# CONTRIBUTING ZONE PLAN for 1996 TWISTED R ROBERTSON LLC.

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- Application Fee Form

FORM TCEQ-20705

## 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 <u>30 TAC 213</u>.

#### **Administrative Review**

1. <u>Edwards Aquifer applications</u> 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: <u>http://www.tceq.texas.gov/field/eapp</u>.

- 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: T STE R ROBERTSON				2. Regulated Entity No.:					
<b>3. Customer Name:</b> ROSS ROBERTSON			4. Customer No.:						
5. Project Type: (Please circle/check one)	New		Modif	icatior	1	Exter	nsion	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)	Resider	ntial	Non-r	esiden	tial		8. Sit	e (acres):	7
9. Application Fee:	Ŋ	YES	10. Permanent BM			BMP(s	s):	YES	
11. SCS (Linear Ft.):			12. AST/UST (No.			o. Tar	nks):		
13. County:		SON	14. W	aters	hed:				

## **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)					
Groundwater Conservation District(s)	Edwards Aquifer Authority Barton Springs/ Edwards Aquifer Hays Trinity Plum Crook	Barton Springs/ Edwards Aquifer	NA		
City(ies) Jurisdiction	Plum Creek Austin Buda Dripping Springs Kyle Mountain City San Marcos Wimberley Woodcreek	Austin Bee Cave Pflugerville Rollingwood Round Rock Sunset Valley West Lake Hills	Austin Cedar Park Florence Georgetown Jerrell Leander Liberty Hill Pflugerville 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.	

ROSS ROBERTSON

Print Name of Customer/Authorized Agent

Signature of Customer Authorized Agent

Date

**FOR TCEQ INTERNAL USE ONLY**				
Date(s)Reviewed:	s)Reviewed: Date Administratively Complete:		ninistratively 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	Payable to TCEQ (Y/N):	
Core Data Form Complete (Y/N):		Check:	Signed (Y/N):	
Core Data Form Incomplete Nos.:			Less than 90 days old (Y/N):	

FORM TCEQ-10257

## This application includes the following attachments:

Attachment A – Road Map

Attachment B - USGS Quadrangle Map

Attachment C - Project Narrative

Attachment D - Factors Affecting Surface Water Quality

Attachment E - Volume and Character of Stormwater

Attachment F – Suitability Letter from Authorized Agent (OSSF is proposed)

Attachment G – Not Included in this application as it does not apply – Alternative Secondary Containment

Attachment H – Not included in this application as it does not apply – AST Containment Structure Drawings

Attachment I – Not included in this application as it does not apply – 20% or Less Impervious Cover Declaration

Attachment J – Not included in this application as it does not apply – BMPs for Upgradient Stormwater

Attachment K - BMPs for On-Site Stormwater

Attachment L – Not included in this application as it does not apply – BMPs for Surface Streams

Attachment M – Construction Plans

Attachment N - Inspection, Maintenance, Repair and Retrofit Plan

Attachment O – Not Included in this application as it does not apply – Pilot-Scale Field Testing Plan

Attachment P – Not included in this application as it does not apply -Measures for Minimizing Surface Stream Contamination

## **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: <u>ROSS</u>ROBERTSON

Date: <u>1/2</u>2/25

Signature of Customer/Agent:

Rus Rom

Regulated Entity Name: <u>1996 TWISTED R ROBERTSON LLC</u>

### **Project Information**

- 1. County: WILLIAMSON
- 2. Stream Basin: SAN GABRIEL RIVER
- 3. Groundwater Conservation District (if applicable): CENTRAL TEXAS
- 4. Customer (Applicant): Contact Person:ROSS ROBERTSON Entity: Mailing Address:1406 W PARK ST City, State:CEDAR PARK, TX78613 Telephone:512-773-6537 Email Address:EVYN@CMHANDLING.COM

Zip: \_\_\_\_\_ Fax: \_\_\_\_\_

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5	Agent/Representative	(If any	٨·
э.	Agent/hepresentative	(II ally	,,,

Contact Person:	
Entity:	
Mailing Address:	
City, State:	Zip:
Telephone:	Fax:
Email Address:	

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 <u>LEANDER</u>.

The project site is not located within any city's limits or ETJ.

7. X 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.

1055 COUNTY ROAD 270 LEANDER TX 78641

- 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.

X USGS Quadrangle Name(s).

10. X 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:

X Area of the site

- Offsite areas
- X Impervious cover
- X Permanent BMP(s)
- Proposed site use
- Site history
- Previous development
- Area(s) to be demolished
- 11. Existing project site conditions are noted below:
  - X Existing commercial site
    - Existing industrial site
    - Existing residential site

Existing paved and/or unpaved roads

X Undeveloped (Cleared)

Undeveloped (Undisturbed/Not cleared)

- Other: \_\_\_\_\_
- 12. The type of project is:



13. Total project area (size of site): 7 Acres

Total disturbed area: <u>5</u> Acres

- 14. Estimated projected population:6\_\_\_\_\_
- 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		÷ 43,560 =	
Parking		÷ 43,560 =	
Other paved surfaces		÷ 43,560 =	
Total Impervious Cover		÷ 43,560 =	

- Total Impervious Cover \_\_\_\_\_ ÷ Total Acreage \_\_\_\_\_ X 100 = \_\_\_\_% Impervious Cover
- 16. X 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. X 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.	Туре	of	project:
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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.  $L \times W = Ft^2 \div 43,560 Ft^2/Acre = acres.$ 21. Pavement Area: Length of pavement area: \_\_\_\_\_ feet. Width of pavement area: feet.  $L \times W = Ft^2 \div 43,560 Ft^2/Acre = acres.$ 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.

X N/A

26. Wastewater will be disposed of by:

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

<ul> <li>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.</li> <li>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.</li> </ul>
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
ermanent Aboveground Storage Tanks <b>(ASTs) ≥ 500</b>

## Permanent Aboveground Storage Tanks(ASTs) ≥ . Gallons

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

X 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			
	·	То	tal 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
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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" =	١.	
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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): \_\_\_\_\_.

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.

<ul> <li>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.</li> <li>The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.</li> <li>The site will not be used for multi-family residential developments, schools, or small business sites.</li> </ul>
52. Attachment J - BMPs for Upgradient Stormwater.
<ul> <li>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.</li> <li>No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.</li> <li>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.</li> </ul>
53. Attachment K - BMPs for On-site Stormwater.
<ul> <li>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.</li> <li>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.</li> </ul>
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.

# FORM TCEQ-10275: ATTACHMENT A



FORM TCEQ-10275: ATTACHMENT B

## Edwards Aquifer Viewer Custom Print



Edwards Aquifer Label Edwards Aquifer Boundary 7.5 Minute Quad Grid TCEQ\_EDWARDS\_OFFICIAL\_MAPS Edwards Aquifer Boundary central line

0

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

0.55

1.1 km

0.28

FORM TCEQ-10275:ATTACHEMNT C

## Project Narrative

The proposed RV project will include the development of 60 RV spaces. They will be designated for either long term usage (by the month) or short-term usage (by the day). Associated improvements will include RV utility hookups such as power, water and sewer. The proposed access to the RV project will be a concrete, all-weather, two-way drive located off CR270. There will be a full-time Site Manager who resides at the current structure located at the entrance of the proposed project area at 1101 CR 270. Management will adhere to supervision protocols which guarantee cleanliness and availability. Additionally, only RV models That are 15 years old or newer will be allowed on the site.

Please see the following for how each project section will comply with the applicable governing laws and standards:

#### Clarification of definitions.

- "Recreational vehicle (RV)" It's defined as a motorhome, travel trailer, truck, camper, camper trailer, or vehicle used for similar purpose, with or without motive power, designed for human habitation or other occupancy.
- "Recreational vehicle (RV) Development" is Defined as a form of real property, with portions of the real property designated for separate ownership or occupancy and the remainder of the real property designated for common ownership or occupancy solely by the owners of those portions.

#### RV Parks Overall Design and Construction

Williamson County subdivision regulations Chapters 2, 3, 5, and Appendix C establishes minimum safety standards for the design and construction of recreational vehicle development. These standards are intended to protect public health and safety by ensuring that RV parks are constructed in a safe and sanitary manner.

Some of the specific requirements of Chapters 2, 3, 5 and Appendix C were included in the project design:

- ✓ RV parks must be located in areas that are zoned for commercial or industrial use only. (Currently zoned commercial).
- ✓ RV parks must have access to water and sewer services. (See project plans)
- ✓ RV parks must be well maintained. (See narrative above)
- ✓ RV parks must be clean and sanitary. (Trash receptacles and recycling bins will be provided)
- ✓ RV parking pads must be elevated 1 foot above the established base flood elevation.

#### Water-

There is an existing water source for the project site. Norwood Dr. is serviced by a 2-inch water main and there is a 4-inch water main that parallels the north property line. The project will adhere to the following applicable standards and meet TCEQ requirements.

- TAC Title 30, Part 1, Chapter 290 SubChapter D: This rule establishes standards for the construction of new public water systems. The rule applies to all public water systems. Including RV parks.
- Subchapter D 290.44 as adopted by TAC as part of the plumbing code for RV Parks.
  - Plumbing systems. Plumbing systems shall be installed in accordance with the requirements of this code TAC Title 30, Part 1, Chapter 290 SubChapter D where applicable.
- Potable water supply and distribution.
  - Quality. The supply or supplies of water shall comply with the potable water standards of the state, local health authority or in the absence thereof, with the drinking water standard of the federal Environmental Protection Agency.
  - Supply. A minimum of 2.0 gpm per connection or RV pad site.
- RV Park water connections for individual RV's.
  - Location where provided the water connections for potable water to individual recreational vehicle sites shall be located on the left rear half of the site. (Left side of the recreational vehicle)

#### Sanitary sewer

There are no existing sanitary sewer services located near the project site, Therefore onsite OSSF will be required for all RV stalls and existing structures.

Williamson County on-site sewage facility regulations, Construction standards for on-site sewage facility regulations as published by TCEQ (Texas Commission on Environmental Quality) and Regulations of the Edwards Aquifer, Chapter 213, Subchapter A, Section 213.1 to 213.14 of the Texas Administrative Code (TAC), as amended provides minimum diameters of sewer lines serving RV sites. In the proposed design, the 4-inch new sanitary sewer laterals meets the outlined criteria of these standards and regulations.

Erosion control.

In order to construct the park, the existing ground will be disturbed but managed so that there is no long-term detrimental effects to the site and those surrounding it. The project will utilize common best management practices (BMPs) and adhere to the following requirements:

✓ TAC Chapter 213.3. This rules states that since the construction of the project will result in the disturbance of more than 1.0 acres of soil surface all requirements of the Edwards Aquifer Contributing Zone application apply. (See Erosion and Sediment Control plan included within the project drawings)

#### Storm and surface water management.

The proposed project calls for the installation of new impervious paving along the drive aisles as well as the addition of the RV Stalls and RV units. Assuming a common RV dimension of 10' x 15' and a total of 60 units, the additional impervious area increase will occupy 39.8% of the existing 7.01 acre site. Ultimately drainage flows towards the existing onsite storm water channel where the storm water will be retained and treated in a

detention/retention pond before it is released via an outflow structure and pipe to continue to travel down the stormwater channel toward the South Fork of the San Gabriel River.

## FORM TCEQ-10275:ATTACHEMENT D

## Factors Affecting Surface Water Quality

For the CR 270 RV Park there are several factors which could affect surface water quality. First is the construction of the RV park. Construction activities can affect surface water quality by introducing pollutants to the area to simply moving dirt around. Temporary BMPS such as silt fences will be used to capture loose dirt and debris before they enter into any existing drainage areas. Concrete washouts will be used to keep the concrete pollutants from leaving the project site. A construction entrance is also proposed to keep offsite pollutants and debris from entering and exiting the project site.

## FORM TCEQ-10275:ATTACHMENT E

## Volume and Character of Stormwater

The CR 270 RV Park project is a 7.01-acre project which contains 2.79 acres of impervious area. The existing conditions are 6.29 acres of pervious area and 0.72 acres of impervious gravel area which includes a 4000 SF existing structure. The proposed construction conditions area 4.22 acres of pervious area and 2.79 acres of impervious concrete drives and parking areas. The existing condition is covered in 10.27% impervious area while the proposed condition increases to 39.80% impervious area. This is an increase of 29.53% or 2.07 acres.

The existing condition run off C Value coefficient is 0.30 based on the Williamson county stormwater regulations. The proposed condition run off C Value coefficient is 0.60 based on the Williamson County stormwater regulations.

The onsite water quality and detention pond is designed to detain and retain the additional stormwater runoff generated by the proposed project. After calculating the difference between the onsite existing condition and proposed condition using the Rational Method, it was determined that the onsite stormwater detention required for the onsite project is 18,120 CF. The proposed onsite water quality and detention pond will detain 22,175 CF of stormwater before releasing the stormwater at a rate of 4.13 fps through the 6" PVC outfall pipe.

## FORM TCEQ-10275:ATTACHMENT F

Williamson County Department of Infrastructure 3151 SE Inner Loop, Ste B Georgetown, TX 78626 T: 512.943.3330 F: 512.943.3335



AFF Total Pages:

#### OSSF ROUTINE MAINTENANCE AFFIDAVIT TO THE PUBLIC THE COUNTY OF WILLIAMSON, STATE OF TEXAS

2022083562

Before me the undersigned authority, on this day personally appeared <u>ROS ROBETSON</u>, who after being by me duly sworn, upon oath states that he/she is the owner of record of that certain tract or parcel of land lying and being situated in Williamson County, Texas and being more particularly described as follows:

Full Legal Description: 1055 + 1101 COUNTY ROAD 270

Or Subdivision: THOM AS +SOUTH SAN GOBPLEL POWBLOCK: Lot: SE	3 +5
The undersigned agrees to advise future owners that the On-Site Sewage Facility (OSSF) utilizes a s	urface
application and/or shallow subsurface application system for wastewater disposal. He/she will, upon any s	sale or
transfer of the above-described property, advise the buyer or transferee to request a transfer of the license to o	perate
a secondary treatment system within 30 days of sale/transfer. The license to operate systems requiring mainter	nance
is valid for only 2 years, at which time renewal is required. The operator further agrees to provide r	outine
maintenance by adding chlorination tablets, inspecting spray heads and inspecting the general operati	on, as
needed. The operator realizes that this unit will cease discharging in the event of treatment malfunct	ion or
lack of disinfection. This might cause sewage backup. The system should not be used when it is dis	abled.
Owner is also responsible for:	
<ul> <li>License renewal and payment of the current fee is required every 2 years or upon lapse of the maintee</li> </ul>	nance
contract. A transfer of license and payment of the current fee is required when ownership changes. L	icense
transfers also require submission of a current inspection report and maintenance contract. These fees an	e paid
directly to Williamson County.	*

- Any buyer or transferee is hereby notified that in accordance with 30 Texas Administrative Code (TAC) Chapter 285, this OSSF must be covered continuously by a <u>maintenance contract</u>. All maintenance must be performed by a State approved maintenance company. Any new maintenance contract must meet Texas Commission on Environmental Quality's (TCEQ's) minimum standards and be signed and dated by both the service provider and the homeowner.
- A new maintenance contract must be submitted to Williamson County Engineer's Office 30 days prior to expiration of the previous contract or within 30 days after the property has been transferred.
- Testing and reporting must be performed every 4 months, or every 6 months with electronic monitoring equipment that automatically notifies service providers upon malfunction. Copies of the report are due to the Williamson County Engineer's Office within 10 days of testing.
- If a system does not possess a current maintenance contract or if it is creating a public health nuisance or threatening to create a public health nuisance, the license to operate will be cancelled and must be renewed following any necessary repairs.
- Any violations of rules adopted under Subchapter C of Chapter 366 of the Texas Health and Safety Code (30 TAC Chapter 285 or Williamson County On-Site Sewage Facility Regulations) is a Class C misdemeanor.

Witness My Hand On This 12th Day Of July, 202	2
Property Owner's Signature	
BY POSS POBERTSON	
Printed Name Of Property Owner	
Sworn To And Subscribed/Before Me On This 12th Day Of	July 2022
Dancy Lopez Notary Public, State C	Of Texas
Notary's Printed Nam	NANCY ARCE LOPEZ
	OF TWO FILE Comm. Expires 08-07-2024 Notary ID 132611128
My commission Expires: 00 01-2024	

Williamson County Dept. of Infrastructure • 3151 SE Inner Loop, Ste. B, Georgetown, TX 78626 • Updated: 12/11/20 Main: 512.943.3330 • Fax: 512.943.3335 • Email: ossf@wilco.org • Website: www.wilco.org/ossf



EVYN Robertson D 1406 W Park St. Cedar Park TX 78613

AFF Fee: \$26.00 07/12/2022 03:46 PM

OSALINAS

Nancy E. Rister, County Clerk Williamson County, Texas

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				25	

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FORM TCEQ-10275:ATTACHMENT K

#### BMPS of On-Site Stormwater

#### **Temporary Best Management Practices**

Site Entry BMP – Gravel Construction Entrance.

This is the first erosion control measure on the site. This entrance will contain offsite sediments brought in by vehicular traffic to the site. The construction entrance provides access without the use of a gravel ramp or wooden curb ramp. It also prevents vehicles from tracking dirt from the site onto improved roadways. All of these features prevent pollution brought onsite from entering into the surface water, groundwater and/or stormwater that originates upstream from the site.

Temporary Sediment Control (Silt) Fences.

This is the second erosion control measure on the site. Silt fences are designed and used to divert or provide a barrier to stormwater surface flows and slow the stormwater surface flow velocity coming off a project. They also capture and contain sediments onsite and limit the capacity to filter the sediment from flows. This site will install silt fences along the downstream graded and ungraded areas of the site. Including along the edge of the onsite drainage channel.

#### Undisturbed Vegetated Buffer

Along with Silt fences any area that is not graded along the perimeter of the site will contain an undisturbed vegetated buffer. This is a buffer or swath of preserved or established vegetation that acts as a perimeter control for the project site. The rooted vegetation holds soil, acts as a wind break and filters runoff that might leave the site. Vegetation should be at least 1 inch I height and provide 80% ground coverage. This BMP minimizes soil movement off-site by wind or surface runoff. It also acts as an alternate, or in certain cases, a supplemental measure to sediment barriers or sediment fence.

#### Check Dams

Another temporary BMP is an instream Check Dam. Check Dams reduce the velocity of stormwater in ditches, dikes and swales. There is an onsite ditch that is small enough for check dams to be installed along. Sedimentation will be captured behind the check dam preventing it from traveling into the mainstream channel.

#### Concrete Washout Area

Another temporary BMP is a concrete washout area located near the construction entrance. This washout area will prevent or reduce the discharge of pollutants to stormwater from concrete waste by performing onsite washout in a designated area and training employees and subcontractors. The Concrete washout area is located 50 feet or more from any sensitive features, storm drains, open ditches or water bodies. Washout wastes into the temporary washout pit where the concrete can set, be broken apart and disposed of properly. When the washout is no longer required for the work, the hardened concrete should be removed and disposed of.

Grass Line Swales

The last onsite temporary BMP are the on-site grass lined swales which will clean and control the flow of stormwater from the site into the on-site retention/detention basin. These swales are to be 2.0' wide and flow at a slope of 1% to 5% max from the proposed graded location to the basin.

#### Permanent Best Management Practices

#### Retention/Detention Sediment Basin

Installation of a 67,633 CF Retention and Detention Sediment Basin or Pond with a flow control outfall. The outfall is a 48" diameter CMP pipe on end with a trash rack top. The outflow of the outfall is an 18" PVC pipe which outfalls to the exiting on-site stormwater channel through a concrete headwall and onto a rip rap splash pad.

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# FORM TCEQ-10275: ATTACHMENT M

# STATE OF TEXAS Williamson COUNTY

# CR 270 RV Park - DRAINAGE AND GRADING PLANS

#### NOTES:

- New construction of any commercial, industrial, or multi-family (non-single family residential) development must be in accordance with the Williamson County Subdivision Regulations (WCSR), whether subject to platting or not. The drainage standards contained in the WCSR, as amended from time to time, are therefore incorporated by reference into this order as fully and completely as if set out verbatim herein.
   Per the Williamson County Subdivision Regulations, a proposed development may be considered exempt from providing on-site stormwater
- detention on "Detention Exempt Stream Reaches".
- A commercial, industrial, or multi-family development may be considered exempt from providing on-site stormwater detention if the proposed development will have less than 20% of impervious cover per lot.
- All proposed commercial, industrial, or multi-family development shall include a site plan and a Refined Drainage Report or construction plans that include all elements according to the Williamson County Subdivision Regulations.

#### Floodplain Development Permit Number:

Date of Permit:
 Fire Marshall Site/Driveway Permit Number: Project #2023-1299-DP

Pe Bi d's Triple T 276 Pe Bi Foodie's Corner/ Weikel's Bakery Provide Triple Byson Rdg Tri Byson Rd

# $\mathsf{P}_{\mathsf{LANS}}$ of $\mathsf{P}_{\mathsf{ROPOSED}}$

Strong ARM Consulting with LMM Engineering Project No. 20210525

# City of Leander



# VICINITY MAP NOT TO SCALE Leander, TEXAS



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	C01	GENERAL NOTES
	V01	SURVEY PLAT
	C02	EXISTING SITE CONDITIONS
	C03	DEMOLITION PLAN
	C04	PRELIMINARY SITE PLAN
	C05	ENLARGED SITE PLAN 1
	C06	ENLARGED SITE PLAN 2
	C07	ENLARGED SITE PLAN 3
	C08	ENLARGED SITE PLAN 4
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	C12	OVERALL WATERSHED – 100 YR. FLOOD PLAIN
T	C13	PRE HEC-RAS WORKSHEET - TRIBUTARY 1 & 2
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	C16	PROJECT PRE DRAINAGE AREA MAP
	C16.1	TCEQ WATER QUALITY PRE DRAINAGE AREA MAP
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	C18	PROJECT STORMWATER CALCULATIONS
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	C38	CITY OF LEANDER SEWER DETAILS
Ţ	C39	SWPPP

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4414 TERRAVIEW DR. ARLINGTON, TX 76001 Cell: (214) 794-4436

1101 CR 270 Leander, TX

Parcel ID: 5.204 Acre Tract Lot 5 South Gabriel Ranches out of the L.B. Johnson Survey Abst. 350 City of Leander Williamson COUNTY, TX

Zoning: PD-20 ; R-D and C-C OWNER/APPLICANT/DEVELOPER

> Ross Robertson 1406 W. Park St. Cedar Park, TX 78613 Phone: 512-791-3284

> > SURVEYOR

Saul V. Castillo 1529 E I-30, Ste 106 Garland, TX 75043

Telephone: 972-564-9840

# **GENERAL NOTES**

REVISED FEBRUARY 25, 2020

ANY CHANGES TO THESE NOTES SHOULD BE CLOUDED ON THE PLAN SET.

CITY CONTACTS: ENGINEERING MAIN LINE:512-528-2766 PLANNING DEPARTMENT:512-528-2750 PUBLIC WORKS MAIN LINE:512-259-2640 STORMWATER INSPECTIONS:512-285-0055 UTILITIES MAIN LINE:512-259-1142 UTILITIES ON-CALL:512-690-4760

1. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES WITH CONSTRUCTION PLANS FOUND IN THE FIELD SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER.

2. THE CONTRACTOR SHALL CONTACT THE TEXAS EXCAVATION SYSTEM AT 1-800-344-8377 FOR EXISTING UTILITY LOCATIONS 48 HOURS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES THAT ARE TO BE EXTENDED, TIED TO, CROSSED, OR ALTERED; OR SUBJECT TO DAMAGE/INCONVENIENCE BY THE CONSTRUCTION OPERATIONS.

3. CONTACT THE CITY OF LEANDER PUBLIC WORKS DEPARTMENT FOR EXISTING WATER, WASTEWATER, STREET LIGHT ELECTRICAL WIRING, AND TRAFFIC SIGNAL WIRING LOCATIONS A MINIMUM OF 48 HOURS PRIOR TO START OF CONSTRUCTION. LOCATE REQUESTS MUST INCLUDE A COPY OF YOUR 811 TICKET.

REFRESH ALL LOCATES BEFORE 14 DAYS - LOCATE REFRESH REQUESTS MUST INCLUDE A COPY OF YOUR 811 TICKET. TEXAS PIPELINE DAMAGE PREVENTION LAWS REQUIRE THAT A LOCATE REFRESH REQUEST BE SUBMITTED BEFORE 14 DAYS, OR IF LOCATION MARKERS ARE NO LONGER VISIBLE.

REPORT ALL DAMAGE TO CITY INFRASTRUCTURE IMMEDIATELY - IF YOU WITNESS OR EXPERIENCE EXCAVATION DAMAGE, PLEASE CONTACT THE CITY OF LEANDER PUBLIC WORKS DEPARTMENT BY PHONE. IF DAMAGE IS WITNESSED OR EXPERIENCED AFTER HOURS, CALL THE CITY OF LEANDER UTILITIES ON-CALL LINE AT THE NUMBER LISTED ABOVE

4. ANY CHANGES OR REVISIONS TO THESE PLANS MUST FIRST BE SUBMITTED TO THE CITY BY THE DESIGN ENGINEER FOR REVIEW AND WRITTEN APPROVAL PRIOR TO CONSTRUCTION OF THE REVISION. A TRAFFIC CONTROL PLAN, IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, SHALL

BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO ANY PARTIAL OR COMPLETE ROADWAY CLOSURES. TRAFFIC CONTROL PLANS SHALL BE SITE SPECIFIC AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. LANE 6. CLOSURES ON ARTERIALS AND ANY FULL ROAD CLOSURES REQUIRE MESSAGE BOARDS NOTIFYING THE PUBLIC ONE WEEK PRIOR TO THE CLOSURE.

7. NO WORK IS TO BE PERFORMED BETWEEN THE HOURS OF 6:00 P.M. AND 7:00 A.M. THE CITY INSPECTOR RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO UNCOVER ALL WORK PERFORMED WITHOUT INSPECTION. FURTHER, THERE IS A NOISE ORDINANCE IN EFFECT FOR CONSTRUCTION ACTIVITY BETWEEN THE HOURS OF 9 PM AND 7 AM. REQUESTS FOR EXCEPTIONS

TO THE ORDINANCE MUST BE MADE TO LEANDER CITY COUNCIL. 8. CONTACT THE CITY INSPECTOR 4 DAYS PRIOR TO WORK TO SCHEDULE ANY INSPECTIONS ON WEEKENDS OR CITY HOI IDAYS

9. NO STREET LIGHTS OR SIGNS OF ANY KIND ARE TO BE PLACED WITHIN ANY SIDEWALKS. 10. NO BLASTING IS ALLOWED.

11. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.

12. THE CONTRACTOR SHALL GIVE THE CITY OF LEANDER 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION. CONTACT ASSIGNED CITY INSPECTOR. 13. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD WITH THE CONTRACTOR, DESIGN ENGINEER/PERMIT APPLICANT AND THE CITY OF LEANDER REPRESENTATIVES PRIOR TO INSTALLATION OF EROSION/SEDIMENTATION CONTROLS AND TREE PROTECTION MEASURES AND PRIOR TO BEGINNING ANY WORK. THE CONTRACTOR SHALL NOTIFY THE CITY OF LEANDER PLANNING DEPARTMENT PLANNING COORDINATOR AT LEAST THREE (3) DAYS PRIOR TO THE MEETING DATE.

14. THE CONTRACTOR AND ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE ENGINEER SHALL FURNISH THE CITY OF LEANDER ACCURATE "RECORD DRAWINGS" FOLLOWING THE COMPLETION OF ALL CONSTRUCTION. THESE "RECORD DRAWINGS" SHALL

MEET THE SATISFACTION OF THE ENGINEERING DEPARTMENTS PRIOR TO FINAL ACCEPTANCE 15. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS. THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. PRIOR TO ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT EASEMENTS. CLEANUP SHALL BE TO THE SATISFACTION OF THE ENGINEER.

16. CONTRACTOR TO LOCATE, PROTECT, AND MAINTAIN BENCHMARKS, MONUMENTS, CONTROL POINTS AND PROJECT ENGINEERING REFERENCE POINTS. RE-ESTABLISH DISTURBED OR DESTROYED ITEMS BY REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, AT NO ADDITIONAL COST TO OWNER.

17. THE CONTRACTOR SHALL PROTECT ALL EXISTING FENCES. IN THE EVENT THAT A FENCE MUST BE REMOVED, THE CONTRACTOR SHALL REPLACE SAID FENCE OR PORTION THEREOF WITH THE SAME TYPE OF FENCING TO A QUALITY OF EQUAL OR BETTER THAN THE ORIGINAL FENCE. 18. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST CITY OF AUSTIN STANDARD SPECIFICATIONS. CITY OF

AUSTIN STANDARDS SHALL BE USED UNLESS OTHERWISE NOTED IN DETAILS. 19. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA). OSHA STANDARDS MAY BE PURCHASED FROM THE

GOVERNMENT PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 1033 LA POSADA DR. SUITE 375, AUSTIN, TEXAS 78752-3832. 20. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT WHERE NOT SPECIFICALLY COVERED IN THE PROJECT SPECIFICATIONS SHALL CONFORM TO ALL CITY OF LEANDER DETAILS AND CITY OF AUSTIN

STANDARD SPECIFICATIONS. 21. PROJECT SPECIFICATIONS TAKE PRECEDENCE OVER PLANS AND SPECIAL CONDITIONS GOVERN OVER TECHNICAL

SPECIFICATIONS. 22. HOT MIX ASPHALTIC CONCRETE PAVEMENT SHALL BE MINIMUM THICKNESS OF 2 INCHES WITH NO RECYCLED ASPHALT

SHINGLES CONTENT. 23. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY RISE CONCERNING THE INTENT. PLACEMENT, OR LIMITS OF DIMENSIONS OR GRADES NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT. 24. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.

25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION BETWEEN HIMSELF AND OTHER CONTRACTORS AND UTILITIES IN THE VICINITY OF THE PROJECT. THIS INCLUDES GAS, WATER, WASTEWATER, ELECTRICAL, TELEPHONE, CABLE TV AND STREET DRAINAGE WORK. ONCE THE CONTRACTOR BECOMES AWARE OF A POSSIBLE CONFLICT, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER WITHIN TWENTY-FOUR (24) HOURS.

26. THE CONTRACTOR MUST OBTAIN A CONSTRUCTION WATER METER FOR ALL WATER USED DURING CONSTRUCTION. A COPY OF THIS PERMIT MUST BE CARRIED AT ALL TIMES BY ALL WHO USE WATER. 27. CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ROADS AND DRIVES ADJACENT TO AND NEAR THE SITE FREE FROM SOIL, SEDIMENT AND DEBRIS. CONTRACTOR WILL NOT REMOVE SOIL, SEDIMENT OR DEBRIS FROM ANY AREA OR VEHICLE BY

MEANS OF WATER. ONLY SHOVELING AND SWEEPING WILL BE ALLOWED. CONTRACTOR WILL BE RESPONSIBLE FOR DUST CONTROL FROM THE SITE. 28. THE CITY OF LEANDER SHALL NOT BE PETITIONED FOR ACCEPTANCE UNTIL ALL NECESSARY EASEMENT DOCUMENTS

HAVE BEEN SIGNED AND RECORDED.

29. AN ENGINEER'S CONCURRENCE LETTER AND RECORD DRAWINGS SHALL BE SUBMITTED TO THE ENGINEERING DEPARTMENT PRIOR TO THE ISSUANCE OF CERTIFICATE OF COMPLETION OR SUBDIVISION ACCEPTANCE. THE ENGINEER AND CONTRACTOR SHALL VERIFY THAT ALL FINAL REVISIONS AND CHANGES HAVE BEEN MADE TO THE DIGITAL COPY PRIOR TO CITY SUBMITTAL. RECORD CONSTRUCTION DRAWINGS, INCLUDING ROADWAY AND ALL UTILITIES SHALL BE PROVIDED TO THE CITY IN DIGITAL FORMAT AS AUTOCAD ".DWG" FILES,

30. MICROSTATION ".DGN" FILES OR ESRI ".SHP" FILES ON CD ROM. LINE WEIGHTS, LINE TYPES AND TEXT SIZE SHALL BE SUCH THAT IF HALF-SIZE PRINTS (11"X17") WERE PRODUCED, THE PLANS WOULD STILL BE LEGIBLE. ALL REQUIRED DIGITAL FILES SHALL CONTAIN A MINIMUM OF TWO CONTROL POINTS REFERENCED TO THE STATE PLANE GRID COORDINATE SYSTEM - TEXAS CENTRAL ZONE (4203), IN US SURVEY FEET AND SHALL INCLUDE ROTATION INFORMATION AND SCALE FACTOR REQUIRED TO REDUCE SURFACE COORDINATES TO GRID COORDINATES IN US SURVEY FEET

31. TREES IN EXISTING ROW SHOULD BE PROTECTED OR NOTED IN THE PLANS TO BE REMOVED. CONSTRUCTION SEQUENCE NOTES 1. ...

2. ...

3. ...

#### EROSION CONTROL NOTES

1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE PROTECTIVE FENCING PRIOR TO ANY WORK (CLEARING, GRUBBING OR EXCAVATION). CONTACT STORMWATER INSPECTOR FOR ON SITE INSPECTION PRIOR TO BEGINNING CONSTRUCTION.

2. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES.

THE TEMPORARY SPOILS DISPOSAL SITE IS TO BE SHOWN IN THE EROSION CONTROL MAP. ANY ON-SITE SPOILS DISPOSAL SHALL BE REMOVED PRIOR TO ACCEPTANCE UNLESS SPECIFICALLY SHOWN ON THE PLANS. THE DEPTH OF SPOIL SHALL NOT EXCEED 10 FEET IN ANY AREA. 5. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE RESTORED WITH A MINIMUM OF 6 INCHES OF TOPSOIL AND COMPOST BLEND. TOPSOIL ON SINGLE FAMILY LOTS MAY BE INSTALLED WITH HOME CONSTRUCTION. THE TOPSOIL AND COMPOST BLEND SHALL CONSIST OF 75% TOPSOIL AND 25% COMPOST. 6. SEEDING FOR REESTABLISHING VEGETATION SHALL COMPLY WITH THE AUSTIN GROW GREEN GUIDE OR WILLIAMSON COUNTY'S PROTOCOL FOR SUSTAINABLE ROADSIDES (SPEC 164--WC001 SEEDING FOR EROSION CONTROL). RESEEDING VARIETIES OF BERMUDA SHALL NOT BE USED. 7. STABILIZED CONSTRUCTION ENTRANCE IS REQUIRED AT ALL POINTS WHERE CONSTRUCTION TRAFFIC IS EXITING THE PROJECT ONTO EXISTING PAVEMENT. LINEAR CONSTRUCTION PROJECTS MAY REQUIRE SPECIAL CONSIDERATION. ROADWAYS SHALL REMAIN CLEAR OF SILT AND MUD.

8. TEMPORARY STOP SIGNS SHOULD BE INSTALLED AT ALL CONSTRUCTION ENTRANCES WHERE A STOP CONDITION DOES NOT ALREADY EXIST. 9. IN THE EVENT OF INCLEMENT WEATHER THAT MAY RESULT IN A FLOODING SITUATION. THE CONTRACTOR SHALL REMOVE

#### WATER AND WASTEWATER NOTES

PRESSURE TAPS SHALL BE IN ACCORDANCE WITH CITY OF LEANDER STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL PERFORM ALL EXCAVATION, ETC. AND SHALL FURNISH, INSTALL AND AIR TEST THE SLEEVE AND VALVE. A CITY OF LEANDER INSPECTOR MUST BE PRESENT WHEN THE CONTRACTOR MAKES A TAP, AND/OR ASSOCIATED TESTS. A MINIMUM OF TWO (2) WORKING DAYS NOTICE IS REQUIRED. "SIZE ON SIZE" TAPS WILL NOT BE PERMITTED UNLESS MADE BY THE USE OF AN APPROVED FULL-CIRCLE GASKETED TAPPING SLEEVE. CONCRETE BLOCKING SHALL BE PLACED BEHIND AND UNDER ALL TAP SLEEVES A MINIMUM OF 24 HOURS PRIOR TO THE BRANCH BEING PLACED INTO SERVICE. BLOCKING SHALL BE INSPECTED PRIOR TO BACKFILL.

2. FIRE HYDRANTS ON MAINS UNDER CONSTRUCTION SHALL BE SECURELY WRAPPED WITH A BLACK POLY WRAP BAG AND TAPED INTO PLACE. THE POLY WRAP SHALL BE REMOVED WHEN THE MAINS ARE ACCEPTED AND PLACED INTO SERVICE. CURVILINEAR WASTEWATER DESIGN LAYOUT IS NOT PERMITTED. THRUST BLOCKING OR RESTRAINTS SHALL BE IN ACCORDANCE WITH THE CITY OF LEANDER STANDARD SPECIFICATIONS 4 AND REQUIRED AT ALL FITTINGS PER DETAIL OR MANUFACTURER'S RECOMMENDATION. ALL FITTINGS SHALL HAVE BOTH

THRUST BLOCKING AND RESTRAINTS. 5. MANDREL TESTING WILL BE REQUIRED ON ALL WASTEWATER PIPE. PER TCEQ, THIS TEST MUST BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS. 6. ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS

ACCREDITED BY ANSI 7. IN ADDITION TO NORMAL COMPACTION METHODS DURING DRY WEATHER CONDITIONS, TRENCH AND MANHOLE BACKFILL IN AND/OR ADJACENT TO STREETS, STRUCTURES, DRIVEWAYS, ETC., SHOULD BE FLOODED TO PROVIDE ADDITIONAL CONSOLIDATION OF BACKFILL DURING CONSTRUCTION PERIODS THAT DO NOT EXPERIENCE SIGNIFICANT RAINFALL EVENTS PRIOR TO SUBGRADE PREPARATION, FLEXIBLE BASE PLACEMENT, PAVING OPERATIONS.

8. ALL WATER SERVICE, WASTEWATER SERVICE AND VALVE LOCATIONS SHALL BE APPROPRIATELY STAMPED AS FOLLOWS: WATER SERVICE "W" ON TOP OF CURB WASTEWATER SERVICE "S" ON TOP OF CURB VALVE "V" ON TOP OF CURB

TOOLS FOR STAMPING THE CURBS SHALL BE PROVIDED BY THE CONTRACTOR. OTHER APPROPRIATE MEANS OF STAMPING SERVICE AND VALVE LOCATIONS SHALL BE PROVIDED IN 10. AREAS WITHOUT CURBS. SUCH MEANS OF STAMPING SHALL BE SPECIFIED BY THE ENGINEER AND ACCEPTED BY THE

CITY OF LEANDER 11. ALL PLASTIC PIPES FOR USE IN PUBLIC WATER SYSTEMS MUST BEAR THE NATIONAL SANITATION FOUNDATION SEAL OF APPROVAL (NSF-PW) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 200 PSI. 12. NO PIPE OR FITTING WHICH HAS BEEN USED FOR ANY PURPOSE OTHER THAN THE CONVEYANCE OF DRINKING WATER SHALL BE ACCEPTED OR RELOCATED FOR USE IN ANY PUBLIC DRINKING WATER SUPPLY. 13. TYPICAL DEPTH OF COVER FOR ALL WASTEWATER LINES SHALL BE 48" MINIMUM, WATER LINES SHALL BE 36" MINIMUM

UNDER BOTH PAVEMENT AND NATURAL GROUND. STORM SEWER SHALL BE 24" MINIMUM UNDER NATURAL GROUND 14. THE HYDROSTATIC LEAKAGE RATE SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY AWWA FORMULAS. 15. ALL WATER MAINS, DISTRIBUTION LINES AND SERVICE LINES SHALL BE INSTALLED IN ENCASEMENT PIPE UNDERNEATH EXISTING STREETS AND OTHER PAVED SURFACES UNLESS APPROVED WITH PLANS.

 ALL MECHANICAL RESTRAINTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. 17. ALL DEAD-END WATER MAINS SHALL HAVE THRUST RESTRAINTS INSTALLED ON THE LAST THREE PIPE-LENGTHS (STANDARD 20' LAYING LENGTH), AT MINIMUM, AND THRUST BLOCKS INSTALLED ON THE PLUG. ADDITIONAL THRUST RESTRAINTS MAY BE REQUIRED BASED UPON THE MANUFACTURER'S RECOMMENDATIONS AND/OR CALCULATIONS BY THE ENGINEER OF

RECORD. 18. WHERE WATER LINES CROSS WASTEWATER LINES AND THERE IS LESS THAN 9 FEET CLEARANCE BETWEEN LINES, THE WASTEWATER LINE SHALL BE PLACED SO THAT THE WASTEWATER PIPE SECTION IS CENTERED ON THE WATER LINE AND

CONSTRUCTED IN ACCORDANCE WITH TCEQ CHAPTERS 217.53(b) AND 290.44(e). 19. PIPE MATERIAL FOR WATER MAINS SHALL BE PVC (AWWA C900-16 MIN. 235 PSI PRESSURE RATING). WATER SERVICES (2" OR LESS) SHALL BE POLYETHYLENE TUBING (BLACK, 200PSI, SDR- (9)). DUCTILE IRON PIPE (AWWA C115/C151, MIN. PRESSURE CLASS 250) MAY BE USED FOR WATER MAINS WITH THE EXPRESS APPROVAL OF CITY OF LEANDER ENGINEERING. 20. PIPE FOR PRESSURE WASTEWATER MAINS SHALL BE PVC (AWWA C900-16), GREEN AND MARKED FOR SEWER. PIPE MATERIAL FOR GRAVITY WASTEWATER MAINS SHALL BE PVC (ASTM D2241, D3034 MAX. SDR-26 OR PS115 F679) OR FIBERGLASS

WITH PIPE STIFFNESS OF 72 PSI PER COA SPL WW-509. ALL FIRE HYDRANT LEADS SHALL BE DUCTILE IRON PIPE (AWWA C115/C151 PRESSURE CLASS 350). INTERIOR SURFACES OF ALL DUCTILE IRON POTABLE OR RECLAIMED WATER PIPE SHALL BE CEMENT-MORTAR LINED AND 22.

SEAL COATED AS REQUIRED BY AWWA C104.

23. ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH MINIMUM 8-MIL POLYETHYLENE. 24. THE CONTRACTOR SHALL CONTACT THE ENGINEERING DEPARTMENT INSPECTOR AT 528-2700 AT LEAST 48 HOURS PRIOR TO CONNECTING TO THE EXISTING WATER LINES.

25. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON RING AND COVER. TAPPING OF FIBERGLASS MANHOLES SHALL NOT BE ALLOWED.

26. EXISTING MANHOLES MODIFIED BY CONSTRUCTION ACTIVITY SHALL BE TESTED FOR LEAKAGE BY VACUUM. ANY EXISTING MANHOLE WHICH FAILS TO PASS THE VACUUM TEST SHALL BE CLOSELY EXAMINED BY THE INSPECTOR AND THE CONTRACTOR TO DETERMINE IF THE MANHOLE CAN BE REPAIRED. THEREAFTER, THE CONTRACTOR SHALL EITHER REPAIR OR REMOVE AND

REPLACE THE MANHOLE AS DIRECTED. 27. PIPE CONNECTIONS TO EXISTING MANHOLES AND JUNCTION BOXES SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF AUSTIN SPECIFICATION 506.5.F. 28. LINE FLUSHING OR ANY ACTIVITY USING A LARGE QUANTITY OF WATER MUST BE COORDINATED WITH THE PUBLIC WORKS

DEPARTMENT.

29. THE CONTRACTOR, AT HIS EXPENSE, SHALL PERFORM STERILIZATION OF ALL CONSTRUCTED POTABLE WATER LINES AND SHALL PROVIDE ALL EQUIPMENT (INCLUDING TEST GAUGES), SUPPLIES (INCLUDING CONCENTRATED CHLORINE DISINFECTING MATERIAL), AND NECESSARY LABOR REQUIRED FOR THE STERILIZATION PROCEDURE. THE STERILIZATION PROCEDURE SHALL BE MONITORED BY CITY OF LEANDER PERSONNEL. WATER SAMPLES WILL BE COLLECTED BY THE CITY OF LEANDER TO VERIFY EACH TREATED LINE HAS ATTAINED AN INITIAL CHLORINE CONCENTRATION OF 50 PPM. WHERE MEANS OF FLUSHING IS NECESSARY, THE CONTRACTOR, AT HIS EXPENSE, SHALL PROVIDE FLUSHING DEVICES AND REMOVE SAID DEVICES PRIOR TO FINAL ACCEPTANCE BY THE CITY OF LEANDER. 30. SAMPLING TAPS SHALL BE BROUGHT UP TO 3 FEET ABOVE GRADE AND SHALL BE EASILY ACCESSIBLE FOR CITY PERSONNEL. AT THE CONTRACTORS' REQUEST, AND IN HIS PRESENCE, SAMPLES FOR BACTERIOLOGICAL TESTING WILL BE COLLECTED BY THE CITY OF LEANDER NOT LESS THAN 24 HOURS AFTER THE TREATED LINE HAS BEEN FLUSHED OF THE CONCENTRATED CHLORINE SOLUTION AND CHARGED WITH WATER APPROVED BY THE CITY. 31. TESTING SHALL BE PERFORMED FOR ALL WASTEWATER PIPE INSTALLED AND PRESSURE PIPE HYDROSTATIC TESTING OF ALL WATER LINES CONSTRUCTED. THE OWNER'S CONTRACTOR SHALL PROVIDE ALL EQUIPMENT (INCLUDING PUMPS AND GAUGES), SUPPLIES AND LABOR NECESSARY TO PERFORM THE TESTS. THE CONTRACTOR SHALL NOTIFY THE CITY OF LEANDER ENGINEERING DEPARTMENT NO LESS THAN 48 HOURS PRIOR TO PERFORMING STERILIZATION, QUALITY TESTS, OR PRESSURE TESTS. A CITY OF LEANDER INSPECTOR SHALL BE PRESENT FOR ALL TESTS AND SHALL BE PAID FOR BY THE

- 33. ALL VALVE BOXES AND COVERS SHALL BE CAST IRON.
- 34. ALL WATER VALVE COVERS ARE TO BE PAINTED BLUE. 35. ALL WATER METER BOXES SHALL BE:

a.a.SINGLE, 1" METER AND BELOW DFW37F-12-1CA, OR EQUAL a.b.DUAL, 1" METERS AND BELOWDFW39F-12-1CA, OR EQUAL a.c.1.5" SINGLE METER DFW65C-14-1CA, OR EQUAL

a.d.2" SINGLE METER DFW1730F-12-1CA, OR EQUAL THE FOLLOWING GRADATION SPECIFICATION:

SIEVE SIZE PERCENT RETAINED BY WEIGHT

/2"	0
8/8"	0-2
<b>#</b> 440	-85
<i>‡</i> 1095	-100
36.	THE CONTRACTOR IS HEREBY NOT

TIFIED THAT CONNECTING TO, SHUTTING DOWN, OR TERMINATING EXISTING UTILITY LINES MAY HAVE TO OCCUR AT OFF-PEAK HOURS. SUCH HOURS ARE USUALLY OUTSIDE NORMAL WORKING HOURS AND POSSIBLY BETWEEN 12 AM AND 6 AM.

INLET PROTECTION MEASURES UNTIL SUCH TIME AS THE WEATHER EVENT HAS PASSED.

INSTITUTE/NATIONAL SANITATION FOUNDATION (ANSI/NSF) STANDARD 61 AND MUST BE CERTIFIED BY AND ORGANIZATION

OWNER/CONTRACTOR. THESE SERVICES ARE PAID FOR AT THE TIME OF CONSTRUCTION PLAN SUBMITTAL. 32. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVE UNLESS AUTHORIZED BY THE CITY OF LEANDER.

35. SAND, AS DESCRIBED IN AUSTIN SPECIFICATION ITEM 510 PIPE, SHALL NOT BE USED AS BEDDING FOR WATER AND WASTEWATER LINES. ACCEPTABLE BEDDING MATERIALS ARE PIPE BEDDING STONE, PEA GRAVEL AND IN LIEU OF SAND, A NATURALLY OCCURRING OR MANUFACTURED STONE MATERIAL CONFORMING TO ASTM C33 FOR STONE QUALITY AND MEETING

37. ALL WASTEWATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) REGULATIONS, 30 TAC CHAPTER 213 AND 30 TAC CHAPTER 217, AS APPLICABLE, WHENEVER TCEQ AND CITY OF LEANDER SPECIFICATION CONFLICT, THE MORE STRINGENT SHALL APPLY.

38. MANHOLES SHALL BE COATED PER CITY OF AUSTIN SPL WW-511 (RAVEN 405 OR SPRAYWALL). 39. DENSITY TESTING FOR TRENCH BACKFILL LOCATED WITHIN THE LIMITS OF THE PAVED AREA IS TO BE DONE IN 12" LIFTS

EVERY 500' AND AT LEAST ONCE PER LINE SEGMENT 40. ALL GRAVITY WASTEWATER MAINS TO BE TESTED BY CAMERA AND PAID FOR BY THE CONTRACTOR. CAMERA TESTING FOR WASTEWATER LINES IN ROADWAY SHALL OCCUR BEFORE PAVING. CONTRACTOR SHALL PROVIDE THE CITY WITH A DVD COPY OF THE FULL CAMERA INSPECTION.

41. RECLAIMED AND RECYCLED WATER LINE SHALL BE CONSTRUCTED OF "PURPLE PIPE." ALL RECLAIMED AND RECYCLED WATER VALVE COVERS SHALL BE SQUARE AND PAINTED PURPLE.

STREET AND DRAINAGE NOTES

1. ALL SIDEWALKS SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT. THE CITY OF LEANDER HAS NOT REVIEWED THESE PLANS FOR COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT, OR ANY OTHER ACCESSIBILITY LEGISLATION, AND DOES NOT WARRANTY OR APPROVE THESE PLANS FOR ANY ACCESSIBILITY STANDARDS. PRIOR TO ACCEPTANCE THE ENGINEER SHALL SUBMIT DOCUMENTATION THAT THE IMPROVEMENTS WERE INSPECTED BY TDLR OR A REGISTERED ACCESSIBLITY SPECIALIST (RAS) AND ARE IN COMPLIANCE WITH THE REQUIREMENTS OF THE TABA. CONTRACTOR SHALL PROVIDE QUALITY TESTING FOR ALL INFRASTRUCTURES TO BE ACCEPTED AND MAINTAINED BY THE CITY OF LEANDER AFTER COMPLETION. THE CONTRACTOR SHALL

NOTIFY THE CITY OF LEANDER ENGINEERING DEPARTMENT AT 528-2700 NO LESS THAN 48 HOURS PRIOR TO ANY TESTING. 4. BACKFILL BEHIND THE CURB SHALL BE COMPACTED TO OBTAIN A MINIMUM OF 95% MAXIMUM DENSITY TO WITHIN 6" OF TOP OF CURB. MATERIAL USED SHALL BE PRIMARILY GRANULAR

WITH NO ROCKS LARGER THAN 6" IN THE GREATEST DIMENSION. THE REMAINING 6" SHALL BE CLEAN TOPSOIL FREE FROM ALL CLODS AND SUITABLE FOR SUSTAINING PLANT LIFE 5. A MINIMUM OF 6" OF TOPSOIL SHALL BE PLACED BETWEEN THE CURB AND RIGHT-OF-WAY AND IN ALL DRAINAGE

CHANNELS EXCEPT CHANNELS CUT IN STABLE ROCK. DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT. INCLUDING GAS. ELECTRIC TELEPHONE. CABLE TV. ETC..

SHALL BE A MINIMUM OF 36" BELOW SUBGRADE. 7. STREET RIGHT-OF-WAY SHALL BE GRADED AT A SLOPE OF 1/4" PER FOOT TOWARD THE CURB UNLESS OTHERWISE INDICATED. HOWEVER, IN NO CASE SHALL THE WIDTH OF RIGHT-OF-WAY AT 1/2" PER FOOT SLOPE BE LESS THAN 10 FEET UNLESS A SPECIFIC REQUEST FOR AN ALTERNATE GRADING SCHEME IS MADE TO AND ACCEPTED BY THE CITY OF LEANDER PUBLIC WORKS DEPARTMENT.

8. BARRICADES BUILT TO THE CITY OF LEANDER STANDARDS SHALL BE ERECTED ON ALL DEAD-END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB AND PUBLIC SAFETY.

9. ALL REINFORCED CONCRETE PIPE SHALL BE MINIMUM CLASS III OF TONGUE AND GROOVE OR O-RING JOINT DESIGN. 10. THE CONTRACTOR IS TO NOTIFY THE ENGINEERING INSPECTOR 48 HOURS PRIOR TO THE FOLLOWING TESTING: PROOF ROLLING SUB-GRADE AND EVERY LIFT OF ROADWAY EMBANKMENT, IN-PLACE DENSITY TESTING OF EVERY BASE COURSE, AND ASPHALT CORES. ALL OF THIS TESTING MUST BE WITNESSED BY A CITY OF LEANDER REPRESENTATIVE.

11. THE CONTRACTOR MUST PROVIDE A PNEUMATIC TRUCK PER TXDOT SPEC FOR PROOF ROLLING. 12. AT INTERSECTIONS WHICH HAVE VALLEY DRAINAGE, THE CROWNS OF THE INTERSECTING STREETS WILL CULMINATE IN A

DISTANCE OF 40 FEET FROM INTERSECTING CURB LINE UNLESS OTHERWISE NOTED. AT THE INTERSECTION OF TWO 44' STREETS OR LARGER, THE CROWNS OF THE INTERSECTING STREETS WILL CULMINATE IN A DISTANCE OF 40 FEET FROM INTERSECTING CURB LINE UNLESS OTHERWISE NOTED.

 A CURB LAYDOWN IS REQUIRED AT ALL POINTS WHERE THE PROPOSED SIDEWALK INTERSECTS THE CURB. 15. ALL STRIPING, WITH THE EXCEPTION OF STOP BARS, CROSS WALKS, WORDS AND ARROWS, IS TO BE TYPE II (WATER BASED). STOP BARS, CROSS WALKS, WORDS AND ARROWS REQUIRE TYPE I THERMOPLASTIC. 16. MANHOLE FRAMES, COVERS, VALVES, CLEAN-OUTS, ETC. SHALL BE RAISED TO GRADE PRIOR TO FINAL PAVEMENT

CONSTRUCTION. 17. CONTRACTOR SHALL NOTIFY THE LEANDER ENGINEERING DEPARTMENT AT 528-2700 AT LEAST 48 HOURS PRIOR TO THE INSTALLATION OF ANY DRAINAGE FACILITY WITHIN A DRAINAGE EASEMENT OR STREET ROW. THE METHOD OF PLACEMENT AND

COMPACTION OF BACKFILL IN THE CITY'S ROW MUST BE APPROVED PRIOR TO THE START OF BACKFILL OPERATIONS. 18. A STOP BAR SHALL BE PLACED AT ALL STOP SIGN LOCATIONS. 19. A MINIMUM OF SEVEN DAYS OF CURE TIME IS REQUIRED FOR HMAC PRIOR TO THE INTRODUCTION OF PUBLIC VEHICULAR

TRAFFIC TO ANY STREETS 20. THE GEOTECHNICAL ENGINEER SHALL INSPECT THE SUBGRADE FOR COMPLIANCE WITH THE DESIGN ASSUMPTIONS

MADE DURING PREPARATION OF THE SOILS REPORT. ANY ADJUSTMENTS THAT ARE REQUIRED SHALL BE MADE THROUGH REVISIONS OF THE CONSTRUCTION PLANS. 21. GEOTECHNICAL INVESTIGATION INFORMATION AND PAVEMENT RECOMMENDATIONS WERE PROVIDED BY

PAVEMENT RECOMMENDATIONS ARE AS FOLLOWS:

TRENCH SAFETY NOTES

1. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT ARE DESCRIBED IN ITEM 509S "TRENCH SAFETY SYSTEMS" OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS AND SHALL BE IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U.S. OCCUPATION SAFETY AND HEALTH ADMINISTRATION REGULATIONS.

GRADING NOTES

1. POSITIVE DRAINAGE SHALL BE MAINTAINED ON ALL SURFACE AREAS WITHIN THE SCOPE OF THIS PROJECT. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER.

THE CONTRACTOR SHALL CONSTRUCT EARTHEN EMBANKMENTS WITH SLOPES NO STEEPER THAN 3:1 AND COMPACT SOIL TO 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD SPECIFICATIONS. 3. AREAS OF SOIL DISTURBANCE ARE LIMITED TO GRADING AND IMPROVEMENTS SHOWN. ALL OTHER AREAS WILL NOT BE DISTURBED.

BENCHMARK NOTES

1. [PROVIDE LOCATION DESCRIPTION]

	unty Drainage Review Comments 11–27–2024 JAMSON COUNTY PERMIT APPROVED 12–17–2024
SNOBAR	DESIGNED HDB/LM REVISION 14 - CC DRAWN HDB DRAWN HDB CHECKED LM DATE LM DATE CHECKED LM SCALE
STAL PAURTERED BY	Atta TERRAVIEW DR. 4414 TERRAVIEW DR. Atta TERRAVIEW DR. ARLINGTON, TX 76001 Cell: (214) 794-4436 Lmiano142@gmail.com Dr. 2000 Br. 2000 Br
PREPARED BY	act briel Schong ARM Consulting Frvey Engineering Support civil Design & Drafting 1504 Buena Vista Dr Denton, TX 76210 Cell: (360)870-3218 hboutwell@st-arm.com
PROJECT LEGAL	5.204 Acre Tra Lot 5 South Gab Ranches L.B. Johnson Sur Abst. 350 Williamson Count
PROJECT I DOATION	CR 270 RV Park 1101 CR 270 Leander, TX Williamson County Case # BHEET TITLE GENERAL NOTES
	C01 PROJECT NO. 20210525





CR 270 RV Par

![](_page_48_Figure_0.jpeg)

Topographical survey done by Saul V. Castillo Benchmark Bench Mark - Set Iron Rod, El. 1053.00

Zone A

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![](_page_48_Figure_2.jpeg)

~ Atlas 14 100 Yr. Floodplain Boundary

FLOOD STATEMENT: According to Community Panel No. 48491C0455F, dated Dec 20, 2019, of the Federal Emergency Management Agency, National Flood Insurance Program Map, this property is within both Flood Zone "A" (areas determined to be within the 1% annual flood chance (100-yr flood) also knows as the base flood, but no base flood elevations is determined) and Flood Zone "X" (areas determined to be outside 500-year floodplain), which is not a special flood hazard area. If this site is not within an identified special flood hazard area, this flood statement  $\overline{\phantom{a}}$  does not imply that the property and/or the structures thereon will be free from flooding or flood damage. On rare occasions, greater floods can and will occur and flood heights may be increased by man-made or natural causes. This statement shall not create liability on the part of the Surveyor.

### CAUTION !!! EXISTING UTILITIES

✓ EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS. HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY\_THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN GRDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

CALL 1-800-344-8377 (DIG-TESS) OR OTHER UTILITY LOCATION SERVICES 48 HOURS PRIOR TO CONSTRUCTION ACTIVITY. SPIARS ENGINEERING, INC. IS NOT RESPONSIBLE FOR KNOWING ALL EXISTING UTILITIES OR DEPICTING EXACT LOCATIONS OF UTILITIES ON DRAWINGS.

![](_page_48_Picture_8.jpeg)

![](_page_48_Figure_9.jpeg)

![](_page_49_Figure_0.jpeg)

## Legend

- ~ Proposed Sanitary Sewer Drainfield

- ~ FEMA 100 Yr. Floodplain Boundary
- ~ Atlas 14 100 Yr. Floodplain Boundary

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SITE D	ATA SUMMARY
LOT	
General Site Data	
ZONING	C3
LOT AREA (SF)	305,362 SF
LAND USE	1 — Commercial
EXISTING IMPERVIOUS	40,891 SF
EXISTING PERVIOUS	264,471 SF
PERCENTAGE IMPERVIOUS	13.4%
PROPOSED IMPERVIOUS	104,580 SF
PROPOSED PERVIOUS	200,782 Sf
PERCENTAGE IMPERVIOUS	33.90%
Parking	
PARKING REQUIREMENTS	1 per RV stall and 1 stall 1600 SF OFFICE
PARKING REQ'D	71
PARKING PROVIDED	62 RV stalls; 71 Parking, 1 Handicap stall included in overall parking count.

S	Setbacks	Coverages				
	Required (FT)		Description	Area (AC)	Percentage (%)	
E)	30		Existing Impervious	0.72	10.27	
)	10		Proposed Impervous	2.79	39.80	
0	10		Existing Pervious	6.29	89.73	
/)	0		Proposed Pervious	4.22	60.20	
			Total Lot size	7.01	100	

FLOOD STATEMENT: According to Community Panel No. 48491C0455F, dated Dec 20, 2019, of the Federal Emergency Management Agency, National Flood Insurance Program Map, this property is within both Flood Zone "A" (areas determined to be within the 1% annual flood chance (100-yr flood) also knows as the base flood, but no base flood elevations is determined) and Flood Zone "X" (areas determined to be outside 500-year floodplain), which is not a special flood hazard area. If this site is not within an identified special flood hazard area, this flood statement does not imply that the property and/or the structures thereon will be free from flooding or flood damage. On rare occasions, greater floods can and will occur and flood heights may be increased by man-made or natural causes. This statement shall not create liability on the part of the

> SCALES IF THIS BAR IS NOT DIMENSION SHOWN, ADJUST SCALES ACCORDINGI

1 inch = 30 ft.

![](_page_49_Figure_20.jpeg)

270 RV Park 1 CR 270 Leander, T

CR 2 1101 Willia

C04

OF 52

20210525

![](_page_50_Picture_0.jpeg)

![](_page_50_Figure_1.jpeg)

## CAUTION !!! EXISTING UTILITIES

EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

![](_page_50_Figure_5.jpeg)

![](_page_50_Figure_6.jpeg)

![](_page_51_Figure_0.jpeg)

![](_page_51_Figure_1.jpeg)

## CAUTION !!! EXISTING UTILITIES

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![](_page_51_Figure_6.jpeg)

![](_page_51_Figure_7.jpeg)

![](_page_52_Figure_0.jpeg)

![](_page_52_Figure_1.jpeg)

![](_page_52_Figure_3.jpeg)

EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

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![](_page_52_Figure_6.jpeg)

![](_page_52_Figure_7.jpeg)

CR 270 RV Parl

![](_page_53_Figure_0.jpeg)

Topographical survey done by Saul V. Castillo Benchmark Bench Mark - Set Iron Rod, El. 1053.00

Zone A

![](_page_53_Figure_2.jpeg)

FLOOD STATEMENT: According to Community Panel No. 48491C0455F, dated Dec 20, 2019, of the Federal Emergency Management Agency, National Flood Insurance Program Map, this property is within both Flood Zone "A" (areas determined to be within the 1% annual flood chance (100-yr flood) also knows as the base flood, but no base flood elevations is determined) and Flood Zone "X" (areas determined to be outside 500-year floodplain), which is not a special flood hazard area. If this site is not within an identified special flood hazard area, this flood statement does not imply that the property and/or the structures thereon will be free from flooding or flood damage. On rare occasions, greater floods can and will occur and flood heights may be increased by man-made or natural causes. This statement shall not create liability on the part of the Surveyor.

5.

![](_page_53_Figure_4.jpeg)

 EXISING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

CALL 1-400-344-8377 (DIG-TESS) OR OTHER UTILITY LOCATION SERVICES 48 HOURS PLIOR TO CONSTRUCTION ACTIVITY. SPIARS ENGINEERING, INC. IS NOT RESPONSIBLE FOR KNOWING ALL EXISTING UTILITIES OR DEPICTING EXACT LOCATIONS OF UTILITIES ON DRAWINGS.

![](_page_53_Picture_7.jpeg)

![](_page_53_Figure_8.jpeg)

![](_page_54_Figure_0.jpeg)

![](_page_54_Figure_1.jpeg)

## CAUTION !!! EXISTING UTILITIES

EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

CALL 1-800-344-8377 (DIG-TESS) OR OTHER UTILITY LOCATION SERVICES 48 HOURS PRIOR TO CONSTRUCTION ACTIVITY. SPIARS ENGINEERING, INC. IS NOT RESPONSIBLE FOR KNOWING ALL EXISTING UTILITIES OR DEPICTING EXACT LOCATIONS OF UTILITIES ON DRAWINGS.

![](_page_54_Picture_6.jpeg)

![](_page_54_Figure_7.jpeg)

# Zone A

Zone A

![](_page_55_Figure_0.jpeg)

# DDF VALUES FROM WILLIAMSON COUNTY

	EXHIBIT 2 - TABLE 2, DEPTH-DURATION-FREQUENCY VALUES											
SAN GABRIEL RIVER ZONE												
DURATION	2-YR	5-YR	10-YR	25-YR	50-YR	100-YR	500-YR	1000-YR				
5 MIN	0.51	0.643	0.757	0.921	1.05	1.19	1.53	1.69				
15 MIN	1.02	1.29	1.51	1.84	2.1	2.37	3.03	3.33				
1 HR	1.88	2.37	2.79	3.4	3.88	4.39	5.79	6.47				
2 HR	2.3	2.95	3.55	4.43	5.16	5.98	8.28	9.43				
3 HR	2.55	3.3	4.02	5.09	6.01	7.06	10.1	11.6				
6 HR	2.98	3.91	4.81	6.18	7.38	8.75	12.7	14.7				
12 HR	3.44	4.51	5.54	7.12	8.48	10.1	14.6	16.9				
24 HR	3.94	5.15	6.3	8.04	9.53	11.2	16.1	18.6				
<u> </u>		-	-			-	-					

# TIME OF CONCENTRATION VALUES

	_																					
Project:		<b>RV</b> Resor	t - Leand	der TX																		
CSJ:		0																				
Compute	ed by:	LM																				
Date:		1/15/2022																				
										$\mathbf{a}$	1											
					Sheet Flow					Shallow Con	centrated Flow					Open C	hannel Fl	ow				
DA	D	ELTA	L	S			P <sub>2</sub>	T.	DELTA	S	-		Т		1	0		<u> </u>	IP R	V	T-	Te
													'n .	DELIA	L	0		- VV	u 18		2 U L	ų – <u> </u>
I.D.	E	LEV.	(ft)		Surface Description	n <sub>ol</sub>	(in)	(min)	ELEV.	(ft)	Surface Description	κ	(min)	ELEV.	(ft)	3	" (fi	2) (ft	t) (ft)	fps	(min)	(min)
I.D. A	920.0	ELEV. 0 - 918.1	(ft) 100	1.90%	Surface Description Grass: short prairie	n <sub>ol</sub> 0.150	(in) 3.94	(min) 10	ELEV. 918.1 - <mark>916.0</mark>	(ft) 2.88% 72.87	Surface Description	K 16.13	(min) 1	ELEV. 916.0 -	(ft)	NA	(fi	. <sup>2</sup> ) (ft	t) (ft) NA	fps NA	(min) 0	(min) 11
I.D. A B	920.0 920.7	LEV. 0 - <mark>918.1</mark> 7 - <mark>918.9</mark>	(ft) 100 100	1.90% 1.80%	Surface Description Grass: short prairie Grass: short prairie	n <sub>ol</sub> 0.150 0.150	(in) 3.94 3.94	(min) 10 10	ELEV. 918.1 - <mark>916.0</mark> 918.9 - <mark>910.0</mark>	(ft) 2.88% 72.87 1.97% 450.7	Surface Description unpaved unpaved	K 16.13 16.13	(min) 1 4	ELEV. 916.0 - 910.0 - 904.0	(ft) 103	NA 5.83%	0.3 84	. <sup>2</sup> ) (ft	t) (ft) NA 1.5 1.4	fps NA 1.50	(min) 0 2	(min) 11 16
I.D. A B C	920.0 920.7 920.7 916.9	LEV. 0 - 918.1 7 - 918.9 9 - 913.3	(ft) 100 100 100	1.90% 1.80% 3.60%	Surface Description Grass: short prairie Grass: short prairie Grass: short prairie	n <sub>ol</sub> 0.150 0.150 0.150	(in) 3.94 3.94 3.94	(min) 10 10 7	ELEV. 918.1 - <mark>916.0</mark> 918.9 - <mark>910.0</mark> 913.3 - <mark>905.0</mark>	(ft) 2.88% 72.87 1.97% 450.7 3.63% 228.6	Surface Description unpaved unpaved 7 unpaved	K 16.13 16.13 16.13	(min) 1 4 2	ELEV. 916.0 - 910.0 - 904.0 905.0 - 903.0	(ft) 103 56	NA 5.83% 3.59%	0.3 84 0.3 33	<sup>2</sup> ) (ft .8 60 .05 33.	t) (ft) NA 1.5 1.4 .93 0.97	fps NA 1.50 0.92	(min) 0 2 2	(min) 11 16 11

# **REQUIRED DETENTION CALCULATIONS**

	Storage Sizing 100 Yr									
		CxlxA	C <sub>UND</sub> x I <sub>UND</sub> x A	DUR <sub>T</sub> x Q <sub>IN</sub> x 60	DUR <sub>T</sub> x Q <sub>OUT</sub> x 60	VOL <sub>IN</sub> - VOL <sub>OUT</sub>	0.5 (T <sub>DEV</sub> +T <sub>DUR</sub> )			
Storm (MIN)	Rainfall (IN)	Q <sub>IN</sub>	Q <sub>OUT</sub>	VOL <sub>IN</sub>	VOL <sub>OUT</sub>	VOL <sub>STG</sub>	DUR⊤			
15	2.37	8.49	20.92	7638.91	15690.83	-8051.92	12.5			
20	8.43	30.20	20.92	36244.62	18829.00	17415.62	15			
25	7.45	26.70	20.92	40046.56	21967.16	18079.40	17.5			
30	6.71	24.01	20.92	43224.80	25105.33	18119.47	20			
35	6.11	21.88	20.92	45958.14	28243.49	17714.64	22.5			
40	5.63	20.15	20.92	48358.97	31381.66	16977.31	25			
45	5.22	18.70	20.92	50502.23	34519.83	15982.40	27.5			
50	4.88	17.48	20.92	52440.25	37657.99	14782.26	30			
55	4.59	16.43	20.92	54210.96	40796.16	13414.80	32.5			
60	4.39	15.72	20.92	56598.87	43934.32	12664.54	35			
65	4.11	14.71	20.92	57357.08	47072.49	10284.59	37.5			
70	3.91	13.99	20.92	58771.15	50210.66	8560.49	40			
75	3.73	13.36	20.92	60098.38	53348.82	6749.56	42.5			
80	3.57	12.78	20.92	61349.73	56486.99	4862.74	45			

DETENTION POND WATER QUALITY STORAGE

 Onsite Hy
 Tx-Williamson County San Gabriel - NOAA 100-yr
 Duration=10 min, Inten=11.88 in/hr

 Prepared by Strong ARM Consulting LLC
 Printed 10/15/2024

 HydroCAD® 10.20-5c
 sin 12862
 2023 HydroCAD Software Solutions LLC
 Page 2

### Summary for Pond 7P: Detention Pond

Inflow Are	a =	6.279 ac,	0.00% Impervious, Inflow[
Inflow	=	29.61 cfs @	0.18 hrs, Volume=
Outflow	=	7.11 cfs @	0.37 hrs, Volume=
Primary	3 <b>8</b> 3	7.11 cfs @	0.37 hrs, Volume=

Peak Elev= 910.16' @ 0.37 hrs Surf.Area= 11,241 sf Storage= 19,876 cf Plug-Flowdetention time= 59.3 min calculated for 0.541 af (94% of inflow) Center-of-Mass det. time= 58.6 min (70.9 - 12.3)

			- 532		23
Volume	Inve	rt Avail.Sto	orage	Storage	Description
#1	908.00	0' 98,1	90 cf	Inline D	etention Po
Elevatio (feo	on S et)	Surf.Area (sq-ft)	Inc (cubi	c.Store c-feet)	Cum.S (cubic-f
908.0 909.0 910.0 911.0 911.0 911.0 911.0 913.0 914.0 915.0	00 00 00 00 00 00 00 00 00	4,761 9,890 11,543 9,669 7,464 53,373 2,877 1,987		0 7,326 10,717 10,606 8,567 30,419 28,125 2,432	7, 18, 28, 37, 67, 95, 98,
Device	Routing	Invert	Out	let Device	s
#1 #2	Primary Primary	908.29' 912.50'	<b>18.0</b> L= 1 Inlet n= 0 <b>Wie</b> Hea VVid	)" Round 13.0' CPF t / Outlet I ).013 Cor r, Cv= 2.6 nd (feet) 0 th (feet) 0	18" PVC 0 <sup>o</sup> , projectin nvert= 908 rugated P E <b>32 (C= 3.28)</b> 1.00 1.50 12.50 24.5

Primary OutFlow Max=7.11 cfs@0.37 hrs HVV=910.16' (Free Discharge) -1=18" PVC Out (Inlet Controls 7.11 cfs@4.02 fps) -2=Wier (Controls 0.00 cfs)

Pond 7P: Detention Pond

![](_page_56_Figure_14.jpeg)

# PROPOSED RUNOFF C VALUE CALCULATIONS

В C

	Runoff Coe	efficient B	reakdown				
		IMP A1	PERV A2	C1	C2	СТОТ	
١		0	0.26	0.9	0.3	0.30	
3		2.17	2.11	0.9	0.3	0.60	
2		0.56	1.43	0.9	0.3	0.47	

vDepth = 1.11" for 100-yr event 0.579 af 0.541 af, Atten= 76%, Lag= 11.8 min 0.541 af

s, dt= 0.01 hrs

Pond (Prismatic) Listed below (Recalc)

![](_page_56_Picture_23.jpeg)

hit ing, no headwall, Ke= 0.900 8.29' / 908.00' S= 0.0223 '/ Cc= 0.900 , smooth interior, Flow Area= 1.77 sf

![](_page_56_Figure_28.jpeg)

#### DRAINAGE DESIGN CRITERIA

Drainage Storm Frequency = 100 years Q<sub>100</sub> (cfs) = C x I (in/hr) x A (ac)

- Definitions: C~ Runoff Coefficient (MU-1 0.80; IR or MU-3 0.90)
- Rainfall Intensity (in/hr) ~
- A~ Drainage Area (AC)
- Q~ Runoff Rate (CFS)

#### Time of Concentration

## Calculation

Tc = Tcs + Tcsc + Tcp + Tcc

#### Definitions:

- Tc~ Time of Concentration (hr)
- Tcs~ Time of Concentration representing Sheet flow (hr) Tcsc~ Time of Concentration representing Shallow
- Concentrated flow (hr) Tcp~ Time of Concentration representing Pipe flow (hr) Tcc~ Time of Concentration representing Stream or
- Channel flow (hr)

# Sheet Flow Calculation

#### Tcs = $[0.007 \text{ x} (\text{nL})^{0.8}] / [(\text{P}_2)^{0.5} \text{ x} (\text{S}_0)^{0.4}]$

#### Definitions:

- Tcs~ Time of Concentration representing Sheet flow (hr)
- n~ Manning's roughness coefficient (0.011 Conc; 0.15 Short grass; 0.4 Woods)
- L~ Flow length ( $\leq$  100 Ft)
- $P_2 \sim 2$ -Year (50% AEP) 24-Hour Rainfall (in)
- $S_0 \sim$  Slope of land surface (ft/ft)

Channel Flow

#### Calculation

Tcc = Lc / (3600 x Vc) Vc =  $(1.49/n) \times R^{2/3} \times S^{1/2}$ 

#### Definitions:

- Tcc~ Time of Concentration representing Channel flow (hr)
- Lc~ Effective hydraulic length of ditch or channel (ft)
- Vc~Average Velocity of ditch or channel flow (ft/s)n~Manning's roughness coefficient (0.15 Short grass)R~Hydraulic Radius (ft) equal to A/Pw
- A~ Cross Sectional flow are (ft<sup>2</sup>)
- Pw~ Wetted Perimeter (ft)
- S~ Slope of the hydraulic grade line (ft/ft)

REVISIONS REVISION 14 – County Drainage Review Comments 11–27–2024 PERMIT SET – WILLIAMSON COUNTY PERMIT APPROVED 12–17–2024
APPROVALS DESIGNED HDB/LM DRAWN HDB CHECKED LM DATE LM SCALE C
SEAL FIGURE TO FIGURE TO
ARLINGTON, TX 76001 Cell: (214) 794-4436 Lmiano142@gmail.com
PREPARED BY Strong ARM Consulting Engineering Support Civil Design & Drafting 1504 Buena Vista Dr Denton, TX 76210 Cell: (360)870-3218 hboutwell@st-arm.com
5.204 Acre Tract 5.204 Acre Tract Lot 5 South Gabriel Ranches L.B. Johnson Survey Abst. 350 Williamson County, TX
CR 270 RV Park 1101 CR 270 Leander, TX Williamson County Case # SIME THE SHEET THE SHEET THE CALCULATIONS CALCULATIONS
PROJECT NO.

	WATER QUALITY CALCULATIONS																
Texas Co	ommission on Environmental Quality			PRE	EXISTING	G CONDIT	IONS RA		ALMEIH			ATIONS					
TSS Remo	oval Calculations 04-20-2009	Project Date Pre	t Name: CR 270 RV Park epared: 7/8/2024	Project: Reviewed Date:	LM 7/16/2024		Cł	R 270 RV	/ Resort - Exi	isting Con	ditions (	Pre)					
Additional	information is provided for cells with a red triangle in the u	pper right corner. Plac	ce the cursor over the	Creator	HDB											1	
<b>cell.</b> Text shown	in blue indicate location of instructions in the Technical Guidance	Manual - RG-348.		Drainage Are	a Area	C <sub>Tot</sub> I <sub>2</sub>	I <sub>5</sub>	I <sub>10</sub>	I <sub>25</sub> I <sub>1</sub>	100 A*C	C <sub>Tot</sub> Q	5 Q <sub>10</sub>	Q <sub>25</sub>	Q <sub>100</sub>	Тс	Description	
Characters Characters the spread	<mark>s shown in red are data entry fields.</mark> s shown in black (Bold) are calculated fields. Changes to th dsheet.	hese fields will remove	e the equations used in	A B C	0.26 4.28 1.99	0.30         5.34           0.30         4.43           0.30         5.34           0.30         5.34	6.72 5.63 6.72	7.66 6.41 7.66	8.96         11           7.52         9.           8.96         11           8.96         11	28         0.0           .47         1.2          28         0.6          11         2.4	08         0.5           28         7.2           50         4.0           17         20	52         0.60           23         8.24           01         4.57           85         23.76	0.70 9.66 5.35	0.88 12.16 6.74	11 16 11 14	Undeveloped lot flows to Norwood Dr Undeveloped lot flows East to onsite ditch Undeveloped lot flows West to onsite ditch	
<u>1. The Requi</u>	ired Load Reduction for the total project: Calculations	from RG-348	Pages 3-27 to 3-30		= OF CON					<u>.11   5.4</u>	+7   20.	05   23.70	27.64	55.04	14		
	Page 3-29 Equation 3.3: L <sub>M</sub> = 27.2(A <sub>N</sub> x P)	)		Project:	<u>CR 270 RV</u>	Resort											
	Required TS	S removal resulting from the	proposed development = 80%	CSJ: Computed b	N/A Dy: HDM												
where	e: $L_{M \text{ TOTAL PROJECT}} = \text{ of increased}$ $A_N = \text{Net increased}$	e in impervious area for the pr	roject	Date:	7/16/2024												
Site Data	P = Average ann	nual precipitation, inches					Sheet F	Flow					Shallo	ow Concentr	rated Flow	w Open Channel Flow	
	County = Williamson Total project area included in plan * = 7.01	n acres		DA I.D.	DELTA ELEV.	L S (ft)	Surfac	ce Descript	tion	$P_2$	T <sub>n</sub> (min)	DELTA ELEV.	S	L (ft) Sur	face Deso	T <sub>n</sub> DELTA L S n A cription <i>K</i> (min) ELEV. (ft) (ft <sup>2</sup> )	NP R V T <sub>n</sub> T <sub>c</sub> (ft) (ft) fps (min) (min)
Total p	Predevelopment impervious area within the limits of the plan * = 7.01 post-development impervious area within the limits of the plan* = 5.00	acres acres		OSA1 10 OSA2 9	009.0 - 1006.5	100         2.52%           100         1.63%	Woods: Woods:	light underk	braush C braush C	0.400         3.94           0.400         3.94	18 1 22	1006.5 - 986.6 997.3 - 973.4	6 4.54% 7.83%	439.1	unpave	Image: Construction of the second state of	4.5         1.98         4.65         13         34           118         1.42         5.92         6         30
	Total post-development impervious cover fraction * = 0.71 P = 32	inches		OSA 9	926.9 - 923.7	100 3.20%	Grass:	dense gras	sses C	0.240 3.94	11	923.7 - 923.0	3.38%	20.7	unpave	d 16.13 1 923.0 - 915.0 437 1.83% 0.08 128 0	64.5 1.98 3.96 2 <b>14</b>
	L <sub>M TOTAL PROJECT</sub> = -1750	lbs.															
* The values	s entered in these fields should be for the total project area.																
N	lumber of drainage basins / outfalls areas leaving the plan area = 1																
2 Draina go I	Pacin Parameters (This information should be provided for each basis)	<b>N</b>															
<u>z. Dramage r</u>	Drainage Basin/Outfall Area No. = B&C	<u>1.</u>															
	Total drainage basin/outfall area = 6.27	acres															
Prec Post-c	development impervious area within drainage basin/outfall area = 0.09 development impervious area within drainage basin/outfall area = 2.73	acres acres											<u> </u>	EQUIRE		TENTION CALCULATIONS	-
Post-dev	velopment impervious fraction within drainage basin/outfall area =0.44L <sub>M THIS BASIN</sub> =2298	lbs.														Storage Sizing 100 Yr	-
3. Indicate th	he proposed BMP Code for this basin.															$\begin{array}{c c c c c c c c c c c c c c c c c c c $	))
	Proposed BMP = Extended D Removal efficiency = 75	Detention											S (	Storm MIN) Rain	nfall (IN)	Q <sub>IN</sub> Q <sub>OUT</sub> VOL <sub>IN</sub> VOL <sub>OUT</sub> VOL <sub>STG</sub> DUR <sub>T</sub>	
			Aqualogic Cartridge Filter Bioretention											15 2 20 8	2.37 8.43	8.4920.927638.9115690.83-8051.9212.530.2020.9236244.6218829.0017415.6215	
			Contech StormFilter Constructed Wetland											25 7 30 6	7.45	26.70         20.92         40046.56         21967.16         18079.40         17.5           24.01         20.92         43224.80         25105.33 <b>18119.47</b> 20	-
			Extended Detention Grassy Swale											35 6	6.11 5.2	21.88         20.92         45958.14         28243.49         17714.64         22.5           20.15         20.02         48258.07         21281.66         16077.21         25	-
			Retention / Irrigation Sand Filter											45 5	5.22	20.15         20.92         48558.57         31381.00         10577.31         25           18.70         20.92         50502.23         34519.83         15982.40         27.5           17.40         20.02         52440.25         23657.00         14702.26         20	-
			Vegetated Filter Strips Vortechs											55 4	4.59	17.48         20.92         52440.23         37637.99         14782.26         30           16.43         20.92         54210.96         40796.16         13414.80         32.5           15.72         20.92         55520.97         40001.02         12001.02         55500.02	-
			Wet Basin Wet Vault	DETEN	NTION POND W	ATER QUALITY	STORAGE							60 <sup>2</sup> 65 <sup>2</sup>	4.39 4.11	15.72         20.92         56598.87         43934.32         12664.54         35           14.71         20.92         57357.08         47072.49         10284.59         37.5	-
4. Calculate	Maximum TSS Load Removed (L <sub>R</sub> ) for this Drainage Basin by the selec	cted BMP Type.		<b>H</b> (10)								and the second		70 s 75 3	3.91 3.73	13.99         20.92         587/1.15         50210.66         8560.49         40           13.36         20.92         60098.38         53348.82         6749.56         42.5	-
	RG-348 Page 3-33 Equation 3.7: L <sub>R</sub> = (BMP efficie	ncy) x P x (A <sub>1</sub> x 34.6 + A <sub>P</sub> x	0.54)	Ons Prep	ared by Tx-Will	ARM County	San Gabriel- ig LLC Midio CAD So	NOAA 10	Ю-yr Duration⊧ tions U.C	=10 min, In Prir	nted 10/15	12024		80 3	3.57	12.78 20.92 61349.73 56486.99 4862.74 45	
where	A <sub>C</sub> = Total On-Site A <sub>I</sub> = Impervious a	A <sub>C</sub> =Total On-Site drainage area in the BMP catchment areaA <sub>I</sub> =Impervious area proposed in the BMP catchment area					ary for Pond	7P: Dete	ention Pond		P	aye z					
	A <sub>P</sub> = Pervious are L <sub>R</sub> = TSS Load re	ea remaining in the BMP catc emoved from this catchment a	area by the proposed BMP	Inflov	wArea = 6.	.279ac, 0.00%	Impervious, I	nflowDept	th = 1.11" for	100-yr eve	nt						
	A <sub>c</sub> = 6.27	acres		Inflov Outfl Prima	w = 29.6 ow = 7.1 ary = 7.1	വന്ദേശു 0.18 11 cfs @ 0.37 11 cfs @ 0.37	nrs, Volume= hrs, Volume= hrs, Volume=	0. 0. 0	.579 at .541 af, Atten= .541 af	76%, Lag=	11.8 min						
	A <sub>I</sub> = <b>2.76</b> A <sub>P</sub> = <b>3.51</b>	acres		Routi	ing by Stor-Ind m	ethod, Time Spa	n= 0.00-24.00	hrs, dt= 0.	.01 hrs								
	L <sub>R</sub> = 2337	Ibs		Peak Plua-	Flowdetention til	go.orn rs Surf. ime=59.3 min ca	Hrea= 11,241 s Iculated for 0.5	জা ডtorage 541 af (94%)	s= 19,076 CT % of inflow)								
				Cente	er-of-Mass det. ti	ime≕ 58.6 min (7	(0.9 - 12.3 )	contrition									
5. Calculate	Fraction of Annual Runoff to Treat the drainage basin / outfall area			<u>voiur</u> #1	908.00'	98,190 cf	Inline Deter	ntion Pond	<b>i (Prismatic</b> ) Lis	sted below (F	Recalc)	20					
	Desired L <sub>M THIS BASIN</sub> = 2298	lbs.		Elev (	vation Sur (feet)	rf.Area In <u>(sq-ft) (cuk</u> 4.764	ic.Store bic-feet) (	Cum Store (cubic-feet)	e )								
6 Calculate	F = 0.98	utfall area Coloulations	from DC 249	90	09.00 09.00 10.00 1	9,890 11,543	7,326 10,717	7,326 18,042	6 2								
	Sapture volume required by the DMF Type for this drainage basin / OU		Trages 3-34 TO 3-36	91 91	11.00 12.00 13.00	9,669 7,464 53,373	10,606 8,567 30,419	28,648 37,215	8 5 3							Pond 7P: Detention Pond	
	Rainfall Depth =       3.33         Post Development Runoff Coefficient =       0.33	inches		91 91	14.00 15.00	2,877 1,987	28,125 2,432	95,758	, 8 0				1	ÆFF		Hydrograph	
	On-site Water Quality Volume = 24740	cubic feet		Devic	ce Routing	Invert Ou	tlet Devices	DWCART	(*)				R	G128		Inflow Area=6.279 ac	
	Calculations	from RG-348 Pages 3-36 t	to 3-37	#1	r Primary	906.29° <b>18.</b> L= Inte	13.0° CPP, pr t / Outlet Inver	rojecting, n rt= 908.29	no headwall, Ke '/908.00' S=0	e= 0.900 0.0223 1/ - Co	c= 0.900		25 26			Peak Elev=910.16'	
	Off-site area draining to BMP = 9.37	acres		#2	2 Primary	n= 912.50' Wi	0.013 Corruga er, Cv= 2.62 (C	ated PE, st C= 3.28)	mooth interior, I	FlowArea=	1.77 sf		2+ 22			Storage=19,876 cf	
	Impervious fraction of off-site area =     0.12       Off-site Runoff Coefficient =     0.15					He VVi	dth (feet) 12.5	50 24.50					2 18 8 18 16				
	Off-site Water Quality Volume = 16484	cubic feet		Prim	ary OutFlow Ma -18" PVC Out (Ir	ax=7.11 cfs @ 0.3 niet Controls 7.11	37 hrs HVV=91 I cfs@ 4.02 fp	10.16' (Fre os)	ee Discharge)				1 1+ 12				
Total C	Storage for Sediment =8245Capture Volume (required water quality volume(s) x 1.20) =49469	cubic feet		-2=	-winen (Controls	: U.UU CISJ							101				
		I		l p	ond 7P: Detenti	ion Pond				Ŵ	/ier —		+ 2				

age Area ID	Area	C <sub>Tot</sub>	l <sub>2</sub>	I <sub>5</sub>	I <sub>10</sub>	I <sub>25</sub>	I <sub>100</sub>	A*C <sub>Tot</sub>	Q <sub>5</sub>	Q <sub>10</sub>	Q <sub>25</sub>	Q <sub>100</sub>	Тс	Description
А	0.26	0.30	5.34	6.72	7.66	8.96	11.28	0.08	0.52	0.60	0.70	0.88	11	Undeveloped lot flows to Norwood Dr
В	4.28	0.30	4.43	5.63	6.41	7.52	9.47	1.28	7.23	8.24	9.66	12.16	16	Undeveloped lot flows East to onsite ditch
С	1.99	0.30	5.34	6.72	7.66	8.96	11.28	0.60	4.01	4.57	5.35	6.74	11	Undeveloped lot flows West to onsite ditch
DSA	9.37	0.37	4.75	6.01	6.85	8.03	10.11	3.47	20.85	23.76	27.84	35.04	14	Developed adjoining lots flow NW to onsite dra

ect:	CR 270 RV Resort
	NI/A

18" PVC Out

![](_page_57_Figure_17.jpeg)

### DRAINAGE DESIGN CRITERIA

Drainage Storm Frequency = 100 years Q<sub>100</sub> (cfs) = C x I (in/hr) x A (ac)

## Definitions:

- C~ Runoff Coefficient (MU-1 0.80; IR or MU-3 0.90)
- I~ Rainfall Intensity (in/hr)
- A~ Drainage Area (AC) Q~ Runoff Rate (CFS)

# Time of Concentration Calculation

## Tc = Tcs + Tcsc + Tcp + Tcc

### Definitions:

- Tc~ Time of Concentration (hr)
- Tcs~Time of Concentration representing Sheet flow (hr)Tcsc~Time of Concentration representing Shallow
- Concentrated flow (hr) Tcp~ Time of Concentration representing Pipe flow (hr) Tcc~ Time of Concentration representing Stream or Channel flow (hr)

# Sheet Flow Calculation

## Tcs = $[0.007 \text{ x} (\text{nL})^{0.8}] / [(\text{P}_2)^{0.5} \text{ x} (\text{S}_0)^{0.4}]$

## Definitions:

- Tcs~ Time of Concentration representing Sheet flow (hr)
- n~ Manning's roughness coefficient (0.011 Conc; 0.15 Short grass; 0.4 Woods) L~ Flow length (≤100 Ft)  $P_2$ ~ 2-Year (50% AEP) 24-Hour Rainfall (in)

- $S_0^2 \sim$  Slope of land surface (ft/ft)

#### Channel Flow

Calculation

#### Tcc = Lc / (3600 x Vc) Vc = $(1.49/n) \times R^{2/3} \times S^{1/2}$

#### Definitions:

- Tcc~ Time of Concentration representing Channel flow (hr)
- Lc~ Effective hydraulic length of ditch or channel (ft)
- LC~Enective hydraulic length of ditch or channel (it)Vc~Average Velocity of ditch or channel flow (ft/s)n~Manning's roughness coefficient (0.15 Short grass)R~Hydraulic Radius (ft) equal to A/PwA~Cross Sectional flow are (ft²)Pw~Wetted Perimeter (ft)S~Slope of the hydraulic grade line (ft/ft)

![](_page_57_Figure_52.jpeg)

![](_page_57_Figure_53.jpeg)

![](_page_58_Figure_0.jpeg)

![](_page_58_Figure_1.jpeg)

![](_page_59_Figure_0.jpeg)

![](_page_59_Figure_1.jpeg)

## Legend

Gravel Drive	
Concrete Drive	<u> </u>
True Grid Parking	
Fire Lane Drive w/ribbon curb	
Gravel Drive	
Existing Elevation	— — 593 — —
Existing Spot Elevation	93.0 Ex.
Existing Flow Direction	
Prop. Flow Direction	2.00%
Proposed Elevation	593
Proposed Spot Elevation	×93.0 F
Property Line	
Exist. Swale	$\rightarrow \rightarrow$
Prop. Swale	$\rightarrow \rightarrow$
High Point	· ♦·
FEMA 100 Yr. Floodplain	
Atlas 14 100 Yr Floodplain	

FLOOD STATEMENT: According to Community Panel No. 48491C0455F, dated Dec 20, 2019, of the Federal Emergency Management Agency, National Flood Insurance Program Map, this property is within both Flood Zone "A" (areas determined to be within the 1% annual flood chance (100-yr flood) also knows as the base flood, but no base flood elevations is determined) and Flood Zone "X" (areas determined to be outside 500-year floodplain), which is not a special flood hazard area. If this site is not within an identified special flood hazard area, this flood statement does not imply that the property and/or the structures thereon will be free from flooding or flood damage. On rare occasions, greater floods can and will occur and flood heights may be increased by man-made or natural causes. This statement shall not create liability on the part of the Surveyor.

Note
Topographical survey done by Saul V. Castillo
Benchmark
Bench Mark - Set Iron Rod, El. 1053.00
Specified Grades
Min. Earth Grade - 1.00%
Max. Earth Grade - 25.0%
Min. Pavement Grade - 1.0%
Min. Ditch Grade - 1.0% (regrade front to slope away both directions)
Min. Adjacent Grade - 5.0% (IRC)
Standing water shall not be allowed adjacent to the foundation.

![](_page_59_Figure_6.jpeg)

![](_page_59_Figure_7.jpeg)

![](_page_60_Figure_0.jpeg)

![](_page_60_Figure_1.jpeg)

![](_page_61_Figure_0.jpeg)

![](_page_61_Figure_3.jpeg)

![](_page_61_Picture_6.jpeg)

![](_page_61_Figure_7.jpeg)

![](_page_62_Figure_0.jpeg)

#### Topographical survey done by Saul V. Castillo Benchmark Bench Mark - Set Iron Rod, El. 1053.00 Specified Grades Min. Earth Grade - 1.00% Max. Earth Grade - 25.0% Min. Pavement Grade - 1.0% Min. Ditch Grade - 1.0% (regrade front to slope away both directions) Min. Adjacent Grade - 5.0% (IRC) Standing water shall not be allowed adjacent to the foundation. FLOOD STATEMENT: According to Community Panel No. 48491C0455F, dated Dec 20, 2019, of the Federal Emergency Management Agency, National Flood Insurance Program Map, this property is within both Flood Zone "A" (areas determined to be within the 1% annual flood chance (100-yr flood) also knows as the base flood, but no base flood elevations is determined) and Flood Zone "X" (areas determined to be outside 500-year floodplain), which is not a special flood hazard area. If this site is not within an identified special Zone A flood hazard area, this flood statement does not imply that the property and/or the structures thereon will be free from flooding or flood damage. On rare occasions, greater floods can and will occur and flood heights may be increased by man-made or natural causes. This statement shall not create liability on the part of the Surveyor. $\geq$ <u>Notes:</u> 1. ALL STANDARDS ADHERE TO WILLIAMSON COUNTY CODE. 2. TRIBUTARY 1 AND 2 BASE FLOOD ELEVATIONS 10 HAVE BEEN DETERMINED BASED ON THE ATLAS 11 14 100-YR. FLOODPLAIN STUDY PERFORMED BY LMM ENGINEERING INC. DATED 02/14/2024. 0+76.70 CULV 2 Begin 2–52" ABS Legend Atlas 14 Floodplain Gravel Drive

## Concrete Drive True Grid Parking Š Fire Lane Drive w/ribbon curb 👡 Gravel Drive Existing Elevation Existing Spot Elevation (A-23) Existing Flow Direction Prop. Flow Direction Proposed Elevation Proposed Spot Elevation 10 Property Line Prop Silt Fence کے 🖗 がHigh Point

10

A-29

× (A-31)

(A-33)

Extents

FEMA 100 YR. Floodplain Atlas 14 100 Yr. Floodplain

Constr. Ent.

Trash Bin

Storage Area

Concrete Washout

![](_page_62_Figure_8.jpeg)

2.00%

![](_page_62_Picture_10.jpeg)

![](_page_62_Picture_11.jpeg)

![](_page_62_Picture_12.jpeg)

![](_page_62_Picture_13.jpeg)

![](_page_63_Figure_0.jpeg)

OF AUSTIN ROTEDTION DEPARTMENT	SILT FENCE					
5. ht 9/1/2011 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 6425-1				

![](_page_63_Figure_9.jpeg)

- SANDBAG

303-I

REVISION 14 - County Drainage Review Comments 11–27–2024 PERMIT SET - WILLIAMSON COUNTY PERMIT APPROVED 12–17–2024	
DESIGNED HDB/LM DRAWN HDB CHECKED LM DATE SCALE	
THE SEAL OF THE SE	
ACINERED BY LMM Engineering 4414 TERRAVIEW DR. ARLINGTON, TX 76001 Cell: (214) 794-4436 Lmiano142@gmail.com	
Strong ARM Consulting Engineering Support civil Design & Drafting 1504 Buena Vista Dr Denton, TX 76210 Cell: (360)870-3218 hboutwell@st-arm.com	
5.204 Acre Tract Lot 5 South Gabriel Ranches L.B. Johnson Survey Abst. 350 Williamson County, TX	
CR 270 RV Park 1101 CR 270 Leander, TX Williamson County Case # ONTROL DETAILS CONTROL DETAILS	
PROJECT NO.	

![](_page_64_Figure_0.jpeg)

![](_page_64_Figure_1.jpeg)

**CR 270 RV F** 

![](_page_65_Picture_0.jpeg)

![](_page_65_Figure_1.jpeg)

![](_page_65_Figure_2.jpeg)

A. <u>General site data</u>	B. EROSION AND SEDIMENT CONTROLS		
5.204 Acre Tract situated in the,Lot 5 South Gabriel Ranches	1. <u>SOIL STABILIZATION PRACTICES:</u> (Select T = Temporary or P = Permanent, as applicable)		
Begin Project Coordinates : Latitude (N) : 30.602788 Longitude (W) : -97.841377			
	<u>P</u> SODDING <u> </u>		
<ul> <li>* Drainage Patterns: Drainage Area Maps C16, C17</li> <li>* Slopes Anticipated After Major Gradings or Areas of Soil Disturbance: Typical Sections C35</li> <li>* Location of Erosion and Sediment Controls: SW3P Site Map and Erosion Control Plan C30</li> <li>* Surface Waters and Discharge Locations: Drainage and Culvert Layouts C21, C20 and C19.1</li> <li>* Project Specific Location(s) (PSL): To be determined by the project Construction Personnel. Location(s) shown on SW3P Site Map (If PSL location(s) is within one mile of project) and information located in project SW3P Binder (Reference Item #10 below).</li> <li><u>PROJECT DESCRIPTION:</u> 1101 CR 270 Leander, TX, existing commercial building, recreational vehicle (RV) parking stalls, and drive aisles within the COUNTY of Williamson, TX. BEING 5.204 Acre Tract situated in the,Lot 5 South Gabriel Ranches L.B. Johnson Survey Abst. 350 COUNTY of Williamson, TX</li> <li><u>MAJOR SOIL DISTURBING ACTIVITIES:</u> On site clearing and grading.</li> </ul>	2. <u>STRUCTURAL PRACTICES:</u> (Select T = Temporary or P = Permanent, as applicable)		
	CURBS AND GUTTERS STORM SEWERS _P VELOCOUNTY CONTROL DEVICES OTHER: (Specify Practice)		
EXISTING CONDITION OF SOIL & VEGETATIVE COVER AND % OF EXISTING VEGETATIVE COVER: 9.0% Branyon Clay, 0-1% slopes, grass covered. 91.0%	NOTE: TOP OF BMP'S SHOULD NOT BE HIGHER THAN ROADWAY ELEVATION AS NOT TO FLOOD ROADWAY UNLESS PRIOR APPROVAL FROM ENGINEER IS OBTAINED.		
Houston Black Clay, 1-3% slopes, grass covered.	<ol> <li><u>STORM WATER MANAGEMENT:</u></li> <li>A. Storm water drainage will be provided by sheet flow and swales which carry drainage within the drive aisles and R.O.W. to the lows within the project site which drains to natural facilities on site.</li> </ol>		
TOTAL PROJECT AREA: 7.01 Acres	B. Other permanent erosion controls include hydraulic design to limit grading design generally consisting of 3:1 or flatter slopes with permanent vegetative cover.		
TOTAL AREA TO BE DISTURBED: 5.00 Acres (71.32%)	<ol> <li>STORM WATER MANAGEMENT ACTIVITIES: (Sequence of Construction)</li> <li><u>Phase 1:</u> Stripping and grubbing, remove all vegetation in grading areas. Stockpile reusable soil. Discathe unsuable soil offsite</li> <li><u>Phase 2</u>: Grade overall site, seed and sod slopes greater than 3:1.</li> <li><u>Phase 3</u>: Grade drive aisles and RV stalls on site, seed and sod slopes greater than 3:1, install swales culverts and detention pond where required.</li> </ol>		
WEIGHTED RUNOFF COEFFICIENT			
AFTER CONSTRUCTION: 0.30 AFTER CONSTRUCTION: 0.46	5. Filter non-storm water discharges, or hold in retention basins, before being allowed to mix with storm water. These discharges consist of, but not limited to, non-polluted ground water, spring water, foundation or footing drain water, water used for dust		
NAME OF RECEIVING WATERS:	control or pavement washing and vehicle washwater containing no detergents.		
South Fork of the San Gabriel River			

PROJECT SW3P Binder:

A. For projects disturbing one to five acres, General Contractor will maintain a SW3P Binder at the project field office (If there is not a project field office, should be kept at the Area Office) which contains the following: Index Sheet, TCEQ Signature Authority, TCEQ Small Construction Site Notice (for projects disturbing 5.0 acres or less) or TCEQ Large Construction Site Notice (for projects disturbing 5.0 acres or greater), Contractor Certification of Compliance, SW3P Inspector Qualification Statements, Inspection and Maintenance Reports (Form 2118), EPIC Sheet, SW3P Sheet, Site Location Maps, Stored Material Lists specifying associated control measures and the Appendix which contains the TPDES Construction General Permit, MS4 Operator Notification(s) and the Construction PSL Permits per all applicable requirements.

![](_page_66_Picture_32.jpeg)

3. WASTE MATERIALS:

On a daily basis, or as may be directed, collect all waste materials, trash and debris from the construction site and deposit into a metal dumpster having a secure cover and which meets all state and local COUNTY solid waste management requirements. Empty the dumpster as required by regulation, or as may be directed, at a local approved landfill site. Do not bury construction waste on the construction project site.

4. HAZARDOUS WASTE & SPILL REPORTING:

As a minimum, any products in the following categories are considered to be hazardous: Paints, Acids, Solvents, Fuels, Asphalt Products, Chemical Additives for Soil Stabilization, and Concrete Curing Compounds or Additives. When storing hazardous material on the project site, or at a Project Specific Location, take all practicable precaution to prevent and/or contain any spillage of these materials. In the event of a spill, contact the spill coordinator immediately.

5. SANITARY WASTE:

Use a licensed sanitary waste management contractor to collect all sanitary waste from portable units as may be required by local regulation, or as directed.

6. CONSTRUCTION VEHICLE TRACKING:

On a regular basis, or as may be directed, dampen haul roads for dust control and stabilize construction entrances/exits. Provide for a motorized broom or vacuum type sweeper to be available on a daily basis, or as may be directed, to remove sediment from paved roadways abutting or traversing the project site.

7. MANAGEMENT PRACTICES:

wetland, waterbody or streambed. the runoff of pollutants. that are not a part of the finished work.

F. Sediment to be removed from roadways daily or when work begins after weather events if construction activities have ceased due to weather event.

![](_page_66_Picture_45.jpeg)

![](_page_66_Picture_46.jpeg)

# C. OTHER REQUIREMENTS & PRACTICES

Maintain all erosion and sediment controls in good working order. Perform any necessary cleaning/repairs/replacements at the earliest possible date prior to next rain event, but no later than 7 calendar days, Ensure the surrounding ground has dried sufficiently to prevent damage from equipment. "Too Wet" is the only reason for not adhering to timeframes described. When construction activities permanently or temporarily cease and are not expected to resume for 14 or more days on a disturbed portion of the site, stabilization measures must be initiated immediately.

A General Contractor Inspector will perform a regularly scheduled SW3P inspection every 7 calendar days An Inspection and Maintenance Report, signed by the General Contractor Inspector and the Contractor, will be filed for each inspection. Revise/clean/repair/replace each BMP control device in accordance with the current Field Inspection and Maintenance Report (Form 2118) and Item 1 (Maintenance) above.

A. Construct disposal areas, stockpiles, haul roads and PSL's in a manner that will minimize and control the amount of sediment that may enter receiving waters. Do not locate disposal areas in any

B. Locate construction staging areas, vehicle maintenance and PSL's areas in a manner to minimize

C. When working in or near a wetland, install and maintain operating soil erosion and sediment controls at all times during construction and isolate the work from the wetland.

D. Clear all waterways as soon as practicable of temporary embankment, temporary bridges, matting, falsework, piling, debris or other obstructions placed during construction operations

E. Procedures and/or practices should be taken to control dust.

![](_page_66_Figure_58.jpeg)

# FORM TCEQ-10275:ATTACHMENT N

#### Inspection and Maintenance for BMPs

#### Daily Inspection

Inspection of silt fences and check dams to occur daily. BMPs will be inspected once a day to ensure that they are functioning properly. Any issues found with the temporary BMP will be dealt with at the time of inspection.

#### Storm Event Inspection

Before any projected storm even all BMPs, temporary and permanent, will be inspected to ensure that they will function properly during the potential storm. Any repairs needed for a BMP will be performed before the storm.

#### Weekly Inspection

Inspection of the construction entrance, concrete washout area to occur weekly. Maintain and repair any issues discovered.

#### Extended Detention Basin Inspection

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

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

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

Erosion Control. The pond side slopes, emergency spillway, and embankment all may periodically suffer from slumping and erosion, although this should not occur often if the soils are properly compacted during construction. Regrading and revegetation may be required to correct the problems. Similarly, the channel connecting an upper stage with a lower stage may periodically need to be replaced or repaired.

Structural Repairs and Replacement. With each inspection, any damage to the structural elements of the system (pipes, concrete drainage structures, retaining walls, etc.) should

be identified and repaired immediately. These repairs should include patching of cracked concrete, sealing of voids, and removal of vegetation from cracks and joints. The various inlet/outlet and riser works in a basin will eventually deteriorate and must be replaced. Public works experts have estimated that corrugated metal pipe (CMP) has a useful life of about 25 yrs., whereas reinforced concrete barrels and risers may last from 50 to 75 yr.

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

Sediment Removal. When properly designed, dry extended detention basins will accumulate quantities of sediment over time. Sediment accumulation is a serious maintenance concern in extended detention dry ponds for several reasons. First, the sediment gradually reduces available stormwater management storage capacity within the basin. Second, unlike wet extended detention basins (which have a permanent pool to conceal deposited sediments), sediment accumulation can make dry extended detention basins very unsightly. Third, and perhaps most importantly, sediment tends to accumulate around the control device. Sediment deposition increases the risk that the orifice will become clogged, and gradually reduces storage capacity reserved for pollutant removal. Sediment can also be resuspended if allowed to accumulate over time and escape through the hydraulic control to downstream channels and streams. For these reasons, accumulated sediment needs to be removed from the lower stage when sediment buildup fills 20% of the volume of the basin or at least every 10 years.

# OWNER AGREES TO ABIDE BY THE REGULATIONS IN THE APPLICATION SUBMITTED

Rosan

ROSS ROBERTSON

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т т т т

# **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: Ross Robertson

Date: 02/05/2025

Signature of Customer/Agent:

Rosan

Regulated Entity Name: 1996 Twisted R Robertson 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: <u>South Fork San Gabriel River</u>

### 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:

		<ul> <li>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.</li> <li>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.</li> <li>A description of how BMPs and measures will prevent pollutants from entering surface streams, sensitive features, or the aquifer.</li> <li>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</li> </ul>
8.	$\boxtimes$	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.
		<ul> <li>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.</li> <li>There will be no temporary sealing of naturally-occurring sensitive features on the site.</li> </ul>
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.	$\ge$	Attachment G - Drainage Area Map. A drainage area map supporting the following requirements is attached:
		<ul> <li>For areas that will have more than 10 acres within a common drainage area disturbed at one time, a sediment basin will be provided.</li> <li>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.</li> <li>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.</li> <li>There are no areas greater than 10 acres within a common drainage area that will be used in combination with other erosion and sediment controls within each 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 area.</li> </ul>

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

## Attachment A F-0602-Spill Response Actions

Should a spill of hydrocarbons or a hazardous substance occur on site the following measures shall be taken.

- Assess and identify what has spilled and the risks to personnel onsite and the environment as well as how large an area is affected by the spill. By knowing what has spilled then we can determine how to clean it up.
  - a. What type of hydrocarbon has spilled?
  - b. Where has the hydrocarbon spill occurred onsite?
  - c. What caused the hydrocarbon spill?
  - d. Can the onsite personnel control the spill?
  - e. Before cleaning up any spill always put on PPE (Personal Protective Equipment) to assure the individual cleaning up the spill is also protected.
- Secure the spilling. Communicate with onsite staff what has occurred, the location of the spill and place a barricade and signage up to mark the location of the spill.
- 3. Control the spill. Stop the spill from getting larger by turning off the source of the spill or fixing the issue which caused the spill in the first place. For example, should it be a container with a hole at the bottom of the container, patch the hole or remove and replace the container from the site with a new container.
  - a. Bunding or absorbent booms
  - b. Pads
- Now that the spill has stopped contain the spill to limit the extent of the damage. Items that can be used for containment may include sandbags, physical barriers or booms.
- 5. Absorb the spill to begin the cleanup. It is recommended to keep a spill kit on site which would be used at this point in the process. If the spill is a hydrocarbon spill, use an emulsifier agent to break down the spill for easier clean up. The spill should be converted from a liquid spill to a solid-state spill to ease the cleanup. This can be achieved by using absorbents such as booms, absorbent pads and granular absorbents.
  - a. Should the spill be a hazardous substance the response personnel may need to evacuate the area before containing and cleaning up the spill to prevent exposure from harmful vapors.
- 6. Dispose and clean up the spill and any contaminated materials. There are several methods of clean up which may be used which include the following but are not limited to the following: Vacuuming and sweeping operations, absorbent materials such as pads or booms, bagging the contaminated material and disposing via the regular waste bin. If the soil is contaminated in small amounts this may also go in a regular waste bin. After removing the spilled item and contaminated material the area must be cleaned with water or a specialized cleaning agent.
- 7. Finally decontaminate the area. This typically involves cleaning agents and disinfectants to remove any remaining traces of the spilled substance. One may also need to use pressure washers or steam cleaners to thoroughly clean the affected area and equipment. The decontamination process should be tailored to the specific type of spill encountered.

### Attachment B - F-0602-Potential Sources of Contamination

The following is a list of potential sources of contamination:

- 1. Fuel for vehicles
- 2. Oils for vehicles
- 3. Construction equipment
- 4. Onsite material storage
- 5. Cleaning compounds
- 6. Offsite material delivery by others to the site
- 7. Recreation Vehicles from clients
- 8. Paints
- 9. Fertilizers
- 10. Solvents
- 11. Pesticides

### Attachment C - F-0602-Sequence of Major Activities

### Grubbing

1 week of grubbing on 7.0 acres will occur. The area is to be stripped and grubbed before any major construction occurs on site. Installation of the silt fence, construction entrance and concrete washout pad to occur.

### Excavation

3 weeks of utility excavation and installation will occur before any major grading occurs on site and will follow OSHA guidelines.

### Grading

4 weeks of grading on 2.79 acres will be performed after the utilities are installed. Drive aisles, RV pads and detention pond will be graded to match the grading plan provided by the Engineer of Record.

## Attachment D - F-0602 Temporary Best Management Practices

Site Entry BMP - Gravel Construction Entrance.

This is the first erosion control measure on the site. This entrance will contain offsite sediments brought in by vehicular traffic to the site. The construction entrance provides access without the use of a gravel ramp or wooden curb ramp. It also prevents vehicles from tracking dirt from the site onto improved roadways. All these features prevent pollution brought onsite from entering into the surface water, groundwater and/or stormwater that originates upstream from the site.

Temporary Sediment Control (Silt) Fences.

This is the second erosion control measure on the site. Silt fences are designed and used to divert or provide a barrier to stormwater surface flows and slow the stormwater surface flow velocity coming off a project. They also capture and contain sediments onsite and limit the capacity to filter the sediment from flows. This site will install silt fences along the downstream graded and ungraded areas of the site. Including along the edge of the onsite drainage channel.

Undisturbed Vegetated Buffer

Along with Silt fences any area that is not graded along the perimeter of the site will contain an undisturbed vegetated buffer. This is a buffer or swath of preserved or established vegetation that acts as perimeter control for the project site. The rooted vegetation holds soil, acts as a wind break and filters runoff that might leave the site. Vegetation should be at least 1 inch high and provide 80% ground coverage. This BMP minimizes soil movement off-site by wind or surface runoff. It also acts as an alternative, or in certain cases, a supplemental measure to sediment barriers or sediment fence.

### Check Dams

Another temporary BMP is an instream Check Dam. Check Dams reduce the velocity of stormwater in ditches, dikes and swales. There is an onsite ditch that is small enough for check dams to be installed along. Sedimentation will be captured behind the check dam preventing it from traveling into the mainstream channel.

### Concrete Washout Area

The last onsite temporary BMP is a concrete washout area located near the construction entrance. This washout area will prevent or reduce the discharge of pollutants to stormwater from concrete waste by performing onsite washout in a designated area and training employees and subcontractors. The Concrete washout area is located 50 feet or more from any sensitive features, storm drains, open ditches or water bodies. Washout wastes into the temporary washout pit where the concrete can set, be broken apart and disposed of properly. When the washout is no longer required for the work, the hardened concrete should be removed and disposed of.

# Construction General Permit SWP3 CR 270 RV PARK Leander, TEXAS

1101 CO RD 270 Leander, TX 78641

# LMM Engineering, Inc.

4414 Terraview Dr. Arlington, TX 76001 F-19687



12/10/2024

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### 1.0 Definitions

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

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

**Common Plan of Development:** A construction activity that is completed in separate stages, separate phases, or in combination with other construction activities. A common plan of development (also known as a "common plan of development or sale") is identified by the documentation for the construction project that identifies the scope of the project, and may include plats, blueprints, marketing plans, contracts, building permits, a public notice or hearing, zoning requests, or other similar documentation and activities.

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

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

b. Large Construction Activity: Construction activities that result in land disturbance of equal to or greater than five (5) acres of land. Also includes the disturbance of less than five (5) acres of total land area that is part of a

larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than five (5) acres of land. Large construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the site

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

**Control Measure:** Any BMP, including structural and non-structural controls, or other method (including effluent limitations) used to prevent or reduce the discharge of pollutants to water in the state.

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

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

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

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

**Infeasible:** not technologically possible, or not economically practicable and achievable in light of best industry practices.

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

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

**Primary Operator:** The person(s) associated with construction activity that meets either of the following two criteria:

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

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

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

a. The employment of other operators, such as a general contractor, to perform or supervise construction activities; or

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

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

If there is not a primary operator at the construction site, then the secondary operator is defined as the primary operator and must comply with the requirements for primary operators. **Outfall:** For the purpose of permit TXR150000, a point source at the point where stormwater runoff associated with construction activity discharges to surface water in the state and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels, or other conveyances that connect segments of the same stream or other water of the U.S and are used to convey waters of the U.S.

**Point Source:** Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff (Title 40, Code of Federal Regulations, Section 122.2).5

**Pollutant:** (from Texas Water Code Section 26.001(13)6) Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, filter backwash, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into any water in the state. This term does not include tail water or runoff water from irrigation or rainwater runoff from cultivated or uncultivated rangeland, pastureland, and farmland. For the purpose of permit TXR150000, the term "pollutant" includes sediment.

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

### 2.0 Shared SWP3 Certification Signature Page

Operators of small and large construction activities must independently obtain TXR150000 authorizations but may work together with other regulated operators to prepare and implement a single, comprehensive shared SWP3. This SWP3 should clearly show which operator is responsible for completing each shared requirement of stormwater duties.

Review Primary and Secondary Operators under the Construction General Permit for Stormwater Discharges (TXR150000)7 (RG-468) for more information on the different responsibilities between primary vs. secondary operators.

If this SWP3 is shared by more than one entity, all operators need to be named below:

Signature:	Date:
Print Name:	
Job Title:	TPDES #:
Signature:	Date:
Print Name:	
Job Title:	TPDES #:
Signature:	Date:
Print Name:	
Job Title:	TPDES #:
Primary Operator(s):	
Secondary Operator(s):	

### 3.0 General Site Information

CR 270 RV Park is being developed on a 2 lot, 7.04 acre partially developed site. Construction activities expected to occur during the development of the RV park include the following:

- Land Clearing: prepare the construction site by clearing the site of vegetation, debris and any existing structures designated for demolition on the Civil Plans.
- Excavation: Identify and install essential utilities such as water, sewer, storm and electricity. This includes digging of trenches and excavation of areas where utility vaults will be laid.
- Grading: Ensure that the site is properly graded to control water flow and prevent issues related to drainage per the Civil Plans.

The onsite conditions are as follows:

- 7.04 acres of DnC soil known as Denton Silty Clay, with 3 to 5 percent slopes.
- Stormwater outfalls into an existing stormwater channel onsite which flows to the South Fork of the San Gabriel River.

### 3.1 Potential Pollutants

The following is a list of potential pollutants generated on-site during construction and their sources.

Potential Pollutants	Potential Pollutant Sources
Oil and Grease from vehicles	Grading operations
Mud from tires	Paving operations
Paint and/or Stain	Concrete Washout
Soaps and/or Solvents	Paint and Stain Washout
Concrete and/or Asphalt	Solid Waste Disposal
Sediment from disturbed soil	Dewatering Operations

### 3.2 Water Bodies Receiving Discharges

The project stormwater outfalls into an existing stormwater channel onsite which flows to the onsite detention pond. The stormwater is captured and treated onsite in a detention pond. From the detention pond the treated stormwater leaves the developed site at the Northern property corner of the project site and travels to the impaired South Fork of the San Gabriel River. According to TCEQ 2024 Texas Integrated Report - Index of Water Quality Impairments page 27, the South Fork San Gabriel River is a category 5c impaired river. This pertains to Assessment Unit (AU) IDs 1250\_01, 1250\_02 and 1250\_03. The impairment is "total solids in water" with a carry forward of "F".

### 3.3 General Site Information Worksheet(s)

Construction Start Date:\_\_\_\_\_, 202\_\_\_\_\_

Provide a general description of the construction activity:

Provide a general description of the construction materials and wastes stored onsite:

Potential Pollutants	Source
Grease, Oil, Fuel	Grading, paving, solid waste
Concrete/Asphalt	Paving, solid waste, concrete washout
Paint/Stain	Paint washout
Mud	Grading, concrete washout
Sediment	grading

Stormwater Discharge Location	Name of Receiving Water	Is the water impaired for any pollutants?
Onsite Detention Pond	South Fork San Gabriel River	No
Channel after detention pond	South Fork San Gabriel River	No

### 4.0 Schedule of Major Grading Activities

The overall project site is 7.04 acres in size but the area of proposed grading is only 5.204 acres. The site will be developed in 3 phases.

- Phase 1: Stripping and grubbing of the site. Remove all vegetation in the proposed grading areas. Stockpile any reusable soils that are designated to be removed. Discard an unusable soil offsite.
- Phase 2: Grade overall site. Seed and sod any graded slopes greater than 3:1.
- Phase 3: Final grade drive aisles, RV stalls onsite. Install proposed swales, proposed culverts, proposed headwalls and stormwater detention/retention pond where proposed. Seed and sod any graded slopes over 3:1.

### 4.1 Schedule of Sequence of Major Grading Activities Worksheet

Construction Phase Number: Phase 1		
Projected Start Date:	Project End Date:	
Acreage Disturbed: 5.204	Location:	
Responsible Party:		

Description of activity disturbing the soil:

Construction Phase Number: Phase 2	
Projected Start Date:	Project End Date:
Acreage Disturbed: 5.204	Location:
Responsible Party:	

Description of activity disturbing the soil:

Construction Phase Number: Phase 3		
Projected Start Date:	Project End Date:	
Acreage Disturbed: 5.204	Location:	
Responsible Party:		

Description of activity disturbing the soil:

	_
_	
_	

### 5.0 Acreage and Soil Type

The overall project site is 7.04 acres in size but the area of proposed grading and site work is only 5.204 acres.

Construction supported activities within the 5.204 acres include:

- Equipment staging and storage areas
- Construction materials staging and storage areas
- Chemical storage areas
- Areas where concrete or asphalt washouts and staging will be located
- Vehicle repair or fueling areas

According to the USDA Web soil survey the entire 7.04 acres of project is DnC soil known as Denton Silty Clay, with 3 to 5 percent slopes. Any site discharged soils from a storm even will be silty clay.

### 6.0 General Construction Location and Detailed Site Maps

# STATE OF TEXAS Williamson COUNTY

# CR 270 RV Park - DRAINAGE AND GRADING PLANS

### NOTES:

- New construction of any commercial, industrial, or multi-family (non-single family residential) development must be in accordance with the Williamson County Subdivision Regulations (WCSR), whether subject to platting or not. The drainage standards contained in the WCSR, as amended from time to time, are therefore incorporated by reference into this order as fully and completely as if set out verbatim herein. Per the Williamson County Subdivision Regulations, a proposed development may be considered exempt from providing on-site stormwater
- detention on "Detention Exempt Stream Reaches".
- A commercial, industrial, or multi-family development may be considered exempt from providing on-site stormwater detention if the proposed development will have less than 20% of impervious cover per lot.
- All proposed commercial, industrial, or multi-family development shall include a site plan and a Refined Drainage Report or construction plans that include all elements according to the Williamson County Subdivision Regulations.

#### Floodplain Development Permit Number:

•• Date of Permit: Fire Marshall Site/Driveway Permit Number: Project #2023-1299-DP

Foodie's Corner/ Weikel's Bakery d's Triple T 🙆 276 Bryson Rdg Tri QuikTri (183A) rtin Marietta -der Ready Mix Concrete 💽  $\mathbf{O}$ South San Gabriel Animal Clinic

# Plans of Proposed

Strong ARM Consulting with LMM Engineering Project No. 20210525

# City of Leander



# VICINITY MAP NOT TO SCALE Leander, TEXAS



Drawing Index		
Sheet Number	Sheet Title	
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C01	GENERAL NOTES	
V01	SURVEY PLAT	
C02	EXISTING SITE CONDITIONS	
C03	DEMOLITION PLAN	
C04	PRELIMINARY SITE PLAN	
C05	ENLARGED SITE PLAN 1	
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abriel C CT LEGAL Jo ഹ Lot L.B. 270 RV Park 1 CR 270 Leander, T COVER SHEET C00 OF 52 TCT NO. ➡ 20210525

## 1101 CR 270 Leander, TX

Parcel ID: 5.204 Acre Tract Lot 5 South Gabriel Ranches out of the L.B. Johnson Survey Abst. 350 City of Leander Williamson COUNTY, TX

Zoning: PD-20 ; R-D and C-C OWNER/APPLICANT/DEVELOPER

> Ross Robertson 1406 W. Park St. Cedar Park, TX 78613 Phone: 512-791-3284

> > SURVEYOR

Saul V. Castillo 1529 E I-30, Ste 106 Garland, TX 75043

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### 7.0 Site Description of Support Activities: Log Sheet

Activity	Description	Location
Paving Operations		Onsite
Concrete Washout		Onsite
Asphalt Washout		Onsite
Paint Washout		Onsite

### 8.0 Authorization Documents and Certifications

Keep all permit documents. Place a copy of each Permit document after this part in this document. Following this page should be: General Permit (TXR150000), Notice of Intent (MOI) and the acknowledgement certificate from TCEQ with our permit authorization identification number; Signatory authorization to an authorized representative (Delegation of signatories report form TCEQ-20403), Edwards Aquifer compliance documentation, TCEQ plan approval letter if applicable.

### 9.0 Pollution Prevention Measures and Controls

Best Management Practices and Sediment Controls

Allowable Non-Stormwater discharges.

### 9.1 Best Management Practices and Sediment Controls

Erosion and Stabilization Practices:

- Protect any exiting trees and vegetation to remain and not designation for demolition
- Establish temporary and permanent vegetation
- Slope texturing
- Geotextiles and sod stabilization

Good House Keeping Practices:

- Daily site sweeps during construction to pick up litter
- Strategically placed trash dumpsters
- Storage of scrap construction materials in restricted areas
- Storage of construction materials inside trailers away from storm events
- Checking of culverts and outfall devices before an expected storm event

Sediment Controls:

- Silt Fences
- Swales
- Rock Filter Dams

Permanent Stormwater Controls:

- Extended detention basin
- Velocity Control Devices

### BMP: List Sheet

BMP: Tree Protection						
Location	Date Implemented					

BMP: Rock Filter Dam						
Location	Date					
	Implemented					

BMP: Silt Fencing	
Location	Date Implemented

BMP: Extended Detention Basin						
Location	Date					
	Implemented					

BMP: Swales	
Location	Date Implemented

BMP: Velocity Control Device						
Location	Date Implemented					

### BMP: Sediment Basin List Sheet

Is the project site larger than 10 Acres?

NO

Are there sedimentation basins or traps on-site?

Yes

Approximate Installation date	
Sedimentation Basin Description	
67,633 CF Detention and	
Retention Pond in line with	
existing creek channel.	
Outlet Structure	
48" Dia CMP pipe on end with	
trash rack top. One 18" outflow	
pipe as shown on plan sheet C35.1	

Insert calculations page C18.1 from Civil Plans after this page.

exas Con	nmission on Environmental Quality						
SS Remov	al Calculations 04-20-2009			Project Name:	CR 270 RV	/ Park	
				Date Prepared:	11812024		
dditional ir	nformation is provided for cells with a red triang	le in the upp	oe <mark>r right</mark> c	orner. Place the	cursor ove	r the	
ell. extshown ir	h blue indicate location of instructions in the Technica	al Guidance N	/lanual - Ro	G-348.			
haracters	shown in red are data entry fields.						
haracters : ne spreads	shown in black (Bold) are calculated fields. Cha heet.	anges to the	se fields v	will remove the e	quations us	sed in	
The Demoin	al land Brahadian franklas fakal masia da				D 0.07 I	0.00	
	a Load Reduction for the total project:	Calculations in	om RG-348		Pages 3-27 to	0 3-30	
	Page 3-29 Equation 3.3: $L_{M}$ =	27.2(A <sub>N</sub> x P)					
		Required TSS	removal resu	Ilting from the propose	d development	: = 80%	
where:	LM TOTAL PROJECT =	Net increase in	n impervious	area for the project			
	P =	Average annua	I precipitatio	n, inches			
Site Data:	Determine Required Load Removal Based on the Entire Proje	ct					
	Total project area included in plan * =	7.01	acres				
P Total no	redevelopment impervious area within the limits of the plan * =	7.01	acres				
τοται μο	Total post-development impervious cover fraction * =	0.71	acres				
	P =	32	inches				
	LM TOTAL PROJECT =	-1750	lbs.				
The values e	entered in these fields should be for the total project area	a.					
Nur	nber of drainage basins / outfalls areas leaving the plan area =	1					
Drainage Ba	asin Parameters (This information should be provided for	each basin).					
Dramage Da							
	Drainage Basin/Outfall Area No. =	B&C					
Drada	Total drainage basin/outfall area =	6.27	acres				
Prede Post-de	velopment impervious area within drainage basin/outial area =	2.73	acres				
Post-devel	opment impervious fraction within drainage basin/outfall area =	0.44	11				
	LM THIS BASIN =	2298	IDS.				
Indicate the	proposed BMP Code for this basin.						
	Proposed BMP =	Extended De	ention				
	Removal efficiency =	75	percent		Aqualogic Ca	rtridae Fil	ter
					Bioretention		
					Contech Stor	m⊢ilter Netland	
					Extended Det	ention	
					Retention / Irr	igation	
					Sand Filter		
					Vegetated Fil	ter Strips	
					Vortechs Wet Basin		
					Wet Vault		
Calculate M	aximum ISS Load Removed (L <sub>R</sub> ) for this Drainage Basin	by the selecte	ed BMP Typ	<u>e.</u>			
	DO 240 Dave 2 22 Equation 2 7: 1	(DMD officience	y) x P x (A <sub>1</sub>	x 34.6 + A <sub>P</sub> x 0.54)			
	RG-348 Page 3-33 Equation 3.7. LR =	(BIVIP ellicienc					
where:	AG-348 Page 3-33 Equation 3.7: L <sub>R</sub> =	Total On-Site	drainage area	a in the BMP catchme	nt area		
where:	Ac = A <sub>l</sub> =	Total On-Site of Impervious are	drainage area a proposed i	a in the BMP catchme n the BMP catchment	nt area area		
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## PRE EXISTING CONDITIONS RATIONAL METHOD CALCULATIONS

CR 270 RV Resort - Existing Conditions (Pre)

Project: LM Reviewed Date:

7/16/2024 Creator HDB

age Area ID	Area	C <sub>Tot</sub>	I <sub>2</sub>	I <sub>5</sub>	I <sub>10</sub>	I <sub>25</sub>	I <sub>100</sub>	A*C <sub>Tot</sub>	Q₅	Q <sub>10</sub>	Q <sub>25</sub>	Q <sub>100</sub>	Тс	Description
А	0.26	0.30	5.34	6.72	7.66	8.96	11.28	0.08	0.52	0.60	0.70	0.88	11	Undeveloped lot flows to Norwood Dr
В	4.28	0.30	4.43	5.63	6.41	7.52	9.47	1.28	7.23	8.24	9.66	12.16	16	Undeveloped lot flows East to onsite ditch
С	1.99	0.30	5.34	6.72	7.66	8.96	11.28	0.60	4.01	4.57	5.35	6.74	11	Undeveloped lot flows West to onsite ditch
DSA	9.37	0.37	4.75	6.01	6.85	8.03	10.11	3.47	20.85	23.76	27.84	35.04	14	Developed adjoining lots flow NW to onsite dra

# TIME OF CONCENTRATION CALCULATIONS

ect:	CR 270 RV Resort
•	NI/A

Computed by: HDM

Date:	7/16/2024	

					Sheet Flow						Shallo	w Conc	entrated Flow						Open C	hannel	Flow					_
Α	DE	ELTA	L	S			$P_2$	T <sub>n</sub>	DE	LTA	S	L			T <sub>n</sub>	DEL	.TA	L	S	n	А	WP	R	V	Tn	T <sub>c</sub>
D.	ELI	EV.	(ft)		Surface Description	n <sub>ol</sub>	(in)	(min)	EL	EV.		(ft)	Surface Description	Κ	(min)	ELE	EV.	(ft)			(ft²)	(ft)	(ft)	fps	(min)	(min)
A1	1009.0	- 1006.5	100	2.52%	Woods: light underbraush	0.400	3.94	18	1006.5	- 986.6	4.54%	439.1	unpaved	16.13	3	986.6 -	899.0	3468	2.52%	0.08	128	64.5	1.98	4.65	13	34
A2	999.0	- 997.3	100	1.63%	Woods: light underbraush	0.400	3.94	22	997.3	- 973.4	7.83%	305.1	unpaved	16.13	2	973.4 -	919.7	1786	3.01%	0.06	168	118	1.42	5.92	6	30
SA	926.9	- 923.7	100	3.20%	Grass: dense grasses	0.240	3.94	11	923.7	- 923.0	3.38%	20.7	unpaved	16.13	1	923.0 -	915.0	437	1.83%	0.08	128	64.5	1.98	3.96	2	14

## **REQUIRED DETENTION CALCULATIONS**

Storage Sizing 100 Yr								
		CxlxA	C <sub>UND</sub> x I <sub>UND</sub> x A	DUR <sub>T</sub> x Q <sub>IN</sub> x 60	DUR <sub>T</sub> x Q <sub>OUT</sub> x 60			
Storm (MIN)	Rainfall (IN)	Q <sub>IN</sub>	Q <sub>OUT</sub>	VOL <sub>IN</sub>	VOL <sub>OUT</sub>			
15	2.37	8.49	20.92	7638.91	15690.83			
20	8.43	30.20	20.92	36244.62	18829.00			
25	7.45	26.70	20.92	40046.56	21967.16			
30	6.71	24.01	20.92	43224.80	25105.33			
35	6.11	21.88	20.92	45958.14	28243.49			
40	5.63	20.15	20.92	48358.97	31381.66			
45	5.22	18.70	20.92	50502.23	34519.83			
50	4.88	17.48	20.92	52440.25	37657.99			
55	4.59	16.43	20.92	54210.96	40796.16			
60	4.39	15.72	20.92	56598.87	43934.32			
65	4.11	14.71	20.92	57357.08	47072.49			
70	3.91	13.99	20.92	58771.15	50210.66			
75	3.73	13.36	20.92	60098.38	53348.82			
80	3.57	12.78	20.92	61349.73	56486.99			

DETENTION POND WATER QUALITY STORAGE

Onsite Hy Tx-Williamson County San Gabriel - NOAA 100-yr Duration=	10 min, Inten=11.88 in/hr
Prepared by Strong ARM Consulting LLC	Printed 10/15/2024
HydroCAD® 10.20-5c s/n 12862 © 2023 HydroCAD Software Solutions LLC	Page 2

Summary for Pond 7P: Detention Pond

Inflow Are	a =	6.279 ac,	0.00% Impervious, Inflov	wDepth = 1.11" for 100-yr event
Inflow	=	29.61 cfs @	0.18 hrs, Volume=	0.579 af
Outflow	=	7.11 cfs @	0.37 hrs, Volume=	0.541 af, Atten= 76%, Lag= 11.8 min
Primary	3 <b>7</b> 3	7.11 cfs @	0.37 hrs, Volume=	0.541 af
			and costrations.	Sec. 2886-167

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs Peak Elev= 910.16' @ 0.37 hrs Surf Area= 11,241 sf Storage= 19,876 cf

Plug-Flowdetention time= 59.3 min calculated for 0.541 af (94% of inflow) Center-of-Mass det. time= 58.6 min (70.9 - 12.3)

volume	Inve	ert Avail.Sto	oraqe Storaqe [	Description
#1	908.0	10' 98,1	90 cf Inline De	tention Pond (Prismatic) Listed below (Recal
Elevatio	n	Surf.Area	Inc.Store	Cum.Store
(fee	t)	(sq-ft)	(cubic-feet)	(cubic-feet)
908.0	0	4,761	0	0
909.0	0	9,890	7,326	7,326
910.0	0	11,543	10,717	18,042
911.0	0	9,669	10,606	28,648
912.0	0	7,464	8,567	37,215
913.0	0	53,373	30,419	67,633
914.0	0	2,877	28,125	95,758
915.0	0	1,987	2,432	98,190
Device	Routing	Invert	Outlet Devices	5
#1	Primary	908.29'	18.0" Round L= 13.0' CPP Inlet / Outlet In n= 0.013 Com	18" PVC Out , projecting, no headwall, Ke= 0.900 wert= 908.29' / 908.00' S= 0.0223 '/ Cc= 0.1 ugated PE, smooth interior, Flow Area= 1.77
#2	Primary	912.50	<b>Wier, Cv= 2.62</b> Head (feet) 0. Width (feet) 1.	2 (C= 3.28) 00 1.50 2.50 24.50
Primary	OutFlow "PVC Ou	Max=7.11 cfs t (Inlet Control:	@ 0.37 hrs HVV s 7.11 cfs @ 4.00	=910.16' (Free Discharge) 2 fps)

18" PVC Out,



# ainage channel

0.5
(T <sub>DEV</sub> +T <sub>DUR</sub> )
$DUR_{T}$
12.5
15
17.5
20
22.5
25
27.5
30
32.5
35
37.5
40
42.5
45

### DRAINAGE DESIGN CRITERIA

Drainage Storm Frequency = 100 years Q<sub>100</sub> (cfs) = C x I (in/hr) x A (ac)

### Definitions:

- C~ Runoff Coefficient (MU-1 0.80; IR or MU-3 0.90)
- Rainfall Intensity (in/hr) ~ A~ Drainage Area (AC)
- Q~ Runoff Rate (CFS)

### Time of Concentration

### Calculation

### Tc = Tcs + Tcsc + Tcp + Tcc

### Definitions:

- Tc~ Time of Concentration (hr)
- Tcs~ Time of Concentration representing Sheet flow (hr) Tcsc~ Time of Concentration representing Shallow
- Concentrated flow (hr)
- Tcp~ Time of Concentration representing Pipe flow (hr) Tcc~ Time of Concentration representing Stream or Channel flow (hr)

# Sheet Flow Calculation

### Tcs = $[0.007 \text{ x} (\text{nL})^{0.8}] / [(\text{P}_2)^{0.5} \text{ x} (\text{S}_0)^{0.4}]$

### Definitions:

- Tcs~ Time of Concentration representing Sheet flow (hr)
- n~ Manning's roughness coefficient (0.011 Conc; 0.15 Short grass; 0.4 Woods)
- L~ Flow length ( $\leq$  100 Ft)
- 2-Year (50% AEP) 24-Hour Rainfall (in)  $P_2 \sim$
- Slope of land surface (ft/ft) S₀~

### Channel Flow

Calculation

### Tcc = Lc / (3600 x Vc) Vc = (1.49/n) x $R^{2/3} x S^{1/2}$

### Definitions:

- Tcc~ Time of Concentration representing Channel flow (hr)
- Lc~ Effective hydraulic length of ditch or channel (ft) Vc~ Average Velocity of ditch or channel flow (ft/s)
- Manning's roughness coefficient (0.15 Short grass) n~
- Hydraulic Radius (ft) equal to A/Pw R∼
- Cross Sectional flow are (ft<sup>2</sup>) A~
- Pw~ Wetted Perimeter (ft)
- S~ Slope of the hydraulic grade line (ft/ft)



### 9.2 Allowable Non-Stormwater Discharges

Allowable non-stormwater discharges include:

- Emergency Fire-Fighting activities
- Uncontaminated Fire Hydrant flushing
- Washing vehicles, buildings or pavements without detergents or soap
- Uncontaminated water for dust control
- Flushing potable water sources
- Uncontaminated air conditioner condensate
- Uncontaminated ground or spring water
- Lawn water or similar irrigation drainage

#### Allowable Non-Stormwater Discharges:

Discharge	Pollution Prevention Measure(s)	Date of implementation

### 10.0 Periodic Inspections, Evaluations, Maintenance, and Monitoring

Record and describe your inspection and maintenance findings. Explain if any changes or updates are needed to pollution control practices. Document any adverse conditions that prevent site inspections or maintenance activities.

Be sure to keep this information up to date with your construction site. Update your SWP3 within seven days of any changes to site activities, processes, or characteristics

### 10.1 Inspect Personnel

Personnel conducting site inspections must be knowledgeable of the Construction General Permit TXR150000, the construction activities and construction support activities on-site, and this SWP3. Personnel conducting these inspections do not need to have signatory authority for inspection reports.

1. Are you knowledgeable of the Construction General Permit?

No

Yes

No

2. Are you knowledgeable of the construction activities at this site?

Yes

3. Are you knowledgeable of this SWP3?

Yes No

If you answered NO to any of the above questions, you are not qualified to conduct these inspections or evaluations.

Inspector(s):

\_\_\_\_\_

### 10.2 Observation and Evaluation of Dewatering Controls Routinely Observe and Evaluate Dewatering Controls and Record Results

Dewatering controls must be observed and evaluated once per day when dewatering discharge occurs. The observation and evaluation report should include:

- Date.
- Name(s) and title(s) of personnel.
- Estimates of the rate (in gallons per day) of discharge.
- Approximate start and end times of dewatering discharge.
- Any indications of pollutants observed at the point of discharge (e.g., color, clarity, presence of oil sheen or odor).
- Major observations such as:  $\circ$  locations where erosion and discharges of sediment or other pollutants occurred.
  - o locations needing BMP maintenance or additional BMPs.
  - o locations where BMPs failed or are inadequate.

Include descriptions of the actions taken in response to the observation and evaluation findings. Your report must contain any incidents of non-compliance. If there are not any incidents of non-compliance, the report must contain a certification that the facility or site complies with the SWP3 and this permit. The observation and evaluation report needs to be signed by personnel with signatory authority and kept within the SWP3.

### Dewatering Observation and Evaluation: Worksheets

Date of Observation and Evaluation:	Personnel Name:
Rate of Discharge Estimate (gallons per day-GPD):	Personnel Title:
Approx. Start (date and time)	Approx. End (date and time):

Observation and Evaluation Questions

1. Did you see any indications of pollutant discharge? Yes (describe below) No

describe below)	No	
•		
see any instances of	non-compliance?	
describe below)	No	
	see any instances of describe below)	see any instances of non-compliance? describe below) No

Ŋ	Yes No (describe below)
_	
_	
_	
Do Y	you recommend any corrective actions or additional control measures Yes (describe below) No
_	
_	
_	
Ι	List any other observations?
_	
_	

### **Certification Statement:**

30 TAC 305.128 "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate 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 there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature:	Date:
Printed Name:	
## 10.3 Inspection of All Controls Inspect Pollution Controls

You must inspect areas of the construction site for evidence of, or potential for, pollutant discharge. If you are unable to perform the inspection because of adverse conditions, then please fill out the adverse conditions log sheet on page 69.

Requirements for inspections:

- Inspect pollution control measures and identify locations where new or modified stormwater controls are necessary.
- Check for signs of visible erosion and sedimentation.
- Identify any incidents of non-compliance.
- Inspect locations where vehicles enter or exit the site for off-site sediment tracking.
- If an inspection is performed when discharges from the site are occurring; identify all discharge points at the site and document the visual quality of discharge (i.e., color, odor, floating, settled, or suspended solids, foam, and oil sheen).

Inspection frequency options:

- Once every fourteen days and within 24 hours of the end of a storm event of 0.5 inches or greater.
- Once a month if areas of the site meet final stabilization or have been temporarily stabilized OR if there are frozen conditions at the site preventing runoff.
- Once a month if your site is in an arid, semi-arid, or drought-stricken area and within 24 hours after the end of a storm event of 0.5 inches or greater.
- Once every seven days regardless of a storm event.

#### **Report Your Inspection Results**

Your inspection report must be completed no later than 24-hours after the inspection. Include the date(s) of the inspection, the reason for the inspection, and any major observations. Major observations must include:

- Locations where erosion and discharges of sediment or other pollutants occurred.
- Locations needing BMP maintenance or additional BMPs.
- Locations where BMPs failed or are inadequate.

Describe any actions taken based on the inspection. If there are not any incidents of non-compliance, the report must contain a certification that the site complies with the SWP3 and TXR150000. The report must be retained as part of the SWP3 and signed by personnel with signatory authority.

# Inspection Plans and Procedures: Worksheet

Inspection Information:	Reason for Inspection:
Inspector Name:	14-Day Inspection
Inspector Title:	Weekly Inspection
Inspection Date:	0.5 Inch or greater rainfall event
	Monthly Inspection

Inspection Questions:

6. Did you see any indications of pollutant discharge? Yes (describe below) No

7. Т	Did you see any erosion?		
,	Yes (describe below)	No	
8. T	Did vou see any instances of n	on-compliance?	
	Yes (describe below)	No	

RG-639 CR 270 RV Park Construction General Permit SWP3

Yes	No (describe below)
)o you recommend Yes (describe bel	any corrective actions or additional control measure ow) No
	100
List any other ob	servations?
List any other ob	servations?
List any other ob	servations?

#### **Certification Statement:**

30 TAC 305.128 "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate 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 there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature:	Date:	
Printed Name:		

#### 10.4 Adverse Conditions

#### **Document Adverse Conditions**

Document any adverse conditions that cause a delay or suspension of inspections in your SWP3.

Adverse conditions are conditions that:

- Are dangerous to personnel (such as high wind or excessive lightning).
- Prohibit access to the site (such as flooding or freezing conditions).

Documentation must include:

- Date and time of adverse conditions.
- Names of personnel that witnessed the adverse condition.
- Description of the adverse condition

#### Adverse Conditions: Log Sheet

Date:		
Time:		
Witness Name:		

Description of adverse conditions?

# Attachment J – F0602 - Schedule of Interim and Permanent Soil Stabilization practices

Interim Soil Stabilization

After the initial grading of the site mulch, sod and other vegetation will be installed to prevent soil erosion and sediment from traveling to the onsite drainage channel.

Permanent Soil Stabilization

After final grading and infrastructure is installed onsite grass, sod, vegetation and trees and shrubs will be installed to stabilize the remaining soil and prevent sediment and debris from traveling to the onsite stormwater conveyance channel. NOTICE OF INTENT (NOI)

## **Texas Commission on Environmental Quality**

**Construction Notice of Intent** 

## Site Information (Regulated Entity)

What is the name of the site to be authorized?	robertson
Does the site have a physical address?	Yes
Physical Address	
Number and Street	1101 COUNTY ROAD 270
City	LEANDER
State	ТХ
ZIP	78641
County	WILLIAMSON
Latitude (N) (##.######)	30.602405
Longitude (W) (-###.#######)	-97.840216
Primary SIC Code	
Secondary SIC Code	
Primary NAICS Code	
Secondary NAICS Code	
Regulated Entity Site Information	
What is the Regulated Entity's Number (RN)?	
What is the name of the Regulated Entity (RE)?	robertson
Does the RE site have a physical address?	Yes
Physical Address	
Number and Street	1101 COUNTY ROAD 270
City	LEANDER
State	ТХ
ZIP	78641
County	WILLIAMSON
Latitude (N) (##.######)	30.602405
Longitude (W) (-###.######)	-97.840216
Facility NAICS Code	
What is the primary business of this entity?	

# Customer (Applicant) Information

How is this applicant associated with this site?
What is the applicant's Customer Number (CN)?
Type of Customer
Full legal name of the applicant:
Legal Name
Texas SOS Filing Number
Federal Tax ID
State Franchise Tax ID
State Sales Tax ID
Local Tax ID
DUNS Number
Number of Employees

Operator

Corporation

1996 TWISTED R ROBERTSON LLC 804009174 320786123 32078612366

Independently Owned and Operated?	
I certify that the full legal name of the entity applying for this permit has been provided and is legally authorized to do business in Texas.	Yes
Responsible Authority Contact	
Organization Name	1996 TWISTED R ROBERTSON LLC
Prefix	
First	EVYN
Middle	
Last	ROBERTSON
Suffix	
Credentials	
Title	MANAGER
Responsible Authority Mailing Address	
Enter new address or copy one from list:	
Address Type	Domestic
Mailing Address (include Suite or Bldg. here, if applicable)	1406 W PARK ST
Routing (such as Mail Code, Dept., or Attn:)	
City	CEDAR PARK
State	ТХ
ZIP	78613
Phone (###-######)	5127736537
Extension	
Alternate Phone (###-#####)	
Fax (###-###-####)	
F-mail	EVYN@CMHANDLING.COM
	C
Application Contact	
Application Contact Person TCEQ should contact for questions about this application:	
Application Contact Person TCEQ should contact for questions about this application: Same as another contact?	1996 TWISTED R ROBERTSON LLC
Application Contact Person TCEQ should contact for questions about this application: Same as another contact? Organization Name	1996 TWISTED R ROBERTSON LLC 1996 TWISTED R ROBERTSON LLC
Application Contact Person TCEQ should contact for questions about this application: Same as another contact? Organization Name Prefix	1996 TWISTED R ROBERTSON LLC 1996 TWISTED R ROBERTSON LLC
Application Contact Person TCEQ should contact for questions about this application: Same as another contact? Organization Name Prefix First	1996 TWISTED R ROBERTSON LLC 1996 TWISTED R ROBERTSON LLC EVYN
Application Contact Person TCEQ should contact for questions about this application: Same as another contact? Organization Name Prefix First Middle	1996 TWISTED R ROBERTSON LLC 1996 TWISTED R ROBERTSON LLC EVYN
Application Contact Person TCEQ should contact for questions about this application: Same as another contact? Organization Name Prefix First Middle Last	1996 TWISTED R ROBERTSON LLC 1996 TWISTED R ROBERTSON LLC EVYN ROBERTSON
Application Contact Person TCEQ should contact for questions about this application: Same as another contact? Organization Name Prefix First Middle Last Suffix	1996 TWISTED R ROBERTSON LLC 1996 TWISTED R ROBERTSON LLC EVYN ROBERTSON
Application Contact Person TCEQ should contact for questions about this application: Same as another contact? Organization Name Prefix First Middle Last Suffix Credentials	1996 TWISTED R ROBERTSON LLC 1996 TWISTED R ROBERTSON LLC EVYN ROBERTSON
Application Contact Person TCEQ should contact for questions about this application: Same as another contact? Organization Name Prefix First Middle Last Suffix Credentials Title	1996 TWISTED R ROBERTSON LLC 1996 TWISTED R ROBERTSON LLC EVYN ROBERTSON MANAGER
Application Contact Person TCEQ should contact for questions about this application: Same as another contact? Organization Name Prefix First Middle Last Suffix Credentials Title Enter new address or copy one from list:	1996 TWISTED R ROBERTSON LLC 1996 TWISTED R ROBERTSON LLC EVYN ROBERTSON MANAGER
Application Contact Person TCEQ should contact for questions about this application: Same as another contact? Organization Name Prefix First Middle Last Suffix Credentials Title Enter new address or copy one from list: Mailing Address	1996 TWISTED R ROBERTSON LLC 1996 TWISTED R ROBERTSON LLC EVYN ROBERTSON MANAGER
Application Contact Person TCEQ should contact for questions about this application: Same as another contact? Organization Name Prefix First Middle Last Suffix Credentials Title Enter new address or copy one from list: Mailing Address Address Type	1996 TWISTED R ROBERTSON LLC 1996 TWISTED R ROBERTSON LLC EVYN ROBERTSON MANAGER Domestic
Application Contact Person TCEQ should contact for questions about this application: Same as another contact? Organization Name Prefix First Middle Last Suffix Credentials Title Enter new address or copy one from list: Mailing Address Address Type Mailing Address (include Suite or Bldg. here, if applicable)	1996 TWISTED R ROBERTSON LLC 1996 TWISTED R ROBERTSON LLC EVYN ROBERTSON MANAGER Domestic 1406 W PARK ST
Application Contact Person TCEQ should contact for questions about this application: Same as another contact? Organization Name Prefix First Middle Last Suffix Credentials Title Enter new address or copy one from list: Mailing Address Address Type Mailing Address (include Suite or Bldg. here, if applicable) Routing (such as Mail Code, Dept., or Attn:)	1996 TWISTED R ROBERTSON LLC 1996 TWISTED R ROBERTSON LLC EVYN ROBERTSON MANAGER Domestic 1406 W PARK ST
Application Contact Person TCEQ should contact for questions about this application: Same as another contact? Organization Name Prefix First Middle Last Suffix Credentials Title Enter new address or copy one from list: Mailing Address Address Type Mailing Address (include Suite or Bldg. here, if applicable) Routing (such as Mail Code, Dept., or Attn:) City	1996 TWISTED R ROBERTSON LLC 1996 TWISTED R ROBERTSON LLC EVYN ROBERTSON MANAGER Domestic 1406 W PARK ST CEDAR PARK
Application Contact Person TCEQ should contact for questions about this application: Same as another contact? Organization Name Prefix First Middle Last Suffix Credentials Title Enter new address or copy one from list: Mailing Address Address Type Mailing Address (include Suite or Bldg. here, if applicable) Routing (such as Mail Code, Dept., or Attn:) City State	1996 TWISTED R ROBERTSON LLC 1996 TWISTED R ROBERTSON LLC EVYN ROBERTSON MANAGER Domestic 1406 W PARK ST CEDAR PARK TX
Application Contact  Person TCEQ should contact for questions about this application: Same as another contact? Organization Name Prefix First Middle Last Suffix Credentials Title Enter new address or copy one from list: Mailing Address Address Type Mailing Address (include Suite or Bldg. here, if applicable) Routing (such as Mail Code, Dept., or Attn:) City State ZIP	1996 TWISTED R ROBERTSON LLC 1996 TWISTED R ROBERTSON LLC EVYN ROBERTSON MANAGER Domestic 1406 W PARK ST CEDAR PARK TX 78613
Application Contact  Person TCEQ should contact for questions about this application: Same as another contact? Organization Name Prefix First Middle Last Suffix Credentials Title Enter new address or copy one from list: Mailing Address Address Type Mailing Address (include Suite or Bldg. here, if applicable) Routing (such as Mail Code, Dept., or Attn:) City State ZIP Phone (####################################	1996 TWISTED R ROBERTSON LLC 1996 TWISTED R ROBERTSON LLC EVYN ROBERTSON MANAGER Domestic 1406 W PARK ST CEDAR PARK TX 78613 5127736537
Application Contact  Person TCEQ should contact for questions about this application: Same as another contact? Organization Name Prefix First Middle Last Suffix Credentials Title Enter new address or copy one from list: Mailing Address Address Type Mailing Address (include Suite or Bldg. here, if applicable) Routing (such as Mail Code, Dept., or Attn:) City State ZIP Phone (####################################	1996 TWISTED R ROBERTSON LLC 1996 TWISTED R ROBERTSON LLC EVYN ROBERTSON MANAGER Domestic 1406 W PARK ST CEDAR PARK TX 78613 5127736537

# **CNOI** General Characteristics

1 Is the project or site located on Indian Country Lands?	No
2 Is the project or site associated to a facility that is licensed for the storage of high-level radioactive waste by the United States Nuclear Regulatory Commission under 10 CFR Part 72?	No
3 Is your construction activity associated with an oil and gas exploration, production, processing, or treatment, or transmission facility?	No
4 What is the Primary Standard Industrial Classification (SIC) Code that best describes the construction activity being conducted at the site?	7033
5 If applicable, what is the Secondary SIC Code(s)?	
6 What is the total number of acres that the construction project or site will disturb under the control of the primary operator?	7
7 What is the construction project or site type?	Commercial
8 Is the project part of a larger common plan of development or sale?	No
9 What is the estimated start date of the project?	05/10/2024
10 What is the estimated end date of the project?	07/10/2024
11 Will concrete truck washout be performed at the site?	No
12 What is the name of the first water body(s) to receive the stormwater runoff or potential runoff from the site?	SOUTH FORK SAN GABRIEL RIVER
13 What is the segment number(s) of the classified water body(s) that the discharge will eventually reach?	1214
14 Is the discharge into a Municipal Separate Storm Sewer System (MS4)?	No
15 Is the discharge or potential discharge within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer, as defined in 30 TAC Chapter 213?	Yes
15.1 I certify that the copy of the TCEQ-approved Plan required by the Edwards Aquifer Rule (30 TAC Chapter 213) that is included or referenced in the Stormwater Pollution Prevention Plan will be implemented.	Yes
16 I certify that a stormwater pollution prevention plan (SWP3) has been developed, will be implemented prior to construction, and to the best of my knowledge and belief is compliant with any applicable local sediment and erosion control plans, as required in the general permit TXR150000. Note: For multiple operators who prepare a shared SWP3, the confirmation of an operator may be limited to its obligations under the SWP3 provided all obligations are confirmed by at least one operator.	Yes
17 I certify that I have obtained a copy and understand the terms and conditions of the Construction General Permit (TXR150000).	Yes
18 I understand that a Notice of Termination (NOT) must be submitted when this authorization is no longer needed.	Yes

## Certification

I certify that I am authorized under 30 Texas Administrative Code Subchapter 305.44 to sign this document and can provide documentation in proof of such authorization upon request.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate 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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

1. I am Evyn Robertson, the owner of the STEERS account ER105279.

- 2. I have the authority to sign this data on behalf of the applicant named above.
- 3. I have personally examined the foregoing and am familiar with its content and the content of any attachments, and based upon my personal knowledge and/or inquiry of any individual responsible for information contained herein, that this information is true, accurate, and complete.
- 4. I further certify that I have not violated any term in my TCEQ STEERS participation agreement and that I have no reason to believe that the confidentiality or use of my password has been compromised at any time.
- 5. I understand that use of my password constitutes an electronic signature legally equivalent to my written signature.
- 6. I also understand that the attestations of fact contained herein pertain to the implementation, oversight and enforcement of a state and/or federal environmental program and must be true and complete to the best of my knowledge.
- 7. I am aware that criminal penalties may be imposed for statements or omissions that I know or have reason to believe are untrue or misleading.
- 8. I am knowingly and intentionally signing Construction Notice of Intent.
- 9. My signature indicates that I am in agreement with the information on this form, and authorize its submittal to the TCEQ.

**OPERATOR Signature: Evyn Robertson OPERATOR** 

Customer Number:	
Legal Name:	1996 TWISTED R ROBERTSON LLC
Account Number:	ER105279
Signature IP Address:	99.46.75.124
Signature Date:	2024-05-07
Signature Hash:	72112C76464D7F599985BE9DF98F4D34D4D67BD8C2CFE2738B4D8D41AD2FFFA0
Form Hash Code at time of Signature:	8B2727123553655BC5619EDCCAA177B580A7C5089421D690649E7D9B04536773

#### Fee Payment

Transaction by:	The application fee payment transaction was made by ER105279/Evyn Robertson
Paid by:	The application fee was paid by EVYN ROBERTSON
Fee Amount:	\$225.00
Paid Date:	The application fee was paid on 2024-05-07
Transaction/Voucher number:	The transaction number is 582EA000609466 and the voucher number is 704495

#### Submission

Reference Number:	The application reference number is 652698
Submitted by:	The application was submitted by ER105279/Evyn Robertson
Submitted Timestamp:	The application was submitted on 2024-05-07 at 14:59:15 CDT
Submitted From:	The application was submitted from IP address 99.46.75.124
Confirmation Number:	The confirmation number is 539050
Steers Version:	The STEERS version is 6.74

## Additional Information

Application Creator: This account was created by Evyn Robertson

TCEQ FORM 10400



# **TCEQ Core Data Form**

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

## **SECTION I: General Information**

1. Reason for Submission (If other is checked please describe in space provided.)					
New Permit, Registration or Authorization (Core Data Form should be submitted with the program application.)					
Renewal (Core Data Form should be submitted with th	e renewal form)	Other			
2. Customer Reference Number (if issued)	Follow this link to search	3. Regulated Entity Reference Number (if issued)			
СМ	<u>Central Registry**</u>	RN			

# **SECTION II: Customer Information**

4. General Cu	istomer l	nformati	on	5. Effective Date for Customer Information Updates (mm/dd/yyyy)       1/3/25						1/3/25			
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 Custome	r Name s	ubmitted	l here may	be updated o	automatica	lly base	ed on	n what is c	urrent	and active	with th	he Texas Sec	retary of State
(SOS) or Texa	ıs Comptı	roller of P	Public Accou	ınts (CPA).									
6. Customer Legal Name (If an individual, print last name first: eg: Doe, John) <u>If new Customer, enter previous Customer below:</u>						er below:							
1996 TWISTED	R ROBERT	SON LLC											
7. TX SOS/CP	A Filing N	lumber		8. TX State	Tax ID (11 c	ligits)			9. Fe	deral Tax I	D	10. DUNS	Number (if
804009174				3207861236	6				(9 dig	gits)		applicable)	
											1		
11. Type of C	ustomer:	:	Corporat	tion				🗌 Individ	Individual Partnership: 🗌 General 🛛 Lir			eral 🔀 Limited	
Government:	City	County 🗌	Federal 🗌	Local 🛛 Stat	e 🗌 Other			Sole Pi	roprieto	orship	🗌 Ot	her:	
12. Number of	of Employ	yees							13. I	ndepender	ntly Ow	ned and Ope	erated?
⊠ 0-20 □ 2	21-100 [	101-25	0 251-	500 🗌 501	and higher				<b>X Y</b>	es	🗌 No		
14. Custome	r <b>Role</b> (Pro	oposed or a	Actual) – <i>as i</i>	t relates to the	e Regulated E	ntity lis	ted or	n this form.	Please	check one of	f the follo	owing	
Owner Occupation	al Licensee	Ope Re	rator sponsible Pa	rty	wner & Opera VCP/BSA Apj	ator olicant				🛛 Other:	MANAG	GER	
15 Mailing													
15. Walling	1406 W	PARK ST											
Address:	City	CEDAR	PARK	State TX				ZIP	7861	78613		ZIP + 4	
16. Country I	Mailing In	formatio	n (if outside	USA)			17. E-Mail Address (if applicable)						
							EVYN@CMHANDLING.COM						
18. Telephone Number 19. Extension or C			Code         20. Fax Number (if applicable)										

# **SECTION III: Regulated Entity Information**

21. General Regulated Entity Information (If 'New Regulated Entity" is selected, a new permit application is also required.)									
New Regulated Entity	Update to	Regulated Entity	Name 🛛 Update	to Regulated	Entity Infor	mation			
The Regulated Entity Nar as Inc, LP, or LLC).	The Regulated Entity Name submitted may be updated, in order to meet TCEQ Core Data Standards (removal of organizational endings such as Inc, LP, or LLC).								
22. Regulated Entity Nam	22. Regulated Entity Name (Enter name of the site where the regulated action is taking place.)								
1996 TWISTED R ROBERTSON	1								
23. Street Address of the Regulated Entity:	1055 CR 270	1055 CR 270							
<u>(No PO Boxes)</u>	City	LEANDER	State	ТХ	ZIP	78641		ZIP + 4	
24. County	WILLIAMSO	N		I	L			1	
		If no Stree	t Address is provi	ded, fields 2	5-28 are r	equired.			
25. Description to									
Physical Location:									
26. Nearest City						State		Nea	rest ZIP Code
Latitude/Longitude are re used to supply coordinate	equired and es where no	may be added/ ne have been pr	updated to meet ovided or to gain	TCEQ Core D accuracy).	ata Stand	ards. (Geod	coding of t	the Physical	Address may be
27. Latitude (N) In Decima	al:			28. Lo	ongitude (	W) In Decir	nal:		
Degrees	Minutes		Seconds	Degre	es	М	inutes		Seconds
29. Primary SIC Code	30.	Secondary SIC C	Code	<b>31. Primary NAICS Code</b>		ode	32. Secondary NAICS Code		S Code
(4 digits)	(4 di	igits)			5)		(5 or 6 d	igits)	
33. What is the Primary B	Susiness of t	his entity? (Do	not repeat the SIC c	or NAICS descri	ption.)				
33. What is the Primary B	Jusiness of t	his entity? (Do	not repeat the SIC c	or NAICS descri	ption.)				
33. What is the Primary B DEVELOPMENT 34. Mailing	Business of t	his entity? (Do ARK ST	not repeat the SIC c	nr NAICS descri	ption.)				
33. What is the Primary B DEVELOPMENT 34. Mailing Address:	Business of t	his entity? (Do NRK ST	not repeat the SIC o	or NAICS descri	ption.)				
33. What is the Primary B DEVELOPMENT 34. Mailing Address:	Business of t	his entity? (Do ARK ST CEDAR PARK	not repeat the SIC of State	TX	ption.) ZIP	78613		ZIP + 4	
33. What is the Primary E DEVELOPMENT 34. Mailing Address: 35. E-Mail Address:	Business of t	his entity? (Do ARK ST CEDAR PARK N@CMHANDLING	not repeat the SIC of State	TX	zip	78613		ZIP + 4	
<ul> <li>33. What is the Primary E</li> <li>DEVELOPMENT</li> <li>34. Mailing</li> <li>Address:</li> <li>35. E-Mail Address:</li> <li>36. Telephone Number</li> </ul>	Business of t	his entity? (Do ARK ST CEDAR PARK N@CMHANDLING	S.COM	TX Code	zIP 38.	78613 Fax Numbe	r (if applica	ZIP + 4	

**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	D PWS
Sludge	Storm Water	🗌 Title V Air	Tires	Used Oil
Voluntary Cleanup	U Wastewater	Wastewater Agriculture	Water Rights	Other:

## **SECTION IV: Preparer Information**

40. Name:	ROSS ROBERTS	SON		41. Title:	OWNER
42. Telephone	Number	43. Ext./Code	44. Fax Number	45. E-Mail /	Address
( 512 ) 773-6537			( ) -	EVYN@CMH	ANDLING.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:	1996 TWISTED R ROBERTSON LLC	Job Title:	MANAGE	2	
Name (In Print):	ROSS ROBERTSON			Phone:	( 512 ) 773- <b>6537</b>
Signature:	Rider			Date:	12/17/2024

# TCEQ FORM 0574 APPLIATION FEE

# **Application Fee Form**

Texas Commission on Environmental Quality				
Name of Proposed Regulated Entity: 1996 TWISTED R ROBERTSON LLC				
Regulated Entity Location:	1055 CR 270 Leander T	(78641		
Name of Customer:Ross Rol	BERTSON			
Contact Person:EVYN ROBERTS	son Pho	ne: 512-773-0	5537	
Customer Reference Number (if is	sued):CN			
Regulated Entity Reference Number (if issued):RN				
Austin Regional Office (3373)				
Hays	Travis		X Wi	illiamson
San Antonio Regional Office (336	2)			
Bexar	Medina		Uv 🗌	alde
Comal	Kinney			
Application fees must be paid by o	heck, certified check,	or money order,	payab	le to the Texas
Commission on Environmental Q	uality. Your canceled	check will serve	as you	r receipt. This
form must be submitted with you	ir fee payment. This p	ayment is being	submi	tted to:
Austin Regional Office		an Antonio Regi	onal O	ffice
X Mailed to: TCEQ - Cashier		vernight Delive	ry to: T	CEQ - Cashier
Revenues Section	1	2100 Park 35 Ci	rcle	
Mail Code 214	E	Building A, 3rd Fl	oor	
P.O. Box 13088	,	ustin, TX 78753		
Austin, TX 78711-3088	(	512)239-0357		
Site Location (Check All That App	ly):			
Recharge Zone	X Contributing Zone		Transi	tion Zone
Type of Plan	n	Size		Fee Due
Water Pollution Abatement Plan,	Contributing Zone			
Plan: One Single Family Residentia	I Dwelling		Acres	\$
Water Pollution Abatement Plan,	Contributing Zone			
Plan: Multiple Single Family Reside	ential and Parks		Acres	\$
Water Pollution Abatement Plan,	Contributing Zone			
Plan: Non-residential	7	acres	\$ 5000	
Sewage Collection System			L.F.	\$
Lift Stations without sewer lines			Acres	\$
Underground or Aboveground Sto	rage Tank Facility	ī	「anks	\$
Piping System(s)(only)			Each	\$
Exception			Each	\$
Extension of Time			Each	\$

Signature: \_\_\_\_\_ Date: \_\_\_\_

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