TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
CONTRIBUTING ZONE PLAN (CZP) APPLICATION

FOR

CYPRESS CREEK CHURCH
203 STILLWATER ROAD
WIMBERLEY, TEXAS

Prepared for:

Taylor Christensen
Cypress Creek Church
203 Stillwater Road
Wimberley, Texas 78676
(512)847-1222

Prepared by:

Hugo Elizondo, Jr., P.E.
Cuatro Consultants, Ltd.
120 Riverwalk Drive, Suite 208
San Marcos, Texas 78666
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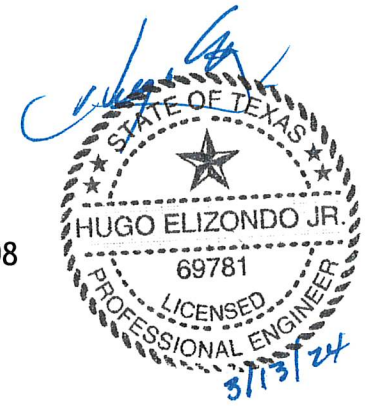


CUATRO Consultants, LTD
Firm No. F-3524

March 2024

CUATRO Consultants, LTD.
Firm Registration No. F-3524

March 11, 2024

Leah Whallon, Intake Review
TCEQ
12100 Park 35 Circle, Building A
Austin, TX 78753

RE: CYPRESS CREEK CHURCH
203 STILLWATER ROAD
WIMBERLEY, TEXAS, 78676
CCL 24-010

Subject: Contributing Zone Plan (CZP) Application

Dear Ms. Whallon:

On behalf of our Client, Cypress Creek Church, please find one (1) original of the following documents for a Contributing Zone Plan submittal for the referenced Project:

1. Edwards Aquifer Application Cover Page - TCEQ-20705

2. Contributing Zone Plan Application - TCEQ-10257
   - 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 (if OSSF is proposed)
   - Attachment G - BMPs for Upgradient Stormwater
   - Attachment H - BMPs for On-site Stormwater
   - Attachment I- Construction Plans
   - Attachment J - Inspection, Maintenance, Repair and Retrofit Plan

3. Temporary Stormwater Section - TCEQ-0602
   - Attachment A - Spill Response Actions
   - Attachment B - Potential Sources of Contamination
   - Attachment C - Sequence of Major Activities
   - Attachment D - Temporary Best Management Practices and Measures

120 Riverwalk Drive, Ste. 208, San Marcos, Texas 78666 Phone 512-312-5040

- Attachment E - Request to Temporarily Seal a Feature.
- Attachment F - Structural Practices
- Attachment G - Drainage Area Map
- Attachment I - Inspection and Maintenance for BMPs
- Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices

4. Agent Authorization Form - TCEQ-0599;

5. Application Fee Form - TCEQ-0574;

6. WPAP fee in the amount of $6,500.00;

7. Core Data Form - TCEQ-10400;

Please review and advise if you have any questions.

Sincerely,

Chris Elizondo, E.I.T., S.I.T.
Project Manager

Attachments

120 Riverwalk Drive, Ste. 208, San Marcos, Texas 78666 Phone 512-312-5040

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

The Edwards Aquifer Program staff conducts an administrative and technical review of all applications. The turnaround time for administrative review can be up to 30 days as outlined in 30 TAC 213.4(e). Generally administrative completeness is determined during the intake meeting or within a few days of receipt. The turnaround time for technical review of an administratively complete Edwards Aquifer application is 90 days as outlined in 30 TAC 213.4(e). Please know that the review and approval time is directly impacted by the quality and completeness of the initial application that is received. In order to conduct a timely review, it is imperative that the information provided in an Edwards Aquifer application include final plans, be accurate, complete, and in compliance with 30 TAC 213.

Administrative Review

1. Edwards Aquifer applications must be deemed administratively complete before a technical review can begin. To be considered administratively complete, the application must contain completed forms and attachments, provide the requested information, and meet all the site plan requirements. The submitted application and plan sheets should be final plans. Please submit one full-size set of plan sheets with the original application, and half-size sets with the additional copies.

   To ensure that all applicable documents are included in the application, the program has developed tools to guide you and web pages to provide all forms, checklists, and guidance. Please visit the below website for assistance: http://www.tceq.texas.gov/field/eapp.

2. This Edwards Aquifer Application Cover Page form (certified by the applicant or agent) must be included in the application and brought to the administrative review meeting.

3. Administrative reviews are scheduled with program staff who will conduct the review. Applicants or their authorized agent should call the appropriate regional office, according to the county in which the project is located, to schedule a review. The average meeting time is one hour.

4. In the meeting, the application is examined for administrative completeness. Deficiencies will be noted by staff and emailed or faxed to the applicant and authorized agent at the end of the meeting, or shortly after. Administrative deficiencies will cause the application to be deemed incomplete and returned.

   An appointment should be made to resubmit the application. The application is re-examined to ensure all deficiencies are resolved. The application will only be deemed administratively complete when all administrative deficiencies are addressed.

5. If an application is received by mail, courier service, or otherwise submitted without a review meeting, the administrative review will be conducted within 30 days. The applicant and agent will be contacted with the results of the administrative review. If the application is found to be administratively incomplete, it can be retrieved from the regional office or returned by regular mail. If returned by mail, the regional office may require arrangements for return shipping.

6. If the geologic assessment was completed before October 1, 2004 and the site contains "possibly sensitive" features, the assessment must be updated in accordance with the *Instructions to Geologists* (TCEQ-0585 Instructions).

Technical Review

1. When an application is deemed administratively complete, the technical review period begins. The regional office will distribute copies of the application to the identified affected city, county, and groundwater conservation district whose jurisdiction includes the subject site. These entities and the public have 30 days to provide comments on the application to the regional office. All comments received are reviewed by TCEQ.

2. A site assessment is usually conducted as part of the technical review, to evaluate the geologic assessment and observe existing site conditions. The site must be accessible to our staff. The site boundaries should be

clearly marked, features identified in the geologic assessment should be flagged, roadways marked and the alignment of the Sewage Collection System and manholes should be staked at the time the application is submitted. If the site is not marked the application may be returned.

3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.
4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

It is important to have final site plans prior to beginning the permitting process with TCEQ to avoid delays.

Occasionally, circumstances arise where you may have significant design and/or site plan changes after your Edwards Aquifer application has been deemed administratively complete by TCEQ. This is considered a "Mid-Review Modification". Mid-Review Modifications may require redistribution of an application that includes the proposed modifications for public comment.

If you are proposing a Mid-Review Modification, two options are available:

- If the technical review has begun your application can be denied/withdrawn, your fees will be forfeited, and the plan will have to be resubmitted.
- TCEQ can continue the technical review of the application as it was submitted, and a modification application can be submitted at a later time.

If the application is denied/withdrawn, the resubmitted application will be subject to the administrative and technical review processes and will be treated as a new application. The application will be redistributed to the affected jurisdictions.

Please contact the regional office if you have questions. If your project is located in Williamson, Travis, or Hays County, contact TCEQ's Austin Regional Office at 512-339-2929. If your project is in Comal, Bexar, Medina, Uvalde, or Kinney County, contact TCEQ's San Antonio Regional Office at 210-490-3096

Please fill out all required fields below and submit with your application.

1. Regulated Entity Name: CYPRESS CREEK CHURCH					**2. Regulated Entity No.:** N/A			
3. Customer Name: CYPRESS CREEK CHURCH					**4. Customer No.:** N/A			
5. Project Type: **(Please circle/check one)**	New	Modification			Extension		Exception	
6. Plan Type: **(Please circle/check one)**	WPAP	CZP	SCS	UST	AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: **(Please circle/check one)**	Residential	Non-residential				**8. Site (acres):**		24.54
9. Application Fee:	$6,500	**10. Permanent BMP(s):**				2		
11. SCS (Linear Ft.):		**12. AST/UST (No. Tanks):**				N/A		
13. County:	HAYS	**14. Watershed:**				LOWER BLANCO RIVER		

Application Distribution

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

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

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

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	X	__	__
Region (1 req.)	X	__	__
County(ies)	X	__	__
Groundwater Conservation District(s)	__Edwards Aquifer Authority __Barton Springs/ Edwards Aquifer X Hays Trinity __Plum Creek	__Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	__Austin __Buda __Dripping Springs __Kyle __Mountain City __San Marcos X 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.
CHRIS ELIZONDO, E.I.T., S.I.T. / CUATRO CONSULTANTS, LTD. Print Name of Customer/Authorized Agent
Chris Elizondo 3-11-24 Signature of Customer/Authorized Agent Date

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

Contributing Zone Plan Application

Texas Commission on Environmental Quality

for Regulated Activities on the Contributing Zone to the Edwards Aquifer and Relating to 30 TAC §213.24(1), Effective June 1, 1999

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

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

Signature

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

Print Name of Customer/Agent: CHRIS ELIZONDO, E.I.T., S.I.T.

Date: 3-11-24

Signature of Customer/Agent:

Chris Elizondo

Regulated Entity Name: CYPRESS CREEK CHURCH

Project Information

1. County: HAYS
2. Stream Basin: GUADALUPE
3. Groundwater Conservation District (if applicable): EDWARDS AQUIFER AUTHORITY & HAYS TRINITY
4. Customer (Applicant):

   Contact Person: TAYLOR CHRISTENSEN
   Entity: CYPRESS CREEK CHURCH
   Mailing Address: 203 STILLWATER ROAD
   City, State: WIMBERLEY, TX Zip: 78676
   Telephone: 512-847-1222 Fax: N/A

Email Address: tc@cypresscreekchurch.com

5. Agent/Representative (If any):

Contact Person: CHRIS ELIZONDO, E.I.T., S.I.T.
Entity: CUATRO CONSULTANTS, LTD.
Mailing Address: 120 RIVERWALK DRIVE, STE. 208
City, State: SAN MARCOS, TX Zip: 78666
Telephone: 512-810-8588 Fax: N/A
Email Address: chris@cuatroconsultants.com

6. Project Location:

☒ The project site is located inside the city limits of WIMBERLEY, TX.
☐ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.
☐ The project site is not located within any city's limits or ETJ.

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

Cypress Creek Church is locared at 203 Stillwater Road, Wimberley, Texas 78676.
The Site is a 24.54-acre tract locared at the corner of FM Road 12 and Southriver, just south of the Blanco River in Wimberley, Texas. It is currently within the city limits of the City of Wimberley and Hays County.

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

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

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

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

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

11. Existing project site conditions are noted below:

- [x] Existing commercial site
- [ ] Existing industrial site
- [ ] Existing residential site
- [ ] Existing paved and/or unpaved roads
- [ ] Undeveloped (Cleared)
- [ ] Undeveloped (Undisturbed/Not cleared)
- [ ] Other: _____

12. The type of project is:

- [ ] Residential: # of Lots: _____
- [ ] Residential: # of Living Unit Equivalents: _____
- [x] Commercial
- [ ] Industrial
- [ ] Other: _____

13. Total project area (size of site): 24.54 Acres

    Total disturbed area: 6.42 Acres

14. Estimated projected population: 1,000

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

Table 1 - Impervious Cover

Impervious Cover of Proposed Project	*Sq. Ft.*	*Sq. Ft./Acre*	*Acres*
Structures/Rooftops	5,257	÷ 43,560 =	0.12
Parking	44,990	÷ 43,560 =	1.03
Other paved surfaces	38,195	÷ 43,560 =	0.87
Total Impervious Cover	88,442	÷ 43,560 =	2.02

Total Impervious Cover 2.02 **÷ Total Acreage** 24.54 **X 100 =** 8.3**% 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.

☐ N/A

18. Type of project:

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

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

☐ Concrete
☐ Asphaltic concrete pavement
☐ Other: _____

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

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

21. Pavement Area:

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

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

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

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

☐ N/A

26. Wastewater will be disposed of by:

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

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

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

☐ Sewage Collection System (Sewer Lines):

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

☐ Existing.
☐ Proposed.

☐ N/A

Permanent Aboveground Storage Tanks(ASTs) ≥ 500 Gallons

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

☒N/A

27. Tanks and substance stored:

Table 2 - Tanks and Substance Storage

AST Number	*Size (Gallons)*	*Substance to be Stored*	*Tank Material*
1			
2			
3			
4			
5			

Total x 1.5 = _____ Gallons

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

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

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

Table 3 - Secondary Containment

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

Total: _____ Gallons

30. Piping:

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

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

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

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

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

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

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

Site Plan Requirements

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

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

    Site Plan Scale: 1" = _____'.

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.

☐ **Attachment I - 20% or Less Impervious Cover Waiver**. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.

☐ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.

☒ The site will not be used for multi-family residential developments, schools, or small business sites.

52. ☒ **Attachment J - BMPs for Upgradient Stormwater**.

☒ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.

☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.

☐ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.

53. ☒ **Attachment K - BMPs for On-site Stormwater**.

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

☐ Permanent BMPs or measures are not required to prevent pollution of surface water or groundwater that originates on-site or flows off the site, including pollution caused by contaminated stormwater runoff, and an explanation is attached.

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

☐ N/A

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

dated. Construction plans for the proposed permanent BMPs and measures are attached and include: Design calculations, TCEQ Construction Notes, all proposed structural plans and specifications, and appropriate details.

☐ N/A

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

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

☐ N/A

57. ☐ **Attachment O - Pilot-Scale Field Testing Plan**. Pilot studies for BMPs that are not recognized by the Executive Director require prior approval from the TCEQ. A plan for pilot-scale field testing is attached.

☒ N/A

58. ☐ **Attachment P - Measures for Minimizing Surface Stream Contamination**. A description of the measures that will be used to avoid or minimize surface stream contamination and changes in the way in which water enters a stream as a result of the construction and development is attached. The measures address increased stream flashing, the creation of stronger flows and in-stream velocities, and other in-stream effects caused by the regulated activity, which increase erosion that result in water quality degradation.

☒ N/A

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

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

60. ☒ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a

multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

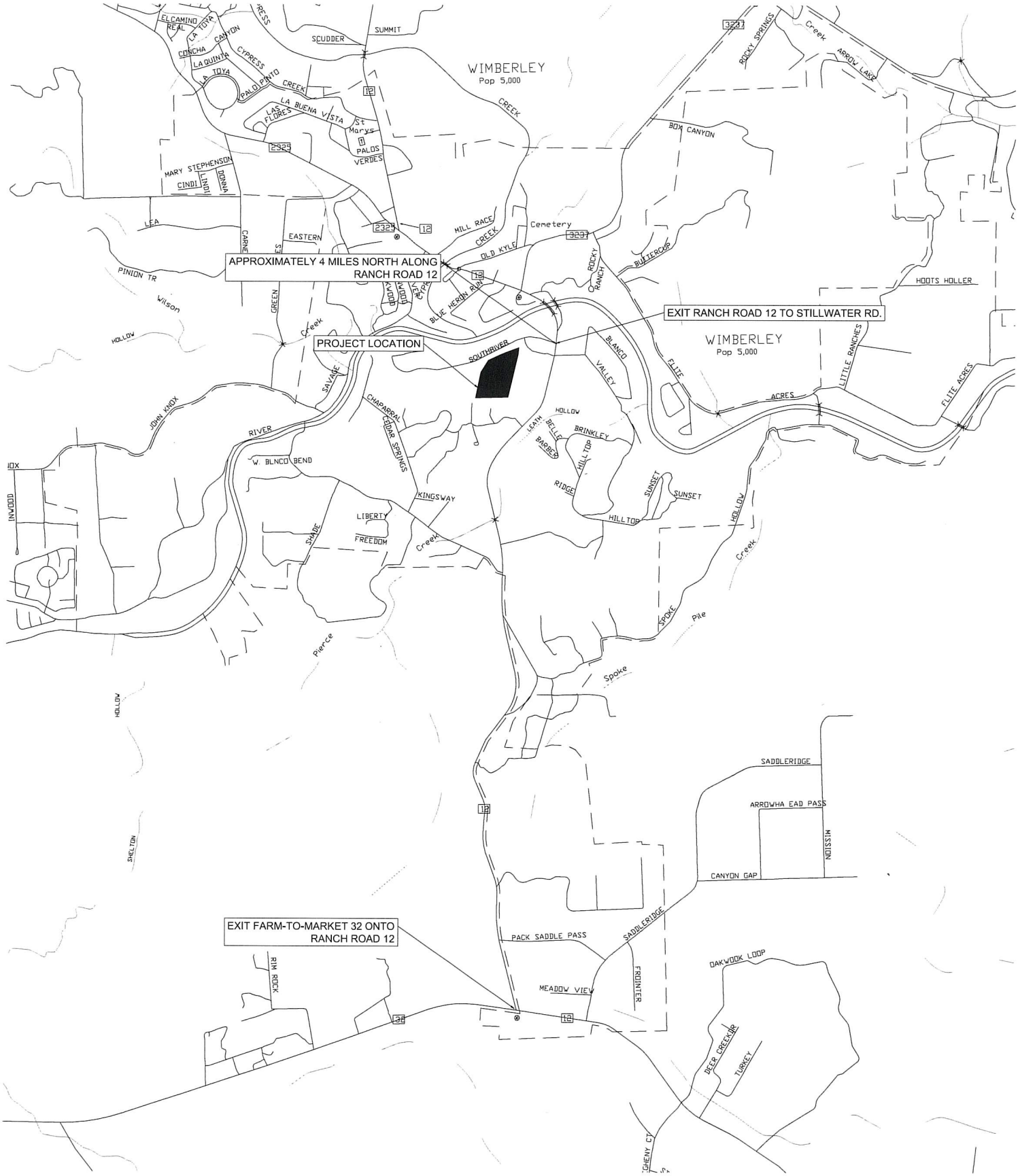
Administrative Information

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

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

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

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

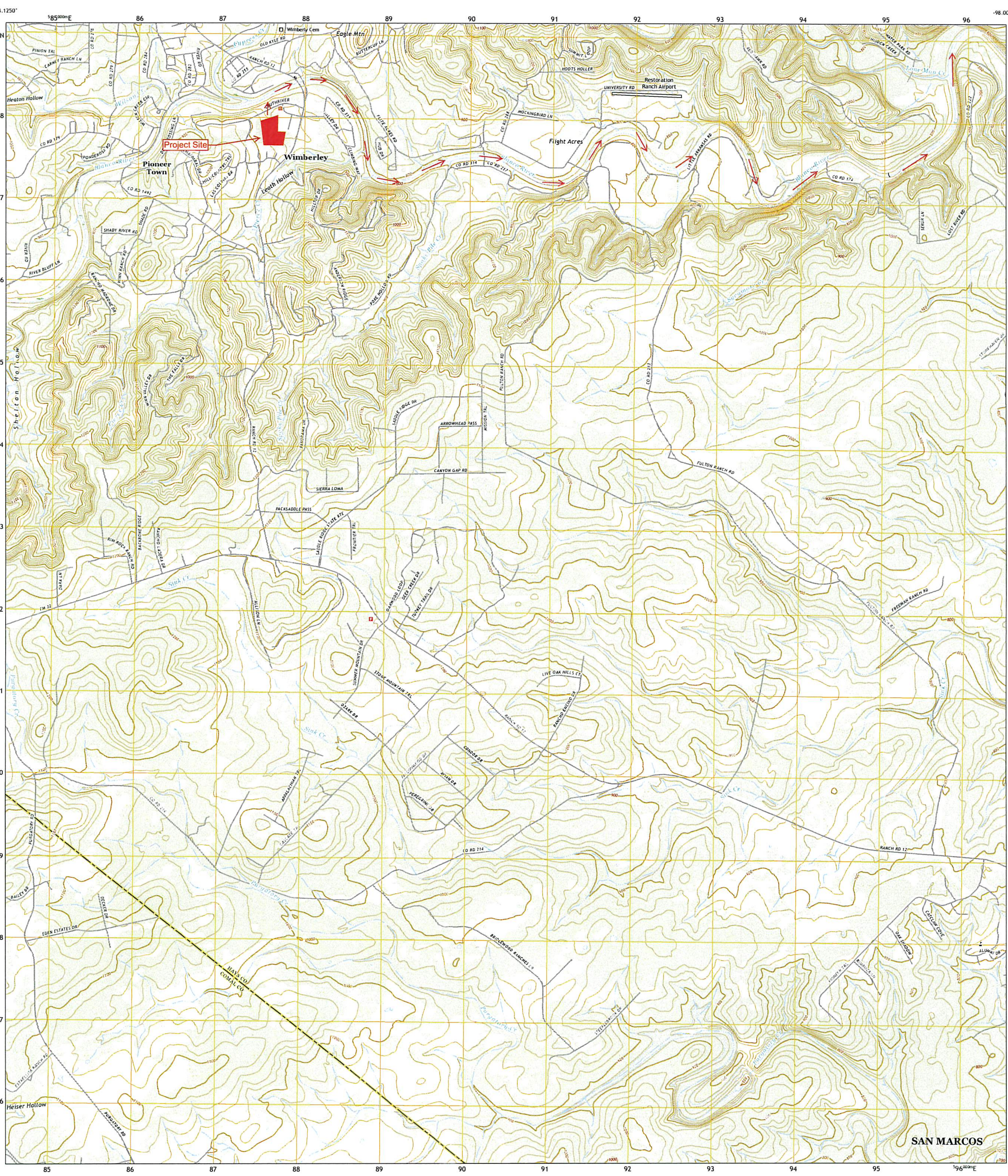


SHEET **ATTACHMENT A**	DATE: SEPTEMBER 2023 PROJECT NO.: 518.001	**ROAD MAP** **CZP APPLICATION** **TCEQ-10257 ITEM 1**	HMT ENGINEERING & SURVEYING 290 S. CASTELL AVE., STE. 100 NEW BRAUNFELS, TX 78130 TBPE FIRM F-10961 TBPLS FIRM 10153600

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

The National Map
US Topo

WIMBERLEY QUADRANGLE
TEXAS
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 14R
This map is not a legal document. Boundaries may be generalized for this map scale. Private lands within government reservations may not be shown. Obtain permission before entering private lands.

Imagery.....NAIP, September 2016 - November 2016
Roads.....U.S. Census Bureau, 2015 - 2019
Names.....GNIS, 1979 - 2022
Hydrography.....National Hydrography Dataset, 2002 - 2018
Contours.....National Elevation Dataset, 2021
Boundaries.....Multiple sources; see metadata file 2019 - 2021
Wetlands.....FWS National Wetlands Inventory Not Available

MN
GN
0°28′
8 MILS
3°54′
69 MILS
UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

U.S. National Grid
100,000 - m Square ID
NU
Grid Zone Designation
14R

SCALE 1:24 000
KILOMETERS
METERS
MILES
FEET

CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

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

TEXAS
QUADRANGLE LOCATION

1 Rough Hollow
2 Driftwood
3 Mountain City
4 Devils Backbone
5 San Marcos North
6 Sattler
7 Hunter
8 San Marcos South
ADJOINING QUADRANGLES

ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Interstate Route
Local Connector
Local Road
4WD
US Route
State Route

WIMBERLEY, TX
2022

NSN. 7643016398934
NGA REF NO. USGSX24K49366

CYPRESS CREEK CHURCH
PROJECT NARRATIVE

The subject 24.54-acre tract lies on the west side of Ranch Road 12, approximately 0.27 miles south of the Blanco River bridge. The Project site lies within the corporate limits of the City of Wimberley. The Project is bound by commercial lots to the east and large residential lots to the east, north and south.

The property is located within the Lower Blanco River watershed. This Site lies within the Contributing Zone of the Edwards Aquifer.

The existing Site is an existing church. However, the existing improvements were installed after the introduction of the Edwards Aquifer Water Quality program and is therefore not vesting. The existing improvements include 19,042 square feet of building, 97,983 square feet of parking area and an additional 40,381square feet in sidewalks and miscellaneous improvements for a total of 14.7 percent impervious cover. In the water quality calculations for this project we did not consider the existing improvements in order to account for the total impervious cover in the calculations.

The proposed church expansion includes typical commercial infrastructure. The construction of the Project will consist of pavement, buildings, potable water, an on-site septic facility, drainage facilities, and two batch detention ponds for water quality.

The proposed impervious cover consists of one additional multi-purposed building related parking and utility. Below is a summary of proposed impervious cover:

PROPOSED IMPERVIOUS COVER

• Structures/Rooftops:	
○ Buildings:	5,257 square feet
• Pavement:	
○ Fire Lane:	18,036 square feet
○ Parking Area:	44,990 square feet
• Miscellaneous:	20,159 square feet
Total Proposed Impervious Cover:	**88,441 square feet**

The overall proposed impervious cover for the Site is 19.87 percent. The project includes the demolition of a small amount of existing improvements to account for the new improvements. The current zoning for the site of “Residential Acreage” limits the impervious cover to 20.00%.

The Site has three existing drainage areas, with three offsite drainage areas totaling 24.54 acres of on-site area and an additional 37.84 acres of offsite area contribute to the stormwater runoff. The offsite impervious cover totals 6.92 acres (18.29 percent). The use of drainage and water quality facilities lengthen the times of concentration

and increase the roughness coefficient for the drainage areas. These proposed drainage improvements will control the proposed stormwater runoff to be reduced to less than or equal the existing runoff.

CYPRESS CREEK CHURCH
FACTORS AFFECTING SURFACE WATER QUALITY

FACTORS AFFECTING WATER QUALITY

Waste Disposal

All waste materials will be collected and stored in a securely lidded metal dumpster rented from a local waste management company which must be a solid waste management company licensed to do business in the State of Texas and Travis or Hays County. The dumpster will comply with all local and state solid waste management regulations.

All trash and construction debris from the site will be deposited in the dumpster. The dumpster will be emptied as required, and the trash will be hauled to a landfill approved by the State of Texas and Hays County. No construction waste materials will be buried on site. All personnel will be instructed regarding the correct procedures for waste disposal. Notices stating these practices will be posted in the job site construction office trailer, and the job site superintendent will be responsible for seeing that these procedures are followed.

Sanitary Waste

All sanitary waste will be collected from the portable units by a licensed portable facility provider in complete compliance with local and state regulations.

Off-Site Vehicle Tracking

A stabilized construction exit will be provided to help reduce vehicle tracking of sediments. The paved street adjacent to the site entrance will be inspected daily and swept as necessary to remove any excess mud, dirt, or rock tracked from the site. Dump trucks hauling material from the construction site will be covered with a tarpaulin. The job site superintendent will be responsible for seeing that these procedures are followed.

Concrete Waste From Concrete Trucks

A. Emptying of excess concrete and/or washout from concrete delivery trucks will be allowed on the job site, but only in either specifically designated diked areas which have been prepared to prevent contact between the concrete and/or washout and stormwater which will be discharged from the site or in locations where waste concrete can be poured into forms to make riprap or other useful concrete products.

B. The hardened residue from the concrete washout diked areas will be disposed of in accordance with the procedures given in the Spill Prevention Control and Countermeasures (SPCC) Plan and in accordance with applicable state and federal regulations. The job site superintendent will be responsible for seeing that these procedures are followed.

Hazardous Substances and Hazardous Waste

A. All hazardous waste materials will be disposed of in the manner specified by local, state, and/or federal regulations and by the manufacturer of such products. Site personnel will be instructed in these practices by the job site superintendent, who will also be responsible for seeing that these practices are followed. Material Safety Data Sheets (MSDS's) for each substance with hazardous properties that is used on the job site will be obtained and used for the proper management of potential wastes that may result from

these products. An MSDS will be posted in the immediate area where such product is stored and/or used and another copy of each MSDS will be maintained in the SWPPP file at the job site construction trailer office. Each employee who must handle a substance with hazardous properties will be instructed on the use of MSDS sheets and the specific information in the applicable MSDS for the product he/she is using, particularly regarding spill control techniques.

B. The contractor will implement the Spill Prevention Control and Countermeasures (SPCC) Plan found within this SWPPP and will train all personnel in the proper cleanup and handling of spilled materials. No spilled hazardous materials or hazardous wastes will be allowed to come in contact with stormwater discharges. If such contact occurs, the stormwater discharge will be contained on site until appropriate measures in compliance with state and federal regulations are taken to dispose of such contaminated stormwater. It shall be the responsibility of the job site superintendent to properly train all personnel in the use of the SPCC plan.

C. Any spills of hazardous materials which are in quantities in excess of Reportable Quantities as defined by EPA regulations shall be immediately reported to the EPA National Response Center 1-800-424-8802.

D. In order to minimize the potential for a spill of hazardous materials to come into contact with stormwater, the following steps will be implemented:

1. All materials with hazardous properties (such as pesticides, petroleum products, fertilizers, detergents, construction chemicals, acids, paints, paint solvents, cleaning solvents, additives for soil stabilization, concrete curing compounds and additives, etc.) will be stored in a secure location, under cover, when not in use.

2. The minimum practical quantity of all such materials will be kept on the job site.

3. A spill control and containment kit (containing, for example, absorbent such as kitty litter or sawdust, acid neutralizing powder, brooms, dust pans, mops, rags, gloves, goggles plastic and metal trash containers, etc.) will be provided at the storage site.

4. All of the product in a container will be used before the container is disposed of. All such containers will be triple-rinsed with water prior to disposal. The rinse water used in these containers will be disposed of in a manner in compliance with state and federal regulations and will not be allowed to mix with stormwater discharges.

5. All products will be stored in and used from the original container with the original product label.

6. All products will be used in strict compliance with instructions on the product label.

7. The disposal of excess or used products will be in strict compliance with instructions on the product label.

Contaminated Soils

A. Any contaminated soils (resulting from spills of materials with hazardous properties) which may result from construction activities will be contained and cleaned up immediately in accordance with the procedures given in the Spill Prevention Control and

Countermeasures (SPCC) Plan and in accordance with applicable state and federal regulations.

B. The job site superintendent will be responsible for seeing that these procedures are followed.

CYPRESS CREEK CHURCH
VOLUME AND CHARACTER OF STORMWATER

The existing condition volume of runoff from this Site can be described, based on SCS curve number of 77. Through the modeling of hydrograph timing and detention ponds, there is no increase in peak stormwater runoff from the site. See tables below for stormwater values.

POINT OF ANALYSIS SUMMARY TABLE						
Run-off Values	**EXISTING**			**PROPOSED**		
	POC-1	**POC-2**	**POC-3**	**POC-1**	**POC-2**	**POC-3**
2 Year	33.01	67.32	2.03	32.78	65.74	2.03
10 Year	68.56	136.69	3.59	66.85	133.80	3.59
25 Year	96.82	191.89	4.81	94.99	186.79	4.81
100 Year	151.92	299.77	7.19	151.24	292.01	7.19

CYPRESS CREEK CHURCH
SUITABILITY LETTER FROM AUTHORIZED AGENT

Hays County Development Services

2171 Yarrington Road, Suite 100, Kyle TX 78640
512-393-2150 main / 512-493-1915 fax

February 28, 2024

To Whom It May Concern:

Re: On Site Sewage Facility Suitability (OSSF) for the Cypress Creek Church located at 211 Stillwater, Wimberley, Texas 78676, parcel ID: R18562.

I have completed my preliminary review of the preliminary on-site sewage facility design for this existing church in Hays County. I concur with Greg Johnson, P.E., findings that this parcel can be adequately served by individual on-site sewage facilities. This tract of land will be served by a public water.

This review does not authorize the start of any construction and all Hays County development authorizations and subdivision requirements must be obtained before the start of any development.

Please contact me if you have any questions concerning this matter.

Sincerely,

Eric Van Gaasbeek, R.S., C.F.M.
Chief Environmental Health Specialist
Floodplain Administrator
OS# 0028967

CYPRESS CREEK CHURCH
BMP's FOR UPGRADIENT STORMWATER

Permanent BMP's or measures are not required to prevent pollution of stormwater that originates upgradient from the Site. A portion of the upgradient stormwater will be directed around the Site. The remaining portion will be treated for water quality with the onsite runoff. Moreover, the stormwater will maintain its pre-construction quality. It will continue its pre-construction flow path once it leaves the site.

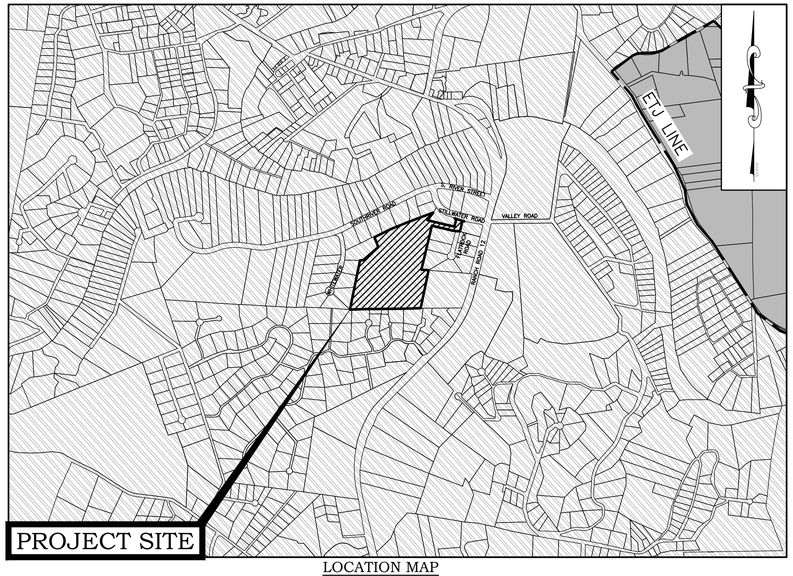
CYPRESS CREEK CHURCH
BMP's FOR ON-SITE STORMWATER

The permanent BMPs for this Project Site shall consist of two batch detention ponds to remove the required TSS. Stormwater shall be conveyed by sheet and shallow-concentrated flows, inlets, culverts, and a channel to the proposed facility. Water Quality Pond 1 is a Batch Detention Pond which is approximately 6,226 square feet with a water quality volume of approximately 7,975.13 cubic feet. Water Quality Pond 2 is a Batch Detention Pond which is approximately 19,489.06 square feet with a water quality volume of approximately 44,001.65 cubic feet.

CYPRESS CREEK CHURCH
CONSTRUCTION PLANS

CYPRESS CREEK CHURCH

SITE DEVELOPMENT PLAN
CITY OF WIMBERLEY
HAYS COUNTY, TEXAS



LOCATION MAP
1"= 1000'

PROJECT DATA:

SUBDIVISION PLAT:	N/A
SUBMITTAL DATE:	FEBRUARY, 2024
PROJECT ADDRESS:	211 STILLWATER ROAD, WIMBERLEY, TEXAS, 78676
ZONING:	RA - RESIDENTIAL ACREAGE
USE:	RELIGIOUS ASSEMBLY

RELATED CASES:
N/A

LEGAL DESCRIPTION:
BEING A 24.54 ACRE TRACT OF LAND, OUT OF THE AMASA TURNER SURVEY , ABSTRACT NO. 461, SITUATED IN HAYS COUNTY, TEXAS, CONSISTING OF THE 23.126 ACRE REMAINING PORTION OF A CALLED 24.00 ACRE TRACT, RECORDED IN VOLUME 1456, PAGE 532 OF THE OFFICIAL PUBLIC RECORD OF HAYS COUNTY, TEXAS AND A LOT, KNOWN AS LOT 60 OF THE REPLAT OF LOTS 60, 61, 85 AND 86 OF THE SOUTH RIVER SUBDIVISION, UNIT 1, AS RECORDED IN VOLUME 11, PAGE 193 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, AND CONSISTING OF THE 1.404 ACRE REMAINDER OF A CALLED 8.404 ACRE TRACT, AS RECORDED IN DOCUMENT NO. 1710393 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS.

BENCHMARKS:
TBM: TBM #50:
SET ½" "HMT" IP SET
- NORTHING: 13,908,116.94', EASTING: 2,256,185.37'
ELEVATION: 873.79'
TBM #51:
SET ½" "HMT" IP SET
- NORTHING: 13,908,570.58', EASTING: 2,256,289.81'
ELEVATION: 867.87'

GENERAL NOTES:
1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN APPROVING THESE PLANS, THE CITY OF WIMBERLEY MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. THIS PROJECT IS WITHIN THE WIMBERLEY INDEPENDENT SCHOOL DISTRICT BOUNDARIES.
3. THE PROJECT IS LOCATED OVER THE EDWARDS AQUIFER CONTRIBUTING ZONE.
4. NO PORTION OF THIS TRACT IS WITHIN THE BOUNDARIES OF A 100 YEAR FLOODPLAIN OF ANY WATERWAY THAT IS WITHIN THE STUDY LIMITS. THIS PROJECT LIES WITHIN AN AREA OF MINIMAL FLOOD HAZARD, ZONE X, AS INDICTED ON THE FEDERAL FLOOD INSURANCE ADMINISTRATION FIRM PANEL #48209C0355F DATED SEPTEMBER 2, 2005 FOR HAYS COUNTY, TEXAS.
5. THE LOCATION OF ALL EXISTING UTILITIES IS APPROXIMATE ONLY. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE EXISTING LINE LOCATIONS. THE CONTRACTOR MUST VERIFY THE LOCATION, DEPTH, AND TYPE OF ANY AND ALL BURIED UTILITIES AFFECTED BY THIS WORK. ANY DISCREPANCIES BETWEEN ACTUAL AND PLAN LOCATION OF UTILITIES SHALL BE REPORTED AND RESOLVED WITH ENGINEER PRIOR TO INITIATING WORK.
6. LIGHTING OF ALL OFF-STREET PARKING, DRIVEWAYS AND LOADING AREAS IS REQUIRED TO BE NON-FLASHING AND DIRECTED AWAY FROM ALL ABUTTING LOTS AND PUBLIC STREETS SO AS TO TO ELIMINATE OBJECTIONABLE GLARE.
7. OUTDOOR MECHANICAL EQUIPMENT SUCH AS COMPRESSORS, ABOVE GROUND UTILITY HUTS AND OTHER BUILDING SERVICE EQUIPMENT SHALL BE COMPLETELY SCREENED FROM VIEW ON ALL SIDES USING A PRIVACY FENCE, PARAPET WALL OR VEGETATIVE SCREEN.
8. ZONING IS RESIDENTIAL ACREAGE (RA) WITH ENTRANCE CORRIDOR (EC) OVERLAY DISTRICT.
9. CONTACT WIMBERLEY WATER SUPPLY CORP. AT (512) 847-2323 WHEN REQUESTING LOCATES FOR ANY W.W.S.C. OWNED UTILITIES.
10. PRE-CONSTRUCTION CONFERENCE SHALL BE SCHEDULED WITH CITY OF WIMBERLEY PLANNING AND DEVELOPMENT DEPARTMENT AT 512-648-2411.
11. ALL SIGNAGE REQUIRES SEPARATE PERMIT. APPROVAL OF THIS SITE PLAN DOES NOT CONSTITUTE APPROVAL OF SIGN LOCATIONS.

NOTE TO CONTRACTOR:
1. BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE, HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HER SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.
2. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT THE CITY OF BUDA OR THE OWNER OF EACH INDIVIDUAL UTILITY FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL UTILITY CROSSINGS PRIOR TO BEGINNING ANY CONSTRUCTION.

SHEET INDEX:

OWNER:
CYPRESS CREEK CHURCH, INC. DATE:
211 STILLWATER ROAD,
WIMBERLEY, TEXAS 78676

PREPARED BY:
HUGO ELIZONDO, JR., P.E. NO. 69781 DATE: 2/28/24
CUATRO CONSULTANTS, LTD., FIRM NO. F-3524
120 RIVER WALK DRIVE, SUITE 208
SAN MARCOS, TEXAS 78666
(512) 312-5040, EXT. 1
(512) 565-9040 (M)

STATE OF TEXAS · HUGO ELIZONDO, JR · 69781 · LICENSED PROFESSIONAL ENGINEER

REVIEWED BY:
CHAD GILPIN, P.E., CITY ENGINEER DATE:
GILPIN ENGINEERING
8908 GALLANT FOX ROAD,
AUSTIN, TEXAS 78737

NATHAN GLASIER, PLANNING & DEVELOPMENT COORDINATOR DATE:
CITY OF WIMBERLEY
DEVELOPMENT SERVICES
221 STILLWATER
WIMBERLEY, TX 78676

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF BUDA MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

UTILITIES:
WATER
WIMBERLEY WATER SUPPLY CORPORATION
110 LAPAIS
P.O BOX 10
WIMBERLEY, TX 78676
PHONE: (512) 847-2323

POWER
PEDERNALES ELECTRIC COOPERATIVE
1810 FM 150 WEST
KYLE, TX 78640
PHONE: (800) 868-4791 EXT. 7522

WASTEWATER
OSSF APPROVED BY
HAYS COUNTY

TELECOM
SPECTRUM
639 EAST HOPKINS STREET,
SAN MARCOS, TX 78666
PHONE: (737) 213-1010

CONSULTANTS:
ENGINEER
HUGO ELIZONDO, JR., P.E. NO. 69781
CUATRO CONSULTANTS, LTD., FIRM NO. F-3524
120 RIVER WALK DRIVE, SUITE 208
SAN MARCOS, TEXAS 78666
PHONE: (512) 312-5040, EXT. 1
PHONE: (512) 565-9040 (M)

SURVEYOR
HMT SURVEYING, TBPLS FIRM 1053600
290 S. CASTELL AVE., SUITE 100
NEW BRAUNFELS, TEXAS 78130
PHONE: (830) 625-8556

ARCHITECT
POWERS|GOOLSBY ARCHITECTS
1824 UNIVERSAL CITY BLVD.,
UNIVERSAL CITY, TEXAS 78148
(210) 659-0229

LANDSCAPE ARCHITECT
CHAD STRANAHAN, OWNER, PRINCIPAL
C2 LANDGROUP
317 LEXINGTON, SUITE 1
SAN ANTONIO, TEXAS 78215
(210) 269-5454

REVISIONS:
REVISIONS/ CORRECTIONS

NO.	DESCRIPTION	REVISE (R) ADD (A) VOID (V) SHEET No.'s	TOTAL NO. SHEETS IN PLAN SET	NET CHANGE IMP. COVER (sq.ft.)	TOTAL SITE IMP. COVER (sq.ft.)/ %	APPROVAL/ DATE	DATE IMAGED

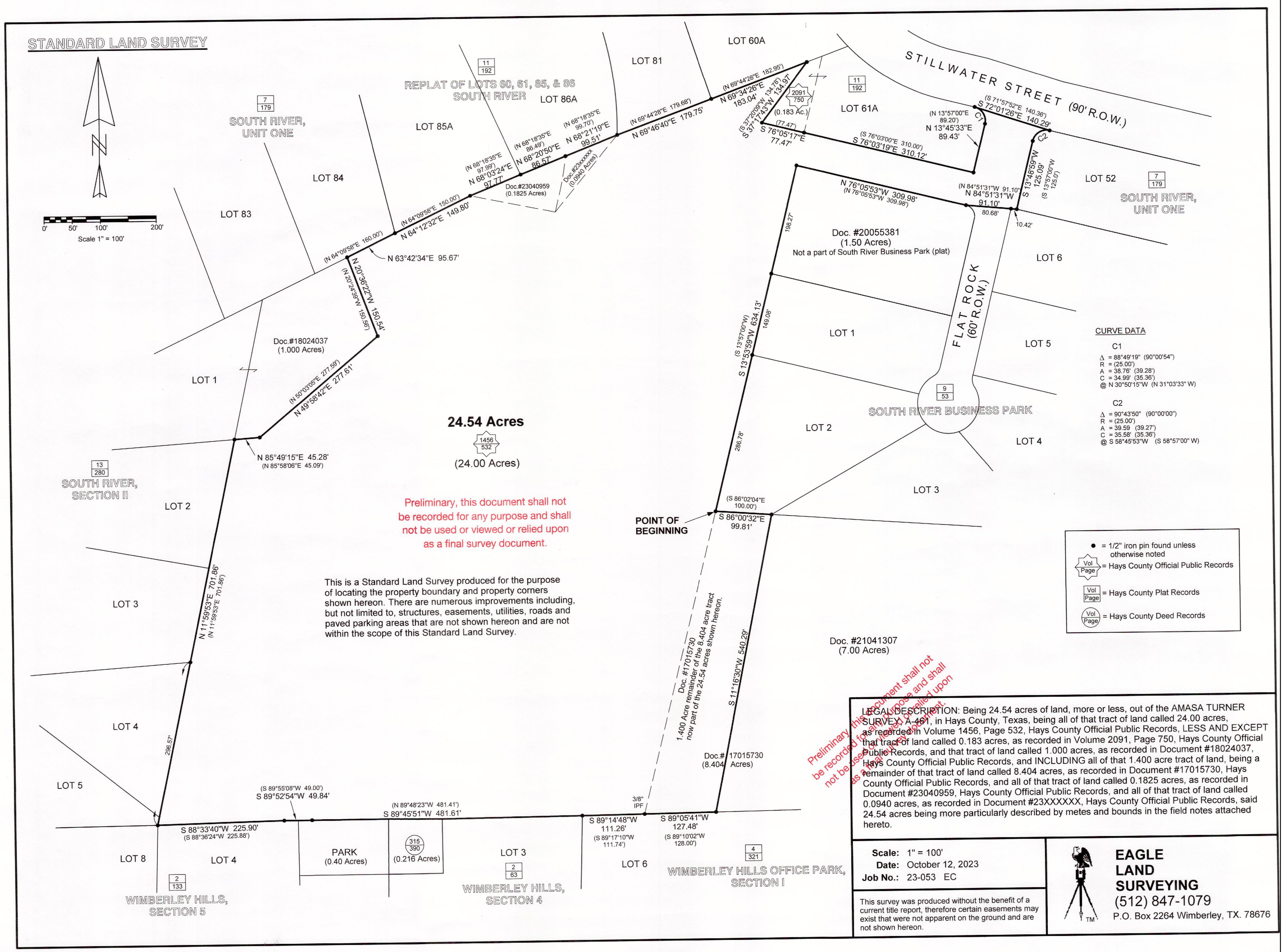
REVISION	DESCRIPTION	BY:	DATE:

CUATRO Consultants, LTD.
Registration No. F-3524
120 River Walk Drive, Ste. 208 Phone: (512) 312-5040
San Marcos, Texas 78666 e-mail: cuatro@cuatroconsultants.com

CYPRES CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE: JANUARY 2024
PROJECT: 24-010
DRAWING'S NAME: 01_CCC_COVER
DESIGN: AWE | CHECKED: CDE
DRAWN: AWE | APPROVED: HE Jr.
SHEET: 1 OF 25



DATE:	BY:	DESCRIPTION	REVISION

STATE OF TEXAS
HUGO ELIZONDO, JR.
69781
LICENSED PROFESSIONAL ENGINEER
2/28/24

CUATRO Consultants, LTD.
Registration No. F-3524
120 Riverwalk Drive, Ste. 208
San Marcos, Texas 78666
Phone: (512) 312-5040
e-mail: cuatro@cuatroconsultants.com

BOUNDARY SURVEY

CYPRES CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE: JANUARY 2024
PROJECT: 24–010
DRAWING'S NAME: 2_CCC_BOUNDARY SURVEY
DESIGN: ---
CHECKED: CDE
DRAWN: AWE
APPROVED: HE Jr.
SHEET: **2 OF 25**

GENERAL CONSTRUCTION NOTES

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF WIMBERLEY MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
2. THESE PLANS, PREPARED BY THE CITY OF WIMBERLEY DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE REGISTERED ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS HAT MAY NOR OR HEREAFTER BE INCORPORATED INTO THESE PLANS.
3. CONTRACTOR SHALL CONTACT THE CITY OF WIMBERLEY'S ENGINEER (512-587-1160) A MINIMUM OF TWO WORKING DAYS IN ADVANCE OF BLOCKING TRAFFIC LANES AND A MINIMUM OF SIX WORKING DAYS IN ADVANCE OF SCHEDULED DETOURING OF TRAFFIC LANES.
4. CONTRACTOR TO GIVE NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF PRIVATE AND PUBLIC UTILITIES AFFECTED BY HIS OPERATIONS PRIOR TO COMMENCEMENT OF WORK. CONTRACTOR TO ASSURE HIMSELF THAT ALL CONSTRUCTION PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF WORK. REQUIRED PERMITS THAT CAN BE ISSUED TO CONTRACTOR TO BE OBTAINED AT HIS EXPENSE.
5. CONTRACTOR TO COORDINATE INTERRUPTIONS OF ALL UTILITIES AND SERVICES. ALL WORK TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY COMPANY OR AGENCY INVOLVED.
6. CONTRACTOR TO LOCATE, PROTECT, AND MAINTAIN BENCHMARKS, MONUMENTS, CONTROL POINTS, AND PROJECT ENGINEERING REFERENCE POINT, REESTABLISH DISTURBED OR DESTROYED ITEMS BY REGISTERED PUBLIC LAND SURVEYOR IN THE STATE OF TEXAS, AT NO ADDITIONAL COST TO OWNER.
7. CONTRACTOR TO CONTROL DUST CAUSED BY THE WORK AND COMPLY WITH POLLUTION CONTROL REGULATIONS OF GOVERNING AUTHORITIES. DUST CONTROL SHALL BE ACHIEVED BY THE APPLICATION OF WATER BY AN APPROVED SPRINKLER IN AMOUNTS SUFFICIENT TO CONTROL THE DUST TO THE SATISFACTION OF THE ENGINEER (NO SEPARATE PAY).
8. BURNING IS NOT ALLOWED ON THIS PROJECT.
9. DEMOLITION PERMITS (IF NEEDED) ARE TO BE OBTAINED BY THE CONTRACTOR.
10. ACQUISITION OF RIGHT OF WAY AND/OR EASEMENT IS THE RESPONSIBILITY OF THE CITY OF WIMBERLEY.
11. THE CONTRACTOR IS TO OBTAIN PERMIT PRIOR TO PERFORMING ANY WORK IN THE PUBLIC RIGHT-OF-WAY.
12. CONTRACTOR SHALL REPAIR ALL STREET CROSSINGS, DRIVEWAYS AND DITCHES TO THEIR ORIGINAL CONDITION OR BETTER. STREET CROSSINGS SHALL BE REPAIRED WITHIN 10 WORKING DAYS AFTER CROSSING IS MADE, UNLESS PRIOR APPROVAL IS OBTAINED TO THE CONTRARY.
13. ALL DAMAGE CAUSED DIRECTLY OR INDIRECTLY TO THE STREET SURFACE OR SUBSURFACE OUTSIDE OF THE PAVEMENT CUT AREA SHALL BE REGARDED AS PART OF THE STREET CUT REPAIR. THIS INCLUDES ANY SCRAPES, GOUGES, CUTS, CRACKING, DEPRESSIONS AND/OR ANY OTHER DAMAGE CAUSED BY THE CONTRACTOR DURING THE EXECUTION OF THE WORK. THESE AREAS WILL BE INCLUDED IN THE TOTAL AREA OF REPAIR. THE AREAS OF REPAIR SHALL BE SAW CUT IN STRAIGHT, NEAT LINES PARALLEL TO THE UTILITY TRENCH. ALL REPAIRS SHALL BE AT THE CONTRACTOR'S EXPENSE AND SHALL MEET ALL CITY TESTING REQUIREMENTS AND SPECIFICATIONS.
14. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATION OF THE UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION. (OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENTS PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 611 EAST 6TH STREET, AUSTIN, TX.)
15. ALL SITE WORK MUST ALSO COMPLY WITH ENVIRONMENTAL REQUIREMENTS.
16. THROUGHOUT THE CONSTRUCTION, AND AT THE COMPLETION OF THE CONSTRUCTION, THE CONTRACTOR IS TO ENSURE THAT DRAINAGE OF STORM WATER RUNOFF IS NOT BLOCKED.
17. ALL EXCESS EXCAVATED MATERIAL AND SOIL IS TO BECOME PROPERTY OF CONTRACTOR AND TO BE REMOVED FROM SITE. (NO SEPARATE PAY.)
18. ALL CULVERTS REMOVED FROM CONSTRUCTION SHALL BE REPLACED TO ORIGINAL GRADE; ROAD DITCH SHALL BE GRADED TO PROVIDE FOR AN EVEN GRADE AND SECTION BETWEEN EXISTING CULVERTS. ALL CULVERTS SHALL BE CLEAN AND FREE OF DEBRIS DURING AND AFTER CONSTRUCTION.
19. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF WIMBERLEY WATER SUPPLY CORPORATION AND AQUA TEXAS AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS AND TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO PRIVATE PROPERTY, WHICH OCCURRED AS A RESULT OF ANY PORTION OF THIS PROJECT. ANY DAMAGE TO PRIVATE PROPERTY SHALL BE REPAIRED TO EQUAL OR BETTER CONDITION. THE CONTRACTOR SHALL COORDINATE ALL REPAIRS TO PRIVATE PROPERTY WITH THE PROPERTY OWNER. CONTRACTOR SHALL PAY AND/OR SETTLE WITH PRIVATE PROPERTY OWNER FOR ALL COSTS RELATED TO ANY DAMAGE. THE CITY OF BUDA WILL NOT PROVIDE SEPARATE PAY FOR REPAIR OF ANY DAMAGES, REIMBURSEMENTS OR SETTLEMENTS.

UTILITY CONSTRUCTION NOTES

1. THE CITY OF AUSTIN STANDARD CONSTRUCTION SPECIFICATIONS CURRENT AT THE TIME OF BIDDING SHALL COVER MATERIAL AND METHODS USED TO DO THIS WORK.
2. CONTRACTOR MUST OBTAIN A STREET CUT PERMIT FROM THE CITY OF WIMBERLEY BEFORE BEGINNING CONSTRUCTION WITHIN THE RIGHT-OF-WAY OF A PUBLIC STREET OR ALLEY.
3. AT LEAST 48 HOURS BEFORE BEGINNING ANY WATER AND WASTEWATER CONSTRUCTION IN PUBLIC R.O.W. OR PUBLIC EASEMENT, THE CONTRACTOR SHALL NOTIFY THE WIMBERLEY WATER SUPPLY CORPORATION AND AQUA TEXAS.
4. THE CONTRACTOR SHALL CONTACT THE AUSTIN AREA "ONE CALL" SYSTEM AT 1-800-344-8377 FOR EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION IN ADVANCE OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES TO BE EXTENDED, TIED TO, OR ALTERED, OR SUBJECT TO DAMAGE/INCONVENIENCE BY THE CONSTRUCTION OPERATIONS. THE WIMBERLEY WATER SUPPLY CORPORATION AND AQUA TEXAS WASTEWATER MAINTENANCE RESPONSIBILITY ENDS AT R.O.W./EASEMENT LINES.
5. NO OTHER UTILITY SERVICE/APPURTENANCES SHALL BE PLACED NEAR THE PROPERTY LINE, OR OTHER ASSIGNED LOCATION DESIGNATED FOR WATER AND WASTEWATER UTILITY SERVICE THAT WOULD INTERFERE WITH THE WATER AND WASTEWATER SERVICES.
6. THE CITY OF AUSTIN SPECIFICATION ITEM 509S WILL BE REQUIRED AS A MINIMUM TRENCH SAFETY MEASURE.
7. ALL MATERIALS TESTS, INCLUDING SOIL DENSITY TESTS AND DETAILED SOIL ANALYSES, SHALL BE CONDUCTED BY AN INDEPENDENT LABORATORY AND FUNDED BY THE OWNER IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM 1804S.04.
8. PRESSURE TAPS SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD ITEM 510.3(24). THE CONTRACTOR SHALL PERFORM EXCAVATION ETC. AND SHALL FURNISH, INSTALL AND AIR TEST THE SLEEVE AND VALVE, WHEN CONTRACTORS MAKE THE TAP A CITY INSPECTOR MUST BE PRESENT AND 2 WORKING DAYS (MIN.) NOTICE MUST BE GIVEN. "SIZE ON SIZE" TAPS WILL NOT BE PERMITTED, UNLESS, IT HAS BEEN DEMONSTRATED THAT A MORE ACCEPTABLE CONNECTION WOULD INVOLVE CONSIDERABLE HARDSHIP TO THE UTILITY SYSTEM. ALL TAPS SHALL BE MADE BY USE OF AN APPROVED FULL CIRCLE-GASKETED CAST IRON OR DUCTILE IRON TAPPING SLEEVE. CONCRETE BLOCKING SHALL BE PLACED UNDER ALL TAP SLEEVES PRIOR TO MAKING THE PRESSURE TAP AND THE USE OF PRECAST BLOCKS MAY BE USED TO HOLD THE TAP IN ITS CORRECT POSITION PRIOR TO BLOCKING. THE BLOCKING BEHIND AND UNDER THE TAP SHALL HAVE A MINIMUM OF 24 HOURS CURING TIME BEFORE THE VALVE CAN BE RE-OPENED FOR SERVICE FROM THAT TAP.
9. THRUST RESTRAINT SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM 510.3(22).
10. ALL BRANCH CONNECTIONS SHALL HAVE THE VALVE BOLTED TO THE MAIN BY METHODS OF FLANGE OR SWIVEL TEES. FOSTER ADAPTORS MAY BE USED IN LIEU OF FLANGE OR SWIVEL TEES WHEN CALLED OUT ON THE PLANS BY THE DESIGN ENGINEER.
11. FIRE HYDRANTS SHALL BE SET IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM 511S.4. FIRE HYDRANTS SHALL BE PAINTED FLYNT ALUMINUM OR EQUAL.
12. WATER LINE TESTING AND STERILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEMS 510.3 (27)-(29). FORCE MAIN PRESSURE TESTING SHALL BE CONDUCTED AND FALL UNDER THE SPECIFICATIONS AS WATER LINES (PRESSURE PIPE) OR AT THE PRESSURE SHOWN ON THE APPROVED PLANS.
13. ALL MATERIAL USED ON THIS PROJECT MUST BE LISTED ON THE STANDARD PRODUCTS LISTING. ANY MATERIAL NOT LISTED HAS TO GO THROUGH THE CITY OF WIMBERLEY CITY ENGINEER FOR REVIEW AND APPROVAL PRIOR TO START OF PROJECT. TESTING AND EVALUATION OF PRODUCTS ARE REQUIRED BEFORE APPROVAL WILL BE GIVEN ANY CONSIDERATION.
14. WHEN WATER SERVICES ARE DAMAGED, THE SERVICE SHALL BE REPLACED FULL LENGTH WITH PE. NOTE: FULL LENGTH IS FROM BALL VALVE TO METER.
15. WHEN AN EXISTING WATERLINE SHUTOUT IS NECESSARY AND POSSIBLE, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTOR WHO WILL THEN NOTIFY THE WIMBERLEY WATER SUPPLY CORPORATION AND THE AFFECTED CUSTOMERS A MINIMUM OF SEVENTY-TWO (72) HOURS IN ADVANCE.
16. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTOR SO THAT HE CAN NOTIFY THE WIMBERLEY WATER SUPPLY CORPORATION AT A MINIMUM OF 72 HOURS PRIOR TO RELOCATING ANY DOMESTIC OR FIRE DEMAND WATER METERS. THE CONTRACTOR SHALL CAREFULLY REMOVE ALL METERS AND METER BOXES THAT ARE INDICATED TO BE RELOCATED OR SALVAGED. THE CONTRACTOR SHALL INSTALL THE REMOVED METER OR CITY PROVIDED METER AT THE NEW LOCATION INDICATED ON THE CONSTRUCTION PLANS.
17. THE CONTRACTOR SHALL VERIFY ALL VERTICAL AND HORIZONTAL LOCATIONS OF EXISTING UTILITIES PRIOR TO STARTING ONSITE UTILITY WORK.
18. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. APPROVAL OF THESE PLANS BY THE CITY OF WIMBERLEY DOES NOT REMOVE THESE RESPONSIBILITIES.
19. REVIEW BY THE CITY OF WIMBERLEY WATER UTILITY APPLIES ONLY TO FACILITIES WITHIN PUBLIC STREETS OR PUBLIC UTILITY EASEMENTS. ALL OTHER WATER AND WASTEWATER FACILITIES INSIDE PRIVATE PROPERTY ARE UNDER THE JURISDICTION OF BUILDING INSPECTION.

EROSION AND SEDIMENTATION CONTROL NOTES:

1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).
2. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE CITY OF AUSTIN'S ENVIRONMENTAL CRITERIA MANUAL.
3. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD WITH THE CONTRACTOR, DESIGN ENGINEER/PERMIT APPLICANT AND INSPECTOR AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTION MEASURES AND PRIOR TO BEGINNING ANY SITE PREPARATION WORK. THE CONTRACTOR SHALL NOTIFY THE CITY OF WIMBERLEY ENGINEER, 512-587-1160, AT LEAST THREE DAYS PRIOR TO THE MEETING DATE.
4. ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER, ENVIRONMENTAL SPECIALIST OR CITY ARBORIST AS APPROPRIATE. MINOR CHANGES TO BE MADE AS FIELD REVISIONS TO THE PLAN MAY BE REQUIRED BY THE INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES.
5. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR THE MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHED SIX (6) INCHES.

PERMANENT EROSION CONTROL:

1. ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW. A MINIMUM OF FOUR INCHES OF TOPSOIL SHALL BE PLACED IN ALL DRAINAGE CHANNELS (EXCEPT ROCK) AND BETWEEN THE CURB AND RIGHT-OF-WAY LINE.
2. THE SEEDING FOR PERMANENT EROSION CONTROL SHALL BE AS SPECIFIED IN THE CITY OF AUSTIN STANDARD SPECIFICATION 604S.

DUST CONTROL:

1. DUST CONTROL METHODS ARE REQUIRED AS PER CITY OF AUSTIN'S ENVIRONMENTAL CRITERIA MANUAL SECTION 1.4.5.D.

SEQUENCE OF CONSTRUCTION:

NO CLEARING OR ROUGH GRADING MAY BE DONE UNTIL THE APPROVED EROSION AND SEDIMENTATION CONTROLS ARE IN PLACE.

1. INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS AND STABILIZED CONSTRUCTION ENTRANCE.
2. HOLD PRE-CONSTRUCTION CONFERENCE.
3. COMPLETE EXCAVATION AND GRADING OF SITE.
4. INSTALL ALL UTILITIES IN RIGHTS-OF-WAY AND UNDER PROPOSED DRIVEWAYS/PARKING.
5. CONDUCT PROOF ROLL OF SUBGRADE.
6. INSURE ALL UNDERGROUND UTILITY CROSSINGS ARE IN PLACE INCLUDING SLEEVES FOR DRY UTILITIES AND INSTALL FIRST COURSE OF BASE.
7. CONSTRUCT URBAN TAPER AND TXDOT DRIVEWAY.
8. INSTALL SECOND COURSE OF ROADWAY MATERIAL.
9. LAY SURFACE OF ROADWAY/PARKING MATERIAL.
10. FINAL GRADE ANY DITCHES AND PARKWAYS.
11. RE-VEGETATE ALL DISTURBED AREAS. DISPOSE OF SPOILS IN AN APPROVED MANNER.
12. SCHEDULE A FINAL INSPECTION WITH ENGINEER'S REPRESENTATIVE AND INSPECTOR, AS APPLICABLE.
13. AFTER ACCEPTANCE OF CONSTRUCTION, TEMPORARY EROSION CONTROLS SHALL BE REMOVED.

TPDES STORMWATER POLLUTION PREVENTION PLAN GENERAL NOTES

(TO COMPLY WITH NPDES REQUIREMENTS)

1. SEE COVER SHEET OF THE PLANS FOR A GENERAL LOCATION MAP.
2. THE NATURE OF THE CONSTRUCTION ACTIVITY CONSISTS OF COMMERCIAL DEVELOPMENT. THE MAIN POTENTIAL SOURCE OF POLLUTION FROM THE CONSTRUCTION IS SEDIMENT FROM THE DISTURBED AREAS.
3. FOR SEQUENCE OF CONSTRUCTION, SEE "CONSTRUCTION SEQUENCING" NOTES THIS SHEET.
4. THE CONSTRUCTION SITE DISTURBED AREA IS ESTIMATED TO BE ABOUT 0.448 ACRES.
5. THE RUNOFF COEFFICIENT AFTER CONSTRUCTION WILL BE THE SAME AS THE EXISTING CONDITION AND DRAINAGE PATTERNS WILL BE UNCHANGED FROM EXISTING.
6. THE EXISTING QUALITY OF STORMWATER DISCHARGING FROM THE SITE IS CHARACTERISTIC OF A DEVELOPED URBAN SITE. POST-DEVELOPMENTAL QUALITY WILL NOT BE SIGNIFICANTLY CHANGED UPON STABILIZATION OF THE SITE.
7. THE RECEIVING BODY OF WATER IS THE BLANCO RIVER. WETLANDS OR AQUATIC SITES AS DESCRIBED UNDER 40 CFR 230.3 (q-1) WILL NOT BE DISTURBED OR RECEIVE DISCHARGES FROM DISTURBED AREAS OF THE PROJECT.
8. NO DESIGNATED CRITICAL HABITAT OCCURS WITHIN THE PROXIMITY OF THE CONSTRUCTION ACTIVITY. LISTED ENDANGERED OR THREATENED SPECIES DO NOT OCCUR WITHIN THE PROXIMITY OF THE CONSTRUCTION ACTIVITY.
9. PROPERTY LISTED OR ELIGIBLE FOR LISTING ON THE NATIONAL REGISTER OF HISTORIC PLACES DOES NOT OCCUR WITHIN THE PROXIMITY OF THE CONSTRUCTION ACTIVITY.
10. SEE CONSTRUCTION CONTRACT FOR A COPY OF THE STORMWATER GENERAL PERMIT AND FOR CONSTRUCTION ACTIVITY IN REGION 6.
11. SOILS ON THE SITE CONSIST OF THE COMFORT-ROCK OUTCROP COMPLEX. THESE SOILS BELONG TO THE "D" HYDROLOGIC GROUP.
12. FOR DEVELOPED CONDITION DRAINAGE PATTERNS REFER TO THE SWPPP OR DRAINAGE AREA MAP SHEET. GRADING WILL BE UNCHANGED FROM THE EXISTING CONDITION.
13. THE "EROSION/SEDIMENTATION CONTROL PLAN" INDICATED THE AREA TO BE DISTURBED BY THE LIMITS OF CONSTRUCTION LINE, LOCATIONS OF STABILIZATION MEASURES, CONTROLS, CONTRACTOR STAGING AREAS, AND TEMPORARY MATERIAL STOCKPILING, AND ANY ADJACENT WATERWAYS
14. THE PERMITTEE MUST POST A NOTICE NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE WITH THE FOLLOWING INFORMATION:
    * NPDES PERMIT NUMBER OR A COPY OF THE NOI IF NO NUMBER HAS BEEN ASSIGNED
    * NAME AND PHONE NUMBER OF A LOCAL CONTACT, AND
    * A BRIEF PROJECT DESCRIPTION AND LOCATION OF THE SWPPP IF NOT LOCATED ON THE CONSTRUCTION SITE.

STRUCTURAL EROSION CONTROL MEASURES TO BE USED DURING CONSTRUCTION CONSIST OF SILT FENCE AND ROCK BERM. THE TIMING FOR THE INSTALLATION OF THESE CONTROLS IS CONTAINED IN THE "SEQUENCE OF CONSTRUCTION" NOTES INCLUDED IN THESE PLANS. RESPONSIBLE PARTY FOR IMPLEMENTATION, INSPECTION, AND MAINTENANCE OF CONTROLS IS THE CONTRACTOR.

1. GOALS AND CRITERIA FOR EROSION/SEDIMENTATION CONTROLS:
   A. THE CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROLS SHOULD BE DESIGNED TO RETAIN SEDIMENT ON SITE TO THE EXTENT PRACTICABLE.
   B. ALL CONTROL MEASURES MUST BE PROPERLY SELECTED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND GOOD ENGINEERING PRACTICES. IF PERIODIC INSPECTIONS OR OTHER INFORMATION INDICATES A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE PERMITEE MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS.
   C. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFFSITE ACCUMULATION OF SEDIMENT MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFFSITE IMPACTS. (E.G. SEDIMENT IN STREET IS WASHED INTO STORMSEWER)
   D. SEDIMENT MUST BE REMOVED FROM SEDIMENT TRAPS OR SEDIMENTATION PONDS WHEN DESIGN CAPACITY HAS BEEN REDUCED BY 50%.
   E. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.
   F. SPOIL MATERIAL DISPOSED OR STOCKPILE MATERIAL STORED AT AN OFFSITE LOCATION THAT IS USED SOLELY BY THE PERMITTED PROJECT IS CONSIDERED PART OF THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR REVISING THE SWPPP TO COVER THIS ACTIVITY.
2. STABILIZATION PRACTICES: THE PERMANENT EROSION CONTROLS NOTES INCLUDED IN THE GENERAL NOTES SPECIFY THE CRITERIA FOR REVEGETATION OF DISTURBED AREAS. THE EROSION/SEDIMENTATION CONTROL PLAN, INCLUDED AS PART OF THESE CONSTRUCTION PLANS, PROVIDES PROTECTION OF ADJACENT VEGETATION BY DEFINITION OF A LIMITS OF CONSTRUCTION AND ANY APPROPRIATE TREE PROTECTION ONSITE.
   A. STABILIZATION (SEEDING, SODDING, MULCHING, ETC.): DISTURBED AREA WHERE CONSTRUCTION HAS PERMANENTLY OR TEMPORARILY CEASED MUST BE STABILIZED WITHIN 14 DAYS OF THE LAST DISTURBANCE. (AREAS WHICH WILL BE REDISTURBED WITHIN 21 DAYS DO NOT HAVE TO BE STABILIZED.)
   B. IN ARID AREAS, AREAS EXPERIENCING DROUGHT, AND IN AREAS EXPERIENCING FROZEN GROUND CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.
3. STRUCTURAL PRACTICES:
   A. PERMANENT CONTROLS SHALL CONSIST OF EXISTING NATURAL CHANNELS AND BUFFERS.
   B. STORMWATER MANAGEMENT: STORMWATER SHALL BE DIRECTED TO NATURAL SWALES OR PROPOSED DITCHES. ALL LOW POINTS LEAVING THE SITE SHALL HAVE TEMPORARY EROSION CONTROLS, I.E., SILT FENCE, OR ROCK BERM.
   C. OTHER CONTROLS:
   C.1. NO SOLID MATERIALS, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED TO THE RECEIVING WATERS.
   C.2. OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED.
   C.3. APPLICATION OF THE SWPPP SHALL BE CONSISTENT WITH OTHER LOCAL AND STATE REGULATIONS.
4. RELEASES OF REPORTABLE QUANTITIES: THE TCEQ HAS ISSUED REGULATIONS THAT DEFINE WHAT REPORTABLE QUANTITY LEVELS ARE FOR OIL AND HAZARDOUS SUBSTANCES. THESE REGULATIONS ARE FOUND IN TAC CHAPTER 327 AND TABLE 302.4 IN 40 CFR 302.4. IF THERE IS A RQ RELEASE DURING THE CONSTRUCTION PERIOD, THEN THE FOLLOWING STEPS MUST BE TAKEN:
   *NOTIFY STATE EMERGENCY RESPONSE COMMISSION (SERC) IMMEDIATELY AT 1-800-832-8224
   *WITHIN 14 DAYS, MODIFY THE SWPPP WITH A WRITTEN DESCRIPTION OF THE RELEASE AND THE STEPS TO BE TAKEN TO PREVENT ANOTHER RELEASE.
5. INSPECTION: THE SWPP GENERAL PERMIT REQUIRES WRITTEN INSPECTIONS EVERY 14 DAYS OR WITHIN 24 HOURS OF A STORM OF 0.5 INCHES OR MORE IN DEPTH. ALL DISTURBED AREAS OF THE SITE, AREAS FOR MATERIAL STORAGE, LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AND ALL OF THE EROSION AND SEDIMENT CONTROLS THAT WERE IDENTIFIED AS PART OF THE PLAN MUST BE INSPECTED. CONTROLS MUST BE IN GOOD OPERATING CONDITION UNTIL THE AREA THEY PROTECT HAS BEEN COMPLETELY STABILIZED AND THE CONSTRUCTION ACTIVITY IS FINISHED.
6. MAINTENANCE/REPAIRS: IF SITE SPECIFICS AND OPERATION OF THE CONTROLS INDICATE MODIFICATIONS ARE REQUIRED, THEN SUCH MODIFICATIONS SHALL BE INDICATED ON THE SWPPP WITH ASSOCIATED DESCRIPTION AS TO NEED FOR THE ADDITIONAL CONTROLS. REVISIONS TO THE SWPPP SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS FOLLOWING INSPECTION. IF EXISTING BMP'S NEED TO BE MODIFIED OF ADDITIONAL BMP'S ADDED IMPLEMENTATION SHALL BE COMPLETED BEFORE THE NEXT ANTICIPATED STORM EVENT. IF THIS IS IMPRACTICABLE, THEY SHALL BE IMPLEMENTED AS SOON AS POSSIBLE. THE INSPECTOR MUST RECORD ANY DAMAGES OR DEFICIENCIES IN THE CONTROL MEASURES ON AN INSPECTION REPORT FORM. THESE REPORTS DOCUMENT THE INSPECTION OF THE POLLUTION PREVENTION MEASURES. RECORDS SHALL BE KEPT TO INDICATE THAT CORRECTION OF DAMAGE OR DEFICIENCIES WERE MADE.
7. RECORD KEEPING: IN ADDITION TO THE INSPECTION AND MAINTENANCE RECORDS, THE OPERATOR SHOULD KEEP RECORDS OF THE CONSTRUCTION ACTIVITY ON THE SITE. IN PARTICULAR, THE OPERATOR SHOULD KEEP A RECORD OF THE FOLLOWING INFORMATION:
   * THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR IN A PARTICULAR AREA.
   * THE DATES WHEN CONSTRUCTION ACTIVITIES CEASE IN AN AREA, TEMPORARILY OR PERMANENTLY.
   * THE DATES WHEN AN AREA IS STABILIZED, TEMPORARILY OR PERMANENTLY.
   * A COPY OF THE SWPPP AND NPDES PERMIT (OR NOI FORM) MUST BE KEPT AT THE CONSTRUCTION SITE FROM THE TIME CONSTRUCTION BEGINS UNTIL THE SITE IS FINALLY STABILIZED.
8. STABILIZATION IS DEFINED AS A MINIMUM OF 70% COVERAGE WITH NO BARE AREAS EXCEEDING 16 SQUARE FEET.
9. RETENTION OF RECORDS: RETENTION OF RECORDS REQUIRES THAT COPIES OF THE SWPPP AND ALL OTHER REPORTS REQUIRED BY THE PERMIT, AS WELL AS ALL OF THE DATA USED TO COMPLETE THE N.O.I. BE RETAINED FOR 3 YEARS AFTER THE COMPLETION OF FINAL SITE STABILIZATION.
10. NOTICE OF TERMINATION: THE NOT IS A ONE-PAGE FORM WHICH SHOULD BE COMPLETED AND SUBMITTED TO EPA WHEN A SITE HAS BEEN FINALLY STABILIZED OR WHEN AN OPERATOR OF A CONSTRUCTION ACTIVITY CHANGES.

• OWNER INFORMATION:

NAME: CYPRESS CREEK CHURCH, INC.

ADDRESS: 211 STILLWATER ROAD
WIMBERLEY, TEXAS 78676

PHONE: (512) 847-1222

REPRESENTATIVE: TAYLOR CHRISTENSEN

• CITY OF WIMBERLEY:

NATHAN GLASIER,
PLANNING & DEVELOPMENT COORDINATOR,
(512) 648-2411.

• CITY ENGINEER:

CHAD GILPIN, P.E.,
GILPIN ENGINEERING
(512) 587-1160.

• DESIGN ENGINEER: REPRESENTATIVE RESPONSIBLE FOR PLAN CHANGES.

NAME: HUGO ELIZONDO, JR. P.E.
C/O CUATRO CONSULTANTS, LTD

ADDRESS: 120 RIVERWALK DRIVE
SAN MARCOS, TEXAS 78666

PHONE: (512) 312-5040
FAX: (512) 312-5399

604S.1 DESCRIPTION

THIS ITEM SHALL GOVERN THE PREPARATION OF A SEED BED TO THE LINES AND GRADES INDICATED ON THE DRAWINGS, SOWING OF SEEDS, FERTILIZING, MULCHING WITH STRAW, CELLULOSE FIBER WOOD CHIPS, RECYCLED PAPER MULCH AND OTHER MANAGEMENT PRACTICES ALONG AND ACROSS SUCH AREAS AS INDICATED IN THE DRAWING OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.

THIS SPECIFICATION IS APPLICABLE FOR PROJECTS OR WORK INVOLVING EITHER INCH-POUND OF SI UNITS. WITHIN THE TEXT, INCH-POUND UNITS ARE GIVEN PREFERENCE WITH SI UNITS SHOWN WITHIN PARENTHESIS.

604S.2 SUBMITTALS

THE SUBMITTAL REQUIREMENTS FOR THIS SPECIFICATION ITEM SHALL INCLUDE:
A. IDENTIFICATION OF THE TYPE, SOURCE, MIXTURE, PLS AND RATE OF APPLICATION OF THE SEED TYPE OF MULCH.
B. TYPE OF TACKING AGENT.
C. TYPE AND RATE OF APPLICATION OF FERTILIZER.

604S.3 MATERIALS

A. SEED
ALL SEED MUST MEET THE REQUIREMENTS OF THE TEXAS SEED LAW INCLUDING THE LABELING REQUIREMENTS FOE SHOWING PURE LIVE SEED(PLS), NAME AND TYPE OF SEED. THE SEED FURNISHED SHALL BE OF THE PREVIOUS SEASONS CROP AND THE DATE OF ANALYSIS SHOWN ON EACH BAG SHALL BE WITHIN NINE MONTHS OF THE TIME OF DELIVERY TO THE PROJECT. EACH VARIETY OF SEED SHALL BE FURNISHED AND DELIVERED IN SEPARATE BAGS OR CONTAINERS. A SAMPLE OF EACH VARIETY OF SEED SHALL BE FURNISHED FOR ANALYSIS AND TESTING WHEN DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
THE AMOUNT OF SEED PLANTED PER ACRE (HECTARE) SHALL BE OF THE TYPE SPECIFIED IN SECTIONS 604S.5 AND 604S.6

B. WATER
WATER SHALL BE CLEAN AND FREE OF INDUSTRIAL WASTES AND OTHER SUBSTANCES HARMFUL TO THE GROWTH OF GRASS OR THE AREA IRRIGATED.

C. TOPSOIL
TOPSOIL SHALL CONFORM TO CITY OF AUSTIN STANDARD SPECIFICATION ITEM NO. 601S.3(A).

D. FERTILIZER
THE FERTILIZER SHALL CONFORM TO CITY OF AUSTIN STANDARD SPECIFICATION ITEM NO. 606S, "FERTILIZER".

E. STRAW AND MULCH OR HAY MULCH
STRAW MULCH SHALL BE OAT, WHEAT OR RICE STRAW. HAY MULCH SHALL BE PRAIRIE GRASS, BERMUDA GRASS, OR OTHER HAY APPROVED BY ENGINEER OR DESIGNATED REPRESENTATIVE. THE STRAW OR HAY SHALL BE FREE OF JOHNSON GRASS OR OTHER NOXIOUS WEEDS AND FOREIGN MATERIALS. IT SHALL BE KEPT IN A DRY CONDITION AND SHALL NOT BE MOLDED OR ROTTED.

F. TACKING AGENTS
THE TACKING AGENT SHALL BE A BIODEGRADABLE TACKING AGENT, APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.

G. CELLULOSE FIBER MULCH (NATURAL WOOD)
CELLULOSE FIBER MULCH SHALL BE NATURAL CELLULOSE FIBER MULCH PRODUCED FROM GRINDING CLEAN WHOLE WOOD CHIPS. THE MULCH SHALL BE DESIGNED FOR USE IN CONVENTIONAL MECHANICAL PLANTING, HYDRAULIC PLANTING OF SEED OR HYDRAULIC MULCHING OF GRASS SEED, EITHER ALONE OR WITH FERTILIZERS AND OTHER ADDITIVES. THE MULCH SHALL BE SUCH, THAT WHEN APPLIED, THE MATERIAL FORM A STRONG, MOISTURE-RETAINING MAT WITHOUT THE NEED OF AN ASPHALT BINDER.

H. RECYCLED PAPER MULCH
RECYCLED PAPER MULCH SHALL BE SPECIFICALLY MANUFACTURED FROM POST-CONSUMER PAPER AND SHALL CONTAIN A MINIMUM OF 85% RECYCLED PAPER CONTENT BY WEIGHT, SHALL CONTAIN NO MORE THAN 15% MOISTURE AND 1.6% ASH, AND SHALL CONTAIN NO GROWTH INHIBITING MATERIAL OR WEED SEEDS. THE RECYCLED PAPER SHALL BE MIXED WITH GRASS SEED AND FERTILIZER FOR HYDRO-SEEDING/MULCHING, EROSION CONTROL, AND A BINDER OVER STRAW MULCH. THE MULCH, WHEN APPLIED, SHALL FORM A STRONG, MOISTURE-RETAINING MAT OF A GREEN COLOR WITHOUT THE NEED OF AN ASPHALT BINDER.

604S.4 CONSTRUCTION METHODS

A. PREPARING SEED BED
AFTER THE DESIGNATED AREAS HAVE BEEN ROUGH GRADED TO THE LINES, GRADES AND TYPICAL SECTIONS INDICATED IN THE DRAWINGS OR AS PROVIDED FOR IN OTHER ITEMS OF THIS CONTRACT AND FOR ANY OTHER SOIL AREA DISTURBED BY THE CONSTRUCTION, A SUITABLE SEEDBED SHALL BE PREPARED. THE SEEDBED SHALL CONSIST OF A MINIMUM OF EITHER 4" (100MILLIMETERS) OF APPROVED TOPSOIL OR 4" (100 MILLIMETERS) OF APPROVED SALVAGED TOPSOIL, CULTIVATED AND ROLLED SUFFICIENTLY TO REDUCE THE SOIL TO A STATE OF GOOD TILTH, WHEN THE SOIL PARTICLES ON THE SURFACE ARE SMALL ENOUGH AND LIE CLOSELY ENOUGH TOGETHER TO PREVENT THE SEED FROM BEING COVERED TOO DEEPLY FOR OPTIMUM GERMINATION. THE OPTIMUM DEPTH FOR SEEDING SHALL BE ¼" (6 MILLIMETERS). WATER SHALL BE GENTLY APPLIED AS REQUIRED TO PREPARE THE SEEDBED PRIOR TO THE PLANTING OPERATION EITHER BY BROADCAST SEEDING OR HYDRAULIC PLANTING. SEEDING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS HEREINAFTER DESCRIBED.

B. WATERING
ALL WATERING SHALL COMPLY WITH CITY ORDINANCES. BROADCAST SEEDED AREAS SHALL IMMEDIATELY BE WATERED WITH A MINIMUM OF 5 GALLONS OF WATER PER SQUARE YARD (22.5 LITERS OF WATER PER SQUARE METER) OR AS NEEDED AND IN THE MANNER AND QUANTITY AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. HYDRAULIC SEEDED AREAS AND NATIVE GRASS SEEDED AREAS SHALL BE WATERED COMMENCING AFTER THE TACKIFIER HAS DRIED WITH A MINIMUM OF 5 GALLONS OF WATER PER SQUARE YARD (22.5 LITERS OF WATER PER SQUARE METER) OR AS NEEDED TO KEEP THE SEEDBED IN A WET CONDITION FAVORABLE FOR THE GROWTH OF THE GRASS.
WATERING APPLICATIONS SHALL CONSTANTLY MAINTAIN THE SEEDBED IN A WET CONDITION FAVORABLE FOR THE GROWTH OF GRASS. WATERING SHALL CONTINUE UNTIL THE GRASS IS UNIFORMLY 1 ½" (40MM) IN HEIGHT AND ACCEPTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. WATERING CAN BE POSTPONED IMMEDIATELY AFTER A ½" (12.5MM) OR GREATER RAINFALL ON THE SITE BUT SHALL BE RESUMED BEFORE THE SOIL DRIES OUT.

604S.5 NON-NATIVE SEEDING

A. METHOD A - BROADCAST SEEDING. THE SEED OR SEED MIXTURE IN THE QUANTITY SPECIFIED SHALL BE UNIFORMLY DISTURBED OVER THE PREPARED SEED AREAS INDICATED ON THE DRAWINGS OR WHERE DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. IF THE SOWING OF SEED IS BY HAND, RATHER THAN BY MECHANICAL METHODS, THE SEED SHALL BE SOWN IN TWO DIRECTIONS AT RIGHT ANGLES TO EACH OTHER. IF MECHANICAL EQUIPMENT IS USED, ALL VARIETIES OF SEED, AS WELL AS FERTILIZER, MAY BE DISTRIBUTED AT THE SAME TIME, PROVIDED THAT EACH COMPONENT IS UNIFORMLY APPLIED AT THE SPECIFIED RATE. AFTER PLANTING, THE PLANTED AREA SHALL BE ROLLED WITH A CORRUGATED ROLLER OF THE "CULTIPACKER" TYPE. ALL ROLLING OF THE SLOPE AREAS SHALL BE ON THE CONTOUR.

SEED MIXTURE AND RATE OF APPLICATION FOR BROADCAST SEEDING:

FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH A COMBINATION OF UNHULLED BERMUDA GRASS AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET (1.0 KILOGRAMS PER 100 SQUARE METERS) AND COOL SEASON COVER CROP (SEE TABLE 4) AT A RATE OF 1.5 POUNDS PER 1000 SQUARE FEET (0.75 KILOGRAMS PER 100 SQUARE METERS).
FROM MARCH 1 TO SEPTEMBER 15, SEEDING SHALL BE WITH HULLED BERMUDA GRASS AT A PLS=0.83. FERTILIZER SHALL BE APPLIED AND SHALL CONFORM TO ITEM NO.606S, "FERTILIZER".

B. METHOD B - HYDRAULIC PLANTING. THE SEEDBED SHALL BE PREPARED AS SPECIFIED ABOVE AND HYDRAULIC PLANTING EQUIPMENT, WHICH IS CAPABLE OF PLACING ALL MATERIALS IN A SINGLE OPERATION, SHALL BE USED.

MARCH 1 TO SEPTEMBER 15
HYDRAULIC PLANTING MIXTURE AND MINIMUM RATE OF APPLICATION POUNDS PER 1000 SQUARE FEET (KILOGRAMS PER 100 SQUARE METERS)

TABLE 1: NON-NATIVE GRASS

HULLED BERMUDA SEED (PLS=0.83)	FIBER MULCH		
	CELLULOSE	WOOD	
1 LBS/1000FT² (0.5 KGS/100 M²)	45.9 LBS/100 FT² (22.5 KGS/100M²)		1.4LBS/1000 FT² (0.7KGS\ 100M²)
		57.4LBS/1000 FT² (28.01KGS/100M²)	1.5LBS/1000 FT² (0.75KGS/100M²)

SEPTEMBER 15 TO MARCH 1
ADD 1.5 POUNDS PER 1000 SQUARE FEET (0.75 KILOGRAMS PER 100 SQUARE METERS) OF COOL SEASON COVER CROP (SEE TABLE 4) TO ABOVE MIXTURE. THE FERTILIZER SHALL CONFORM TO CITY OF AUSTIN STANDARD SPECIFICATION ITEM NO. 606S, "FERTILIZER".

604S.7 MULCH

A. STRAW MULCH
STRAW MULCH SHALL BE SPREAD UNIFORMLY OVER THE AREA INDICATED OR AS DESIGNATED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE AT THE RATE OF 2 TO 2 ½ TONS OF STRAW PER ACRE (4.5 TO 5.6 MEGAGRAMS OF STRAW PER HECTARE). THE ACTUAL RATE OF APPLICATION WILL BE DESIGNATED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. STRAW MAY BE HAND OR MACHINE PLACED AND ADEQUATELY SECURED.

B. FIBER MULCH
CELLULOSE AND WOOD FIBER MULCH SHALL BE SPREAD UNIFORMLY OVER THE AREA INDICATED OR AS DESIGNATED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE AT A RATE THAT WILL PROVIDE 100% COVERAGE.

D. SHREDDED BRUSH MULCH
SMALL BRUSH OR TREE LIMBS EXCEPT JUNIPER, WHICH HAVE BEEN SHREDDED, MAY BE USED FOR MULCHING NATIVE GRASS SEEDING.

REVISION	DESCRIPTION	BY:	DATE:

STATE OF TEXAS
HUGO ELIZONDO, JR.
69781
LICENSED PROFESSIONAL ENGINEER
2/28/24

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GENERAL NOTES

CYPRES CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE: JANUARY 2024
PROJECT: 24-010
DRAWING'S NAME: 3_CCC_GENERAL NOTES
DESIGN: AWE
CHECKED: CDE
DRAWN: AWE
APPROVED: HE Jr.
SHEET: 3 OF 25

Texas Commission on Environmental Quality
Contributing Zone Plan
General Construction Notes

Edwards Aquifer Protection Program Construction Notes – Legal Disclaimer

The following/listed "construction notes" are intended to be advisory in nature only and do not constitute an approval or conditional approval by the Executive Director (ED), nor do they constitute a comprehensive listing of rules or conditions to be followed during construction. Further actions may be required to achieve compliance with TCEQ regulations found in Title 30, Texas Administrative Code (TAC), Chapters 213 and 217, as well as local ordinances and regulations providing for the protection of water quality. Additionally, nothing contained in the following/listed "construction notes" restricts the powers of the ED, the commission or any other governmental entity to prevent, correct, or curtail activities that result or may result in pollution of the Edwards Aquifer or hydrologically connected surface waters. The holder of any Edwards Aquifer Protection Plan containing "construction notes" is still responsible for compliance with Title 30, TAC, Chapters 213 or any other applicable TCEQ regulation, as well as all conditions of an Edwards Aquifer Protection Plan through all phases of plan implementation. Failure to comply with any condition of the ED's approval, whether or not in contradiction of any "construction notes," is a violation of TCEQ regulations and any violation is subject to administrative rules, orders, and penalties as provided under Title 30, TAC § 213.10 (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. The following/listed "construction notes" in no way represent an approved exception by the ED to any part of Title 30 TAC, Chapters 213 and 217, or any other TCEQ applicable regulation

1. A written notice of construction must be submitted to the TCEQ regional office at least 48 hours prior to the start of any ground disturbance or construction activities. This notice must include:
   - the name of the approved project;
   - the activity start date; and
   - the contact information of the prime contractor.

2. All contractors conducting regulated activities associated with this project should be provided with complete copies of the approved Contributing Zone Plan (CZP) and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractor(s) should keep copies of the approved plan and approval letter on-site.

3. No hazardous substance storage tank shall be installed within 150 feet of a water supply source, distribution system, well, or sensitive feature.

4. Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the manufacturers specifications. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. These controls must remain in place until the disturbed areas have been permanently stabilized.

5. Any sediment that escapes the construction site must be collected and properly disposed of before the next rain event to ensure it is not washed into surface streams, sensitive features, etc.

6. Sediment must be removed from the sediment traps or sedimentation basins when it occupies 50% of the basin's design capacity.

7. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from being discharged offsite.

8. All excavated material that will be stored on-site must have proper E&S controls.

9. If portions of the site will have a cease in construction activity lasting longer than 14 days, soil

stabilization in those areas shall be initiated as soon as possible prior to the 14^{th} day of inactivity. If activity will resume prior to the 21^{st} day, stabilization measures are not required. If drought conditions or inclement weather prevent action by the 14^{th} day, stabilization measures shall be initiated as soon as possible.

10. The following records should be maintained and made available to the TCEQ upon request:
    - the dates when major grading activities occur;
    - the dates when construction activities temporarily or permanently cease on a portion of the site; and
    - the dates when stabilization measures are initiated.

11. The holder of any approved CZP must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:

    A. any physical or operational modification of any best management practices (BMPs) or structure(s), including but not limited to temporary or permanent ponds, dams, berms, silt fences, and diversionary structures;

    B. any change in the nature or character of the regulated activity from that which was originally approved;

    C. any change that would significantly impact the ability to prevent pollution of the Edwards Aquifer; or

    D. any development of land previously identified as undeveloped in the approved contributing zone plan.

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Fax (512) 339-3795	Fax (210) 545-4329

THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

Texas Commission on Environmental Quality
Organized Sewage Collection System
General Construction Notes

Edwards Aquifer Protection Program Construction Notes – Legal Disclaimer

The following/listed "construction notes" are intended to be advisory in nature only and do not constitute an approval or conditional approval by the Executive Director, nor do they constitute a comprehensive listing of rules or conditions to be followed during construction. Further actions may be required to achieve compliance with TCEQ regulations found in Title 30, Texas Administrative Code, Chapters 213 and 217, as well as local ordinances and regulations providing for the protection of water quality. Additionally, nothing contained in the following/listed "construction notes" restricts the powers of the Executive Director, the commission or any other governmental entity to prevent, correct, or curtail activities that result or may result in pollution of the Edwards Aquifer or hydrologically connected surface waters. The holder of any Edwards Aquifer Protection Plan containing "construction notes" is still responsible for compliance with Title 30, Texas Administrative Code, Chapters 213 or any other applicable TCEQ regulation, as well as all conditions of an Edwards Aquifer Protection Plan through all phases of plan implementation. Failure to comply with any condition of the Executive Director's approval, whether or not in contradiction of any "construction notes," is a violation of TCEQ regulations and any violation is subject to administrative rules, orders, and penalties as provided under Title 30, Texas Administrative Code § 213.10 (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. The following/listed "construction notes" in no way represent an approved exception by the Executive Director to any part of Title 30 Texas Administrative Code, Chapters 213 and 217, or any other TCEQ applicable regulation.

1. This Organized Sewage Collection System (SCS) must be constructed in accordance with 30 Texas Administrative Code (TAC) §213.5(c), the Texas Commission on Environmental Quality's (TCEQ) Edwards Aquifer Rules and any local government standard specifications.

2. All contractors conducting regulated activities associated with this proposed regulated project must be provided with copies of the SCS plan and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors must be required to keep on-site copies of the plan and the approval letter.

3. A written notice of construction must be submitted to the presiding TCEQ regional office at least 48 hours prior to the start of any regulated activities. This notice must include:
   - the name of the approved project;
   - the activity start date; and
   - the contact information of the prime contractor.

4. Any modification to the activities described in the referenced SCS application following the date of approval may require the submittal of an SCS application to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval.

5. Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the manufacturers specifications. These controls must remain in place until the disturbed areas have been permanently stabilized.

6. If any sensitive features are discovered during the wastewater line trenching activities, all regulated activities near the sensitive feature must be suspended immediately. The applicant must immediately notify the appropriate regional office of the TCEQ of the feature discovered. A geologist's assessment of the location and extent of the feature discovered must be reported to that regional office in writing and the applicant must submit a plan for ensuring the structural integrity of the sewer line or for modifying the proposed collection system alignment around the feature. The regulated activities near the sensitive feature may not proceed until the

executive director has reviewed and approved the methods proposed to protect the sensitive feature and the Edwards Aquifer from any potentially adverse impacts to water quality while maintaining the structural integrity of the line.

7. Sewer lines located within or crossing the 5-year floodplain of a drainage way will be protected from inundation and stream velocities which could cause erosion and scouring of backfill. The trench must be capped with concrete to prevent scouring of backfill, or the sewer lines must be encased in concrete. All concrete shall have a minimum thickness of 6 inches.

8. Blasting procedures for protection of existing sewer lines and other utilities will be in accordance with the National Fire Protection Association criteria. Sand is not allowed as bedding or backfill in trenches that have been blasted. If any existing sewer lines are damaged, the lines must be repaired and retested.

9. All manholes constructed or rehabilitated on this project must have watertight size on size resilient connectors allowing for differential settlement. If manholes are constructed within the 100-year floodplain, the cover must have a gasket and be bolted to the ring. Where gasketed manhole covers are required for more than three manholes in sequence or for more than 1500 feet, alternate means of venting will be provided. Bricks are not an acceptable construction material for any portion of the manhole.

   The diameter of the manholes must be a minimum of four feet and the manhole for entry must have a minimum clear opening diameter of 30 inches. These dimensions and other details showing compliance with the commission's rules concerning manholes and sewer line/manhole inverts described in 30 TAC §217.55 are included on Plan Sheet __ of __.

   It is suggested that entrance into manholes in excess of four feet deep be accomplished by means of a portable ladder. The inclusion of steps in a manhole is prohibited.

10. Where water lines and new sewer line are installed with a separation distance closer than nine feet (i.e., water lines crossing wastewater lines, water lines paralleling wastewater lines, or water lines next to manholes) the installation must meet the requirements of 30 TAC §217.53(d) (Pipe Design) and 30 TAC §290.44(e) (Water Distribution).

11. Where sewers lines deviate from straight alignment and uniform grade all curvature of sewer pipe must be achieved by the following procedure which is recommended by the pipe manufacturer: ______________________________.

    If pipe flexure is proposed, the following method of preventing deflection of the joint must be used: ______________________________.

    Specific care must be taken to ensure that the joint is placed in the center of the trench and properly bedded in accordance with 30 TAC §217.54.

12. New sewage collection system lines must be constructed with stub outs for the connection of anticipated extensions. The location of such stub outs must be marked on the ground such that their location can be easily determined at the time of connection of the extensions. Such stub outs must be manufactured wyes or tees that are compatible in size and material with both the sewer line and the extension. At the time of original construction, new stub-outs must be constructed sufficiently to extend beyond the end of the street pavement. All stub-outs must be sealed with a manufactured cap to prevent leakage. Extensions that were not anticipated at the time of original construction or that are to be connected to an existing sewer line not furnished with stub outs must be connected using a manufactured saddle and in accordance with accepted plumbing techniques.

If no stub-out is present an alternate method of joining laterals is shown in the detail on Plan Sheet __ of __. (For potential future laterals).

The private service lateral stub-outs must be installed as shown on the plan and profile sheets on Plan Sheet __ of __ and marked after backfilling as shown in the detail on Plan Sheet __ of __.

13. Trenching, bedding and backfill must conform with 30 TAC §217.54. The bedding and backfill for flexible pipe must comply with the standards of ASTM D-2321, Classes IA, IB, II or III. Rigid pipe bedding must comply with the requirements of ASTM C 12 (ANSI A 106.2) classes A, B or C.

14. Sewer lines must be tested from manhole to manhole. When a new sewer line is connected to an existing stub or clean-out, it must be tested from existing manhole to new manhole. If a stub or clean-out is used at the end of the proposed sewer line, no private service attachments may be connected between the last manhole and the cleanout unless it can be certified as conforming with the provisions of 30 TAC §213.5(c)(3)(E).

15. All sewer lines must be tested in accordance with 30 TAC §217.57. The engineer must retain copies of all test results which must be made available to the executive director upon request. The engineer must certify in writing that all wastewater lines have passed all required testing to the appropriate regional office within 30 days of test completion and prior to use of the new collection system. Testing method will be:
    (a) For a collection system pipe that will transport wastewater by gravity flow, the design must specify an infiltration and exfiltration test or a low-pressure air test. A test must conform to the following requirements:
        (1) *Low Pressure Air Test.*
            (A) A low pressure air test must follow the procedures described in American Society For Testing And Materials (ASTM) C-828, ASTM C-924, or ASTM F-1417 or other procedure approved by the executive director, except as to testing times as required in Table C.3 in subparagraph (C) of this paragraph or Equation C.3 in subparagraph (B)(ii) of this paragraph.
            (B) For sections of collection system pipe less than 36 inch average inside diameter, the following procedure must apply, unless a pipe is to be tested as required by paragraph (2) of this subsection.
                (i) A pipe must be pressurized to 3.5 pounds per square inch (psi) greater than the pressure exerted by groundwater above the pipe.
                (ii) Once the pressure is stabilized, the minimum time allowable for the pressure to drop from 3.5 psi gauge to 2.5 psi gauge is computed from the following equation:

Equation C.3

$$T = \frac{0.085 \times D \times K}{Q}$$

Where:

T = time for pressure to drop 1.0 pound per square inch gauge in seconds
K = 0.000419 X D X L, but not less than 1.0
D = average inside pipe diameter in inches

L = length of line of same size being tested, in feet
Q = rate of loss, 0.0015 cubic feet per minute per square foot internal surface

(C) Since a K value of less than 1.0 may not be used, the minimum testing time for each pipe diameter is shown in the following Table C.3:

Pipe Diameter *(inches)*	**Minimum Time** *(seconds)*	**Maximum Length for Minimum Time** *(feet)*	**Time for Longer Length** *(seconds/foot)*
6	340	398	0.855
8	454	298	1.520
10	567	239	2.374
12	680	199	3.419
15	850	159	5.342
18	1020	133	7.693
21	1190	114	10.471
24	1360	100	13.676
27	1530	88	17.309
30	1700	80	21.369
33	1870	72	25.856

(D) An owner may stop a test if no pressure loss has occurred during the first 25% of the calculated testing time.
(E) If any pressure loss or leakage has occurred during the first 25% of a testing period, then the test must continue for the entire test duration as outlined above or until failure.
(F) Wastewater collection system pipes with a 27 inch or larger average inside diameter may be air tested at each joint instead of following the procedure outlined in this section.
(G) A testing procedure for pipe with an inside diameter greater than 33 inches must be approved by the executive director.

(2) *Infiltration/Exfiltration Test.*
    (A) The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch of diameter per mile of pipe per 24 hours at a minimum test head of 2.0 feet above the crown of a pipe at an upstream manhole.
    (B) An owner shall use an infiltration test in lieu of an exfiltration test when pipes are installed below the groundwater level.
    (C) The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch diameter per mile of pipe per 24 hours at a minimum test head of two feet above the crown of a pipe at an upstream manhole, or at least two feet above existing groundwater level, whichever is greater.
    (D) For construction within a 25-year flood plain, the infiltration or exfiltration must not exceed 10 gallons per inch diameter per mile of pipe per 24 hours at the same minimum test head as in subparagraph (C) of this paragraph.
    (E) If the quantity of infiltration or exfiltration exceeds the maximum quantity specified, an owner shall undertake remedial action in order to reduce

the infiltration or exfiltration to an amount within the limits specified. An owner shall retest a pipe following a remediation action.

(b) If a gravity collection pipe is composed of flexible pipe, deflection testing is also required. The following procedures must be followed:
    (1) For a collection pipe with inside diameter less than 27 inches, deflection measurement requires a rigid mandrel.
        (A) *Mandrel Sizing.*
            (i) A rigid mandrel must have an outside diameter (OD) not less than 95% of the base inside diameter (ID) or average ID of a pipe, as specified in the appropriate standard by the ASTMs, American Water Works Association, UNI-BELL, or American National Standards Institute, or any related appendix.
            (ii) If a mandrel sizing diameter is not specified in the appropriate standard, the mandrel must have an OD equal to 95% of the ID of a pipe. In this case, the ID of the pipe, for the purpose of determining the OD of the mandrel, must equal be the average outside diameter minus two minimum wall thicknesses for OD controlled pipe and the average inside diameter for ID controlled pipe.
            (iii) All dimensions must meet the appropriate standard.
        (B) *Mandrel Design.*
            (i) A rigid mandrel must be constructed of a metal or a rigid plastic material that can withstand 200 psi without being deformed.
            (ii) A mandrel must have nine or more odd number of runners or legs.
            (iii) A barrel section length must equal at least 75% of the inside diameter of a pipe.
            (iv) Each size mandrel must use a separate proving ring.
        (C) *Method Options.*
            (i) An adjustable or flexible mandrel is prohibited.
            (ii) A test may not use television inspection as a substitute for a deflection test.
            (iii) If requested, the executive director may approve the use of a deflectometer or a mandrel with removable legs or runners on a case-by-case basis.
    (2) For a gravity collection system pipe with an inside diameter 27 inches and greater, other test methods may be used to determine vertical deflection.
    (3) A deflection test method must be accurate to within plus or minus 0.2% deflection.
    (4) An owner shall not conduct a deflection test until at least 30 days after the final backfill.
    (5) Gravity collection system pipe deflection must not exceed five percent (5%).
    (6) If a pipe section fails a deflection test, an owner shall correct the problem and conduct a second test after the final backfill has been in place at least 30 days.

16. All manholes must be tested to meet or exceed the requirements of 30 TAC §217.58.
    (a) All manholes must pass a leakage test.
    (b) An owner shall test each manhole (after assembly and backfilling) for leakage, separate and independent of the collection system pipes, by hydrostatic exfiltration testing, vacuum testing, or other method approved by the executive director.
        (1) Hydrostatic Testing.

(A) The maximum leakage for hydrostatic testing or any alternative test methods is 0.025 gallons per foot diameter per foot of manhole depth per hour.
(B) To perform a hydrostatic exfiltration test, an owner shall seal all wastewater pipes coming into a manhole with an internal pipe plug, fill the manhole with water, and maintain the test for at least one hour.
(C) A test for concrete manholes may use a 24-hour wetting period before testing to allow saturation of the concrete.

(2) Vacuum Testing.
    (A) To perform a vacuum test, an owner shall plug all lift holes and exterior joints with a non-shrink grout and plug all pipes entering a manhole.
    (B) No grout must be placed in horizontal joints before testing.
    (C) Stub-outs, manhole boots, and pipe plugs must be secured to prevent movement while a vacuum is drawn.
    (D) An owner shall use a minimum 60 inch/lb torque wrench to tighten the external clamps that secure a test cover to the top of a manhole.
    (E) A test head must be placed at the inside of the top of a cone section, and the seal inflated in accordance with the manufacturer's recommendations.
    (F) There must be a vacuum of 10 inches of mercury inside a manhole to perform a valid test.
    (G) A test does not begin until after the vacuum pump is off.
    (H) A manhole passes the test if after 2.0 minutes and with all valves closed, the vacuum is at least 9.0 inches of mercury.

17. All private service laterals must be inspected and certified in accordance with 30 TAC §213.5(c)(3)(I). After installation of and, prior to covering and connecting a private service lateral to an existing organized sewage collection system, a Texas Licensed Professional Engineer, Texas Registered Sanitarian, or appropriate city inspector must visually inspect the private service lateral and the connection to the sewage collection system, and certify that it is constructed in conformity with the applicable provisions of this section. The owner of the collection system must maintain such certifications for five years and forward copies to the appropriate regional office upon request. Connections may only be made to an approved sewage collection system.

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THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

REVISION	DESCRIPTION	BY:	DATE:

HUGO ELIZONDO, JR.
69781
LICENSED PROFESSIONAL ENGINEER

CUATRO Consultants, LTD.
Registration No F-3524

TCEQ NOTES
1 OF 2

CYPRESS CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE: JANUARY 2024	
PROJECT: 24-010	
DRAWING'S NAME: 4_CCC_TCEQ NOTES 1 OF 2	
DESIGN: CDE	CHECKED: CDE
DRAWN: DR	APPROVED: HE Jr.
SHEET: 4 OF 25	

TCEQ WATER DISTRIBUTION SYSTEM GENERAL CONSTRUCTION NOTES

1. This water distribution system must be constructed in accordance with the current Texas Commission on Environmental Quality (TCEQ) Rules and Regulations for Public Water Systems 30 Texas Administrative Code (TAC) Chapter 290 Subchapter D. When conflicts are noted with local standards, the more stringent requirement shall be applied. At a minimum, construction for public water systems must always meet TCEQ's "Rules and Regulations for Public Water Systems."

2. All newly installed pipes and related products must conform to American National Standards Institute (ANSI)/NSF International Standard 61 and must be certified by an organization accredited by ANSI [§290.44(a)(1)].

3. Plastic pipe for use in public water systems must bear the NSF International Seal of Approval (NSF-pw) and have an ASTM design pressure rating of at least 150 psi or a standard dimension ratio of 26 or less [§290.44(a)(2)].

4. No pipe 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 [§290.44(a)(3)].

5. All water line crossings of wastewater mains shall be perpendicular [§290.44(e)(4)(B)].

6. Water transmission and distribution lines shall be installed in accordance with the manufacturer's instructions. However, the top of the water line must be located below the frost line and in no case shall the top of the water line be less than 24 inches below ground surface [§290.44(a)(4)].

7. The maximum allowable lead content of pipes, pipe fittings, plumbing fittings, and fixtures is 0.25 percent [§290.44(b)].

8. The contractor shall install appropriate air release devices with vent openings to the atmosphere covered with 16-mesh or finer, corrosion resistant screening material or an acceptable equivalent [§290.44(d)(1)].

9. The contractor shall not place the pipe in water or where it can be flooded with water or sewage during its storage or installation [§290.44(f)(1)].

10. When waterlines are laid under any flowing or intermittent stream or semi-permanent body of water the waterline shall be installed in a separate watertight pipe encasement. Valves must be provided on each side of the crossing with facilities to allow the underwater portion of the system to be isolated and tested [§290.44(f)(2)].

11. Pursuant to 30 TAC §290.44(a)(5), the hydrostatic leakage rate shall not exceed the amount allowed or recommended by the most current AWWA formulas for PVC pipe, cast iron and ductile iron pipe. Include the formulas in the notes on the plans.
    - The hydrostatic leakage rate for polyvinyl chloride (PVC) pipe and appurtenances shall not exceed the amount allowed or recommended by formulas in America Water Works Association (AWWA) C-605 as required in 30 TAC §290.44(a)(5). Please ensure that the formula for this calculation is correct and most current formula is in use;

$$Q = \frac{LD\sqrt{P}}{148{,}000}$$

      Where:
      - Q = the quantity of makeup water in gallons per hour,
      - L = the length of the pipe section being tested, in feet,
      - D = the nominal diameter of the pipe in inches, and
      - P = the average test pressure during the hydrostatic test in pounds per square inch (psi).
    - The hydrostatic leakage rate for ductile iron (DI) pipe and appurtenances shall not exceed the amount allowed or recommended by formulas in America Water Works Association (AWWA) C-600 as required in 30 TAC §290.44(a)(5). Please ensure that the formula for this calculation is correct and most current formula is in use;

$$L = \frac{SD\sqrt{P}}{148{,}000}$$

      Where:
      - L = the quantity of makeup water in gallons per hour,
      - S = the length of the pipe section being tested, in feet,
      - D = the nominal diameter of the pipe in inches, and
      - P = the average test pressure during the hydrostatic test in pounds per square inch (psi).

12. The contractor shall maintain a minimum separation distance in all directions of nine feet between the proposed waterline and wastewater collection facilities including manholes. If this distance cannot be maintained, the contractor must immediately notify the project engineer for further direction. Separation distances, installation methods, and materials utilized must meet §290.44(e)(1)-(4).

13. The separation distance from a potable waterline to a wastewater main or lateral manhole or cleanout shall be a minimum of nine feet. Where the nine-foot separation distance cannot be achieved, the potable waterline shall be encased in a joint of at least 150 psi pressure class pipe at least 18 feet long and two nominal sizes larger than the new conveyance. The space around the carrier pipe shall be supported at five-foot intervals with spacers or be filled to the springline with washed sand. The encasement pipe shall be centered on the crossing and both ends sealed with cement grout or manufactured sealant [§290.44(e)(5)].

14. Fire hydrants shall not be installed within nine feet vertically or horizontally of any wastewater line, wastewater lateral, or wastewater service line regardless of construction [§290.44(e)(6)].

15. Suction mains to pumping equipment shall not cross wastewater mains, wastewater laterals, or wastewater service lines. Raw water supply lines shall not be installed within five feet of any tile or concrete wastewater main, wastewater lateral, or wastewater service line [§290.44(e)(7)].

16. Waterlines shall not be installed closer than ten feet to septic tank drainfields [§290.44(e)(8)].

17. The contractor shall disinfect the new waterlines in accordance with AWWA Standard C-651-14 or most recent, then flush and sample the lines before being placed into service. Samples shall be collected for microbiological analysis to check the effectiveness of the disinfection procedure which shall be repeated if contamination persists. A minimum of one sample for each 1,000 feet of completed waterline will be required or at the next available sampling point beyond 1,000 feet as designated by the design engineer [§290.44(f)(3)].

18. Dechlorination of disinfecting water shall be in strict accordance with current AWWA Standard C655-09 or most recent.

REVISION	DESCRIPTION	BY:	DATE:

STATE OF TEXAS · HUGO ELIZONDO, JR. · 69781 · LICENSED PROFESSIONAL ENGINEER

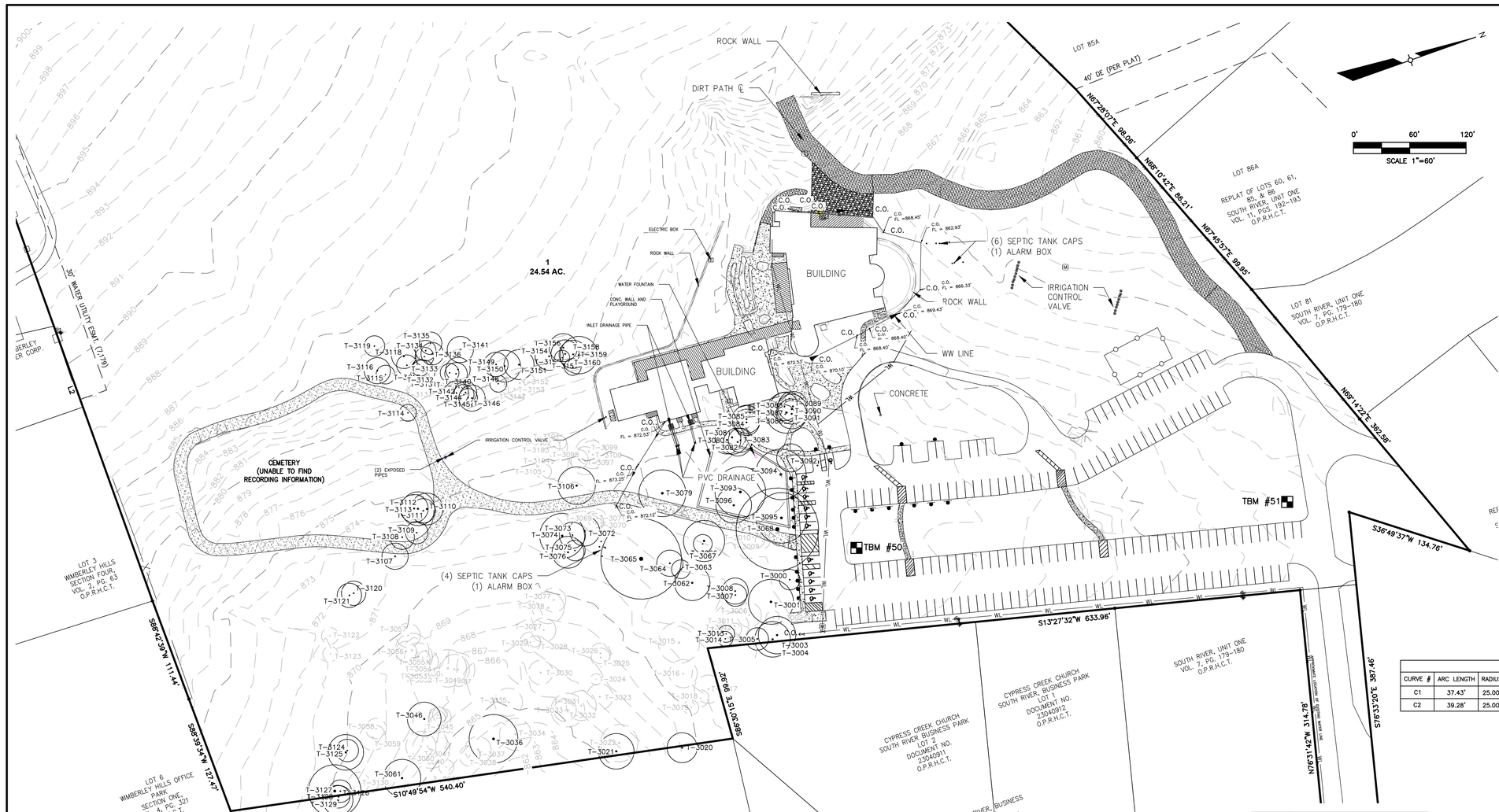
4 QUATRO Consultants, LTD.
Registration No: F-3524
120 Riverwalk Drive, Ste. 208 Phone: (512) 312-5510
San Marcos, Texas 78666 e-mail: coatneo@coatneoconsultants.com

TCEQ NOTES 2 OF 2

CYPRES CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE: JANUARY 2024
PROJECT: 24-010
DRAWING'S NAME: 5_CCC_TCEQ NOTES 2 OF 2
DESIGN: CDE | CHECKED: CDE
DRAWN: DR | APPROVED: HE Jr.
SHEET: 5 OF 25



LEGEND

EXISTING	DESCRIPTION
	BOUNDARY LINE
	EASEMENT BOUNDARY
915	CONTOURS
	LOT LINE
	CENTER LINE OF DITCH
WL	WATER LINE
	WATER VALVE
	FIRE HYDRANT
	WATER METER
AV	AIR RELEASE VALVE
	FLUSH VALVE
	WASTEWATER LINE
	WASTEWATER FORCE MAIN
	MANHOLE
C.O.	WASTEWATER CLEANOUT
	WASTEWATER SERVICE
OHE	OVERHEAD ELECTRIC
UE	SUBSURFACE ELECTRIC
	TRANSFORMER
	OVERHEAD TELEPHONE
L.P.	LIGHT POLE
	POWER POLE
	GUY WIRE
	STORM SEWER
	CMP/ RCP PIPES
TEL	TELEPHONE LINE
FOC	FIBER OPTIC CABLE
GAS	GAS LINE
	PAVEMENT (HMAC)
	CONCRETE
	CHAIN LINK FENCE
	WOOD FENCE
	BARBED WIRE FENCE
	TRAFFIC FLOW
	HANDICAP SPACE
T-3101	EXISTING TREE TO REMAIN
T-3101	EXISTING TREE TO BE REMOVED

LINE TABLE		
LINE #	LENGTH	BEARING
L1	702.13'	N11°33'36"E
L2	481.27'	S89°19'33"W

CURVE TABLE						
CURVE #	ARC LENGTH	RADIUS	BEARING	CHORD LENGTH	TANGENT	DELTA
C1	37.43'	25.00'	N29°35'09"W	34.03'	23.22'	085°46'30"
C2	39.28'	25.00'	S58°26'28"W	35.36'	25.01'	090°00'54"

TREE SURVEY LIST:

TREE TABLE – TO REMAIN				TREE TABLE – TO REMAIN				TREE TABLE – TO REMAIN				TREE TABLE – TO REMAIN			
TREE TAG	TREE DESCRIPTION	TREE TAG	TREE DESCRIPTION	TREE TAG	TREE DESCRIPTION	TREE TAG	TREE DESCRIPTION	TREE TAG	TREE DESCRIPTION	TREE TAG	TREE DESCRIPTION	TREE TAG	TREE DESCRIPTION	TREE TAG	TREE DESCRIPTION
T-3000	11" OAK	T-3068	44" OAK	T-3093	27" CEDAR	T-3124	12" OAK	T-3146	14" OAK						
T-3001	24" OAK	T-3072	16" OAK	T-3094	27" OAK	T-3125	19" OAK	T-3148	9" OAK						
T-3003	20" OAK	T-3073	14" OAK	T-3095	27" OAK	T-3126	12" OAK	T-3149	13" OAK						
T-3004	19" OAK	T-3074	24" OAK	T-3096	19" OAK	T-3127	28" OAK	T-3150	17" OAK						
T-3005	12" OAK	T-3075	11" OAK	T-3106	20" OAK	T-3128	12" OAK	T-3151	16" OAK						
T-3007	12" OAK	T-3076	17" OAK	T-3107	14" OAK	T-3129	16" OAK	T-3154	15" OAK						
T-3008	14" OAK	T-3079	25" OAK	T-3108	13" OAK	T-3131	13" OAK	T-3155	8" OAK						
T-3013	9" OAK	T-3080	15" OAK	T-3109	12" OAK	T-3132	9" OAK	T-3156	15" OAK						
T-3014	8" OAK	T-3081	18" OAK	T-3110	17" OAK	T-3133	10" OAK	T-3157	15" OAK						
T-3020	16" OAK	T-3082	15" OAK	T-3111	13" ELM	T-3134	11" OAK	T-3158	15" OAK						
T-3021	19" OAK	T-3083	13" OAK	T-3112	18" OAK	T-3135	12" OAK	T-3159	20" OAK						
T-3036	28" OAK	T-3084	14" OAK	T-3113	15" OAK	T-3136	12" OAK	T-3160	9" OAK						
T-3046	18" OAK	T-3085	15" OAK	T-3114	9" OAK	T-3138	10" OAK								
T-3061	20" OAK	T-3086	10" OAK	T-3115	10" OAK	T-3139	12" OAK								
T-3062	19" OAK	T-3087	22" OAK	T-3116	14" OAK	T-3140	13" OAK								
T-3063	10" ELM	T-3088	15" OAK	T-3117	11" OAK	T-3141	14" OAK								
T-3064	14" OAK	T-3089	16" OAK	T-3118	13" OAK	T-3142	13" OAK								
T-3065	43" OAK	T-3090	16" OAK	T-3119	11" OAK	T-3143	12" OAK								
T-3066	22" OAK	T-3091	16" OAK	T-3120	13" OAK	T-3144	11" OAK / IN DECLINE								
T-3067	10" OAK	T-3092	15" OAK	T-3121	13" OAK	T-3145	10" OAK								

TREE TABLE – TO BE REMOVED				TREE TABLE – TO BE REMOVED				TREE TABLE – TO BE REMOVED				TREE TABLE – TO BE REMOVED			
TREE TAG	TREE DESCRIPTION	TREE TAG	TREE DESCRIPTION	TREE TAG	TREE DESCRIPTION	TREE TAG	TREE DESCRIPTION	TREE TAG	TREE DESCRIPTION	TREE TAG	TREE DESCRIPTION	TREE TAG	TREE DESCRIPTION	TREE TAG	TREE DESCRIPTION
T-3002	8" OAK	T-3031	16" OAK	T-3053	7" ELM	T-3104	17" OAK								
T-3006	13" OAK	T-3032	18" OAK	T-3054	15" ELM	T-3105	8" OAK								
T-3009	8" OAK	T-3033	12" OAK	T-3055	18" OAK	T-3122	9" OAK								
T-3010	13" OAK	T-3034	17" OAK	T-3056	11" OAK	T-3123	8" OAK								
T-3011	15" OAK	T-3035	15" OAK	T-3057	13" OAK / HALF DEAD	T-3130	11" OAK								
T-3012	7" OAK	T-3037	14" OAK	T-3058	11" OAK	T-3137	13" OAK								
T-3015	22" OAK	T-3038	11" OAK	T-3059	14" OAK	T-3147	13" OAK								
T-3016	15" OAK	T-3039	8" OAK	T-3060	16" OAK	T-3152	16" OAK								
T-3017	15" OAK	T-3040	20" OAK	T-3069	11" OAK	T-3153	12" OAK								
T-3018	9" OAK	T-3041	11" OAK	T-3070	11" OAK										
T-3019	8" OAK	T-3042	12" OAK	T-3071	10" OAK										
T-3022	20" OAK	T-3043	9" OAK	T-3077	13" OAK										
T-3023	14" OAK	T-3044	9" OAK	T-3078	17" OAK										
T-3024	6" OAK	T-3045	8" OAK	T-3097	15" OAK / IN DECLINE										
T-3025	10" OAK	T-3047	18" OAK	T-3098	10" OAK										
T-3026	11" OAK	T-3048	16" OAK	T-3099	14" OAK										
T-3027	13" OAK	T-3049	20" OAK	T-3100	15" OAK										
T-3028	6" OAK	T-3050	12" OAK	T-3101	7" OAK										
T-3029	11" OAK	T-3051	8" ELM	T-3102	15" OAK										
T-3030	13" OAK	T-3052	12" ELM	T-3103	10" OAK										

TREE MITIGATION:

PER THE WIMBERLEY CODE OF ORDINANCES, SEC. 9.02.391, SUBSECTION C:
824 (IN.) x $100 = $82,400.00 : FEE IN LIEU OF ONSITE PLANTINGS.

LEGAL DESCRIPTION:

BEING A 24.54 ACRE TRACT OF LAND, OUT OF THE AMASA TURNER SURVEY , ABSTRACT NO. 461, SITUATED IN HAYS COUNTY, TEXAS, CONSISTING OF THE 23.126 ACRE REMAINING PORTION OF A CALLED 24.00 ACRE TRACT, RECORDED IN VOLUME 1456, PAGE 532 OF THE OFFICIAL PUBLIC RECORD OF HAYS COUNTY, TEXAS AND A LOT, KNOWN AS LOT 60 OF THE REPLAT OF LOTS 60, 61, 85 AND 86 OF THE SOUTH RIVER SUBDIVISION, UNIT 1, AS RECORDED IN VOLUME 11, PAGE 193 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS, AND CONSISTING OF THE 1.404 ACRE REMAINDER OF A CALLED 8.404 ACRE TRACT, AS RECORDED IN DOCUMENT NO. 1710393 OF THE OFFICIAL PUBLIC RECORDS OF HAYS COUNTY, TEXAS.

TEMPORARY BENCHMARK:

TBM #50:
SET ½" "HMT" IP SET
NORTHING: 13,908,116.94'
EASTING: 2,256,185.37'
ELEVATION: 873.79'

TBM #51:
SET ½" "HMT" IP SET
NORTHING: 13,908,570.58'
EASTING: 2,256,289.81'
ELEVATION: 867.87'

SOURCE:

TOPOGRAPHIC SURVEY PERFORMED ON 7/6/2023 BY
HMT ENGINEERING AND SURVEYING, FIRM REGISTRATION NO. 10153600.

Point Number	Full Description	INCHES TO MITIGATE
3002	8" OAK	8
3006	13" OAK	13
3009	8" OAK	8
3010	13" OAK	13
3011	15" OAK	15
3012	7" OAK	7
3015	22" OAK	22
3016	15" OAK	15
3017	15" OAK	15
3018	9" OAK	9
3019	8" OAK	8
3022	20" OAK	20
3023	14" OAK	14
3024	6" OAK	6
3025	10" OAK	10
3026	11" OAK	11
3027	13" OAK	13
3028	6" OAK	6
3029	11" OAK	11
3030	13" OAK	13
3031	16" OAK	16
3032	18" OAK	18
3033	12" OAK	12
3034	17" OAK	17
3035	15" OAK	15
3037	14" OAK	14
3038	11" OAK	11
3039	8" OAK	8
3040	20" OAK	20
3041	11" OAK	11
3042	12" OAK	12
3043	9" OAK	9
3044	9" OAK	9
3045	8" OAK	8
3047	18" OAK	18
3048	16" OAK	16
3049	20" OAK	20
3050	12" OAK	12
3051	8" ELM	8
3052	12" ELM	12
3053	7" ELM	7
3054	15" ELM	15
3055	18" OAK	18
3056	11" OAK	11
3058	11" OAK	11
3059	14" OAK	14
3060	16" OAK	16
3070	11" OAK	11
3071	10" OAK	10
3077	13" OAK	13
3078	17" OAK	17
3098	10" OAK	10
3099	14" OAK	14
3100	15" OAK	15
3101	7" OAK	7
3102	15" OAK	15
3103	10" OAK	10
3104	17" OAK	17
3105	8" OAK	8
3122	9" OAK	9
3123	8" OAK	8
3130	11" OAK	11
3137	13" OAK	13
3147	13" OAK	13
3152	16" OAK	16
3153	12" OAK	12

DATE:	
BY:	
DESCRIPTION	
REVISION	

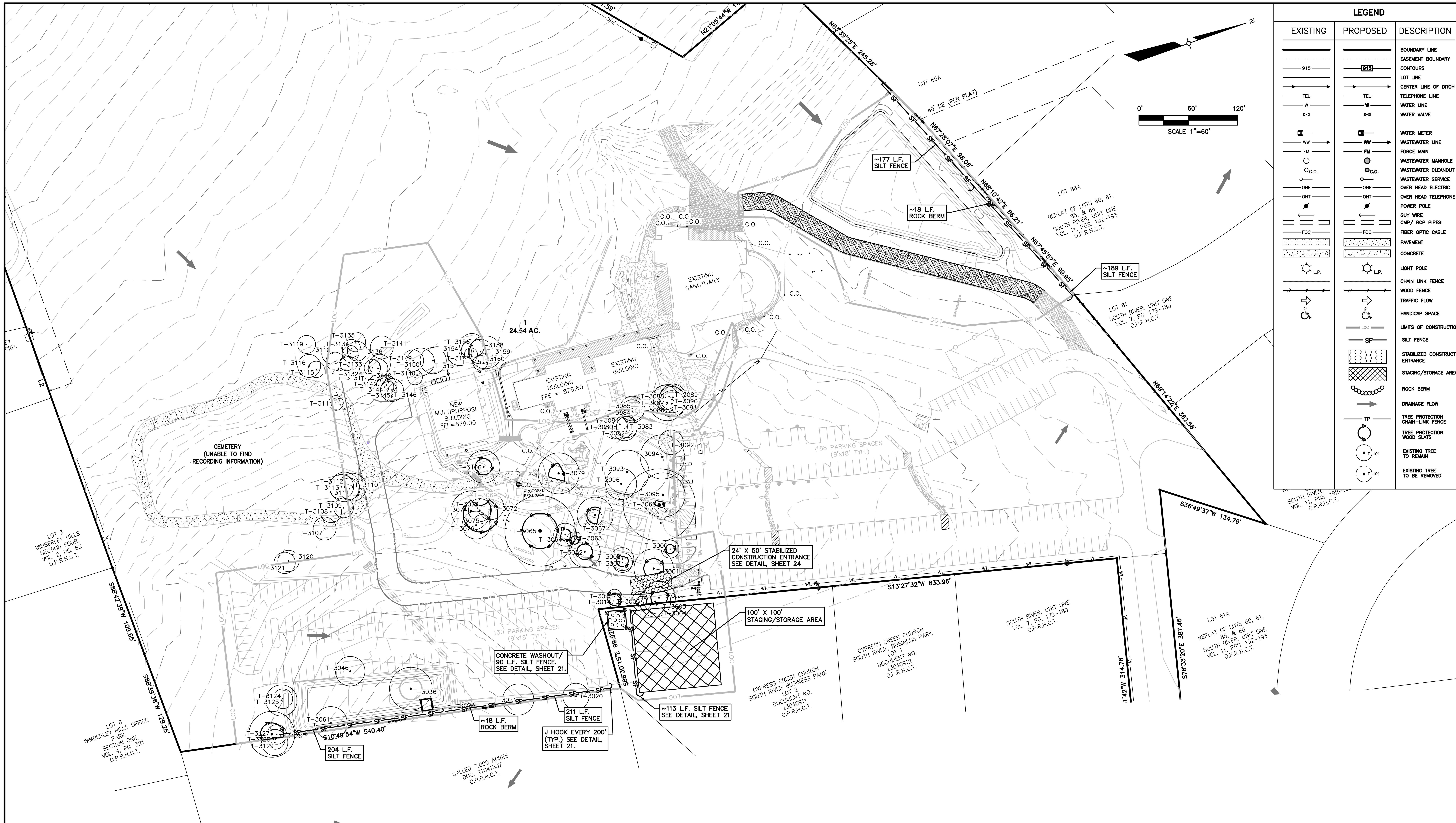
4QUATRO Consultants, LTD.
Registration No: F-3524
120 Riverwalk Drive, Ste. 208 Phone: (512) 312-5040
San Marcos, Texas 78666 e-mail: coatro@coatroconsultants.com

EXISTING CONDITIONS AND DEMOLITION PLAN

CYPRES CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE:	JANUARY 2024
PROJECT:	24-010
DRAWING'S NAME:	6_CCC_EXISTING CONDITIONS & DEMO PLAN
DESIGN: WTS	CHECKED: CDE
DRAWN: EPL	APPROVED: HE Jr.
SHEET:	6 OF 25



SEQUENCE OF CONSTRUCTION:

NO CLEARING OR ROUGH GRADING MAY BE DONE UNTIL APPROVED EROSION AND SEDIMENTATION CONTROLS ARE IN PLACE.

1. INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS AND STABILIZED CONSTRUCTION ENTRANCE.
2. HOLD PRE-CONSTRUCTION CONFERENCE.
3. COMPLETE EXCAVATION AND GRADING OF SITE.
4. INSTALL ALL UTILITIES IN RIGHTS-OF-WAY AND UNDER PROPOSED DRIVEWAYS/PARKING.
5. CONDUCT PROOF ROLL OF SUBGRADE.
6. INSURE ALL UNDERGROUND UTILITY CROSSINGS ARE IN PLACE INCLUDING SLEEVES FOR DRY UTILITIES AND INSTALL FIRST COURSE OF BASE.
7. CONSTRUCT URBAN TAPER AND TXDOT DRIVEWAY.
8. INSTALL SECOND COURSE OF ROADWAY MATERIAL.
9. LAY SURFACE OF ROADWAY/PARKING MATERIAL.
10. FINAL GRADE ANY DITCHES AND PARKWAYS.
11. RE-VEGETATE ALL DISTURBED AREAS. DISPOSE OF SPOILS IN AN APPROVED MANNER.
12. SCHEDULE A FINAL INSPECTION WITH ENGINEER'S REPRESENTATIVE AND INSPECTOR, AS APPLICABLE.
13. AFTER ACCEPTANCE OF CONSTRUCTION, TEMPORARY EROSION CONTROLS SHALL BE REMOVED.

EROSION CONTROL NOTES:

1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).
2. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE CITY OF AUSTIN'S ENVIRONMENTAL CRITERIA MANUAL.
3. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD WITH THE CONTRACTOR, DESIGN ENGINEER/PERMIT APPLICANT AND INSPECTOR AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTION MEASURES AND PRIOR TO BEGINNING ANY SITE PREPARATION WORK. THE CONTRACTOR SHALL NOTIFY THE CITY OF WIMBERLEY ENGINEER, 512-587-1160, AT LEAST THREE DAYS PRIOR TO THE MEETING DATE.
4. ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER, ENVIRONMENTAL SPECIALIST OR CITY ARBORIST AS APPROPRIATE. MINOR CHANGES TO BE MADE AS FIELD REVISIONS TO THE PLAN MAY BE REQUIRED BY THE INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES.
5. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR THE MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHED SIX (6) INCHES.

LIMIT OF CONSTRUCTION (LOC) NOTE:

1. TOTAL LIMIT OF CONSTRUCTION (LOC) EQUALS 6.42 ACRES.

REFERENCE NOTES:

1. FOR EXISTING CONDITIONS SEE SHEET 6.
2. FOR EXISTING AND MASTER DRAINAGE, SEE SHEETS 8 AND 9.
3. FOR GRADING PLAN, SEE SHEET 12.
4. FOR POND LAYOUTS AND CALCULATIONS, SEE SHEETS 13-16.
5. FOR DETAILS, SEE SHEETS 20-25.

REVISION	DESCRIPTION	BY:	DATE:

CUATRO Consultants, LTD.
Registration No. F-3524
120 Riverwalk Drive, Ste. 208 San Marcos, Texas 78666
Phone: (512) 312-5040
e-mail: cuatro@cuatroconsultants.com

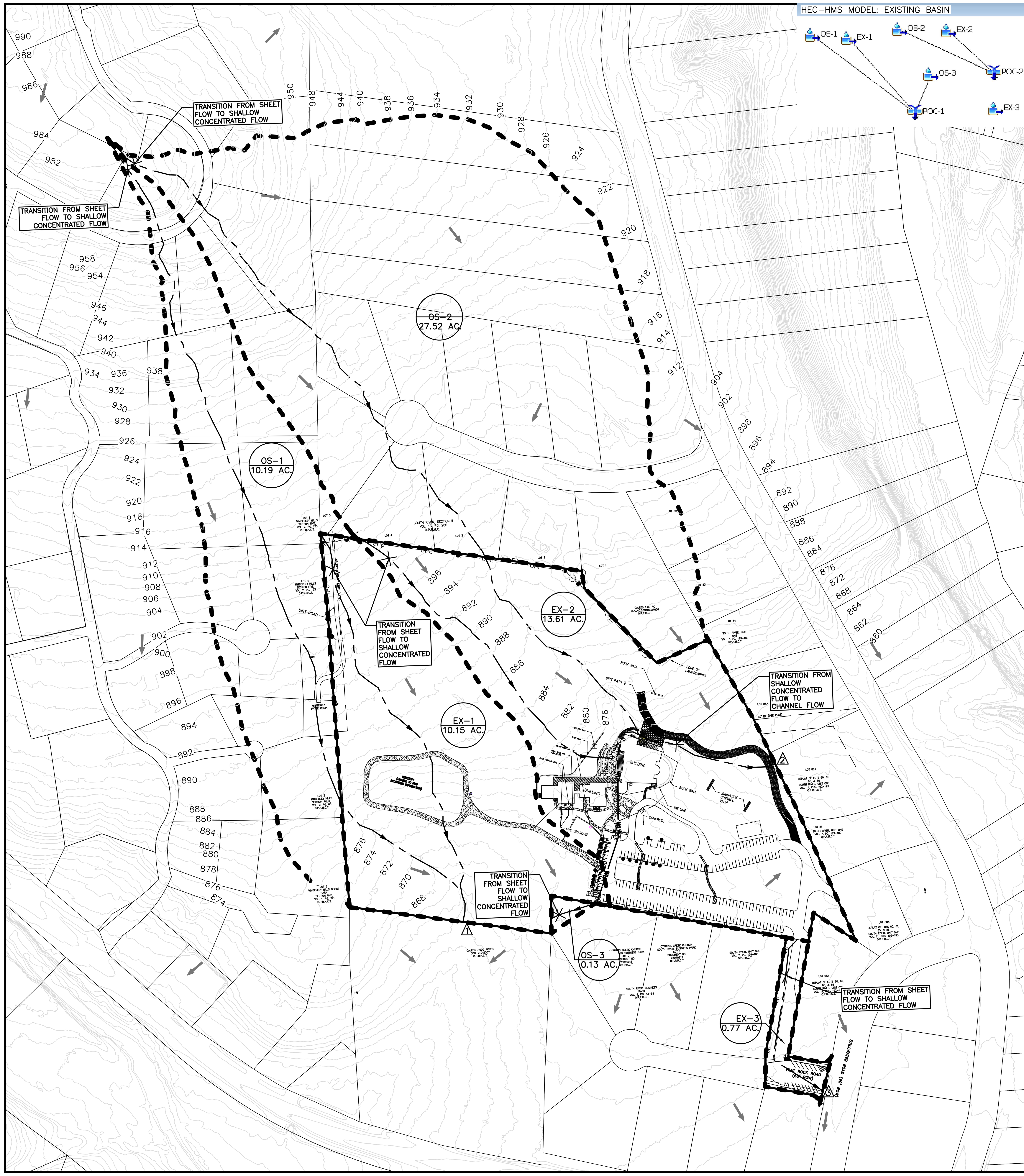
STATE OF TEXAS
HUGO ELIZONDO, JR.
69781
LICENSED PROFESSIONAL ENGINEER

EROSION AND SEDIMENTATION CONTROL PLAN

CYPRESS CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE: JANUARY 2024	
PROJECT: 24-010	
DRAWING'S NAME: 7_CCC_ERO AND SEDI CTRL PLAN	
DESIGN: AWE	CHECKED: CDE
DRAWN: AWE	APPROVED: HE Jr.
SHEET: 7 OF 25	



N

0' 150' 300'
SCALE 1"=150'

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BOUNDARY LINE
		EASEMENT BOUNDARY
915	915	CONTOURS
		LOT LINE
		CENTER LINE OF DITCH
WL	WL	WATER LINE
		WATER VALVE
		FIRE HYDRANT
		WATER METER
F.V.	F.V.	FLUSH VALVE
		AIR RELEASE VALVE
		WASTEWATER LINE
		FORCE MAIN
		MANHOLE
C.O.	C.O.	WASTEWATER CLEANOUT
		WASTEWATER SERVICE
OHE	OHE	OVERHEAD ELECTRIC
UE	UE	UNDERGROUND ELECTRIC
		TRANSFORMER BOX
L.P.	L.P.	LIGHT POLE
		POWER POLE
		GUY WIRE
		STORM SEWER
		CMP/ RCP PIPES
TEL	TEL	OVER HEAD TELEPHONE
FOC	FOC	FIBER OPTIC CABLE
GAS	GAS	GAS LINE
		PAVEMENT (HMAC)
		CONCRETE
		CHAIN LINK FENCE
		WOOD FENCE
		BARBED WIRE FENCE
		DRAINAGE BOUNDARY
		TIME OF CONCENTRATION
		DRAINAGE FLOW DIRECTION
		PROPOSED DRAINAGE EASEMENT
EX-1 XX.XX AC.	DA-1 XX.XX AC.	DRAINAGE AREA
1	1	POINT OF CONCENTRATION

EXISTING DRAINAGE CALCULATIONS

Time of Concentration (TR-55 method) & Run-off Values (SCS Method)

Subbasin		OS-1	OS-2	OS-3	EX-1	EX-2	EX-3
Area	sf	443,876	1,198,771	5,663	442,134	592,852	33,541
	ac	10.19	27.52	0.13	10.15	13.61	0.77
	sq mi	0.01592	0.04300	0.00020	0.01586	0.02127	0.00120
Impervious	sf	88,775	212,542	0	23,205	123,249	21,275
Impervious	%	20.00%	17.73%	0.00%	5.41%	20.79%	63.43%
Pervious	Cn	77	77	77	77	77	77
Composite	Cn	81	81	77	78	81	90
Retention	in	2.32	2.39	2.99	2.80	2.29	1.07
Initial Abstraction	in	0.463	0.478	0.597	0.560	0.458	0.214
Sheet Flow							
Slope	ft/ft	0.018	0.018	0.015	0.052	0.052	0.015
Length	ft.	100.00	100.00	100.00	100.00	100.00	32.03
Roughness	n	0.27	0.27	0.27	0.27	0.27	0.27
P2 (Atlas-14)	in.	4.18	4.18	4.18	4.18	4.18	4.18
Time	min.	14.26	14.26	15.39	9.36	9.36	6.19
Shallow Concentrated							
Slope	ft/ft	0.052	0.048	0.018	0.040	0.034	0.011
Length	ft.	2308.61	2513.42	22.75	1056.47	1060.10	458.44
Paved?	p/u	u	u	u	u	u	u
Time	min.	10.49	11.81	0.18	5.47	5.90	4.52
Channel Flow							
Slope	ft/ft	0.000	0.000	0.000	0.000	0.015	0.000
Hydraulic Radius	ft.	0.0000	0.0000	0.0000	0.0000	0.9850	0.0000
Roughness	n	0.000	0.000	0.000	0.000	0.035	0.000
Velocity	fps	0.00	0.00	0.00	0.00	5.20	0.00
Length	ft.	0.00	0.00	0.00	0.00	276.02	0.00
Time	min.	0.00	0.00	0.00	0.00	0.89	0.00
Summary							
Tc	min.	24.75	26.07	15.57	14.83	16.15	10.71
Lag Time	min.	14.85	15.64	9.34	8.90	9.69	6.42
Run-off Values							
2 Year	cfs	16.56	43.43	0.20	17.28	25.18	2.03
10 Year	cfs	33.56	88.10	0.45	37.51	51.40	3.59
25 Year	cfs	47.12	123.57	0.66	53.66	72.28	4.81
100 Year	cfs	73.63	193.10	1.05	85.19	113.09	7.19

Notes:
1: Atlas 14 precipitation values are used to determine storm water runoff
2: Pervious C value is chosen based off "Woods" with a Soil Type D in good condition from the City of Austin Drainage Criteria Manual
3: Roughness N-value is based on 50% woods and 50% range

POINT OF ANALYSIS SUMMARY TABLE

Run-off Values	POC-1	POC-2	POC-3
2 Year	33.01	67.32	2.03
10 Year	68.56	136.69	3.59
25 Year	96.82	191.89	4.81
100 Year	151.92	299.77	7.19

ALL UNITS ARE IN CFS

REFERENCE NOTES:

1. FOR MASTER DRAINAGE PLANS SEE SHEET 9.
2. FOR POND 1 AND 2 LAYOUT AND CALCULATIONS, SEE SHEETS 14–17.

REVISION	DESCRIPTION	BY:	DATE:

STATE OF TEXAS
HUGO ELIZONDO, JR.
69781
LICENSED PROFESSIONAL ENGINEER
2/28/24

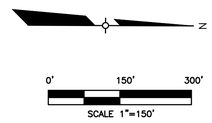
CUATRO Consultants, LTD.
Registration No. F-3524
120 Riverwalk Drive, Ste. 208 Phone: (512) 312-5040
San Marcos, Texas 78666 e-mail: cuatro@cuatroconsultants.com

EXISTING DRAINAGE CONDITIONS

CYPRES CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE: JANUARY 2024
PROJECT: 24–010
DRAWING'S NAME: 8_CCC_EXISTING DRAINAGE CONDITIONS
DESIGN: AWE
CHECKED: CDE
DRAWN: AWE
APPROVED: HE Jr.



LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BOUNDARY LINE
		EASEMENT BOUNDARY
915	915	CONTOURS
		LOT LINE
		CENTER LINE OF DITCH
WL	WL	WATER LINE
		WATER VALVE
		FIRE HYDRANT
F.V.	F.V.	WATER METER
		FLUSH VALVE
		AIR RELEASE VALVE
		WASTEWATER LINE
		FORCE MAIN
C.O.	C.O.	MANHOLE
		WASTEWATER CLEANOUT
		WASTEWATER SERVICE
OHE	OHE	OVERHEAD ELECTRIC
UE	UE	UNDERGROUND ELECTRIC
		TRANSFORMER BOX
L.P.	L.P.	LIGHT POLE
		POWER POLE
		GUY WIRE
		STORM SEWER
		CMP/ RCP PIPES
TEL	TEL	OVER HEAD TELEPHONE
FOC	FOC	FIBER OPTIC CABLE
GAS	GAS	GAS LINE
		PAVEMENT (HMAC)
		CONCRETE
		CHAIN LINK FENCE
		WOOD FENCE
		BARBED WIRE FENCE
		DRAINAGE BOUNDARY
		TIME OF CONCENTRATION
		DRAINAGE FLOW DIRECTION
		PROPOSED DRAINAGE EASEMENT
DA-1 XXXX AC.	DA-1 XXXX AC.	DRAINAGE AREA
		POINT OF CONCENTRATION

PROPOSED DRAINAGE CALCULATIONS

Time of Concentration (TR-55 method) & Run-off Values (SCS Method)

Subbasin		OS-1	OS-2	OS-3	OS-4	DA-1	DA-2	DA-3	DA-4	DA-5
Area	sf	157,687	1,198,771	5,663	286,189	232,610	592,852	33,541	37,026	172,498
	ac	3.62	27.52	0.13	6.57	5.34	13.61	0.77	0.85	3.96
	sq mi	0.00566	0.04300	0.00020	0.01027	0.00834	0.02127	0.00120	0.00133	0.00619
Impervious	sf	31,537	212,542	0	57,238	13,124	123,249	21,275	0	83,240
Impervious	%	20.00%	17.73%	0.00%	20.00%	5.64%	20.79%	63.43%	0.00%	48.26%
Pervious	Cn	77	77	77	77	77	77	77	77	77
Composite	Cn	81	81	77	81	78	81	90	77	87
Retention	in	2.32	2.39	2.99	2.32	2.79	2.29	1.07	2.99	1.48
Initial Abstraction	in	0.463	0.478	0.597	0.463	0.558	0.458	0.214	0.597	0.295
Sheet Flow										
Slope	ft/ft	0.018	0.018	0.015	0.018	0.052	0.052	0.015	0.065	0.019
Length	ft.	100.00	100.00	100.00	100.00	100.00	100.00	32.03	100.00	100.00
Roughness	n	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
P2 (Atlas-14)	in.	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18
Time	min.	14.26	14.26	15.16	14.26	9.36	9.36	6.19	8.56	14.00
Shallow Concentrated										
Slope	ft/ft	0.055	0.048	0.018	0.051	0.039	0.030	0.011	0.030	0.036
Length	ft.	1988.74	2513.42	22.75	2201.22	849.27	1336.12	458.44	334.32	533.66
Paved?	p/u	u	u	u	u	u	u	u	u	p
Time	min.	8.80	11.81	0.18	10.04	4.42	7.98	4.52	2.01	2.32
Channel Flow										
Slope	ft/ft	0.030	0.000	0.000	0.000	0.017	0.000	0.000	0.000	0.000
Hydraulic Radius	ft.	0.6250	0.0000	0.0000	0.0000	0.6250	0.0000	0.0000	0.0000	0.0000
Roughness	n	0.013	0.000	0.000	0.000	0.013	0.000	0.000	0.000	0.000
Velocity	fps	8.42	0.00	0.00	0.00	8.42	0.00	0.00	0.00	0.00
Length	ft.	371.63	0.00	0.00	0.00	248.56	0.00	0.00	0.00	0.00
Time	min.	0.74	0.00	0.00	0.00	0.49	0.00	0.00	0.00	0.00
Summary										
Tc	min.	23.79	26.07	15.34	24.30	14.27	17.34	10.71	10.57	16.32
Lag Time	min.	14.28	15.64	9.21	14.58	8.56	10.41	6.42	6.34	9.79
Run-off Values										
2 Year	cfs	6.00	43.43	0.20	10.78	9.23	24.84	2.03	1.47	8.99
10 Year	cfs	12.15	88.10	0.46	21.84	19.98	50.24	3.59	3.24	16.54
25 Year	cfs	17.05	123.57	0.66	30.65	28.56	70.48	4.81	4.64	22.49
100 Year	cfs	26.62	193.10	1.05	47.89	45.29	110.06	7.19	7.38	34.11

Notes:
1: Atlas 14 precipitation values are used to determine storm water runoff
2: Pervious C value is chosen based off "Woods" with a Soil Type D in good condition from the City of Austin Drainage Criteria Manual
3: Roughness N-value is based on 50% woods and 50% range

Run-off Values	POINT OF ANALYSIS SUMMARY TABLE					
	EXISTING			PROPOSED		
	POC-1	POC-2	POC-3	POC-1	POC-2	POC-3
2 Year	33.01	67.32	2.03	32.78	65.74	2.03
10 Year	68.56	136.69	3.59	66.85	133.80	3.59
25 Year	96.82	191.89	4.81	94.99	186.79	4.81
100 Year	151.92	299.77	7.19	151.24	292.01	7.19

REFERENCE NOTES:

1. FOR EXISTING DRAINAGE PLANS SEE SHEET 8.
2. FOR POND 1 AND 2 LAYOUT AND CALCULATIONS, SEE SHEETS 14–17.

DATE:	BY:	DESCRIPTION	REVISION

STATE OF TEXAS · HUGO ELIZONDO, JR. · 69781 · LICENSED PROFESSIONAL ENGINEER

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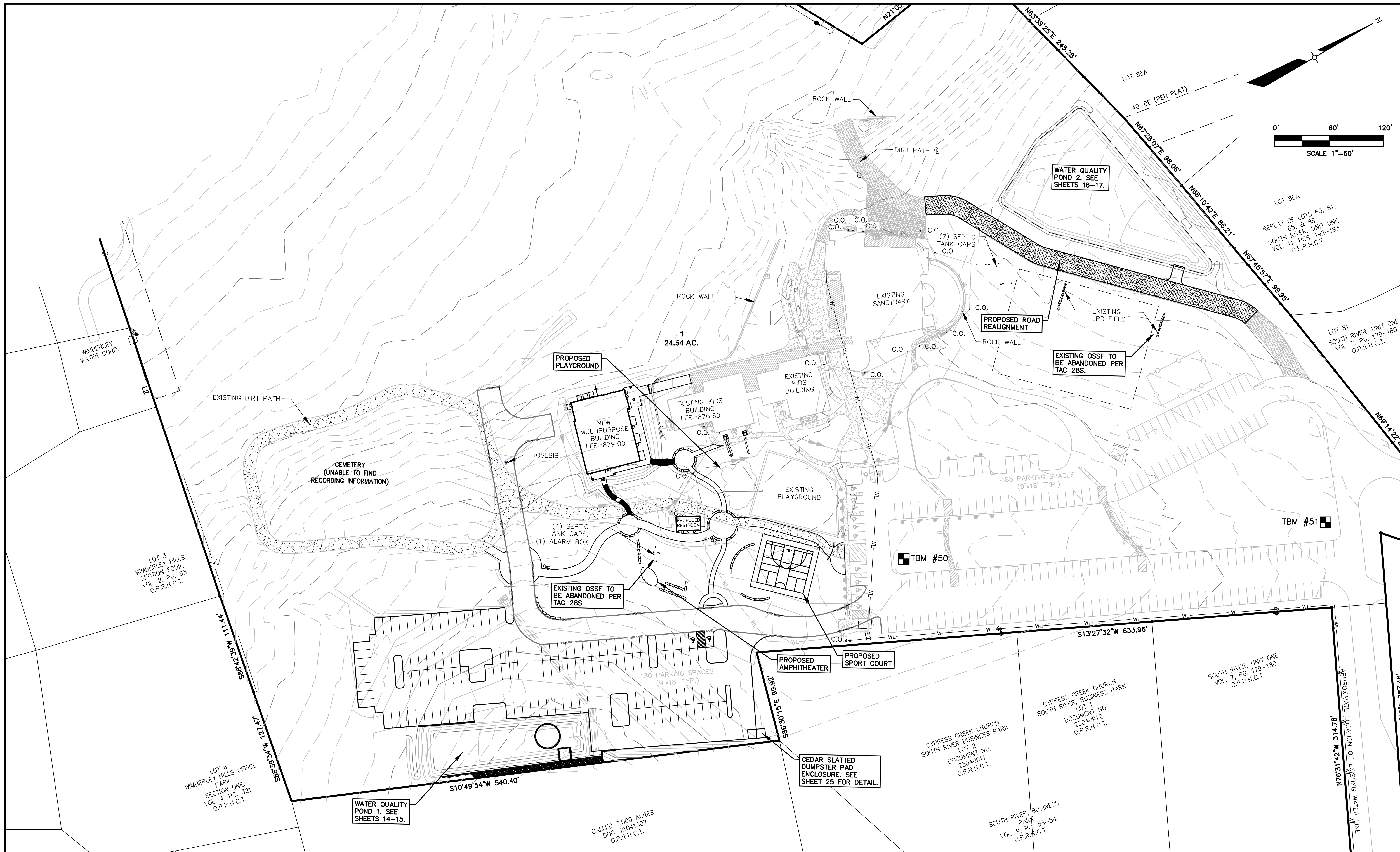
120 Rowmark Drive, Ste. 208 Phone: (512) 312-5450
San Marcos, Texas 78666 e-mail: ecuatroconsultants.com

MASTER DRAINAGE PLAN

CYPRES CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE:	JANUARY 2024
PROJECT:	24–010
DRAWING'S NAME:	9_CCC_MASTER DRAINAGE PLAN
DESIGN: AWE	CHECKED: CDE
DRAWN: AWE	APPROVED: HE Jr.
SHEET:	9 OF 25



LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BOUNDARY LINE
		EASEMENT BOUNDARY
915	915	CONTOURS
		LOT LINE
		CENTER LINE OF DITCH
TEL	TEL	TELEPHONE LINE
W	W	WATER LINE
UG	UG	UNDERGROUND ELECTRIC
		WATER VALVE
		FIRE HYDRANT
		WATER METER
WW	WW	WASTEWATER LINE
FM	FM	FORCE MAIN
		WASTEWATER MANHOLE
C.O.	C.O.	WASTEWATER CLEANOUT
		WASTEWATER SERVICE
F.V.	F.V.	FLUSH VALVE
		AIR RELEASE VALVE
OHE	OHE	OVER HEAD ELECTRIC
OHT	OHT	OVER HEAD TELEPHONE
		POWER POLE
		GUY WIRE
SS	SS	STORM SEWER
		CMP/ RCP PIPES
ATT	ATT	AT&T LINE
FOC	FOC	FIBER OPTIC CABLE
GAS	GAS	GAS LINE
		PAVEMENT
		CONCRETE
L.P.	L.P.	LIGHT POLE
		CHAIN LINK FENCE
		WOOD FENCE
		BARB WIRE FENCE
		TRAFFIC FLOW
		HANDICAP SPACE
	FIRE LANE	FIRE LANE

EXISTING IMPERVIOUS COVER (I.C.)

TOTAL SITE AREA:			24.54 AC	1,068,962 SF
EXISTING BUILDING(S):				19,042 SF
EXISTING PARKING AREA:				97,983 SF
EXISTING REAR ROAD TO BE REMOVED				8,932 SF
EXISTING SIDEWALKS AND MISC. CONCRETE:				31,449 SF
TOTAL EXISTING IMPERVIOUS COVER:				157,406 SF
EXISTING I.C. PERCENTAGE:	157,406	/	1,068,962	14.7 %

TOTAL IMPERVIOUS COVER (I.C.)

TOTAL SITE AREA:			24.54 AC	1,068,962 SF
ZONING: RA, RESIDENTIAL ACREAGE, I.C.				20.0 %
TOTAL BUILDING(S):				24,299 SF
TOTAL PAVED AREA/ROADS:				150,896 SF
TOTAL SIDEWALKS AND MISC. CONCRETE:				37,162 SF
TOTAL IMPERVIOUS COVER:				212,357 SF
TOTAL I.C. PERCENTAGE:	212,357	/	1,068,962	19.87 %

PROPOSED IMPERVIOUS COVER (I.C.)

TOTAL SITE AREA:			24.54 AC	1,068,962 SF
PROPOSED BUILDING(S):				5,257 SF
PROPOSED PARKING AREA:				44,990 SF
PROPOSED REAR ROAD				7,867 SF
PROPOSED FIRE LANE				18,036 SF
PROPOSED SIDEWALKS AND MISC. CONCRETE:				12,292 SF
TOTAL PROPOSED IMPERVIOUS COVER:				88,441 SF
PROPOSED I.C. PERCENTAGE:	88,441	/	1,068,962	8.3 %

PARKING REQUIREMENTS:

LAND USE:	NUMBER OF SEATS:	PARKING RATIO:	PARKING REQUIRED	PARKING PROVIDED	HANDICAP PARKING REQUIRED	HANDICAP PARKING PROVIDED
CHURCH	511	1/3	170	318	8	12
		TOTAL:	170	318	8	12
				100%		120%

SITE PLAN NOTES:

1. ALL IMPROVEMENTS SHALL BE MADE IN ACCORDANCE WITH THE RELEASED SITE PLAN. ANY ADDITIONAL IMPROVEMENTS WILL REQUIRE SITE PLAN AMENDMENT AND APPROVAL OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT
2. APPROVAL OF THIS SITE PLAN DOES NOT INCLUDE BUILDING AND FIRE CODE APPROVAL NOR BUILDING PERMIT APPROVAL
3. ADDITIONAL ELECTRIC EASEMENTS MAY BE REQUIRED AT A LATER DATE.
4. A DEVELOPMENT PERMIT MUST BE ISSUED PRIOR TO AN APPLICATION FOR BUILDING PERMIT FOR NON-CONSOLIDATED OR PLANNING COMMISSION APPROVED SITE PLANS.
5. FOR DRIVEWAY CONSTRUCTION: THE OWNER IS RESPONSIBLE FOR ALL COSTS OF RELOCATION OF, OR DAMAGE TO UTILITIES.
6. FOR CONSTRUCTION WITHIN THE RIGHT OF WAY, A R.O.W. EXCAVATION PERMIT IS REQUIRED.
7. SIGN INSTALLATION REQUIRES SEPARATE PERMIT AND APPROVAL PROCESS.

REFERENCE NOTES:

1. FOR EXISTING CONDITIONS SEE SHEET 6.
2. FOR EXISTING AND MASTER DRAINAGE, SEE SHEETS 8 AND 9.
3. FOR GRADING PLAN, SEE SHEET 12.
4. FOR POND LAYOUTS AND CALCULATIONS, SEE SHEETS 13-16.
5. FOR DETAILS, SEE SHEETS 20-25.

REVISION	DESCRIPTION	BY:	DATE:

STATE OF TEXAS
HUGO ELIZONDO, JR.
69781
LICENSED PROFESSIONAL ENGINEER

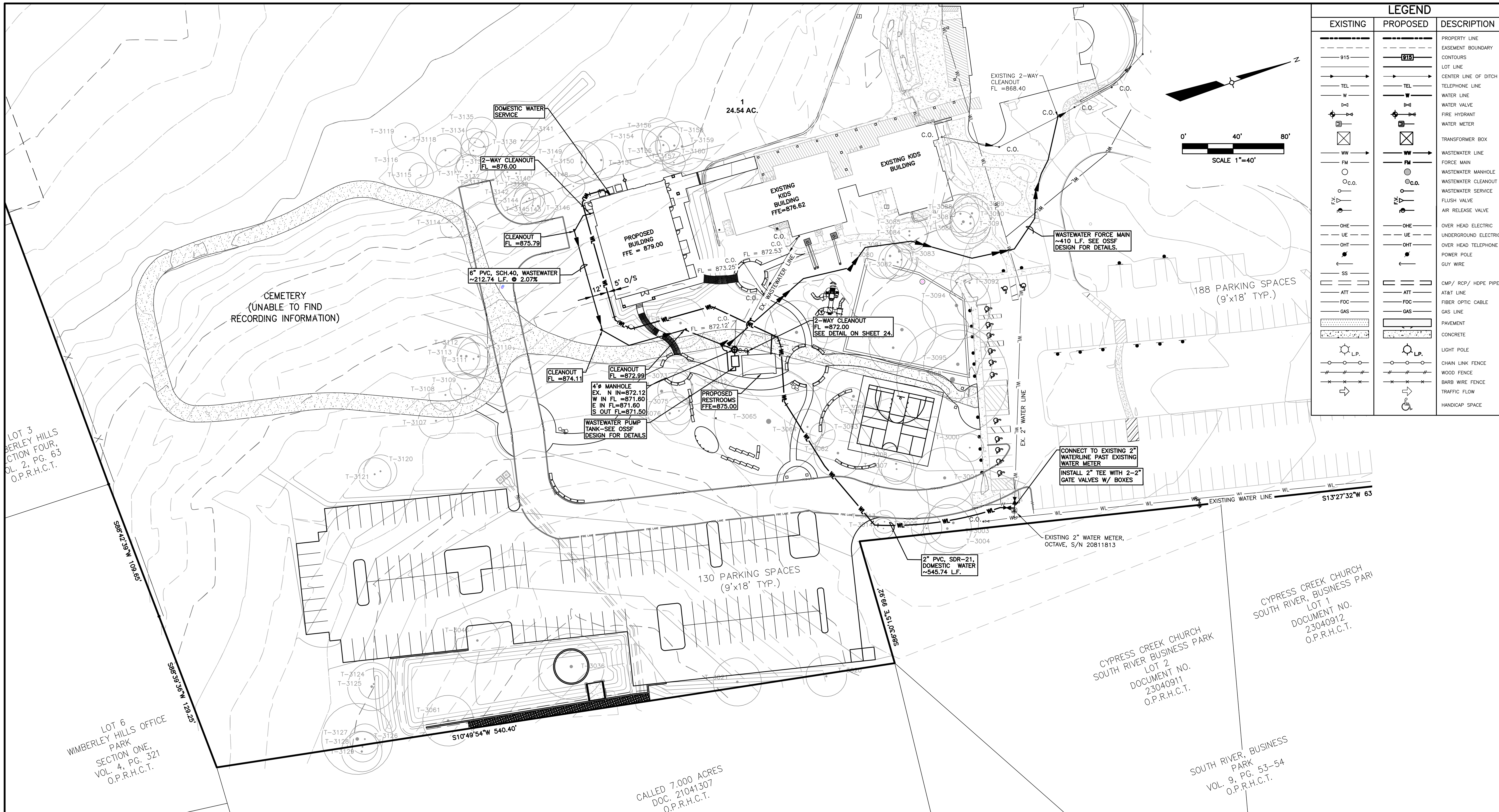
4CUATRO Consultants, LTD.
Registration No. F-3524
120 Riverwalk Drive, Ste. 208 San Marcos, Texas 78666
Phone: (512) 312-5040
e-mail: cuatro@cuatroconsultants.com

SITE PLAN

CYPRES CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE: JANUARY 2024	
PROJECT: 24-010	
DRAWING'S NAME: 10_CCC_SITE PLAN	
DESIGN: AWE	CHECKED: CDE
DRAWN: AWE	APPROVED: HE Jr.
SHEET: 10 OF 25	



WASTEWATER SEPARATION: (TCEQ CHAPTER 217)

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
CHAPTER 217 – DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM

A. IF A COLLECTION SYSTEM PARALLELS A PUBLIC WATER SUPPLY PIPE THE FOLLOWING REQUIREMENTS APPLY.

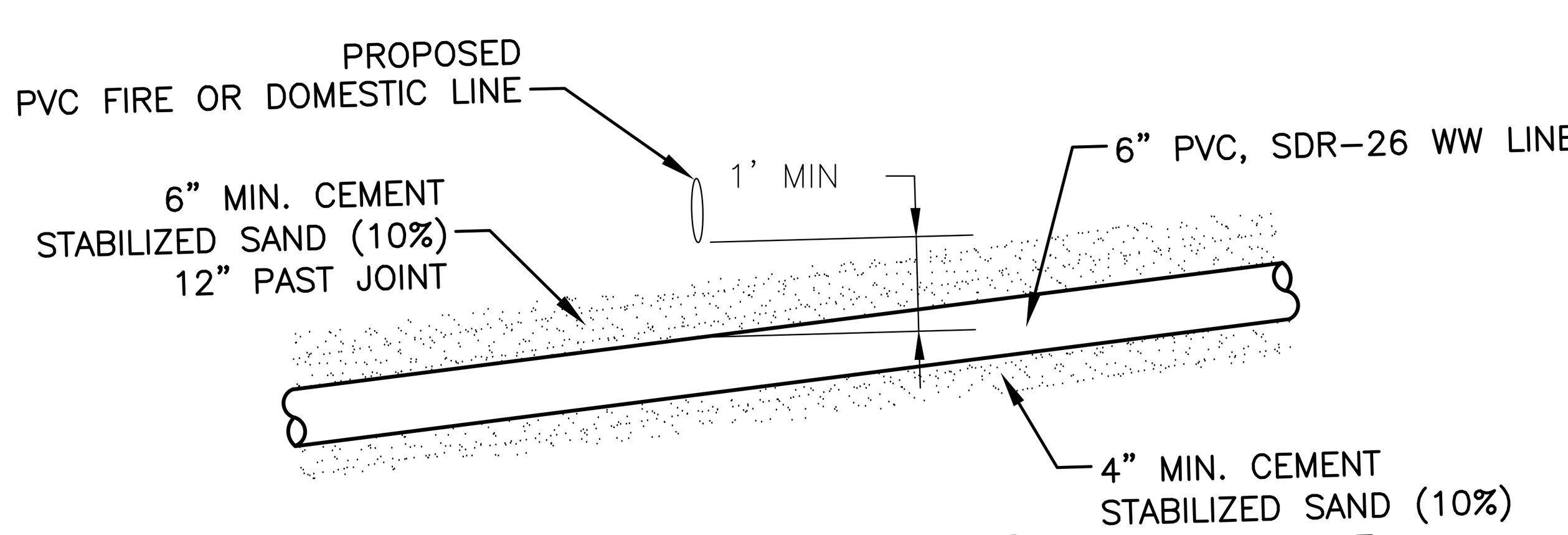
I. IF A COLLECTION SYSTEM PIPE MUST BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC MEETING ASTM SPECIFICATIONS WITH AT LEAST A 150 POUNDS PER SQUARE INCH (PSI) PRESSURE RATING FOR BOTH THE PIPE AND JOINTS.
II. A VERTICAL SEPARATION MUST BE AT LEAST 2 FEET BETWEEN THE OUTSIDE DIAMETERS OF THE PIPES.
III. A HORIZONTAL SEPARATION MUST BE AT LEAST 4 FEET BETWEEN OUTSIDE DIAMETERS OF THE PIPES.
IIII. A COLLECTION SYSTEM PIPE MUST BE BELOW A PUBLIC WATER SUPPLY PIPE.

B. IF A COLLECTION SYSTEM PIPE CROSSES A PUBLIC WATER SUPPLY PIPE, THE FOLLOWING REQUIREMENTS APPLY:
I. IF A COLLECTION SYSTEM IS CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI, THE FOLLOWING REQUIREMENTS APPLY:
A. A MINIMUM SEPARATION DISTANCE IS 6" BETWEEN OUTSIDE DIAMETERS OF THE PIPES
B. A COLLECTION SYSTEM PIPE MUST BE BELOW A PUBLIC WATER SUPPLY PIPE.
C. COLLECTION SYSTEM PIPE JOINTS MUST BE LOCATED AS FAR AS POSSIBLE FROM AN INTERSECTION WITH A PUBLIC WATER SUPPLY LINE.

II. IF A COLLECTION SYSTEM PIPE CROSSES UNDER A PUBLIC WATER SUPPLY PIPE AND THE COLLECTION SYSTEM PIPE IS CONSTRUCTED OF ACRYLONITRILE BUTADIENE STYRENE (ABS) TRUSS PIPE, SIMILAR SEMI-RIGID PLASTIC COMPOSITE PIPE, CLAY PIPE, OR CONCRETE PIPE WITH GASKETED JOINTS, THE FOLLOWING REQUIREMENTS APPLY:
A. A MINIMUM SEPARATION DISTANCE IS 2 FEET.
B. IF A COLLECTION SYSTEM PIPE IS WITHIN 9 FEET OF A PUBLIC WATER SUPPLY PIPE, THE INITIAL BACKFILL AROUND THE COLLECTION SYSTEM PIPE MUST BE:
1. SAND STABILIZER WITH 2 OR MORE 80 POUND BAGS OF CEMENT PER CUBIC YARD OF SAND FOR ANY SECTION OF COLLECTION SYSTEM PIPE WITH IN 9 FEET OF A PUBLIC WATER SUPPLY PIPE.
2. INSTALLED FROM ONE QUARTER OF THE DIAMETER OF THE COLLECTION SYSTEM PIPE BELOW THE CENTERLINE OF THE COLLECTION SYSTEM PIPE TO ONE PIPE DIAMETER (BUT NOT LESS THAN 12") ABOVE THE TOP OF THE COLLECTION SYSTEM PIPE.

III. IF A COLLECTION SYSTEM CROSSES OVER A PUBLIC WATER SUPPLY PIPE, ONE OF THE FOLLOWING PROCEDURES MUST BE FOLLOWED:

(a). EACH PORTION OF A COLLECTION SYSTEM PIPE WITHIN 9 FEET OF A PUBLIC WATER SUPPLY PIPE MUST BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC PIPE WITH AT LEAST A 150 PSI PRESSURE RATING USING APPROPRIATE ADAPTERS.



SEWER CROSSING
NTS.

CONSTRUCTION NOTES

1. CONTRACTOR SHALL COORDINATE WITH LANDSCAPE ARCHITECT REGARDING THE RELOCATION OF EXISTING IRRIGATION INFRASTRUCTURE AS WELL AS LOCATION OF PROPOSED IRRIGATION INFRASTRUCTURE.
2. CONTRACTOR SHALL CONSTRUCT WASTEWATER MANHOLE OVER EXISTING WASTEWATER LINE/CLEANOUT AND SERVICES IN AS SHOWN.
3. CONTRACTOR SHALL CONSTRUCT NEW 2" PVC WATERLINE AS SHOWN UTILIZING SOLVENT WELD BENDS AS REQUIRED TO ACHIEVE ALIGNMENT.

DATE:	BY:	DESCRIPTION	REVISION

HUGO ELIZONDO, JR. 69781 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS

CUATRO Consultants, LTD.
Registration No. F-3524
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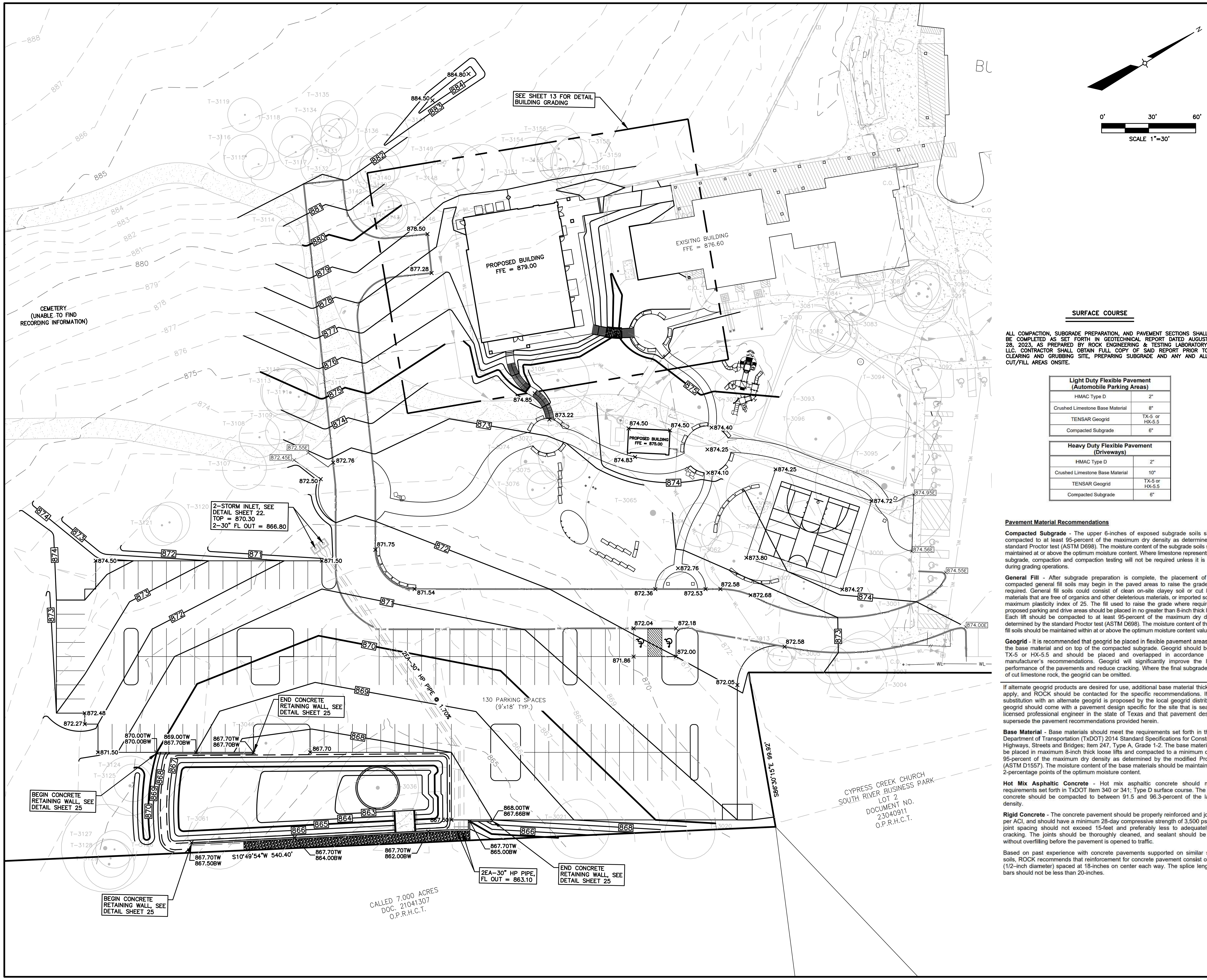
Phone: (512) 312-5040
e-mail: cuatro@cuatroconsultants.com

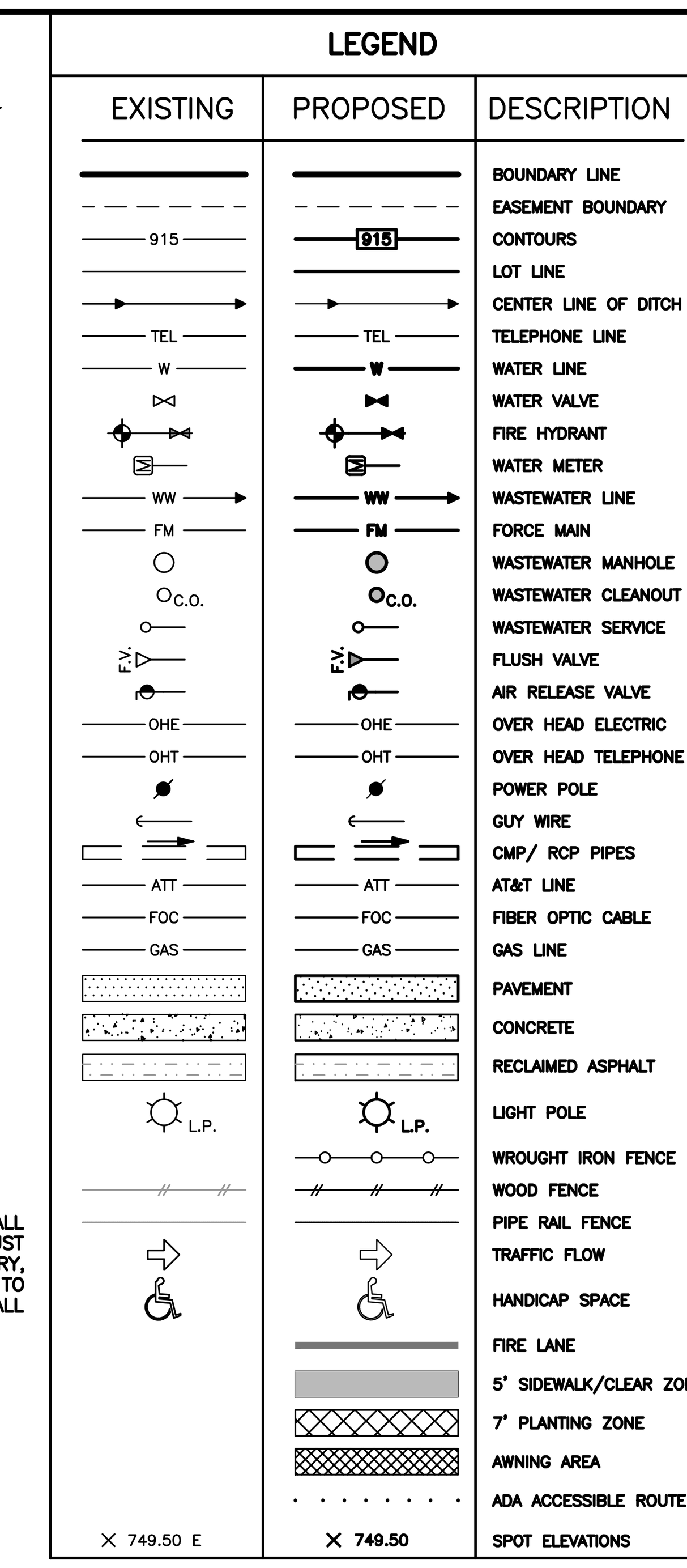
UTILITY PLAN

CYPRESS CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE: JANUARY 2024
PROJECT: 24-010
DRAWING'S NAME: 11_CCC_UTILITY PLAN
DESIGN: AWE
CHECKED: CDE
DRAWN: AWE
APPROVED: HE Jr.
SHEET: 11 OF 25





SURFACE COURSE

ALL COMPACTION, SUBGRADE PREPARATION, AND PAVEMENT SECTIONS SHALL BE COMPLETED AS SET FORTH IN GEOTECHNICAL REPORT DATED AUGUST 28, 2023, AS PREPARED BY ROCK ENGINEERING & TESTING LABORATORY, LLC. CONTRACTOR SHALL OBTAIN FULL COPY OF SAID REPORT PRIOR TO CLEARING AND GRUBBING SITE, PREPARING SUBGRADE AND ANY AND ALL CUT/FILL AREAS ONSITE.

Light Duty Flexible Pavement (Automobile Parking Areas)	
HMAC Type D	2"
Crushed Limestone Base Material	8"
TENSAR Geogrid	TX-5 or HX-5.5
Compacted Subgrade	6"

Heavy Duty Flexible Pavement (Driveways)	
HMAC Type D	2"
Crushed Limestone Base Material	10"
TENSAR Geogrid	TX-5 or HX-5.5
Compacted Subgrade	6"

Pavement Material Recommendations

Compacted Subgrade - The upper 6-inches of exposed subgrade soils should be compacted to at least 95-percent of the maximum dry density as determined by the standard Proctor test (ASTM D698). The moisture content of the subgrade soils should be maintained at or above the optimum moisture content. Where limestone represents the final subgrade, compaction and compaction testing will not be required unless it is disturbed during grading operations.

General Fill - After subgrade preparation is complete, the placement of properly compacted general fill soils may begin in the paved areas to raise the grades, where required. General fill soils could consist of clean on-site clayey soil or cut limestone materials that are free of organics and other deleterious materials, or imported soils with a maximum plasticity index of 25. The fill used to raise the grade where required in the proposed parking and drive areas should be placed in no greater than 8-inch thick loose lifts. Each lift should be compacted to at least 95-percent of the maximum dry density as determined by the standard Proctor test (ASTM D698). The moisture content of the general fill soils should be maintained within at or above the optimum moisture content value.

Geogrid - It is recommended that geogrid be placed in flexible pavement areas beneath the base material and on top of the compacted subgrade. Geogrid should be Tensar TX-5 or HX-5.5 and should be placed and overlapped in accordance with the manufacturer's recommendations. Geogrid will significantly improve the long-term performance of the pavements and reduce cracking. Where the final subgrade consists of cut limestone rock, the geogrid can be omitted.

If alternate geogrid products are desired for use, additional base material thickness will apply, and ROCK should be contacted for the specific recommendations. If a direct substitution with an alternate geogrid is proposed by the local geogrid distributor, the geogrid should come with a pavement design specific for the site that is sealed by a licensed professional engineer in the state of Texas and that pavement design shall supersede the pavement recommendations provided herein.

Base Material - Base materials should meet the requirements set forth in the Texas Department of Transportation (TxDOT) 2014 Standard Specifications for Construction of Highways, Streets and Bridges; Item 247, Type A, Grade 1-2. The base material should be placed in maximum 8-inch thick loose lifts and compacted to a minimum density of 95-percent of the maximum dry density as determined by the modified Proctor test (ASTM D1557). The moisture content of the base materials should be maintained within 2-percentage points of the optimum moisture content.

Hot Mix Asphaltic Concrete - Hot mix asphaltic concrete should meet the requirements set forth in TxDOT Item 340 or 341; Type D surface course. The asphaltic concrete should be compacted to between 91.5 and 96.3-percent of the laboratory density.

Rigid Concrete - The concrete pavement should be properly reinforced and jointed, as per ACI, and should have a minimum 28-day compressive strength of 3,500 psi. Control joint spacing should not exceed 15-feet and preferably less to adequately control cracking. The joints should be thoroughly cleaned, and sealant should be installed without overfilling before the pavement is opened to traffic.

Based on past experience with concrete pavements supported on similar subgrade soils, ROCK recommends that reinforcement for concrete pavement consist of #4 bars (1/2–inch diameter) spaced at 18-inches on center each way. The splice length for #4 bars should not be less than 20-inches.

REFERENCE NOTES:

1. FOR EXISTING CONDITIONS SEE SHEET 6.
2. FOR EXISTING AND MASTER DRAINAGE, SEE SHEETS 8 AND 9.
3. FOR SITE PLAN, SEE SHEET 10.
4. FOR POND LAYOUTS AND CALCULATIONS, SEE SHEETS 13–16.
5. FOR DETAILS, SEE SHEETS 20–25.

REVISION	DESCRIPTION	BY:	DATE:

STATE OF TEXAS — HUGO ELIZONDO, JR. — 69781 — LICENSED PROFESSIONAL ENGINEER

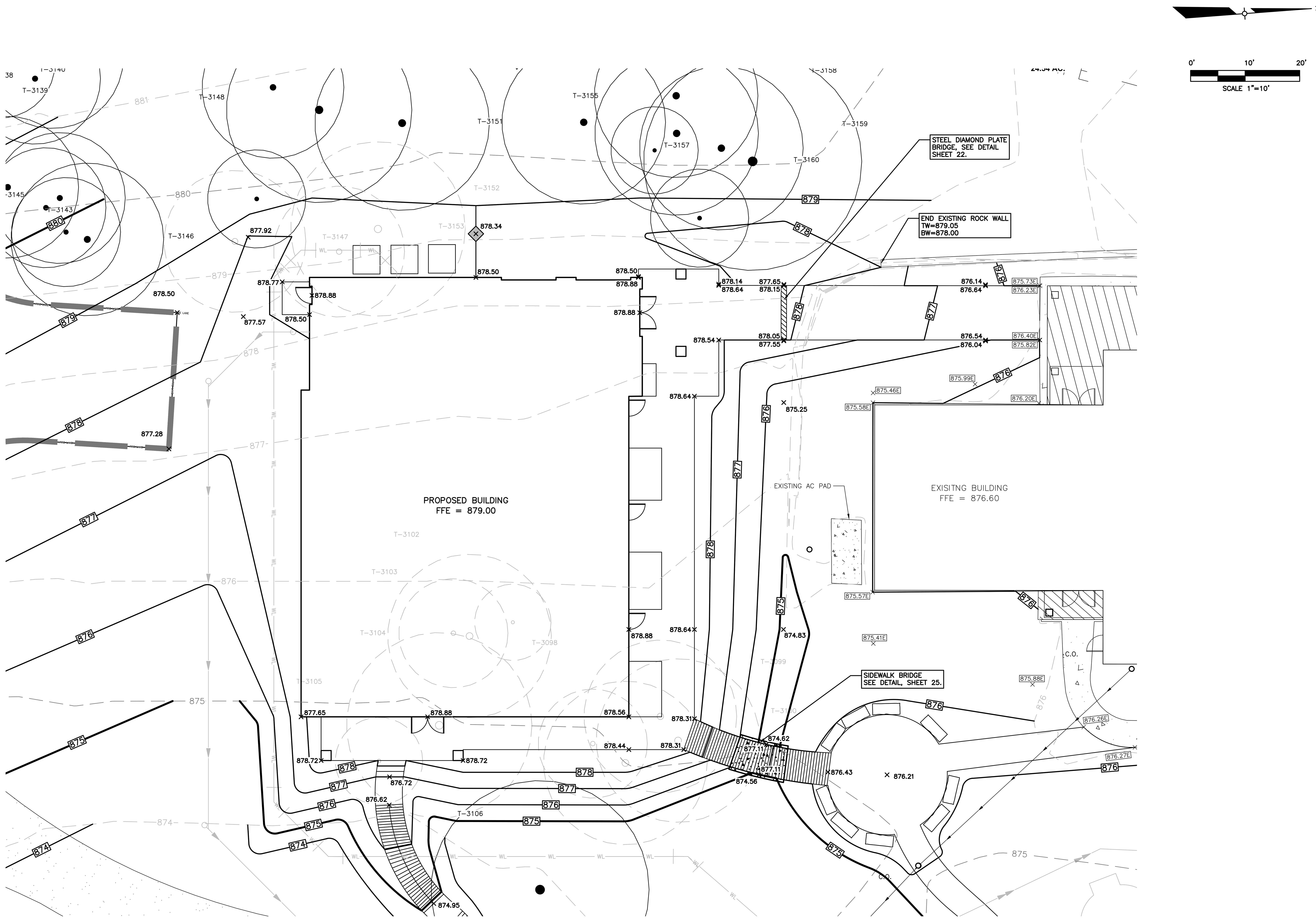
CUATRO Consultants, LTD.
Registration No. F-3524
120 Riverwalk Drive, Ste. 208 San Marcos, Texas 78666
Phone: (512) 312-5040 e-mail: cuatro@cuatroconsultants.com

OVERALL GRADING PLAN

CYPRES CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE: JANUARY 2024	
PROJECT: 24–010	
DRAWING'S NAME: 12_CCC_GRADING PLAN	
DESIGN: CDE	CHECKED: CDE
DRAWN: CCG	APPROVED: HE Jr.
SHEET: 12 OF 25	



LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BOUNDARY LINE
		EASEMENT BOUNDARY
915	915	CONTOURS
		LOT LINE
		CENTER LINE OF DITCH
TEL	TEL	TELEPHONE LINE
W	W	WATER LINE
		WATER VALVE
		FIRE HYDRANT
		WATER METER
WW	WW	WASTEWATER LINE
FM	FM	FORCE MAIN
		WASTEWATER MANHOLE
C.O.	C.O.	WASTEWATER CLEANOUT
		WASTEWATER SERVICE
F.V.	F.V.	FLUSH VALVE
		AIR RELEASE VALVE
OHE	OHE	OVER HEAD ELECTRIC
OHT	OHT	OVER HEAD TELEPHONE
		POWER POLE
		GUY WIRE
		CMP/ RCP PIPES
ATT	ATT	AT&T LINE
FOC	FOC	FIBER OPTIC CABLE
GAS	GAS	GAS LINE
		PAVEMENT
		CONCRETE
		RECLAIMED ASPHALT
L.P.	L.P.	LIGHT POLE
		WROUGHT IRON FENCE
		WOOD FENCE
		PIPE RAIL FENCE
		TRAFFIC FLOW
		HANDICAP SPACE
		FIRE LANE
		5' SIDEWALK/CLEAR ZONE
		7' PLANTING ZONE
		AWNING AREA
		ADA ACCESSIBLE ROUTE
× 749.50 E	× 749.50	SPOT ELEVATIONS

REFERENCE NOTES:

1. FOR EXISTING CONDITIONS SEE SHEET 6.
2. FOR EXISTING AND MASTER DRAINAGE, SEE SHEETS 8 AND 9.
3. FOR SITE PLAN, SEE SHEET 10.
4. FOR POND LAYOUTS AND CALCULATIONS, SEE SHEETS 13–16.
5. FOR DETAILS, SEE SHEETS 20–25.

REVISION	DESCRIPTION	BY:	DATE:

STATE OF TEXAS
HUGO ELIZONDO, JR.
69781
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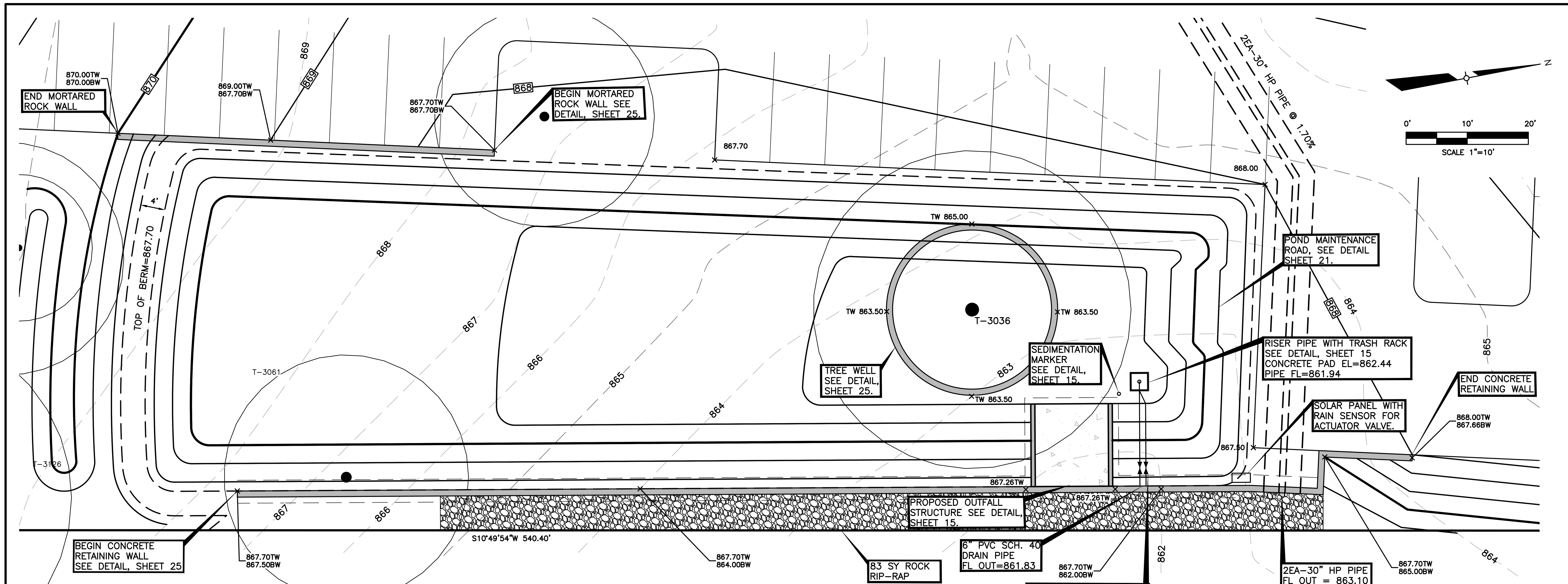
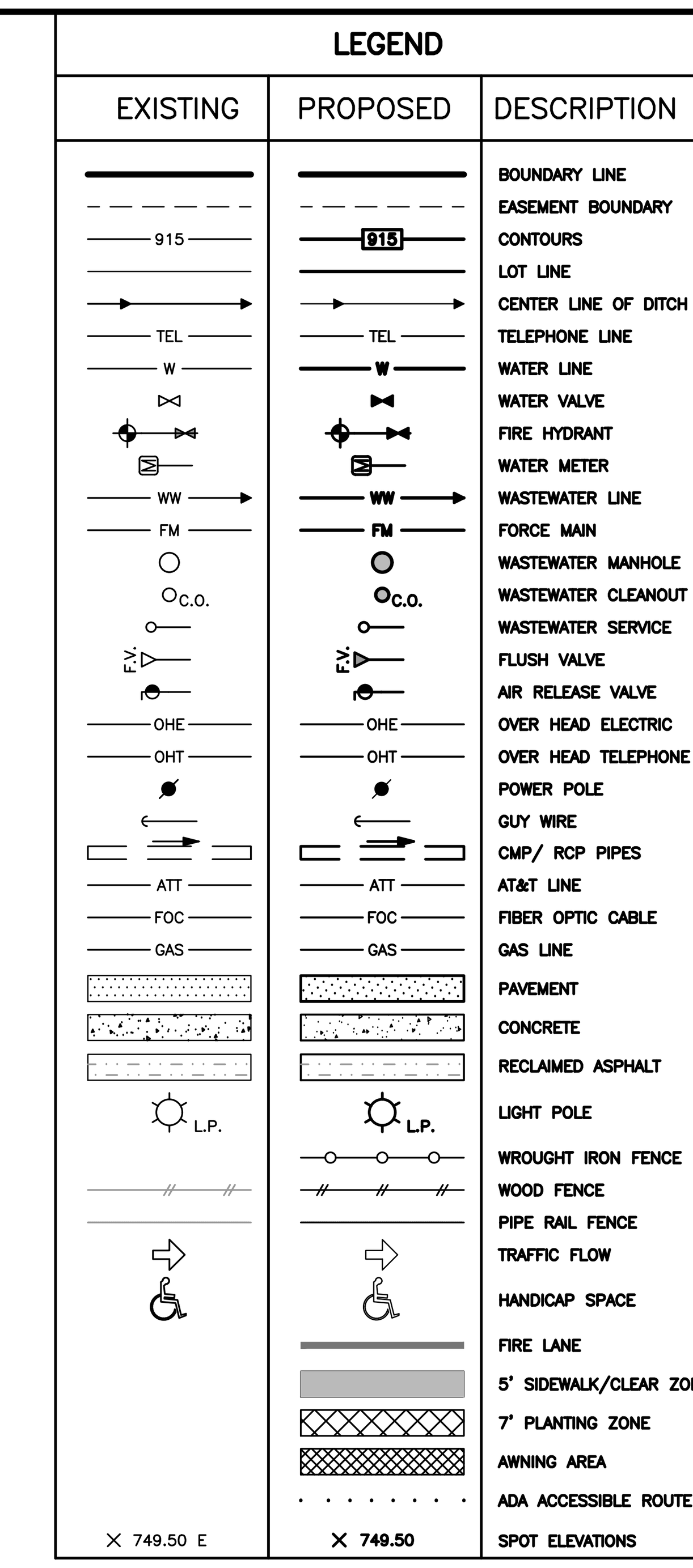
BUILDING GRADING PLAN

CYPRESS CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE: JANUARY 2024
PROJECT: 24-010
DRAWING'S NAME: 13_CCC_BUILDING GRADING PLAN
DESIGN: CDE
CHECKED: CDE
DRAWN: CCG
APPROVED: HE Jr.
SHEET: 13 OF 25





Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009 1

Project Name: CYPRESS CREEK CHURCH
Date Prepared: 2/20/2024

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

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

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

Site Data: Determine Required Load Removal Based on the Entire Project
County = **Hays**
Total project area included in plan * = **24.53** acres
Predevelopment impervious area within the limits of the plan * = **0.00** acres
Total post-development impervious area within the limits of the plan* = **6.59** acres
Total post-development impervious cover fraction * = **0.27**
P = **33** inches

$L_{M\ TOTAL\ PROJECT}$ = **5913** lbs.

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

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area = **3.96** acres
Predevelopment impervious area within drainage basin/outfall area = **0.00** acres
Post-development impervious area within drainage basin/outfall area = **1.91** acres
Post-development impervious fraction within drainage basin/outfall area = **0.48**
$L_{M\ THIS\ BASIN}$ = **1715** lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention
Removal efficiency = **91** percent

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

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

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

A_C = **3.96** acres
A_I = **1.91** acres
A_P = **2.05** acres
L_R = **2019** lbs

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

Desired $L_{M\ THIS\ BASIN}$ = **1715** lbs.

F = **0.85**

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

Rainfall Depth = **1.32** inches
Post Development Runoff Coefficient = **0.35**
On-site Water Quality Volume = **6605** cubic feet

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

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

Storage for Sediment = **1321**
Total Capture Volume (required water quality volume(s) x 1.20) = 7926 cubic feet
The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.

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

Required Water Quality Volume for extended detention basin = **7926** cubic feet

DETENTION POND STORAGE SUMMARY POC-1

Stage	Area [sf]	Volume [cf]	Tree Well [sf]	Adjusted Volume [cf]	Cum. Volume [cf]	Cum. Volume [Acre-ft]
862.00	0,000.00	0,000.00	0.00	0,000.00	0,000.00	0.0000
863.00	1,289.18	0,644.59	470.92	0,409.13	0,409.13	0.0094
864.00	3,335.74	2,312.46	60.01	2,342.47	2,751.60	0.0632
865.00	6,123.40	4,729.57	0.00	4,729.57	7,481.17	0.1717
865.08	*6,226*	*493.96*	*0.00*	0,493.96	7,975.13	*0.18308*
866.00	7,401.82	6,762.61	0.00	6,762.61	14,737.74	0.33833
867.00	8,715.07	8,058.44	0.00	8,058.44	22,796.18	0.52333

* TREE WELL/ISLAND ELEVATION = 863.50

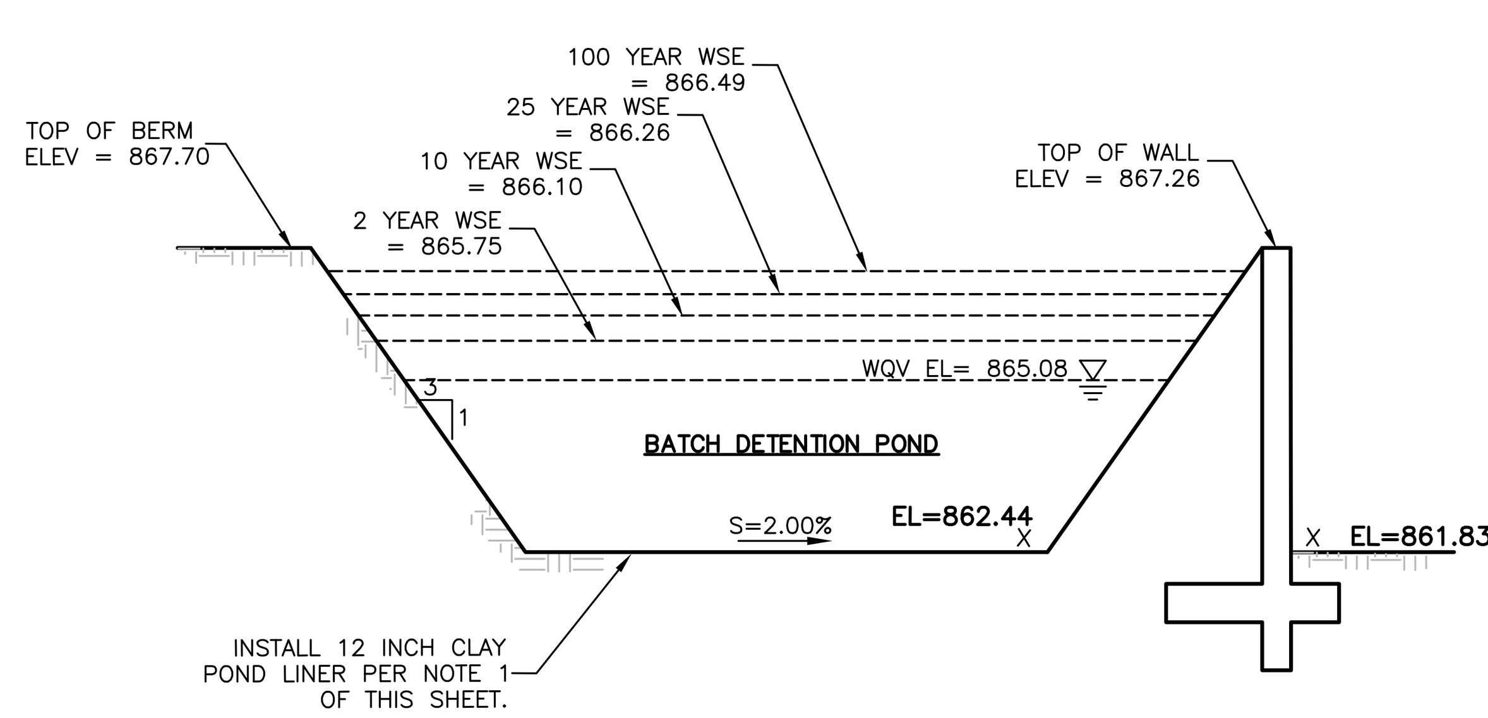
WQV EL= 865.08

DETENTION POND STAGE SUMMARY

DESIGN STORM	PROPOSED	PROPOSED ROUTED	W.S. ELEVATION
2YR	32.78 cfs	6.62 cfs	865.75
10YR	66.85 cfs	12.45 cfs	866.10
25YR	94.99 cfs	18.31 cfs	866.26
100YR	151.24 cfs	29.45 cfs	866.49

PRE, POST, AND ROUTED-DETENTION RUNOFF SUMMARY POC-1

DESIGN STORM	EXISTING	PROPOSED ROUTED
2YR	33.01 cfs	32.78 cfs
10YR	68.56 cfs	66.85 cfs
25YR	96.82 cfs	94.99 cfs
100YR	151.92 cfs	151.24 cfs



TYPICAL SECTION – EXTENDED DETENTION BASIN
SCALE: NTS

3.4.2 Basin Lining Requirements

Impermeable liners should be used for water quality basins (retention, extended detention, sand filters, wet ponds and constructed wetlands) located over the recharge zone and in areas with the potential for groundwater contamination. Impermeable liners may be clay, concrete or geomembrane. If geomembrane is used, suitable geotextile fabric should be placed on the top and bottom of the membrane for puncture protection and the liners covered with a minimum of 6 inches of compacted topsoil. The topsoil should be stabilized with appropriate vegetation. Clay liners should meet the specifications in Table 3-6 and have a minimum thickness of 12 inches.

Table 3-6 Clay Liner Specifications (COA, 2004)

Property	Test Method	Unit	Specification
Permeability	ASTM D-2434	cm/sec	1×10^{-6}
Plasticity Index of Clay	ASTM D-423 & D-424	%	Not less than 15
Liquid Limit of Clay	ASTM D-2216	%	Not less than 30
Clay Particles Passing	ASTM D-422	%	Not less than 30
Clay Compaction	ASTM D-2216	%	95% of Standard Proctor Density

POND CONSTRUCTION NOTES:

1. POND INTERIOR/EXTERIOR FILL SLOPES SHALL BE INSTALLED AT 3:1 (H:V).
2. ACCESS ROAD SHALL BE 8" FLEXIBLE BASE W/6" MOISTURE CONDITIONED SUBGRADE (12' WIDE), EXCEPT AT ACCESS DRIVES.
3. ALL POND INTERIOR SLOPES REQUIRE REVET MATTING, TXDOT ITEM 169, UNLESS SODDED.
4. POND ACCESS RAMPS SHALL HAVE A SLOPE OF 4:1.

AUTOMATED DISCHARGE SYSTEM REQUIREMENTS:

AUTOMATED DISCHARGE SYSTEM WILL BE POWERED BY A SOLAR PANEL WITH A BACKUP BATTERY. A 12 HOUR DETENTION CONTROLLER WITH LEVEL SENSOR LOCATED ON A CONCRETE PAD SHALL BE INSTALLED IN THE WQ BASIN AS SHOWN HEREON; AT THE END OF THE REQUIRED 12 HOUR DETENTION TIME. THE CONTROLLER NEEDS TO BE SE TO OPEN THE PROPOSED 6 AUTOMATED PVC VALVE TO DRAIN WATER INTO THE PROPOSED DETENTION BASIN.

SUBSEQUENT RAINFALL EVENTS THAT OCCUR PRIOR TO THE WQ BASIN DRAINING SHOULD CAUSE THE VALVE TO REMAIN OPEN AND ALLOW THE ADDITIONAL STORMWATER RUNOFF TO PASS THROUGH THE BASIN. SET CONTROLLER TO CLOSE THE VALVE ONCE THE BASIN HAS BEEN DRAINED.

THE TOTAL DRAWDOWN TIME OF THE WQ BASIN SHALL NOT EXCEED 48 HOURS FOR A SINGLE STORM EVENT AFTER THE 12 HOUR REQUIRED DETENTION TIME ALL CABLES AND ELECTRIC COMPONENTS SHOULD BE PROTECTED BY CONDUIT AND BURIED TO PREVENT DAMAGE DURING MAINTENANCE ACTIVITIES.

THE LOGIC CONTROLLER SHOULD BE INSPECTED AS PART OF THE TWICE YEARLY INVESTIGATIONS. AT THE END OF THE INSPECTION. THE CONTROLLER SHOULD BE RESET.

INSTALL SEPARATE 6" DRAIN PIPE WITH MANUAL VALVE.

NOTES:

1. CLAY POND LINER SHALL BE INSTALLED WITHIN THE WETTED PERIMETER OF THE WATER QUALITY POND. SEE CLAY POND LINER REQUIREMENTS PER TCEQ, SHEET 28.
2. INSTALL TEMPORARY IRRIGATION SYSTEM FOR DISTURBED AREA TO ESTABLISH LAWN AND PLANTS.
3. INSTALL COMMON BERMUDA SOD ON ALL WATER QUALITY AND DETENTION PONDS.

REFERENCE NOTES:

1. FOR DRAINAGE CALCULATIONS, SEE SHEETS 8 AND 9.
2. FOR GRADING PLAN, SEE SHEET 12.

REVISION	DESCRIPTION	BY:	DATE:

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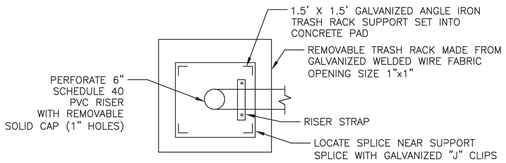
STATE OF TEXAS — HUGO ELIZONDO, JR. — 69781 — LICENSED PROFESSIONAL ENGINEER

POND 1 LAYOUT AND CALCULATIONS

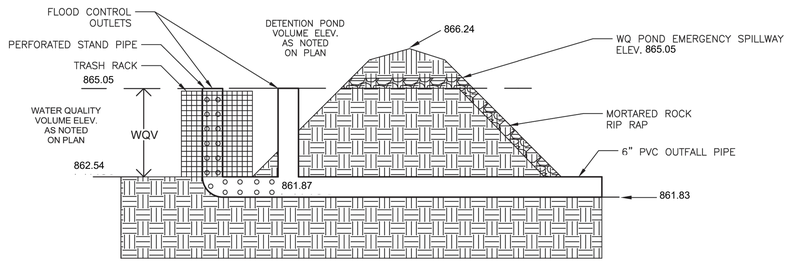
CYPRESS CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

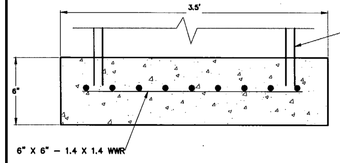
DATE: JANUARY 2024
PROJECT: 24-010
DRAWING'S NAME: 14_CCC_POND LAYOUT 1 AND CALCULATIONS
DESIGN: CDE | CHECKED: CDE
DRAWN: MJH | APPROVED: HE Jr.
SHEET: **14 OF 25**



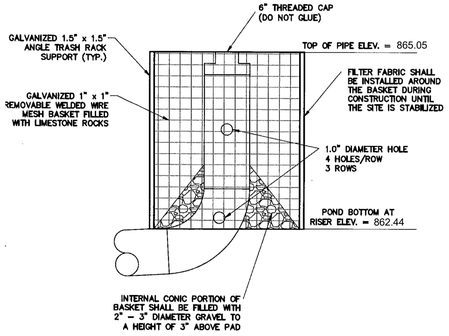
TRASH RACK DETAIL
SCALE: N.T.S.



WATER QUALITY EMERGENCY SPILLWAY DETAIL
NTS



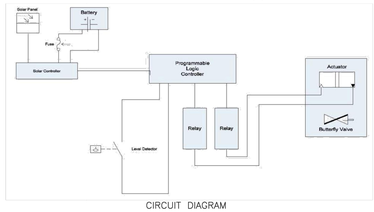
RISER PIPE PAD



(7) *Vegetation* – The facility should be planted and maintained to provide for a full and robust vegetative cover. The following wet tolerant species are recommended for planting within the bottom stage (LCRA, 1998):

- Bushy Bluestem
- Sedges
- Cypress
- Switch Grass
- Spike Rush
- Green Sprangletop
- Indian Grass
- Bullrush
- Scouring Rush
- Eastern Gamma
- Dropseed Iris

VEGETATION LIST
PER SECTION 3.4.4(7)

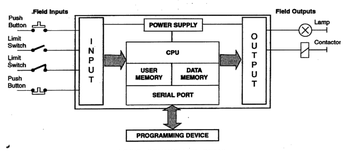


CIRCUIT DIAGRAM

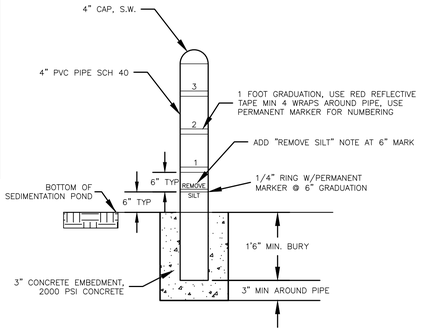
THE LOGIC CONTROLLER SHALL PROVIDE A TEST SEQUENCE, BE ABLE TO HANDLE A POWER OUTAGE, INCLUDE AN ON/OFF RESET SWITCH, HAVE CLEARLY VISIBLE EXTERNAL INDICATOR TO INDICATE A CYCLE IS IN PROGRESS WITHOUT OPENING THE BOX, AND THE ABILITY TO EXERCISE THE VALVE TO PREVENT SEIZING. A WATER LEVEL SENSOR SUCH AS A FLOAT VALVE, SHOULD BE INSTALLED TO ALERT THE SYSTEM TO CLOSE THE VALVE. A 6" SLIDE VALTERRA VALVE SHALL BE INSTALLED IN LINE TO BE CONTROLLED BY THE AUTOMATIC SYSTEM. A RECOMMENDED SUPPLIER FOR THIS SYSTEM, IS AGRIDRAIN WITH THEIR ITEM NUMBER 99–404, AS A POSSIBLE PRODUCT THAT WILL MEET THESE REQUIREMENTS. THE CONTRACTOR MAY USE AN ALTERNATE DESIGN, AS LONG AS AN EQUIVALENT SUPPLIER AND MODEL WITH SPECIFICATIONS IS PROVIDED TO THE ENGINEER OF RECORD FOR REVIEW PRIOR TO INSTALLATION.

A SEPARATE 6" LINE WITH MANUAL 6" GATE VALVE IS REQUIRED TO PROVIDE MANUAL OPERATION AND REMOVAL OF THE STORM WATER IN THE CASE OF A MALFUNCTION OF THE AUTOMATED SYSTEM.

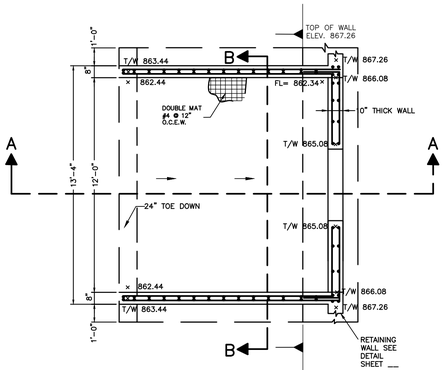
AN ALARM SYSTEM LIGHT, MUST BE CLEARLY VISIBLE TO INDICATE A SYSTEM MALFUNCTION, AND A SIGN POSTED WITH PHONE NUMBERS FOR THE BERRY CREEK MAINTENANCE DIVISION, AND THE TCEQ REGIONAL OFFICE TO BE CONTACTED. PLEASE CONTACT THE ENGINEER OF RECORD FOR THE APPROPRIATE CONTACT INFORMATION BEFORE PREPARING THE WARNING SIGN.



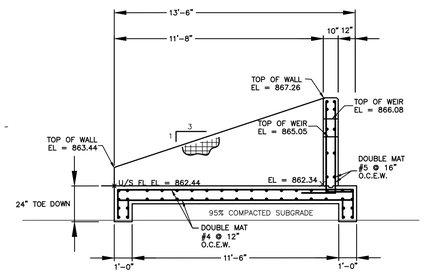
LOGIC CONTROLLER DETAIL



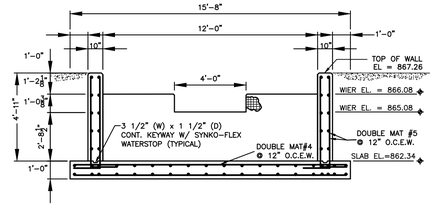
SEDIMENT ACCUMULATION MARKER
N.T.S.



POND OUTLET STRUCTURE : PLAN VIEW
SCALE: 1/4" = 1'



POND OUTLET STRUCTURE : SECTION "A-A"
SCALE: 1/4" = 1'



POND OUTLET STRUCTURE : SECTION "B-B"
SCALE: 1/4" = 1'

GENERAL CONCRETE NOTES:

1. ALL STRUCTURAL CONCRETE SHALL BE CLASS C STONE AGGREGATE CONCRETE UNLESS NOTED OTHERWISE. MINIMUM CONCRETE COMPRESSIVE STRENGTH FOR STRUCTURAL CONCRETE SHALL BE 3,600 P.S.I. WHEN TESTED AT 28 DAYS.

   MISCELLANEOUS NON–STRUCTURAL CONCRETE SHALL BE CLASS A STONE AGGREGATE CONCRETE MINIMUM COMPRESSIVE STRENGTH OF 3,000 P.S.I. AT 28 DAYS.

   IF TEMPERATURE IS ABOVE 80° F AT POURING, CONTRACTOR SHALL APPLY A COAT OF CURING COMPOUND.
2. HORIZONTAL CONSTRUCTION JOINTS IN CONCRETE POURS SHALL BE PERMITTED ONLY WHERE INDICATED ON THE DRAWINGS. ALL CONSTRUCTION JOINTS SHALL BE MADE IN THE CENTER OF SPANS. SEE DRAWINGS FOR TYPICAL DETAIL. THE LOCATION OF CONSTRUCTION JOINTS SHALL BE AS APPROVED BY THE STRUCTURAL ENGINEER. ADDITIONAL REINFORCING AT CONSTRUCTION JOINTS SHALL BE AS SPECIFIED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS FOR CONSTRUCTION JOINTS NOT SHOWN ON DRAWINGS FOR APPROVAL BY THE STRUCTURAL ENGINEER.

   CONTRACTION JOINTS SHALL BE INSTALLED AT MAXIMUM 10'–0" SPACING. ALL SAWCUTS SHALL BE 1/8" BY 1/4" OR 1" DEEP AND BE COMPLETED WITHIN 4 TO 6 HOURS AFTER POUR IS COMPLETE.
3. ALL PIPE SLEEVES IN CONCRETE MEMBERS SHALL BE SCHEDULE 40, PVC PIPE UNLESS SHOWN OTHERWISE ON THE STRUCTURAL DRAWINGS. LOCATION OF SLEEVES SHALL BE AS APPROVED BY THE STRUCTURAL ENGINEER.
4. REINFORCING STEEL SHALL CONFORM TO ACI 318 AND 315, LATEST EDITION. REINFORCING STEEL SHALL BE DEFORMED NEW BILLET STEEL BARS IN ACCORDANCE WITH ASTM SPECIFICATION A615 GRADE 60.
5. DETAILING OF REINFORCING STEEL SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE DETAILING MANUAL.
6. PROVIDE 2– #5 X 4' – 0" "L" SHAPED BARS TOP AND BOTTOM AT ALL CORNERS AND "T" INTERSECTIONS OF BEAMS.
7. ALL HOOKS AND BENDS IN REINFORCING BARS SHALL CONFORM TO ACI STANDARDS UNLESS SHOWN OTHERWISE.
8. LAP CONTINUOUS UNSCHEDULED REINFORCING BARS 36 BAR DIAMETERS, UNLESS NOTED OTHERWISE. TOP BARS SHALL HAVE A BAR LAP OF 50 BAR DIAMETERS.
9. **ALL INTERSECTIONS OF STEEL SHALL BE TIED.**
10. PROVIDE REINFORCING BARS IN ACCORDANCE WITH THE BAR BENDING DIAGRAM IF BAR TYPE ARE SPECIFIED. IN UNSCHEDULED BEAMS, SLABS, COLUMNS AND WALLS DETAIL REINFORCING IS AS FOLLOWS:
    - LAP TOP REINFORCING BARS AT MID SPAN.
    - LAP BOTTOM REINFORCING BARS AT THE SUPPORTS.
    - LAP VERTICAL BARS IN COLUMNS AND WALLS ONLY AT FLOOR LINES, UNLESS NOTED OTHERWISE.
    - LAP REINFORCING BARS 36 BAR DIAMETERS MINIMUM, UNLESS NOTED OTHERWISE.
    - PROVIDE STANDARD HOOKS IN TOP BARS AT CANTILEVER AND DISCONTINUOUS ENDS OF BEAMS, WALL, AND SLABS.
    - PROVIDE CORNER BARS FOR ALL HORIZONTAL BARS AT THE INSIDE AND OUTSIDE FACES OF INTERSECTING BEAMS OR WALLS. CORNER BARS ARE NOT REQUIRED IF TOP, BOTTOM, OR HORIZONTAL BARS ARE HOOKED.
11. TACK WELDING ON REINFORCING STEEL WILL NOT BE PERMITTED.
12. HEAT SHALL NOT BE USED IN THE FABRICATION OR INSTALLATION OF REINFORCEMENT.
13. REINFORCING STEEL MINIMUM CLEARANCE SHALL BE AS FOLLOWS:
    A) FOOTINGS 1 1/2 " TOP, 3" BOTTOM, 2" SIDE FORMED, 3" SIDE AGAINST EARTH
    B) WALLS 2"
14. HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AROUND BENDS.
15. CONTRACTOR SHALL PROVIDE 1" CHAMFER ON ALL EXPOSED EDGES AND A RUBBED FINISH ON ALL EXPOSED FACES UNLESS OTHERWISE SPECIFIED.
16. PROVIDE POURABLE URETHANE SEALANT AT ALL JOINTS.
17. USE SPACING CHAIRS TO MAINTAIN MINIMUM CLEARANCE AT REINFORCING STEEL OFF SUBGRADE. THE USE OF ROCK, BLOCK, WOOD, BRICK, ETC. SHALL NOT BE PERMITTED.
18. CONCRETE FORM WORK AND REINFORCEMENT SHALL BE INSPECTED BY CUATRO CONSULTANTS, LTD. PRIOR TO THE POURING OF CONCRETE.
19. CONCRETE SHALL HAVE A BROOM FINISH, UNLESS OTHERWISE NOTED ON PLAN.
20. SELECT FILL: SELECT FILL SHALL CONSIST OF MATERIAL WHICH HAS A P.I. BETWEEN 7 AND 17. SELECT FILL MAY BE APPROVED FLEXIBLE BASE MATERIAL (C.O.A. OR TXDOT SPECIFICATION), CRUSHED, ANGULAR 3/8" STONE, OR COMPACTED SOIL MATERIAL WITH P.I. BETWEEN 7 AND 17. COMPACTION OF SUBGRADE: 95 PERCENT. COMPACTION OF SELECT FILL: 95 PERCENT.
21. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS WITH ARCHITECTURAL PLANS BEFORE COMMENCING ANT WORK, THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE THE COMMENCING WORK.
22. CHAMFER ALL EXPOSED EDGES 3/4 INCH.
23. EMBEDDED CONDUITS, PIPES, AND SLEEVES SHALL MEET THE REQUIREMENTS OF ACI 318–98, SECTION 6.3, INCLUDING THE FOLLOWING:
    - CONDUITS AND PIPES EMBEDDED WITHIN A SLAB, WALL OR BEAM (OTHER THAN THOSE PASSING THROUGH) SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN 1/3 THE OVERALL THICKNESS OF THE SLAB, WALL OR BEAM IN WHICH THEY ARE EMBEDDED.
    - CONDUITS, PIPES AND SLEEVES SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS OR WIDTHS ON CENTER.

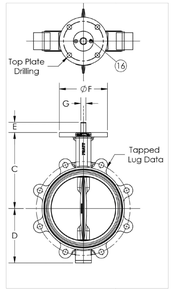
Construction Specification:
Milliken BF Series Butterfly Valves

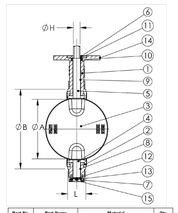
Valve with Electric Operator

Sizes: 2" through 48"
Body: Ductile Iron (65-45-12)
Disc: Ductile Iron Nickel Plated, Ductile Iron Nylon 11, CF8M Stainless Steel, Aluminum Bronze
Stem: 416 S.S. Heat Treated
Resilient Seat: EPDM, Buna-N, Viton
Actuation Options: Worm Gear, Lever, Pneumatic, Electric
Pressure Ratings: 2" – 12" 230psi
14" – 48" 150psi

* For installation between ANSI 125/150 flanges
** Substitute material may result in pressure rating change. Contact factory for details.

Dimensional Data:
BF Series BFV, Lug





Part No.	Part Name	Material	Qty.
1	Lug Body	DI	1
2	Seat	EPDM/NBR/Viton	1
3	Disc	CF8M/DI.NP/Al Br/CF8M/DI.Nylon 11	1
4	Lower Stem	SS416/SS316/SS630	1
5	Upper Stem	SS416/SS316/SS630	1
6	Top Cap	1020 Steel	1
7	End Cap	1020 Steel	1
8	Lower Bushing	Nylatron®	1
9	Upper Bushing	Nylatron®	1
10	O-packing	NBR	1
11	Washer	SS304	1
12	Wear Shim	SS304	1
13	O-ring	NBR	1
14	Data Plate	SS304	1
15	End Cap Bolt	SS304	2
16	Top Cap Bolt	SS304	2

											Milliken Standard Top Plate Drilling				ISO 5211 Top Plate Drilling				Tapped Lug Data	
Size	OA	OB	C	D	E	OF	G	OH	L	Key	Bolt Circle	No. of Holes	Hole Dia.	Bolt Circle	No. of Holes	Hole Dia.	Bolt Circle	No. of Holes	Tapped
2"	1.078	3.500	3.000	2.376	1.200	4.000	0.375	0.563	1.001	–	3.25	4	0.437	2.750	4	0.402	4.75	4	5/8"
2.5"	1.902	4.094	3.500	2.854	1.200	4.000	0.375	0.563	1.811	–	3.25	4	0.437	2.750	4	0.402	5.5	4	5/8"
3"	2.420	4.646	3.750	3.662	1.200	4.000	0.375	0.563	1.911	–	3.25	4	0.437	2.750	4	0.402	6	4	5/8"
4"	3.500	5.927	4.496	4.438	1.200	4.000	0.437	0.682	2.047	–	3.25	4	0.437	2.750	4	0.402	7.5	8	5/8"
5"	4.587	7.205	7.500	4.921	1.200	4.000	0.500	0.750	2.205	–	3.25	4	0.437	2.750	4	0.402	8.5	8	3/4"
6"	5.420	7.992	7.874	5.423	1.200	4.000	0.500	0.750	2.205	–	3.25	4	0.437	2.750	4	0.402	9.5	8	3/4"
8"	7.766	10.315	9.500	6.921	1.200	4.000	0.625	0.875	2.362	–	5	4	0.563	4.921	4	0.563	11.75	8	3/4"
10"	9.646	12.508	10.906	8.110	2.000	4.000	–	1.125	3.477	1/4" * 1/4"	5	4	0.563	4.921	4	0.563	14.25	12	7/8"
12"	11.516	14.567	12.205	9.753	2.000	4.000	–	1.125	3.671	1/4" * 1/4"	5	4	0.563	4.921	4	0.563	17	12	7/8"

DATE:	BY:	DESCRIPTION	REVISION

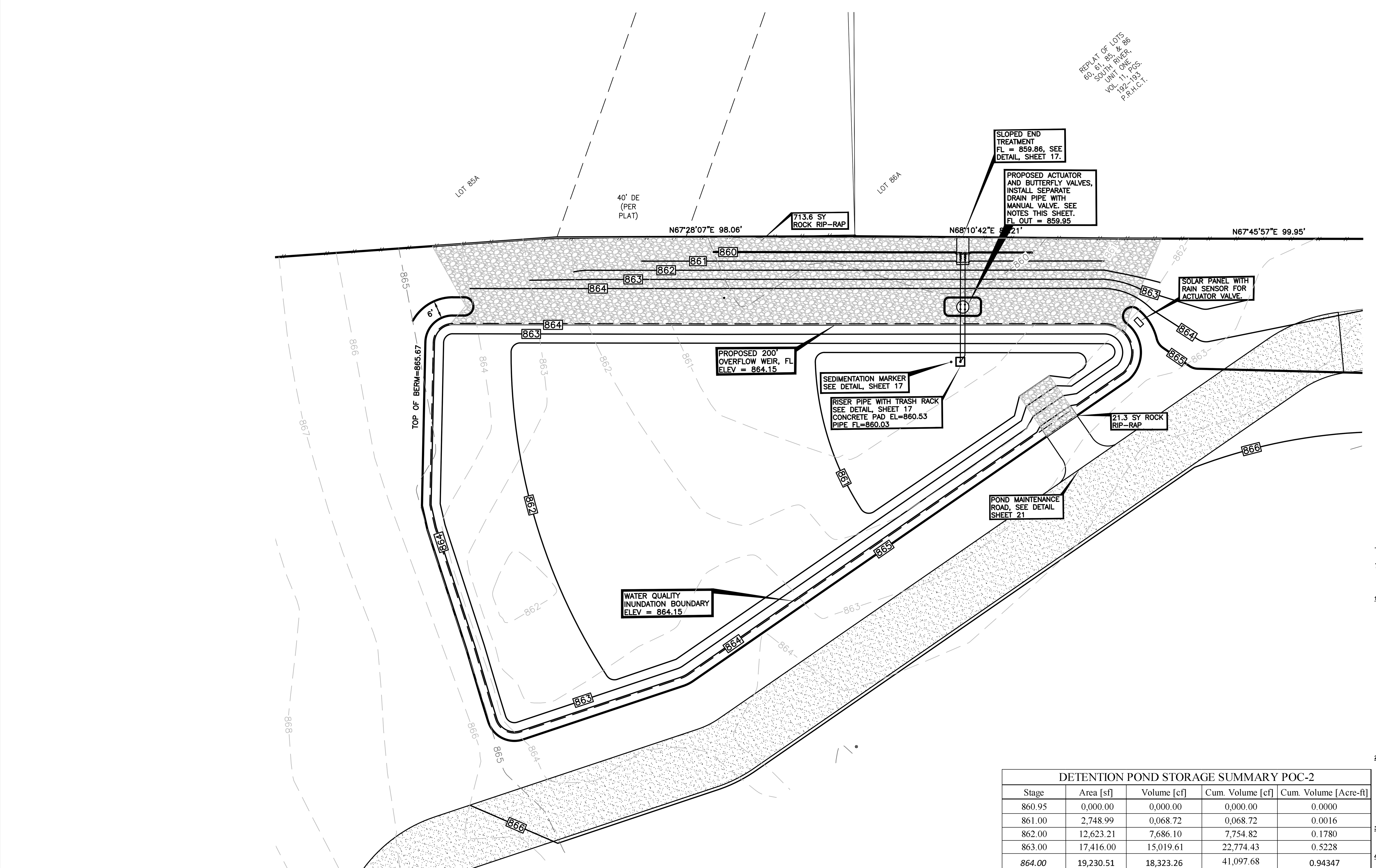
CUATRO Consultants, LTD.
Registration No: F-3524
120 Riverwalk Drive, Ste. 208 Phone: (512) 312-5300
San Marcos, Texas 78666 e-mail: cuatroconsultants@cuatroconsultants.com

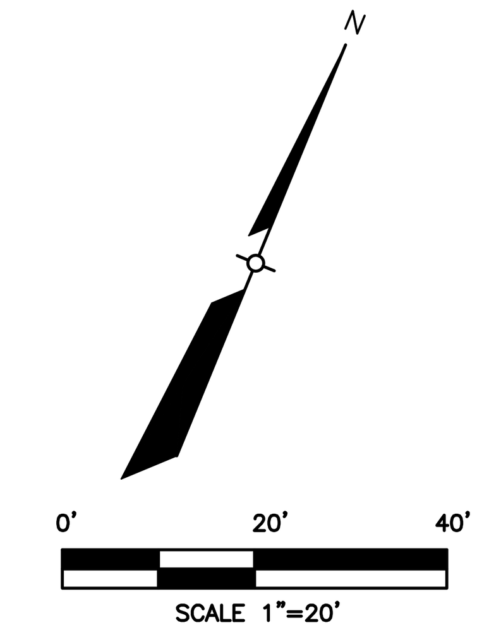
POND 1 DETAILS

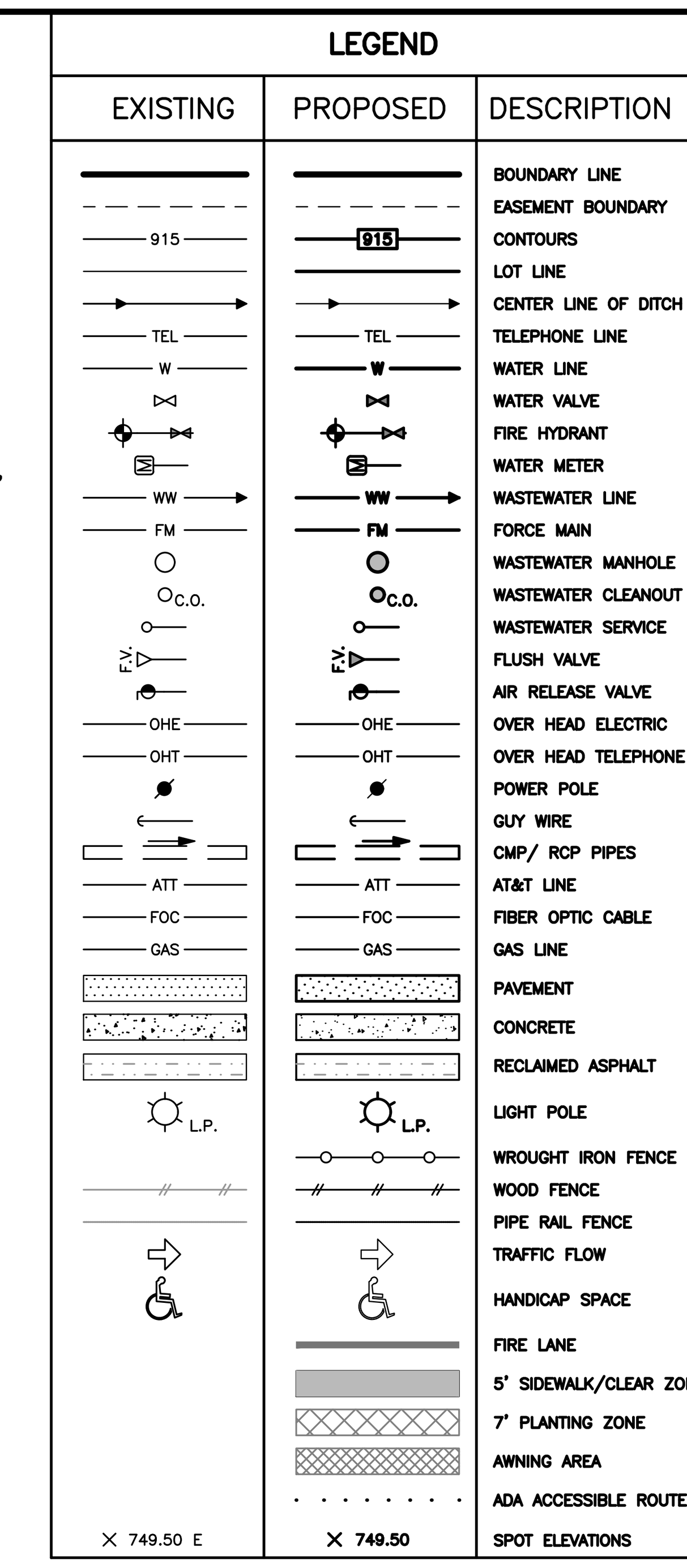
CYPRESS CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE:	JANUARY 2024
PROJECT:	24–010
DRAWING'S NAME:	15_CCC_POND 1 DETAILS
DESIGN: AWE	CHECKED: CDE
DRAWN: AWE	APPROVED: HE Jr.
SHEET:	15 OF 25







DETENTION POND STORAGE SUMMARY POC-2					
	Stage	Area [sf]	Volume [cf]	Cum. Volume [cf]	Cum. Volume [Acre-ft]
	860.95	0,000.00	0,000.00	0,000.00	0.0000
	861.00	2,748.99	0,068.72	0,068.72	0.0016
	862.00	12,623.21	7,686.10	7,754.82	0.1780
	863.00	17,416.00	15,019.61	22,774.43	0.5228
	864.00	19,230.51	18,323.26	41,097.68	0.94347
WQV EL=	*864.15*	*19,489.06*	*2,903.97*	*44,001.65*	*1.01014*
	865.00	21,101.59	*17,251.02*	61,252.68	1.40617

WEIR AND ORIFICE CALCULATIONS	
WEIR	ORIFICE
Q=C x L x h^3/2	Q=Co x a x sqrt(64.4 x ho)

WEIR 1:	200.00 ft	864.15
Storm	Elevation (ft)	Q (cfs)
2-YR	864.41	68.94
10-YR	864.57	141.54
25-YR	864.67	194.99
100-YR	864.85	304.54

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009 1

Project Name: CYPRESS CREEK CHURCH
Date Prepared: 2/21/2024

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

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

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

Site Data: Determine Required Load Removal Based on the Entire Project
County = Hays
Total project area included in plan * = 24.53 acres
Predevelopment impervious area within the limits of the plan * = 0.00 acres
Total post-development impervious area within the limits of the plan* = 6.59 acres
Total post-development impervious cover fraction * = 0.27
P = 33 inches

$L_{M\ TOTAL\ PROJECT}$ = 5913 lbs.

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

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area = 13.61 acres
Predevelopment impervious area within drainage basin/outfall area = 0.00 acres
Post-development impervious area within drainage basin/outfall area = 3.68 acres
Post-development impervious fraction within drainage basin/outfall area = 0.27
$L_{M\ THIS\ BASIN}$ = 3303 lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Batch Detention
Removal efficiency = 91 percent

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

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

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

A_C = 13.61 acres
A_I = 3.68 acres
A_P = 9.93 acres
L_R = 3985 lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 3303 lbs.

F = 0.83

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

Rainfall Depth = 1.20 inches
Post Development Runoff Coefficient = 0.24
On-site Water Quality Volume = 14380 cubic feet

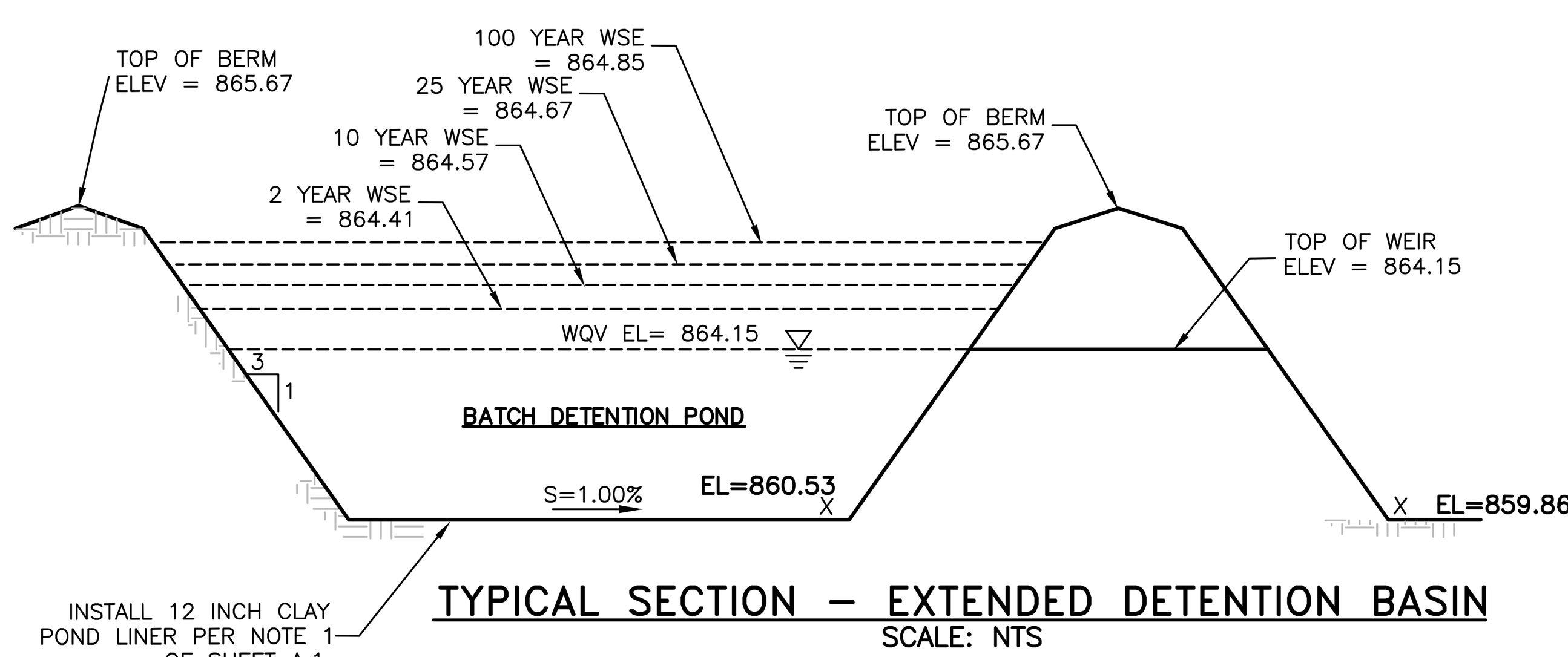
Calculations from RG-348 Pages 3-36 to 3-37

Off-site area draining to BMP = 27.52 acres
Off-site Impervious cover draining to BMP = 4.88 acres
Impervious fraction of off-site area = 0.18
Off-site Runoff Coefficient = 0.19
Off-site Water Quality Volume = 22268 cubic feet

Storage for Sediment = 7330
Total Capture Volume (required water quality volume(s) x 1.20) = 43977 cubic feet
The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.

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

Required Water Quality Volume for extended detention basin = 43977 cubic feet



TYPICAL SECTION – EXTENDED DETENTION BASIN
SCALE: NTS

POND CONSTRUCTION NOTES:

1. POND INTERIOR/EXTERIOR FILL SLOPES SHALL BE INSTALLED AT 3:1 (H:V).
2. ACCESS ROAD SHALL BE 8" FLEXIBLE BASE W/6" MOISTURE CONDITIONED SUBGRADE (12' WIDE), EXCEPT AT ACCESS DRIVES.
3. ALL POND INTERIOR SLOPES REQUIRE REVET MATTING, TXDOT ITEM 169, UNLESS SODDED.
4. POND ACCESS RAMPS SHALL HAVE A SLOPE OF 4:1.

AUTOMATED DISCHARGE SYSTEM REQUIREMENTS:

AUTOMATED DISCHARGE SYSTEM WILL BE POWERED BY A SOLAR PANEL WITH A BACKUP BATTERY. A 12 HOUR DETENTION CONTROLLER WITH LEVEL SENSOR LOCATED ON A CONCRETE PAD SHALL BE INSTALLED IN THE WQ BASIN AS SHOWN HEREON; AT THE END OF THE REQUIRED 12 HOUR DETENTION TIME. THE CONTROLLER NEEDS TO BE SE TO OPEN THE PROPOSED 6 AUTOMATED PVC VALVE TO DRAIN WATER INTO THE PROPOSED DETENTION BASIN.

SUBSEQUENT RAINFALL EVENTS THAT OCCUR PRIOR TO THE WQ BASIN DRAINING SHOULD CAUSE THE VALVE TO REMAIN OPEN AND ALLOW THE ADDITIONAL STORMWATER RUNOFF TO PASS THROUGH THE BASIN. SET CONTROLLER TO CLOSE THE VALVE ONCE THE BASIN HAS BEEN DRAINED.

THE TOTAL DRAWDOWN TIME OF THE WQ BASIN SHALL NOT EXCEED 48 HOURS FOR A SINGLE STORM EVENT AFTER THE 12 HOUR REQUIRED DETENTION TIME ALL CABLES AND ELECTRIC COMPONENTS SHOULD BE PROTECTED BY CONDUIT AND BURIED TO PREVENT DAMAGE DURING MAINTENANCE ACTIVITIES.

THE LOGIC CONTROLLER SHOULD BE INSPECTED AS PART OF THE TWICE YEARLY INVESTIGATIONS. AT THE END OF THE INSPECTION. THE CONTROLLER SHOULD BE RESET.

INSTALL SEPARATE 6" DRAIN PIPE WITH MANUAL VALVE.

NOTES:

1. CLAY POND LINER SHALL BE INSTALLED WITHIN THE WETTED PERIMETER OF THE WATER QUALITY POND. SEE CLAY POND LINER REQUIREMENTS PER TCEQ, SHEET 28.
2. INSTALL TEMPORARY IRRIGATION SYSTEM FOR DISTURBED AREA TO ESTABLISH LAWN AND PLANTS.
3. INSTALL COMMON BERMUDA SOD ON ALL WATER QUALITY AND DETENTION PONDS.

REFERENCE NOTES:

1. FOR DRAINAGE CALCULATIONS, SEE SHEETS 8 AND 9.
2. FOR GRADING PLAN, SEE SHEET 12.

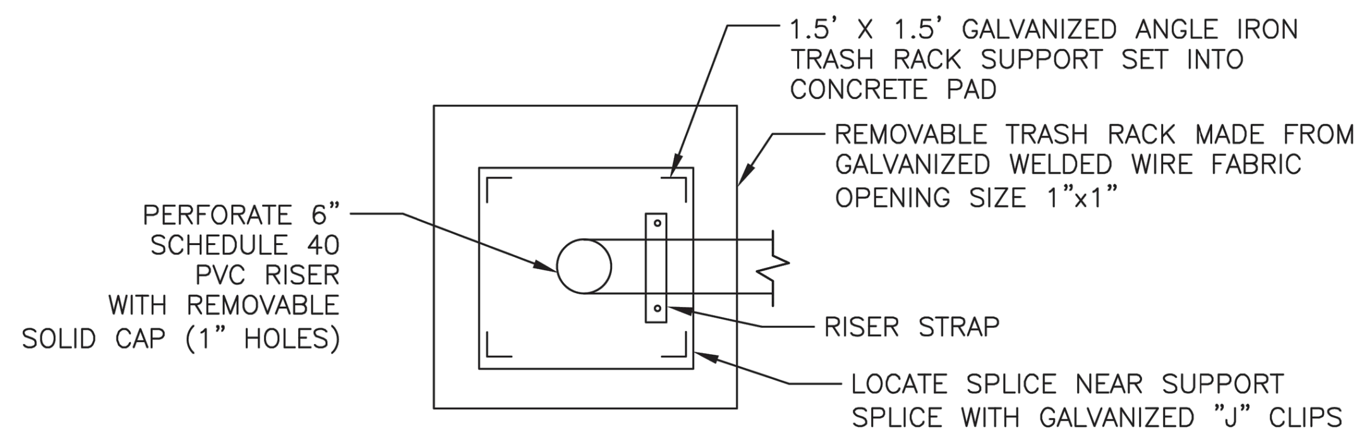
REVISION	DESCRIPTION	BY:	DATE:

4 CUATRO Consultants, Ltd.
Registration No. F-3524
HUGO ELIZONDO, JR. 69781 LICENSED PROFESSIONAL ENGINEER — STATE OF TEXAS

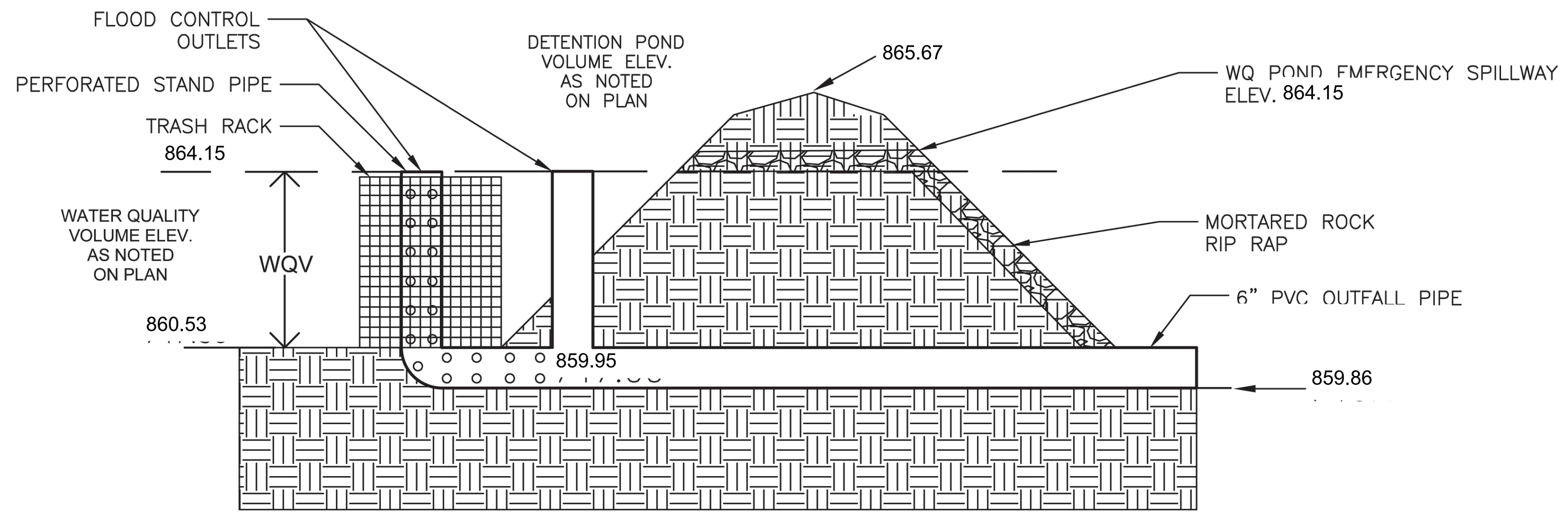
POND 2 LAYOUT AND CALCULATIONS - PHASE 2
CYPRESS CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

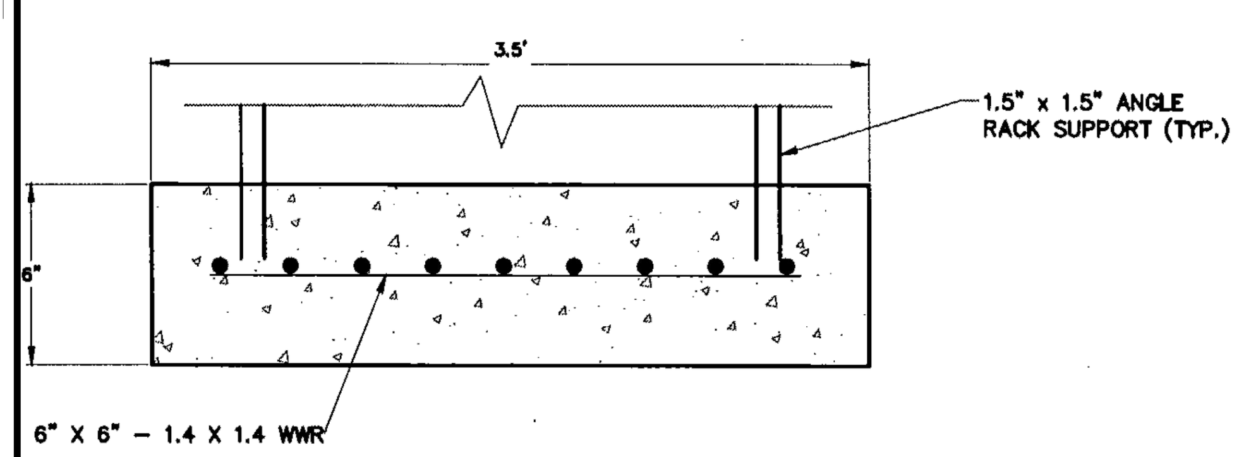
DATE: JANUARY 2024
PROJECT: 24-010
DRAWING'S NAME: 16_CCC_POND LAYOUT 2 AND CALCULATIONS
DESIGN: CDE | CHECKED: CDE
DRAWN: MJH | APPROVED: HE Jr.
SHEET: 16 OF 25



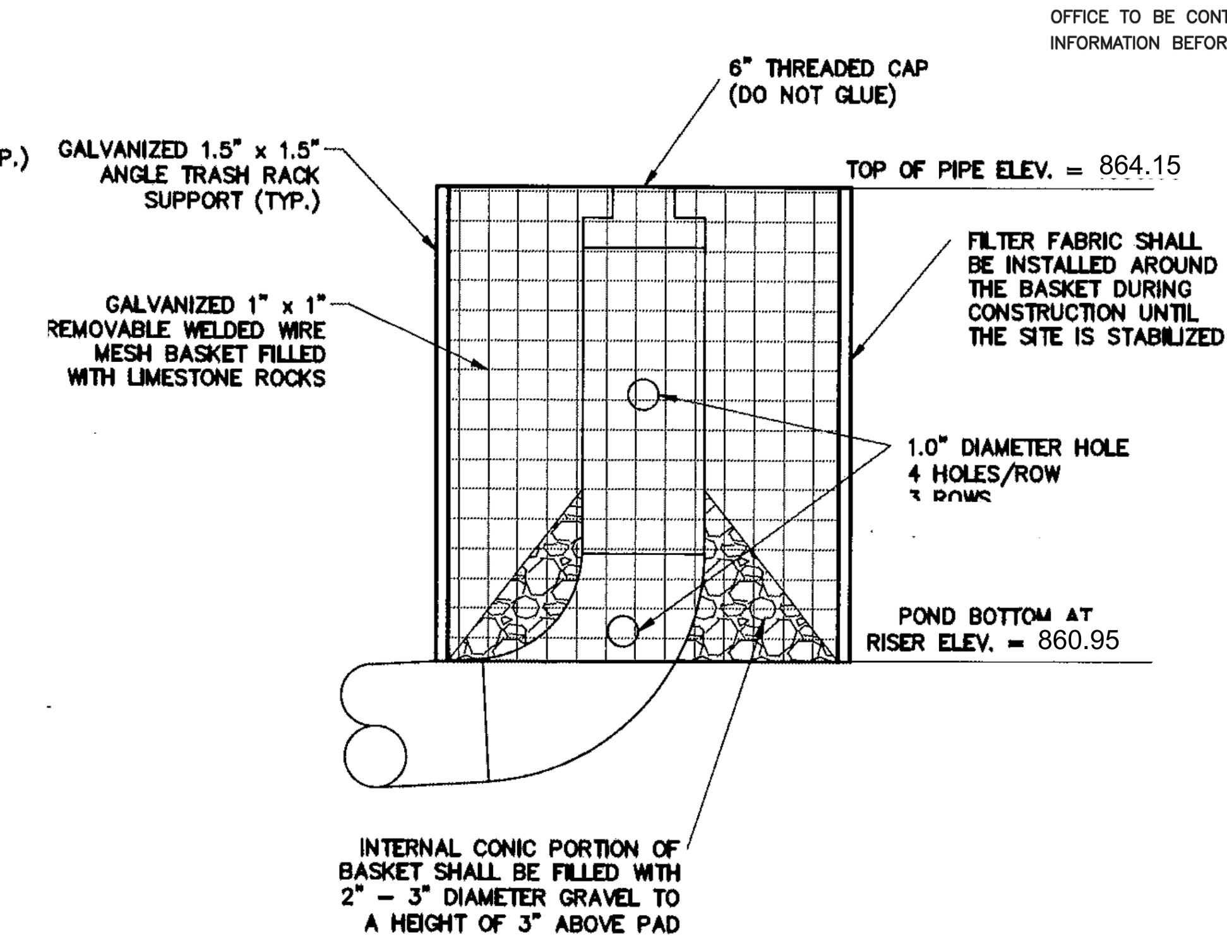
TRASH RACK DETAIL
SCALE: N.T.S.



WATER QUALITY EMERGENCY SPILLWAY DETAIL
NTS



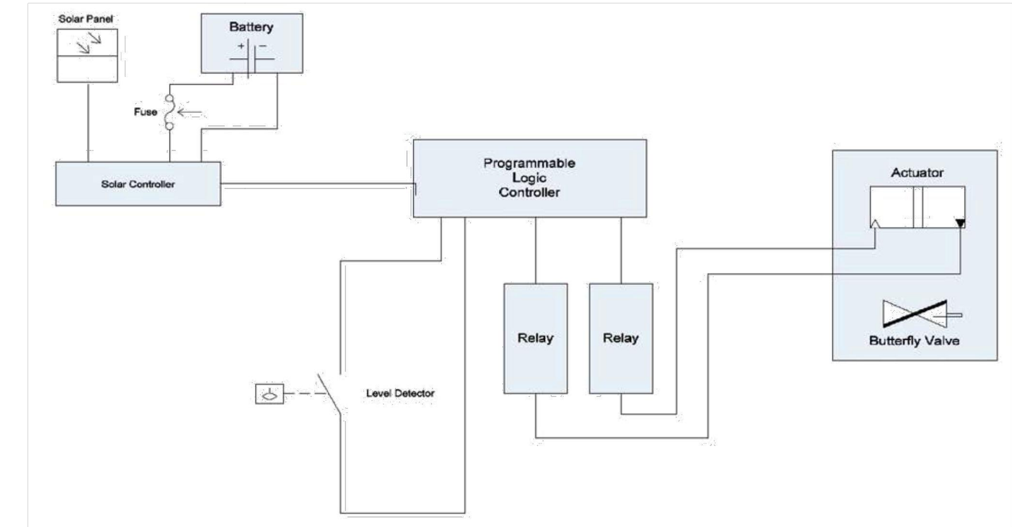
RISER PIPE PAD



(7) *Vegetation* – The facility should be planted and maintained to provide for a full and robust vegetative cover. The following wet tolerant species are recommended for planting within the bottom stage (LCRA, 1998):

- Bushy Bluestem
- Sedges
- Cyperus
- Switch Grass
- Spike Rush
- Green Sprangletop
- Indian Grass
- Bullrush
- Scouring Rush
- Eastern Gamma
- Dropseed Iris

VEGETATION LIST
PER SECTION 3.4.4(7)

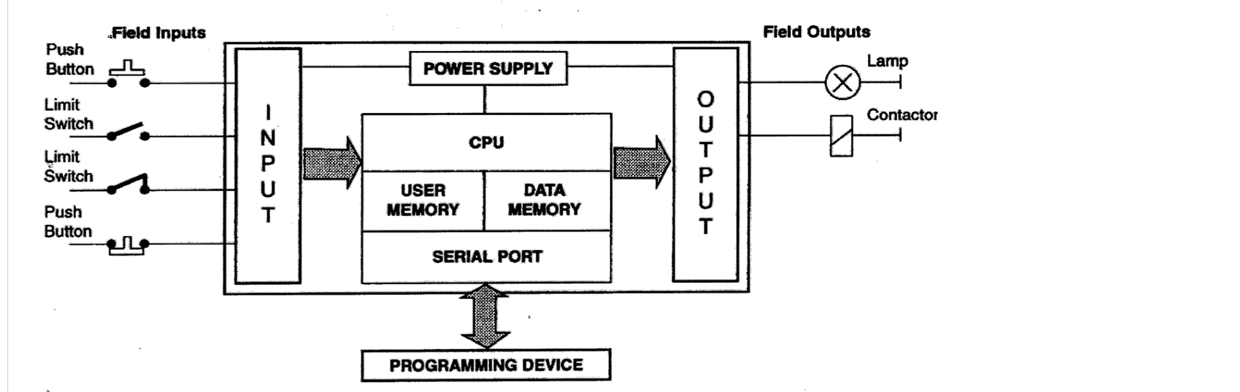


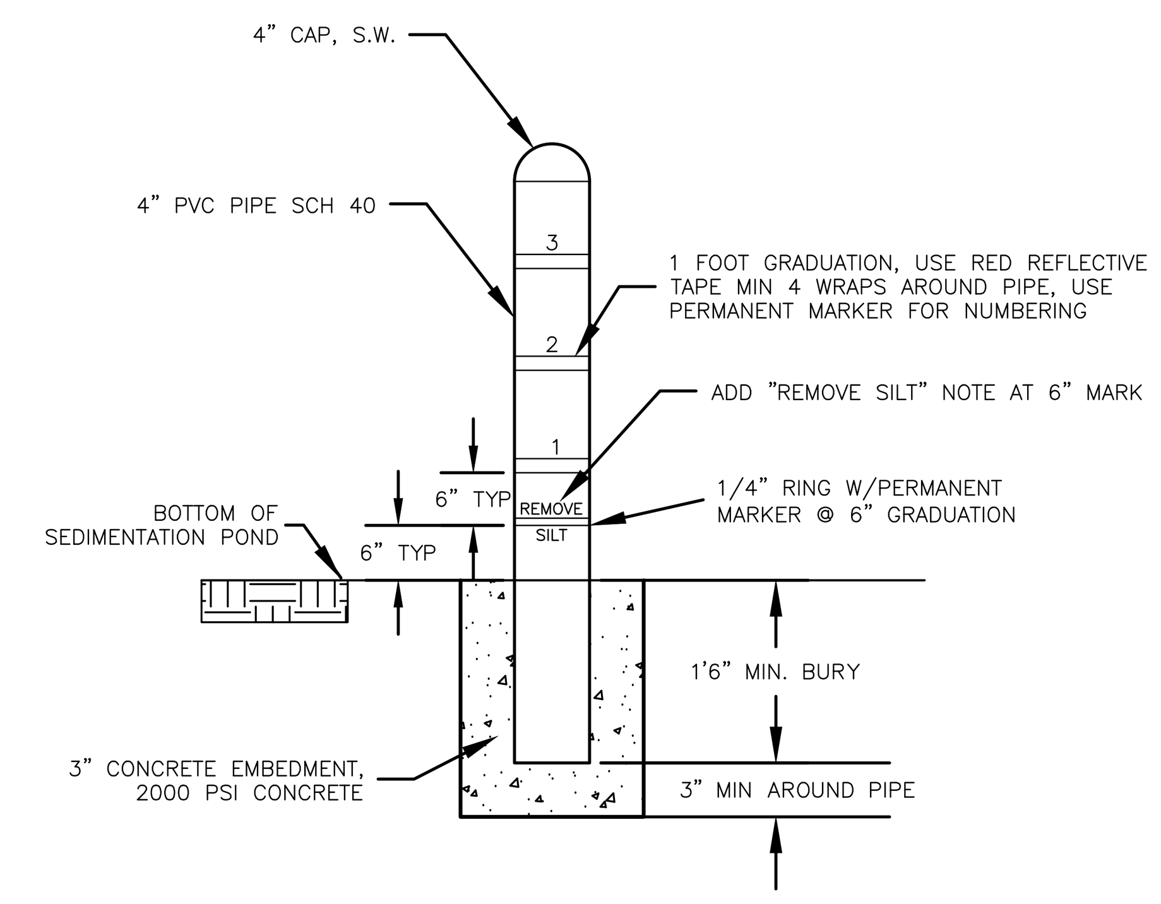
CIRCUIT DIAGRAM

THE LOGIC CONTROLLER SHALL PROVIDE A TEST SEQUENCE, BE ABLE TO HANDLE A POWER OUTAGE, INCLUDE AN ON/OFF RESET SWITCH, HAVE CLEARLY VISIBLE EXTERNAL INDICATOR TO INDICATE A CYCLE IS IN PROGRESS WITHOUT OPENING THE BOX, AND THE ABILITY TO EXERCISE THE VALVE TO PREVENT SEIZING. A WATER LEVEL SENSOR SUCH AS A FLOAT VALVE, SHOULD BE INSTALLED TO ALERT THE SYSTEM TO CLOSE THE VALVE. A 6" SLIDE VALTERRA VALVE SHALL BE INSTALLED IN LINE TO BE CONTROLLED BY THE AUTOMATIC SYSTEM. A RECOMMENDED SUPPLIER FOR THIS SYSTEM, IS AGRIDRAIN WITH THEIR ITEM NUMBER 99–404, AS A POSSIBLE PRODUCT THAT WILL MEET THESE REQUIREMENTS. THE CONTRACTOR MAY USE AN ALTERNATE DESIGN, AS LONG AS AN EQUIVALENT SUPPLIER AND MODEL WITH SPECIFICATIONS IS PROVIDED TO THE ENGINEER OF RECORD FOR REVIEW PRIOR TO INSTALLATION.

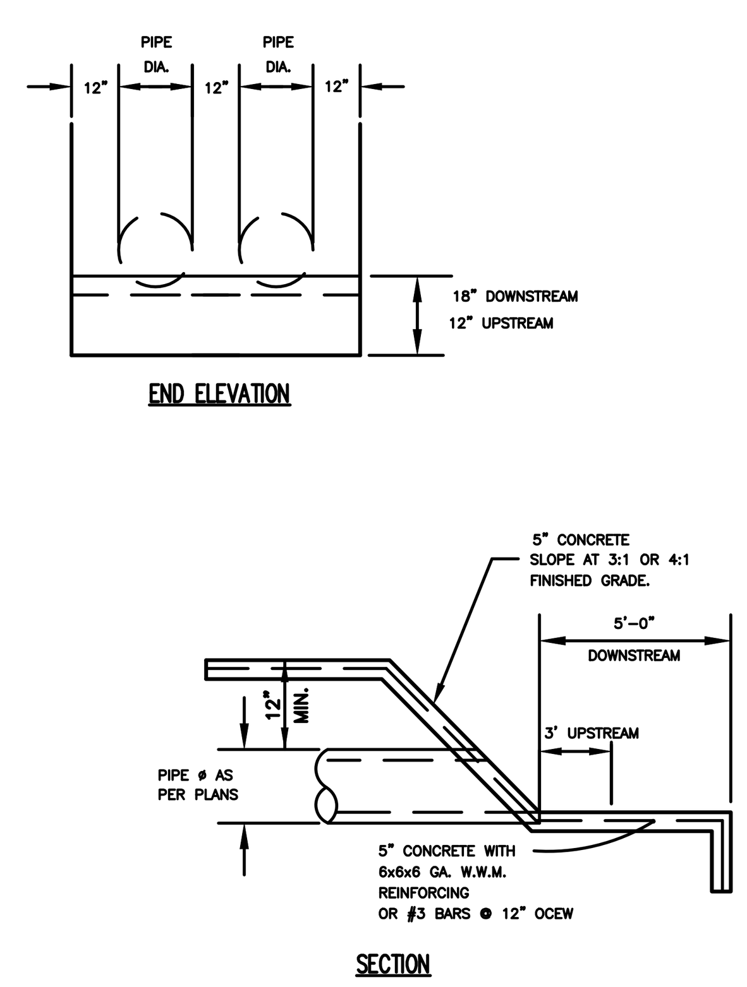
A SEPARATE 6" LINE WITH MANUAL 6' GATE VALVE IS REQUIRED TO PROVIDE MANUAL OPERATION AND REMOVAL OF THE STORM WATER IN THE CASE OF A MALFUNCTION OF THE AUTOMATED SYSTEM.

AN ALARM SYSTEM LIGHT, MUST BE CLEARLY VISIBLE TO INDICATE A SYSTEM MALFUNCTION, AND A SIGN POSTED WITH PHONE NUMBERS FOR THE BERRY CREEK MAINTENANCE DIVISION, AND THE TCEQ REGIONAL OFFICE TO BE CONTACTED. PLEASE CONTACT THE ENGINEER OF RECORD FOR THE APPROPRIATE CONTACT INFORMATION BEFORE PREPARING THE WARNING SIGN.





SEDIMENT ACCUMULATION MARKER
N.T.S.



CONCRETE SLOPED END TREATMENT: LONG (DUAL PIPE)
N.T.S.

GENERAL CONCRETE NOTES:

1. ALL STRUCTURAL CONCRETE SHALL BE CLASS C STONE AGGREGATE CONCRETE UNLESS NOTED OTHERWISE. MINIMUM CONCRETE COMPRESSIVE STRENGTH FOR STRUCTURAL CONCRETE SHALL BE 3,600 P.S.I. WHEN TESTED AT 28 DAYS.

   MISCELLANEOUS NON–STRUCTURAL CONCRETE SHALL BE CLASS A STONE AGGREGATE CONCRETE MINIMUM COMPRESSIVE STRENGTH OF 3,000 P.S.I. AT 28 DAYS.

   IF TEMPERATURE IS ABOVE 80° F AT POURING, CONTRACTOR SHALL APPLY A COAT OF CURING COMPOUND.

2. HORIZONTAL CONSTRUCTION JOINTS IN CONCRETE POURS SHALL BE PERMITTED ONLY WHERE INDICATED ON THE DRAWINGS. ALL CONSTRUCTION JOINTS SHALL BE MADE IN THE CENTER OF SPANS. SEE DRAWINGS FOR TYPICAL DETAIL. THE LOCATION OF CONSTRUCTION JOINTS SHALL BE AS APPROVED BY THE STRUCTURAL ENGINEER. ADDITIONAL REINFORCING AT CONSTRUCTION JOINTS SHALL BE AS SPECIFIED BY THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL SUBMIT PROPOSED LOCATIONS FOR CONSTRUCTION JOINTS NOT SHOWN ON DRAWINGS FOR APPROVAL BY THE STRUCTURAL ENGINEER.

   CONTRACTION JOINTS SHALL BE INSTALLED AT MAXIMUM 10'–0" SPACING. ALL SAWCUTS SHALL BE 1/8" BY t/4" OR 1" DEEP AND BE COMPLETED WITHIN 4 TO 6 HOURS AFTER POUR IS COMPLETE.

3. ALL PIPE SLEEVES IN CONCRETE MEMBERS SHALL BE SCHEDULE 40, PVC PIPE UNLESS SHOWN OTHERWISE ON THE STRUCTURAL DRAWINGS. LOCATION OF SLEEVES SHALL BE AS APPROVED BY THE STRUCTURAL ENGINEER.
4. REINFORCING STEEL SHALL CONFORM TO ACI 318 AND 315, LATEST EDITION. REINFORCING STEEL SHALL BE DEFORMED NEW BILLET STEEL BARS IN ACCORDANCE WITH ASTM SPECIFICATION A615 GRADE 60.
5. DETAILING OF REINFORCING STEEL SHALL CONFORM TO THE AMERICAN CONCRETE INSTITUTE DETAILING MANUAL.
6. PROVIDE 2– #5 X 4' – 0" "L" SHAPED BARS TOP AND BOTTOM AT ALL CORNERS AND "T" INTERSECTIONS OF BEAMS.
7. ALL HOOKS AND BENDS IN REINFORCING BARS SHALL CONFORM TO ACI STANDARDS UNLESS SHOWN OTHERWISE.
8. LAP CONTINUOUS UNSCHEDULED REINFORCING BARS 36 BAR DIAMETERS, UNLESS NOTED OTHERWISE. TOP BARS SHALL HAVE A BAR LAP OF 50 BAR DIAMETERS.
9. **ALL INTERSECTIONS OF STEEL SHALL BE TIED.**
10. PROVIDE REINFORCING BARS IN ACCORDANCE WITH THE BAR BENDING DIAGRAM IF BAR TYPE ARE SPECIFIED. IN UNSCHEDULED BEAMS, SLABS, COLUMNS AND WALLS DETAIL REINFORCING IS AS FOLLOWS:
    - LAP TOP REINFORCING BARS AT MID SPAN.
    - LAP BOTTOM REINFORCING BARS AT THE SUPPORTS.
    - LAP VERTICAL BARS IN COLUMNS AND WALLS ONLY AT FLOOR LINES, UNLESS NOTED OTHERWISE.
    - LAP REINFORCING BARS 36 BAR DIAMETERS MINIMUM, UNLESS NOTED OTHERWISE.
    - PROVIDE STANDARD HOOKS IN TOP BARS AT CANTILEVER AND DISCONTINUOUS ENDS OF BEAMS, WALL, AND SLABS.
    - PROVIDE CORNER BARS FOR ALL HORIZONTAL BARS AT THE INSIDE AND OUTSIDE FACES OF INTERSECTING BEAMS OR WALLS. CORNER BARS ARE NOT REQUIRED IF TOP, BOTTOM, OR HORIZONTAL BARS ARE HOOKED.
11. TACK WELDING ON REINFORCING STEEL WILL NOT BE PERMITTED.
12. HEAT SHALL NOT BE USED IN THE FABRICATION OR INSTALLATION OF REINFORCEMENT.
13. REINFORCING STEEL MINIMUM CLEARANCE SHALL BE AS FOLLOWS:

    A) FOOTINGS 1 1/2 " TOP, 3" BOTTOM, 2" SIDE FORMED, 3" SIDE AGAINST EARTH

    B) WALLS 2"
14. HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AROUND BENDS.
15. CONTRACTOR SHALL PROVIDE 1" CHAMFER ON ALL EXPOSED EDGES AND A RUBBED FINISH ON ALL EXPOSED FACES UNLESS OTHERWISE SPECIFIED.
16. PROVIDE POURABLE URETHANE SEALANT AT ALL JOINTS.
17. USE SPACING CHAIRS TO MAINTAIN MINIMUM CLEARANCE AT REINFORCING STEEL OFF SUBGRADE. THE USE OF ROCK, BLOCK, WOOD, BRICK, ETC. SHALL NOT BE PERMITTED.
18. CONCRETE FORM WORK AND REINFORCEMENT SHALL BE INSPECTED BY CUATRO CONSULTANTS, LTD. PRIOR TO THE POURING OF CONCRETE.
19. CONCRETE SHALL HAVE A BROOM FINISH, UNLESS OTHERWISE NOTED ON PLAN.
20. SELECT FILL: SELECT FILL SHALL CONSIST OF MATERIAL WHICH HAS A P.I. BETWEEN 7 AND 17. SELECT FILL MAY BE APPROVED FLEXIBLE BASE MATERIAL (C.O.A. OR TXDOT SPECIFICATION), CRUSHED, ANGULAR 3/8" STONE, OR COMPACTED SOIL MATERIAL WITH P.I. BETWEEN 7 AND 17. COMPACTION OF SUBGRADE: 95 PERCENT. COMPACTION OF SELECT FILL: 95 PERCENT.
21. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS WITH ARCHITECTURAL PLANS BEFORE COMMENCING ANT WORK, THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE THE COMMENCING WORK.
22. CHAMFER ALL EXPOSED EDGES 3/4 INCH.
23. EMBEDDED CONDUITS, PIPES, AND SLEEVES SHALL MEET THE REQUIREMENTS OF ACI 318–98, SECTION 6.3, INCLUDING THE FOLLOWING:
    - CONDUITS AND PIPES EMBEDDED WITHIN A SLAB, WALL OR BEAM (OTHER THAN THOSE PASSING THROUGH) SHALL NOT BE LARGER IN OUTSIDE DIMENSION THAN 1/3 THE OVERALL THICKNESS OF THE SLAB, WALL OR BEAM IN WHICH THEY ARE EMBEDDED.
    - CONDUITS, PIPES AND SLEEVES SHALL NOT BE SPACED CLOSER THAN THREE DIAMETERS OR WIDTHS ON CENTER.

Construction Specification:
Milliken BF Series Butterfly Valves

Valve with Electric Operator

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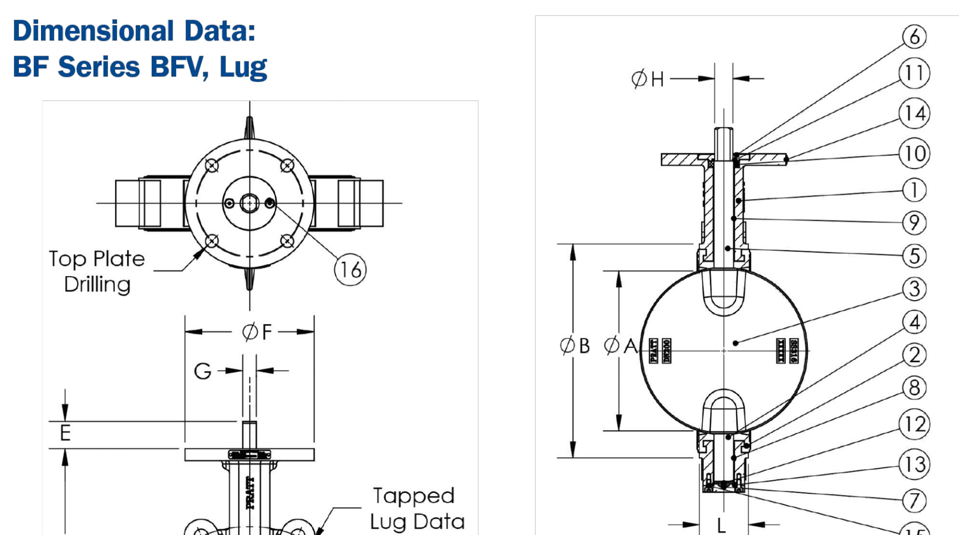
Disc: Ductile Iron Nickel Plated, Ductile Iron Nylon 11, CF8M Stainless Steel, Aluminum Bronze
Stem: 416 S.S. Heat Treated
Resilient Seat: EPDM, Buna-N, Viton
Actuation Options: Worm Gear, Lever, Pneumatic, Electric
Pressure Ratings: 2" – 12" 230psi
14" – 48" 150psi

* For installation between ANSI 125/150 flanges
** Substitute material may result in pressure rating change. Contact factory for details.

Dimensional Data:
BF Series BFV, Lug

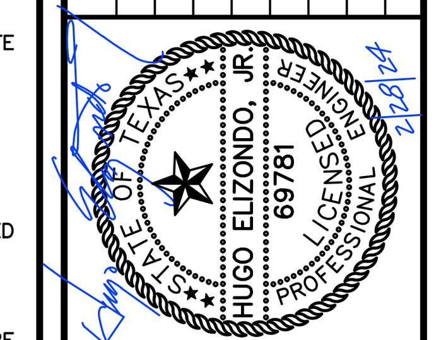


Part No.	Part Name	Material	Qty.
1	Lug Body	DI	1
2	Seat	EPDM/NBR/Viton	1
3	Disc	CF8M/DI-NP/Al Bz C954/DI-Nylon 11	1
4	Lower Stem	SS416/SS316/SS630	1
5	Upper Stem	SS416/SS316/SS630	1
6	Top Cap	1020 Steel	1
7	End Cap	1020 Steel	1
8	Lower Bushing	Nylatron®	1
9	Upper Bushing	Nylatron®	1
10	V-packing	NBR	1
11	Washer	SS304	1
12	Wear Shim	SS304	1
13	O-ring	NBR	1
14	Data Plate	SS304	1
15	End Cap Bolt	SS304	2
16	Top Cap Bolt	SS304	2

											Milliken Standard Top Plate Drilling			ISO 5211 Top Plate Drilling			Tapped Lug Data		
Size	ΦA	ΦB	C	D	E	ΦF	G	ΦH	L	Key	Bolt Circle	No. of Holes	Hole Dia.	Bolt Circle	No. of Holes	Hole Dia.	Bolt Circle	No. of Holes	Tapped
2"	1.079	3.500	5.000	2.579	1.260	4.000	0.375	0.563	1.693	-	3.25	4	0.437	2.760	4	0.402	4.75	4	5/8"
2.5"	1.862	4.094	5.500	2.854	1.260	4.000	0.375	0.563	1.811	-	3.25	4	0.437	2.760	4	0.402	5.5	4	5/8"
3"	2.429	4.646	5.709	3.642	1.260	4.000	0.375	0.563	1.811	-	3.25	4	0.437	2.760	4	0.402	6	4	5/8"
4"	3.500	5.827	6.496	4.429	1.260	4.000	0.437	0.625	2.047	-	3.25	4	0.437	2.760	4	0.402	7.5	8	5/8"
5"	4.567	7.205	7.500	4.921	1.260	4.000	0.500	0.750	2.205	-	3.25	4	0.437	2.760	4	0.402	8.5	8	3/4"
6"	5.433	7.992	7.874	5.433	1.260	4.000	0.500	0.750	2.205	-	3.25	4	0.437	2.760	4	0.402	9.5	8	3/4"
8"	7.744	10.315	9.500	6.811	1.260	6.000	0.625	0.875	2.362	-	5	4	0.563	4.921	4	0.563	11.75	8	3/4"
10"	9.646	12.598	10.866	8.110	2.000	6.000	-	1.125	2.677	1/4" ° 1/4"	5	4	0.563	4.921	4	0.563	14.25	12	7/8"
12"	11.339	14.567	12.205	9.713	2.000	6.000	-	1.125	3.071	1/4" ° 1/4"	5	4	0.563	4.921	4	0.563	17	12	7/8"

page 8

DATE:	BY:	DESCRIPTION	REVISION



CUATRO Consultants, LTD.
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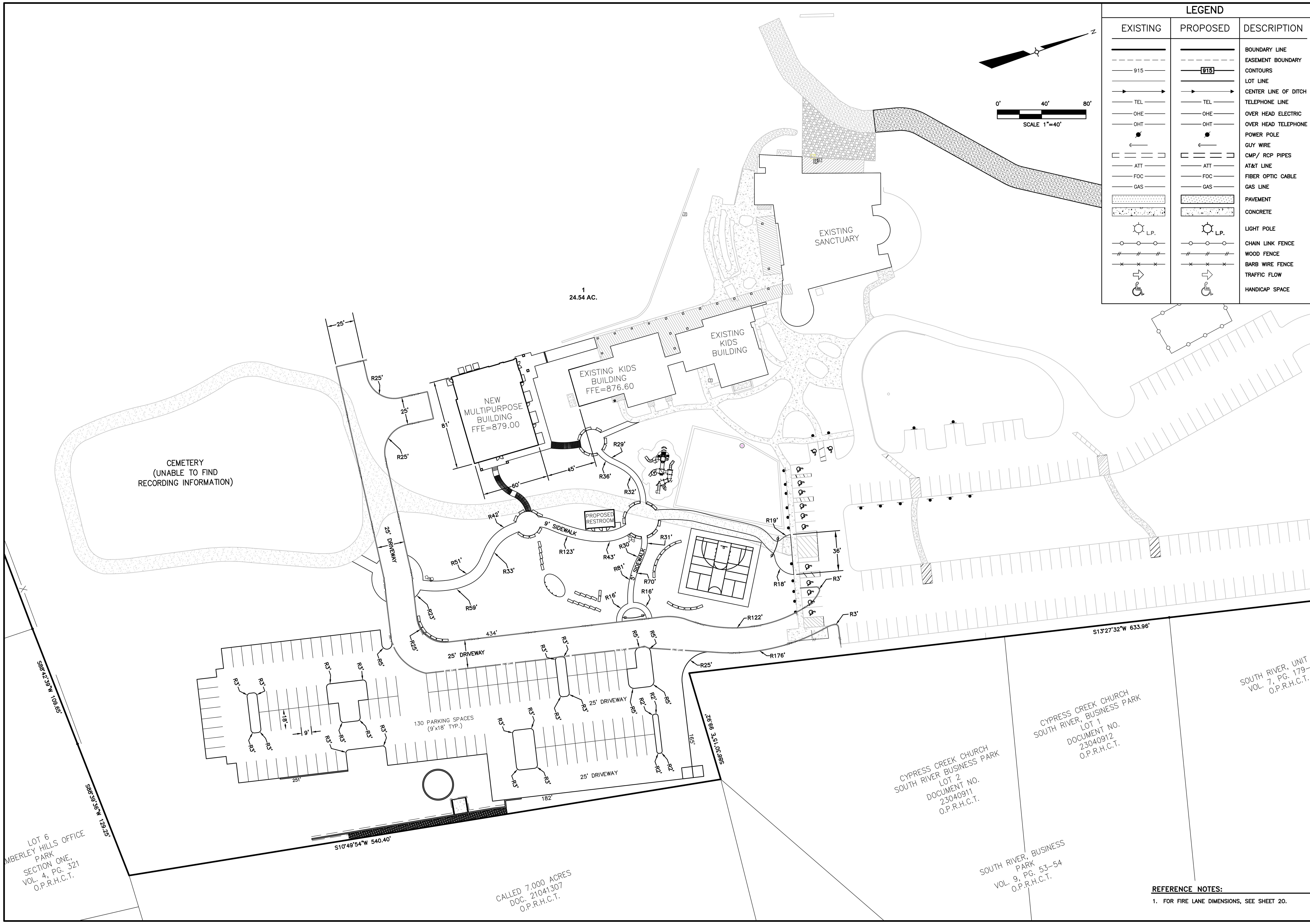
120 Riverwalk Drive, Ste. 208 Phone: (512) 312-5040
San Marcos, Texas 78666 e-mail: cuatro@cuatroconsultants.com

POND 2 DETAILS - PHASE 2

CYPRES CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE: JANUARY 2024
PROJECT: 24–010
DRAWING'S NAME: 17_CCC_POND 2 DETAILS
DESIGN: MJH
CHECKED: CDE
DRAWN: MJH
APPROVED: HE Jr.
SHEET: **17 OF 25**



REFERENCE NOTES:

1. FOR FIRE LANE DIMENSIONS, SEE SHEET 20.

REVISION	DESCRIPTION	BY:	DATE:

HUGO ELIZONDO, JR.
69781
LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS

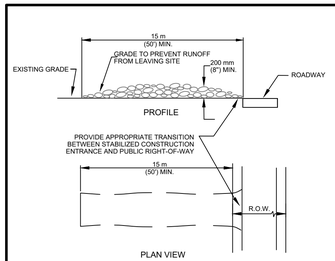
CUATRO Consultants, LTD.
Registration No F-5524

DIMENSIONAL CONTROL PLAN

CYPRESS CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

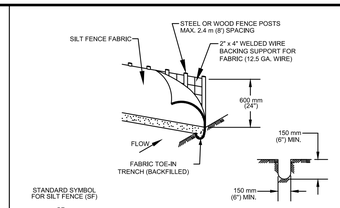
CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE: JANUARY 2024	
PROJECT: 24-010	
DRAWING'S NAME: 18_CCC_DIMENSIONAL CONTROL PLAN	
DESIGN: CDE	CHECKED: CDE
DRAWN: DR	APPROVED: HE Jr.
SHEET: 18 OF 25	



NOTES:
1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	STABILIZED CONSTRUCTION ENTRANCE	
RECORD COPY SIGNED BY J. PATRICK MURPHY 5/23/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 641S-1



1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 inches) DEPTH, USE STEEL POSTS.

2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.

3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 inches) DEEP AND 150 mm (6 inches) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE , WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.

5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTY AS NEEDED.

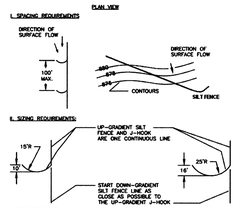
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	SILT FENCE	
RECORD COPY SIGNED BY MORGAN BYARS 09/01/2011 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 642S-1

Recommended Silt Fence Spacing on Sloping Sites

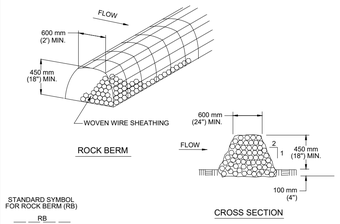
Slope angle	Soil Type		
	Silty	Clayey	Sandy
Very steep (1:1)	50 ft.	75 ft.	100 ft.
Steep (2:1)	75 ft.	100 ft.	125 ft.
Moderate (4:1)	100 ft.	125 ft.	150 ft.
Slight (10:1)	125 ft.	150 ft.	200 ft.



J-hook Placement Details

For more information, see the LCRA Water Quality Management Technical Manual
For questions or information, call LCRA at (800) 776-5272, ext. 2324 or visit www.lcra.org.

J-HOOK DETAIL: PLAN AND LOCATION
NTS



STANDARD SYMBOL
FOR ROCK BERM (RB)
RB

NOTES:
1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED,THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	ROCK BERM	
RECORD COPY SIGNED BY MORGAN BYARS 8/24/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 639S-1

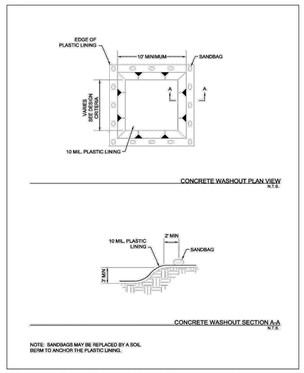
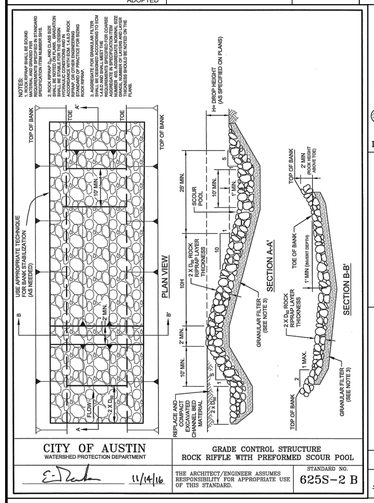
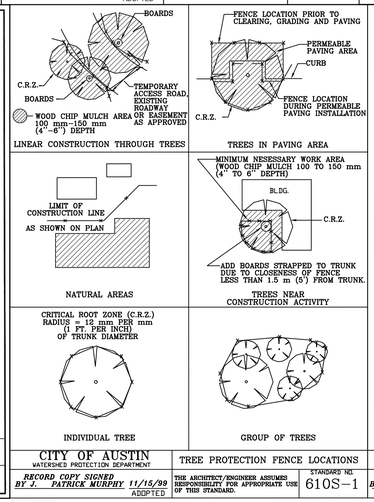


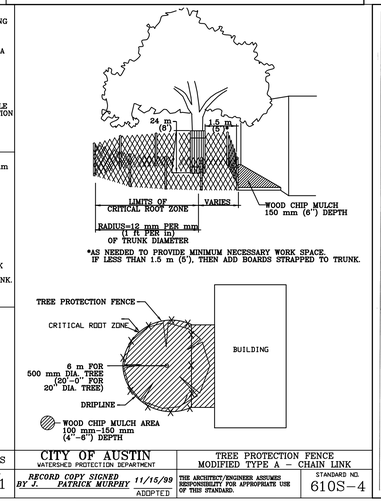
Figure 4.1 Schematics of Concrete Washout Containment



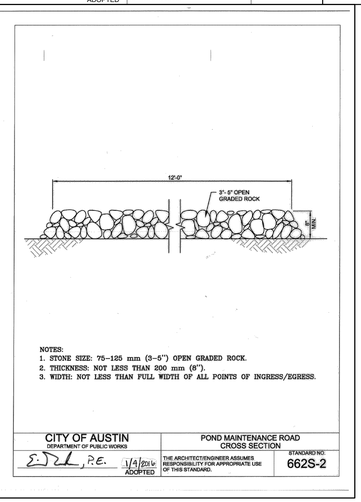
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	GRADE CONTROL STRUCTURE ROCK RIFFLE WITH PREFORMED SCOUR POOL	
11/14/16	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 625S-2 B



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	TREE PROTECTION FENCE LOCATIONS	
RECORD COPY SIGNED BY J. PATRICK MURPHY 11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-1



CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	TREE PROTECTION FENCE MODIFIED TYPE A - CHAIN LINK	
RECORD COPY SIGNED BY J. PATRICK MURPHY 11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-4



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	POND MAINTENANCE ROAD CROSS SECTION	
E.J.R., P.E. 1/9/2014 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 662S-2

DATE:								
BY:								
DESCRIPTION								
REVISION								

4QUATRO Consultants, LTD.
Registration No: F-3524
120 Rowmark Drive, Ste. 208 Phone: (512) 312-5300
San Marcos, Texas 78666 e-mail: coatrotx@coatroconsultants.com

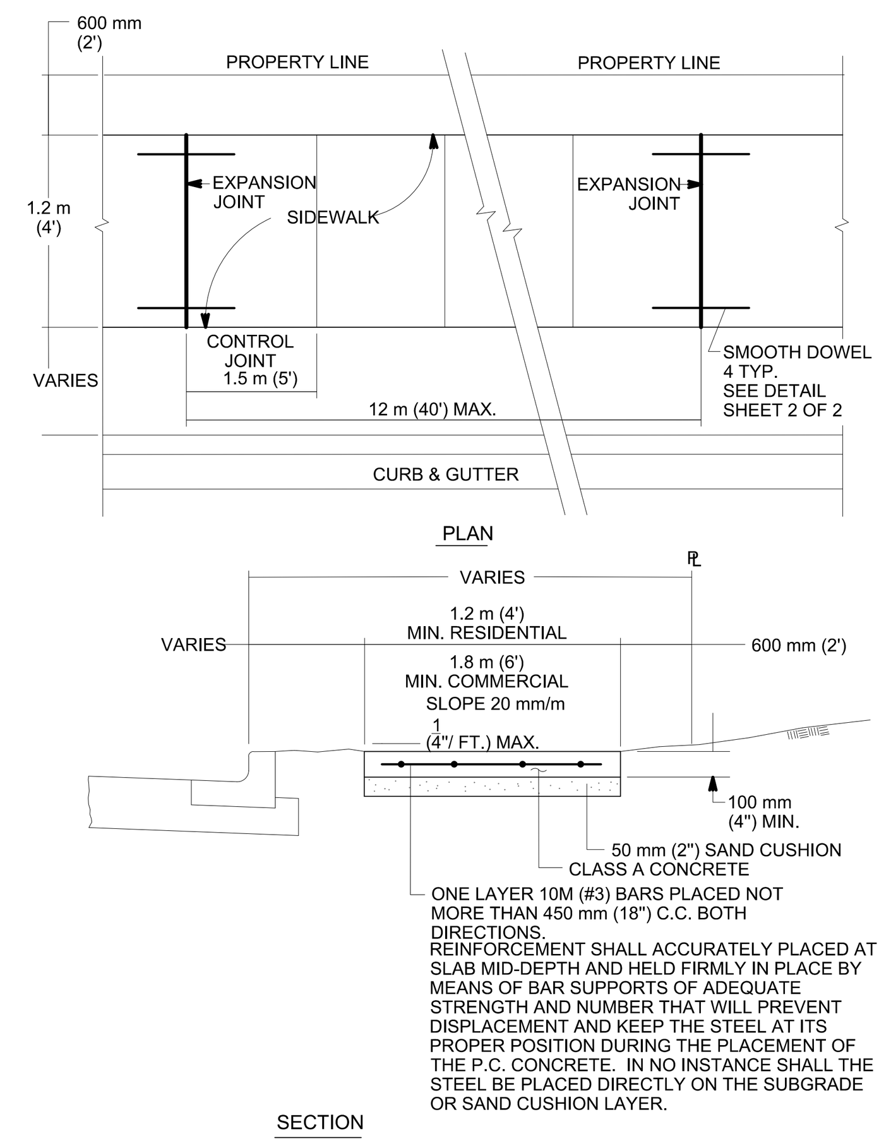
STATE OF TEXAS
HUGO ELIZONDO, JR.
69781
LICENSED
PROFESSIONAL
ENGINEER

EROSION AND SEDIMENTATION CONTROL DETAILS

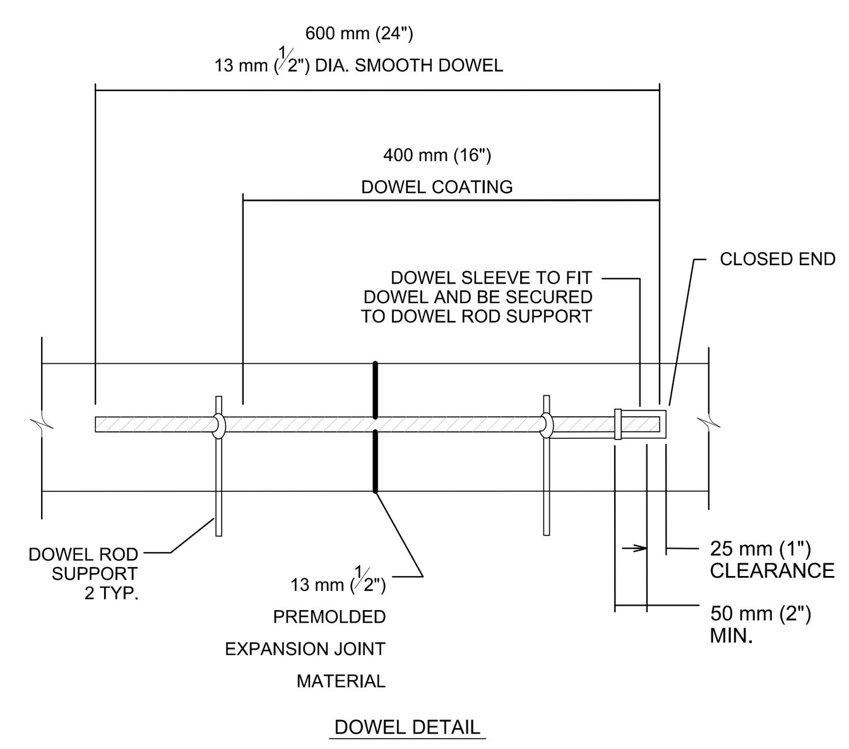
CYPRES CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

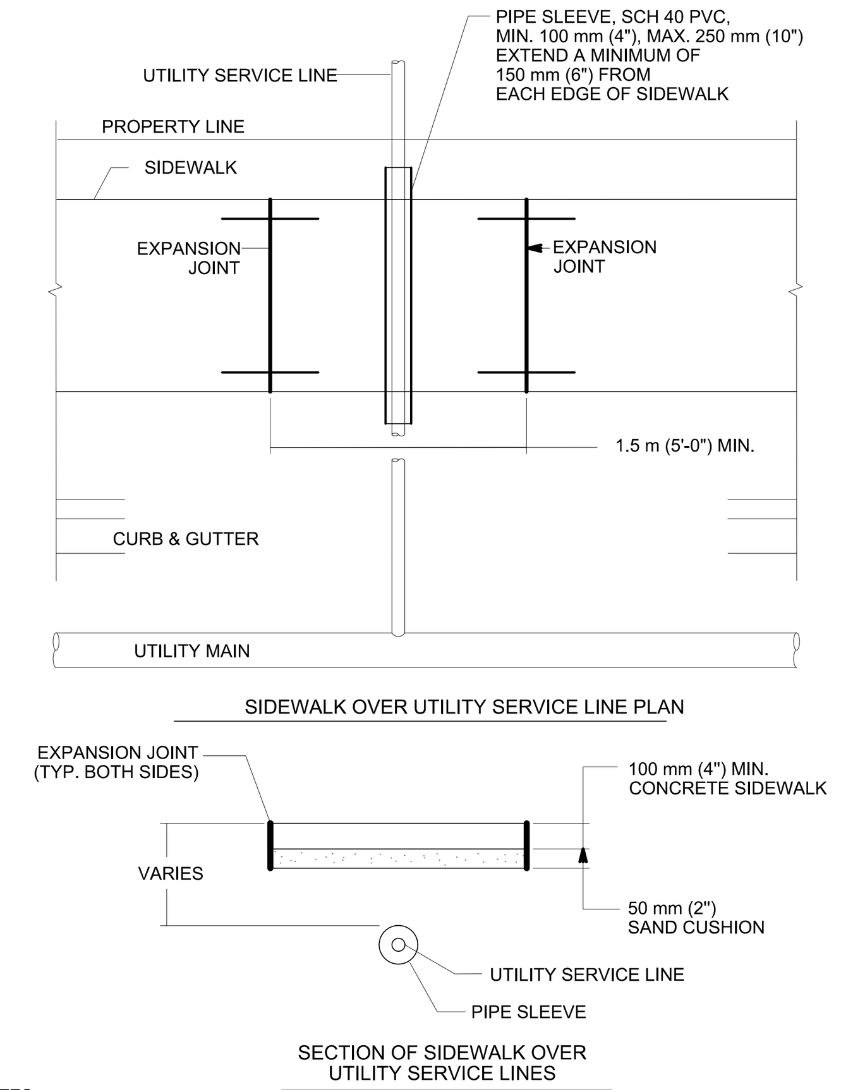
DATE: JANUARY 2024
PROJECT: 24-010
DRAWING'S NAME: 21_CCC_ERO AND SEDI CTRL DETAILS
DESIGN: AWE | CHECKED: CDE
DRAWN: AWE | APPROVED: HE Jr.
SHEET: 21 OF 25



CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
SIDEWALK
ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 432S-1
1 OF 3

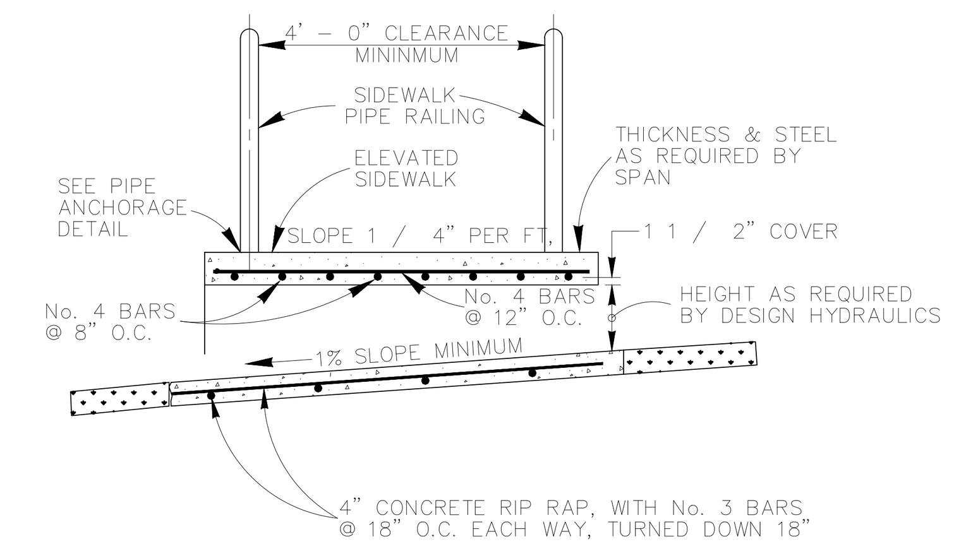


CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
SIDEWALK
ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 432S-1
2 OF 3



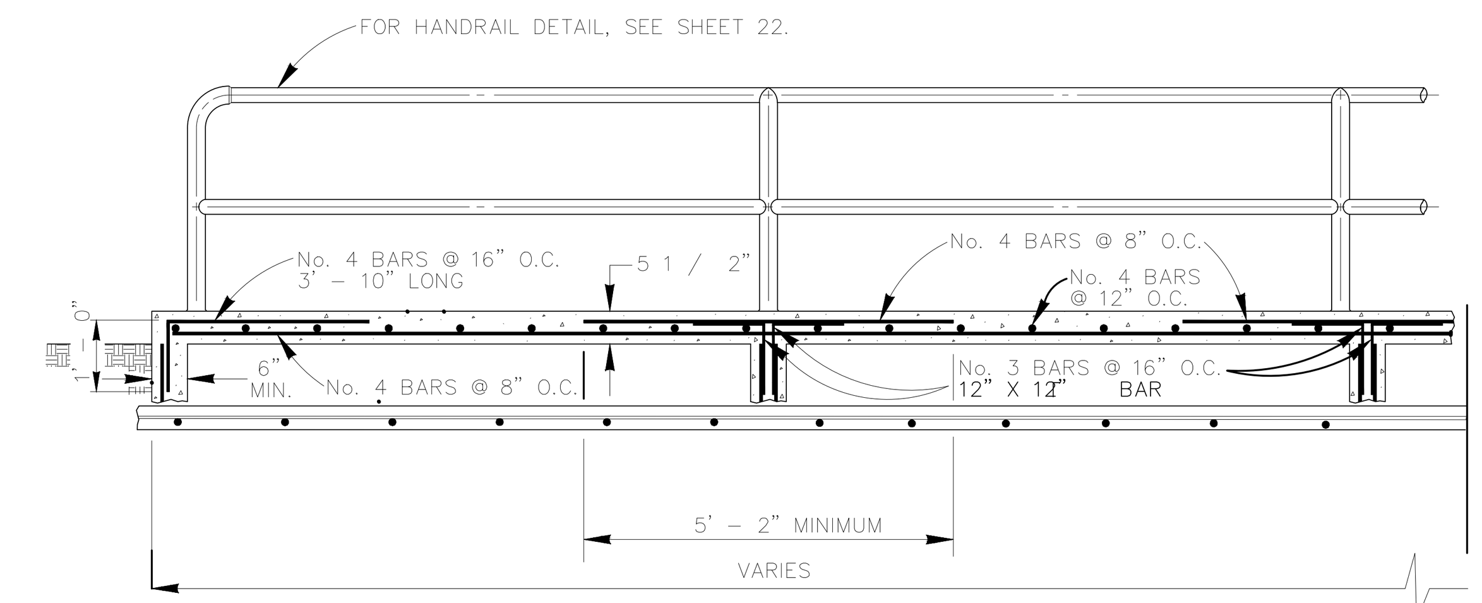
NOTES:
1. THIS STANDARD APPLIES TO THE INSTALLATION OF NEW UTILITIES OR UTILITIES BEING REPLACED BY A NEW LINE.
2. NO JOINTS IN UTILITY SERVICE PIPE TO BE LOCATED INSIDE PVC PIPE SLEEVE.

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
SIDEWALK
ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 432S-1
3 OF 3



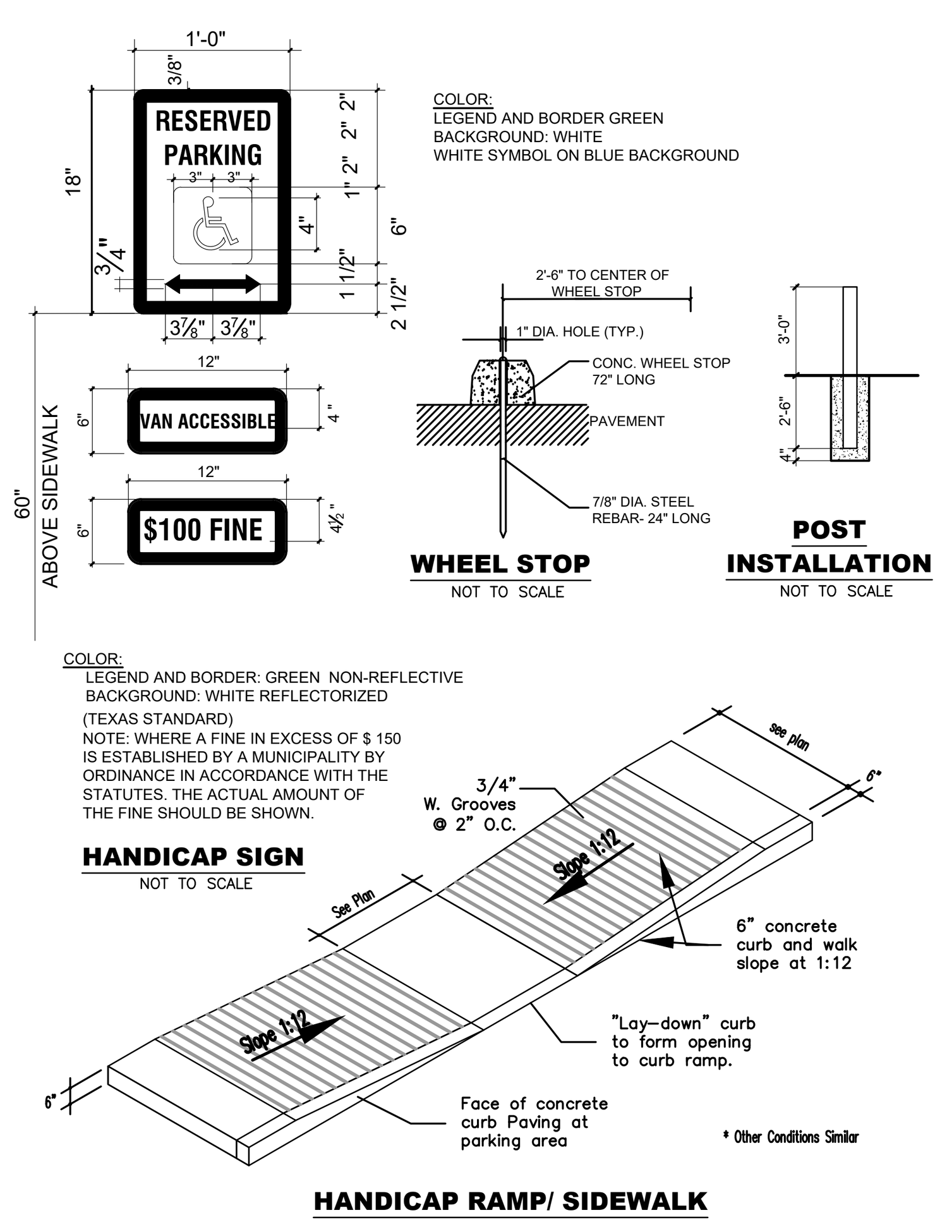
ELEVATED SIDEWALK & DROP CURB DETAILS FOR DRAINAGE CHANNELS

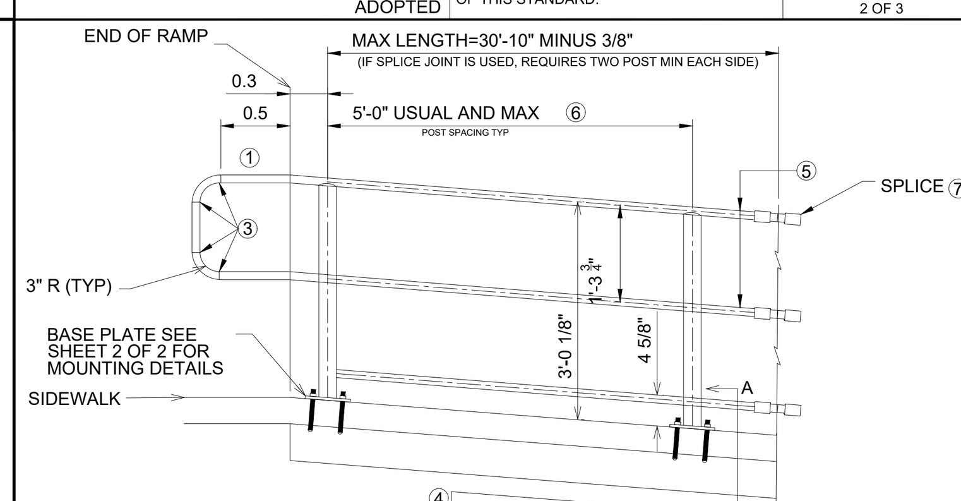
SCALE : N.T.S.



TYPICAL SIDEWALK BRIDGE & SIDEWALK PIPE RAILING SECTION

SCALE : N.T.S.



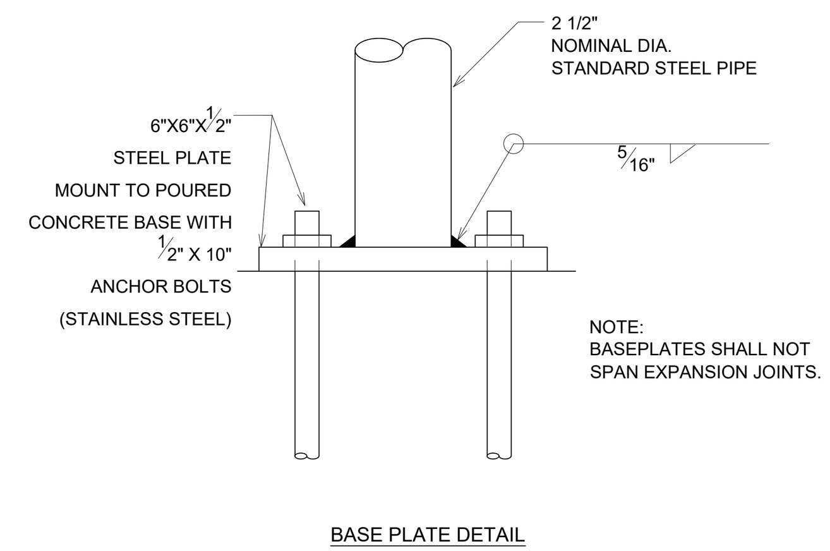


LEGEND
1. PARALLEL TO THE GROUND.
2. SHOP SPLICE IS PERMITTED WITH MINIMUM 85 PERCENT PENETRATION. THE WELD MAY BE SQUARE GROOVE OR SINGLE VEE GROOVE. GRIND SMOOTH.
3. SEE RAMP DETAIL LOCATED ELSEWHERE IN DRAWINGS FOR RAMP SLOPE AND DIMENSIONS. MAXIMUM RAMP SLOPE WILL NOT EXCEED 8.3 PERCENT. LEVEL LANDING REQUIRED FOR EACH 30" RISE IF GRADE EXCEEDS 5 PERCENT.
4. 1" DIA EXTRA HEAVY PIPE (1.315" O.D. , 0.179" WALL THICKNESS). PARALLEL TO RAMP/ SIDEWALK. PROVIDE HOLES AS NEEDED IN 1" DIA PIPE FOR GALVANIZING DRAINAGE AND VENTING.
5. 2 ½ DIA STANDARD PIPE (2.875" O.D. , 0.202" WALL THICKNESS). PLUMB ALL POSTS. SEE POST MOUNT DETAIL FOR CRIMPING AND TRIMMING POST TO FIT DIA OF TOP RAIL. PROVIDE HOLES AS NEEDED IN POST FOR GALVANIZING DRAINAGE AND VENTING.
6. SEE HANDRAIL FABRICATION DETAILS FOR SPLICE JOINTS.
7. CENTER LINE ⅝ DIA ROUND BAR EQ SPACES AT 4 ½ " MAX. PLUMB ALL PICKETS.

NOTE:
IF SPLICE JOINT IS USED, REQUIRES TWO POST MINIMUM EACH SIDE

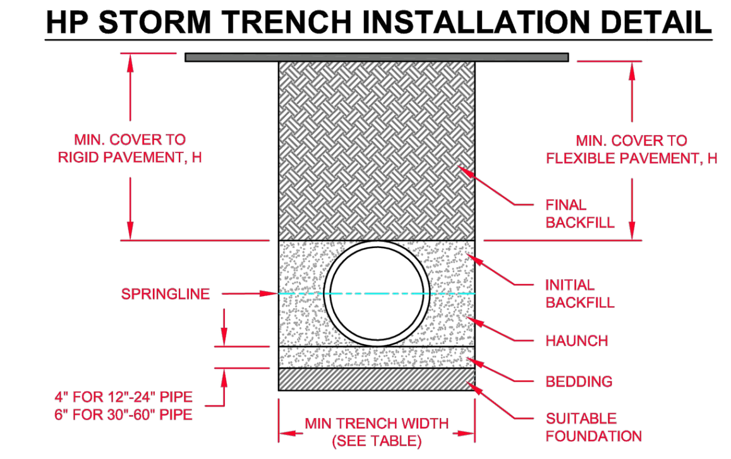
NOTES
* WHEN NEEDED FOR ACCESSIBILITY (GRADE >5 PERCENT) OR AS NEEDED FOR PEDESTRIAN SAFETY.
* NOT TO BE USED ON BRIDGES
* ONE SHOP SPLICE PER PANEL IS PERMITTED WITH MINIMUM 85 PERCENT PENETRATION. THE WELD MAY BE SQUARE GROOVE OR SINGLE VEE GROOVE. GRIND SMOOTH.

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
PEDESTRIAN ADA HANDRAIL ON SIDEWALK OPTION 3
RECORD COPY SIGNED BY KERI JUAREZ 01/04/11
ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 707-4
1 OF 2



CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
PEDESTRIAN ADA HANDRAIL ON SIDEWALK- OPTION 3
RECORD COPY SIGNED BY KERI JUAREZ 01/04/11
ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 707-4
2 OF 2

HP STORM TRENCH INSTALLATION DETAIL



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION, WITH THE EXCEPTION THAT THE INITIAL BACKFILL MAY EXTEND TO THE CROWN OF THE PIPE. SOIL CLASSIFICATIONS ARE PER THE LATEST VERSION OF ASTM D2321. CLASS IVB MATERIALS (MH, CH) AS DEFINED IN PREVIOUS VERSIONS OF ASTM D2321 ARE NOT APPROPRIATE BACKFILL MATERIALS.
2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 12"-24" (300mm-600mm) DIAMETER PIPE; 6" (150mm) FOR 30"-60" (750mm-1500mm) DIAMETER PIPE. THE MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PLACED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II, III, OR IV IN THE PIPE ZONE EXTENDING TO THE CROWN OF THE PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. COMPACTION SHALL BE SPECIFIED BY THE ENGINEER IN ACCORDANCE WITH TABLE 3 FOR THE APPLICABLE FILL HEIGHTS LISTED. PLEASE NOTE, CLASS IV MATERIAL HAS LIMITED APPLICATION AND CAN BE DIFFICULT TO PLACE AND COMPACT; USE ONLY WITH THE APPROVAL OF A SOIL EXPERT.
6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" (300mm) FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS; CLASS I OR II MATERIAL COMPACTED TO 90% SPD AND CLASS III COMPACTED TO 95% SPD IS REQUIRED. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" (300mm) UP TO 48" (1200mm) DIAMETER PIPE AND 24" (600mm) OF COVER FOR 60" (1500mm) DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.
7. FOR ADDITIONAL INFORMATION SEE TECHNICAL NOTE 2.04.

TABLE 1, RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	39" (991mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2438mm)

TABLE 2, MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS

	SURFACE LIVE LOADING CONDITION	
PIPE DIAM.	H-25	HEAVY CONSTRUCTION (75T AXLE LOAD) *
12" - 48" (300mm - 1200mm)	12" (305mm)	48" (1219mm)
60" (1500mm)	24" (610mm)	60" (1524mm)

* VEHICLES IN EXCESS OF 75T MAY REQUIRE ADDITIONAL COVER

TABLE 3, MAXIMUM COVER FOR ADS HP STORM PIPE, ft

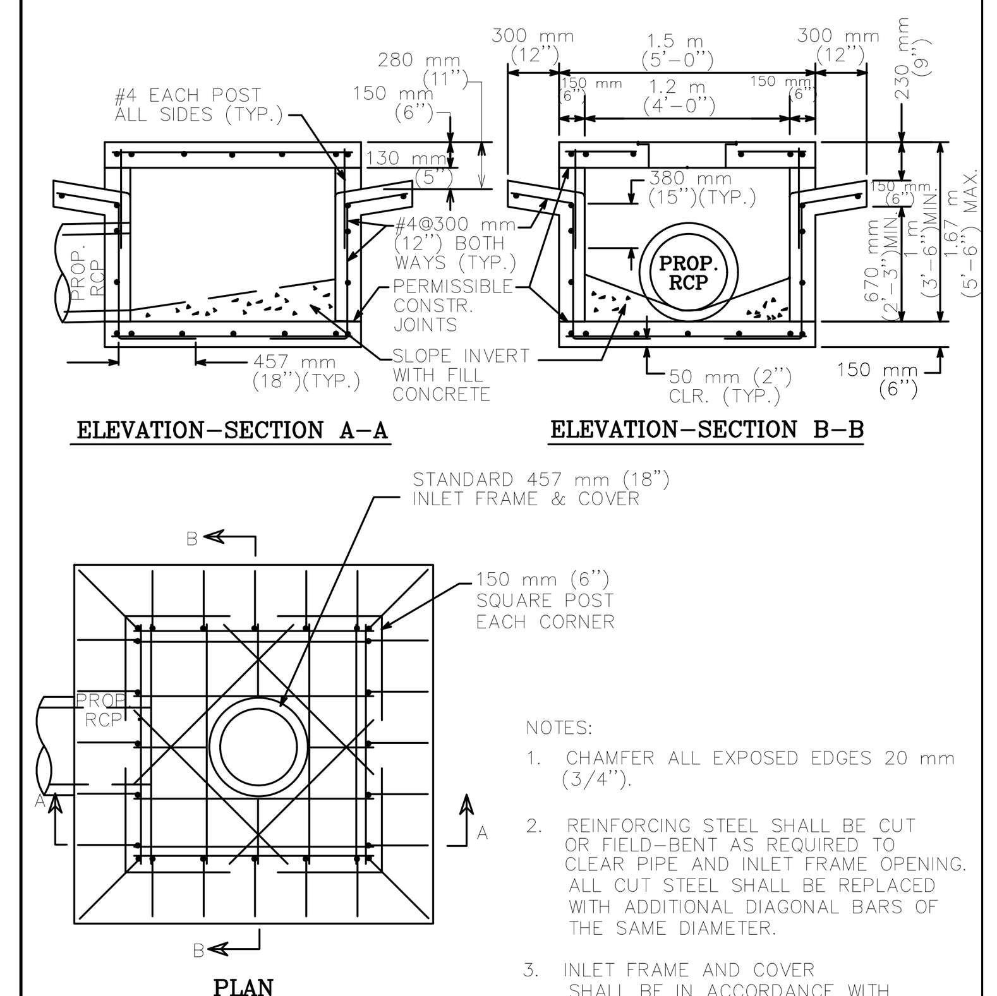
	CLASS I	CLASS II			CLASS III		CLASS IV
PIPE DIA	COMPACTED	95%	90%	85%	95%	90%	95%
12" (300mm)	41 (12.5m)	28 (8.5m)	21 (6.4m)	16 (4.9m)	20 (6.1m)	16 (4.9m)	16 (4.9m)
15" (375mm)	42 (12.8m)	29 (8.8m)	21 (6.4m)	16 (4.9m)	21 (6.4m)	16 (4.9m)	16 (4.9m)
18" (450mm)	44 (13.4m)	30 (9.1m)	21 (6.4m)	16 (4.9m)	22 (6.7m)	17 (5.2m)	16 (4.9m)
24" (600mm)	30 (9.1m)	21 (6.4m)	15 (4.6m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	11 (3.4m)
30" (750mm)	39 (11.9m)	27 (8.2m)	19 (5.8m)	14 (4.3m)	19 (5.8m)	15 (4.6m)	14 (4.3m)
36" (900mm)	28 (8.5m)	20 (6.1m)	14 (4.3m)	10 (3.0m)	14 (4.3m)	11 (3.4m)	10 (3.0m)
42" (1050mm)	30 (9.1m)	21 (6.4m)	14 (4.3m)	10 (3.0m)	15 (4.6m)	11 (3.4m)	10 (3.0m)
48" (1200mm)	29 (8.8m)	20 (6.1m)	14 (4.3m)	9 (2.7m)	14 (4.3m)	10 (3.0m)	10 (3.0m)
60" (1500mm)	29 (8.8m)	20 (6.1m)	14 (4.3m)	9 (2.7m)	14 (4.3m)	10 (3.0m)	9 (2.7m)

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE
UNIT WEIGHT OF SOIL (γs) = 120 PCF

REV.	DESCRIPTION	BY	MM/DD/YY	CHK'D
6	REV. MAXIMUM COVER HEIGHTS	RWD	01/11/17	

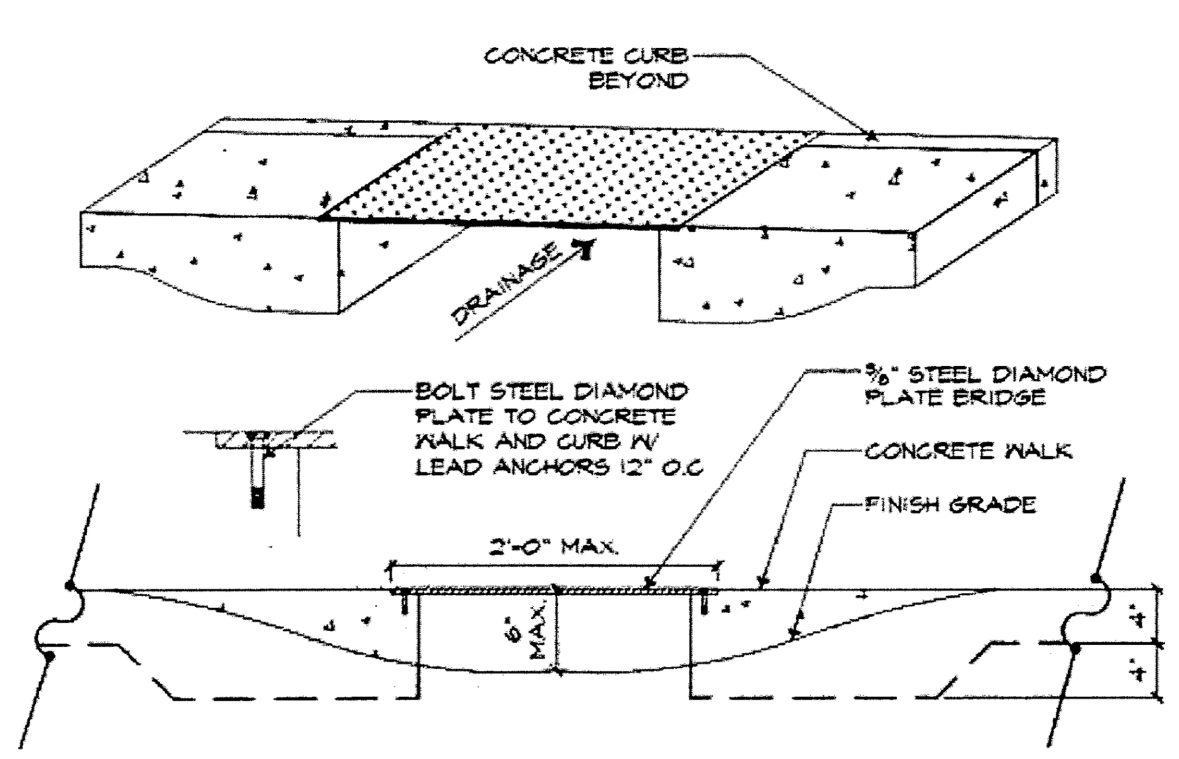
ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO DEPICT THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

TRENCH INSTALLATION DETAIL (HP STORM)
DRAWING NUMBER: STD-101D
ADS
4640 TRUEMAN BLVD
HILLIARD, OHIO 43026
DRAWN BY: JAB
DATE: 01/29/09
CK'D BY:
SCALE: NTS
SHEET: 1 OF 1



NOTES:
1. CHAMFER ALL EXPOSED EDGES 20 mm (3/4").
2. REINFORCING STEEL SHALL BE CUT OR FIELD–BENT AS REQUIRED TO CLEAR PIPE AND INLET FRAME OPENING. ALL CUT STEEL SHALL BE REPLACED WITH ADDITIONAL DIAGONAL BARS OF THE SAME DIAMETER.
3. INLET FRAME AND COVER SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD 503S–1.
4. CONCRETE COVERAGE OF STEEL SHALL BE 50 mm (2") MIN. AT ALL SURFACES.

CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT
4–SIDED AREA INLET
RECORD COPY SIGNED BY ARTHUR C. ROMERO 08/18/2010
ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 508S–9



STEEL DIAMOND PLATE BRIDGE
SCALE: NTS

4CUATRO Consultants, LTD

REVISION	DESCRIPTION	BY:	DATE:

4CUATRO Consultants, LTD.
Registration No. F-3524
120 Riverwalk Drive, Ste. 208 San Marcos, Texas 78666
Phone: (512) 312-5040
e-mail: cuatro@cuatroconsultants.com

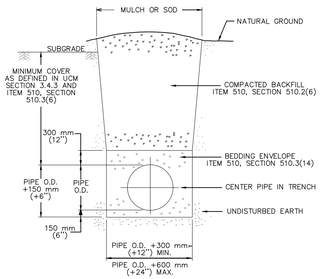
STATE OF TEXAS
HUGO ELIZONDO, JR.
69781
LICENSED PROFESSIONAL ENGINEER
2/28/24

STREET AND DRAINAGE DETAILS

CYPRES CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE: JANUARY 2024
PROJECT: 24–010
DRAWING'S NAME: 22_CCC_STREET AND DRAINAGE DETAILS
DESIGN: AWE
CHECKED: CDE
DRAWN: AWE
APPROVED: HE Jr.
SHEET: 22 OF 25

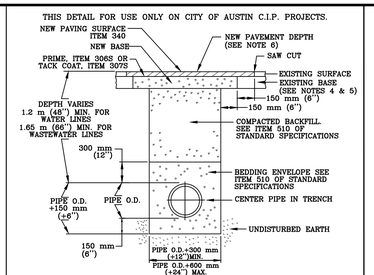


REFERENCES:

1. UTILITY CRITERIA MANUAL SECTION 3.4.3, "FINAL DESIGN"
2. STANDARD SPECIFICATION MANUAL ITEM 510;
   SECTION 510.2(6), "SELECT BACKFILL OR BORROW";
   SECTION 510.3(6), "TRENCH DEPTH AND DEPTH OF COVER";
   SECTION 510.3(14), "PIPE BEDDING ENVELOPE"

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPICAL TRENCH DETAIL WITH UNFINISHED SURFACE	
RECORD COPY SIGNED BY BILL GARDNER 03/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 510S–5

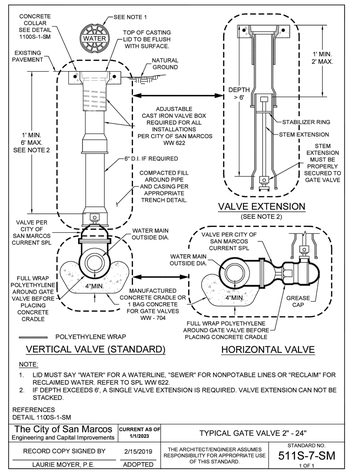
THIS DETAIL FOR USE ONLY ON CITY OF AUSTIN C.I.P. PROJECTS.



NOTES:

1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE A MINIMUM OF 300 mm (12") WIDER THAN THE UNDISTURBED SIDES OF THE TRENCH, SYMMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
2. ANY CONCRETE PAVING SHALL BE SAW CUT 150 mm (6") WIDER THAN UNDISTURBED SIDES OF EXCAVATION.
3. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT SIDING SURFACE WITH COLD MIX OR TEMPORARY HOT MIX ASPHALTIC CONCRETE.
4. ROAD BASE AND SURFACE MATERIALS IN THE TRENCH CUT SHALL BE REPLACED IN KIND OF EQUAL THICKNESS, OR MINIMUM BASE THICKNESS OF 250 mm (10"), WHICHEVER IS GREATER.
5. ALL DAMAGED AREAS OF PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH MINIMUM OF 200 mm (8") OF BASE OR MATCH EXISTING THICKNESS, WHICHEVER IS GREATER.
6. SURFACE PAVEMENT SHALL BE OF THE KIND AND THICKNESS AS EXISTING, OR MINIMUM 50 mm (2"), WHICHEVER IS GREATER.

CITY OF AUSTIN WATER AND WASTEWATER UTILITY	TYPICAL TRENCH WITH PAVED SURFACE	
RECORD COPY SIGNED BY KATHI L. FLOWERS 8/19/02 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 510S–3

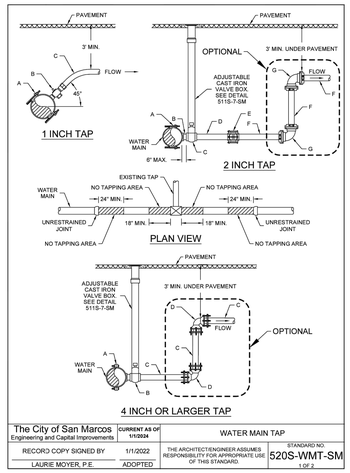


NOTE:

1. LID MUST SAY "WATER" FOR A WATERLINE, "SEWER" FOR NONPOTABLE LINES OR "RECLAIM" FOR RECLAIMED WATER. REFER TO SPL WW 622.
2. IF DEPTH EXCEEDS 6', A SINGLE VALVE EXTENSION IS REQUIRED. VALVE EXTENSION CAN NOT BE STACKED.

REFERENCES
DETAIL 1100S-1-SM

The City of San Marcos Engineering and Capital Improvements	CURRENT AS OF 1/1/2023	TYPICAL GATE VALVE 2" - 24"	
RECORD COPY SIGNED BY	2/15/2019	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511S-7-SM
LAURIE MOYER, P.E.	ADOPTED		1 OF 1



The City of San Marcos Engineering and Capital Improvements	CURRENT AS OF 1/1/2024	WATER MAIN TAP	
RECORD COPY SIGNED BY	1/1/2022	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-WMT-SM
LAURIE MOYER, P.E.	ADOPTED		1 OF 2

1 INCH TAP MATERIAL LIST

LABEL	ITEM	SIZE
*A	APPROVED TAPPING SADDLE PER SPL NO. WW-264/WW-256	REQUIRED
B	CORPORATION STOP FORD TYPE Q COMPRESSION FITTING OR APPROVED EQUIVALENT PER SPL NO. WW-66	1"
**C	TUBING PER SPL NO. TYPE K COPPER WW-613 OR POLYETHYLENE WW-65	1"

* SERVICE SADDLES SHALL BE WRAPPED COMPLETELY WITH 8 MIL. POLYETHYLENE FILM.
** ALL FITTING CONNECTED TO POLYETHYLENE PIPE WILL REQUIRE A STAINLESS STEEL INSERT.

2 INCH TAP MATERIAL LIST

LABEL	ITEM	SIZE
A	APPROVED TAPPING SADDLE PER SPL NO. WW-264	REQUIRED
B	GALVANIZED NIPPLE-THREADED	2"
C	TAPPING VALVE (RESILIENT WEDGE GATE, IRON BODY FEMALE/FEMALE) WITH VALVE BOX DETAIL 511S-7SM	2"
D	GALVANIZED NIPPLE-THREADED X THREADED	2"
E	RESTRAINT DRESSING COUPLINGS - MAXI-GRIP OR APPROVED EQUIVALENT PER SPL NO. WW-587B	2"
F	SUPPLY PIPE SCH. 80 FULLY RESTRAINED PER SPL NO. WW-587	2"
G	DUCTILE IRON 90° BEND - HARCO-KNUCKLE JOINT RESTRAINT, OR APPROVED EQUIVALENT PER SPL NO. WW-587B	2"

4 INCH AND LARGER TAP MATERIAL LIST

LABEL	ITEM	SERVICE SIZE			
		4"	6"	8"	10"
A	APPROVED TAPPING SLEEVE PER SPL NO. WW-244	REQUIRED			
B	TAPPING VALVE (RESILIENT WEDGE GATE, IRON BODY M.J. X M.J.) WITH VALVE BOX DETAIL 511S-7-SM	4"	6"	8"	10"
C	SUPPLY PIPE C900 PER SPL NO. WW-308A OR DUCTILE IRON PER SPL NO. WW-27 FULLY RESTRAINED	4"	6"	8"	10"
*D	DUCTILE IRON 90° BEND - MEGALUG RESTRAINT, OR APPROVED EQUIVALENT PER SPL NO. WW-27B AND NO. WW-27A	4"	6"	8"	10"

* WHEN CONDITIONS ALLOW 45° BENDS ARE PREFERRED OVER 90° BENDS

NOTES:

1. MAIN SIZE CAN NOT BE LESS THAN OR EQUAL TO TAP. TEE PER SPL NO. WW-27B MAY BE USED WITH ENGINEERING DEPARTMENT APPROVAL FOR SIZE ON SIZE CONNECTION.
2. BACKFILL AND EMBEDMENT WILL BE PER CITY DETAIL 510-S&L-SM.
3. 3" SERVICE AND FIRE LINES WILL USE A 4" TAP AND HAVE A REDUCER AT THE METER PER THE DETAILS.
4. ALL PARTS WILL BE PER THE CURRENT CITY OF SAN MARCOS STANDARD PRODUCTS LIST.
5. WHEN A TAP IS PROPOSED ON AN EXISTING ASBESTOS CEMENT (AC) PIPE THE CONTRACTOR WILL REPLACE THE AC PIPE SEGMENT WITH AN APPROVED PVC PIPE PER CITY STANDARD PRODUCT LIST (SPL). NEW PIPE WILL BE CONNECTED TO THE EXISTING AC PIPE WITH A WIDE RANGE COUPLING ADAPTOR PER CITY SPL.
6. 1.5" WILL USE A 2" TAP AND HAVE A REDUCER AT THE METER PER THE DETAILS.

REFERENCES
DETAIL 510S-S&L-SM
DETAIL 511S-7-SM

The City of San Marcos Engineering and Capital Improvements	CURRENT AS OF 1/1/2024	WATER MAIN TAP	
RECORD COPY SIGNED BY	1/1/2022	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 520S-WMT-SM
LAURIE MOYER, P.E.	ADOPTED		2 OF 2

DATE:									
BY:									
DESCRIPTION									
REVISION									

4CUATRO Consultants, LTD.
Registration No: F-3524
120 Rowmark Drive, Ste. 208 Phone: (512) 312-5300
San Marcos, Texas 78666 e-mail: contact@4cuatroconsultants.com

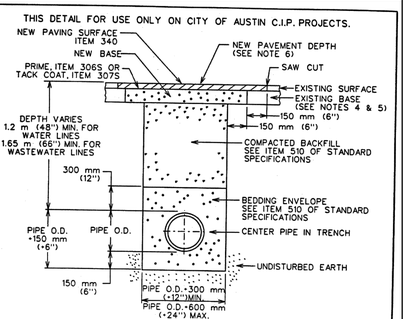
WATER DETAILS

CYPRES CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE: JANUARY 2024
PROJECT: 24–010
DRAWING'S NAME: 23_CCC_WATER DETAILS
DESIGN: CDE | CHECKED: CDE
DRAWN: DR | APPROVED: HE Jr.
SHEET: 23 OF 25

THIS DETAIL FOR USE ONLY ON CITY OF AUSTIN C.I.P. PROJECTS.



NOTES:

1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE A MINIMUM OF 300 mm (12") WIDER THAN THE UNDISTURBED SIDES OF THE TRENCH, SYMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
2. ANY CONCRETE PAVING SHALL BE SAW CUT 150 mm (6") WIDER THAN UNDISTURBED SIDES OF EXCAVATION.
3. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX OR TEMPORARY HOT MIX ASPHALTIC CONCRETE.
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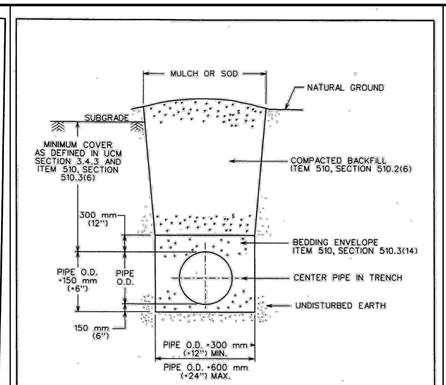
5. ALL DAMAGED AREAS OF PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH MINIMUM OF 200 mm (8") OF BASE OR MATCH EXISTING THICKNESS, WHICHEVER IS GREATER.
6. SURFACE PAVEMENT SHALL BE OF THE KIND AND THICKNESS AS EXISTING, OR MINIMUM 50 mm (2"), WHICHEVER IS GREATER.

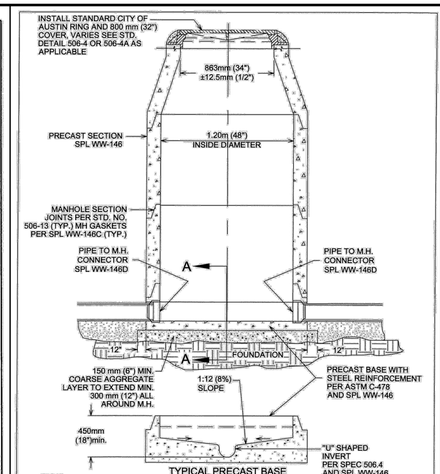
CITY OF AUSTIN WATER AND WASTEWATER UTILITY	TYPICAL TRENCH WITH PAVED SURFACE
Jean Bailey P.E. 8/19/02 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 510S-3



REFERENCES:

1. UTILITY CRITERIA MANUAL SECTION 3.4.3, "FINAL DESIGN"
2. STANDARD SPECIFICATION MANUAL ITEM 510, SECTION 510.2(6), "SELECT BACKFILL OR BORROW"; SECTION 510.3(6), "TRENCH DEPTH AND DEPTH OF COVER"; SECTION 510.3(14), "PIPE BEDDING ENVELOPE"

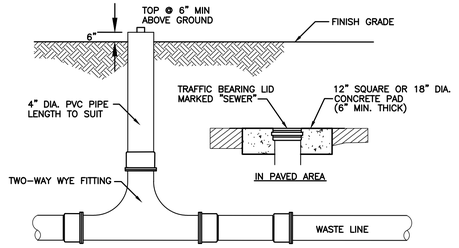
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPICAL TRENCH DETAIL WITH UNFINISHED SURFACE
Bill Bunch 3/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 510S-5



TYPICAL PRECAST BASE

NOTE:
1. THE MANHOLE BASE SHALL BE BEDDED ON 150 mm (6") COARSE AGGREGATE. THE CONTRACTOR SHALL LEVEL AND PLUMB THE BASE PRIOR TO SETTING THE PRECAST MANHOLE RISER SECTIONS ON THE PRECAST CONCRETE BASE.
2. MH FOUNDATION SHALL MEET OR EXCEED STD. SPEC. 506.5B.

CITY OF AUSTIN AUSTIN WATER UTILITY	WASTEWATER MANHOLE ON PRECAST BASE
Kathi A Flowers 8/31/2011	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 506S-10



SEWER TWO-WAY CLEANOUT
N.T.S.

DATE:	BY:	DESCRIPTION	REVISION

STATE OF TEXAS · HUGO ELIZONDO, JR. · 69781 · LICENSED PROFESSIONAL ENGINEER

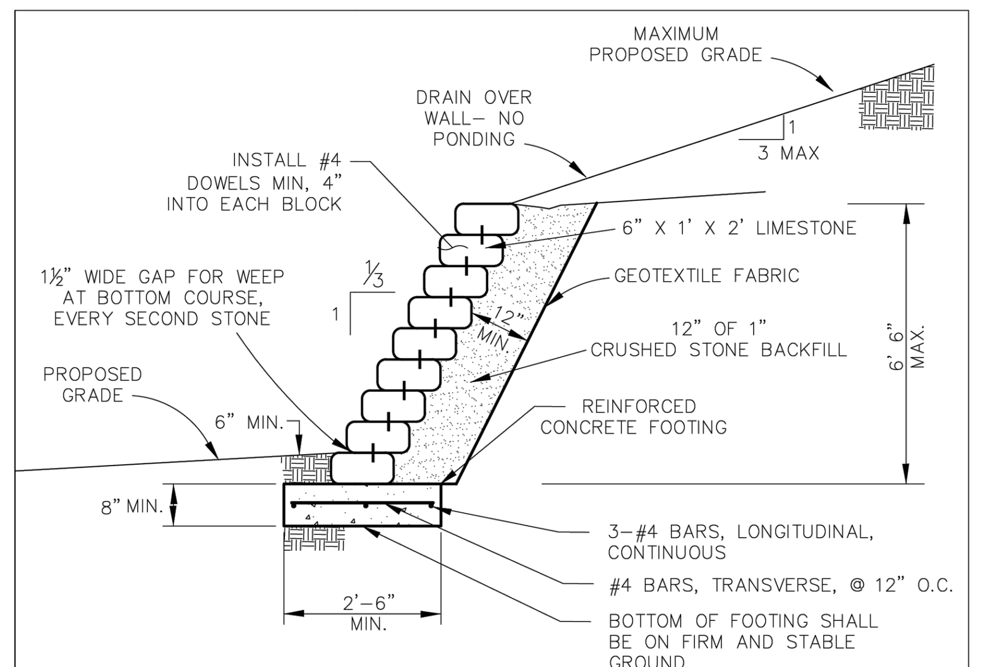
4CUATRO Consultants, LTD.
Registration No: F-3524
120 Riverwalk Drive, Ste. 208 Phone: (512) 312-5510
San Marcos, Texas 78666 e-mail: customer@4cuatroconsultants.com

WASTEWATER DETAILS

CYPRES CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE: JANUARY 2024
PROJECT: 24-010
DRAWING'S NAME: 24_CCC_WASTEWATER DETAILS
DESIGN: AWE | CHECKED: CDE
DRAWN: AWE | APPROVED: HE Jr.
SHEET: 24 OF 25



MORTARED ROCK WALL (6'–6" MAX. REINFORCED)

SCALE: N.T.S.

CONSTRUCTION NOTES:

1. ALL CONCRETE SHALL BE CLASS A, STONE AGGREGATE, CONCRETE UNLESS NOTED OTHERWISE. MINIMUM CONCRETE COMPRESSIVE STRENGTH FOR THE FOOTING SHALL BE 3,000 P.S.I. WHEN TESTED AT 28 DAYS.

POURING TEMPERATURE SHALL BE 40° F AND RISING. CONCRETE SHALL HAVE A MAX. SLUMP OF 4".

IF TEMPERATURE IS ABOVE 80° F AT POURING, CONTRACTOR SHALL APPLY A COAT OF CURING COMPOUND.

2. REINFORCING STEEL SHALL CONFORM TO ACI 318 AND 315, LATEST EDITION. REINFORCING STEEL SHALL BE DEFORMED NEW BILLET STEEL BARS IN ACCORDANCE WITH ASTM SPECIFICATION A615 GRADE 60.

3. LAP CONTINUOUS UNSCHEDULED REINFORCING BARS 36 BAR DIAMETERS, UNLESS NOTED OTHERWISE. TOP BARS SHALL HAVE A BAR LAP OF 50 BAR DIAMETERS.

4. ALL INTERSECTIONS OF STEEL SHALL BE TIED, I.E., 100 PERCENT TIE.

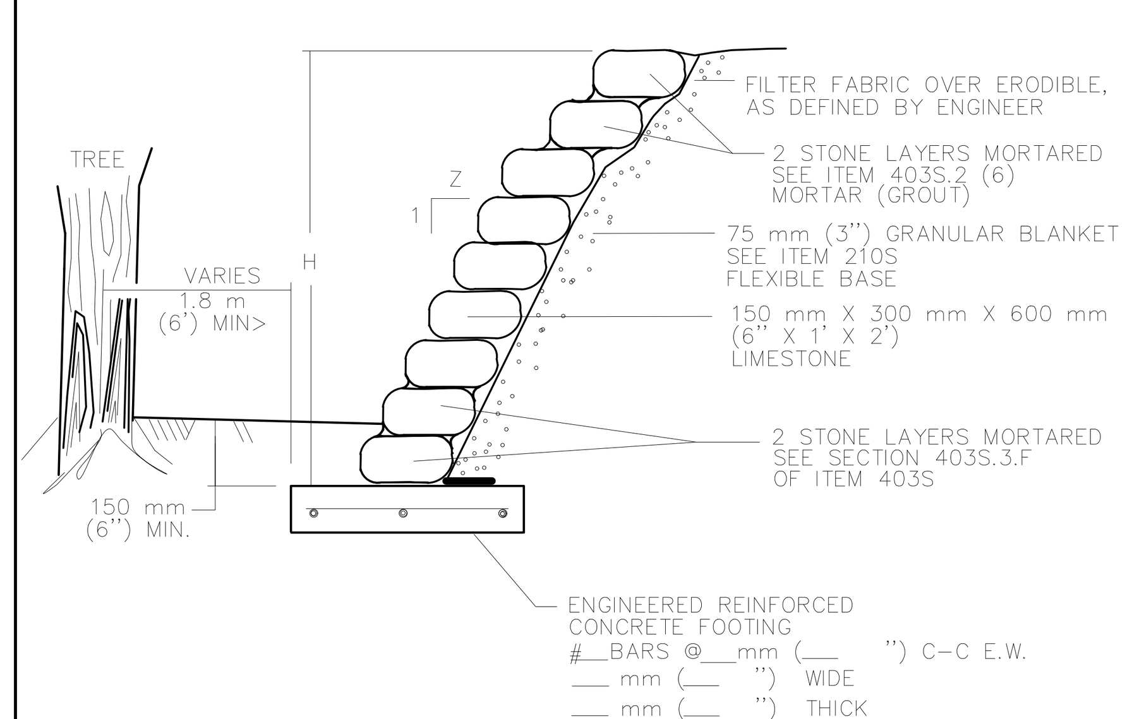
5. REINFORCING STEEL MINIMUM CLEARANCE SHALL BE AS FOLLOWS:
   A) FOOTINGS 1 1/2 " TOP, 3" BOTTOM, 2" SIDEFORMED, 3" SIDE AGAINST EARTH
   B) WALLS 2"

6. MORTAR SHALL CONSIST OF 1 PART CEMENT, 2 PARTS FINELY GRADED SAND AND ENOUGH WATER TO MAKE THE MIXTURE PLASTIC. MORTAR ALL JOINTS OF BLOCK.

7. IF GROUNDWATER IS ENCOUNTERED, NOTIFY ENGINEER FOR DESIGN MODIFICATIONS TO THIS WALL DETAIL.

8. SURCHARGE LOADS BEHIND THE WALL ARE NO CLOSER THAN 4'–0" FROM THE TOP OF WALL.

CUATRO Consultants, LTD.
Registration No. F-3524
3601 Kyle Crossing, Suite A Phone: (512) 312-5040 Fax: (512) 312-5399
Kyle, Texas 78640 e-mail: cuatro@cuatroconsultants.com



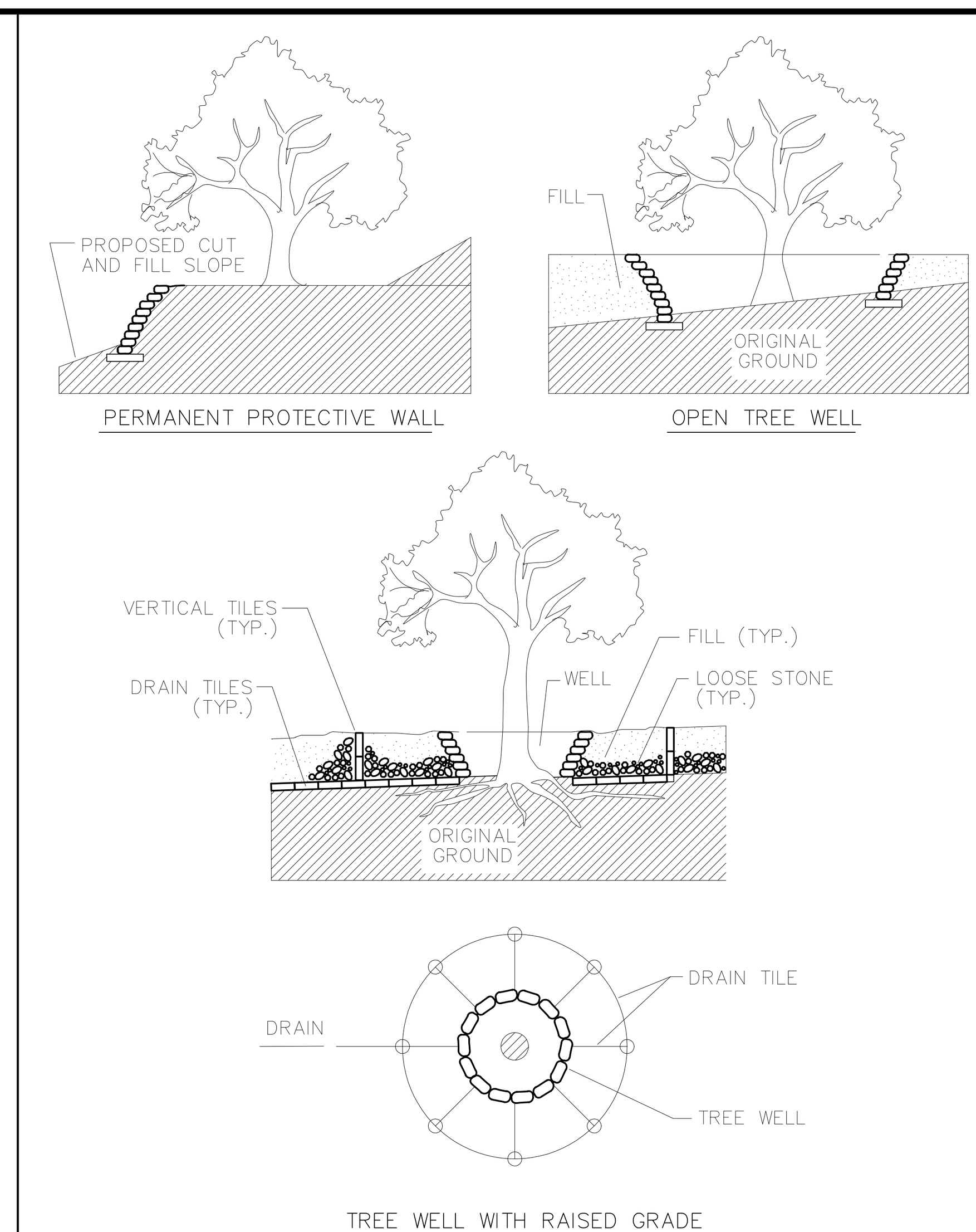
THIS STANDARD APPLIES ONLY UNDER THE FOLLOWING CONDITIONS:

A. H AND Z ARE SPECIFIED ON THE DRAWING.
B. GROUNDWATER IS NO HIGHER THAN THE BOTTOM OF THE FOOTING.
C. THE MATERIAL BELOW THE FOOTING IS FIRM AND STABLE.
D. THE MATERIAL BEHIND THE WALL HAS A LEVEL SURFACE.
E. THE MATERIAL IN FRONT OF THE WALL HAS A SLOPE NO STEEPER THAN 4 HORIZONTAL TO 1 VERTICAL.
F. THE FACE OF THE WALL IS NO STEEPER THAN 1 HORIZONTAL TO 2 VERTICAL.
G. SURCHARGE LOADS BEHIND THE WALL ARE NO CLOSER THAN DISTANCE H FROM THE TOP OF WALL.

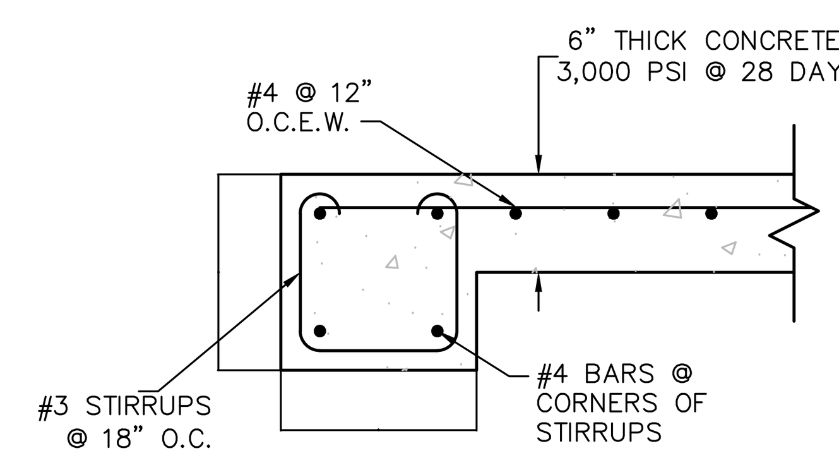
NOTES:

1. DESIGN AND CONSTRUCTION OF ROCK WALL SHALL CONFORM TO THE REQUIREMENTS OF CITY CODE 16–7–2, PLACEMENT OF FENCES IN STREET CORNER AREAS, AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL FOR MINIMIM SIGHT DISTANCE.
2. CONCRETE SHALL CONFORM TO ITEM 403S, "CONCRETE FOR STRUCTURES".

DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW		SLOPE PROTECTION AND TREE WELLS	
RECORD COPY SIGNED BY J. PATRICK MURPHY	03/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S–6 1 OF 2

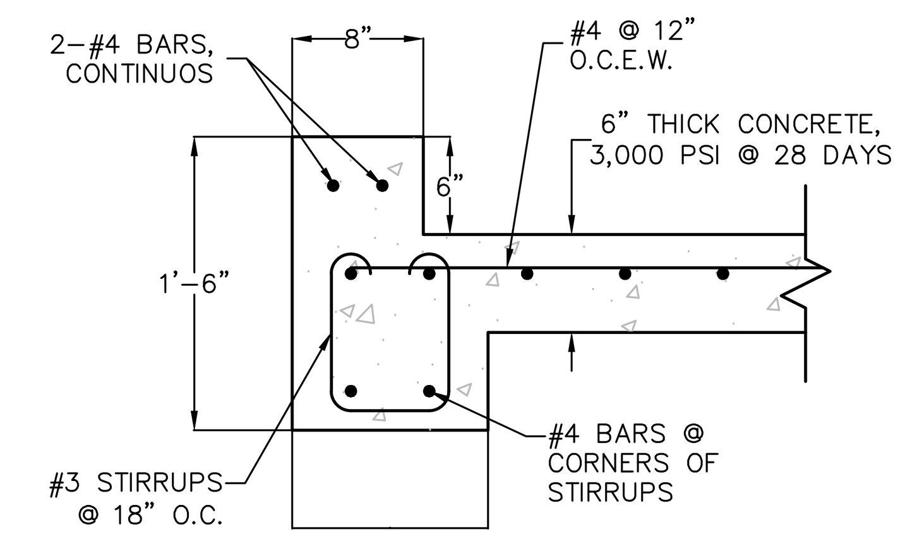


DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW		SLOPE PROTECTION AND TREE WELLS	
RECORD COPY SIGNED BY J. PATRICK MURPHY	03/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S–6 2 OF 2



2e SECTION

N.T.S.



2d SECTION

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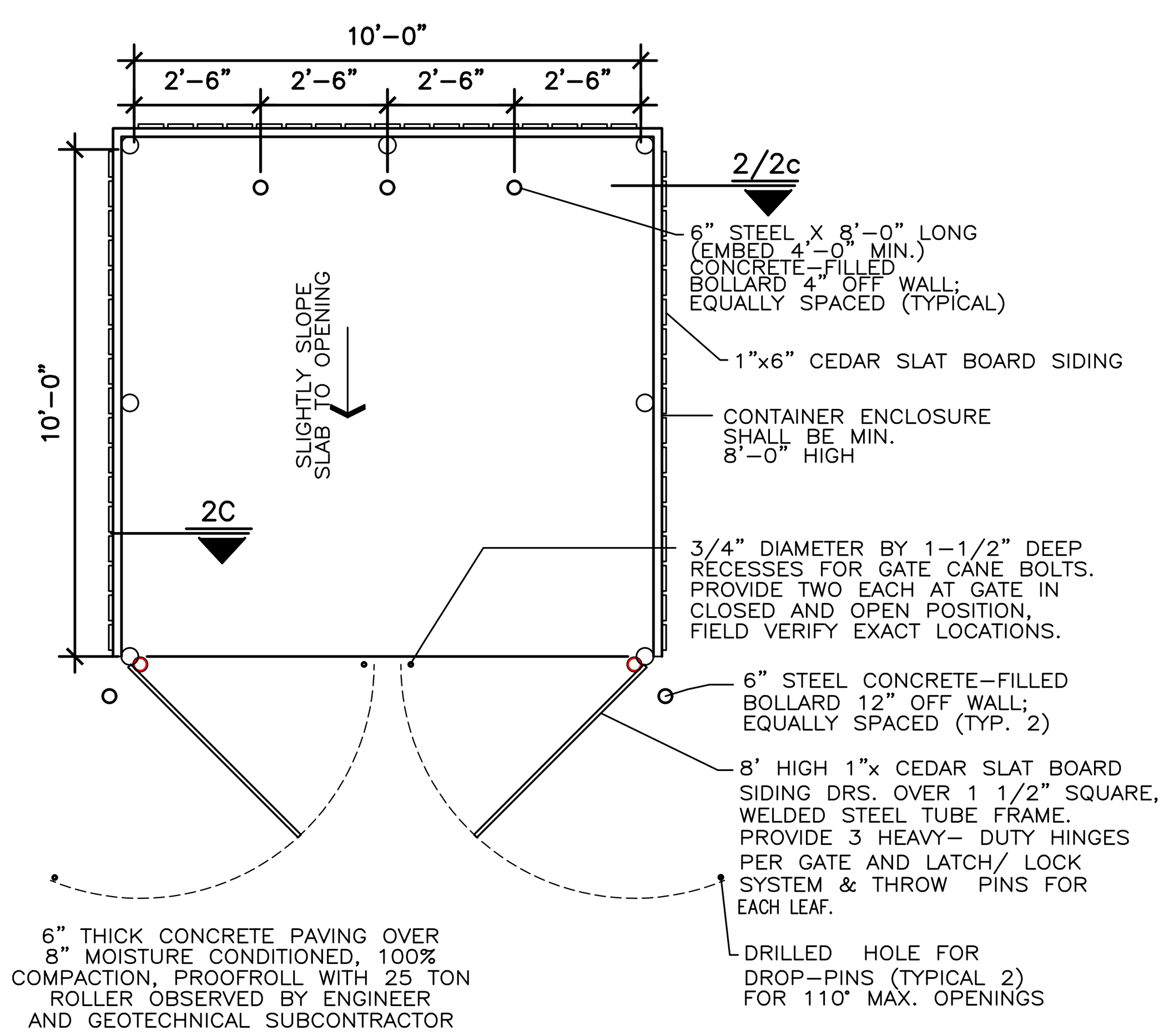

PLAN VIEW OF ENCLOSURE

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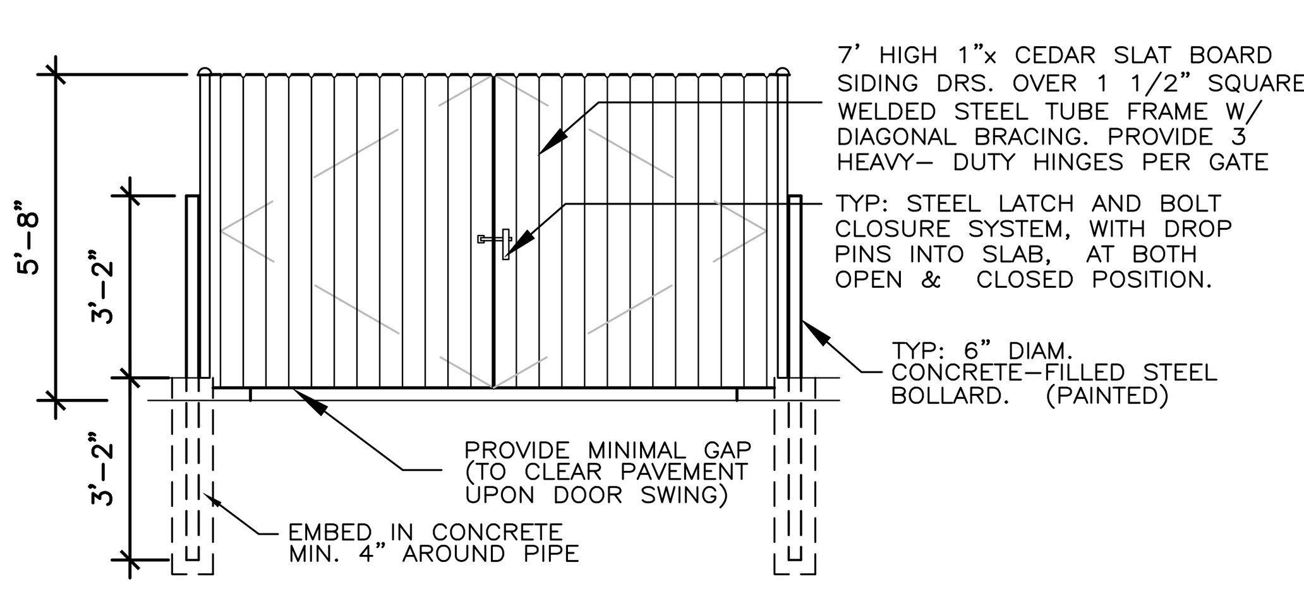

FRONT ELEVATION

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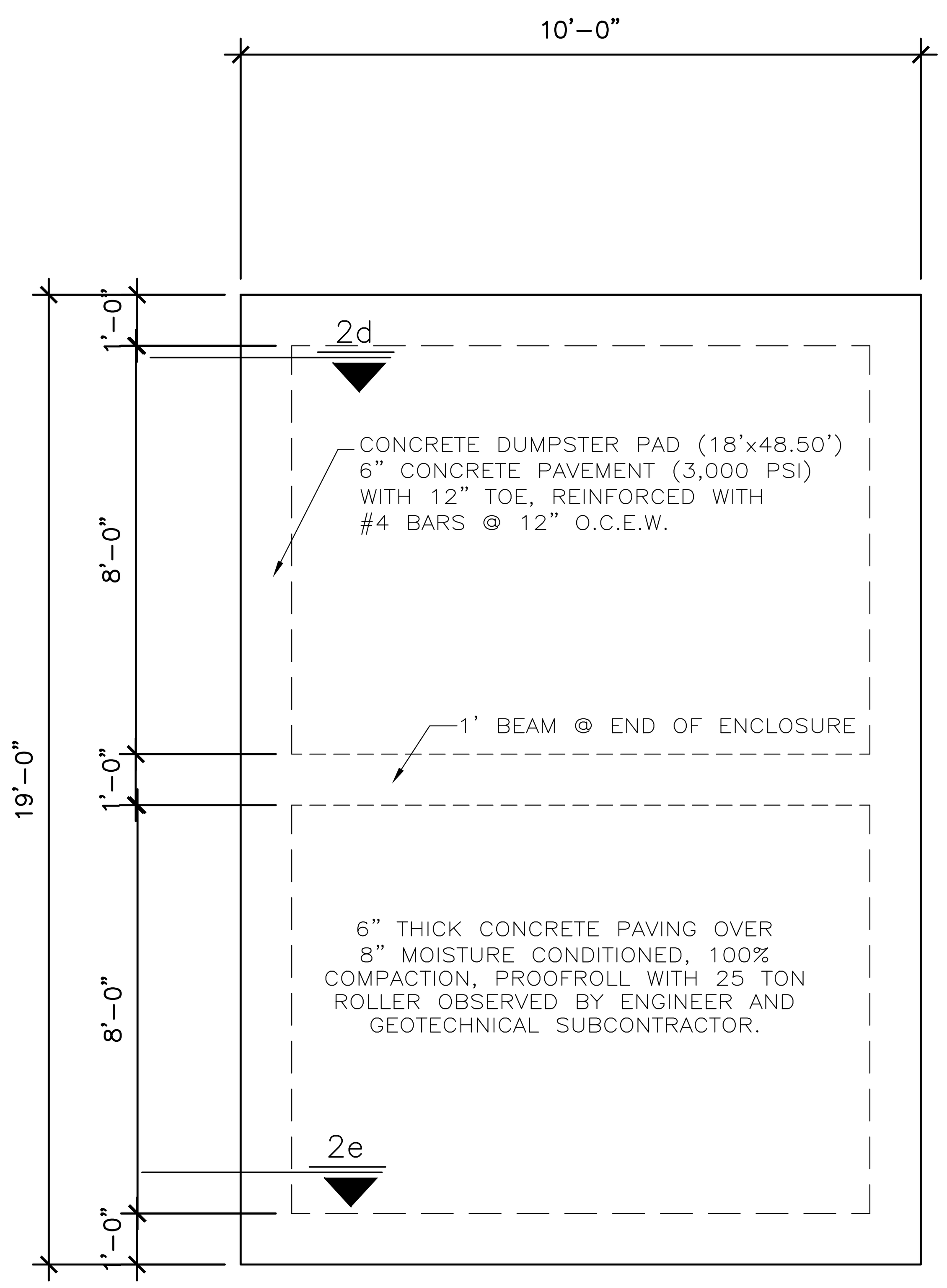

DUMPSTER CONCRETE DETAIL

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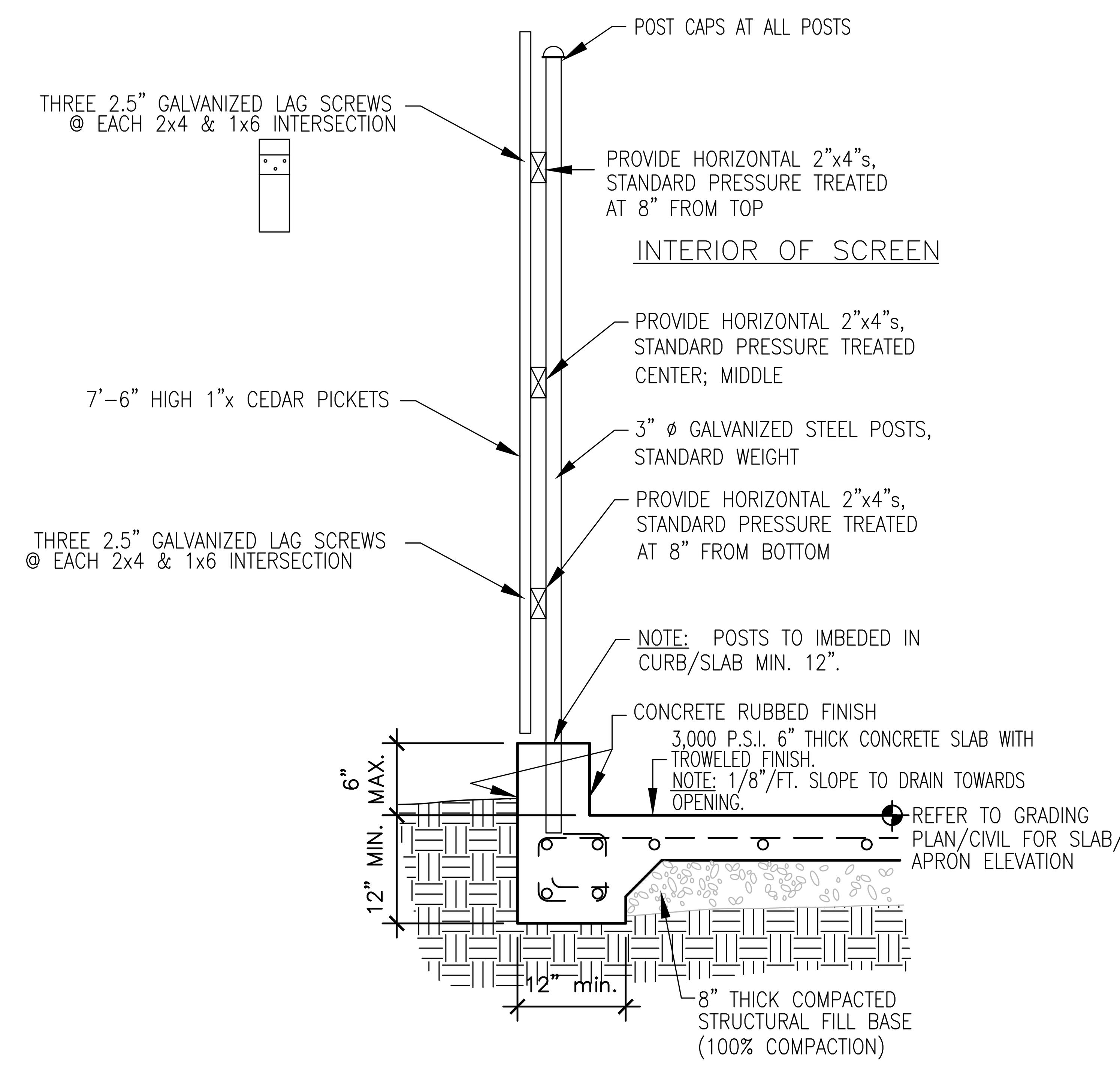


2c SECTION

N.T.S.

REVISION	DESCRIPTION	BY:	DATE:

STATE OF TEXAS — HUGO ELIZONDO, JR. — 69781 — LICENSED PROFESSIONAL ENGINEER

CUATRO Consultants, LTD.
Registration No. F-3524
120 Riverwalk Drive, Ste. 208 Phone: (512) 312-5040
San Marcos, Texas 78666 e-mail: cuatro@cuatroconsultants.com

STRUCTURAL DETAILS

CYPRESS CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE: JANUARY 2024	
PROJECT: 24–010	
DRAWING'S NAME: 25_CCC_STRUCTURAL DETAILS	
DESIGN: AWE	CHECKED: CDE
DRAWN: AWE	APPROVED: HE Jr.
SHEET: 25 OF 25	

CYPRESS CREEK CHURCH
INSPECTION, MAINTENANCE, REPAIR, AND RETROFIT PLAN

A record of inspections, maintenance, repair, and retrofit shall be kept. The records shall include dates, observations, recommendations, actions taken, and names of those responsible.

The following practices and measures will be adopted to ensure the proper operation and maintenance of the permanent controls in the site.

Batch Detention

Batch detention basins may have somewhat higher maintenance requirements than an extended detention basin since they are active stormwater controls. The maintenance activities are identical to those of extended detention basins with the addition of maintenance and inspections of the automatic controller and the valve at the outlet.

- ***Inspections***. Inspections should take place a minimum of twice a year. One inspection should take place during wet weather to determine if the basin is meeting the target detention time of 12 hours and a drawdown time of no more than 48 hours. The remaining inspections should occur between storm events so that manual operation of the valve and controller can be verified. The level sensor in the basin should be inspected and any debris or sediment in the area should be removed. The outlet structure and the trash screen should be inspected for signs of clogging. Debris and sediment should be removed from the orifice and outlet(s) as described in previous sections. Debris obstructing the valve should be removed. During each inspection, erosion areas inside and downstream of this BMP should be identified and repaired/revegetated immediately.

- ***Mowing***. The basin, basin side-slopes, and embankment of the basin must be mowed to prevent woody growth and control weeds. A mulching mower should be used, or the grass clippings should be caught and removed. Mowing should take place at least twice a year, or more frequently if vegetation exceeds 18 inches in height. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas.

- ***Litter and Debris Removal***. Litter and debris removal should take place at least twice a year, as part of the periodic mowing operations and inspections. Debris and litter should be removed from the surface of the basin. Particular attention should be paid to floatable debris around the outlet structure. The outlet should be checked for possible clogging or obstructions and any debris removed.

- ***Erosion Control***. The basin side slopes and embankment all may periodically suffer from slumping and erosion. To correct these problems, corrective action, such as regrading and revegetation, may be necessary. Correction of erosion control should take place whenever required based on the periodic inspections.

- ***Nuisance Control***. Standing water or soggy conditions may occur in the basin. Some standing water may occur after a storm event since the valve may close with 2 to 3 inches of water in the basin. Some flow into the basin may also occur between storms due to spring flow and residential water use that enters the storm sewer system. Twice a year, the facility should be evaluated in terms of nuisance control (insects, weeds, odors, algae, etc.).

- ***Structural Repairs and Replacement***. With each inspection, any damage to structural elements of the basin (pipes, concrete drainage structures, retaining walls, etc.) should be identified and repaired immediately. An example of this type of repair can include patching of cracked concrete, sealing of voids, removal of vegetation from cracks and joints. The various inlet/outlet structures in a basin will eventually deteriorate and must be replaced.

- ***Sediment Removal***. A properly designed batch detention basin will accumulate quantities of sediment over time. The accumulated sediment can detract from the appearance of the facility and reduce the pollutant removal performance of the facility. The sediment also tends to accumulate near the outlet structure and can interfere with the level sensor operation. Sediment shall be removed from the basin at least every 5 years, when sediment depth exceeds 6 inches, when the sediment interferes with the level sensor or when the basin does not drain within 48 hours. Care should be taken not to compromise the basin lining during maintenance

- ***Logic Controller***. The Logic Controller should be inspected as part of the twice yearly investigations. Verify that the external indicators (active, cycle in progress) are operating properly by turning the controller off and on, and by initiating a cycle by triggering the level sensor in the basin. The valve should be manually opened and closed using the open/close switch to verify valve operation and to assist in inspecting the valve for debris. The solar panel should be inspected and any dust or debris on the panel should be carefully removed. The controller and all other circuitry and wiring should be inspected for signs of corrosion, damage from insects, water leaks, or other damage. At the end of the inspection, the controller should be reset.

Signature of Responsible Party during Construction:

_____ 03/28/2024

Taylor Christensen **Date**
Cypress Creek Church

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: CHRIS ELIZONDO, E.I.T., S.I.T.

Date: 3-11-24

Signature of Customer/Agent:

Regulated Entity Name: CYPRESS CREEK CHURCH

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: _____

Temporary Best Management Practices (TBMPs)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

☒ N/A

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

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

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

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

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

Soil Stabilization Practices

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

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

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

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

Administrative Information

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

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

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

CYPRESS CREEK CHURCH
SPILL RESPONSE ACTIONS

The following measures are to be taken to contain any spill of hydrocarbons or hazardous substances:

General Measures

- To the extent that the work can be accomplished safely, spills of oil, petroleum products, and substances listed under 40 CFR parts 110,117, and 302, and sanitary and septic wastes should be contained and cleaned up immediately.
- Store hazardous materials and wastes in covered containers and protect from vandalism.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- Designate responsible individuals to oversee and enforce control measures.
- Spills should be covered and protected from storm water run-on during rainfall to the extent that it doesn't compromise cleanup activities.
- Do not bury or wash spills with water.
- Store and dispose of used clean up materials, contaminated materials, and recovered spill material that is no longer suitable for the intended purpose in conformance with the provisions in applicable BMPs.
- Do not allow water used for cleaning and decontamination to enter storm drains or watercourses. Collect and dispose of contaminated water in accordance with applicable regulations.
- Contain water overflow or minor water spillage and do not allow it to discharge into drainage facilities or watercourses.
- Keep waste storage areas clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored. Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.

Cleanup

- Clean up leaks and spills immediately.
- Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.
- Never hose down or bury dry material spills. Clean up as much of the material as possible and dispose of properly. See the waste management BMPs in this section for specific information.

Minor Spills

- Minor spills typically involve small quantities of oil, gasoline, paint, etc. which can be controlled by the first responder at the discovery of the spill.
- Use absorbent materials on small spills rather than hosing down or burying the spill.

- Absorbent materials should be promptly removed and disposed of properly.
- Follow the practice below for a minor spill:
- Contain the spread of the spill.
- Recover spilled materials.
- Clean the contaminated area and properly dispose of contaminated materials.

Semi-Significant Spills

- Semi-significant spills still can be controlled by the first responder along with the aid of other personnel such as laborers and the foreman, etc. This response may require the cessation of all other activities.
- Spills should be cleaned up immediately:
- Contain spread of the spill.
- Notify the project foreman immediately.
- If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
- If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
- If the spill occurs during rain, cover spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

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

Reportable Quantities

The RQ depends on the substance released and where released. Use this table to determine whether you must report and under what rule.

In Texas, upon determining that a reportable discharge or spill has occurred, the responsible person must notify the state. The threshold quantity that triggers the requirement to report a spill is called the reportable quantity (RQ). The reportable quantity depends on the type of substance released and where released (e.g. into water vs. on land); different kinds of spills are subject to different provisions of state and federal rules.

Kind of spill	Where discharged	Reportable quantity	Rule, statute, or responsible agency
Hazardous substance	onto land	"Final RQ" in Table 302.4 in 40 CFR 302.4 (PDF)	30 TAC 327
	into water	"Final RQ" or 100 lbs, whichever is **less**	
Any oil	coastal waters	as required by the Texas General Land Office	Texas General Land Office
Crude oil, oil that is neither a petroleum product nor used oil	onto land	210 gallons (five barrels)	30 TAC 327
	directly into water	enough to create a sheen	
Petroleum product, used oil	onto land, from an exempt PST facility	210 gallons (five barrels)	30 TAC 327
	onto land, or onto land from a non-exempt PST facility	25 gallons	
	directly into water	enough to create a sheen	
Associated with the exploration, development and production of oil, gas, or geothermal resources	under the jurisdiction of the Railroad Commission of Texas	as required by the Railroad Commission of Texas	Railroad Commission of Texas
Industrial solid waste or other substances	into water	100 lbs	30 TAC 327
From petroleum storage tanks, underground or aboveground	into water	enough to create a sheen on water	30 TAC 334.75-81
From petroleum storage tanks, underground or aboveground	onto land	25 gallons or equal to the RQ under 40 CFR 302	30 TAC 327
Other substances that may be useful or valuable and are not ordinarily considered to be waste, but will cause pollution if discharged into water in the state	into water	100 lbs	30 TAC 327

A. Any contaminated soils (resulting from spills of materials with hazardous properties) which may result from construction activities will be contained and cleaned up immediately in accordance with the procedures given in the Spill Prevention Control and Countermeasures (SPCC) Plan and in accordance with applicable state and federal regulations.

B. The job site superintendent will be responsible for seeing that these procedures are followed.

CYPRESS CREEK CHURCH
POTENTIAL SOURCES OF CONTAMINATION

Waste Disposal
All waste materials will be collected and stored in a securely lidded metal dumpster rented from a local waste management company which must be a solid waste management company licensed to do business in the State of Texas and Travis or Hays County. The dumpster will comply with all local and state solid waste management regulations.

All trash and construction debris from the site will be deposited in the dumpster. The dumpster will be emptied as required, and the trash will be hauled to a landfill approved by the State of Texas and Hays County. No construction waste materials will be buried on site. All personnel will be instructed regarding the correct procedures for waste disposal. Notices stating these practices will be posted in the job site construction office trailer, and the job site superintendent will be responsible for seeing that these procedures are followed.

Sanitary Waste
All sanitary waste will be collected from the portable units by a licensed portable facility provider in complete compliance with local and state regulations.

Off-Site Vehicle Tracking
A stabilized construction exit will be provided to help reduce vehicle tracking of sediments. The paved street adjacent to the site entrance will be inspected daily and swept as necessary to remove any excess mud, dirt, or rock tracked from the site. Dump trucks hauling material from the construction site will be covered with a tarpaulin. The job site superintendent will be responsible for seeing that these procedures are followed.

Concrete Waste From Concrete Trucks
A. Emptying of excess concrete and/or washout from concrete delivery trucks will be allowed on the job site, but only in either specifically designated diked areas which have been prepared to prevent contact between the concrete and/or washout and stormwater which will be discharged from the site or in locations where waste concrete can be poured into forms to make riprap or other useful concrete products.
B. The hardened residue from the concrete washout diked areas will be disposed of in accordance with the procedures given in the Spill Prevention Control and Countermeasures (SPCC) Plan and in accordance with applicable state and federal regulations. The job site superintendent will be responsible for seeing that these procedures are followed.

Hazardous Substances and Hazardous Waste
A. All hazardous waste materials will be disposed of in the manner specified by local, state, and/or federal regulations and by the manufacturer of such products. Site personnel will be instructed in these practices by the job site superintendent, who

will also be responsible for seeing that these practices are followed. Material Safety Data Sheets (MSDS's) for each substance with hazardous properties that is used on the job site will be obtained and used for the proper management of potential wastes that may result from these products. An MSDS will be posted in the immediate area where such product is stored and/or used and another copy of each MSDS will be maintained in the SWPPP file at the job site construction trailer office. Each employee who must handle a substance with hazardous properties will be instructed on the use of MSDS sheets and the specific information in the applicable MSDS for the product he/she is using, particularly regarding spill control techniques.

B. The contractor will implement the Spill Prevention Control and Countermeasures (SPCC) Plan found within this SWPPP and will train all personnel in the proper cleanup and handling of spilled materials. No spilled hazardous materials or hazardous wastes will be allowed to come in contact with stormwater discharges. If such contact occurs, the stormwater discharge will be contained on site until appropriate measures in compliance with state and federal regulations are taken to dispose of such contaminated stormwater. It shall be the responsibility of the job site superintendent to properly train all personnel in the use of the SPCC plan.

C. Any spills of hazardous materials which are in quantities in excess of Reportable Quantities as defined by EPA regulations shall be immediately reported to the EPA National Response Center 1-800-424-8802.

D. In order to minimize the potential for a spill of hazardous materials to come into contact with stormwater, the following steps will be implemented:
    1. All materials with hazardous properties (such as pesticides, petroleum products, fertilizers, detergents, construction chemicals, acids, paints, paint solvents, cleaning solvents, additives for soil stabilization, concrete curing compounds and additives, etc.) will be stored in a secure location, under cover, when not in use.
    2. The minimum practical quantity of all such materials will be kept on the job site.
    3. A spill control and containment kit (containing, for example, absorbent such as kitty litter or sawdust, acid neutralizing powder, brooms, dust pans, mops, rags, gloves, goggles plastic and metal trash containers, etc.) will be provided at the storage site.
    4. All of the product in a container will be used before the container is disposed of. All such containers will be triple-rinsed with water prior to disposal. The rinse water used in these containers will be disposed of in a manner in compliance with state and federal regulations and will not be allowed to mix with stormwater discharges.
    5. All products will be stored in and used from the original container with the original product label.
    6. All products will be used in strict compliance with instructions on the product label.
    7. The disposal of excess or used products will be in strict compliance with instructions on the product label.

CYPRESS CREEK CHURCH
SEQUENCE OF MAJOR EVENTS

No clearing or rough grading may be done until the approved erosion and sedimentation controls are in place.

1. Install temporary erosion and sedimentation controls and stabilized construction entrance, if required in approved plans.
    a. 6.42 ac.
2. Hold pre-construction conference.
3. Rough grade site.
    a. 4.91 ac.
4. Install all utilities.
    a. 4.91 ac.
5. Re-grade and compact subgrade.
    a. 4.91 ac.
6. Ensure all undergoing utility crossings are in place including sleeves for dry utilities and install first course base.
    a. 4.91 ac.
7. Install curbs, rip-rap, and miscellaneous concrete.
    a. 4.91 ac.
8. Install second course of base.
    a. 1.63 ac.
9. Lay asphalt.
    a. 1.45 ac.
10. Finish ponds
    a. 0.68 ac.
11. Final grade site.
    a. 4.91 ac.
12. Re-vegetate all disturbed area. Dispose of spoil in an approved manner.
    a. 4.39 ac.
13. Schedule a final inspection with County.
14. After acceptance of construction ad revegetation, temporary erosion controls shall be removed.
    a. 6.42 ac

CYPRESS CREEK CHURCH
TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

Stabilization Practices

Stabilization practices for this site include:

A. Land clearing activities shall be done only in areas where earthwork will be performed and shall progress as earthwork is needed
B. Frequent watering of excavation and fill areas to minimize wind erosion during construction.
C. Use of stabilization fabric for all slopes having a slope of 1V:3H or greater.
D. Permanent seeding and planting of all unpaved areas using the planting of grass seed, grass sod, or shrubs.

Structural Practices

Structural practices for this site include:

A. Inlet protection silt fences and outlet protection using rock berms
B. Intermittent silt fence along low side of Blocks
C. Natural waterway protection with silt fence and rock berms
D. Stabilized construction exit points

Sequence of Major Activities

The Contractor will be responsible for implementing the following erosion control and stormwater management control structures. The Contractor may designate these tasks to certain subcontractors and the builders of individual homes as he sees fit, but the ultimate responsibility for implementing these controls and ensuring their proper functioning remains with the Contractor. The order of activities will be as follows (refer to Stormwater Pollution Prevention Plan Sheet contained in this SWPPP for details):

A. Construct temporary construction exits at locations shown on the SWPPP plan sheet.
B. Install silt fences and rock berms in the locations shown on the SWPPP plan sheet.
C. Begin clearing, grubbing, and topsoil removal operations. Clearing and grubbing shall be done only in areas where earthwork will be performed and only in areas where construction is planned to commence within 14 days after clearing and grubbing.
D. Frequent watering of the excavation and fill areas shall be done to minimize wind erosion.
E. Install storm sewer piping and drainage structures.
F. Install protective silt fences at the locations of all grate inlets, curb inlets and at the ends of all exposed storm sewer pipes.

G. Begin site grading operations and road subgrade preparation.
H. Finalize pavement subgrade preparation, install base material. Construct all grate inlets, curb inlets, headwalls and sloped end treatments. Inlet protection silt fences may be removed temporarily for this construction.
I. Install all underground utility lines.
J. Install base material as required for pavement.
K. Carry out final grading and seeding and revegetation.
L. Remove silt fencing only after all paving is complete and exposed surfaces are stabilized.
M. Remove temporary construction exits only prior to pavement construction in these areas (These areas are to be paved last).
N. Install final pavement as shown on the plans.

CYPRESS CREEK CHURCH
REQUEST TO TEMPORARILY SEAL A FEATURE

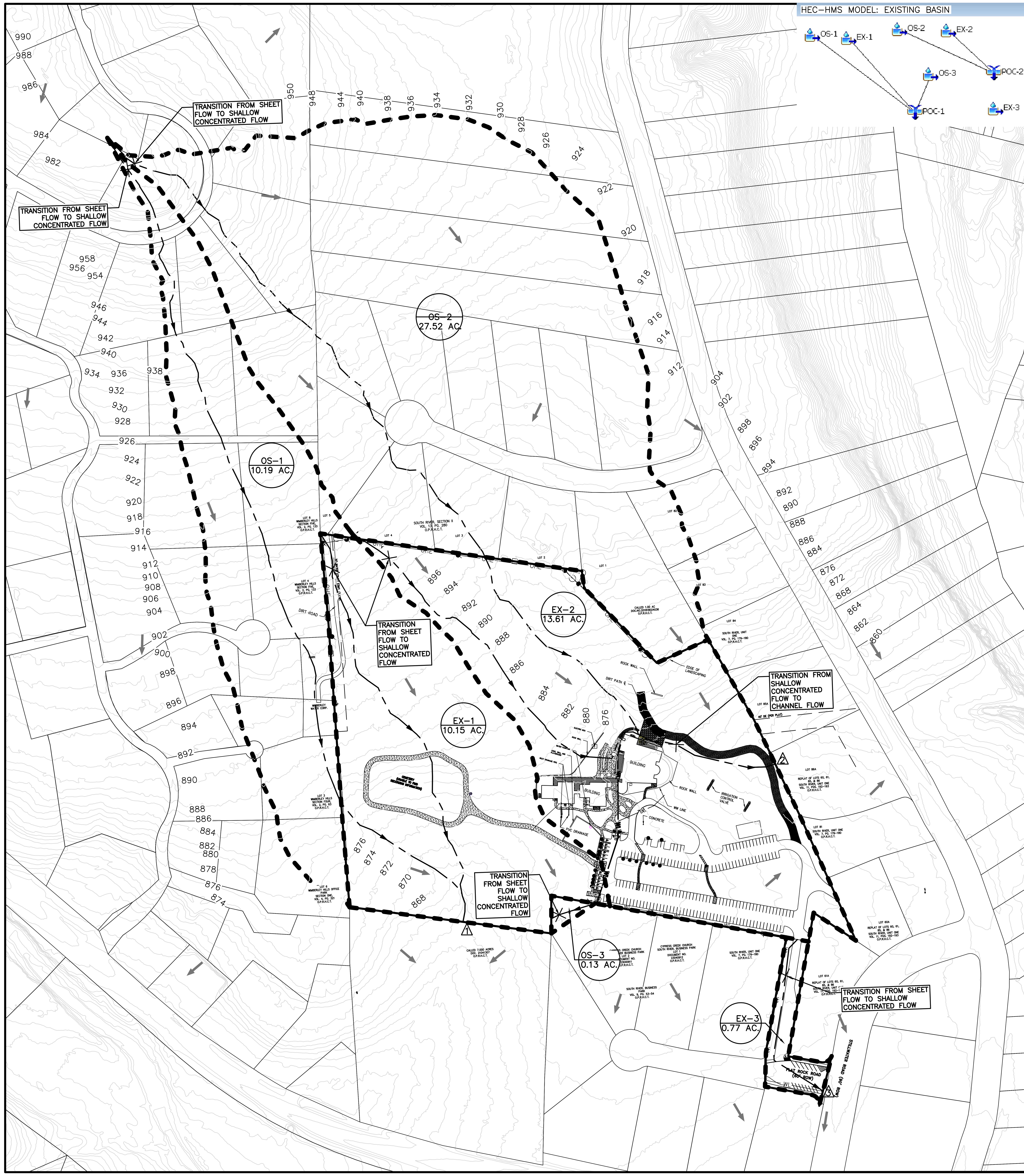
Not Applicable

CYPRESS CREEK CHURCH
STRUCTURAL PRACTICES

Structural practices for this site include:

A. Inlet protection, silt fences, and outlet protection using rock berms.
B. Natural waterway protection with silt fence and rock berms.
   Stabilized construction exit points.

A. CYPRESS CREEK CHURCH
DRAINAGE AREA MAP



LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BOUNDARY LINE
		EASEMENT BOUNDARY
915	915	CONTOURS
		LOT LINE
		CENTER LINE OF DITCH
WL	WL	WATER LINE
		WATER VALVE
		FIRE HYDRANT
		WATER METER
F.V.	F.V.	FLUSH VALVE
		AIR RELEASE VALVE
		WASTEWATER LINE
		FORCE MAIN
		MANHOLE
C.O.	C.O.	WASTEWATER CLEANOUT
		WASTEWATER SERVICE
OHE	OHE	OVERHEAD ELECTRIC
UE	UE	UNDERGROUND ELECTRIC
		TRANSFORMER BOX
L.P.	L.P.	LIGHT POLE
		POWER POLE
		GUY WIRE
		STORM SEWER
		CMP/ RCP PIPES
TEL	TEL	OVER HEAD TELEPHONE
FOC	FOC	FIBER OPTIC CABLE
GAS	GAS	GAS LINE
		PAVEMENT (HMAC)
		CONCRETE
		CHAIN LINK FENCE
		WOOD FENCE
		BARBED WIRE FENCE
		DRAINAGE BOUNDARY
		TIME OF CONCENTRATION
		DRAINAGE FLOW DIRECTION
		PROPOSED DRAINAGE EASEMENT
EX-1 XX.XX AC.	DA-1 XX.XX AC.	DRAINAGE AREA
1	1	POINT OF CONCENTRATION

EXISTING DRAINAGE CALCULATIONS

Time of Concentration (TR-55 method) & Run-off Values (SCS Method)

Subbasin		OS-1	OS-2	OS-3	EX-1	EX-2	EX-3
Area	sf	443,876	1,198,771	5,663	442,134	592,852	33,541
	ac	10.19	27.52	0.13	10.15	13.61	0.77
	sq mi	0.01592	0.04300	0.00020	0.01586	0.02127	0.00120
Impervious	sf	88,775	212,542	0	23,205	123,249	21,275
Impervious	%	20.00%	17.73%	0.00%	5.41%	20.79%	63.43%
Pervious	Cn	77	77	77	77	77	77
Composite	Cn	81	81	77	78	81	90
Retention	in	2.32	2.39	2.99	2.80	2.29	1.07
Initial Abstraction	in	0.463	0.478	0.597	0.560	0.458	0.214
Sheet Flow							
Slope	ft/ft	0.018	0.018	0.015	0.052	0.052	0.015
Length	ft.	100.00	100.00	100.00	100.00	100.00	32.03
Roughness	n	0.27	0.27	0.27	0.27	0.27	0.27
P2 (Atlas-14)	in.	4.18	4.18	4.18	4.18	4.18	4.18
Time	min.	14.26	14.26	15.39	9.36	9.36	6.19
Shallow Concentrated							
Slope	ft/ft	0.052	0.048	0.018	0.040	0.034	0.011
Length	ft.	2308.61	2513.42	22.75	1056.47	1060.10	458.44
Paved?	p/u	u	u	u	u	u	u
Time	min.	10.49	11.81	0.18	5.47	5.90	4.52
Channel Flow							
Slope	ft/ft	0.000	0.000	0.000	0.000	0.015	0.000
Hydraulic Radius	ft.	0.0000	0.0000	0.0000	0.0000	0.9850	0.0000
Roughness	n	0.000	0.000	0.000	0.000	0.035	0.000
Velocity	fps	0.00	0.00	0.00	0.00	5.20	0.00
Length	ft.	0.00	0.00	0.00	0.00	276.02	0.00
Time	min.	0.00	0.00	0.00	0.00	0.89	0.00
Summary							
Tc	min.	24.75	26.07	15.57	14.83	16.15	10.71
Lag Time	min.	14.85	15.64	9.34	8.90	9.69	6.42
Run-off Values							
2 Year	cfs	16.56	43.43	0.20	17.28	25.18	2.03
10 Year	cfs	33.56	88.10	0.45	37.51	51.40	3.59
25 Year	cfs	47.12	123.57	0.66	53.66	72.28	4.81
100 Year	cfs	73.63	193.10	1.05	85.19	113.09	7.19

Notes:

1: Atlas 14 precipitation values are used to determine storm water runoff

2: Pervious C value is chosen based off "Woods" with a Soil Type D in good condition from the City of Austin Drainage Criteria Manual

3: Roughness N-value is based on 50% woods and 50% range

POINT OF ANALYSIS SUMMARY TABLE

Run-off Values	POC-1	POC-2	POC-3
2 Year	33.01	67.32	2.03
10 Year	68.56	136.69	3.59
25 Year	96.82	191.89	4.81
100 Year	151.92	299.77	7.19

ALL UNITS ARE IN CFS

REFERENCE NOTES:

1. FOR MASTER DRAINAGE PLANS SEE SHEET 9.
2. FOR POND 1 AND 2 LAYOUT AND CALCULATIONS, SEE SHEETS 14–17.

REVISION	DESCRIPTION	BY:	DATE:

STATE OF TEXAS
HUGO ELIZONDO, JR.
69781
LICENSED
PROFESSIONAL ENGINEER
2/28/24

CUATRO Consultants, LTD.
Registration No. F-3524
120 Riverwalk Drive, Ste. 208 Phone: (512) 312-5040
San Marcos, Texas 78666 e-mail: cuatro@cuatroconsultants.com

EXISTING DRAINAGE CONDITIONS

CYPRES CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE: JANUARY 2024

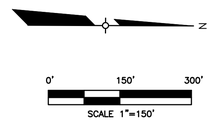
PROJECT: 24–010

DRAWING'S NAME: 8_CCC_EXISTING DRAINAGE CONDITIONS

DESIGN: AWE | CHECKED: CDE

DRAWN: AWE | APPROVED: HE Jr.

SHEET: 8 OF 25



LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BOUNDARY LINE
		EASEMENT BOUNDARY
915	915	CONTOURS
		LOT LINE
		CENTER LINE OF DITCH
WL	WL	WATER LINE
		WATER VALVE
		FIRE HYDRANT
F.V.	F.V.	WATER METER
		FLUSH VALVE
		AIR RELEASE VALVE
		WASTEWATER LINE
		FORCE MAIN
C.O.	C.O.	MANHOLE
		WASTEWATER CLEANOUT
		WASTEWATER SERVICE
OHE	OHE	OVERHEAD ELECTRIC
UE	UE	UNDERGROUND ELECTRIC
		TRANSFORMER BOX
L.P.	L.P.	LIGHT POLE
		POWER POLE
		GUY WIRE
		STORM SEWER
		CMP/ RCP PIPES
TEL	TEL	OVER HEAD TELEPHONE
FOC	FOC	FIBER OPTIC CABLE
GAS	GAS	GAS LINE
		PAVEMENT (HMAC)
		CONCRETE
		CHAIN LINK FENCE
		WOOD FENCE
		BARBED WIRE FENCE
		DRAINAGE BOUNDARY
		TIME OF CONCENTRATION
		DRAINAGE FLOW DIRECTION
		PROPOSED DRAINAGE EASEMENT
DA-1 XXXX AC.	DA-1 XXXX AC.	DRAINAGE AREA
		POINT OF CONCENTRATION

PROPOSED DRAINAGE CALCULATIONS

Time of Concentration (TR-55 method) & Run-off Values (SCS Method)

Subbasin		OS-1	OS-2	OS-3	OS-4	DA-1	DA-2	DA-3	DA-4	DA-5
Area	sf	157,687	1,198,771	5,663	286,189	232,610	592,852	33,541	37,026	172,498
	ac	3.62	27.52	0.13	6.57	5.34	13.61	0.77	0.85	3.96
	sq mi	0.00566	0.04300	0.00020	0.01027	0.00834	0.02127	0.00120	0.00133	0.00619
Impervious	sf	31,537	212,542	0	57,238	13,124	123,249	21,275	0	83,240
Impervious	%	20.00%	17.73%	0.00%	20.00%	5.64%	20.79%	63.43%	0.00%	48.26%
Pervious	Cn	77	77	77	77	77	77	77	77	77
Composite	Cn	81	81	77	81	78	81	90	77	87
Retention	in	2.32	2.39	2.99	2.32	2.79	2.29	1.07	2.99	1.48
Initial Abstraction	in	0.463	0.478	0.597	0.463	0.558	0.458	0.214	0.597	0.295
Sheet Flow										
Slope	ft/ft	0.018	0.018	0.015	0.018	0.052	0.052	0.015	0.065	0.019
Length	ft.	100.00	100.00	100.00	100.00	100.00	100.00	32.03	100.00	100.00
Roughness	n	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
P2 (Atlas-14)	in.	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18
Time	min.	14.26	14.26	15.16	14.26	9.36	9.36	6.19	8.56	14.00
Shallow Concentrated										
Slope	ft/ft	0.055	0.048	0.018	0.051	0.039	0.030	0.011	0.030	0.036
Length	ft.	1988.74	2513.42	22.75	2201.22	849.27	1336.12	458.44	334.32	533.66
Paved?	p/u	u	u	u	u	u	u	u	u	p
Time	min.	8.80	11.81	0.18	10.04	4.42	7.98	4.52	2.01	2.32
Channel Flow										
Slope	ft/ft	0.030	0.000	0.000	0.000	0.017	0.000	0.000	0.000	0.000
Hydraulic Radius	ft.	0.6250	0.0000	0.0000	0.0000	0.6250	0.0000	0.0000	0.0000	0.0000
Roughness	n	0.013	0.000	0.000	0.000	0.013	0.000	0.000	0.000	0.000
Velocity	fps	8.42	0.00	0.00	0.00	8.42	0.00	0.00	0.00	0.00
Length	ft.	371.63	0.00	0.00	0.00	248.56	0.00	0.00	0.00	0.00
Time	min.	0.74	0.00	0.00	0.00	0.49	0.00	0.00	0.00	0.00
Summary										
Tc	min.	23.79	26.07	15.34	24.30	14.27	17.34	10.71	10.57	16.32
Lag Time	min.	14.28	15.64	9.21	14.58	8.56	10.41	6.42	6.34	9.79
Run-off Values										
2 Year	cfs	6.00	43.43	0.20	10.78	9.23	24.84	2.03	1.47	8.99
10 Year	cfs	12.15	88.10	0.46	21.84	19.98	50.24	3.59	3.24	16.54
25 Year	cfs	17.05	123.57	0.66	30.65	28.56	70.48	4.81	4.64	22.49
100 Year	cfs	26.62	193.10	1.05	47.89	45.29	110.06	7.19	7.38	34.11

Notes:
1: Atlas 14 precipitation values are used to determine storm water runoff
2: Pervious C value is chosen based off "Woods" with a Soil Type D in good condition from the City of Austin Drainage Criteria Manual
3: Roughness N-value is based on 50% woods and 50% range

Run-off Values	POINT OF ANALYSIS SUMMARY TABLE					
	EXISTING			PROPOSED		
	POC-1	POC-2	POC-3	POC-1	POC-2	POC-3
2 Year	33.01	67.32	2.03	32.78	65.74	2.03
10 Year	68.56	136.69	3.59	66.85	133.80	3.59
25 Year	96.82	191.89	4.81	94.99	186.79	4.81
100 Year	151.92	299.77	7.19	151.24	292.01	7.19

REFERENCE NOTES:

1. FOR EXISTING DRAINAGE PLANS SEE SHEET 8.
2. FOR POND 1 AND 2 LAYOUT AND CALCULATIONS, SEE SHEETS 14–17.

DATE:	BY:	DESCRIPTION	REVISION

STATE OF TEXAS · HUGO ELIZONDO, JR. · 69781 · LICENSED PROFESSIONAL ENGINEER

ECUATRO Consultants, LTD.
Registration No: F-3524
120 Rowmark Drive, Ste. 208 Phone: (512) 312-5450
San Marcos, Texas 78666 e-mail: ecuatroconsultants.com

MASTER DRAINAGE PLAN

CYPRES CREEK CHURCH
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

CLIENT:
CYPRESS CREEK CHURCH, INC.
211 STILLWATER ROAD
WIMBERLY, TEXAS 78676

DATE:	JANUARY 2024
PROJECT:	24–010
DRAWING'S NAME:	9_CCC_MASTER DRAINAGE PLAN
DESIGN: AWE	CHECKED: CDE
DRAWN: AWE	APPROVED: HE Jr.
SHEET:	9 OF 25

CYPRESS CREEK CHURCH
INSPECTION AND MAINTENANCE FOR BMP's

Erosion and Sediment Control Maintenance and Inspection Practices

A. The following is a list of erosion and sediment controls to be used on this site during construction practice:
   1. Stabilization practices for this site include:

      Land clearing activities shall be done only in areas where earthwork will be performed and shall progress, as earthwork is needed.

      Frequent watering of excavation and fill areas to minimize wind erosion during construction.
      - Dust Control
        - When dust is evident during dry weather, reapply dust control BMPs.

      Use of stabilization fabric for all slopes having a slope of 1V:3H or greater.
      - Slope Protection
        - Blankets and matting should be inspected weekly and after each rain event to locate and repair any damage. Apply new material if necessary to restore function.

      Permanent seeding and planting of all unpaved areas using the hydro-mulching grass seeding technique.
      - Seeding as Erosion Control
        - Blankets and matting should be inspected weekly and after each rain event to locate and repair any damage. Apply new material if necessary to restore function.

   2. Structural practices for this site include:

      Natural Waterway Protection using silt fences and Rock Berms.
      - Silt Fence
        - Inspect all fencing weekly, and after any rainfall.
        - Remove sediment when buildup reaches 6 inches.
        - Replace any torn fabric or install a second line of fencing parallel to the torn section.
        - Replace or repair any sections crushed or collapsed in the course of construction activity. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection, but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicle access points.
        - When construction is complete, the sediment should be disposed of in a manner that will not cause additional siltation and the prior

location of the silt fence should be revegetated. The fence itself should be disposed of in an approved landfill.

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

Inlet protection using silt fences and outlet protection using rock berms

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

Silt fence protection for graded bar ditch sections

Stabilized construction exit points

- Temporary Construction Entrance/Exit
  - The entrance should be maintained in a condition, which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment.
  - All sediment spilled, dropped, washed or tracked onto public rights-of-way should be removed immediately by contractor.
  - When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-of-way.

- When washing is required, it should be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.
- All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.

Concrete Washout Area

B. The following inspection and maintenance practices will be used to maintain erosion and sediment controls:

1. All control measures will be inspected at least once each week and following any storm event of 0.5 inches.

2. All measures will be maintained in good working order; if repairs are found to be necessary they will be initiated within 24 hours of report.

3. Built up sediment will be removed from silt fence when it has reached one-third the height of the fence.

4. Silt fences will be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are securely in the ground.

5. Built up sediment will be removed from rock berms when it has reached one-third the height of the berm.

6. Temporary and permanent seeding will be inspected for bare spots, washouts, and healthy growth.

7. A maintenance inspection report will be made after each inspection. Copies of the report forms to be completed by the inspector are included in this SWPPP.

8. The job site superintendent will be responsible for selecting and training the individuals who will be responsible for these inspections, maintenance and repair activities, and filling out inspection and maintenance reports.

9. Personnel selected for the inspection and maintenance responsibilities will receive training from the job site superintendent. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls that are used onsite in good working order. They will also be trained in the completion of, initiation of actions required by, and the filing of the inspection forms. Certification of the training of inspectors shall be provided, in writing, to the Owner and the Engineer by the Contractor.

Inspection and Maintenance Report Forms

Once installation of any required or optional erosion control device or measure has been implemented, weekly inspections of each measure shall be performed by the Contractor's inspection personnel. The Inspection and Maintenance Reports found in this SWPPP (or other forms which the Contractor desires to use that have been approved by the Engineer) shall be used by the inspectors to inventory and report the condition of each measure to assist in maintaining the erosion and sediment control measures in good working order.

These report forms shall become an integral part of the SWPPP and shall be made readily accessible to EPA inspection officials, the Civil Engineering Consultant, and the Owner for review upon request during visits to the project site. In addition, copies of the reports shall be provided to any of these persons, upon request, via mail or facsimile transmission.

The Contractor shall notify the Owner and the Engineer in writing that training of inspectors for purposes of compliance with this SWPPP has been performed.

The following forms shall be utilized by inspectors to report on the incremental status and condition of the control measures used on the site:

STORMWATER POLLUTION PREVENTION PLAN
SUMMARY OF EROSION AND SEDIMENT CONTROL MAINTENANCE/INSPECTION PROCEDURES

- All control measures will be inspected at least once each week and following any storm event of 0.5 inches or greater.
- All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of report.
- Built-up sediment will be removed from silt fences and rock berms when it has reached one-third the height of the device.
- Silt fences will be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.
- Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and healthy growth.
- A maintenance inspection report will be made after each inspection. A copy of the report forms to be used are included in this SWPPP.
- The job site superintendent will select the individuals who will be responsible for inspections, maintenance and repair activities, and filling out the inspection and maintenance reports.
- Personnel selected for inspection and maintenance responsibilities will receive training from the job site superintendent. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order.

STORMWATER POLLUTION PREVENTION PLAN CONSTRUCTION/IMPLEMENTATION CHECKLIST

1. **Maintain Records of Construction Activities, including:**

   - Dates when major grading activities occur
   - Dates when construction activities temporarily cease on a portion of the site
   - Dates when construction activities permanently cease on a portion of the site
   - Dates when stabilization measures are initiated on the site

2. **Prepare Inspection Reports summarizing:**

   - Name of inspector
   - Qualifications of inspector
   - Measures/areas inspected
   - Observed conditions
   - Changes necessary to the SWPPP

3. **Report Releases of Reportable Quantities of Oil or Hazardous Materials (if they occur):**

   - Notify National Response Center (1-800-424-8802) immediately
   - Notify permitting authority in writing within 14 days
   - Modify the pollution prevention plan to include:
     - the date of release
     - circumstances leading to the release
     - steps taken to prevent reoccurrence of the release

4. **Modify Pollution Prevention Plan as necessary to:**

   - Comply with the minimum permit requirements when notified by EPA that the plan does not comply
   - Address a change in design, construction operation, or maintenance which has an effect on the potential for discharge of pollutants
   - Prevent reoccurrence of reportable quantity releases of a hazardous material or oil

FINAL STABILIZATION/TERMINATION CHECKLIST

1. All soil disturbing activities are complete.
2. Temporary erosion and sediment control measures have been removed or will be removed at an appropriate time.
3. All areas of the construction site not otherwise covered by a permanent pavement or structure have been stabilized with a uniform perennial vegetative cover with a density of 70% or equivalent measures have been employed.

STORMWATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM

STABILIZATION MEASURES

INSPECTOR:_____
DATE:_____

QUALIFICATIONS OF INSPECTOR:_____

_____

DAYS SINCE LAST RAINFALL: _____ AMOUNT OF LAST RAINFALL:_____

AREA	DATE SINCE LAST RAINFALL	DATE OF NEXT DISTURBANCE	STABILIZED (YES/NO)	STABILIZED WITH	CONDITION

STABILIZATION REQUIRED:_____
_____

TO BE PERFORMED BY:_____ ON OR BEFORE:_____

STORMWATER POLLUTION PREVENTION PLAN
INSPECTION AND MAINTENANCE REPORT FORM

SILT FENCE

INSPECTOR: _____ DATE: _____

QUALIFICATIONS OF INSPECTOR:_____

_____

DAYS SINCE LAST RAINFALL: _____ AMOUNT OF LAST RAINFALL:_____

IS THE BOTTOM OF THE FABRIC STILL BURIED?_____

IS THE FABRIC TORN OR SAGGING?_____

ARE THE POSTS TIPPED OVER?_____

HOW DEEP IS THE SEDIMENT?_____

MAINTENANCE REQUIRED FOR SILT FENCE:_____

TO BE PERFORMED BY:_____

ON OR BEFORE:_____

CYPRESS CREEK CHURCH
SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

The Contractor will be responsible for implementing the following erosion control and stormwater management control structures. The Contractor may designate these tasks to certain subcontractors and the builders of individual homes as he sees fit, but the ultimate responsibility for implementing these controls and ensuring their proper functioning remains with the Contractor. The order of activities will be as follows (refer to Stormwater Pollution Prevention Plan Sheet contained in this SWPPP for details):

Note: Bare Soil should be seeded or otherwise stabilized within 14 calendar days after final grading or where construction activity has temporarily ceased for more than 21 days.

A. Construct temporary construction exits at locations shown on the SWPPP plan sheet.
B. Install silt fences and rock berms in the locations shown on the SWPPP plan sheet.
C. Begin clearing, grubbing, and topsoil removal operations. Clearing and grubbing shall be done only in areas where earthwork will be performed and only in areas where homesteads are planned to commence within 14 days after clearing and grubbing.
D. Frequent watering of the excavation and fill areas shall be done to minimize wind erosion.
E. Install storm sewer piping and drainage structures.
F. Install protective silt fences at the locations of all grate inlets, curb inlets and at the ends of all exposed storm sewer pipes.
G. Begin site grading operations and road subgrade preparation.
H. Finalize pavement subgrade preparation, install base material. Construct all grate inlets, curb inlets, headwalls and sloped end treatments. Inlet protection silt fences may be removed temporarily for this construction.
I. Install all underground utility lines.
J. Install base material as required for pavement.
K. Carry out final grading and seeding and revegetation.
L. Remove silt fencing only after all paving is complete and exposed surfaces are stabilized.
M. Remove temporary construction exits only prior to pavement construction in these areas (These areas are to be paved last).
N. Install final pavement as shown on the plans.

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

I TAYLOR CHRISTENSEN,
Print Name

EXECUTIVE PASTOR,
Title - Owner/President/Other

of CYPRESS CREEK CHURCH,
Corporation/Partnership/Entity Name

have authorized CHRIS ELIZONDO, E.I.T., S.I.T.
Print Name of Agent/Engineer

of CUATRO CONSULTANTS, LTD
Print Name of Firm

to represent and act on the behalf of the above named Corporation, Partnership, or Entity for the purpose of preparing and submitting this plan application to the Texas Commission on Environmental Quality (TCEQ) for the review and approval consideration of regulated activities.

I also understand that:

1. The applicant is responsible for compliance with 30 Texas Administrative Code Chapter 213 and any condition of the TCEQ's approval letter. The TCEQ is authorized to assess administrative penalties of up to $10,000 per day per violation.

2. For those submitting an application who are not the property owner, but who have the right to control and possess the property, additional authorization is required from the owner.

3. Application fees are due and payable at the time the application is submitted. The application fee must be sent to the TCEQ cashier or to the appropriate regional office. The application will not be considered until the correct fee is received by the commission.

4. A notarized copy of the Agent Authorization Form must be provided for the person preparing the application, and this form must accompany the completed application.

5. No person shall commence any regulated activity on the Edwards Aquifer Recharge Zone, Contributing Zone or Transition Zone until the appropriate application for the activity has been filed with and approved by the Executive Director.

SIGNATURE PAGE:

Applicant's Signature

03/12/2024
Date

THE STATE OF TEXAS §

County of HAYS §

BEFORE ME, the undersigned authority, on this day personally appeared TAYLOR CHRISTENSEN known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that (s)he executed same for the purpose and consideration therein expressed.

GIVEN under my hand and seal of office on this 13th day of March, 2024.

NOTARY PUBLIC

MUSHEERAH MURPHY

Typed or Printed Name of Notary

MY COMMISSION EXPIRES: November 10, 2026

MUSHEERAH MURPHY
Notary Public, State of Texas
Comm. Expires 11-10-2026
Notary ID 125910317

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: _____
Regulated Entity Location: 203 STILLWATER ROAD, WIMBERLEY, TX 78676
Name of Customer: CYPRESS CREEK CHURCH
Contact Person: TAYLOR CHRISTENSEN Phone: 512-847-1222
Customer Reference Number (if issued):CN _____
Regulated Entity Reference Number (if issued):RN _____
Austin Regional Office (3373)

☒ Hays ☐ Travis ☐ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

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

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

Site Location (Check All That Apply):

☐ Recharge Zone ☒ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	24.54 Acres	$ 6,500
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: _____ Date: 03/12/2024

Application Fee Schedule

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

TCEQ Use Only

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 the renewal form)* ☐ Other

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

SECTION II: Customer Information

4. General Customer Information | **5. Effective Date for Customer Information Updates** (mm/dd/yyyy)

☒ New Customer ☐ Update to Customer Information ☐ Change in Regulated Entity Ownership
☐ Change in Legal Name (Verifiable with the Texas Secretary of State or Texas Comptroller of Public Accounts)

The Customer Name submitted here may be updated automatically based on what is current and active with the Texas Secretary of State (SOS) or Texas Comptroller of Public Accounts (CPA).

6. Customer Legal Name *(If an individual, print last name first: eg: Doe, John)* *If new Customer, enter previous Customer below:*

CYPRESS CREEK CHURCH

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
0129878801	30117053865	74-2644686	

11. Type of Customer: ☒ Corporation ☐ Individual Partnership: ☐ General ☐ Limited
Government: ☐ City ☐ County ☐ Federal ☐ Local ☐ State ☐ Other ☐ Sole Proprietorship ☐ Other:

12. Number of Employees
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher

13. Independently Owned and Operated?
☐ **Yes** ☐ **No**

14. Customer Role (Proposed or Actual) – *as it relates to the Regulated Entity listed on this form. Please check one of the following*

☐ Owner ☐ Operator ☒ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ VCP/BSA Applicant ☐ Other:

15. Mailing Address:	PO BOX 1357							
	City	WIMBERLEY	**State**	TX	**ZIP**	78676	**ZIP + 4**	

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

18. Telephone Number	**19. Extension or Code**	**20. Fax Number** *(if applicable)*

(512) 847-1222		( ) -

SECTION III: Regulated Entity Information

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

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

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

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

CYPRESS CREEK CHURCH

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	211 STILLWATER							
	City	WIMBERLEY	**State**	TX	**ZIP**	78676	**ZIP + 4**	
24. County								

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

25. Description to Physical Location:					
26. Nearest City			**State**		**Nearest ZIP Code**

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

27. Latitude (N) In Decimal:	29.98803333		**28. Longitude (W) In Decimal:**	- 98.091797222	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	59	16.92	98	05	30.47

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
8661		813110	

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

CHURCH

34. Mailing Address:	**PO BOX 1357**							
	City	**WIMBERLEY**	**State**	**TX**	**ZIP**	**78676**	**ZIP + 4**	
35. E-Mail Address:	**info@cypresscreekchurch.com**							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(512) 847-1222		( ) -

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

☐ Dam Safety	☐ Districts	☒ Edwards Aquifer	☐ Emissions Inventory Air	☐ Industrial Hazardous Waste
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

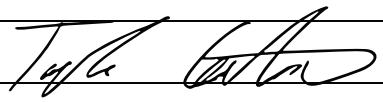
SECTION IV: Preparer Information

40. Name:	HUGO ELIZONDO, JR., P.E., C.F.M.	**41. Title:**	ENGINEER

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512 **)** 565-9040		**( )** -	hugo@cuatroconsultats.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:	CYPRESS CREEK CHURCH.	**Job Title:**	EXECUTIVE PASTOR
Name *(In Print):*	TAYLOR CHRISTENSEN.	**Phone:**	**(** 512 **)** 847- **1222**
Signature:		**Date:**	03/12/2024