CONTRIBUTING ZONE
PLAN MODIFICATION
FOR
CISD CANYON LAKE HIGH SCHOOL

PREPARED FOR:

COMAL ISD
Comal Independent School District

DATE: FEBRUARY 2025

PREPARED BY:

MTR
• Engineers
• Surveyors
• Planners

Moy Tarin Ramirez Engineers, LLC
12770 Cimarron Path, Ste 100 San Antonio, TX 78249
TBPE Firm #5297, TBPLS Firm #10131500
Phone 210-698-5051 – Fax 210-698-5085

CANYON LAKE HIGH SCHOOL
CONTRIBUTING ZONE PLAN MODIFICATION

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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 if not withdrawn the application will be denied and 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 to you:

- You can withdraw your application, and your fees will be refunded or credited for a resubmittal.
- 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 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 effected 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: Canyon Lake High School					**2. Regulated Entity No.: 104421649**			
3. Customer Name: Comal ISD					**4. Customer No.: 600249825**			
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):**			88.0 acres
9. Application Fee:	$8,000	**10. Permanent BMP(s):**			VFS, SFB, EDB, JellyFish Filter			
11. SCS (Linear Ft.):	N/A	**12. AST/UST (No. Tanks):**			N/A			
13. County:	Comal	**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.)	___	___	___
Region (1 req.)	___	___	___
County(ies)	___	___	___
Groundwater Conservation District(s)	___Edwards Aquifer Authority ___Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	___Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs ___Kyle ___Mountain City ___San Marcos ___Wimberley ___Woodcreek	___Austin ___Bee Cave ___Pflugerville ___Rollingwood ___Round Rock ___Sunset Valley ___West Lake Hills	___Austin ___Cedar Park ___Florence ___Georgetown ___Jerrell ___Leander ___Liberty Hill ___Pflugerville ___Round Rock

San Antonio Region					
County:	**Bexar**	**Comal**	**Kinney**	**Medina**	**Uvalde**
Original (1 req.)	___	_X_	___	___	___
Region (1 req.)	___	_X_	___	___	___
County(ies)	___	_X_	___	___	___
Groundwater Conservation District(s)	___ Edwards Aquifer Authority ___Trinity-Glen Rose	_X_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.
Sean Smith, P.E. Print Name of Customer/Authorized Agent
Signature of Customer/Authorized Agent — Date: 2/13/25

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):	

Modification of a Previously Approved Contributing Zone Plan

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: Sean Smith, P.E.

Date: 2/13/25

Signature of Customer/Agent:

Project Information

1. Current Regulated Entity Name: CISD Canyon Lake High School
   Original Regulated Entity Name: CISD Canyon Lake High School
   Assigned Regulated Entity Number(s) (RN): 104421649
   Edwards Aquifer Protection Program ID Number(s): _____
   ☒ The applicant has not changed and the Customer Number (CN) is: 600249825
   ☐ The applicant or Regulated Entity has changed. A new Core Data Form has been provided.

2. ☒ **Attachment A: Original Approval Letter and Approved Modification Letters.** A copy of the original approval letter and copies of any modification approval letters are attached.

3. A modification of a previously approved plan is requested for (check all that apply):

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

4. ☒ Summary of Proposed Modifications (select plan type being modified). If the approved plan has been modified more than once, copy the appropriate table below, as necessary, and complete the information for each additional modification.

CZP Modification Summary	***Approved Project***	***Proposed Modification***
Acres	88.00	88.00
Type of Development	High School	High School
Number of Residential Lots	0	0
Impervious Cover (acres)	33.07	33.26
Impervious Cover (%)	37.58	37.80
Permanent BMPs	VFS, SFB, EDB JellyFish	VFS, SFB, EDB, JellyFish
Other	_____	_____

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

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

5. ☒ **Attachment B: Narrative of Proposed Modification**. A detailed narrative description of the nature of the proposed modification is attached. It discusses what was approved,

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

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

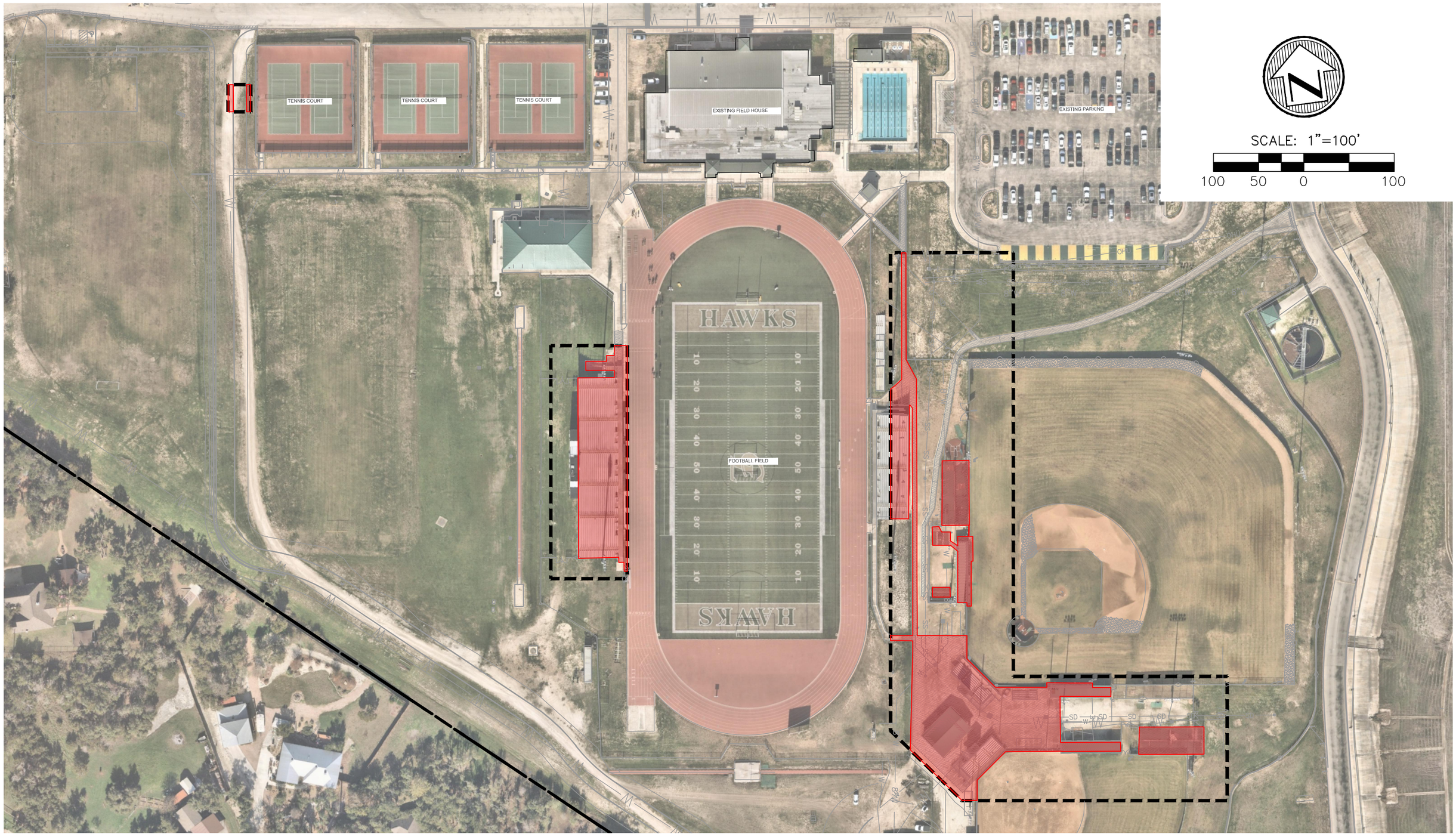
7. ☒ Acreage has not been added to or removed from the approved plan.
   ☐ Acreage has been added to or removed from the approved plan and is discussed in *Attachment B: Narrative of Proposed Modification*.

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

SUMMARY OF PREVIOUS & PROPOSED MODIFICATIONS

CZP Modification Summary	***Pre-June 1, 1999***	***Original CZP***	***Previous Modification 1***	***Previous Modification 2***	***Previous Modification 3***	***Previous Modification 4***	***Previous Modification 5***	***Proposed Modification 6***
Acres	88.00	88.00	88.00	88.00	88.00	88.00	88.00	88.00
Type of Development	Undeveloped	High School	High School	High School	High School	High School	High School	High School
Number of Residential Lots	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Impervious Cover (acres)	N/A	22.41	27.62	30.16	31.12	31.81	33.07	33.26
Impervious Cover (%)	N/A	25.47%	31.39%	34.27%	35.36%	36.14%	37.58%	37.80%
Permanent BMPs	N/A	EDB	EDB, Interim Filter Strip	SFB, EDB	EDB, SFB	EDB, SFB, VFS, JellyFish Filter	EDB, SFB, VFS, JellyFish Filter	EDB, SFB, VFS, JellyFish Filter
Other	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Approval Letter Date	N/A	April 11, 2005	July 23, 2009	February 1, 2011	November 14, 2016	October 14, 2022	June 14, 2024	TBD

Table from TCEQ-10259
Item 4



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SCALE: 1"=100'

100 50 0 100

PROJECT AREA

IMPERVIOUS COVER

TOTAL PROJECT AREA = 134,363 FT²
EXISTING IMPERVIOUS COVER = 43,824 FT²

CISD

CANYON LAKE HIGH SCHOOL

EXISTING IMPERVIOUS COVER EXHIBIT

FEBRUARY 2025

MTR
• Engineers
• Surveyors
• Planners
Moy Tarin Ramirez Engineers, LLC
TBPELS ENGINEERING F-5287/SURVEYING F-10131500
12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085

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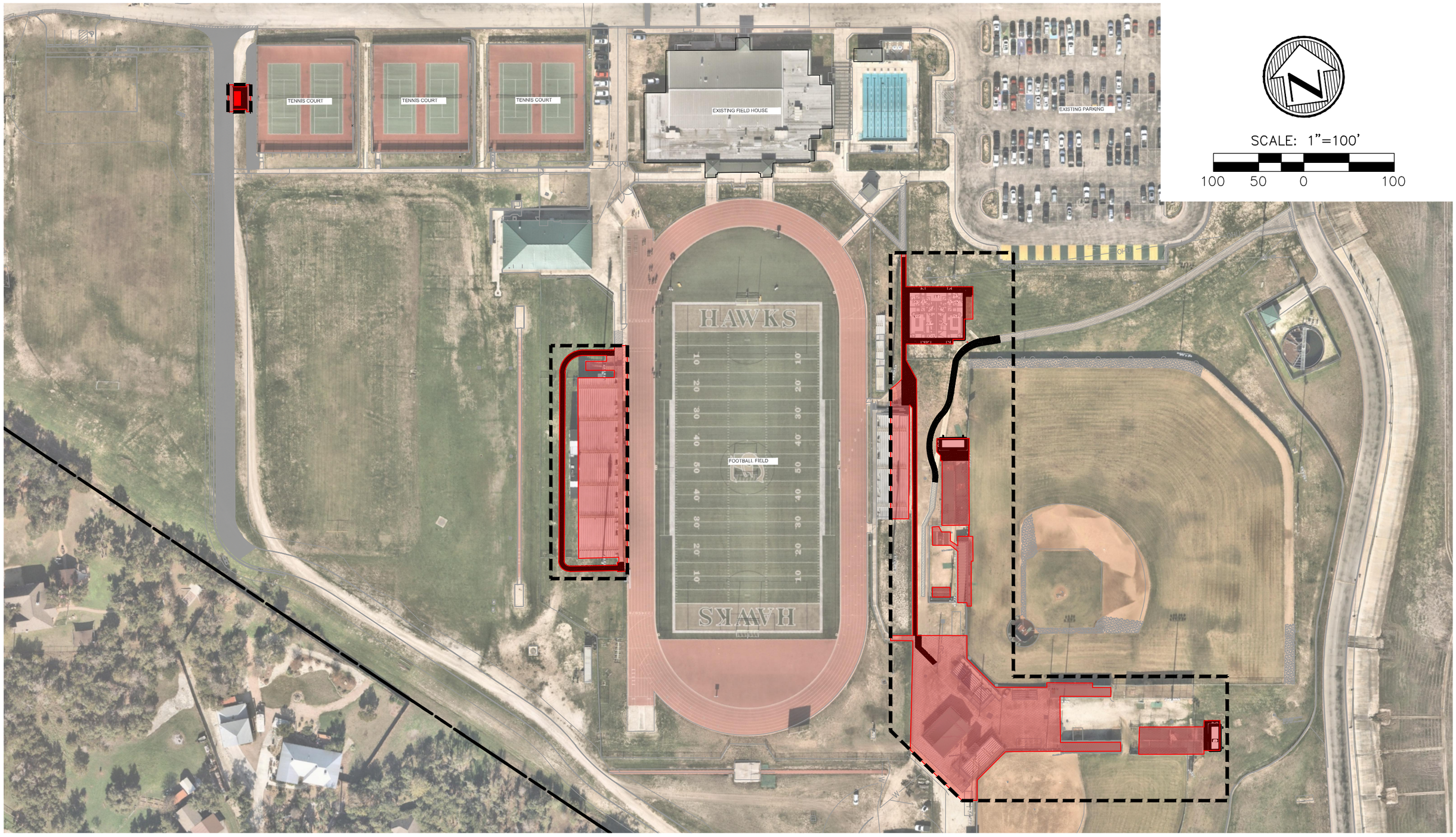

SCALE: 1"=100'

100 50 0 100

- PROJECT AREA
- IMPERVIOUS COVER

TOTAL PROJECT AREA = 134,363 FT²
EXISTING IMPERVIOUS COVER = 43,824 FT²
PROPOSED IMPERVIOUS COVER = 52,145 FT²
INCREASE IN IMPERVIOUS COVER = 8,321 FT²

MTR
• Engineers
• Surveyors
• Planners
Moy Tarin Ramirez Engineers, LLC
TBPELS ENGINEERING F-5287/SURVEYING F-10131500
12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051
SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085

CISD

CANYON LAKE HIGH SCHOOL

PROPOSED IMPERVIOUS COVER EXHIBIT

FEBRUARY 2025

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Original CZP Approval Letter

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 11, 2005

Mr. Roy Linnartz
Comal Independent School District
278 Loop 337
New Braunfels, Texas 78130

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: Canyon Lake Area High School; Located on the South Sideof Ranch Road 32, approximately 1,780' west of FM 3424; Canyon Lake Area, Texas
TYPE OF PLAN: Request for Approval of a Contributing Zone Plan (CZP); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer, Edwards Aquifer Protection Program File No. 2248.00, RN104421649, Investigation No. 349738

Dear Mr. Linnartz:

The Contributing Zone Plan application for the referenced project was submitted to the San Antonio Regional Office by Slay Engineering Company, Inc. on behalf of Comal Independent School District on October 11, 2004. Final review of the CZP submittal was completed after additional material was received on January 21, 2005, February 10, 2005, March 4, 2005, March 8, 2005, and March 25, 2005. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Contributing Zone Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10% of the construction has commenced on the project or an extension of time has been requested.*

PROJECT DESCRIPTION

The proposed school project will be located on 88.0 acres and will consist of a new high school campus. It will include classroom buildings, sports facilities, utilities, and associated driveways and parking. The proposed impervious cover for the development is approximately 22.41 acres (25.47%) of the total area of the site). Wastewater will be disposed of by an on-site wastewater treatment plant (TCEQ application number WQ0014533001).

A site investigation was conducted on January 5, 2005. The site was cleared and the project was under construction.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent pollution of stormwater runoff originating on-site or up-gradient of the site and potentially flowing across and off the site after construction, an on-line extended detention basin will be constructed.

The extended detention basin is designed in accordance with the 1999 edition of the TNRCC's "Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices.". It is sized to capture the first 1.493 inches of stormwater run-off from 62 acres of impervious cover. Total capture volume is 324,585 cubic feet. The basin will consist of:

1. Side slopes of 3:1 or flatter for grass stabilized slopes. Slopes steeper than 3:1 must be stabilized with an appropriate slope stabilization practice.
2. Energy dissipaters will be provided at the basin inlet to reduce resuspension of accumulated sediment.
3. The outflow structure must be sized to allow for the complete drawdown of the water quality volume in 72 hours.
4. No more than 50% of the water quality volume will be drained from the facility within the first 24 hours.
5. The design manual states that the outflow structure should be fitted with a valve so that discharge from the basin can be halted in case of an accidental spill.

Chemicals related to chemistry, biology, agricultural, automotive and industrial technology laboratories will total less than the regulated quantity of 500 gallons.

SPECIAL CONDITIONS

I. Prior to the opening of the school, an approved copy of the TCEQ application number WQ0014533001 must be provided to the San Antonio Regional Office.

II. Within 60 days of receiving written approval of an Edwards Aquifer protection plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page numbers of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested form (Deed Recordation Affidavit, TCEQ-0625) that you may use to deed record the approved CZP is enclosed.

III. Intentional discharges of sediment laden stormwater during construction are not allowed. If dewatering of excavated areas becomes necessary, the discharge will be filtered through appropriately selected temporary best management practices. These may include vegetative filter strips, sediment traps, rock berms, silt fence rings, etc.

IV. Based on the Contributing Zone Plan application, Notice of Intent, and the January 5, 2005 on-site inspection of the project site, Commission records indicate that construction of the Canyon Lake Area High School was actually initiated on or about August 12, 2004, and that other site development and construction activities have already been conducted. These activities were conducted without the prior approval of the Contributing Zone Plan for the project, as required by

Commission rules (30 TAC Chapter 213, Subchapter B). Therefore, the applicant is hereby advised that the after-the-fact approval of this Contributing Zone Plan, as provided by this letter, shall not absolve the applicant of any prior violations of Commission rules related to this project, and shall not necessarily preclude the Commission from pursuing appropriate enforcement actions and administrative penalties associated with such violations, as provided in 30 TAC §213.10 of Commission rules.

STANDARD CONDITIONS

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

Prior to Commencement of Construction:

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

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

4. The applicant must provide written notification of intent to commence construction of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.

5. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

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

7. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

8. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

9. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

After Completion of Construction:

10. Owners of permanent BMPs and measures must insure that the BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.

11. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through the San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

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

13. A Contributing Zone Plan approval or extension will expire and no extension will be granted if more than 50% of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone Plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

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

If you have any questions or require additional information, please contact John Mauser of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210/403-4024.

Sincerely,

Bobby D. Caldwell

for Glenn Shankle
Executive Director
Texas Commission on Environmental Quality

GS/JKM/eg

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

fc: Mr. Micheal Slay, PE, Slay Engineering Company, Inc.
Mr. Tom Hornseth, PE, Comal County
cc Mr. Robert J. Potts, Edwards Aquifer Authority
TCEQ Central Records, Building F, MC 212

CZP Modification #1
Approval Letter

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 23, 2009

Mr. Thomas Bloxham
Comal Independent School District
1404 IH-35 North
New Braunfels, TX 78130

Re: Edwards Aquifer, Comal County
NAME OF PROJECT: CISD Canyon Lake High School; Located at 8555 FM 32; Fischer, Texas
TYPE OF PLAN: Request for a Modification of an Approved Contributing Zone Plan (CZP); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer
Edwards Aquifer Protection Program ID No. 2248.02; Investigation No. 743245
Regulated Entity No.: RN104421649

Dear Mr. Bloxham:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP modification for the above-referenced project submitted to the San Antonio Regional Office by Gil Engineering Associates, Inc. on behalf of Comal Independent School District on April 14, 2009. Final review of the CZP was completed after additional material was received on June 22, 2009, June 29, 2009, and July 20, 2009. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The project was originally approved by letter dated April 11, 2005. The school project was proposed on 88.0 acres and consisted of a new high school campus. It included classroom buildings, sports facilities, utilities, and associated driveways and parking. The proposed impervious cover for the development was approximately 22.41 acres (25.47%) of the total area of the site. Wastewater was to be disposed of by on-site Canyon Lake High School Wastewater Treatment Facilities (TCEQ application number WQ0014533001) owned by Comal Independent School District.

The permanent pollution abatement measures for the proposed project consisted of an extended detention basin designed in accordance with the 1999 edition of the TNRCC's "Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices." The basin was sized to capture the

first 1.493 inches of stormwater run-off from the 30.6 acres of impervious cover within a 62 acre catchment area. Total capture volume was to be 324,585 cubic feet. The basin consisted of:

1. Side slopes of 3:1 or flatter for grass stabilized slopes. Slopes steeper than 3:1 must be stabilized with an appropriate stabilization practice.

2. Energy dissipaters will be provided at the basin inlet to reduce resuspension of accumulated sediment.

3. The outflow structure must be sized to allow for the complete drawdown of the water quality volume in 72 hours.

4. No more than 50% of the water quality volume will be drained from the facility within the first 24 hours.

5. The design manual states that the outflow structure should be fitted with a valve so that discharge from the basin can be halted in case of an accidental spill.

Chemicals related to chemistry, biology, agricultural, automotive and industrial technology laboratories will total less than the regulated quantity of 500 gallons.

PROJECT DESCRIPTION

The proposed commercial project will take place at a previously approved high school facility located on approximately 88 acres. It will include the addition of a new agriculture building, a new swimming pool, and additions to the high school field house. The improvements will also include the retrofit of the existing detention basin into an extended detention device, which in addition to detention will provide water quality treatment for the site. The basin will be reconstructed to conform to the extended detention design proposed in the original CZP application approved by letter dated April 11, 2005. The impervious cover currently approved and constructed for the site is 25.93 acres. This modification will increase the impervious cover by 1.69 acres. The total impervious cover at the site will be 27.62 acres (31 percent). Wastewater will be disposed of by on-site Canyon Lake High School Wastewater Treatment Facilities (TCEQ application number WQ0014533001) owned by Comal Independent School District.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, an extended detention basin, designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (1999), will be retrofitted to treat stormwater runoff. The retrofit of the BMP will conform to the design approved by letter dated April 11, 2005. The required total suspended solids (TSS) treatment for this project is 24,792 pounds of TSS generated from the 27.62 acres of impervious cover. Based on April 11, 2005 approval the BMP is capable of removing 24,143 pounds of TSS. At this time an interim filter strip, installed at the basin outlet, will provide treatment of the remaining TSS balance (649 pounds of TSS). As stated by the project engineer permanent treatment measures for the 649 pounds of TSS will be provided in the next Edwards Aquifer Protection Program application submitted for the site.

The basin will capture the first 4.00 inches of stormwater run-off from the 27.62 acres of impervious cover within a 62 acre catchment area. Total required capture volume is 359,804 cubic feet (403,960 cubic feet provided). The basin will consist of:

1. Side slopes of 3:1 or flatter for grass stabilized slopes. Slopes steeper than 3:1 must be stabilized with an appropriate stabilization practice.

2. Energy dissipaters will be provided at the basin inlet to reduce resuspension of accumulated sediment.

3. The outflow structure must be sized to allow for the complete drawdown of the water quality volume in 72 hours.

4. No more than 50% of the water quality volume will be drained from the facility within the first 24 hours.

5. The design manual states that the outflow structure should be fitted with a valve so that discharge from the basin can be halted in case of an accidental spill.

The interim filter strip will consist of:

1. Top edge of the filter strip should be level to discourage forming of channel in the low spot.

2. The level spreader will be lined or constructed of impermeable materials (concrete).

3. The area to be used for the strip should be free of gullies or rills that can concentrate overland flow.

4. Filter strips should be landscaped after other portions of the project are completed and vegetation coverage should be at least 80%.

SPECIAL CONDITIONS

I. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested format (Deed Recordation Affidavit, TCEQ-0625A) that you may use to deed record the approved CZP is enclosed.

II. This modification is subject to all Special and Standard Conditions listed in the CZP approval letter dated April 11, 2005.

III. The retrofit of the permanent pollution abatement measure (extended detention basin) shall be completed before the next school year commences.

IV. All sediment and/or media removed from the water quality basin during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

V. This approval letter is being issued for regulated activities (as defined in Chapter 213) and for best management practices presented in the application. This approval does not constitute a water right permit or authorization from the TCEQ Dam Safety Program. Failure to obtain all necessary authorizations could result in enforcement actions. For more information on Water Rights Permits, please refer to:

http://www.tceq.state.tx.us/permitting/water_supply/water_rights/wr_amiregulated.html

For more information on the Dam Safety program, please refer to:

http://www.tceq.state.tx.us/compliance/field_ops/dam_safety/damsafetyprog.html

VI. Permanent water quality treatment for the 649 pounds of TSS shall be provided in the next Edwards Aquifer Protection Program application or modification submitted for the site.

VII. Regulated activities identified during the site assessment investigation constitute construction without the prior approval of the contributing zone plan as required by Commission rules (30 TAC Chapter 213). Therefore, the applicant is hereby advised that the after-the-fact approval of the development, as provided by this letter, shall not absolve the applicant of any prior violations of Commission rules related to this project, and shall not necessarily preclude the Commission from pursuing appropriate enforcement actions and administrative penalties associated with such violations, as provided in 30 TAC §213.10 of Commission rules.

STANDARD CONDITIONS

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

2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.

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

Prior to Commencement of Construction:

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

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

6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.

7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

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

9. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

10. Intentional discharges of sediment laden storm water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.

11. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

12. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

After Completion of Construction:

14. Owners of permanent BMPs and measures must insure that the BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.

15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through the San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

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

17. A Contributing Zone Plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone Plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

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

If you have any questions or require additional information, please contact Agnieszka Hobson of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4075.

Sincerely,

Mark R. Vickery, P.G.
Executive Director
Texas Commission on Environmental Quality

MRV/AMH/eg

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

cc: Mr. Victor Gil, P.E., Gil Engineering Associates, Inc.
Mr. Thomas H. Hornseth, P.E., Comal County
Ms. Velma Reyes Danielson, Edwards Aquifer Authority
TCEQ Central Records, Building F, MC 212

CZP Modification #2
Approval Letter

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

February 1, 2011

Mr. Thomas Bloxham
Comal Independent School District
1404 IH 35 North
New Braunfels, TX 78130

Re: Edwards Aquifer Protection Program, Comal County

Name of Project: CISD Canyon Lake High School; Located approximately 1,300 feet northwest of the FM 32 and FM 3424 intersection; Comal County, Texas

Type of Plan: Request for the Modification to an Approved Contributing Zone Plan (CZP); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer

San Antonio File No. 2248.03; Investigation No. 873302; Regulated Entity No. RN104421649

Dear Mr. Bloxham:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP modification for the above-referenced project submitted to the San Antonio Regional Office by Gil Engineering Associates, Inc. on behalf of CISD on November 1, 2010. Final review of the CZP was completed after additional material was received on December 27, 2010 and January 25, 2011. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

Background

The original CZP for Canyon Lake High School was approved on April 11, 2005 for construction on the 88 acre site with 22.41 acres of impervious cover. The construction included classroom facilities, sports facilities, utilities, driveways and parking lots. An extended detention basin was constructed to treat storm water runoff from the developed site.

On July 23, 2009 a CZP modification was approved to construct an agriculture building, swimming pool and additions to the field house. The impervious cover increased to 27.69 acres.

Project Description

The proposed school project will have an area of approximately 8.49 acre within the larger 88 acre site. It will include the construction of an artificial turf field and bleacher expansion. The impervious cover for this project will be 2.47 acres and increase the total impervious cover to 30.16 acres (37 percent). Project wastewater will be disposed of by conveyance to the existing, onsite Canyon Lake High School Wastewater Treatment Facility (TCEQ WQ0014533001) owned by Comal Independent School District.

Permanent Pollution Abatement Measures

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, a sand filter basin and extended detention basin, designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 27,072 pounds of TSS generated from the 30.16 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

The sand filter basin will have a drainage area of 10.00 acres with 7.10 acres of impervious cover. The basin has a designed water quality volume of 63,800 cubic feet (58,421 cubic feet required) and a sand filter area of 5,106 square feet (4,868 square feet required). The basin has been designed to account for 6,925 pounds of TSS.

The extended detention has been constructed based upon the previous approvals. No physical changes will be made to the basin, however, the drainage area to the basin has been reduced to 52.92 acres with 23.06 acres of impervious cover. The basin will have a designed water quality volume of 403,960 cubic feet (298,961 cubic feet required) and will account for 20,147 pounds of TSS.

Special Conditions

1. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested format (Deed Recordation Affidavit, TCEQ-0625A) that you may use to deed record the approved CZP is enclosed.

2. This modification is subject to all Special and Standard Conditions listed in the CZP approval letter dated April 11, 2005 and July 23, 2009.

3. Since the water quality basin is providing TSS reduction for the football field and bleachers by capturing storm water from the parking lot, the sand filter basin and modification to the extended detention basin must be installed and operational prior to use of the field and stadium.

4. All sediment and/or media removed from the water quality basins during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

Standard Conditions

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

2. The holder of the approved Edwards Aquifer protection plan must comply with all provisions of 30 TAC Chapter 213 and all best management practices and measures contained in the approved plan. Additional and separate approvals, permits, registrations and/or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, UIC) can be required depending on the specifics of the plan.

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

Prior to the Commencement of Construction:

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

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

6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.

7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

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

9. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).

10. Intentional discharges of sediment laden storm water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.

11. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

12. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

After Completion of Construction:

14. Owners of permanent BMPs and measures must insure that the BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.

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

maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through the San Antonio Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.

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

17. A Contributing Zone Plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone Plan must be submitted to the San Antonio Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.

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

If you have any questions or require additional information, please contact Charly Fritz of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4065.

Sincerely,

for

Mark R. Vickery, P.G., Executive Director
Texas Commission on Environmental Quality

MRV/CEF/eg

Enclosures: Deed Recordation Affidavit, Form TCEQ-0625A

Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

cc: Mr. Victor Gil, Gil Engineering Associates, Inc.
Mr. Thomas Hornseth, P.E., Comal County Engineer
Mr. Karl Dreher, General Manager, Edwards Aquifer Authority
TCEQ Central Records, Building F, MC212

Filed and Recorded
Official Public Records
Joy Streater, County Clerk
Comal County, Texas
06/12/2012 09:50:04 AM
DARLA 6 Page(s)
201206020435

Joy Streater

CZP Modification #3
Approval Letter

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

November 14, 2016

Mr. John Tucker
Comal Independent School District
1404 IH 35 North
New Braunfels, TX 78130-2817

Re: Edwards Aquifer, Comal County

NAME OF PROJECT: CISD Canyon Lake High School; Located at 8555 FM 32; Fischer, Texas

TYPE OF PLAN: Request for Modification of an Approved Contributing Zone Plan (CZP); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer

Regulated Entity No. RN104421649; Additional ID No. 13000227

Dear Mr. Tucker:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP Modification for the above-referenced project submitted to the San Antonio Regional Office by MTR Engineers, LLC on behalf of Comal Independent School District on August 18, 2016. Final review of the CZP was completed after additional material was received on October 12, 2016 and November 3, 2016. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The original CZP was approved by letter dated April 11, 2005 and permitted the construction of a new high school campus on an 88.0 acre site. The impervious cover for the project was 22.41 acres (25.47 percent) that consisted of classroom buildings, sports facilities, utilities, and associated parking and driveways. One extended detention basin was approved to treat stormwater.

The first CZP modification was approved by letter dated July 23, 2009 and included the construction of a new agriculture building, swimming pool, additions to the high school field

house, and retrofitting of the existing water quality basin. The project increased the total impervious cover on site to 27.62 acres (31.39 percent).

The second CZP modification was approved by letter dated February 1, 2011 and permitted the construction of an artificial turf field and bleacher expansion. The project increased the total impervious cover to 30.16 acres (34.27 percent). A partial sedimentation/filtration basin was approved to treat stormwater. The drainage area of the existing extended detention basin was reduced; however, no physical changes were made to the basin.

PROJECT DESCRIPTION

The proposed commercial project will have an area of approximately 88.0 acres. It will include the renovation and expansion of an existing metal building, the addition of a building, drainage improvements at various locations around the site, additional sidewalks, pavement improvements, and modifications to the two existing water quality basins. The modifications to the extended detention basin include increasing the volume of the basin, new low-flow channels, maintenance ramp, staging area, fencing, gates, and changing the earthen side-slopes on the western perimeter of the basin to concrete riprap. The partial sedimentation/filtration basin modifications will include a resizing of the filtration basin to accommodate the increased impervious cover. The project will increase the impervious cover on site to 31.12 acres (35.36 percent). Project wastewater will be disposed of by conveyance to the existing onsite Canyon Lake High School Wastewater Treatment Facility (TCEQ WQ0014533001) owned by Comal Independent School District.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, one existing extended detention basin and one existing partial sedimentation/filtration basin, designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be utilized to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 27,933 pounds of TSS generated from the 31.12 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

TSS Removal Summary					
Drainage Area	Acres (ac.)	Impervious Cover (ac.)	Treatment Measure	Required TSS Removal (lbs.)	Provided TSS Removal (lbs.)
1	52.92	24.02	Extended Detention Basin	21,560*	20,850*
2	10.00	7.10	Partial Sedimentation/Filtration Basin	6,373	7,083*
3	25.08	0.00	Uncaptured	-	-
Total	88.0	31.12	-	27,933	27,933

*710 pounds of TSS overtreatment provided for by partial sedimentation/filtration basin.

The extended detention basin has a designed capture volume of 328,833 cubic feet (281,180 cubic feet required).

The partial sedimentation/filtration basin has a designed capture volume of 77,551 cubic feet (74,824 cubic feet required), and a sand filter area of 13,165 square feet (6,235 square feet required).

SPECIAL CONDITIONS

I. Within 60 days of receiving written approval of an Edwards Aquifer Protection Plan, the applicant must submit to the San Antonio Regional Office, proof of recordation of notice in the county deed records, with the volume and page number(s) of the county deed records of the county in which the property is located. A description of the property boundaries shall be included in the deed recordation in the county deed records. A suggested format (Deed Recordation Affidavit, TCEQ-0625A) that you may use to deed record the approved CZP is enclosed.

II. This modification is subject to all Special and Standard Conditions listed in the CZP approval letter dated April 11, 2005, and subsequent modifications dated July 23, 2009, and February 1, 2011.

III. All sediment and/or media removed from the water quality basins during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

IV. The permanent pollution abatement measures shall be operational prior to first occupancy of the newly constructed facilities within the measure's respective drainage area.

STANDARD CONDITIONS

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

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved Contributing Zone Plan and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence,

and the name of the prime contractor with the name and telephone number of the contact person.

7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).
10. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
11. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
12. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

After Completion of Construction:

14. Owners of permanent BMPs and measures must insure that the BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.

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

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Mr. Joshua Vacek of the Edwards Aquifer Protection Program of the San Antonio Regional Office at 210-403-4028.

Sincerely,

Lynn Bumguardner, Water Section Manager
San Antonio Region
Texas Commission on Environmental Quality

LB/JV/eg

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

cc: Mr. Duane A. Moy, P.E., MTR Engineers, LLC
Mr. Roland Ruiz, Edwards Aquifer Authority
Mr. H. L. Saur, Comal Trinity Groundwater Conservation District
Mr. Thomas H. Hornseth, P.E., Comal County Engineer
TCEQ Central Records, Building F, MC212

CZP Modification #4
Approval Letter

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 14, 2022

Alejandro Araujo
Comal Independent School District
1404 IH-35 North
Fischer, Texas 78623

Re: Edwards Aquifer, Comal County

NAME OF PROJECT: Comal Independent School District Canyon Lake High School; Located at 8555 Farm to Market 32, Fischer, TX

TYPE OF PLAN: Request for Modification of an Approved Contributing Zone Plan (CZPMOD); 30 Texas Administrative Code (TAC) Chapter 213 Subchapter B Edwards Aquifer

Regulated Entity No. RN104421649; Additional ID No. 13001576

Dear Mr. Araujo:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP Modification for the above-referenced project submitted to the San Antonio Regional Office by MTR Engineers on behalf of Comal Independent School District on July 29,2022. Final review of the CZP Modification was completed after additional material was received on September 15, 2022, and October 3, 2022. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected, and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed, and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

BACKGROUND

The original CZP application was approved by letter dated April 11, 2005, permitted the construction of a new high school campus on an 88.0-acres site. The impervious cover for the project was 22.41-acres (25.47 percent) and one (1) extended detention basin was approved to treat the stormwater.

Subsequent modifications were approved on July 23, 2009, February 1, 2011, and November 14, 2016, for regulated entity RN104421649.

PROJECT DESCRIPTION

The proposed high school project will have an area of approximately 88-acres. It will include the construction of two (2) new buildings, and associated parking and flatwork. The impervious cover will be 0.69-acres, increasing the total impervious cover to 31.81-acres (36.14 percent). Project wastewater will be disposed of by the Canyon Lake High School Wastewater Treatment Facility owned by Comal Independent School District.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, a Jellyfish and engineered vegetative filter strip, designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 619 pounds of TSS generated from the additional 0.69-acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

SPECIAL CONDITIONS

I. This modification is subject to all Special and Standard Conditions listed in the CZP approval letter dated April 11, 2005, July 23, 2009, February 1, 2011, and November 14, 2016

II. All permanent pollution abatement measures shall be operational prior to occupancy of the facility.

III. All sediment and/or media removed from the permanent pollution abatement measures during maintenance activities shall be properly disposed of according to 30 TAC 330 or 30 TAC 335, as applicable.

STANDARD CONDITIONS

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

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved Contributing Zone Plan and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.

6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the San Antonio Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.
7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

<u>During Construction:</u>

8. During the course of regulated activities related to this project, the applicant or his agent shall comply with all applicable provisions of 30 TAC Chapter 213, Edwards Aquifer. The applicant shall remain responsible for the provisions and conditions of this approval until such responsibility is legally transferred to another person or entity.
9. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been significantly reduced. Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).
10. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge will be filtered through appropriately selected best management practices. These may include vegetated filter strips, sediment traps, rock berms, silt fence rings, etc.
11. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.
12. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.
13. This approval does not authorize the installation of temporary aboveground storage tanks on this project. If the contractor desires to install a temporary aboveground storage tank for use during construction, an application to modify this approval must be submitted and approved prior to installation. The application must include information related to tank location and spill containment. Refer to Standard Condition No. 5, above.

<u>After Completion of Construction:</u>

14. Owners of permanent BMPs and measures must insure that the BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the San Antonio Regional Office within 30 days of site completion.

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

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Drew Evans of the Edwards Aquifer Protection Program of the San Antonio Regional Office at (210) 403-4053.

Sincerely,

Lillian Butler

Lillian Butler, Section Manager
Edwards Aquifer Protection Program
Texas Commission on Environmental Quality

LIB/de

Enclosures: Change in Responsibility for Maintenance of Permanent BMPs, Form TCEQ-10263

cc: Mr. Sean Smith, P.E., Moy Tarin Ramirez Engineers, LLC.

CZP Modification #5
Approval Letter

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 14, 2024

Mr. Jeffrey Smith
Comal Independent School District
1404 IH 35 North
New Braunfels, Texas, 78130-2817

Re: Approval of a Modification of an approved Contributing Zone Plan (CZPMOD)
CISD Canyon Lake High School; Located northwest of FM 32 and FM 3424; Comal County, Texas
Edwards Aquifer Protection Program ID: 13001919, Regulated Entity No. RN104421649

Dear Mr. Smith:

The Texas Commission on Environmental Quality (TCEQ) has completed its review on the application for the above-referenced project submitted to the Edwards Aquifer Protection Program (EAPP) by Moy Tarin Ramirez Engineers, LLC. on behalf of the applicant, Comal Independent School District on April 22, 2024. Final review of the application was completed after additional material was received on June 5, 2024.

As presented to the TCEQ, the application was prepared in general compliance with the requirements of 30 Texas Administrative Codes (TAC) Chapter §213. The permanent best management practices (BMPs) and measures represented in the application were prepared by a Texas licensed professional engineer (PE). All construction plans and design information were sealed, signed, and dated by a Texas licensed PE. Therefore, the application for the construction of the proposed project and methods to protect the Edwards Aquifer are **approved,** subject to applicable state rules and the conditions in this letter.

This approval expires two years from the date of this letter, unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been officially requested. This approval or extension will expire, and no extension will be granted if more than 50 percent of the project has not been completed within ten years from the date of this letter.

The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this contributing zone plan or modification to a plan. A motion for reconsideration must be filed in accordance with 30 TAC §50.139.

BACKGROUND

The original CZP was approved by letter dated April 11, 2005, and modified by letters dated July 23, 2009, February 1, 2011, November 14, 2016, and October 14, 2022. The 88.0-acre site was approved to consist of 31.805-acres of impervious cover.

PROJECT DESCRIPTION

The current modification proposes the addition of one (1) new golf training facility and a new maintenance drive on the 88.0-acre site. The impervious cover will be 1.267-acres (1.44 percent) and the new overall impervious cover as a result of the project will be 33.072-acres. Of the 1.267-acres of impervious cover, 0.138-acres of impervious cover is comprised of artificial turf with an associated underdrain system and liner. The total amount of impervious cover requiring treatment is 1.129-acres. Project wastewater will be disposed of by conveyance to the existing Canyon Lake High School Wastewater Treatment Facility owned by Comal Independent School District.

PERMANENT POLLUTION ABATEMENT MEASURES

To prevent the pollution of stormwater runoff originating on-site or upgradient of the site and potentially flowing across and off the site after construction, four (4) engineered vegetative filter strips, designed using the TCEQ technical guidance, *RG-348, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices,* will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 1,013 pounds of TSS generated from the 1.129-acres of impervious cover. For an overall impervious cover of 1.267-acres, 0.138-acres will be an artificial turf area with an associated underdrain system and liner. The approved permanent BMPs and measures meet the required 80 percent removal of the increased load in TSS caused by the project.

The permanent BMPS shall be operational prior to occupancy or use of the proposed project. Inspection, maintenance, repair, and retrofit of the permanent BMPs shall be in accordance with the approved application.

SPECIAL CONDITIONS

I. This modification is subject to all the special and standard conditions listed in the approval letter(s) dated April 11, 2005, July 23, 2009, February 1, 2011, November 14, 2016, and October 14, 2022.

STANDARD CONDITIONS

1. The plan holder (applicant) must comply with all provisions of 30 TAC Chapter §213 and all technical specifications in the approved plan. The plan holder should also acquire and comply with additional and separate approvals, permits, registrations or authorizations from other TCEQ Programs (i.e., Stormwater, Water Rights, Dam Safety, Underground Injection Control) as required based on the specifics of the plan.

2. In addition to the rules of the Commission, the plan holder must also comply with state and local ordinances and regulations providing for the protection of water quality as applicable.

Prior to Commencement of Construction:

3. The plan holder of any approved contributing zone plan must notify the EAPP and obtain approval from the executive director prior to initiating any modification to the activities described in the referenced application following the date of the approval.

4. The plan holder must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the EAPP no later than 48 hours prior to commencement of the regulated activity. Notification must include the date on which the regulated activity will commence, the name

of the approved plan and program ID number for the regulated activity, and the name of the prime contractor with the name and telephone number of the contact person.

5. Temporary erosion and sedimentation (E&S) controls as described in the referenced application, must be installed prior to construction, and maintained during construction. Temporary E&S controls may be removed when vegetation is established, and the construction area is stabilized. The TCEQ may monitor stormwater discharges from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

<u>During Construction:</u>

6. The application must indicate the placement of permanent aboveground storage tanks facilities for static hydrocarbons and hazardous substances with cumulative storage capacity of 500 gallons or more. Subsequent permanent storage tanks on this project site require a modification to be submitted and approved prior to installation.

7. If sediment escapes the construction site, the sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain). Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50 percent. Litter, construction debris, and construction chemicals shall be prevented from becoming stormwater discharge pollutants.

8. Intentional discharges of sediment laden water are not allowed. If dewatering becomes necessary, the discharge must be filtered through appropriately selected BMPs.

9. The following records shall be maintained and made available to the executive director upon request: the dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated.

10. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and construction activities will not resume within 21 days. When the initiation of stabilization measures by the 14th day is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable.

<u>After Completion of Construction:</u>

11. Owners of permanent BMPs and temporary measures must ensure that the BMPs and measures are constructed and function as designed. A Texas licensed PE **must certify** in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the EAPP within 30 days of site completion.

12. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property or the ownership of the property is transferred to the entity. A copy of the transfer of responsibility must be filed with the executive director through the EAPP within 30 days of the transfer. TCEQ form, Change in Responsibility for Maintenance on Permanent BMPs and Measures (TCEQ-10263), may be used.

The holder of the approved contributing zone plan is responsible for compliance with Chapter §213 subchapter B and any condition of the approved plan through all phases of plan implementation. Failure to comply with any condition within this approval letter is a violation of Chapter §213 subchapter B and is subject to administrative rule or orders and penalties as provided under §213.25 of this title (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. Upon legal transfer of this property, the new owner is required to comply with all terms of the approved contributing zone plan.

This action is taken as delegated by the executive director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact Mr. Hunter Patterson of the Edwards Aquifer Protection Program at (210) 403-4026 or the regional office at 512-339-2929.

Sincerely,

Lori Wilson, Regional Director
Austin Region
Texas Commission on Environmental Quality

LW/hhp

cc: Mr. Sean Smith, P.E., Moy Tarin Ramirez Engineers, LLC.

ATTACHMENT B

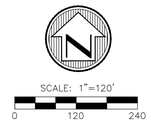
NARRATIVE OF PROPOSED MODIFICATION

The proposed project is located at the site of the existing Canyon Lake High School, located at 8555 Farm to Market 32, Fischer, TX 78623. The project will be providing new buildings and new concrete flatwork. There are no changes to the overall drainage patterns due to the proposed additions

A Contributing Zone Plan (CZP) for the site was approved on April 11, 2005 (EAPP#2248.00) for 22.41 acres of impervious cover. CZP Modification #1 was approved on July 23, 2009, for a 5.21-acre increase in impervious cover. CZP Modification #2 was approved on February 1, 2011, for a 2.54-acre increase in impervious cover. CZP Modification #3 was approved on November 14, 2016, for a 0.96-acre increase in impervious cover. CZP Modification #4 was approved on October 14, 2022, for a 0.69-acre increase in impervious cover. The most recent CZP Modification (#5) was approved on June 14, 2024 for the addition of 1.27 acres of impervious cover, for a total of 33.07 acres. Of the 33.07 acres currently on site, 0.14 acres is comprised of synthetic turf that provides equivalent water protection via an underdrain and liner system.

The proposed improvements at Canyon Lake High School will result in a 0.19-acre increase in impervious cover, for a site total of 33.26 acres. The increase in impervious cover will be treated through a combination of new vegetative filter strips and a new JellyFish Filter. Certain areas previously treated by the existing extended detention basin will be treated with new VFS, while portions of the new improvements will be treated with the existing extended detention basin. This will result in no change to the amount of impervious cover being treated by the extended detention basin. Therefore, the previously approved TSS removal calculations for the extended detention basin still apply for this application.

Current CZP Site Plan



LEGEND:

- PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- SILT FENCE
- CHAINLINK FENCE
- ROCK BERM
- GRAVEL INLET FILTER
- STABILIZED CONSTRUCTION EXIT
- NEW LIGHT DUTY FLEXIBLE PAVEMENT
- NEW HEAVY DUTY FLEXIBLE PAVEMENT
- NEW RIGID PAVEMENT
- NEW CONCRETE SIDEWALK/FLATWORK
- CONSTRUCTION STAGING AREA
- CONCRETE WASHOUT PIT
- DRAINAGE FLOW ARROW

PROJECT AREA = 36.87 ACRES

DISTURBED AREA = 5.55 ACRES

REVISIONS

NO.	DATE	DESCRIPTION	BY	PROJ. #	DSN. BY:	DWN. BY:	CHKD. BY:	DATE

• Engineers
• Surveyors
• Planners

MTR

Moy Tarin Ramirez Engineers, LLC

TBPELS: ENGINEERING F-5297/SURVEYING F-10131500
12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249
TEL: (210) 698-5051
FAX: (210) 698-5085

STATE OF TEXAS
SEAN S. SMITH
113308
REGISTERED PROFESSIONAL ENGINEER
8/6/24

CANYON LAKE HS 2023 FIELD DRIVEWAY RECONSTRUCTION

OVERALL CONTRIBUTING ZONE SITE PLAN

SHEET
C1.0

K:\Comal\01\Canyon Lake HS\2024 CZP Addn\Drawings\CZP Site Plan.dwg 2024/08/06 12:58pm ecobsion

REVISIONS

NO.	DATE	DESCRIPTION	BY

PROJ. # | DGN. BY | DWN. BY | CHKD. BY | DATE:

Moy Tarin Ramirez Engineers, LLC
· Engineers · Surveyors · Planners
TBPELS: ENGINEERING F-5297/SURVEYING F-10131500
12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249
TEL: (210) 698-5051
FAX: (210) 698-5085

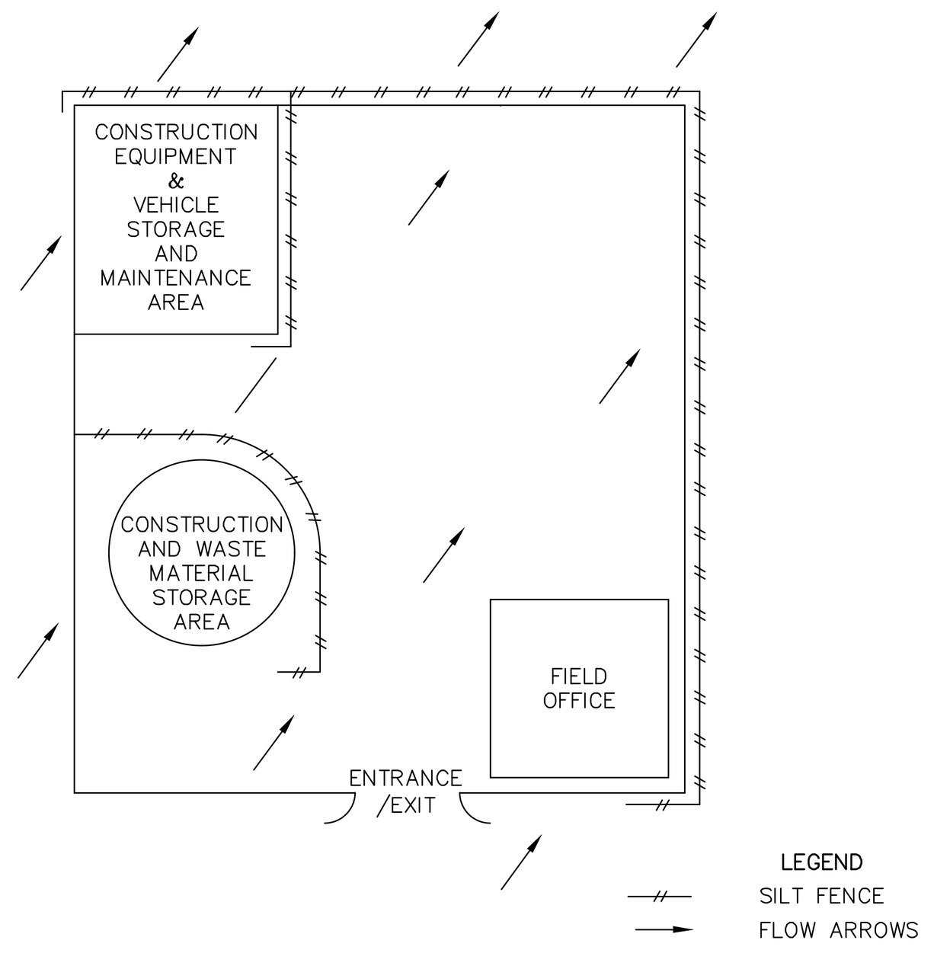
STATE OF TEXAS
SEAN S. SMITH
113308
REGISTERED PROFESSIONAL ENGINEER
6/4/24

CANYON LAKE HIGH SCHOOL - FIELD DRIVEWAY RECONSTRUCTION

CONTRIBUTING ZONE SITE PLAN

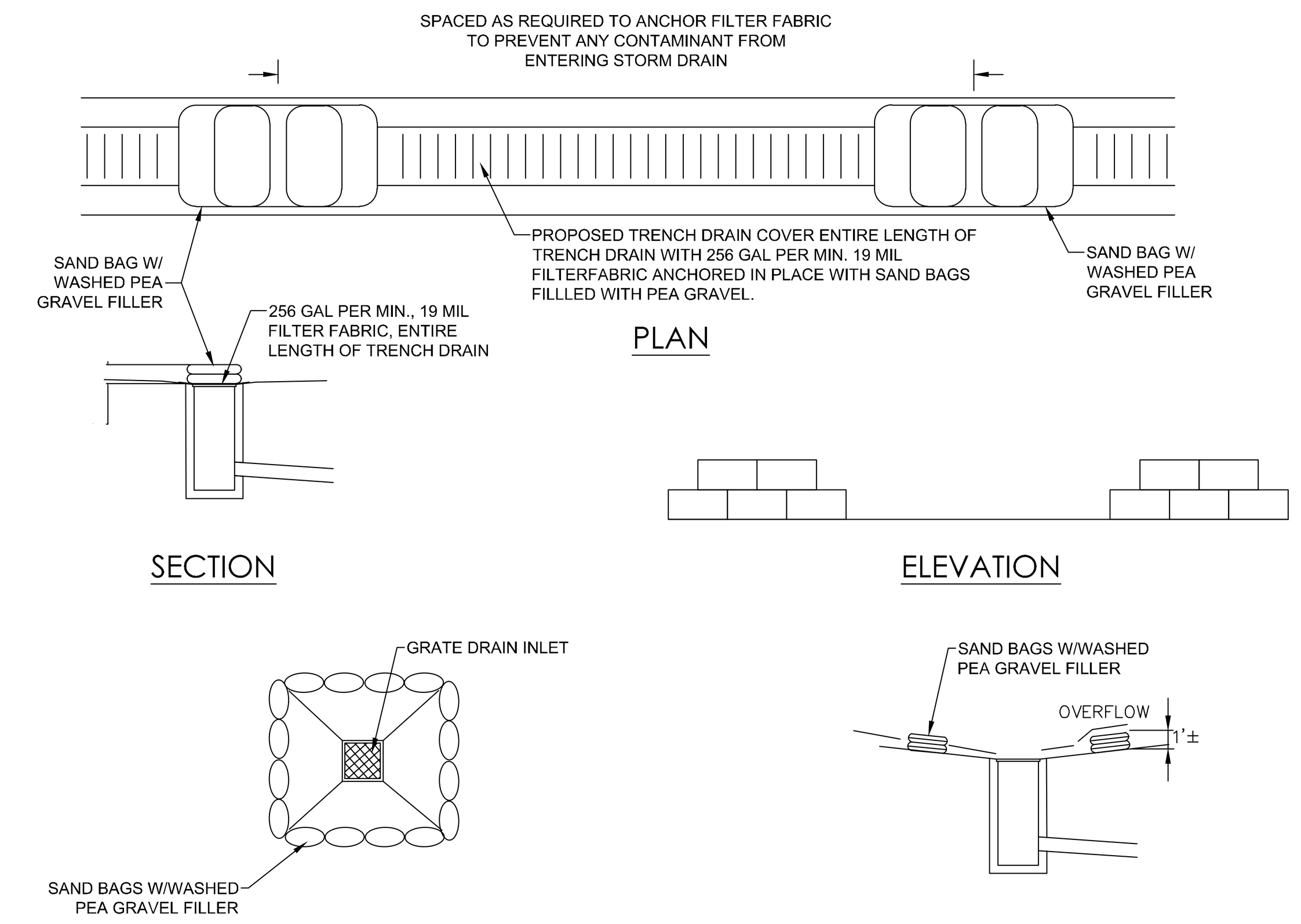
SHEET
C1.1

R:\Comal ISD\Canyon Lake H S\2024 CZP Mod\Drawings\CZP Site Plan.dwg 2024/06/05 1:18pm bstanish



1 — CONSTRUCTION STAGING AREA

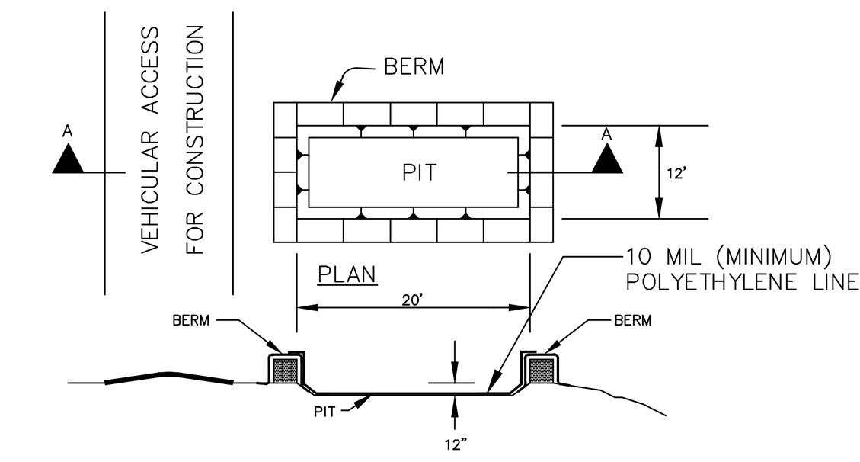
SCALE: NONE



1. THE GRAVEL BAG MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, POLYAMIDE OR COTTON BULAP WOVEN FABRIC, MINIMUM UNIT WEIGHT 4 OZ/YD 2, MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70 PERCENT.
2. THE BAG LENGTH SHOULD BE 24 INCHES, WIDTH SHOULD BE 18 INCHES AND THICKNESS SHOULD BE 6 INCHES.
3. THE GRAVEL BAGS SHOULD BE FILLED WITH 3/4" GRAVEL.
4. WHEN A GRAVEL BAG IS FILED WITH GRAVEL, THE OPEN END OF THE GRAVEL BAG SHOULD BE STAPLED OR TIED WITH NYLON OR POLY CORD.
5. THE GRAVEL BAGS SHOULD BE PLACED AS SHOWN ON THE DETAIL. THE GRAVEL BAGS SHALL BE STACKED TO FORM A CONTINUOUS BARRIER AROUND THE INLETS. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.
6. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
7. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
8. 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.
9. STRUCTURE SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

2 — BAGGED GRAVEL INLET FILTER

SCALE: NONE

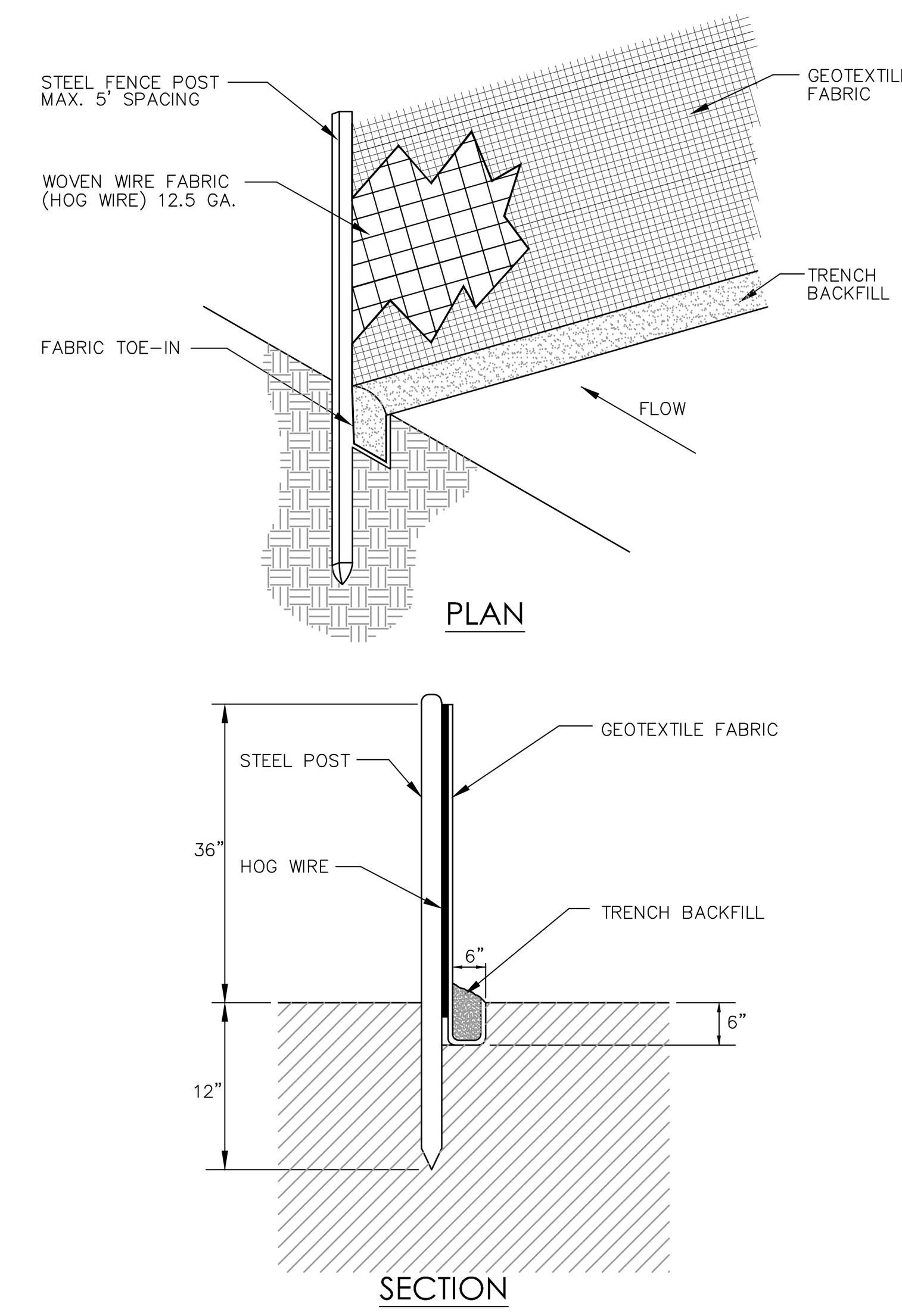


GENERAL NOTES:

- DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
- WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
- WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.

3 — CONCRETE TRUCK WASHOUT PIT

SCALE: NONE

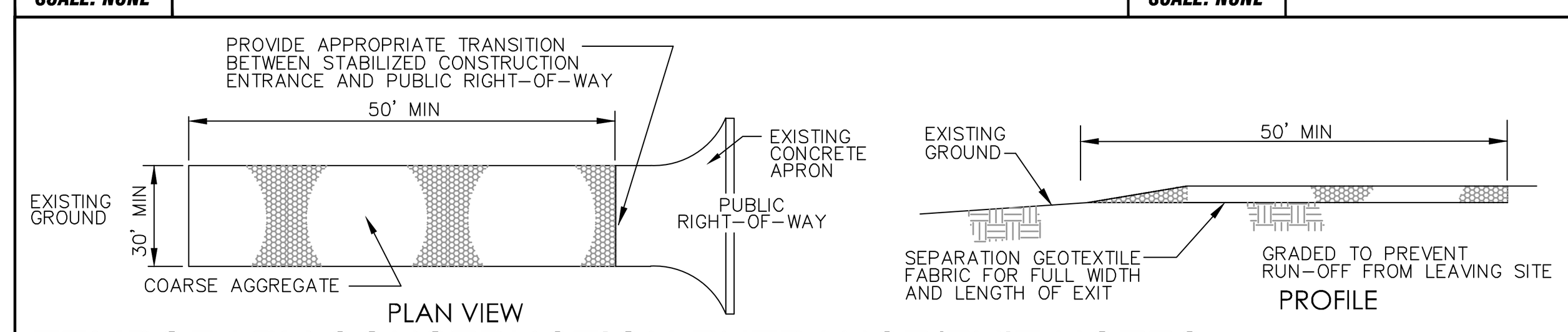


SILT FENCE NOTES

1. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC WIDTH SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN 2 , ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NO. 30.
2. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR Y-BAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM NOMINAL WEIGHT 1.25 LB/FT 2 , AND BRINDELL HARDNESS EXCEEDING 140.
3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12.5 GAUGE MINIMUM.
4. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 1 FOOT DEEP AND SPACED NOT MORE THAN 5 FEET ON CENTER.
5. LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS ¼ ACRE/100 FEET OF FENCE.
6. THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
7. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
8. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
9. SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
10. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES, OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE OLD FENCE.
11. REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.
12. 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.

4 — SILT FENCE DETAIL

SCALE: NONE

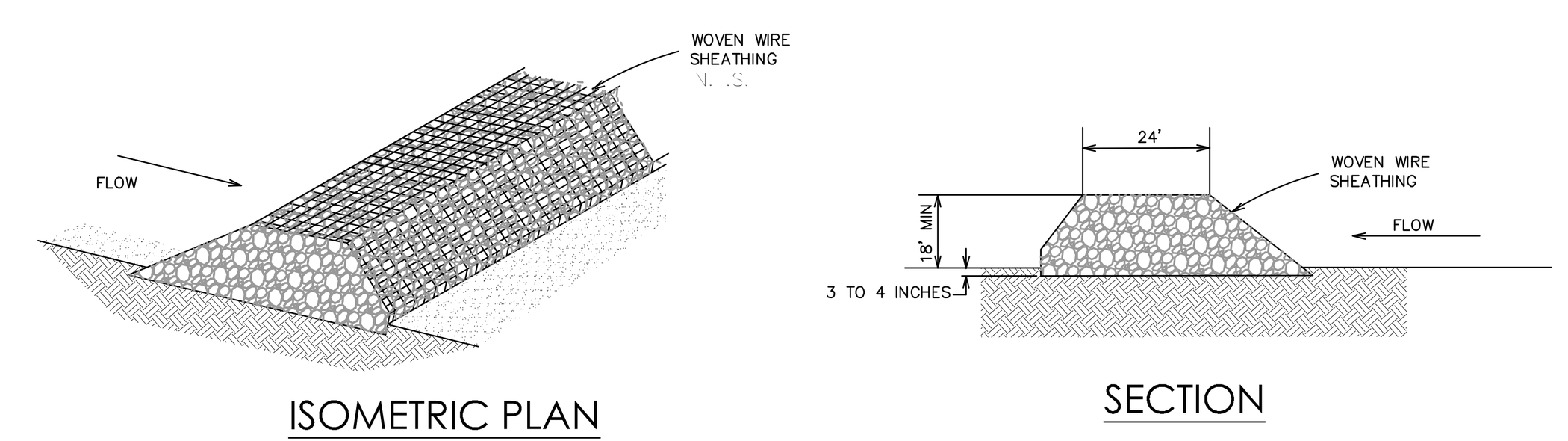


TEMPORARY CONSTRUCTION ENTRANCE/EXIT NOTES

1. THE AGGREGATE SHOULD CONSIST OF 4 TO 8 INCH WASHED STONE OVER A STABLE FOUNDATION.
2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8 INCHES.
3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD 2 , A MULLEN BURST RATING OF 140 LB/IN 2 , AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
4. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
5. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
6. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
7. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
8. PLACE STONE TO DIMENSIONS AND GRADE SHOWN. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
9. 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.
10. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON TO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
11. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
12. 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.
13. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE.

5 — STABILIZED CONSTRUCTION ENTRANCE / EXIT

SCALE: NONE

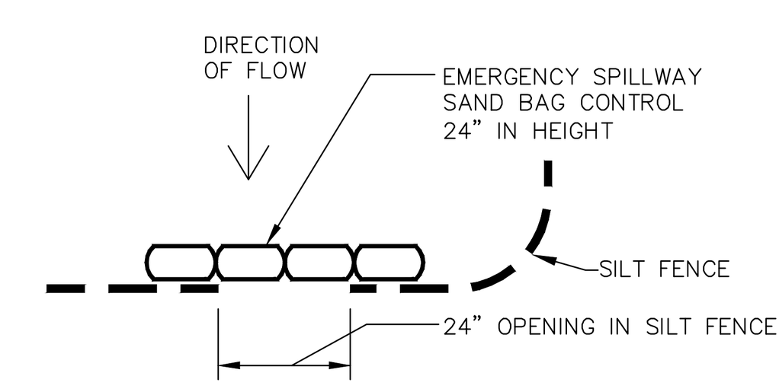


ROCK BERM NOTES

1. THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT RINGS.
2. CLEAN, OPEN GRADED 3 TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-TO 8-INCH DIAMETER ROCKS MAY BE USED.
3. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE.
4. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.
5. PLACE THE ROCK ALONG THE SHEATHING TO A HEIGHT NOT LESS THAN 18".
6. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.
7. BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.
8. THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.
9. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
10. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT OF IN AN APPROVED MANNER AND REPAIR ANY LOOSE WIRE SHEATHING.
11. 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.
12. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

6 — ROCK BERM

SCALE: NONE



7 — PLAN - SAND BAG CONTROL DETAIL

SCALE: NONE

REVISIONS

NO.	DATE	DESCRIPTION	BY

PROJ # | DGN. BY: | DWN. BY: | CHKD. BY: | DATE:

MTR
Moy Tarin Ramirez Engineers, LLC
· Engineers · Surveyors · Planners
TBPELS: ENGINEERING F-5297/SURVEYING F-10131500
12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249
TEL (210) 698-5051
FAX (210) 698-5085

STATE OF TEXAS — SEAN S. SMITH — 113308 — REGISTERED PROFESSIONAL ENGINEER — 3/8/24

CANYON LAKE HS 2023 FIELD DRIVEWAY RECONSTRUCTION

CONTRIBUTING ZONE SITE PLAN DETAILS

SHEET

C1.2

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: Sean Smith, P.E.

Date: 2/13/25

Signature of Customer/Agent:

Regulated Entity Name: CISD Canyon Lake High School

Project Information

1. County: Comal
2. Stream Basin: Lower Blanco River
3. Groundwater Conservation District (if applicable): Comal Trinity GCD
4. Customer (Applicant):

   Contact Person: Jeffrey Smith
   Entity: Comal Independent School District
   Mailing Address: 1404 IH 35 North
   City, State: New Braunfels, TX Zip: 78130-2817
   Telephone: (830) 221-2150 Fax: _____
   Email Address: jeffrey.smith@comalisd.org

5. Agent/Representative (If any):

Contact Person: Sean Smith, P.E.
Entity: Moy Tarin Ramirez Engineers, LLC
Mailing Address: 12770 Cimarron Path #100
City, State: San Antonio, TX Zip: 78249
Telephone: (210) 698-5051 Fax: (210) 698-5085
Email Address: ssmith@mtrengineers.com

6. Project Location:

☐ The project site is located inside the city limits of _____.
☐ The project site is located outside the city limits but inside the ETJ (extra-territorial jurisdiction) of _____.
☒ 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.

8555 FM 32, FISCHER, TX 78623; WEST OF THE INTERSECTION OF FM 32 AND FM 3424

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

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

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

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

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

11. Existing project site conditions are noted below:

☐ Existing commercial site
☐ Existing industrial site
☐ Existing residential site

☐ Existing paved and/or unpaved roads
☐ Undeveloped (Cleared)
☐ Undeveloped (Undisturbed/Not cleared)
☒ Other: Existing High School site

12. The type of project is:

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

13. Total project area (size of site): 88 Acres

Total disturbed area: 2.29 Acres

14. Estimated projected population: 1,112

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	332,772	÷ 43,560 =	7.64
Parking	636,925	÷ 43,560 =	14.62
Other paved surfaces	479,246	÷ 43,560 =	11.00
Total Impervious Cover	1,448,943	÷ 43,560 =	33.26

Total Impervious Cover 33.26 **÷ Total Acreage** 88.00 **X 100 =** 37.80**% Impervious Cover**

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

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

For Road Projects Only

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

☒ N/A

18. Type of project:

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

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

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

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

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

21. Pavement Area:

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

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

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

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

☐ N/A

26. Wastewater will be disposed of by:

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

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

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

☒ Sewage Collection System (Sewer Lines):

The sewage collection system will convey the wastewater to the Canyon Lake High School WWTP (WQ#0014533001) (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" = 100'.

35. 100-year floodplain boundaries:

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

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

    The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA PANEL 48091C0095F DATED 9/2/2009.

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.

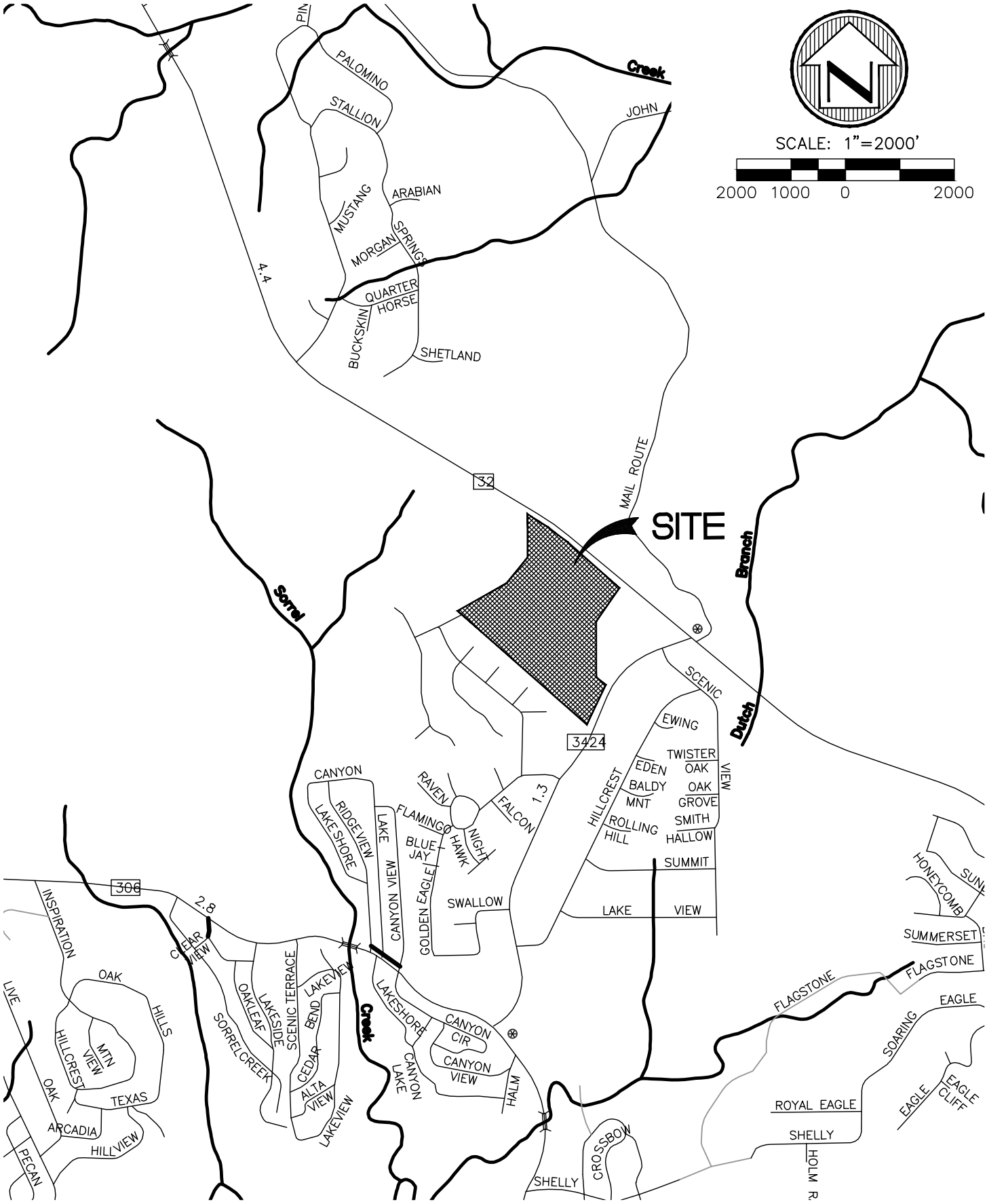
Administrative Information

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.



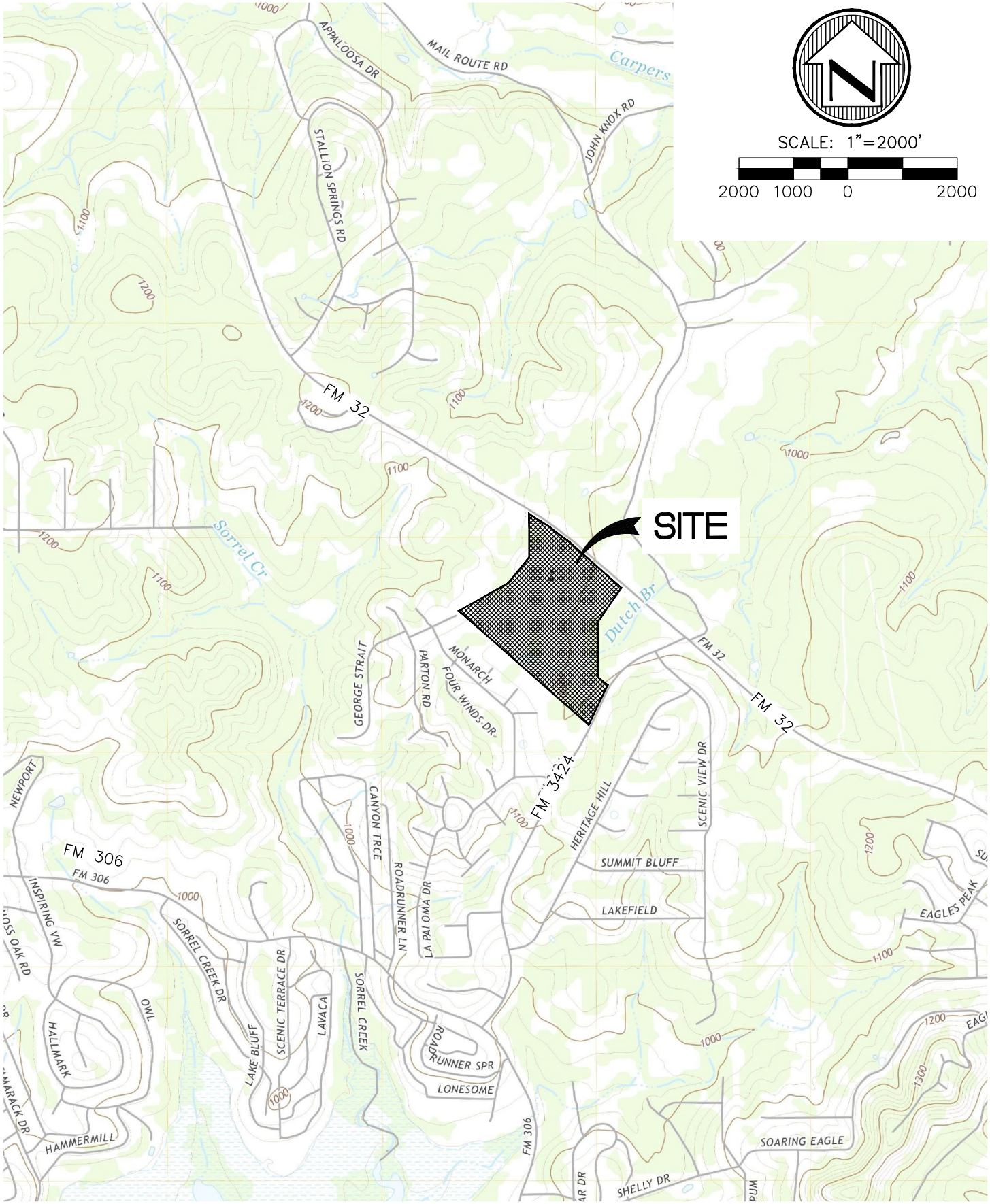
MTR
• Engineers
• Surveyors
• Planners
Moy Tarin Ramirez Engineers, LLC
TBPE F-5297 & TBPLS F-10131500
12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249
TEL: (210) 698-5051
FAX: (210) 698-5085

COMAL INDEPENDENT SCHOOL DISTRICT

CANYON LAKE HIGH SCHOOL

LOCATION MAP

DATE: FEBRUARY 2025



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COMAL INDEPENDENT SCHOOL DISTRICT

CANYON LAKE HIGH SCHOOL

USGS MAP - DEVIL'S BACKBONE QUADRANGLE

DATE: FEBRUARY 2025

ATTACHMENT C

PROJECT DESCRIPTION

The proposed project at Canyon Lake High School will include new buildings and new concrete flatwork.

The overall acreage of the Canyon Lake High School property is 88.00 acres and is located at 8555 Farm to Market 32, Fischer, TX 78623. The site is located in the Edwards Aquifer Contributing Zone. The current development consists of a high school with buildings, concrete sidewalks, asphalt parking, and sports fields.

The proposed impervious cover onsite will increase by approximately 0.19 acres. An existing concrete flatwork area west of the football field was previously unaccounted for in the TSS removal calculations. For treatment purposes, we are including this impervious cover in this modification as if it is new impervious cover. This brings the total site impervious cover to 33.26 acres, or 37.80%.

The following table summarizes the increase in impervious cover per item, similar to Item 15 Table 1 in the Contributing Zone Application document.

Summary of Increase in Impervious Cover		
Item	**Square Feet**	**Acres**
Roofs	3,624	0.08
Parking	0	0
Other Paved Surfaces	4,697	0.11
Total:	**8,321**	**0.19**

Treatment for the proposed impervious cover will be provided with a combination of new vegetative filter strips and a new JellyFish filter. The addition of the new concrete bleacher pad will result in the removal of a portion of the existing VFS, which removes treatment for approximately 0.02 acres of impervious cover. This 0.02 acres will be treated with the existing extended detention pond, while new VFS will be provided elsewhere on-site to treat 0.02 acres of impervious cover. As a result, the impervious cover treated by the extended detention basin is unchanged. By extension, the previously approved TSS removal calculations for the extended detention basin are also unchanged. See the attachment for on-site BMPs later in this application for a more in depth discussion of treatment of impervious cover.

The majority of the school site including the existing school buildings will remain undisturbed with this project.

ATTACHMENT D

FACTORS AFFECTING SURFACE WATER QUALITY

Factors impacting surface water quality include fertilizers, pesticides from landscaping, sediment from soil disturbances, leaf litter from tree removal, small amounts of oil grease from vehicular traffic, and suspended solids from the proposed impervious cover areas. These factors may cause suspended solids to enter into the storm water runoff and subsequently affect the surface water. However, temporary BMPs have been designed on the basis of the Technical Guidance Manual to treat the required amount of storm water runoff as to not adversely affect water quality entering into any surface water or groundwater.

ATTACHMENT E

VOLUME AND CHARACTER OF STORM WATER

Volume of Storm Water

Canyon Lake High School is located on the side of a small bluff with upgradient runoff flowing onto the site from the west and south. The majority of the flow from the west sheet flows and crosses the site at the southwest corner. The onsite flow is in a south easterly direction and exits the site at the southeast corner. The increase in impervious cover associated with the proposed project will only increase on-site impervious cover by 0.57% (0.19/33.07). Therefore, there should be a negligible impact to the existing flow conditions.

Character of Storm Water

Stormwater runoff will be generated from rooftops, parking areas, sidewalks, landscape, and field/pervious areas from the site. However, temporary BMPs have been designed, using the current Technical Guidance Manual, to treat stormwater as to not adversely affect water quality entering any surface water or groundwater. Permanent BMPs in the form of vegetative filter strips have also been incorporated into the design of the proposed development.

ATTACHMENT J

BMP'S FOR UPGRADIENT STORM WATER

Upgradient storm water enters the site along the northwest boundary and does not traverse impervious cover prior to entering the site. All storm water originating upgradient of the site will continue to naturally enter the site. The proposed construction will not impact the existing upgradient flows.

During construction, temporary BMP's consisting of silt fences and bagged gravel inlet filters will be utilized to alleviate sediment from leaving the site.

ATTACHMENT K

BMP'S FOR ON-SITE STORM WATER

During construction, temporary BMP's consisting of silt fences and bagged gravel inlet filters will be utilized to alleviate sediment from leaving the site.

The proposed improvements at Canyon Lake High School will result in a 0.19-acre increase in impervious cover, for a site total of 33.26 acres. Treatment for the increase in impervious cover from this project will be provided by the existing extended detention basin, new vegetative filter strips (VFS), and a new JellyFish Filter. The locations of the new VFS and JellyFish Filter are shown on sheet C1.1 of the CZP Site Plan.

The addition of the proposed concrete bleacher pad will result in the removal of VFS previously treating 0.02 acres of impervious cover. Combined with the proposed increase of 0.19 acres of impervious cover, this project must provide treatment for 0.21 acres of impervious cover. Proposed VFS will provide treatment for 0.04 acres of proposed impervious cover. The new JellyFish filter will treat 0.08 acres of proposed impervious cover and 0.09 acres of existing impervious cover previously treated by the extended detention basin. The remaining 0.09 acres of proposed impervious cover will then be treated by the extended detention basin, resulting in no change to the total impervious cover being treated by the extended detention basin. Accordingly, the previously approved TSS removal calculations for the basin still apply and are provided with this application.

While the overall impervious cover total on-site is 33.26 acres, treatment is only required for 33.12 acres since 0.14 acres of impervious cover is synthetic turf which provides equivalent water protection through an underdrain and liner system. The overall TSS removal requirement for 33.12 acres of impervious cover is 29,729 pounds. According to the calculations previously approved by TCEQ, the extended detention basin removes 20,850 pounds of TSS and the sand filter basin removes 7,083 pounds of TSS (this includes 710 pounds of overtreatment). An existing JellyFish removes 135 pounds of TSS. Existing vegetative filter strips remove 1,472 pounds of TSS. Of the remaining TSS removal requirement of 189 pounds, the new JellyFish Filter will remove 153 pounds, while the new VFS will remove 36 pounds. Ultimately, the total TSS removal provided on-site will be 29,729 pounds.

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: CLHS
Date Prepared: 2/11/2025

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

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

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

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

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

County =	Comal	
Total project area included in plan * =	88.00	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	33.12	acres
Total post-development impervious cover fraction * =	0.38	
P =	33	inches
$L_{M\ TOTAL\ PROJECT}$ =	29729	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 1

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	0.04	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.04	acres
Post-development impervious fraction within drainage basin/outfall area =	1.00	
$L_{M\ THIS\ BASIN}$ =	36	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 percent

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

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

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

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

A_C =	0.04	acres
A_I =	0.04	acres
A_P =	0.00	acres
L_R =	39	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 36 lbs.

F = 0.93

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

Contech Engineered Solutions Calculations for Texas Commission on Environmental Quality
TSS Removal Calculations

Project Name: **Canyon Lake High School**
Date Prepared: **1/15/2025**

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: $L_M = 27.2(A_N \times P)$

$L_{M\ TOTAL\ PROJECT}$ = 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 =	**Comal**	
Total project area included in plan * =	**0.19**	acres
Predevelopment impervious area within the limits of the plan * =	**0.00**	acres
Total post-development impervious area within the limits of the plan* =	**0.17**	acres
Total post-development impervious cover fraction * =	**0.89**	
P =	**33**	inches
$L_{M\ TOTAL\ PROJECT}$ =	**153**	lbs.
Number of drainage basins / outfalls areas leaving the plan area =	**1**	

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

Drainage Basin/Outfall Area No. =	**1**	
Total drainage basin/outfall area =	**0.19**	acres
Predevelopment impervious area within drainage basin/outfall area =	**0.00**	acres
Post-development impervious area within drainage basin/outfall area =	**0.17**	acres
Post-development impervious fraction within drainage basin/outfall area =	**0.89**	
$L_{M\ THIS\ BASIN}$ =	**153**	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =	**JF**	abbreviation
Removal efficiency =	**86**	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:
LR = (BMP efficiency) x P x (A_I x 34.6 + A_P x 0.54)

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

A_C =	**0.19**	acres
A_I =	**0.17**	acres
A_P =	**0.02**	acres
L_R =	**167**	lbs.

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

Desired $L_{M\ THIS\ BASIN}$ =	**153**	lbs.
F =	**0.91**	

6. Calculate Treated Flow required by the BMP Type for this drainage basin / outfall area.

Offsite area draining to BMP =	**0.00**	acres
Offsite impervious cover draining to BMP =	**0.00**	acres

Calculations from RG-348 Pages Section 3.2.22

Rainfall Intensity =	**1.15**	inches per hour
Effective Area =	**0.15**	acres
Cartridge Length =	**54**	inches
Peak Treatment Flow Required =	**0.18**	cubic feet per second

7. Jellyfish

Designed as Required in RG-348 Section 3.2.22

Flow Through Jellyfish Size	**Vault**	
Jellyfish Size for Flow-Based Configuration =	**JFPD0406-1-1**	
Jellyfish Treatment Flow Rate =	**0.27**	cfs

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: CISD Canyon Lake HS
Date Prepared: 11/1/2016

Additional information is provided for cells with a red triangle in the upper right corner. Place the cursor over the cell.
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1. The Requirad 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 =	Comal	
Total project area included in plan * =	88.00	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan * =	31.12	acres
Total post-development impervious cover fraction * =	0.35	
P =	33	inches
$L_{M\ TOTAL\ PROJECT}$ =	27933	lbs.

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

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

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

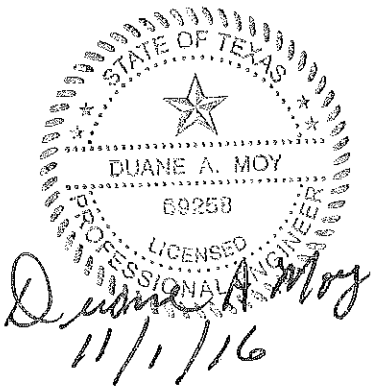
Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	52.92	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	24.02	acres
Post-development impervious fraction within drainage basin/outfall area =	0.45	
$L_{M\ THIS\ BASIN}$ =	21560	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Extended Detention
Removal efficiency = 75 percent

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



Duane A. Moy, P.E.
11/1/16

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 =	52.92	acres
A_I =	24.02	acres
A_P =	28.90	acres
L_R =	20956	lbs

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

Desired $L_{M\ THIS\ BASIN}$ =	20850	lbs.
F =	0.99	

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 =	3.66	inches
Post Development Runoff Coefficient =	0.33	
On-site Water Quality Volume =	234318	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 =	46863	
Total Capture Volume (required water quality volume(s) x 1.20) =	281180	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.

7. Retention/Irrigation System Designed as Required in RG-348 Pages 3-42 to 3-46

Required Water Quality Volume for retention basin =	NA	cubic feet

Irrigation Area Calculations:

Soil infiltration/permeability rate =	0.1	in/hr	Enter determined permeability rate or assumed value of 0.1
Irrigation area =	NA	square feet	
	NA	acres	

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

Required Water Quality Volume for extended detention basin =	281180	cubic feet

Construction Plans

GENERAL NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO BEGINNING WORK.
2. ALL WASTE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND IT SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE SITE TO A STATE LICENSED LANDFILL. CONTRACTOR WILL BE REQUIRED TO PROVIDE DOCUMENTATION WHERE DISPOSED MATERIAL IS TAKEN TO. THE OWNER WILL NOT BE HELD LIABLE FOR ANY ON-SITE WASTE MATERIAL. CONTRACTOR SHALL NOT ALLOW THE ACCUMULATION OF DEMOLISHED WASTE MATERIAL ON-SITE.
3. CONTRACTOR IS REQUIRED TO SET AND VERIFY ALL PROJECT ELEVATIONS PRIOR TO THE START OF CONSTRUCTION. "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY THE SAME MATERIALS AS WELL AS VERTICAL AND HORIZONTAL ALIGNMENT.
4. GENERAL CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSION & GRADE CONDITIONS (BOTH NEW AND EXISTING). HE SHALL REPORT ANY DISCREPANCIES TO THE PROJECT ENGINEER BEFORE PROCEEDING WITH ANY PHASE OF THE WORK AS HE WILL BE RESPONSIBLE FOR ALL WORK AS INTENDED BY THE DRAWINGS AND SPECIFICATIONS.
5. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY.
6. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AT A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS IN AND AROUND TRENCH EXCAVATION.
7. PRIOR TO START OF CONSTRUCTION THE CONTRACTOR SHALL COMPLY WITH THE SEDIMENTATION AND EROSION CONTROL PLANS AND SHALL SUBMIT NOTIFICATIONS AND PAY ALL PERMITS.
8. BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND GENERALLY BE LOCATED TO AFFORD MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT AND TO ASSURE AN EXPEDITIOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION.
9. THE RESPONSIBILITY OF THE ARCHITECT/ENGINEER OR OWNER, TO CONDUCT CONSTRUCTION REVIEW OR OBSERVATION OF THE CONTRACTORS PERFORMANCE IS NOT INTENDED TO REVIEW THE ADEQUACY OF THE CONTRACTORS SAFETY MEASURES IN OR NEAR THE CONSTRUCTION SITE.
10. ANY EXISTING IMPROVEMENTS AND/OR UTILITIES REMOVED, DAMAGED OR UNDERCUT BY CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE PROJECT ARCHITECT AT THE CONTRACTOR'S EXPENSE.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION, ANY DAMAGES DONE TO EXISTING FENCES, CURBS, CONCRETE DRIVEWAYS, SIDEWALK STRUCTURES AND PAVEMENT, UTILITY BOXES/VALVES, ETC. THAT ARE NOT INDICATED TO BE REMOVED. AN INVENTORY OF EXISTING CONDITIONS SHALL BE CONDUCTED WITH THE CONTRACTOR AND OWNER PRIOR TO DEMOLITION.
12. CONTRACTOR SHALL MAINTAIN CONTINUAL ALL UTILITY SERVICES (GAS, TELE, CATV, ELEC., WATER, SEWER, STORM SEWER, ETC.) TO EXISTING FACILITIES AND BUILDINGS. WHERE CONSTRUCTION IS IN THE PROXIMITY OF A UTILITY, THE CONTRACTOR WILL TAKE PRECAUTION TO PROTECT AND/OR SUPPORT THE UTILITY.
13. CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE PROJECT ENGINEER BEFORE PROCEEDING WITH ANY PHASE OF THE WORK. THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVE GROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED DURING CONSTRUCTION. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY PURVEYORS DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED.
14. NOTIFY OWNER 72 HOURS IN ADVANCE OF ANY UTILITY SHUTDOWN.
15. ADJUST ALL EXISTING VALVES & UTILITIES TO REMAIN TO FINISH GRADE. REFERENCE DEMOLITION, GRADING, & UTILITY PLANS.
16. CONTRACTOR SHALL COORDINATE ALL DEMOLITION/CONSTRUCTION ACTIVITIES WITH OTHER DISCIPLINES AS REQUIRED.
17. CONTRACTOR SHALL COORDINATE UTILITY DEMOLITION WITH UTILITY PLANS.
18. CONTRACTOR IS RESPONSIBLE FOR CLEARING THE ALIGNMENT FOR ALL NEW FENCING. CLEARING TO INCLUDE ALL VEGETATION, TREE LIMBS, AND SHRUBS WITHIN 5' OF NEW FENCE ALIGNMENT ON EACH SIDE. COORDINATE WITH LANDSCAPE/TREE PRESERVATION PLANS AS NEEDED, IF APPLICABLE.
19. CONTRACTOR SHALL IMMEDIATELY REMOVE ALL WATER FROM EXCAVATIONS FOLLOWING RAIN EVENTS. NO STANDING WATER WILL BE ALLOWED IN EXCAVATIONS.
20. CONTRACTOR TO REFERENCE LANDSCAPE PLANS FOR THE REMOVAL OF EXISTING TREES AND THE PROTECTION/PRESERVATION OF EXISTING TREES TO REMAIN, IF APPLICABLE.
21. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL SILT FROM THE DRAINAGE SYSTEM AND FLUSH ALL STORM DRAINS AND CHANNELS PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.
22. CONTRACTOR IS TO TELEVISE ALL HDPE PIPE INSTALLATION PRIOR TO FINAL ACCEPTANCE.
23. AFTER CONSTRUCTION IS COMPLETED, THE CONTRACTOR SHALL STABILIZE ALL DISTURBED SOIL AREAS IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN AND RE-SOD DISTURBED SOIL AREAS WITH BERMUDA SODDING OR HYDROMULCH TO MATCH CONDITIONS PRIOR TO CONSTRUCTION, OR AS OTHERWISE SPECIFIED BY THE LANDSCAPE ARCHITECT.

STORM DRAINAGE NOTES:

1. CLEAR COVER FOR REINFORCEMENT STEEL IS 2" UNLESS OTHERWISE NOTED.
2. MATERIAL SPECIFICATIONS:
   A. CONCRETE/CONCRETE RIPRAP: CLASS A 3000 PSI (28-DAY STRENGTH) UNLESS OTHERWISE NOTED ON PLANS.
   B. REINFORCING STEEL: CONFORM TO A.S.T.M. A-615, GRADE 60 (2" CLEAR COVER UNLESS OTHERWISE NOTED ON PLANS)
   C. PIPE RAILING: CONFORM TO A.S.T.M. A-53, GRADE B, OR A-501
3. STORM SEWER PIPE MATERIAL SPECIFICATIONS: PIPE MATERIAL SHALL BE AS NOTED ON DRAINAGE PLANS. WHEN SPECIFIED:
   A. REINFORCED CONCRETE PIPE (RCP) CLASS III, UNLESS OTHERWISE SPECIFIED ON PLAN.
   B. PRECAST BOX CULVERT OLDCASTLE PRECAST TYPE I OR EQUAL APPROVED BY ENGINEER.
   C. POLYVINYL CHLORIDE (PVC) PIPE SHALL BE SDR 26 (115 PSI)
   D. ALUMINIZED STEEL (AS)
      a. CORRUGATIONS: $\frac{3}{4}$"X$\frac{3}{4}$"X7-1/2" HELICAL CORRUGATIONS PER ASSHTO M-36, TYPE IR (ASTM A-760)
      b. MATERIAL: ALUMINIZED TYPE 2 STEEL PER AASHTO M-274 (ASTM A-819)
      c. JOINT: HUGGER BANDS WITH TECHNO ANGLES. CONTRACTOR TO PROVIDE 5-C BANDS WITH BAR BOLT AND STRAP CONNECTION.
      d. THICKNESS: 0.064" (16 GAUGE).
   E. HDPE STORM PIPE TO BE ADS DUAL WALL PIPE N-12 OR APPROVED EQUAL.
4. ALL STORM SEWER INLET GRATES SHALL BE GALVANIZED.
5. CONCRETE COLLARS SHALL BE PROVIDED ON ALL STORM DRAIN TO JUNCTION BOX/GRATE INLET CONNECTIONS. REFERENCE DETAILS.
6. GROUT INVERTS OF ALL JUNCTION BOXES AND GRATE INLETS TO DRAIN.
7. JUNCTION BOXES SHALL HAVE MANHOLES FOR ACCESS WITH BOLTED MANHOLE LIDS.
8. ALL DRAINAGE STRUCTURES, LIDS AND GRATES SHALL BE RATED FOR H20 LOADING.
9. ALL PIPE TRENCHES SHALL CONTAIN FILTER FABRIC BETWEEN THE INITIAL AND SECONDARY BACKFILL. REFERENCE DETAILS AND SPECIFICATIONS FOR CONSTRUCTION REQUIREMENTS.
10. PROVIDE CONCRETE APRONS AROUND ALL INLETS NOT IN PAVEMENT AREAS AS PER CIVIL DETAILS.
11. ALL CONCRETE STORM DRAIN STRUCTURES TO HAVE A 32" CLEAR OPENING FOR ACCESS. CONTRACTOR TO PROVIDE CORRESPONDING LID AND FRAME TO PROVIDE 32" CLEAR OPENING.
12. ALL CURB INLETS TO BE INSTALLED WITH STEEL ARMOR AT THE CURB OPENING.
13. PROVIDE ECCENTRIC REDUCERS ON SDR 26 PVC/HDPE STORM PIPE WHERE PIPE DIAMETERS INCREASE IN SIZE.

PAINT SPECFICATION

THE PAVEMENT MARKING PAINT TO BE USED ON THIS PROJECT WILL BE GORILLA HI-PERFORMANCE ACRYLIC ZONE MARKING PAINT FROM AEXCEL OR APPROVED EQUAL. WHITE PAINT 22W-E008, LEAD-FREE YELLOW 22Y-E006, BLUE PAINT 22L-E004, BLACK 22A-E001. RED PAINT TO BE ENNIS-FLINT EF SERIES LOW VOC SOLVENT BASED TRAFFIC PAINT PRODUCT CODE: 9855154 OR APPROVED EQUAL.

SURFACE PREPARATION: SURFACES WILL BE CLEAN, DAY AND FREE FROM LOOSE OR PEELING SURFACES. DO NOT APPLY WHEN AIR TEMPERATURES ARE BELOW 50DEG. F. OR WHEN THE RELATIVE HUMIDITY EXCEEDS 85%, OR WHEN THE TEMPERATURE FALLS BELOW THE DEW POINT. IT IS RECOMMENDED TO PLACE AN INCONSPICUOUS TEST STRIP TO DETERMINE IF THE NEW ASPHALT SURFACES HAVE CURED SUFFICIENTLY TO PAINT. WAIT 24 HOURS AFTER A RAIN TO PAINT ASPHALT SURFACES.

APPLICATION RATES: APPLY PAINT AT FILM THICKNESS AND SPREADING RATE AS RECOMMENDED BY THE PAINT SUPPLIER. ALL OF THE NEW ASPHALT SURFACES WILL BE PAINTED WITH TWO (2) COATS OF 15.0 MILS WET, 8.0 MILS DRY. THE FIRST COAT MUST BE COMPLETELY DRY BEFORE THE SECOND COAT IS APPLIED. WAIT A MINIMUM OF 48 HOURS BETWEEN THE ASPHALT PLACEMENT/SEAL COAT AND THE PERMANENT TRAFFIC STRIPING AND MARKINGS.

IF 48 HOURS CANNOT BE ACHIEVED CONTRACTOR TO PROVIDE TWO (2) ADDITIONAL COATS OF 15.0 MILS WET, 8.0 MILS DRY 10 DAYS AFTER INITIAL PLACEMENT AT NO ADDITIONAL COST TO THE OWNER. THE ADDITIONAL COATS ARE TO BE COORDINATED WITH THE OWNER AND WILL NOT DISRUPT OPERATIONS.

TREE PROTECTION NOTES:

1. ALL PROTECTED SIZE TREES AFFECTED BY CONSTRUCTION SHALL HAVE THE LIMBS AND ROOTS TRIMMED AND PRUNED ACCORDING TO ITEM No. 802. (TREE PRUNING, SOIL AMENDING AND FERTILIZATION), UNLESS SPECIFIED TREES SHALL RECEIVE LEVEL 1 PROTECTION AS PER ITEM No. 801. (TREE AND LANDSCAPE PROTECTION) AND AS DETAILED IN 1.1.2.
2. ALL TREES SHALL REMAIN UNLESS NOTED ON THE CITY APPROVED PLANS.
3. NO SITE PREPARATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND PROTECTION MEASURES HAVE NOT BEEN COMPLETED AND APPROVED BY THE CITY ARBORIST OFFICE.
4. TREE PROTECTION FENCING SHALL BE MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION.
5. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN THREE INCHES (3") IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN THE VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR IF ROOTS LARGER THAN THREE INCHES (3") WITHIN THE FIVE FOOT (5') ROOT PROTECTION ZONE NEED TO BE PRUNED.
6. THE ROOT PROTECTION ZONE IS THAT AREA SURROUNDING A TREE, AS MEASURED BY A RADIUS FROM THE TREE TRUNK, IN WHICH NO EQUIPMENT, VEHICLES OR MATERIALS MAY OPERATE OR BE STORED. THE REQUIRED RADIUS LENGTH IS ONE FOOT (1') PER DIAMETER INCH OF THE TREE. FOR EXAMPLE, A TEN INCH (10") DIAMETER TREE WOULD HAVE A TEN FOOT (10') RADIUS ROOT PROTECTION ZONE AROUND THE TREE. ROOTS OR BRANCHES THAT ARE IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS, OUTLINED BELOW. All OAK WOUNDS SHALL BE PAINTED OVER, WITHIN TWENTY (20) MINUTES TO PREVENT OAK WILT.
   A. CONTRACTOR TO REMOVE SECTION OF ROOT BY CUTTING WITH A HAND SAW OR RECIPROCATING SAW (CLEAN-SHARP BLADE). APPLY TREE-PRUNING SEALER TO END OF THE LIVE ROOT. BACKFILL THE AREA WITH QUALITY 4-WAY LANDSCAPER MIX AND HAND TAMP. DRENCH AND SATURATE IMPACTED AREA WITH WATER MIXED WITH SUPER-THRIVE AND ALLOW MIXTURE TO COMPLETELY PERCOLATE INTO THE SOIL. AFTER AREA AROUND ROOT HAS BEEN ADDRESS AND SATURATED, APPLY LANDSCAPE MULCH AROUND THE ENTIRE BASE OF THE TREE AND TREAT ENTIRE BASE OF TREE WITH SUPER-THRIVE APPLICATION AND WATERING.
7. NO DISTURBANCE SHALL OCCUR CLOSER TO THE TRUNK THAN HALF THE ROOT PROTECTION ZONE AREA.
8. TREES, SHRUBS OR BUSHES TO BE CLEARED FROM PROTECTED ROOT ZONE AREAS SHALL BE REMOVED BY HAND.
9. TREES DAMAGED OR LOST DUE TO CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED.
10. EXPOSED ROOTS SHALL BE COVERED AT THE END OF EACH DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH OR WET BURLAP.
11. ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST OFFICE PRIOR TO ITS REMOVAL.

LANDSCAPE NOTES:

PROVIDE 4" OF APPROVED TOPSOIL ALONG WITH SOLID SOD (BERMUDA TIF 419) ON ALL AREAS SHOWN TO RECEIVE SOLID SOD. CONTRACTOR TO NOTIFY ENGINEER PRIOR TO SOD PLACEMENT TO VERIFY TOPSOIL DEPTH.

PROVIDE 4" OF APPROVED TOPSOIL ON ALL OTHER AREAS DISTURBED BY REGRADING / CONSTRUCTION ACTIVITIES ALONG WITH GRASS HYDROMULCH.

TOPSOIL TO BE NEWEARTH ENRICHED TOPSOIL, OR APPROVED EQUAL.

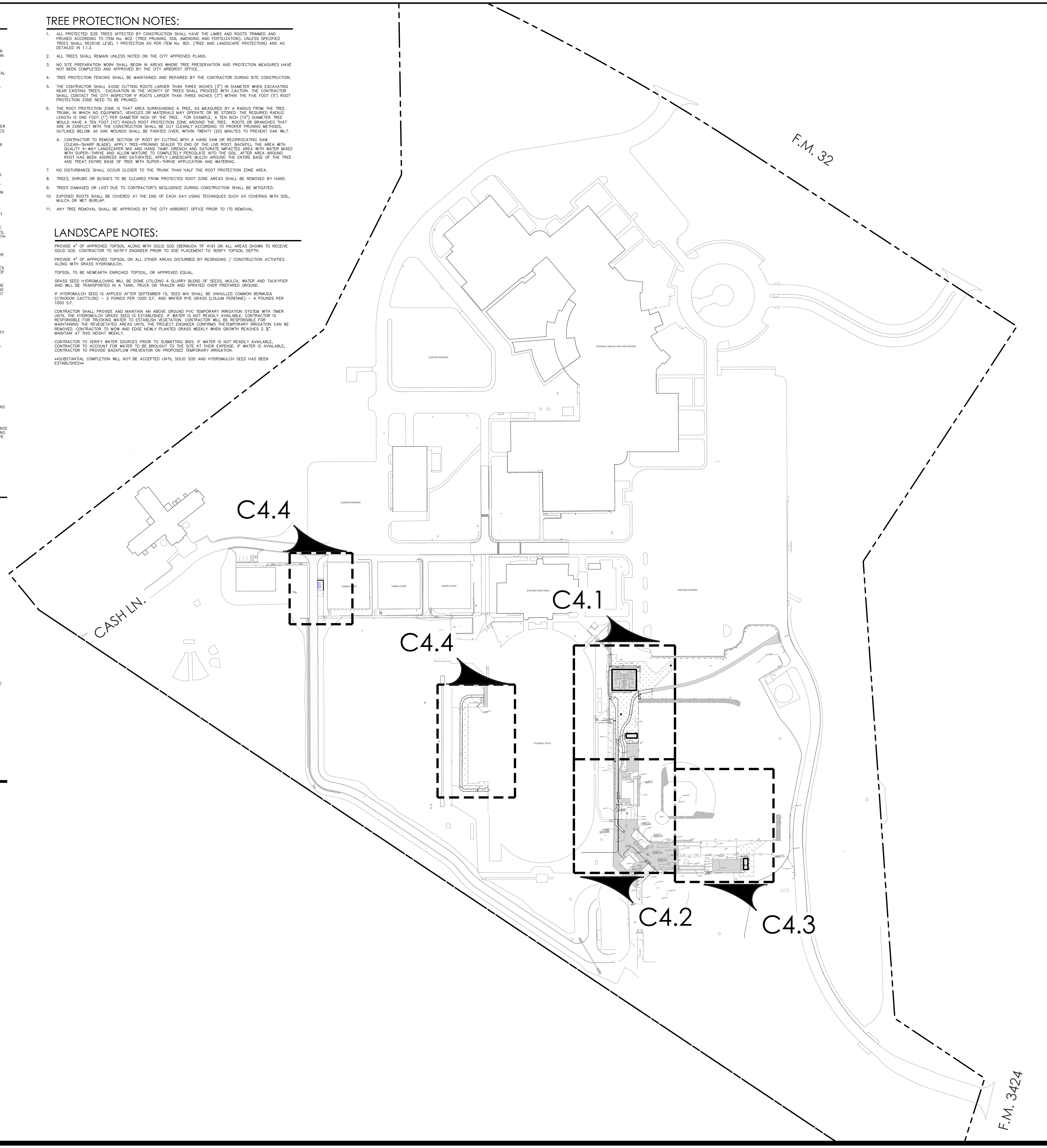
GRASS SEED HYDROMULCHING WILL BE DONE UTILIZING A SLURRY BLEND OF SEEDS, MULCH, WATER AND TACKYFIER AND WILL BE TRANSPORTED IN A TANK, TRUCK OR TRAILER AND SPRAYED OVER PREPARED GROUND.

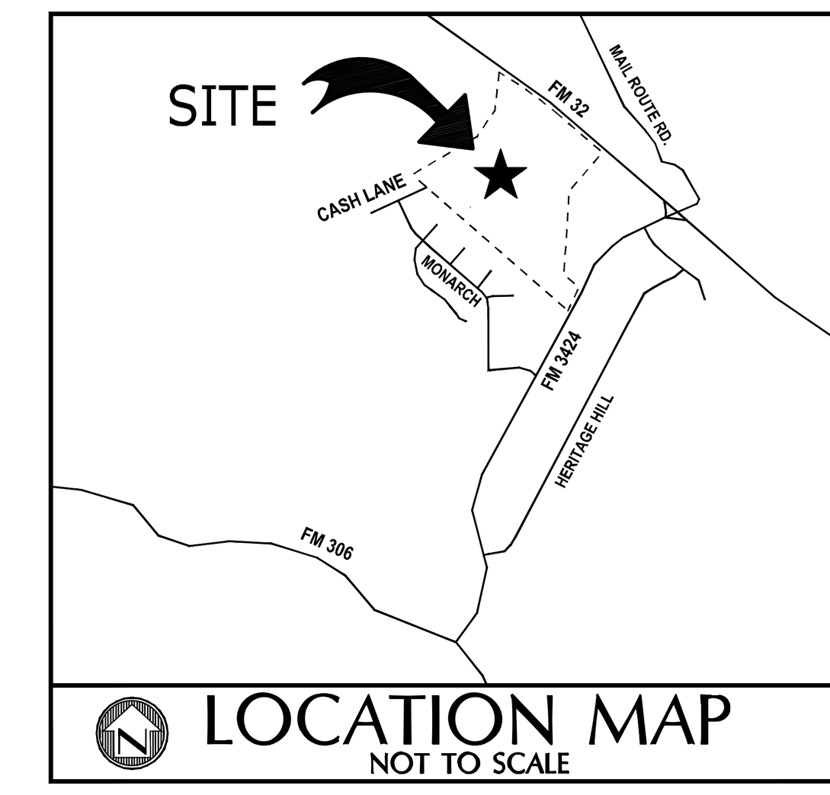
IF HYDROMULCH SEED IS APPLIED AFTER SEPTEMBER 15, SEED MIX SHALL BE UNHULLED COMMON BERMUDA (CYNODON CACTYLON) - 2 POINDS PER 1000 S.F. AND WINTER RYE GRASS (LOLIUM PERENNE) - 4 POUNDS PER 1000 S.F.

CONTRACTOR SHALL PROVIDE AND MAINTAIN AN ABOVE GROUND PVC TEMPORARY IRRIGATION SYSTEM WITH TIMER UNTIL THE HYDROMULCH GRASS SEED IS ESTABLISHED. IF WATER IS NOT READILY AVAILABLE, CONTRACTOR IS RESPONSIBLE FOR TRUCKING WATER TO ESTABLISH VEGETATION. CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING THE REVEGETATED AREAS UNTIL THE PROJECT ENGINEER CONFIRMS THETEMPORARY IRRIGATION CAN BE REMOVED. CONTRACTOR TO MOW AND EDGE NEWLY PLANTED GRASS WEEKLY WHEN GROWTH REACHES 2 ½". MAINTAIN AT THIS HEIGHT WEEKLY.

CONTRACTOR TO VERIFY WATER SOURCES PRIOR TO SUBMITTING BIDS. IF WATER IS NOT READILY AVAILABLE, CONTRACTOR TO ACCOUNT FOR WATER TO BE BROUGHT TO THE SITE AT THEIR EXPENSE. IF WATER IS AVAILABLE, CONTRACTOR TO PROVIDE BACKFLOW PREVENTOR ON PROPOSED TEMPORARY IRRIGATION.

SUBSTANTIAL COMPLETION WILL NOT BE ACCEPTED UNTIL SOLID SOD AND HYDROMULCH SEED HAS BEEN ESTABLISHED





LOCATION MAP

NOT TO SCALE

SCALE: 1"=100'

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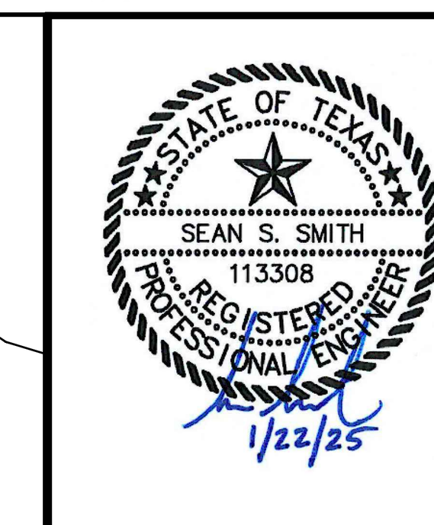

LEGEND

(line symbol)	PROPERTY LINE
(hatch)	NEW CONCRETE FLATWORK
(hatch)	NEW LIGHT-DUTY ASPHALT
(hatch)	NEW HEAVY-DUTY ASPHALT
(hatch)	NEW CONCRETE PAVEMENT
(hatch)	EXISTING CONCRETE TO REMAIN
(hatch)	NEW SOD
802.00	EXISTING SPOT ELEVATION
(802.00)+	PROPOSED SPOT ELEVATION
-802-	EXISTING CONTOUR
802	PROPOSED CONTOUR
(line symbol)	GRADE BREAK
(line symbol)	CHAIN LINK FENCE
(line symbol)	ORNAMENTAL FENCE
(line symbol)	WOODEN FENCE
(line symbol)	WIRE FENCE
(line symbol)	FLOW LINE
RCP	REINFORCED CONCRETE
PVC	PIPE POLYVINYL CHLORIDE INVERT
INV	ELEVATION OF PIPE
TW	TOP OF WALL ELEVATION
BW	BOTTOM OF WALL ELEVATION
TOP	TOP OF MANHOLE ELEVATION
TOG	TOP OF GRATE ELEVATION
TC	TOP OF CURB
G	GUTTER
SW	TOP OF SIDEWALK
NG	NATURAL GROUND
ESM'T	EASEMENT
ROW	RIGHT OF WAY
HP	HIGH POINT
E.G.T.CATV	ELECTRIC, GAS, TELEPHONE & CABLE T.V
(symbol)	SIDEWALK RAMP
(symbol)	DRAINAGE FLOW ARROW
(symbol)	PROPOSED TRAFFIC SIGN

Revision / Date

Project: CANYON LAKE HIGH SCHOOL BATTING CAGES AND LOCKER ROOMS
FOR
COMAL ISD
8555 FM 32, FISCHER, TEXAS 78623

MTR
· Engineers · Surveyors · Planners
Moy Tarin Ramirez Engineers, LLC
FIRM TBPE NO. F-5297 & TBPLS NO. 10131500
12770 CIMARRON PATH, SUITE 100
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OVERALL SITE GRADING PLAN

PACKAGE 2

Job No.	Sheet No.
1957-04-04	C4.0
Drawn By: HC	
Date: 11/26/24	

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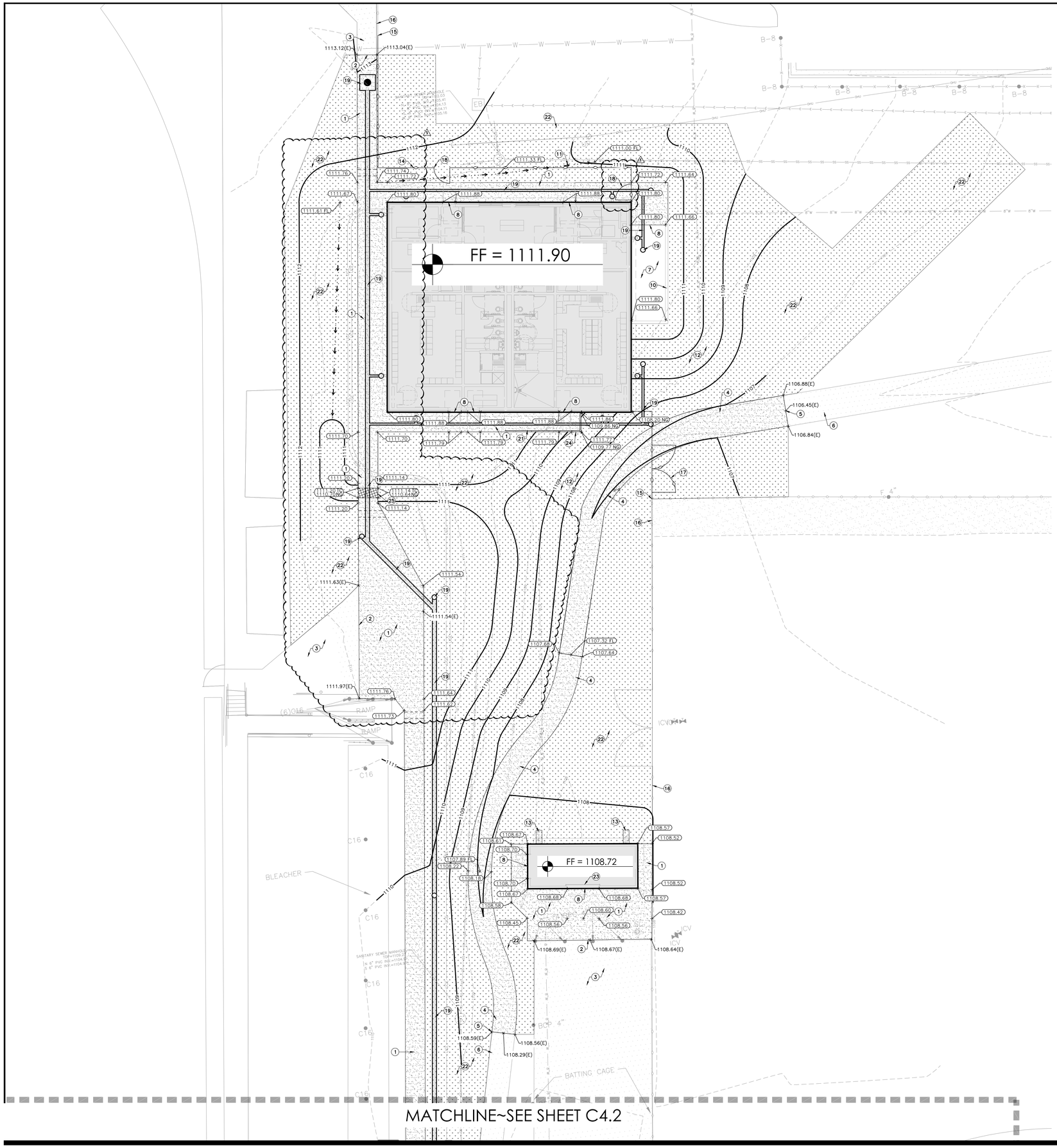

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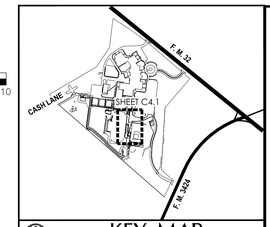

KEY MAP
NOT TO SCALE

GRADING KEYNOTES

1. NEW CONCRETE SIDEWALK/FLATWORK. REFERENCE DETAIL NO. 1, SHEET C8.0.
2. NEW CONCRETE SIDEWALK/FLATWORK TO MATCH EXISTING. PROVIDE EXPANSION JOINT AND DOWEL BARS AT JUNCTURE PER DETAIL NO. 16, SHEET C8.0.
3. EXISTING CONCRETE SIDEWALK/FLATWORK TO REMAIN IN PLACE.
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10. NEW WALL WITH DRAINAGE WEEPS. REFERENCE ARCHITECTURAL PLANS FOR DIRECTION.
11. GRADE AREA TO DRAIN.
12. GRADE AREA AT A 5:1 MAXIMUM SLOPE.
13. NEW CAST-IN-PLACE CONCRETE DOWNSPOUT SPLASH BLOCK. REFERENCE DETAIL NO. 7, SHEET C8.0.
14. NEW 6' CHAIN-LINK FENCING. REFERENCE DETAIL NO. 1, SHEET C8.1.
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19. NEW STORM PIPE/STRUCTURE. REFERENCE DRAINAGE PLAN.
20. NEW 4 ROW ALUMINUM BLEACHERS. KAY PARK REC. PART NO. BLA4A15 OR APPROVED EQUAL.
21. NEW HANDRAIL. REFERENCE DETAIL NO. 1, SHEET C8.2.
22. NEW SOLID SOD. REFERENCE LANDSCAPE NOTES, SHEET C4.0.
23. CONTRACTOR TO PROVIDE 1/2" DROP OUTSIDE OF ROLL UP DOORS. REFERENCE ARCHITECTURAL PLANS FOR DOORS.
24. CONTRACTOR TO PROVIDE THICKENED EDGE ON CONCRETE FLATWORK. REFERENCE DETAIL NO. 1E, SHEET C8.0
25. NEW SIDEWALK DRAIN WITH ADJACENT THICKENED EDGE. REFERENCE DETAIL NO. 5, SHEET C8.0 AND DETAIL NO. 1E, SHEET C8.0.

LEGEND

- PROPERTY LINE
- NEW CONCRETE FLATWORK
- NEW LIGHT-DUTY ASPHALT
- NEW HEAVY-DUTY ASPHALT
- NEW CONCRETE PAVEMENT
- EXISTING CONCRETE TO REMAIN
- NEW SOD
- 802.00 EXISTING SPOT ELEVATION
- (802.00)+ PROPOSED SPOT ELEVATION
- 802 EXISTING CONTOUR
- 802 PROPOSED CONTOUR
- GRADE BREAK
- CHAIN LINK FENCE
- ORNAMENTAL FENCE
- WOODEN FENCE
- WIRE FENCE
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- DRAINAGE FLOW ARROW
- PROPOSED TRAFFIC SIGN

STATE OF TEXAS
SEAN S. SMITH
113308
REGISTERED PROFESSIONAL ENGINEER
2/13/25

Revision / ADDENDUM #	Date
1	2/13/25

Project:

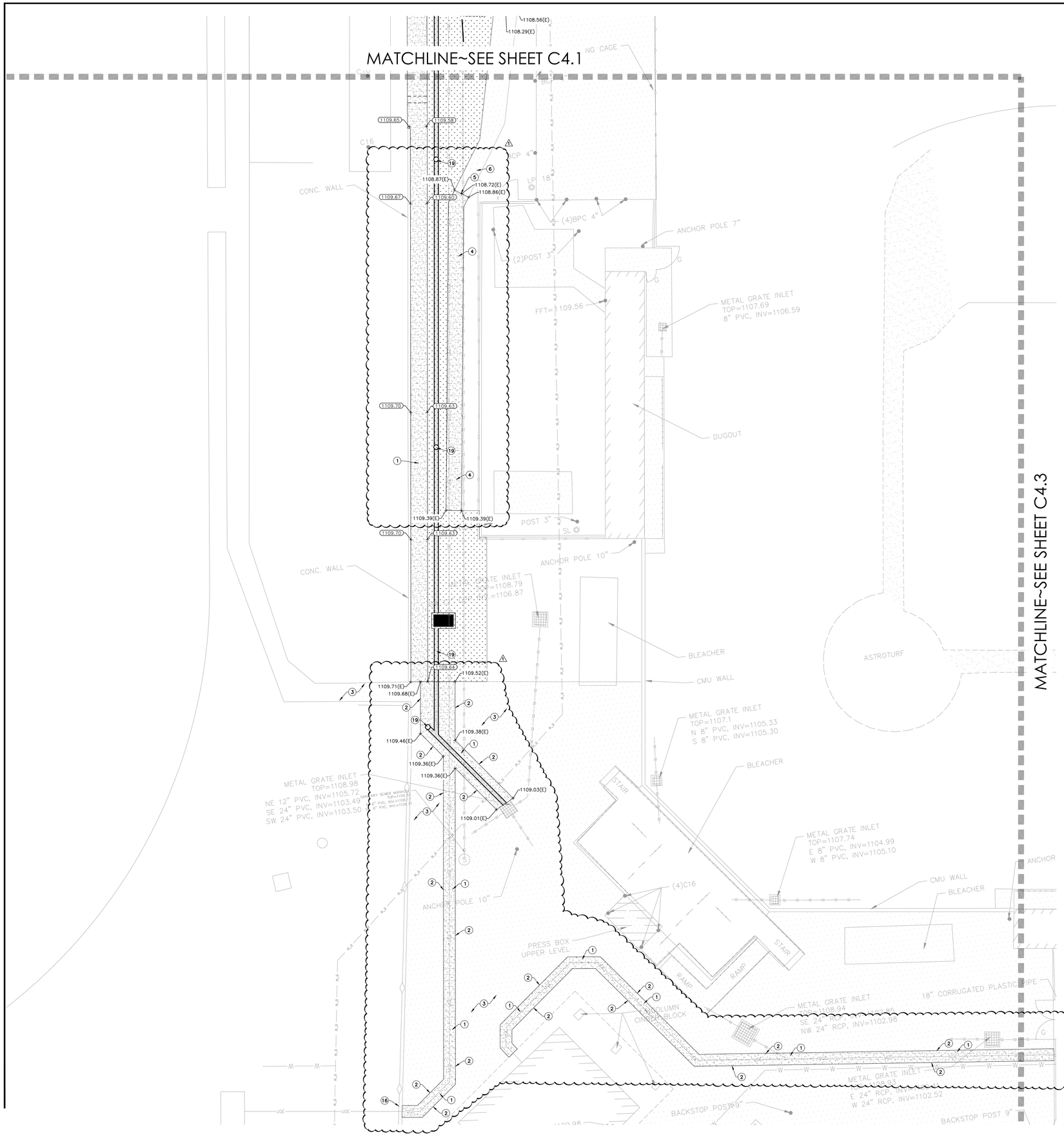
CANYON LAKE HIGH SCHOOL BATTING CAGES AND LOCKER ROOMS
FOR
COMAL ISD
8555 FM 32, FISCHER, TEXAS 78623

Moy Tarin Ramirez Engineers, LLC
• Engineers
• Surveyors
• Planners
FIRM TBPE NO. F-5297 & TBPLS NO. 10131500
12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249
TEL: (210) 698-5050
FAX: (210) 698-5055

SITE GRADING PLAN

PACKAGE 2

Job No.	Sheet No.
1957-04-04	C4.1R1
Drawn By: HC	
Date: 11/26/24	



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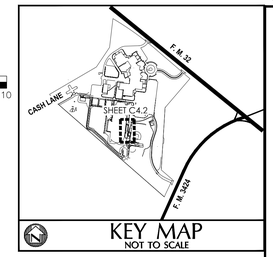

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11. GRADE AREA TO DRAIN.
12. GRADE AREA AT A 5:1 MAXIMUM SLOPE.
13. NEW CAST-IN-PLACE CONCRETE DOWNSPOUT SPLASH BLOCK. REFERENCE DETAIL NO. 7, SHEET C8.0.
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SITE GRADING PLAN

PACKAGE 2

Job No.	Sheet No.
1957-04-04	C4.2R1
Drawn By: HC	
Date: 11/26/24	

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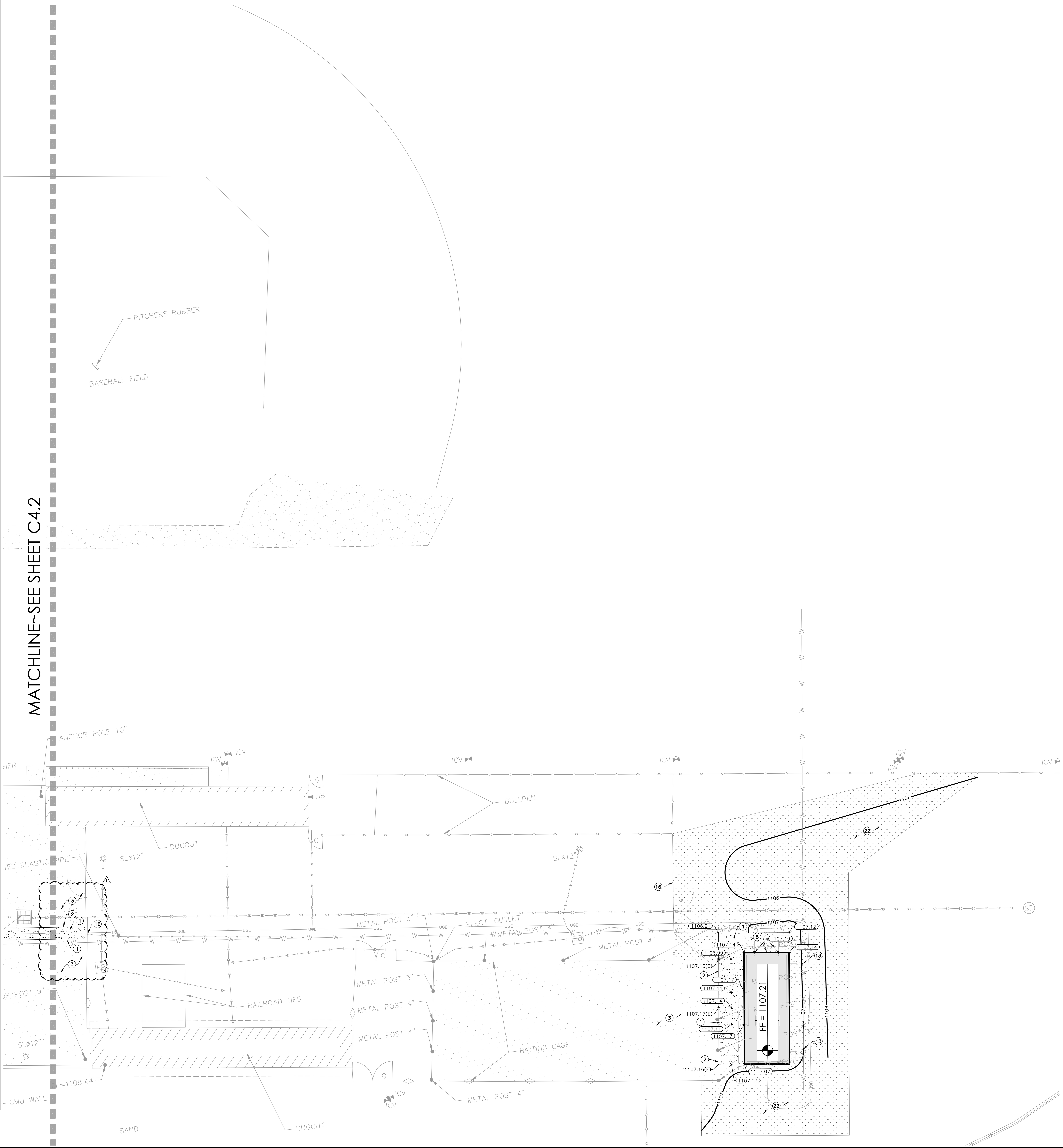

GRADING KEYNOTES

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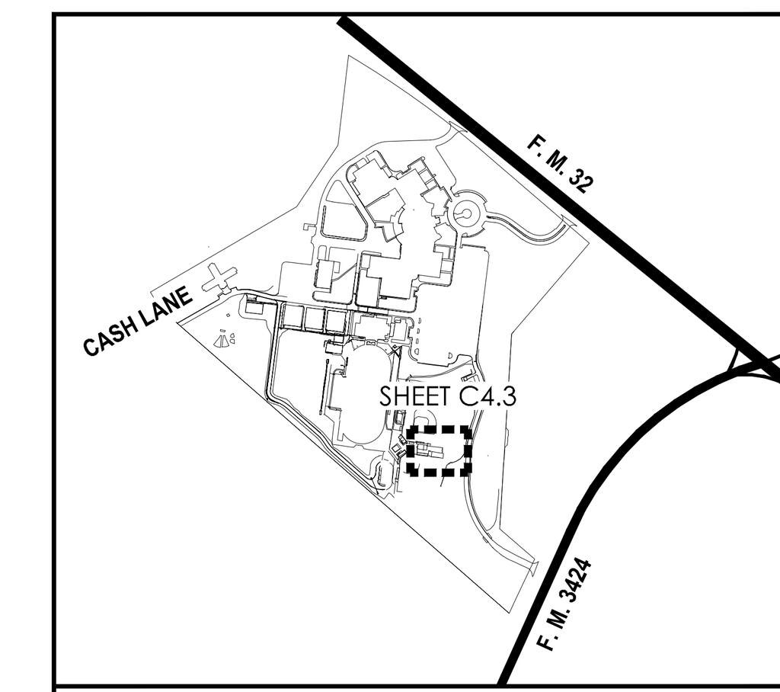
13. NEW CAST–IN–PLACE CONCRETE DOWNSPOUT SPLASH BLOCK. REFERENCE DETAIL NO. 7, SHEET C8.0.
14. NEW 6' CHAIN–LINK FENCING. REFERENCE DETAIL NO. 1, SHEET C8.1.
15. NEW 6' CHAIN–LINK FENCING TO MATCH EXISTING.
16. EXISTING 6' CHAIN–LINK FENCING TO REMAIN IN PLACE.
17. NEW 6' HIGH 12' DOUBLE CHAIN–LINK FENCE GATE. REFERENCE DETAIL NO. 1, SHEET C8.1.
18. NEW 6' HIGH 4' CHAIN–LINK FENCE GATE. REFERENCE DETAIL NO. 1, SHEET C8.1.
19. NEW STORM PIPE/STRUCTURE. REFERENCE DRAINAGE PLAN.
20. NEW 4 ROW ALUMINUM BLEACHERS. KAY PARK REC. PART NO. BLA4A15 OR APPROVED EQUAL.
21. NEW HANDRAIL. REFERENCE DETAIL NO. 1, SHEET C8.2.
22. NEW SOLID SOD. REFERENCE LANDSCAPE NOTES, SHEET C4.0.
23. CONTRACTOR TO PROVIDE 1/2" DROP OUTSIDE OF ROLL UP DOORS. REFERENCE ARCHITECTURAL PLANS FOR DOORS.
24. CONTRACTOR TO PROVIDE THICKENED EDGE ON CONCRETE FLATWORK. REFERENCE DETAIL NO. 1E, SHEET C8.0
25. NEW SIDEWALK DRAIN WITH ADJACENT THICKENED EDGE. REFERENCE DETAIL NO. 9, SHEET C8.0 AND DETAIL NO. 1E, SHEET C8.0. (Revision 1)



KEY MAP
NOT TO SCALE

SCALE: 1"=10'

10 5 0 10

LEGEND

	PROPERTY LINE
	NEW CONCRETE FLATWORK
	NEW LIGHT–DUTY ASPHALT
	NEW HEAVY–DUTY ASPHALT
	NEW CONCRETE PAVEMENT
	EXISTING CONCRETE TO REMAIN
	NEW SOD
802.00	EXISTING SPOT ELEVATION
(802.00)+	PROPOSED SPOT ELEVATION
802	EXISTING CONTOUR
802	PROPOSED CONTOUR
	GRADE BREAK
	CHAIN LINK FENCE
	ORNAMENTAL FENCE
	WOODEN FENCE
	WIRE FENCE
	FLOW LINE
RCP	REINFORCED CONCRETE
PVC	PIPE POLYVINYL CHLORIDE INVERT
INV	ELEVATION OF PIPE
TW	TOP OF WALL ELEVATION
BW	BOTTOM OF WALL ELEVATION
TOP	TOP OF MANHOLE ELEVATION
TOG	TOP OF GRATE ELEVATION
TC	TOP OF CURB
G	GUTTER
SW	TOP OF SIDEWALK
NG	NATURAL GROUND
ESM'T	EASEMENT
ROW	RIGHT OF WAY
HP	HIGH POINT
E.G.T.CATV	ELECTRIC, GAS, TELEPHONE & CABLE T.V
	SIDEWALK RAMP
	DRAINAGE FLOW ARROW
	PROPOSED TRAFFIC SIGN

STATE OF TEXAS
SEAN S. SMITH
113308
REGISTERED PROFESSIONAL ENGINEER
2/13/25

Revision /	Date
1 ADDENDUM #1	2/13/25

Project:
CANYON LAKE HIGH SCHOOL BATTING CAGES AND LOCKER ROOMS
FOR
COMAL ISD
8555 FM 32, FISCHER, TEXAS 78623

MTR
Moy Tarin Ramirez Engineers, LLC
· Engineers · Surveyors · Planners
FIRM TBPE NO. F–5297 & TBPLS NO. 10131500
12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249
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SITE GRADING PLAN

PACKAGE 2

Job No. 1957-04-04	Sheet No.
Drawn By: HC	C4.3R1
Date: 11/26/24	

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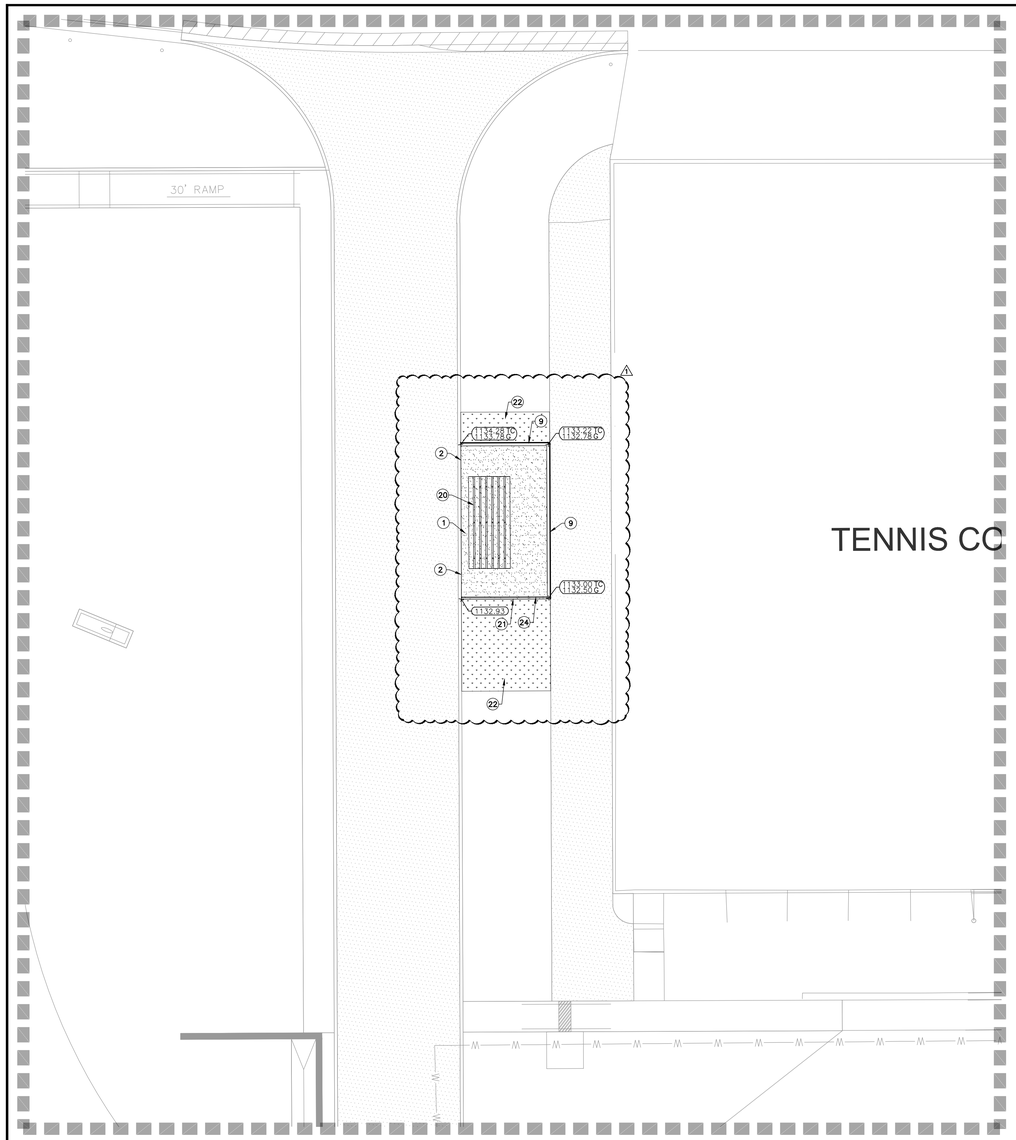

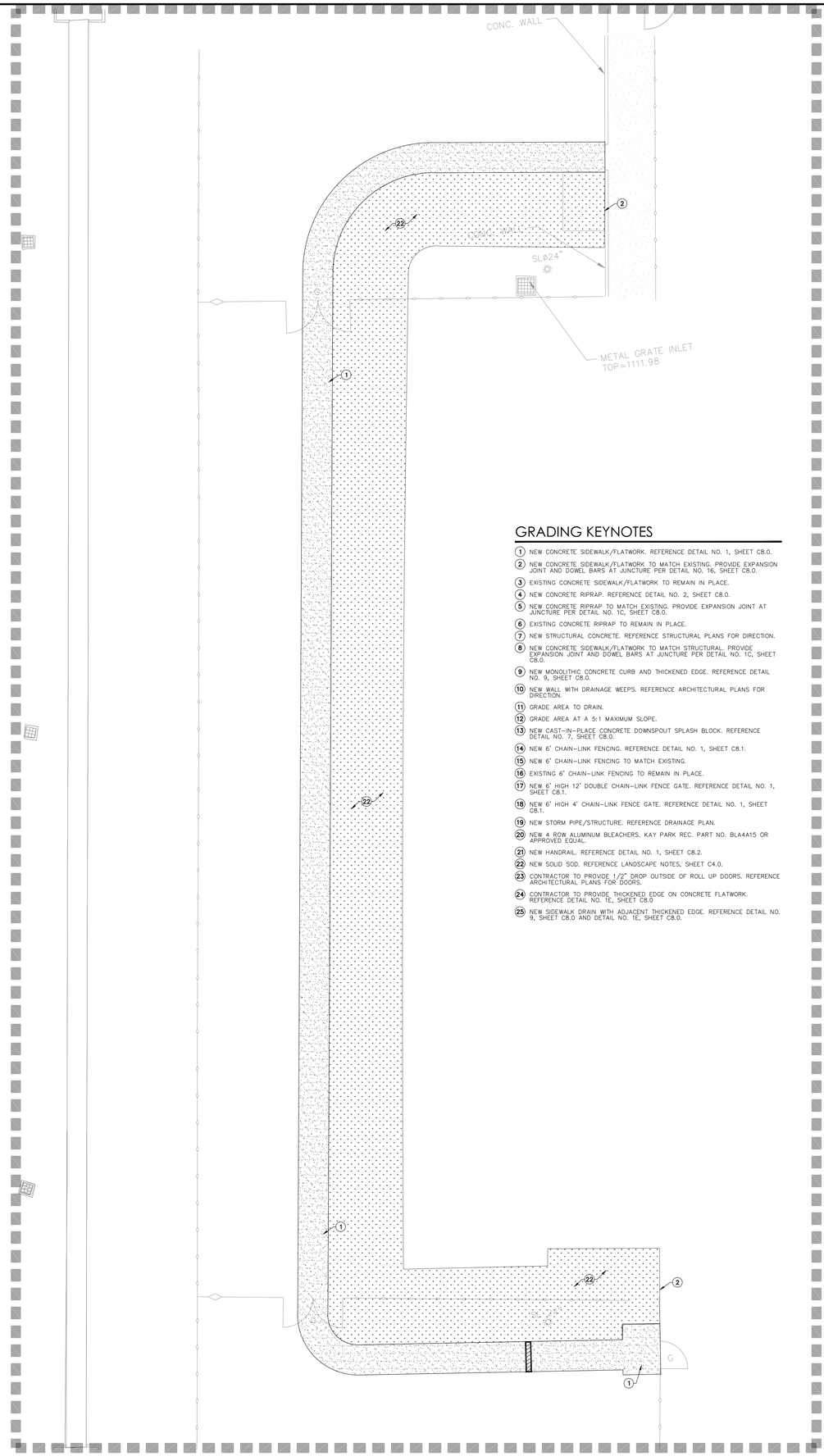

GRADING KEYNOTES

1. NEW CONCRETE SIDEWALK/FLATWORK. REFERENCE DETAIL NO. 1, SHEET C8.0.
2. NEW CONCRETE SIDEWALK/FLATWORK TO MATCH EXISTING. PROVIDE EXPANSION JOINT AND DOWEL BARS AT JUNCTURE PER DETAIL NO. 1E, SHEET C8.0.
3. EXISTING CONCRETE SIDEWALK/FLATWORK TO REMAIN IN PLACE.
4. NEW CONCRETE RIPRAP. REFERENCE DETAIL NO. 2, SHEET C8.0.
5. NEW CONCRETE RIPRAP TO MATCH EXISTING. PROVIDE EXPANSION JOINT AT JUNCTURE PER DETAIL NO. 1C, SHEET C8.0.
6. EXISTING CONCRETE RIPRAP TO REMAIN IN PLACE.
7. NEW STRUCTURAL CONCRETE. REFERENCE STRUCTURAL PLANS FOR DIRECTION.
8. NEW CONCRETE SIDEWALK/FLATWORK TO MATCH STRUCTURAL. PROVIDE EXPANSION JOINT AND DOWEL BARS AT JUNCTURE PER DETAIL NO. 1C, SHEET C8.0.
9. NEW MONOLITHIC CONCRETE CURB AND THICKENED EDGE. REFERENCE DETAIL NO. 9, SHEET C8.0.
10. NEW WALL WITH DRAINAGE WEEPS. REFERENCE ARCHITECTURAL PLANS FOR DIRECTION.
11. GRADE AREA TO DRAIN.
12. GRADE AREA AT A 5:1 MAXIMUM SLOPE.
13. NEW CAST-IN-PLACE CONCRETE DOWNSPOUT SPLASH BLOCK. REFERENCE DETAIL NO. 7, SHEET C8.0.
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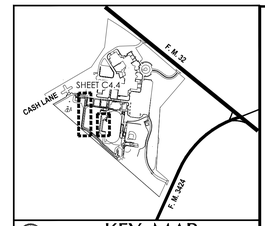

KEY MAP
NOT TO SCALE

SCALE: 1"=10'
10 5 0 10

LEGEND

- PROPERTY LINE
- NEW CONCRETE FLATWORK
- NEW LIGHT-DUTY ASPHALT
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- NEW CONCRETE PAVEMENT
- EXISTING CONCRETE TO REMAIN
- NEW SOD
- 802.00 EXISTING SPOT ELEVATION
- 802.00 PROPOSED SPOT ELEVATION
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- PVC PIPE POLYVNYL CHLORIDE INVERT
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STATE OF TEXAS
SEAN S. SMITH
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SITE GRADING PLAN

PACKAGE 2

Job No.	Sheet No.
1957-04-04	C4.4R1
Drawn By: HC	
Date: 11/26/24	

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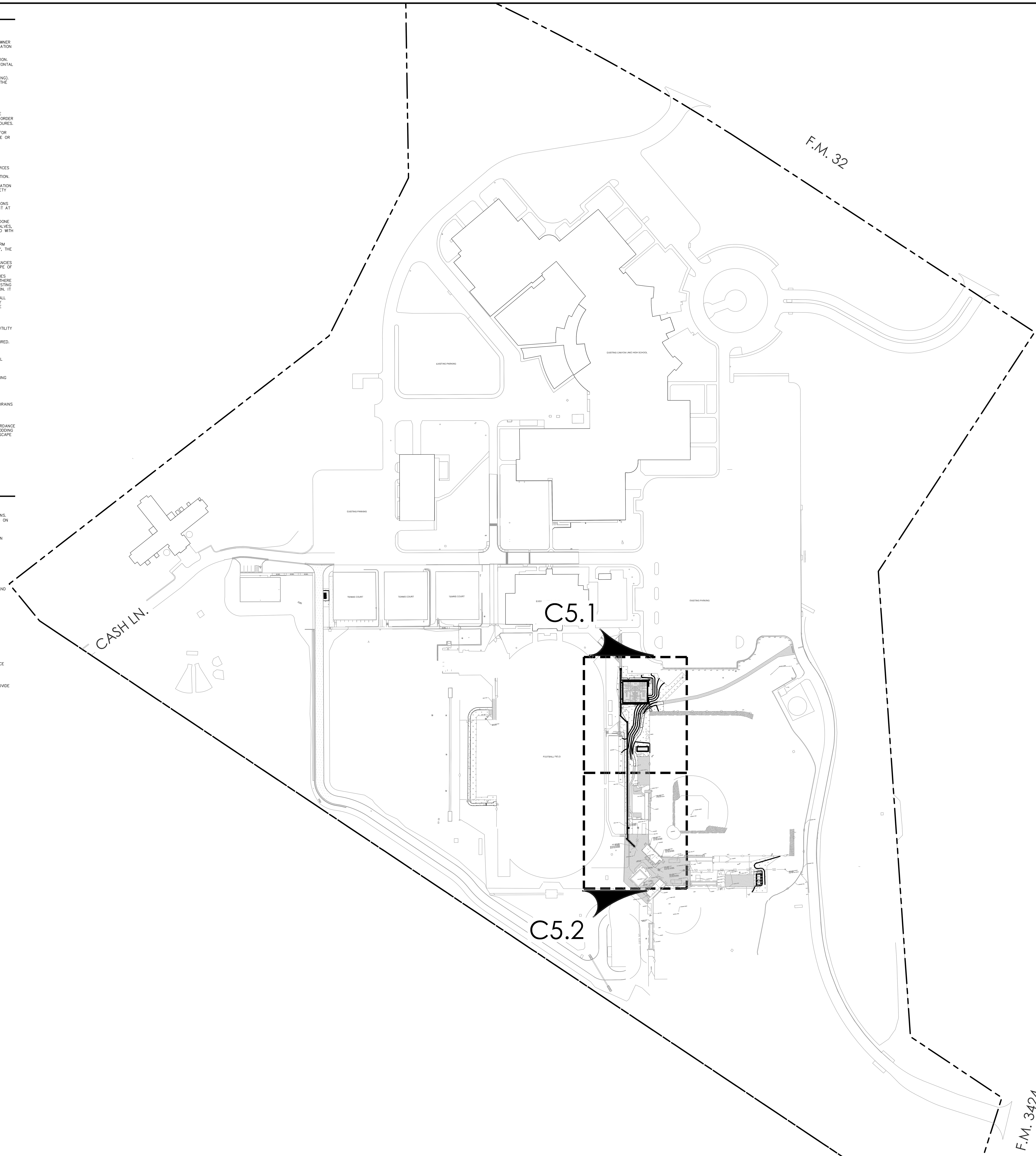
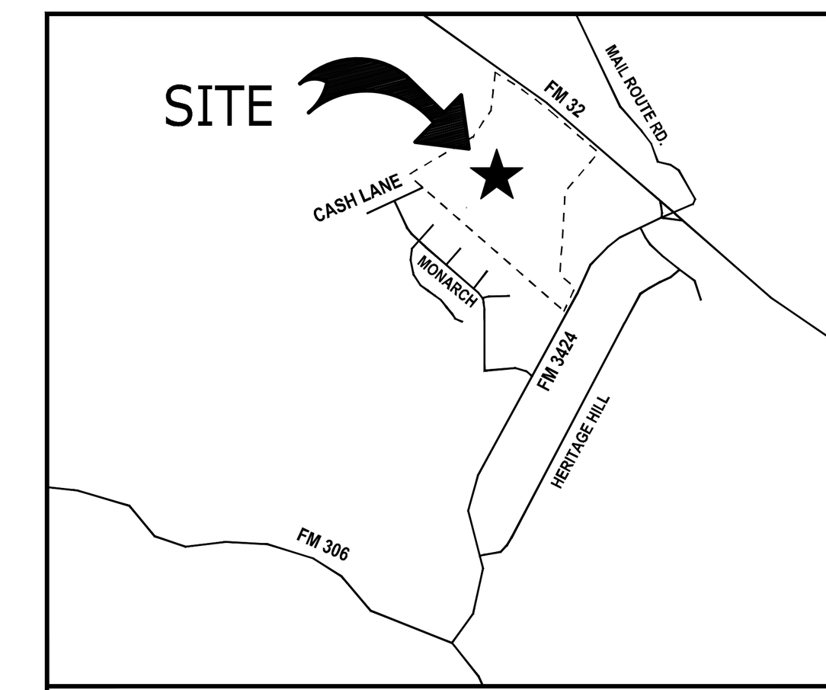
GENERAL NOTES:

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO BEGINNING WORK.
2. ALL WASTE MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND IT SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE SITE TO A STATE LICENSED LANDFILL. CONTRACTOR WILL BE REQUIRED TO PROVIDE DOCUMENTATION WHERE DISPOSED MATERIAL IS TAKEN TO. THE OWNER WILL NOT BE HELD LIABLE FOR ANY ON–SITE WASTE MATERIAL. CONTRACTOR SHALL NOT ALLOW THE ACCUMULATION OF DEMOLISHED WASTE MATERIAL ON–SITE.
3. CONTRACTOR IS REQUIRED TO SET AND VERIFY ALL PROJECT ELEVATIONS PRIOR TO THE START OF CONSTRUCTION. "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY THE SAME MATERIALS AS WELL AS VERTICAL AND HORIZONTAL ALIGNMENT.
4. GENERAL CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSION & GRADE CONDITIONS (BOTH NEW AND EXISTING). HE SHALL REPORT ANY DISCREPANCIES TO THE PROJECT ENGINEER BEFORE PROCEEDING WITH ANY PHASE OF THE WORK AS HE WILL BE RESPONSIBLE FOR ALL WORK AS INTENDED BY THE DRAWINGS AND SPECIFICATIONS.
5. CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY.
6. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AT A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS IN AND AROUND TRENCH EXCAVATION.
7. PRIOR TO START OF CONSTRUCTION THE CONTRACTOR SHALL COMPLY WITH THE SEDIMENTATION AND EROSION CONTROL PLANS AND SHALL SUBMIT NOTIFICATIONS AND PAY ALL PERMITS.
8. BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND GENERALLY BE LOCATED TO AFFORD MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT AND TO ASSURE AN EXPEDITIOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION.
9. THE RESPONSIBILITY OF THE ARCHITECT/ENGINEER OR OWNER, TO CONDUCT CONSTRUCTION REVIEW OR OBSERVATION OF THE CONTRACTORS PERFORMANCE IS NOT INTENDED TO REVIEW THE ADEQUACY OF THE CONTRACTORS SAFETY MEASURES IN OR NEAR THE CONSTRUCTION SITE.
10. ANY EXISTING IMPROVEMENTS AND/OR UTILITIES REMOVED, DAMAGED OR UNDERCUT BY CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE PROJECT ARCHITECT AT THE CONTRACTOR'S EXPENSE.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION, ANY DAMAGES DONE TO EXISTING FENCES, CURBS, CONCRETE DRIVEWAYS, SIDEWALK STRUCTURES AND PAVEMENT, UTILITY BOXES/VALVES, ETC. THAT ARE NOT INDICATED TO BE REMOVED. AN INVENTORY OF EXISTING CONDITIONS SHALL BE CONDUCTED WITH THE CONTRACTOR AND OWNER PRIOR TO DEMOLITION.
12. CONTRACTOR SHALL MAINTAIN CONTINUAL ALL UTILITY SERVICES (GAS, TELE, CATV, ELEC., WATER, SEWER, STORM SEWER, ETC.) TO EXISTING FACILITIES AND BUILDINGS. WHERE CONSTRUCTION IS IN THE PROXIMITY OF A UTILITY, THE CONTRACTOR WILL TAKE PRECAUTION TO PROTECT AND/OR SUPPORT THE UTILITY.
13. CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO THE PROJECT ENGINEER BEFORE PROCEEDING WITH ANY PHASE OF THE WORK. THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVE GROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED DURING CONSTRUCTION. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY PURVEYORS DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED.
14. NOTIFY OWNER 72 HOURS IN ADVANCE OF ANY UTILITY SHUTDOWN.
15. ADJUST ALL EXISTING VALVES & UTILITIES TO REMAIN TO FINISH GRADE. REFERENCE DEMOLITION, GRADING, & UTILITY PLANS.
16. CONTRACTOR SHALL COORDINATE ALL DEMOLITION/CONSTRUCTION ACTIVITIES WITH OTHER DISCIPLINES AS REQUIRED.
17. CONTRACTOR SHALL COORDINATE UTILITY DEMOLITION WITH UTILITY PLANS.
18. CONTRACTOR IS RESPONSIBLE FOR CLEARING THE ALIGNMENT FOR ALL NEW FENCING. CLEARING TO INCLUDE ALL VEGETATION, TREE LIMBS, AND SHRUBS WITHIN 5' OF NEW FENCE ALIGNMENT ON EACH SIDE. COORDINATE WITH LANDSCAPE/TREE PRESERVATION PLANS AS NEEDED, IF APPLICABLE.
19. CONTRACTOR SHALL IMMEDIATELY REMOVE ALL WATER FROM EXCAVATIONS FOLLOWING RAIN EVENTS. NO STANDING WATER WILL BE ALLOWED IN EXCAVATIONS.
20. CONTRACTOR TO REFERENCE LANDSCAPE PLANS FOR THE REMOVAL OF EXISTING TREES AND THE PROTECTION/PRESERVATION OF EXISTING TREES TO REMAIN, IF APPLICABLE.
21. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL SILT FROM THE DRAINAGE SYSTEM AND FLUSH ALL STORM DRAINS AND CHANNELS PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.
22. CONTRACTOR IS TO TELEVISE ALL HDPE PIPE INSTALLATION PRIOR TO FINAL ACCEPTANCE.
23. AFTER CONSTRUCTION IS COMPLETED, THE CONTRACTOR SHALL STABILIZE ALL DISTURBED SOIL AREAS IN ACCORDANCE WITH THE STORM WATER POLLUTION PREVENTION PLAN AND RE–SOD DISTURBED SOIL AREAS WITH BERMUDA SODDING OR HYDROMULCH TO MATCH CONDITIONS PRIOR TO CONSTRUCTION, OR AS OTHERWISE SPECIFIED BY THE LANDSCAPE ARCHITECT.

STORM DRAINAGE NOTES:

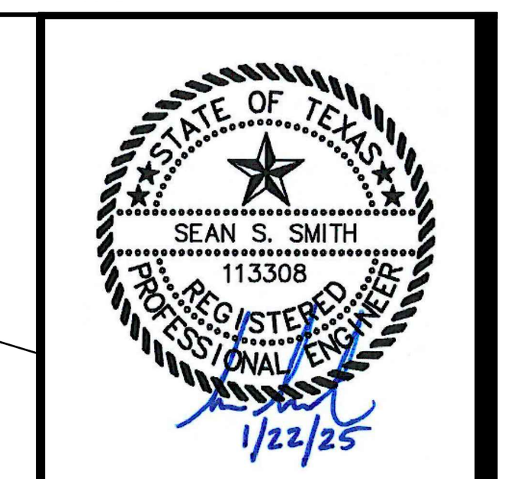
1. CLEAR COVER FOR REINFORCEMENT STEEL IS 2" UNLESS OTHERWISE NOTED.
2. MATERIAL SPECIFICATIONS:
   A. CONCRETE/CONCRETE RIPRAP: CLASS A 3000 PSI (28–DAY STRENGTH) UNLESS OTHERWISE NOTED ON PLANS.
   B. REINFORCING STEEL: CONFORM TO A.S.T.M. A–615, GRADE 60 (2" CLEAR COVER UNLESS OTHERWISE NOTED ON PLANS)
   C. PIPE RAILING: CONFORM TO A.S.T.M. A–53, GRADE B, OR A–501
3. STORM SEWER PIPE MATERIAL SPECIFICATIONS: PIPE MATERIAL SHALL BE AS NOTED ON DRAINAGE PLANS. WHEN SPECIFIED:
   A. REINFORCED CONCRETE PIPE (RCP) CLASS III, UNLESS OTHERWISE SPECIFIED ON PLAN.
   B. PRECAST BOX CULVERT OLDCASTLE PRECAST TYPE I OR EQUAL APPROVED BY ENGINEER.
   C. POLYVINYL CHLORIDE (PVC) PIPE SHALL BE SDR 26 (115 PSI)
   D. ALUMINIZED STEEL (AS)
      a. CORRUGATIONS: 3/4"X3/4"X7–1/2" HELICAL CORRUGATIONS PER ASSHTO M–36, TYPE IR (ASTM A–760)
      b. MATERIAL: ALUMINIZED TYPE 2 STEEL PER AASHTO M–274 (ASTM A–819)
      c. JOINT: HUGGER BANDS WITH TECHNO ANGLES. CONTRACTOR TO PROVIDE 5–C BANDS WITH BAR BOLT AND STRAP CONNECTION.
      d. THICKNESS: 0.064" (16 GAUGE).
   E. HDPE STORM PIPE TO BE ADS DUAL WALL PIPE N–12 OR APPROVED EQUAL.
4. ALL STORM SEWER INLET GRATES SHALL BE GALVANIZED.
5. CONCRETE COLLARS SHALL BE PROVIDED ON ALL STORM DRAIN TO JUNCTION BOX/GRATE INLET CONNECTIONS. REFERENCE DETAILS.
6. GROUT INVERTS OF ALL JUNCTION BOXES AND GRATE INLETS TO DRAIN.
7. JUNCTION BOXES SHALL HAVE MANHOLES FOR ACCESS WITH BOLTED MANHOLE LIDS.
8. ALL DRAINAGE STRUCTURES, LIDS AND GRATES SHALL BE RATED FOR H20 LOADING.
9. ALL PIPE TRENCHES SHALL CONTAIN FILTER FABRIC BETWEEN THE INITIAL AND SECONDARY BACKFILL. REFERENCE DETAILS AND SPECIFICATIONS FOR CONSTRUCTION REQUIREMENTS.
10. PROVIDE CONCRETE APRONS AROUND ALL INLETS NOT IN PAVEMENT AREAS AS PER CIVIL DETAILS.
11. ALL CONCRETE STORM DRAIN STRUCTURES TO HAVE A 32" CLEAR OPENING FOR ACCESS. CONTRACTOR TO PROVIDE CORRESPONDING LID AND FRAME TO PROVIDE 32" CLEAR OPENING.
12. ALL CURB INLETS TO BE INSTALLED WITH STEEL ARMOR AT THE CURB OPENING.
13. PROVIDE ECCENTRIC REDUCERS ON SDR 26 PVC/HDPE STORM PIPE WHERE PIPE DIAMETERS INCREASE IN SIZE.





LOCATION MAP
NOT TO SCALE

SCALE: 1"=100'
100 50 0 100



LEGEND

- PROPERTY LINE
- NEW CONCRETE FLATWORK
- NEW LIGHT–DUTY ASPHALT
- NEW HEAVY–DUTY ASPHALT
- NEW CONCRETE PAVEMENT
- NEW WASHED RIVER ROCK
- NEW SOD
- +802.00 EXISTING SPOT ELEVATION
- (802.00)+ PROPOSED SPOT ELEVATION
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RCP	REINFORCED CONCRETE
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Revision / Date

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OVERALL SITE DRAINAGE PLAN

PACKAGE 2

Job No. 1957-04-04	Sheet No. C5.0
Drawn By: HC	
Date: 11/26/24	

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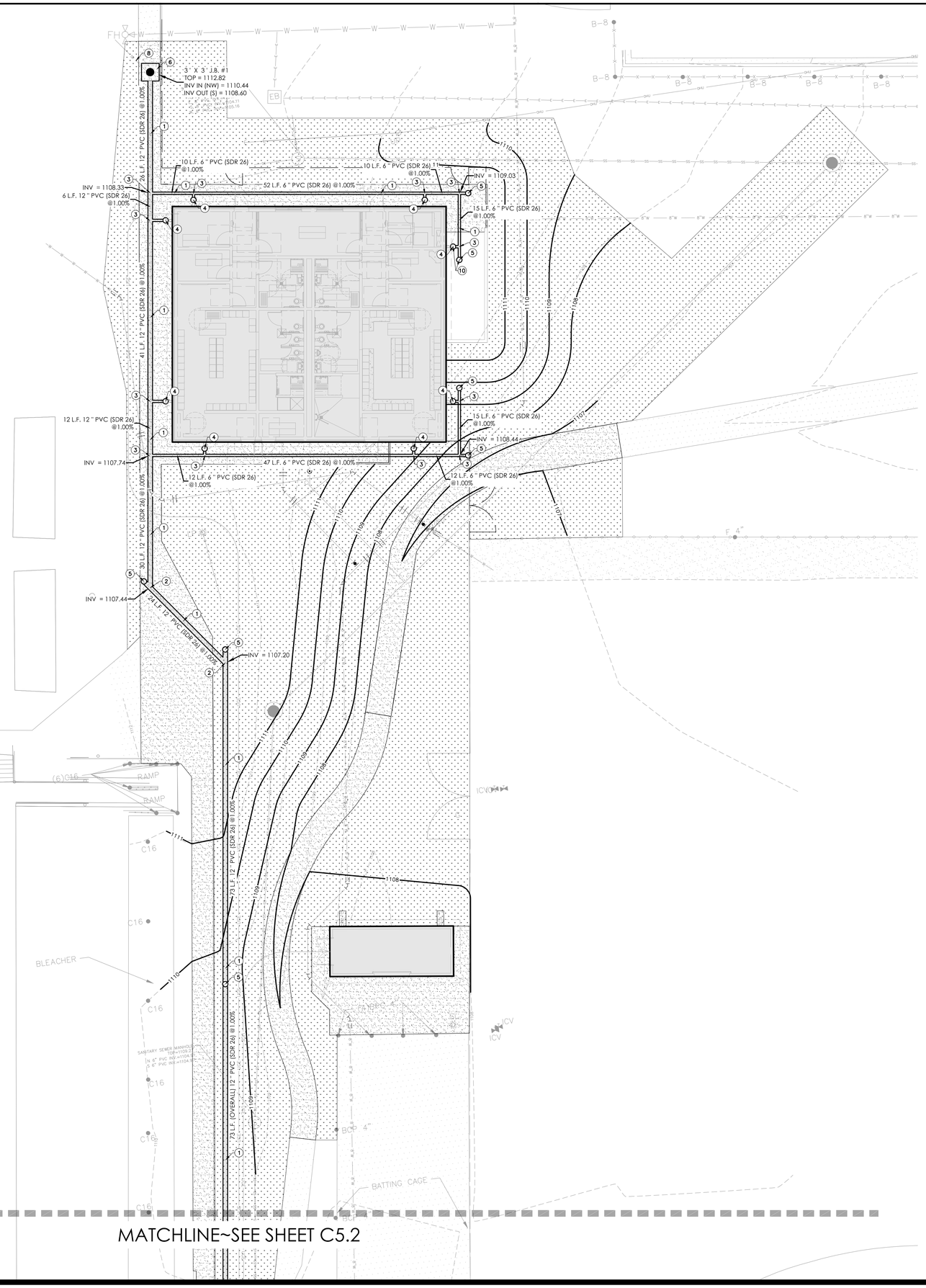
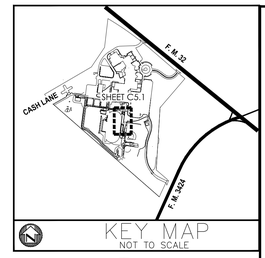


DRAINAGE KEYNOTES

1. NEW SDR26 PVC DRAINAGE PIPING. REFERENCE SIZE, LENGTH AND INVERT ELEVATIONS SHOWN ON PLAN.
2. CONTRACTOR TO PROVIDE SANITARY WYE BEND.
3. CONTRACTOR TO PROVIDE SANITARY WYE AND 1/8 BEND CONNECTION.
4. CONTRACTOR TO CONNECT DOWNSPOUT TO UNDERGROUND DRAINAGE SYSTEM. PROVIDE CLEANOUT. REFERENCE DETAIL NO. 8, SHEET C8.0.
5. PROVIDE ONE-WAY CLEANOUT AS SHOWN ON PLAN. REFERENCE DETAIL NO. 4, SHEET C8.0.
6. NEW PRE-CAST CONCRETE JUNCTION BOX ("CAPITAL PRECAST" OR APPROVED EQUAL). CONTRACTOR TO PROVIDE 6" NECK EXTENSION WITH SOLID LID FOR ACCESS PER DETAIL NO. 6, SHEET C8.0. CONTRACTOR TO PROVIDE SQUARE KNOCK OUT. REFERENCE TOP AND INVERT ELEVATIONS AND BOX SIZE SHOWN ON PLAN.
7. NEW CONTECH STORM WATER QUALITY JELLYFISH OR APPROVED EQUAL. REFERENCE DETAIL NO. 2, SHEET C8.1.
8. CONTRACTOR TO EXTEND EXISTING STORM PIPE INTO NEW JUNCTION BOX. CONTRACTOR TO FIELD VERIFY EXISTING STORM PIPE LOCATION, INVERT, SIZE AND MATERIAL PRIOR TO ORDERING MATERIALS.
9. CONTRACTOR TO CORE DRILL AND EXTEND NEW STORM PIPE INTO EXISTING STORM GRATE INLET.
10. NEW CLEANOUTS IN STRUCTURAL CONCRETE MECHANICAL AREA. CONTRACTOR TO FIELD VERIFY LOCATION OF CLEANOUT AND MECHANICAL EQUIPMENT. CONTRACTOR TO VERIFY ANY CONFLICTS PRIOR TO ORDERING MATERIALS.



KEY MAP
NOT TO SCALE

SCALE: 1"=10'
10 5 0 10

LEGEND

	PROPERTY LINE
	NEW CONCRETE FLATWORK
	NEW LIGHT-DUTY ASPHALT
	NEW HEAVY-DUTY ASPHALT
	NEW CONCRETE PAVEMENT
	NEW WASHED RIVER ROCK
	NEW SOD
	NEW XXXXX
	NEW XXXXX
	NEW XXXXX
+802.00	EXISTING SPOT ELEVATION
802.00	PROPOSED SPOT ELEVATION
802	EXISTING CONTOUR
802	PROPOSED CONTOUR
	GRADE BREAK
	CHAIN LINK FENCE
	ORNAMENTAL FENCE
	WOODEN FENCE
	WIRE FENCE
	FLOW LINE
RCP	REINFORCED CONCRETE
PVC	PIPE POLYVINYL CHLORIDE INVERT
INV	ELEVATION OF PIPE
TW	TOP OF WALL ELEVATION
BW	BOTTOM OF WALL ELEVATION
TOP	TOP OF MANHOLE ELEVATION
TOG	TOP OF GRATE ELEVATION
TC	TOP OF CURB
G	GUTTER
SW	TOP OF SIDEWALK
NG	NATURAL GROUND
ESM'T	EASEMENT
ROW	RIGHT OF WAY
HP	HIGH POINT
E.G.T.CATV	ELECTRIC, GAS, TELEPHONE & CABLE T.V
	SIDEWALK RAMP
	DRAINAGE FLOW ARROW
	PROPOSED TRAFFIC SIGN

STATE OF TEXAS
SEAN S. SMITH
113308
REGISTERED PROFESSIONAL ENGINEER
1/22/25

Date
Revision /

Project:
CANYON LAKE HIGH SCHOOL BATTING CAGES AND LOCKER ROOMS
FOR
COMAL ISD
8555 FM 32, FISCHER, TEXAS 78623

MTR
Moy Tarin Ramirez Engineers, LLC
• Engineers
• Surveyors
• Planners
FIRM TBPE NO. F-5297 & TBPLS NO. 10131500
12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249
TEL: (210) 698-3051
FAX: (210) 696-2005

Huckabee
www.huckabee-inc.com
800.687.1229

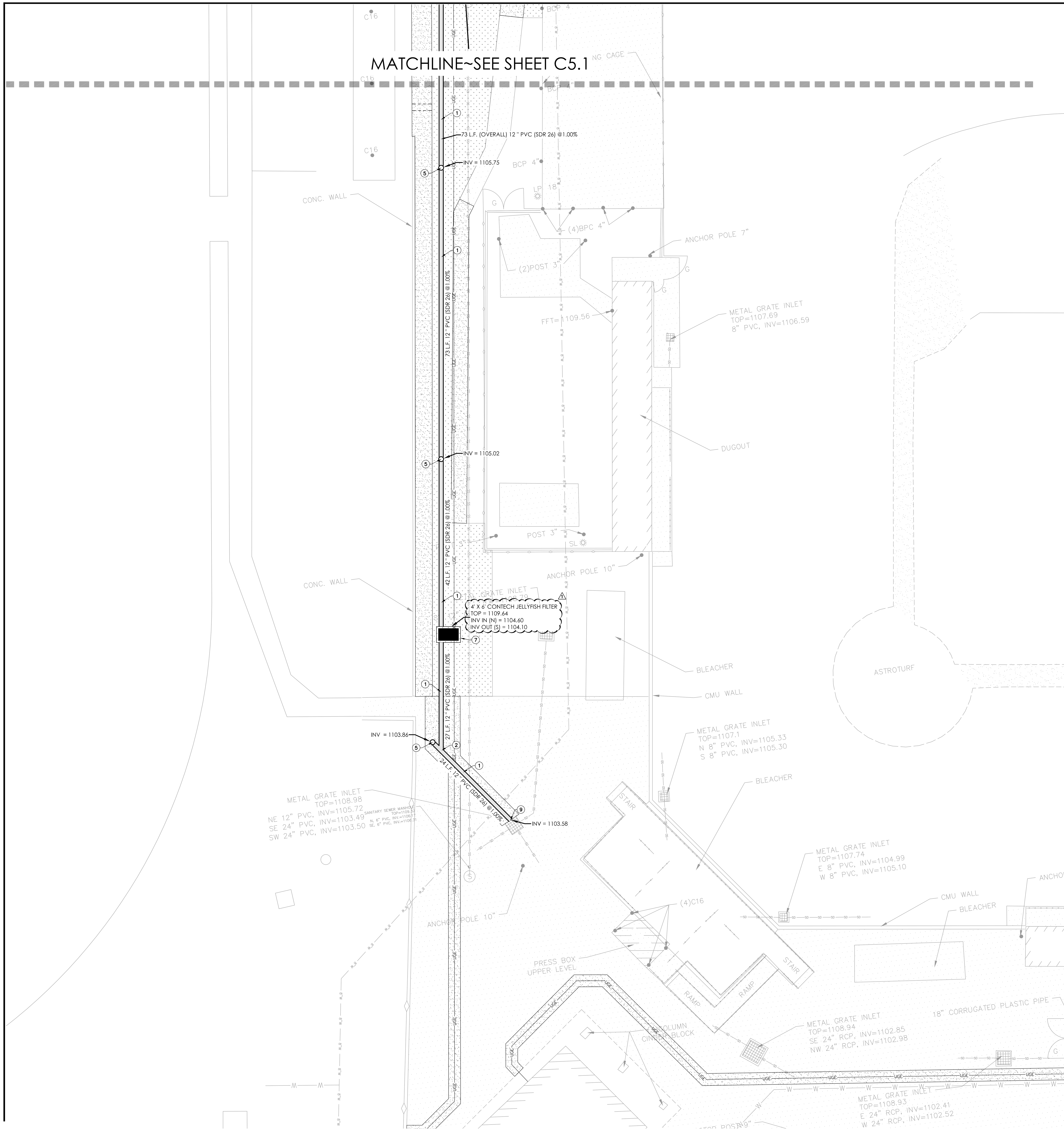
SITE DRAINAGE PLAN

PACKAGE 2

Job No. 1957-04-04	Sheet No. C5.1
Drawn By: HC	
Date: 11/26/24	

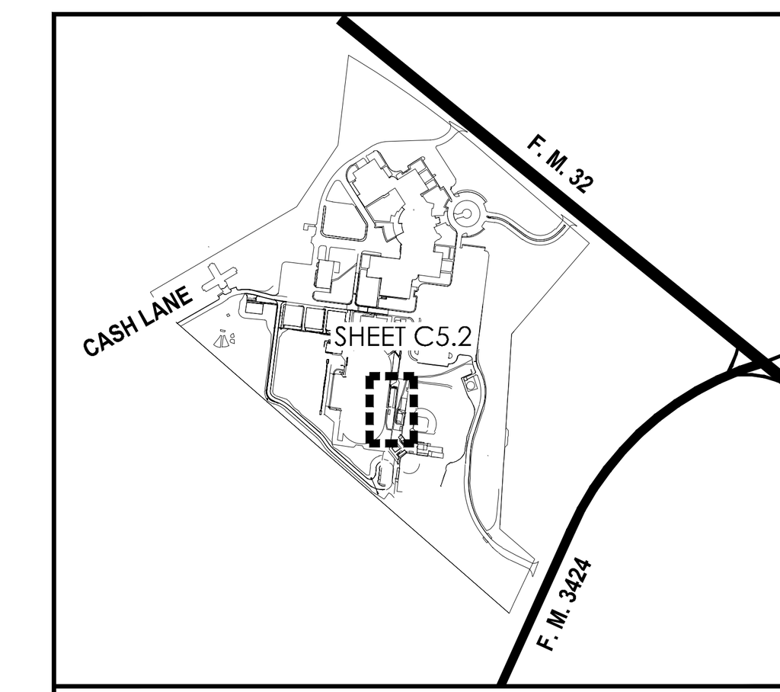
P:\Comal ISD\Canyon Lake H.S.\2023 batting cg Cages & Locker Room Upgrades\Drawings\23033_C5.1_DRN.dwg 2025-01-22 9:42am smith

11/26/2024 9:18:41 AM
Autodesk Docs://COMAL ISD - CANYON LAKE HS COVERED BATTING CAGES & STANDS/19157-0444_CLHS Batting Cages+Locker Rooms_ARCH_v23.rvt



DRAINAGE KEYNOTES

1. NEW SDR26 PVC DRAINAGE PIPING. REFERENCE SIZE, LENGTH AND INVERT ELEVATIONS SHOWN ON PLAN.
2. CONTRACTOR TO PROVIDE SANITARY WYE BEND.
3. CONTRACTOR TO PROVIDE SANITARY WYE AND 1/8 BEND CONNECTION.
4. CONTRACTOR TO CONNECT DOWNSPOUT TO UNDERGROUND DRAINAGE SYSTEM. PROVIDE CLEANOUT. REFERENCE DETAIL NO. 8, SHEET C8.0.
5. PROVIDE ONE-WAY CLEANOUT AS SHOWN ON PLAN. REFERENCE DETAIL NO. 4, SHEET C8.0.
6. NEW PRE-CAST CONCRETE JUNCTION BOX ("CAPITAL PRECAST" OR APPROVED EQUAL). CONTRACTOR TO PROVIDE 6" NECK EXTENSION WITH SOLID LID FOR ACCESS PER DETAIL NO. 6, SHEET C8.0. CONTRACTOR TO PROVIDE SQUARE KNOCK OUT. REFERENCE TOP AND INVERT ELEVATIONS AND BOX SIZE SHOWN ON PLAN.
7. NEW CONTECH STORM WATER QUALITY JELLYFISH OR APPROVED EQUAL. REFERENCE DETAIL NO. 2, SHEET C8.1.
8. CONTRACTOR TO EXTEND EXISTING STORM PIPE INTO NEW JUNCTION BOX. CONTRACTOR TO FIELD VERIFY EXISTING STORM PIPE LOCATION, INVERT, SIZE AND MATERIAL PRIOR TO ORDERING MATERIALS.
9. CONTRACTOR TO CORE DRILL AND EXTEND NEW STORM PIPE INTO EXISTING STORM GRATE INLET.
10. NEW CLEANOUTS IN STRUCTURAL CONCRETE MECHANICAL AREA. CONTRACTOR TO FIELD VERIFY LOCATION OF CLEANOUT AND MECHANICAL EQUIPMENT. CONTRACTOR TO VERIFY ANY CONFLICTS PRIOR TO ORDERING MATERIALS.



KEY MAP
NOT TO SCALE

SCALE: 1"=10'

10 5 0 10

LEGEND

	PROPERTY LINE
	NEW CONCRETE FLATWORK
	NEW LIGHT-DUTY ASPHALT
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	NEW CONCRETE PAVEMENT
	NEW WASHED RIVER ROCK
	NEW SOD
+802.00	EXISTING SPOT ELEVATION
(802.00)+	PROPOSED SPOT ELEVATION
802	EXISTING CONTOUR
802	PROPOSED CONTOUR
	GRADE BREAK
	CHAIN LINK FENCE
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	WIRE FENCE
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RCP	REINFORCED CONCRETE
PVC	PIPE POLYVINYL CHLORIDE INVERT
INV	ELEVATION OF PIPE
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TOG	TOP OF GRATE ELEVATION
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STATE OF TEXAS
SEAN S. SMITH
113308
REGISTERED PROFESSIONAL ENGINEER
2/13/25

Revision /	Date
ADDENDUM #1	2/13/25

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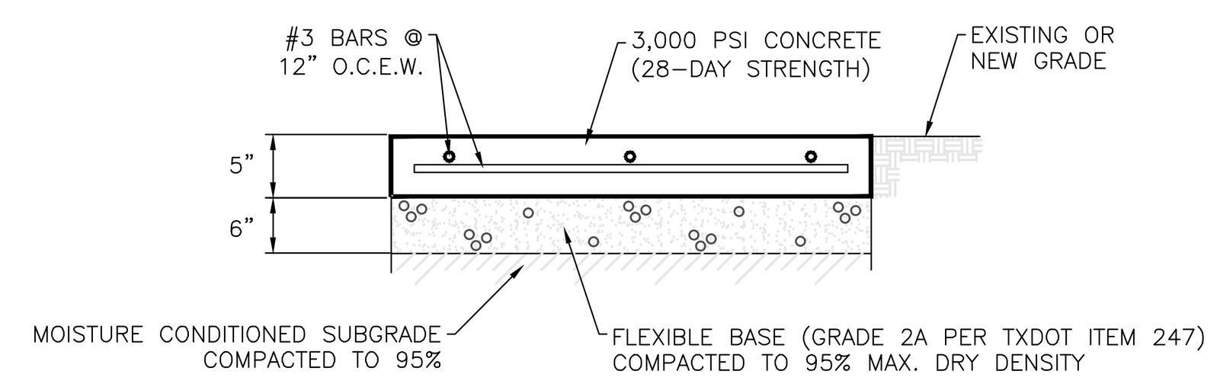
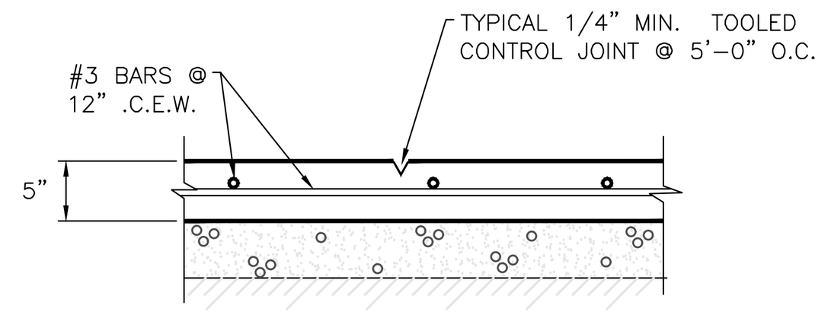
SITE DRAINAGE PLAN

PACKAGE 2

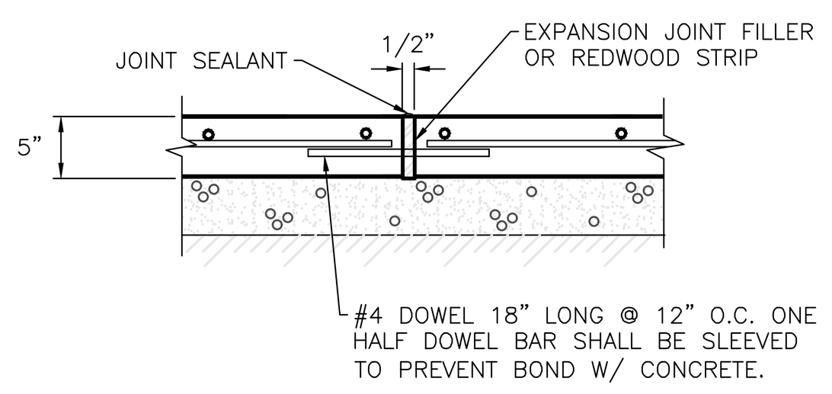
Job No.	Sheet No.
1957-04-04	C5.2R1
Drawn By: HC	
Date: 11/26/24	



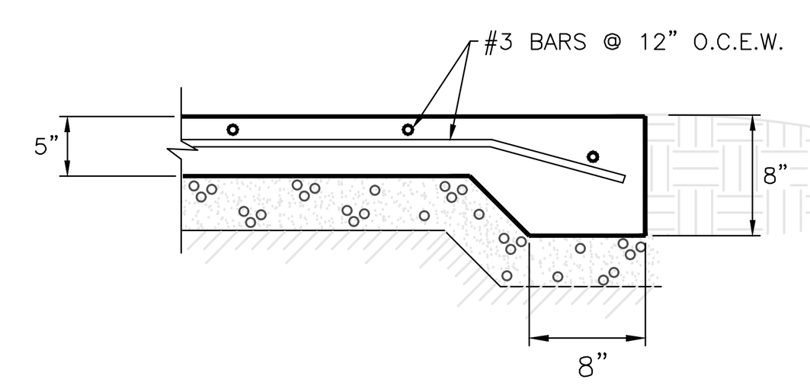
A — **TYPICAL CONCRETE SIDEWALK/FLATWORK SECTION**
SCALE: NONE



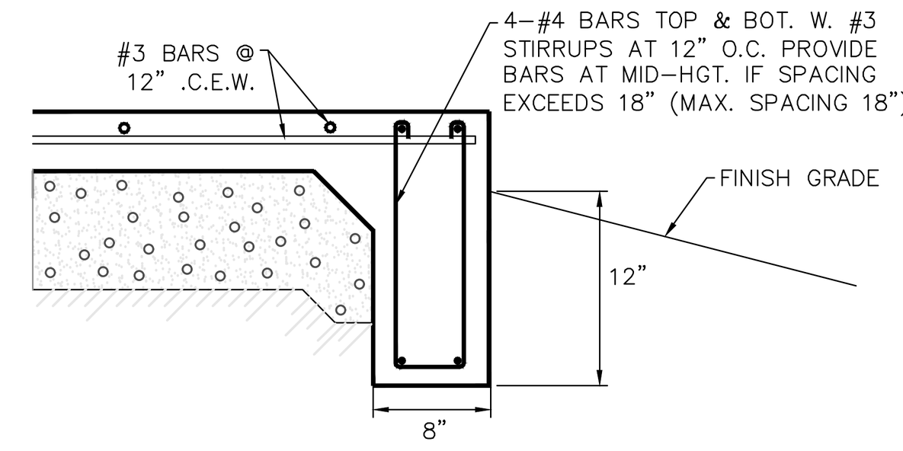
B — **TYPICAL CONTROL JOINT**
SCALE: NONE



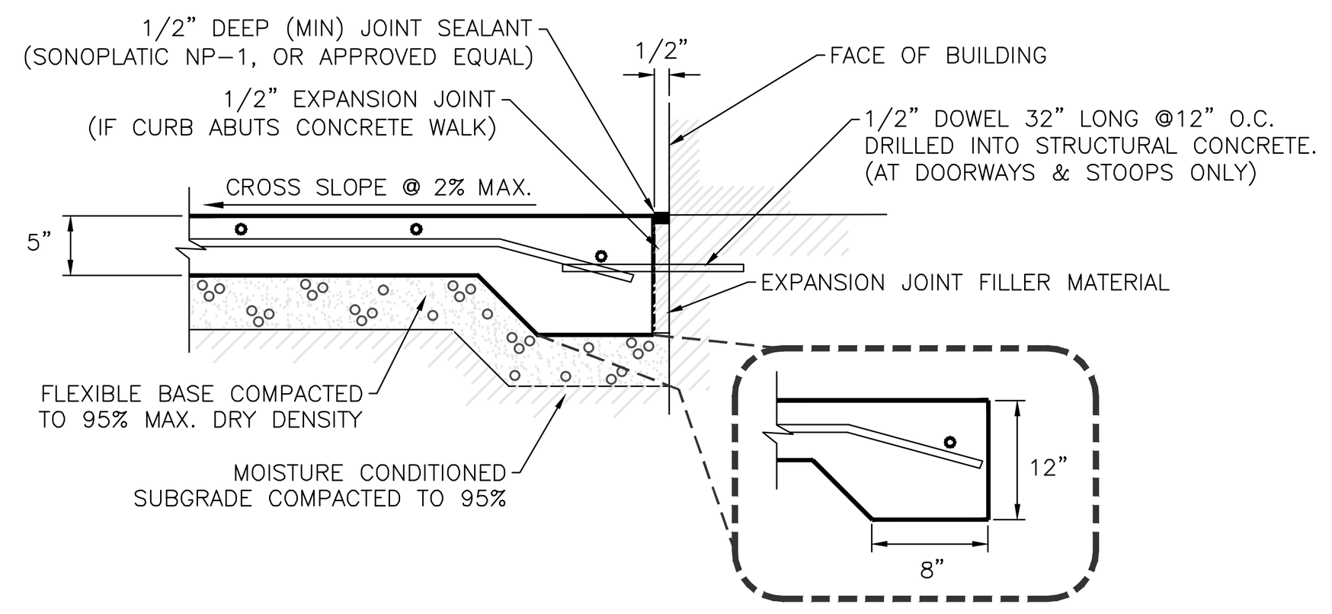
C — **TYPICAL EXPANSION JOINT**
SCALE: NONE



D — **EDGE ADJACENT TO NATURAL GRADE**
SCALE: NONE



E — **THICKENED EDGE**
SCALE: NONE

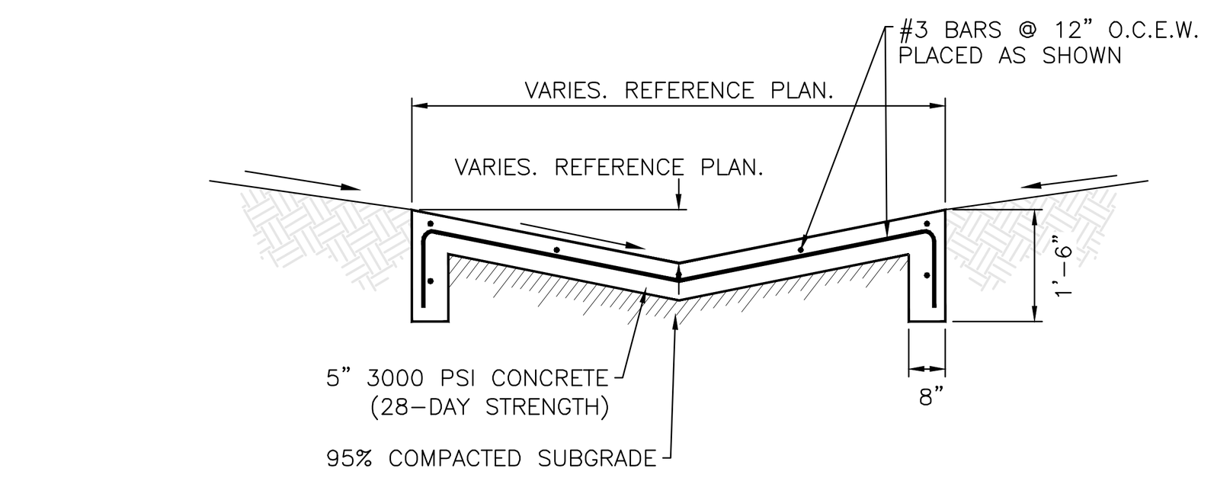


F — **TYPICAL EXPANSION JOINT @ CONCRETE WALK/BLDG OR CONCRETE PAVEMENT INTERFACE**
SCALE: NONE

GENERAL NOTES FOR CONCRETE SIDEWALKS:

1. ALL SIDEWALKS SHALL BE A MINIMUM 3000 PSI CONCRETE WITH NO. 3 BARS AT 12" INCHES ON CENTER.
2. SLOPE SIDEWALKS AWAY FROM BUILDING AS INDICATED ON DRAWINGS OR AT 2% MAX.
3. PROVIDE SIDEWALK WITH A HORIZONTAL (CROSS) BRUSH FINISH ON ALL SURFACES.
4. GROOVE CONTRACTION JOINTS SHALL BE SPACED 5 FT. ON CENTERS, WITH 1/2" ELASTOMERIC EXPANSION JOINTS AT EVERY 30 FT. IN LARGER AREAS PROVIDE CONTRACTION JOINTS AT 10' O.C.E.W. WITH 1/2" EXPANSION JOINTS AT 30' O.C.E.W.
5. PROVIDE A 1/2" ELASTOMERIC EXPANSION JOINT ALONG NEW BUILDING BETWEEN ALL NEW SIDEWALK. SEAL WITH NP1 JOINT SEALANT.
6. ALL BASE MATERIAL UNDER SIDEWALKS TO BE MOISTURE CONDITIONED AND COMPACTED.
7. MAINTAIN 2" OF CLEAR COVER BETWEEN REINFORCING STEEL AND EDGE OF CONCRETE, BASE MATERIAL AND/OR SUBGRADE. CONTRACTOR TO PROVIDE BRICK SUPPORTS WITH WIRE TIES FOR REINFORCING STEEL. NO REBAR SHALL EXTEND INTO BASE/SUBGRADE.
8. ALL DOWEL BARS SHALL BE SMOOTH AND ALL REINFORCING BARS SHALL BE DEFORMED "REBAR" BOTH DOWELS AND REBAR SHALL BE AT A MINIMUM GRADE 60.
9. CONTRACTOR SHALL SUBMIT JOINTING PLAN TO ENGINEER FOR REVIEW PRIOR TO PLACEMENT OF CONCRETE.
10. CONCRETE FLATWORK 3,000 PSI. SLUMP = 4.0" ± 1.0".
11. WATER TO CEMENT RATIO (LBS/LBS) CANNOT EXCEED 0.50.
12. CONTRACTOR TO PROVIDE A THICKER EDGE ADJACENT TO ALL NATURAL GRADE AND LANDSCAPE AREAS. REFERENCE SECTION D.

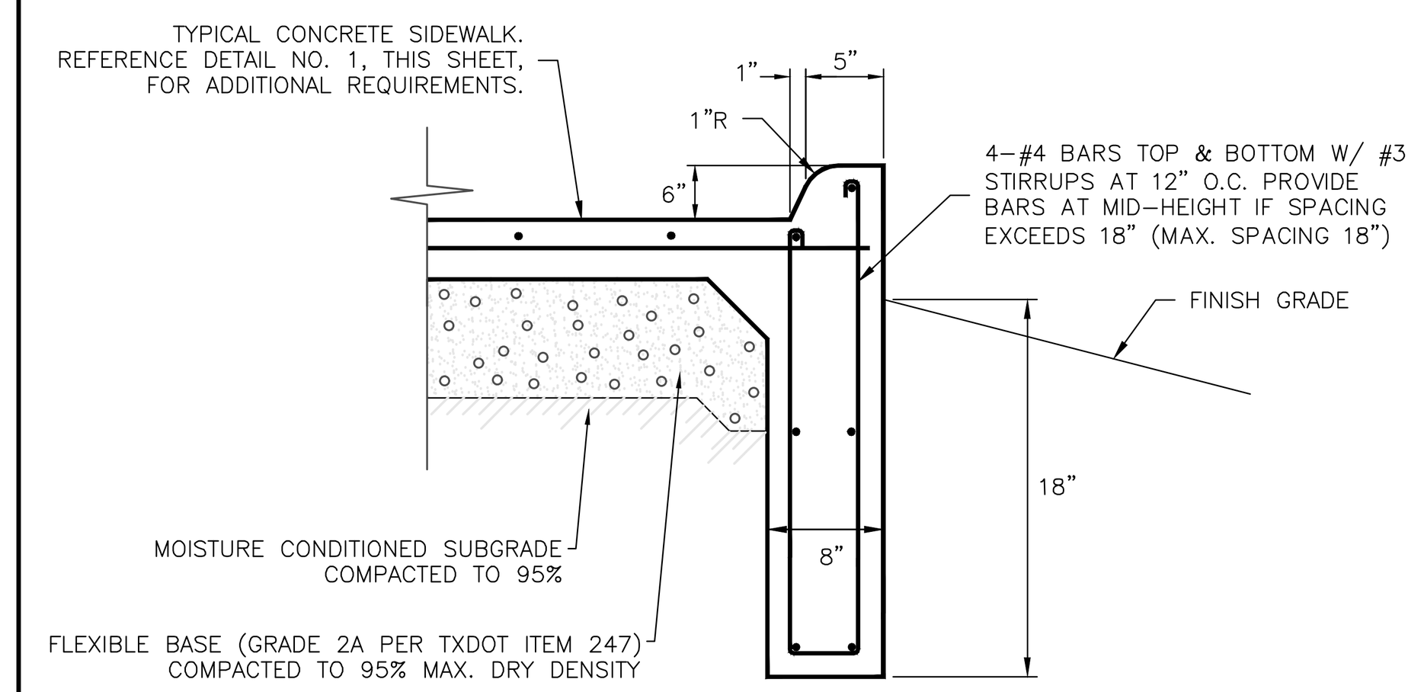
1 SIDEWALK/FLATWORK DETAILS
SCALE: NONE



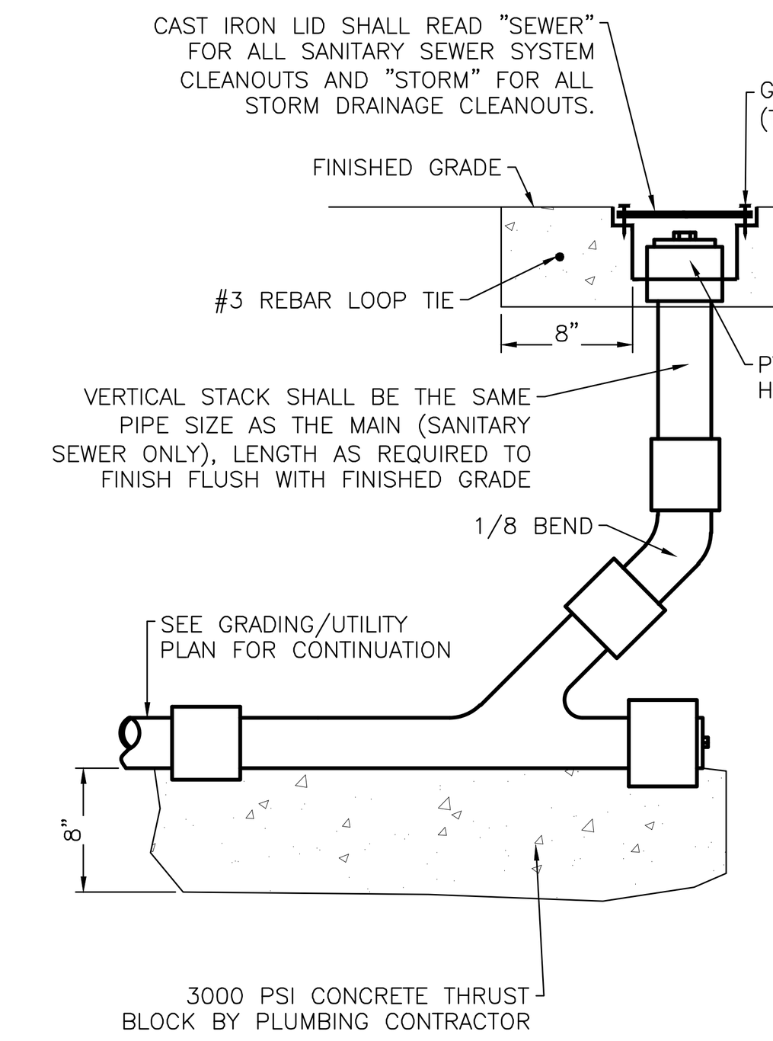
NOTES:

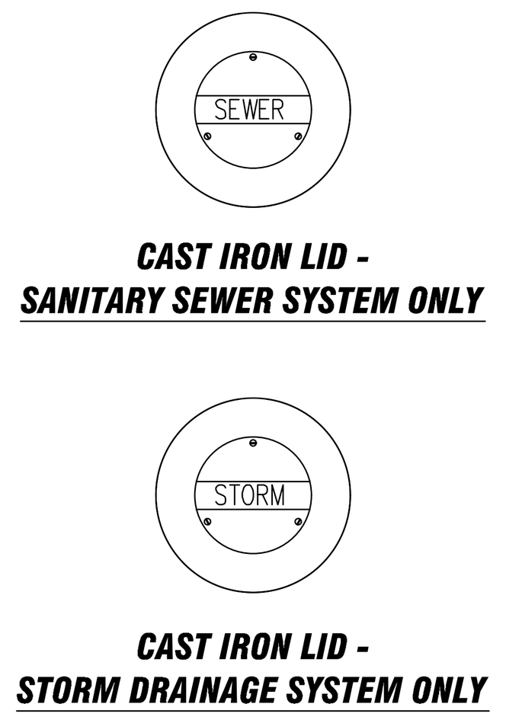
1. GROOVE CONTRACTION JOINTS SHALL BE SPACED 10 FT. ON CENTERS, WITH 1/2" ELASTOMERIC EXPANSION JOINTS AT EVERY 50 FT. EXPANSION JOINTS TO BE SEALED WITH MASTERSEAL NP-1 OR APPROVED EQUAL.

2 TYPICAL CONCRETE V-SWALE DETAIL
SCALE: NONE

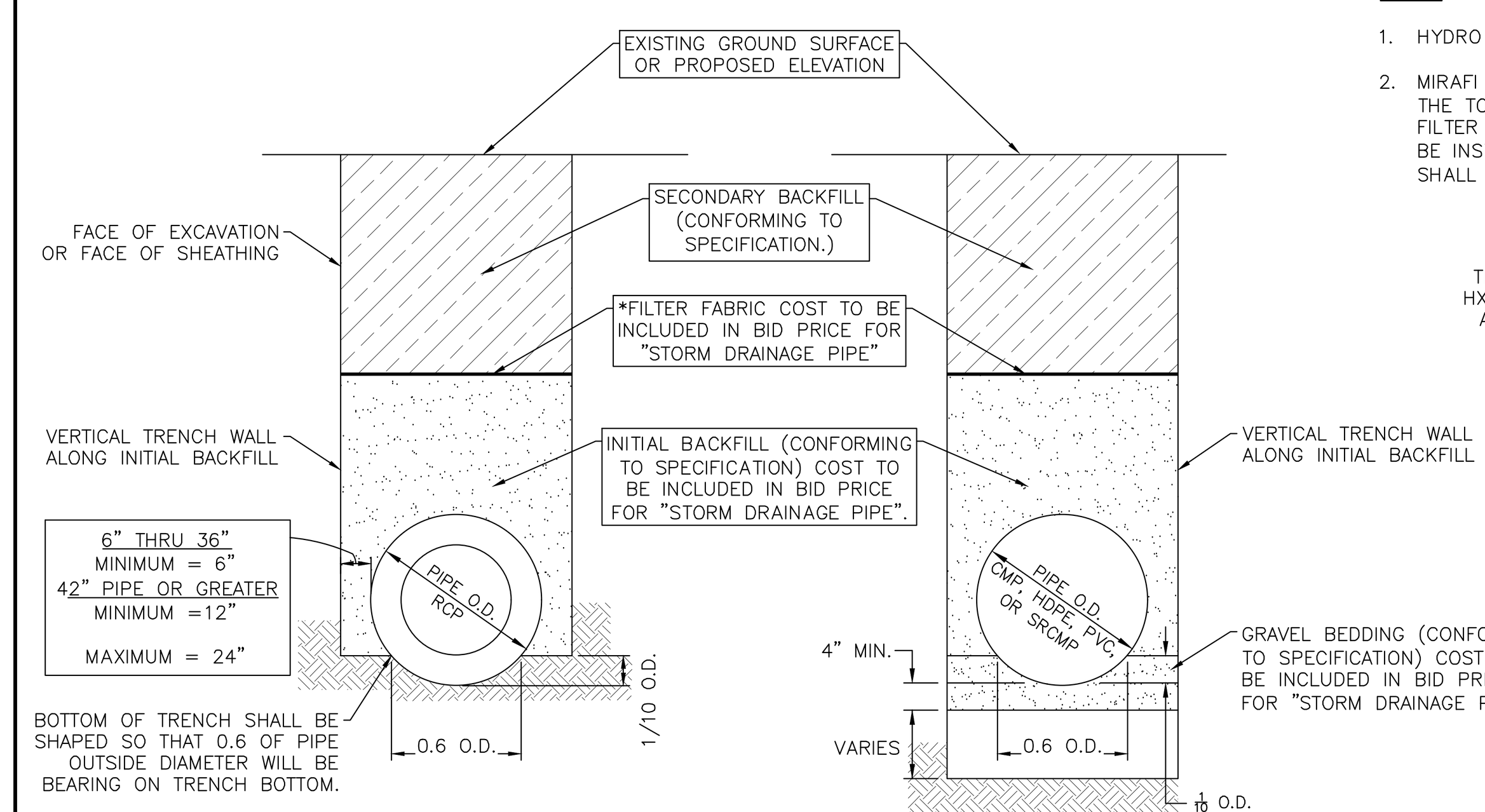


3 COMBINATION SIDEWALK/TURNDOWN BEAM
SCALE: NONE



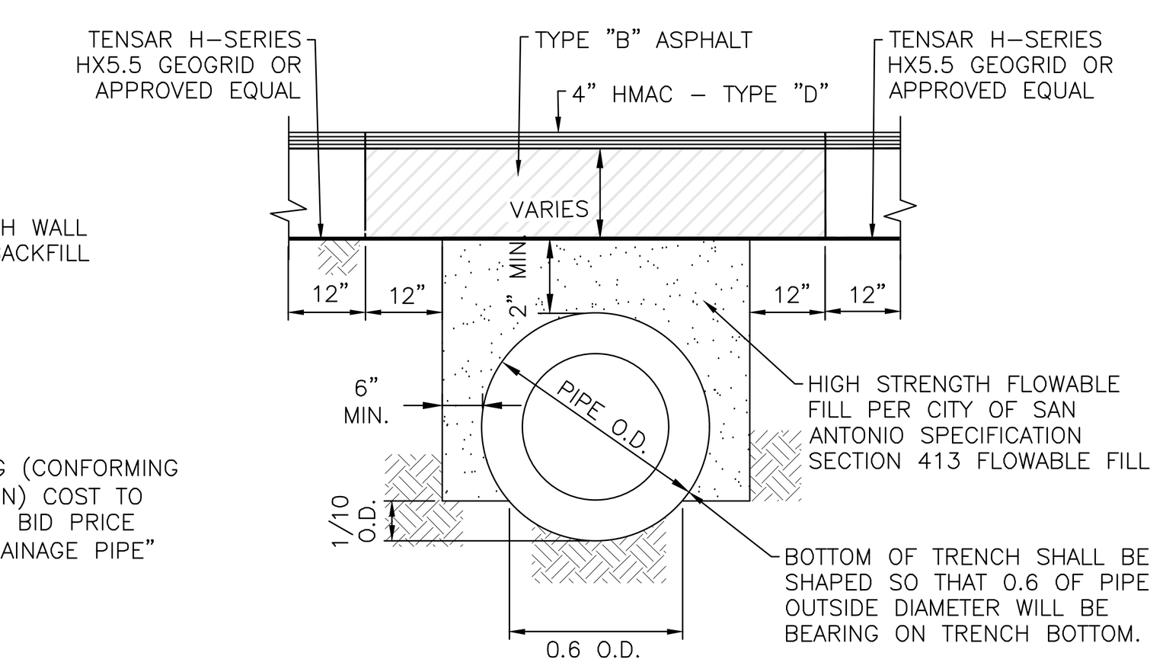


4 STORM PIPE ONE-WAY CLEANOUT DETAIL
SCALE: NONE

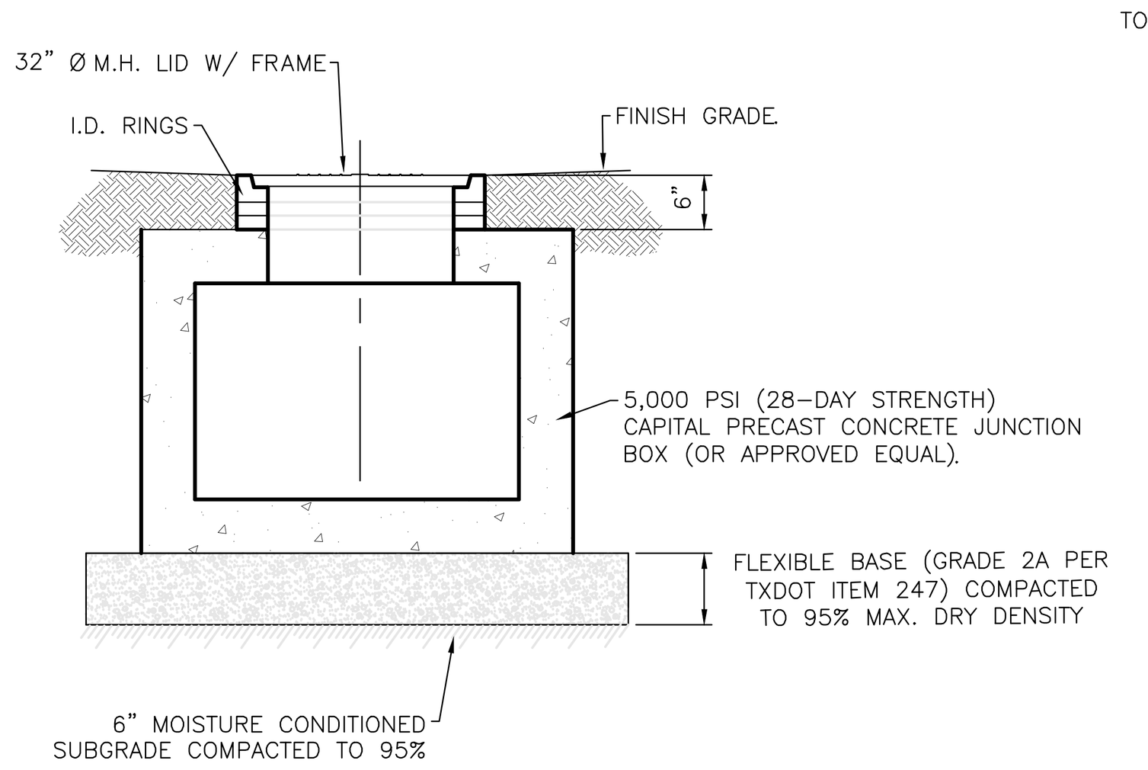


NOTES:

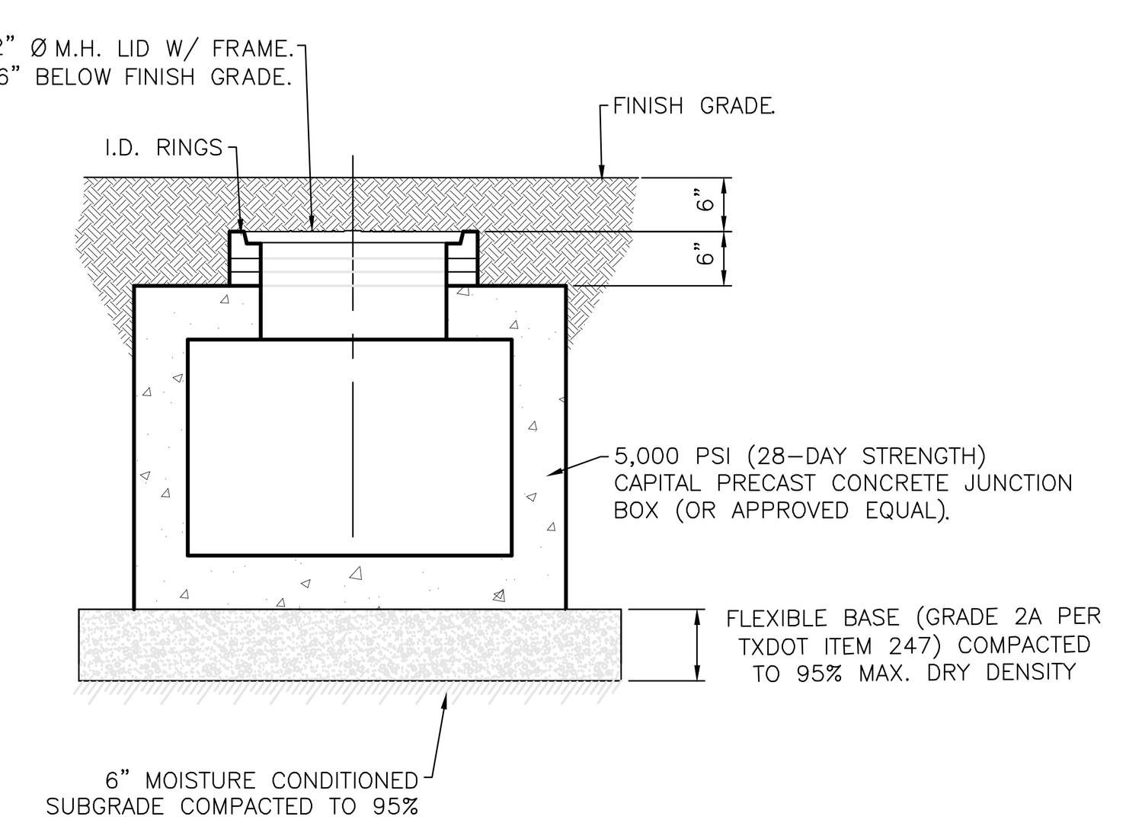
1. HYDRO FLOW PIPE HAS TO BE BRACED PRIOR TO BACKFILLING. (NO LARGE ROCKS ALLOWED)
2. MIRAFI 140N SHALL OR APPROVED EQUAL – "A FILTER FABRIC SHALL BE PLACED BETWEEN THE TOP OF THE GRAVEL BACKFILL (INITIAL BACKFILL) AND THE SECONDARY BACKFILL. THE FILTER FABRIC SHALL COVER THE TOTAL WIDTH AND LENGTH OF THE TRENCH AND SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATION. THE FILTER MATERIAL SHALL HAVE AN APPARENT OPENING SIZE OF U.S. STANDARD SIEVE NO. 40."



5 PIPE BEDDING & BACKFILL DETAIL FOR STORM DRAIN PIPES
SCALE: NONE



DETAIL "A"

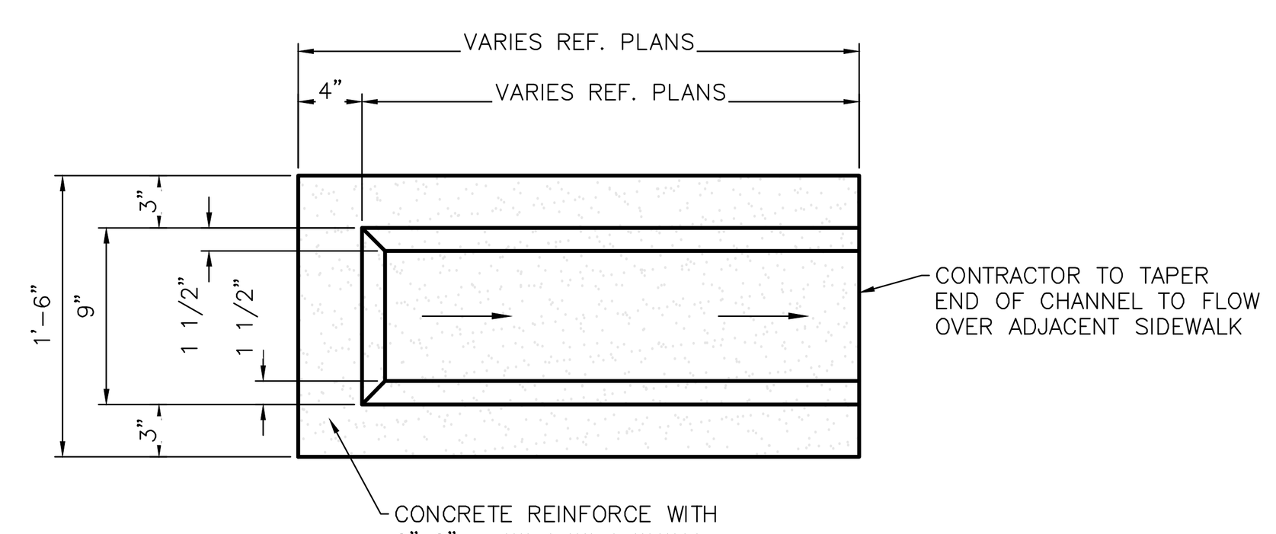


DETAIL "B"

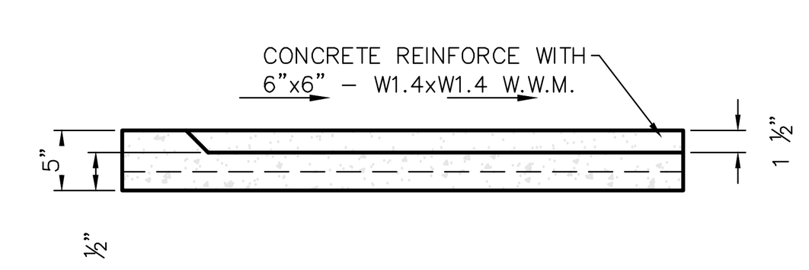
NOTES:

1. PROVIDE PIPE OPENINGS AS REQUIRED FOR PROPOSED STORM DRAINAGE CONSTRUCTION AND CONCRETE COLLAR AT PIPE CONNECTION PER DETAIL NO. 2 THIS SHEET.

6 JUNCTION BOX SECTION DETAIL
SCALE: NONE

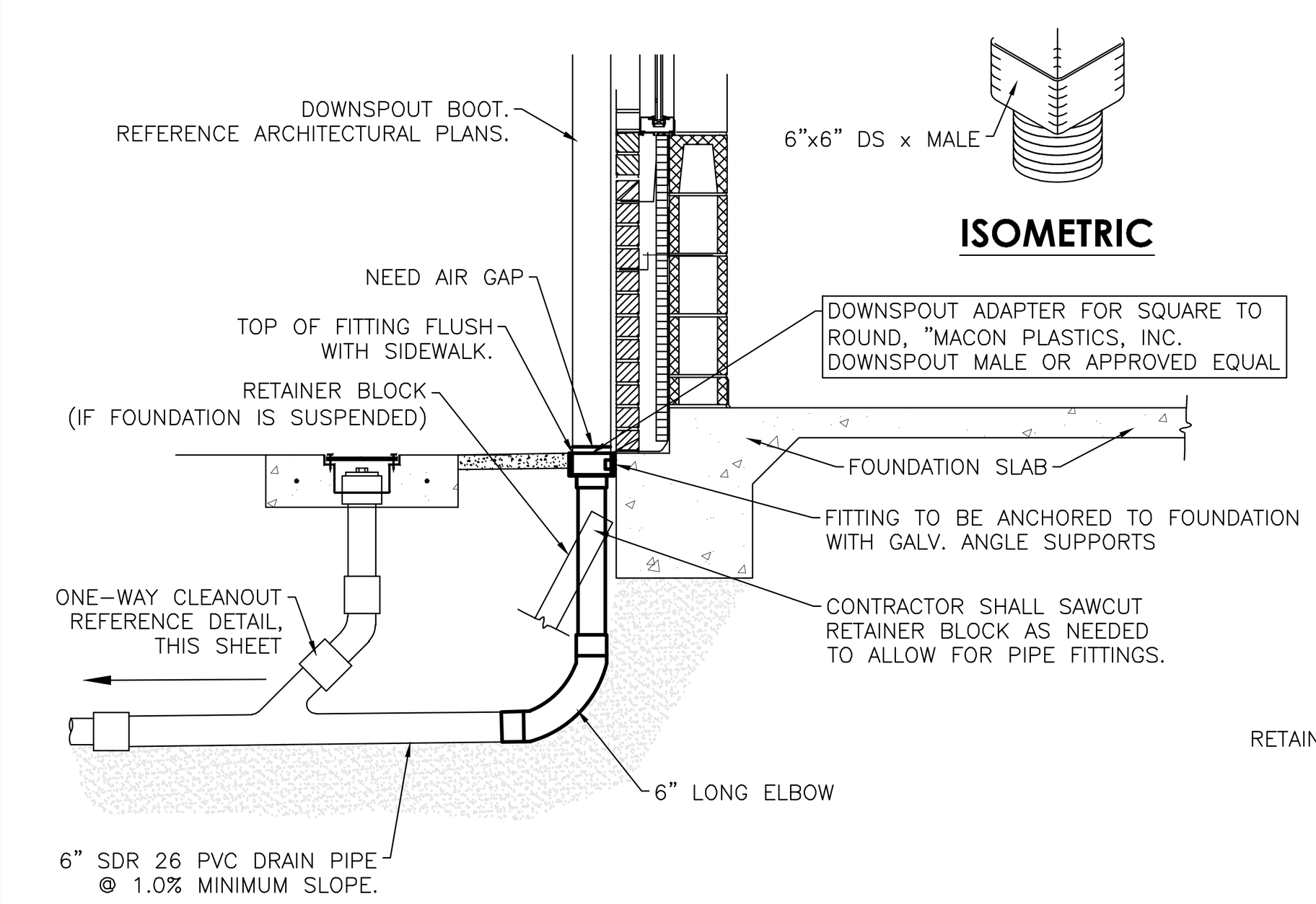


PLAN

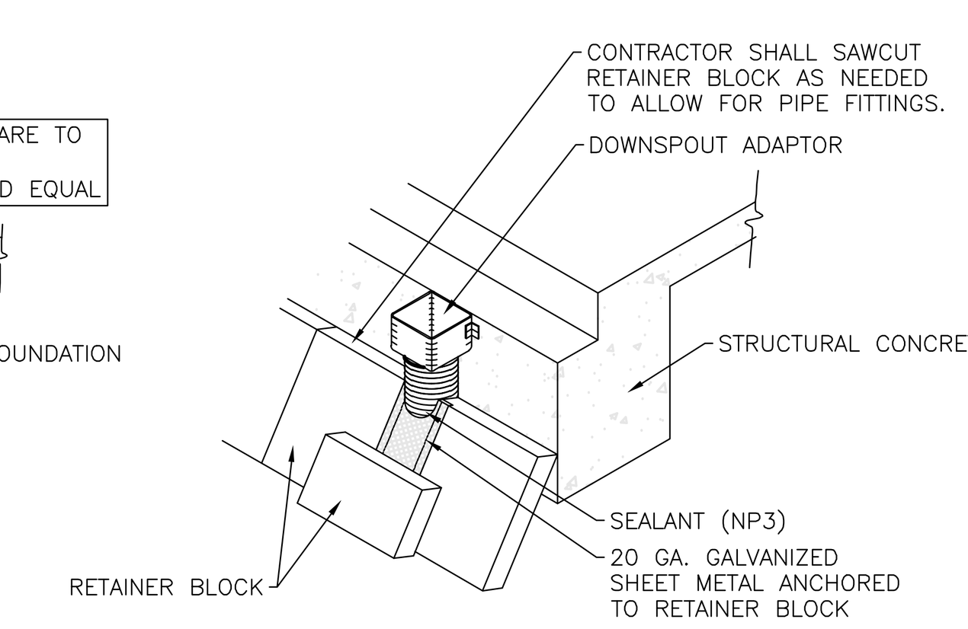


SECTION

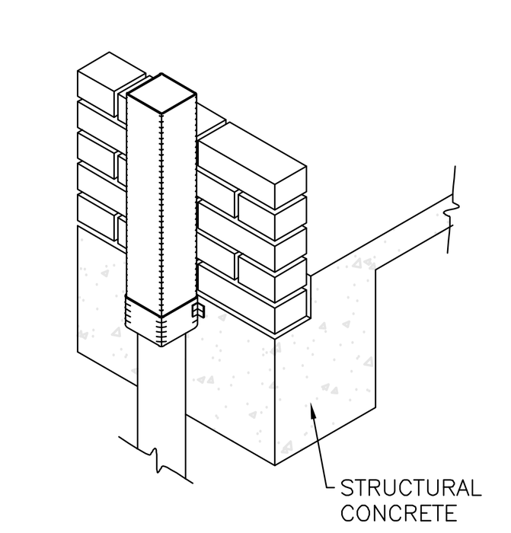
7 SPLASH BLOCK / CONCRETE SWALE DETAIL
SCALE: NONE



PROFILE VIEW

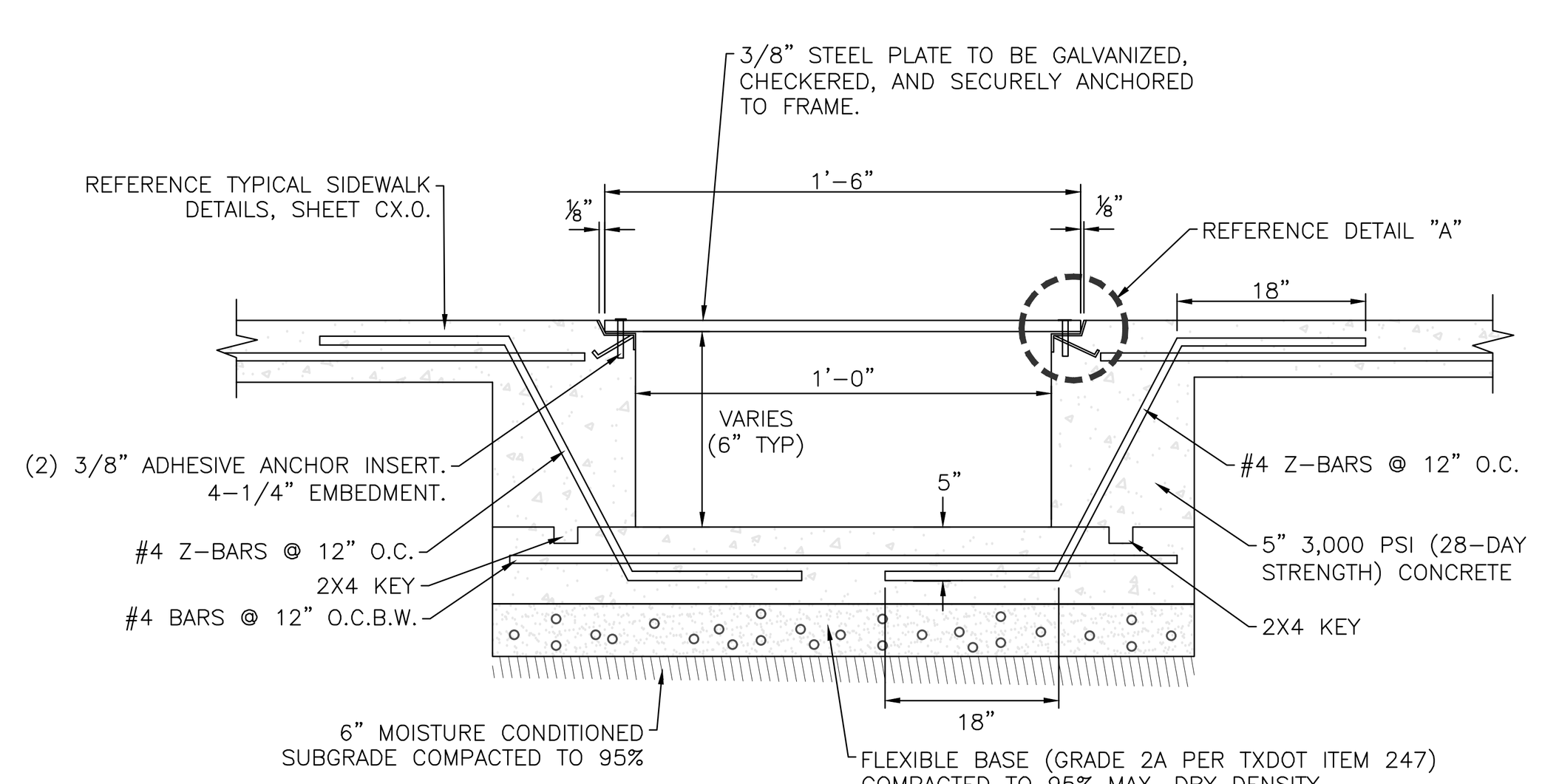


ISOMETRIC (SUSPENDED SLAB)

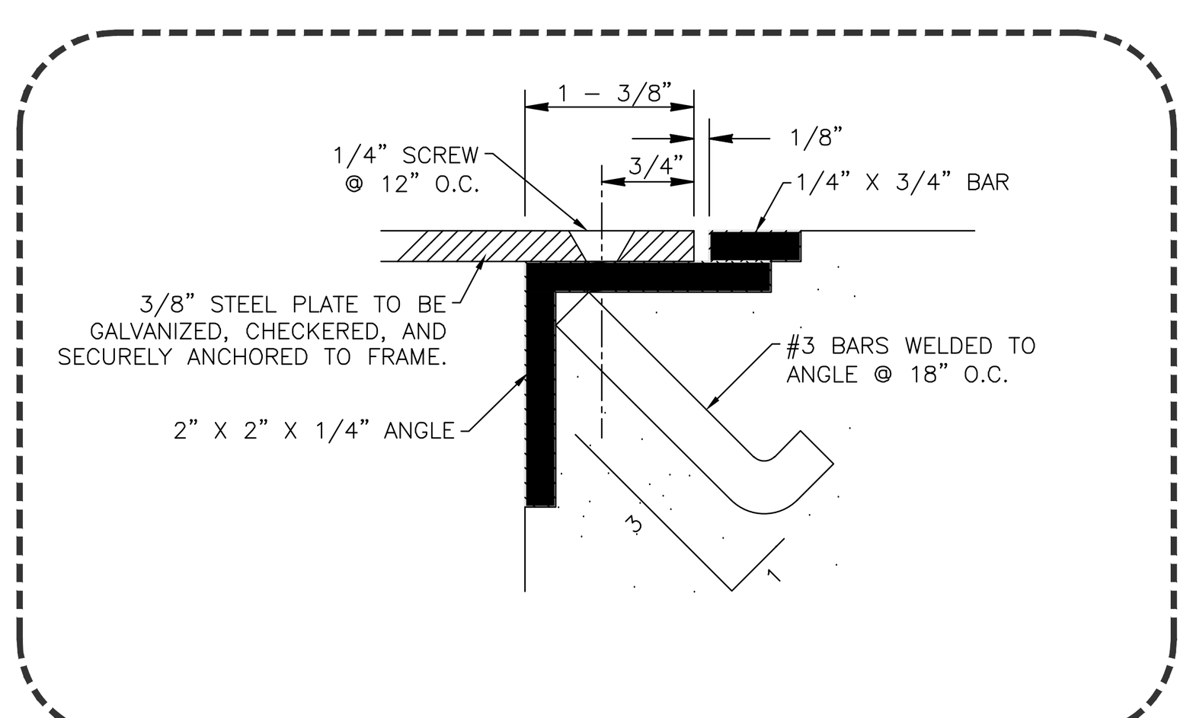


ISOMETRIC (SLAB ON GRADE)

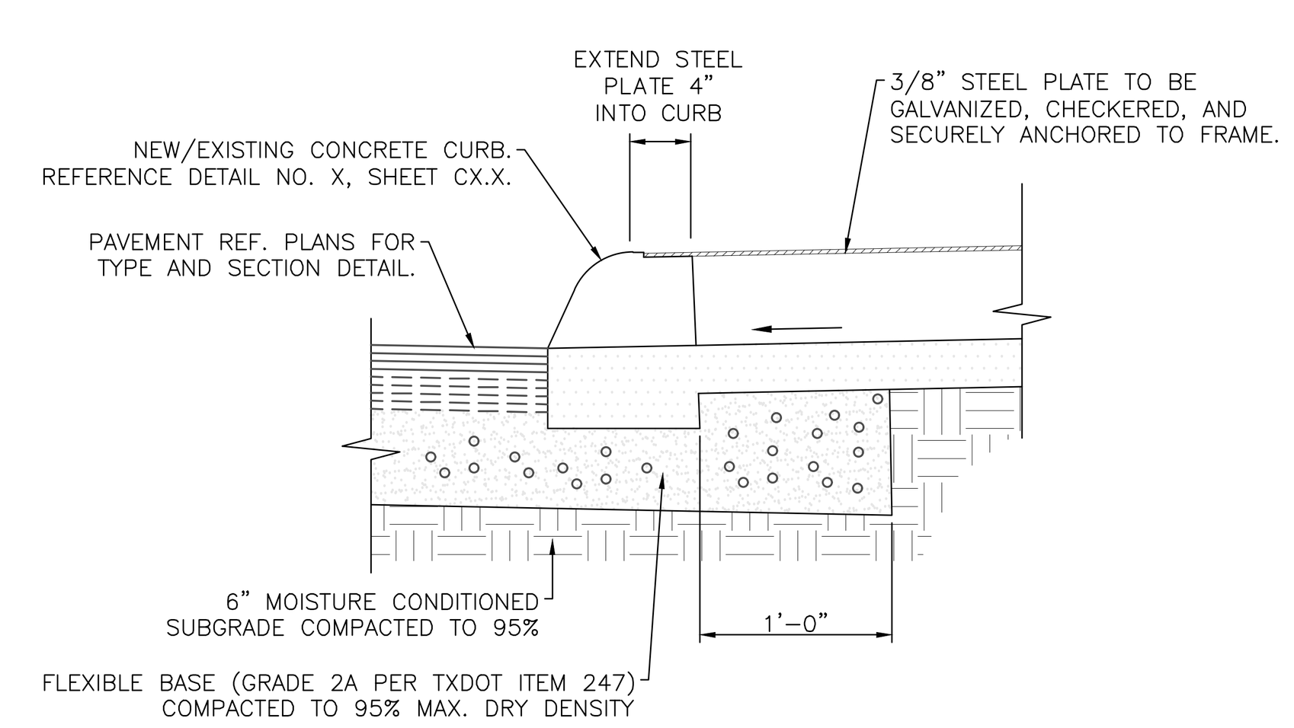
8 DOWNSPOUT CONNECTION
SCALE: NONE



PROFILE VIEW



DETAIL "A"



SECTION VIEW

NOTES:

1. FOLLOW GENERAL NOTES FOR SIDEWALKS UNLESS OTHERWISE NOTED ON DETAIL.
2. REFERENCE GRADING PLAN FOR PROPOSED SPOT ELEVATIONS.
3. ALL CONCRETE TO BE 3,000 PSI (28-DAY STRENGTH)

9 SIDEWALK DRAIN WITH COVER DETAIL
SCALE: NONE

STATE OF TEXAS — SEAN S. SMITH — 113308 — REGISTERED PROFESSIONAL ENGINEER — 2/13/25

Revision /	Date
1 ADDENDUM #1	2/13/25

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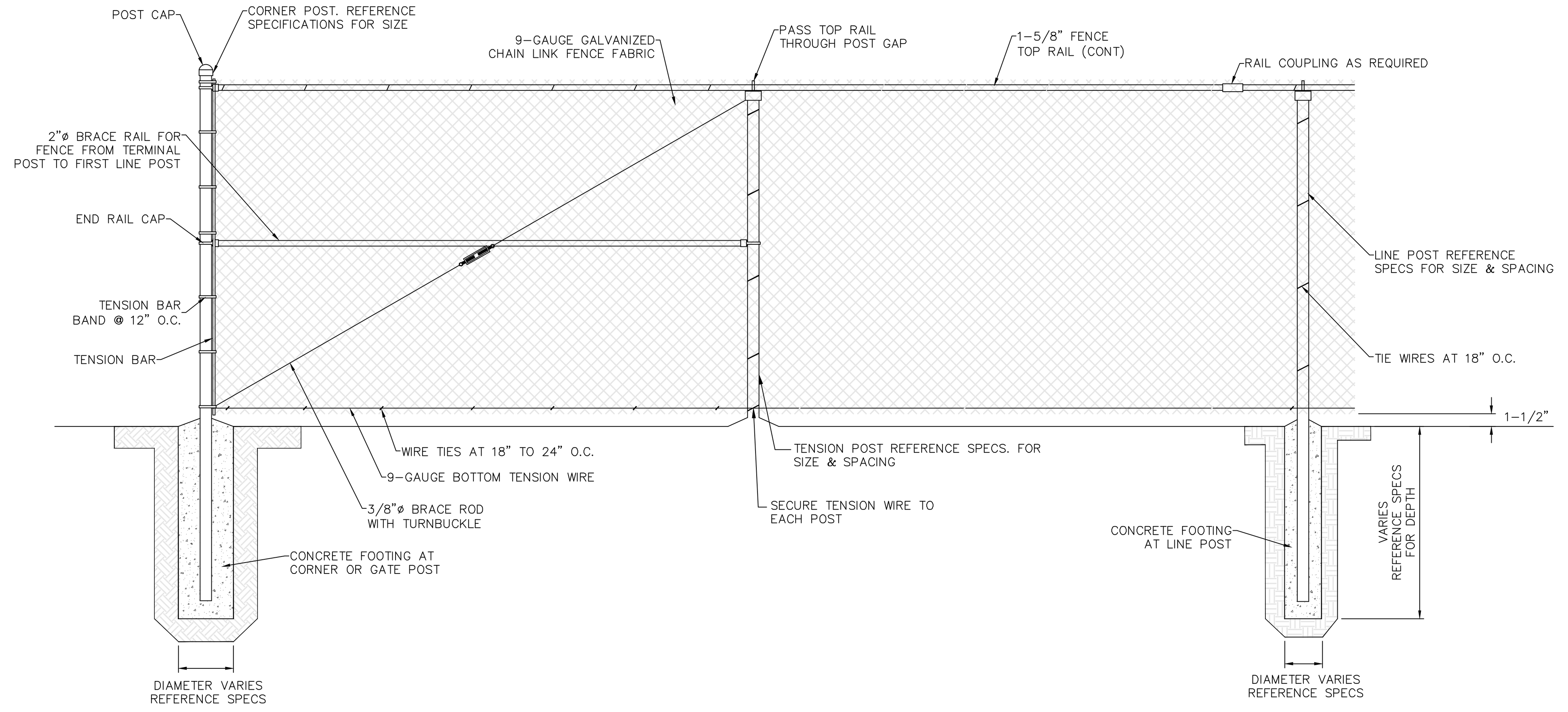
DETAILS

PACKAGE 2

Job No.	1957-04-04
Drawn By:	HC
Date:	11/26/24
Sheet No.	C8.0R1

1 CHAIN LINK FENCE DETAILS

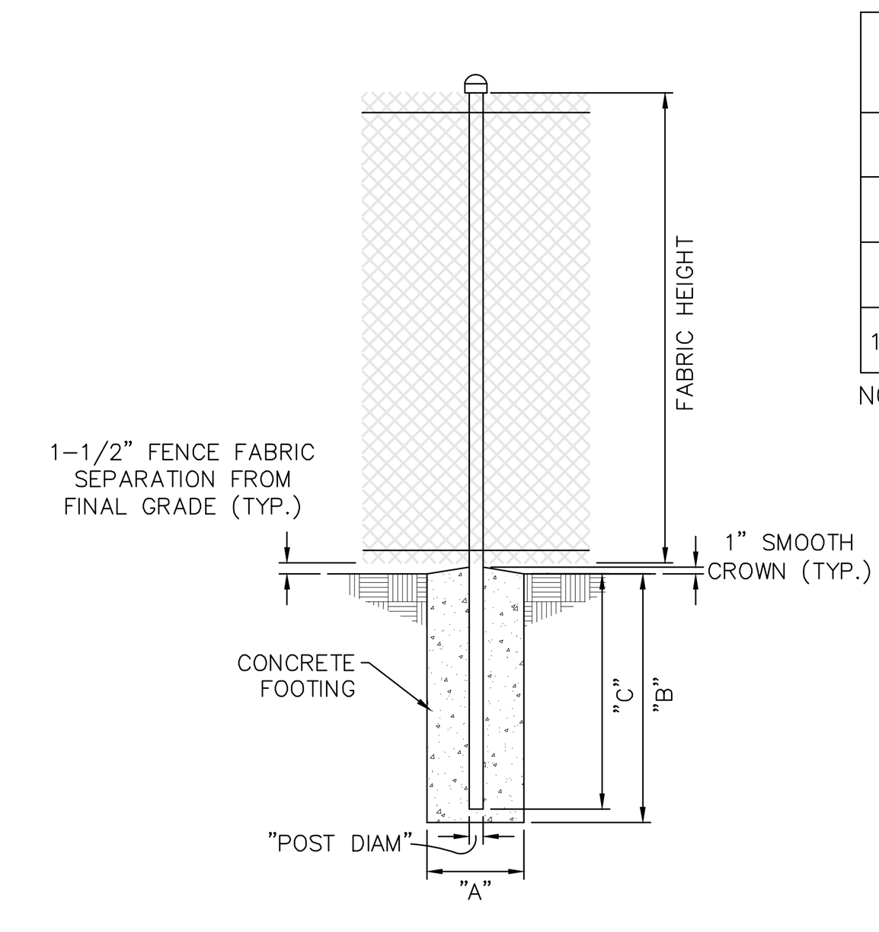
SCALE: NONE



TYPICAL FENCE PROFILE

NOTES:

1. ALL FENCE MATERIALS & HARDWARE TO BE HOT DIP GALVANIZED UNLESS OTHERWISE NOTED ON FENCING PLAN. (ALUMINUM WIRE TIES ARE ACCEPTABLE)
2. ALL FENCE FABRIC SHALL BE INSTALLED WITH THE KNUCKLE SIDE UP AND DOWN.
3. ALL CHAIN-LINK FENCE FABRIC IS TO GALVANIZED.
4. ALL CONCRETE POST FOOTINGS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI (28-DAY STRENGTH) AND MAXIMUM 3" SLUMP.



LINE AND TERMINAL POSTS

FABRIC HEIGHT	TYPE POST	"POST DIAM"	"A" DIAM	"B" DEPTH	"C" POST EMBED
3'-0" TO 4'-0"	LINE	2"	10"	30"	28"
	TERMINAL	3"	12"	36"	34"
5'-0" TO 6'-0"	LINE	2-3/8"	12"	28"	30"
	TERMINAL	3"	12"	40"	38"
8'-0"	LINE	2-3/8"	12"	36"	34"
	TERMINAL	3"	12"	40"	38"
10'-0" TO 12'-0"	LINE	2-3/8"	16"	48"	46"
	TERMINAL	3"	16"	48"	46"

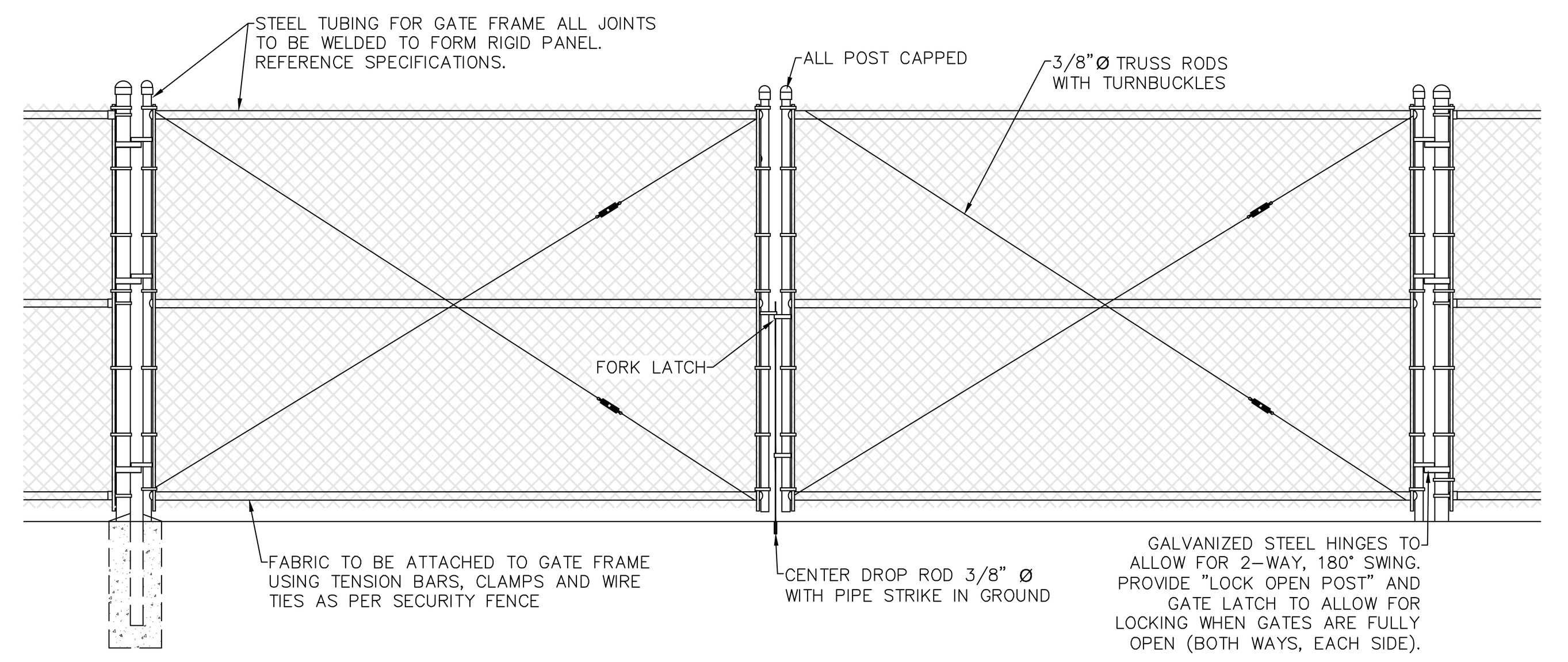
NOTE: TERMINAL POSTS INCLUDE END, CORNER, AND TENSION POSTS

GATE POST

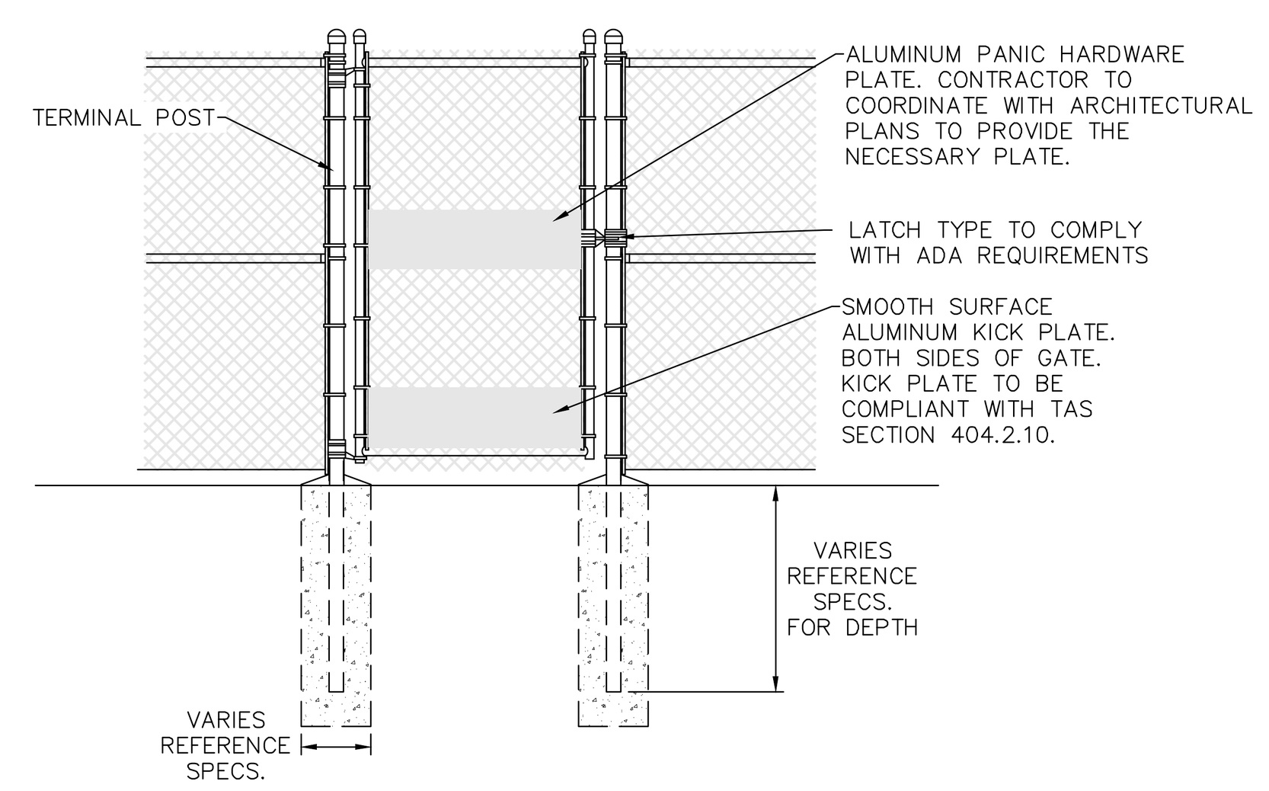
GATE LEAF WIDTH	GATE POST	FABRIC HEIGHT	"A" DIAM	"B" DEPTH	"C" POST EMBED
3' TO 4'	3"	4'	12"	36"	34"
		5' TO 6'	12"	40"	38"
		8'	16"	46"	44"
5' TO 9'	4"	3' TO 4'	18"	48"	46"
		5' TO 6'	18"	48"	46"
		8'	18"	60"	58"
10'	6.625"	8'-0"	18"	60"	58"

FENCE POST FOOTING SCHEDULE

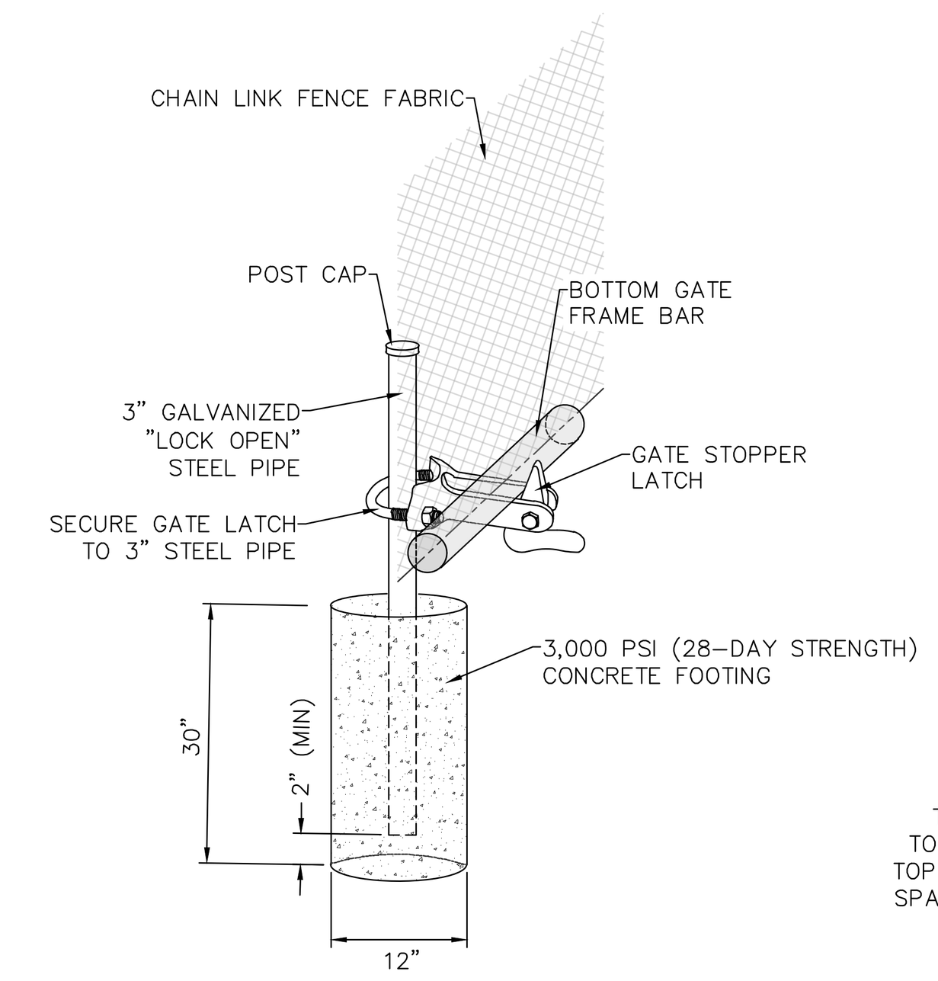
NOTE:
THESE ARE TYPICAL LINE, TERMINAL, & GATE POST DIMENSIONS, TO BE USED UNLESS OTHERWISE SPECIFIED IN SPECIFICATION SECTION 32 3113.



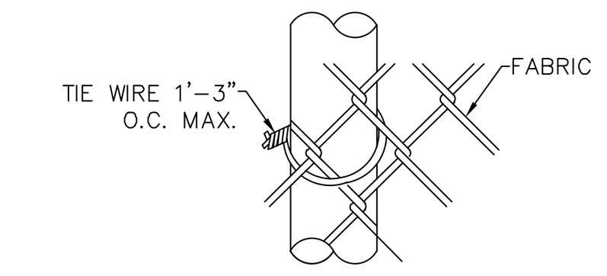
TYPICAL DOUBLE SWING GATE PROFILE



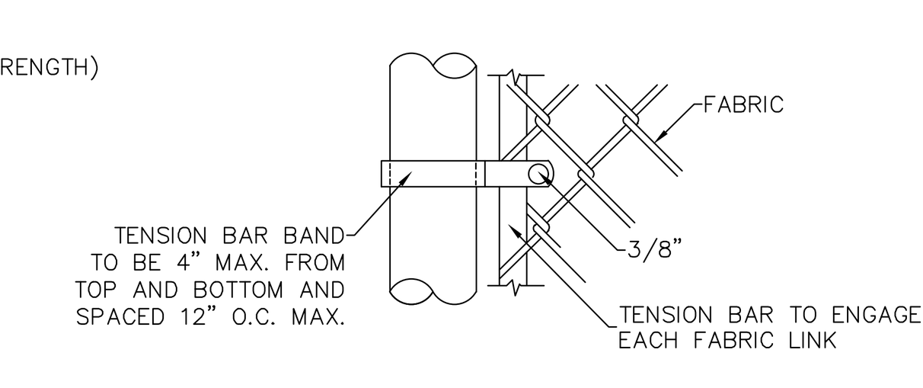
TYPICAL SINGLE SWING (PEDESTRIAN) GATE PROFILE



TYPICAL LOCK OPEN POST & GATE LATCH DETAIL



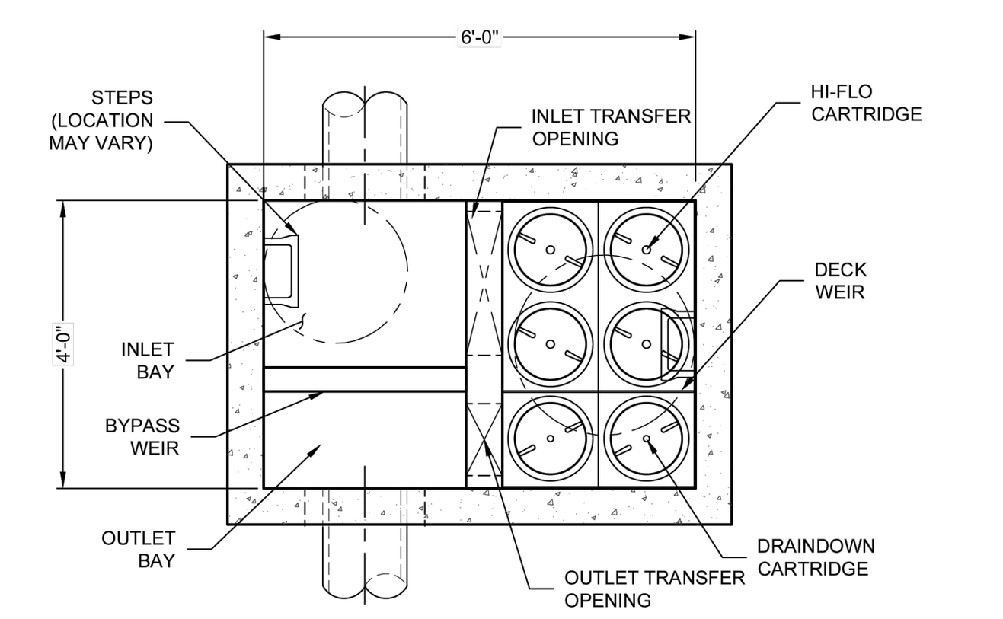
WIRE TIES FOR POST



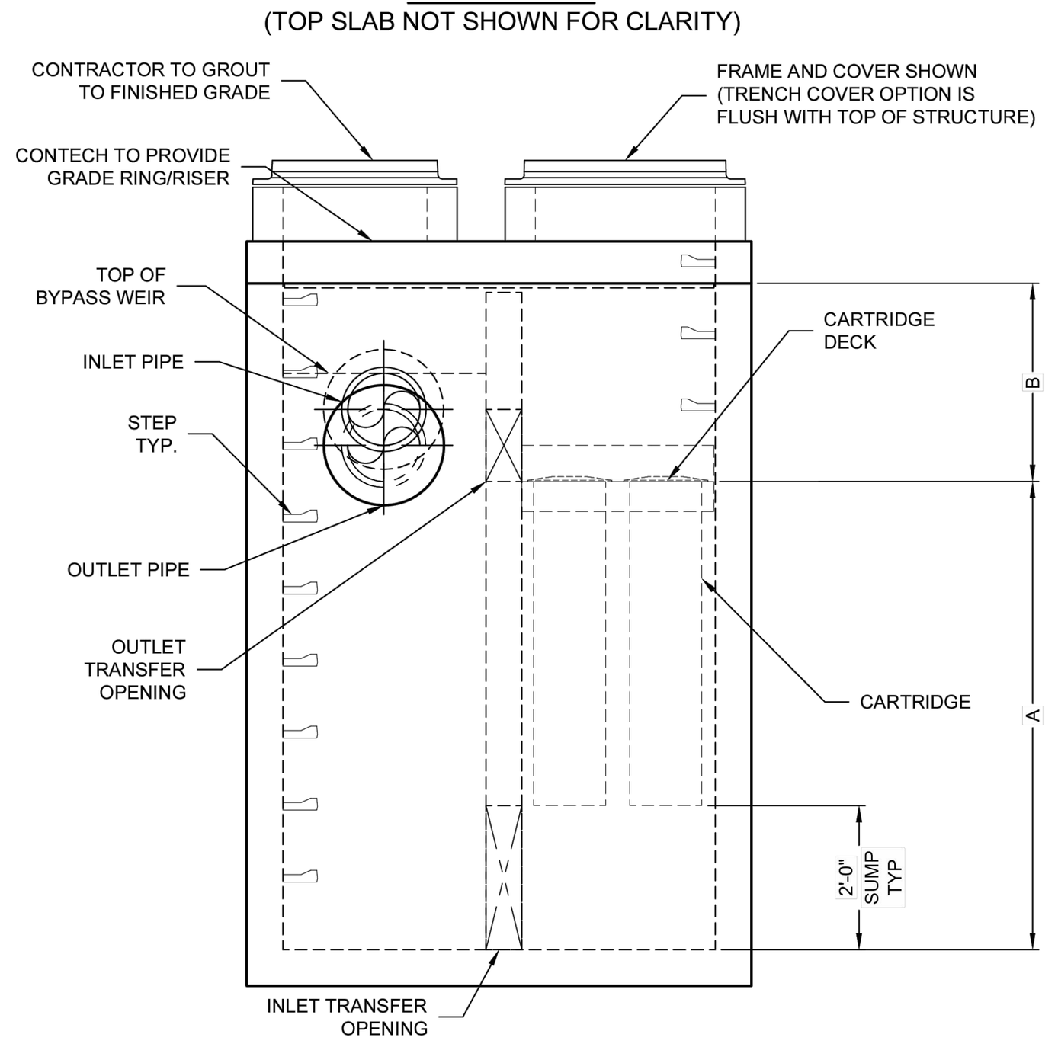
DETAIL - END OR GATE POST

2 CONTECH JELLYFISH FILTER DETAIL

SCALE: NONE



PLAN VIEW
(TOP SLAB NOT SHOWN FOR CLARITY)



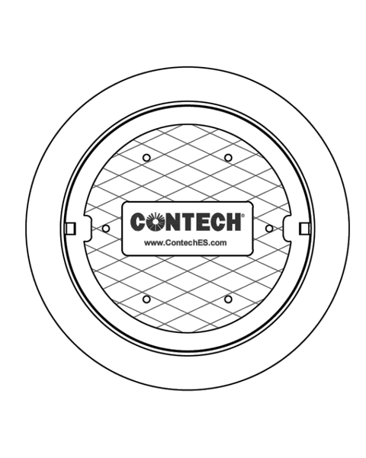
ELEVATION VIEW

JELLYFISH DESIGN NOTES

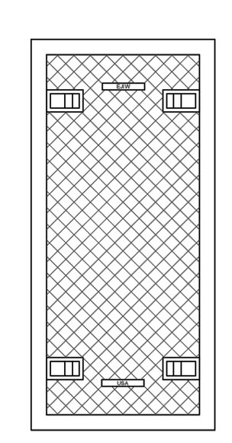
JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE LENGTH AND THE NUMBER OF CARTRIDGES. THE STANDARD PEAK DIVERSION STYLE WITH PRECAST TOP SLAB IS SHOWN. ALTERNATE OFFLINE VAULT, CURB INLET OR SHALLOW PIPE INLET OPTIONS ARE AVAILABLE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF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

CARTRIDGE SELECTION

CARTRIDGE LENGTH	54"
OUTLET INVERT TO STRUCTURE INVERT (A)	6'-6"
FLOW RATE HIGH-FLO / DRAINDOWN (CFS) (PER CART)	0.178 / 0.089
MAX. TREATMENT (CFS)	0.89
DECK TO INSIDE TOP (MIN) (B)	5'-0"



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



24" TRENCH COVER
N.T.S.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	WQU-01
WATER QUALITY FLOW RATE (cfs)	0.18
PEAK FLOW RATE (cfs)	1.94
RETURN PERIOD OF PEAK FLOW (yrs)	25
# OF CARTRIDGES REQUIRED (HF / DD)	1 / 1
CARTRIDGE LENGTH	54"

PIPE DATA:	I.E.	MAT'L	DIA	SLOPE %	HGL
INLET #1	1104.60'	PVC	12"	*	*
INLET #2	*	*	*	*	*
OUTLET	1104.10'	PVC	12"	*	*

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

RIM ELEVATION	1109.64'

ANTI-FLOTATION BALLAST	WIDTH	HEIGHT
	*	*

NOTES/SPECIAL REQUIREMENTS:

* PER ENGINEER OF RECORD

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

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

Jellyfish® Filter

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

4' x 6' JELLYFISH - 834765 - 10
CANYON LAKE HS
FISCHER, TX
SITE DESIGNATION: JELLYFISH #1

STATE OF TEXAS
SEAN S. SMITH
113308
REGISTERED PROFESSIONAL ENGINEER
2/13/25

Revision /	Date
1 ADDENDUM #1	2/13/25

Project:
CANYON LAKE HIGH SCHOOL BATTING CAGES AND LOCKER ROOMS
FOR
COMAL ISD
8555 FM 32, FISCHER, TEXAS 78623

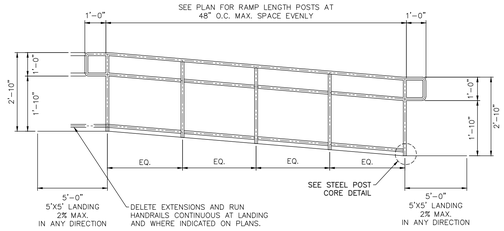
MTR
· Engineers · Surveyors · Planners
Moy Tarin Ramirez Engineers, LLC
FIRM TBPE NO. F-5297 & TBPLS NO. 10131500
12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249
TEL: (210) 698-5051
FAX: (210) 698-5085

Huckabee
www.huckabee-inc.com
800.687.1229

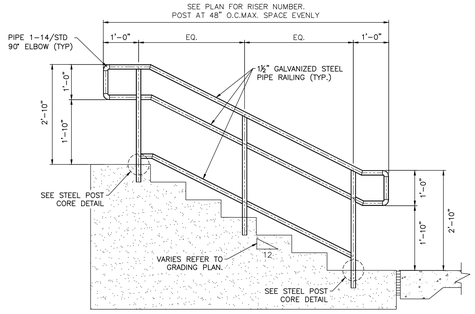
DETAILS

PACKAGE 2

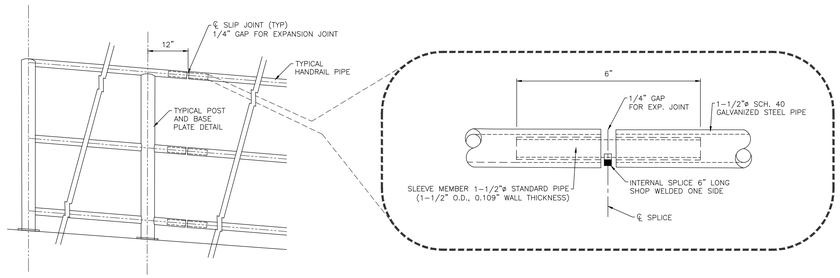
Job No.	Sheet No.
1957-04-04	C8.1R1
Drawn By: HC	
Date: 11/26/24	



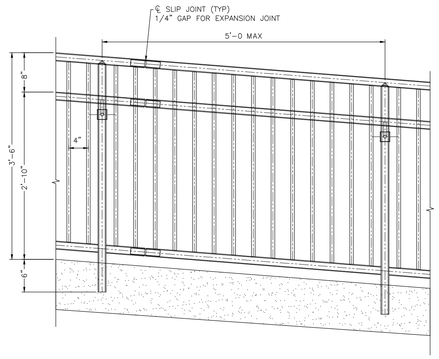
A **TYPICAL HANDRAIL AT RAMP**
SCALE: NONE



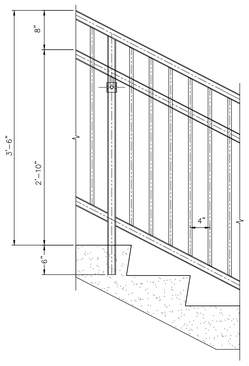
D **TYPICAL HANDRAIL AT STAIRS**
SCALE: NONE



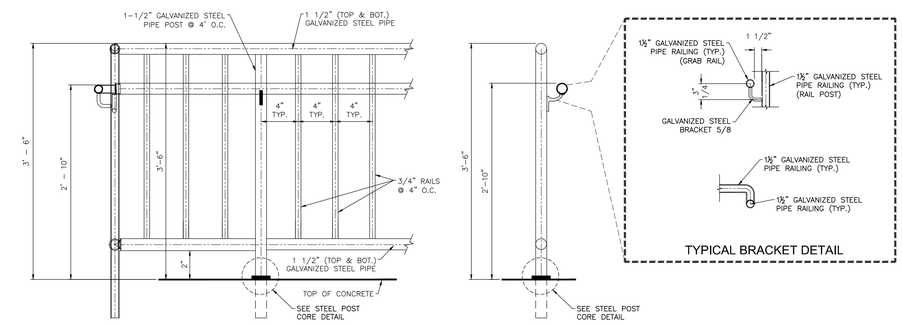
F **TYPICAL SLIP JOINT DETAILS**
SCALE: NONE



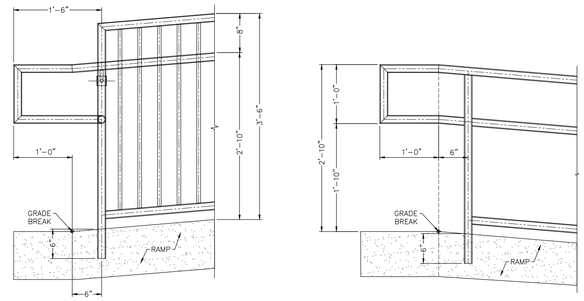
B **TYPICAL GUARDRAIL / HANDRAIL AT RAMP**
SCALE: NONE



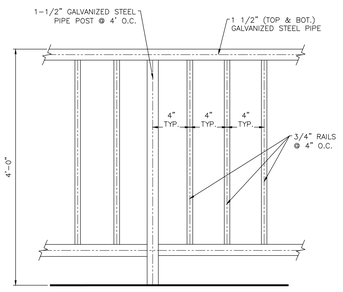
E **TYPICAL GUARDRAIL / HANDRAIL AT STAIRS**
SCALE: NONE



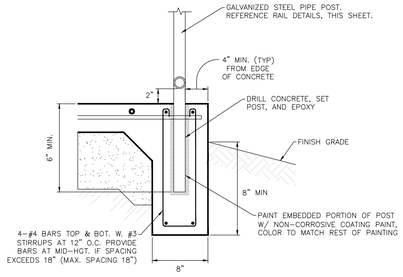
G **TYPICAL GUARDRAIL / HANDRAIL DETAIL**
SCALE: NONE



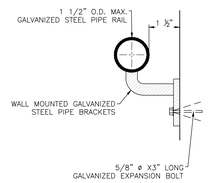
C **TYPICAL GUARDRAIL EXTENSIONS AT RAMP TOP AND BOTTOM**
SCALE: NONE



H **TYPICAL GUARDRAIL DETAIL - 2 PIPE**
SCALE: NONE



I **STEEL POST CORE DETAIL**
SCALE: NONE



J **HANDRAIL ADJACENT TO BUILDING**
SCALE: NONE

GENERAL NOTES:

1. HANDRAIL CONSTRUCTION 1-1/2" GALVANIZED STEEL PIPE (TYP).
2. ALL STEEL PIPE TO BE HOTDIP-GALVANIZED AFTER FABRICATION.
3. NO ON-SITE WELDING WILL BE ALLOWED.
4. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND GALVANIZATION.
5. PROVIDE HANDRAIL/GUARDRAIL PIPE SLIP JOINTS @ 30' MAX. SPACING AND ACROSS CONCRETE EXPANSION JOINTS TO ALLOW FOR APPROPRIATE MOVEMENT. SLIP JOINTS TO BE PER TXDOT STANDARDS.
6. HEAT UP THE RAILING CORNERS, BEAT THE SHARP EDGES, AND GRIND SMOOTH. ALL EXPOSED STEEL EDGES SHALL BE SMOOTH.
7. FOLLOW GENERAL NOTES FOR SIDEWALKS UNLESS OTHERWISE NOTED ON DETAIL.
8. REFERENCE GRADING PLAN FOR PROPOSED SPOT ELEVATIONS AND DEPTH OF RISERS.
9. IF 2 OR MORE RISERS, PROVIDE ADJACENT HANDRAILS. EXTEND HANDRAILS 1' BEYOND LIMITS OF RISERS AS SHOWN ON PLAN. SEE HANDRAIL EXTENSION DETAIL, THIS SHEET.
10. PAINT ALL RAILING COMPONENTS AS PER OWNER/ARCHITECT'S DIRECTION.

1 ***TYPICAL RAIL AT RAMP AND CONCRETE STEPS WITH SLIP JOINT DETAIL***
SCALE: NONE

STATE OF TEXAS
SEAN S. SMITH
113308
REGISTERED
PROFESSIONAL ENGINEER
1/22/25

Revision / Date

Project:
CANYON LAKE HIGH SCHOOL BATTING CAGES AND LOCKER ROOMS
FOR
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8555 FM 32, FISCHER, TEXAS 78623

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Huckabee
www.huckabee-inc.com
800.687.1229

DETAILS

PACKAGE 2

Job No.	Sheet No.
1957-04-04	C8.2
Drawn By: HC	
Date: 11/26/24	

ATTACHMENT N

INSPECTION, MAINTENANCE, REPAIR AND RETROFIT PLAN

SAND FILTER SYSTEMS

The biggest threat to the filtering system is exposure to heavy sediment loads that clog the filter media. The sand filter BMP shall be inspected on a quarterly basis and after large storms for the first year of operation. Subsequent inspections shall be semi-annually or more often if deemed necessary.

During Construction: Construction within the area draining to the system shall be complete prior to exposing the filter to stormwater runoff. All exposed areas shall be stabilized to minimize sediment loads.

Inspections: Inspect the sand filter BMP at least twice a year (once during or immediately following wet weather) to evaluate facility operation. During each inspection, erosion areas inside and downstream of the BMP must be identified and repaired or revegetated immediately. With each inspection, any damage to the structural elements of the system (pipes, concrete drainage structures, retaining walls, etc.) must be identified and repaired immediately. Cracks, voids and undermining should be patched/filled to prevent additional structurally damage. Trees and root systems should be removed to prevent growth in cracks and joints that can cause structural damage.

Sediment Removal: Remove sediment from the inlet structure and filtration chamber when sediment buildup reaches a depth of 6 inches or when the proper functioning of inlet and outlet structures is impaired. Sediment should be cleared from the inlet structure at least every year and from the filtration basin at least every 5 years.

Media Replacement: Maintenance of the filter media is necessary when the drawdown time exceeds 48 hours. When this occurs, the upper layer of sand should be removed and replaced with new material meeting the original specifications. Any discolored sand should also be removed and replaced. In filters that have been regularly maintained, this should be limited to the top 2 to 3 inches.

Debris and Litter Removal: Debris and litter that accumulates within the basin should be removed during regular mowing operations and inspections. Particular attention should be paid to floating debris that can eventually clog the control device or riser.

Filter Underdrain: Clean underdrain piping network to remove any sediment buildup as needed to maintain design drawdown time.

Mowing: Grass areas in and around sand filters must be mowed at least twice annually to limit vegetation height to 18 inches.

Cleaning: The unit must be cleaned annually. This cleaning includes removal and appropriate disposal of all water, sediment, oil and grease, and debris that has accumulated within the unit. The Jellyfish Filter is inspected and maintained by professional vacuum cleaning service providers with experience in the maintenance of underground tanks, sewers and catch basins. Since some of the maintenance procedures require manned entry into the Jellyfish structure, only professional maintenance service providers trained in confined space entry procedures should enter the vessel. Service provider companies typically have personnel who are trained and certified in confined space entry procedures according to local, state, and federal standards.

Filter Cartridge Testing: Filter cartridges should be tested for adequate flow rate, every 12 months and cleaned and re-commissioned, or replaced if necessary. A manual backflush must be performed on a single draindown cartridge using a Jellyfish Cartridge Backflush pipe (described in the Jellyfish Filter Owner's manual). If the time required to drain 14 gallons of backflush water from the Backflush Pipe (from top of pipe to the top of the open flapper valve) exceeds 15 seconds, it is recommended to perform a manual backflush on each of the cartridges. After the manual backflush, the draindown test should be repeated on a single cartridge to determine if the cartridge can drain 14 gallons of water in 15 seconds. If the cartridge still does not achieve the design flow rate, it must be replaced. The unit should be cleaned out immediately after an oil, fuel or chemical spill.

Filter Cartridge Cleaning: This cartridge cleaning procedure is performed by removing the cartridge from the cartridge deck and externally rinsing the filtration tentacles using a low-pressure water sprayer, as described in the Jellyfish Filter Owner's Manual. If this procedure is performed within the structure, the cartridge or individual filtration tentacles should be rinsed while safely suspended over the maintenance access wall opening in the cartridge deck, such that rinsate flows into the lower chamber of the Jellyfish Filter. If the rinsing procedure is performed outside the structure, the cartridge or individual filtration tentacles should be rinsed in a suitable basin such as a plastic barrel or tub, and rinsate subsequently poured into the maintenance access wall opening in the cartridge deck. Sediment is subsequently removed from the lower chamber by standard vacuum service.

EXTENDED DETENTION BASINS

There are many factors that may affect the basin's operation and that should be periodically checked. These factors can include mowing, control of pond vegetation, removal of accumulated bottom sediments, removal of debris from all inflow and outflow structures, unclogging of orifice perforations, and the upkeep of all physical

structures that are within the detention pond area. One should conduct periodic inspections and after each significant storm. Remove floatables and correct erosion problems in the pond slopes and bottom. Pay particular attention to the outlet control perforations for signs of clogging. If the orifices are clogged, remove sediment and other debris.

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

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

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

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

Structural Repairs and Replacement: With each inspection, any damage to the structural elements of the system (pipes, concrete drainage structures, retaining walls, etc.) should be identified and repaired immediately. These repairs should include patching of cracked concrete, sealing of voids, and removal of vegetation from cracks and joints. The various inlet/outlet and riser works in a basin will eventually deteriorate and must be replaced. Public works experts have estimated that corrugated metal pipe (CMP) has a useful life of about 25 yr, whereas reinforced concrete barrels and risers may last from 50 to 75 yr.

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

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

ENGINEERED VEGETATIVE FILTER STRIPS

Once a vegetated area is well established, little additional maintenance is generally necessary. The key to establishing a viable vegetated feature is the care and maintenance it receives in the first few months after it is planted. Once established, all vegetated BMPs require some basic maintenance to ensure the health of the plants including:

Pest Management: An Integrated Pest Management (IPM) Plan should be developed for vegetated areas. This plan should specify how problem insects and weeds will be controlled with minimal or no use of insecticides and herbicides.

Seasonal Mowing and Lawn Care: If the filter strip is made up of turf grass, it should be mowed as needed to limit vegetation height to 18 inches, using a mulching mower (or removal of clippings). If native grasses are used, the filter may require less frequent mowing, but a minimum of twice annually. Grass clippings and brush debris should not be deposited on vegetated filter strip areas. Regular mowing should also include weed control practices; however, herbicide use should be kept to a minimum (Urbonas et al., 1992). Healthy grass can be maintained without using fertilizers because runoff usually contains sufficient nutrients. Irrigation of the site can help assure a dense and healthy vegetative cover.

Inspection: Inspect filter strips at least twice annually for erosion or damage to vegetation; however, additional inspection after periods of heavy runoff is most desirable. The strip should be checked for uniformity of grass cover, debris and litter, and areas of sediment accumulation. More frequent inspections of the grass cover during the first few years after establishment will help to determine if any problems are developing, and to plan for long-term restorative maintenance needs. Bare spots and areas of erosion identified during semi-annual inspections must be replanted and restored to meet specifications. Construction of a level spreader device may be necessary to reestablish shallow overland flow.

Debris and Litter Removal: Trash tends to accumulate in vegetated areas, particularly along highways. Any filter strip structures (i.e., level spreaders) should be kept free of obstructions to reduce floatables being flushed downstream, and for aesthetic reasons. The need for this practice is determined through periodic inspection, but should be performed no less than 4 times per year.

Sediment Removal: Sediment removal is not normally required in filter strips, since the vegetation normally grows through it and binds it to the soil. However, sediment may accumulate along the upstream boundary of the strip preventing uniform overland flow. Excess sediment should be removed by hand or with flat-bottomed shovels.

Grass Reseeding and Mulching: A healthy dense grass should be maintained on the filter strip. If areas are eroded, they should be filled, compacted, and reseeded so that the final grade is level. Grass damaged during the sediment removal process should be promptly replaced using the same seed mix used during filter strip establishment. If possible, flow should be diverted from the damaged areas until the grass is firmly established. Bare spots and areas of erosion identified during semi-annual inspections must be replanted and restored to meet specifications. Corrective maintenance, such as weeding or replanting should be done more frequently in the first two to three years after installation to ensure stabilization. Dense vegetation may require irrigation immediately after planting, and during particularly dry periods, particularly as the vegetation is initially established.

JELLYFISH FILTERS

Jellyfish cartridges are passively backwashed automatically after each storm event, which removes accumulated sediment from the membranes and significantly extends the service life of the cartridges and the maintenance interval. If required, the cartridges can be easily manually backwashed without removing the cartridges. Additionally, the lightweight cartridges can be removed by hand and externally rinsed, and rinsed cartridges then re-installed. These simple maintenance options allow for cartridge regeneration, thereby minimizing cartridge replacement costs and life-cycle treatment costs while ensuring long-term treatment performance. Regular inspection and maintenance are proven, cost-effective ways to maximize water resource protection for

all stormwater pollution control practices, and are required to ensure proper functioning of the Jellyfish Filter. Inspection of the Jellyfish Filter is performed from the surface, while proper maintenance required a combination of procedures conducted from the surface and worker entry in the structure.

Inspection: Post-construction inspection is required prior to putting the Jellyfish Filter into service. Routine inspections are recommended quarterly during the first year of operation to accurately assess the sediment and floatable pollutant accumulation, and to ensure that the automatic backwash feature is functioning properly.

Cleaning: The unit must be cleaned annually. This cleaning includes removal and appropriate disposal of all water, sediment, oil and grease, and debris that has accumulated within the unit. The Jellyfish Filter is inspected and maintained by professional vacuum cleaning service providers with experience in the maintenance of underground tanks, sewers and catch basins. Since some of the maintenance procedures require manned entry into the Jellyfish structure, only professional maintenance service providers trained in confined space entry procedures should enter the vessel. Service provider companies typically have personnel who are trained and certified in confined space entry procedures according to local, state, and federal standards.

Filter Cartridge Testing: Filter cartridges should be tested for adequate flow rate, every 12 months and cleaned and re-commissioned, or replaced if necessary. A manual backflush must be performed on a single draindown cartridge using a Jellyfish Cartridge Backflush pipe (described in the Jellyfish Filter Owner's manual). If the time required to drain 14 gallons of backflush water from the Backflush Pipe (from top of pipe to the top of the open flapper valve) exceeds 15 seconds, it is recommended to perform a manual backflush on each of the cartridges. After the manual backflush, the draindown test should be repeated on a single cartridge to determine if the cartridge can drain 14 gallons of water in 15 seconds. If the cartridge still does not achieve the design flow rate, it must be replaced. The unit should be cleaned out immediately after an oil, fuel or chemical spill.

Filter Cartridge Cleaning: This cartridge cleaning procedure is performed by removing the cartridge from the cartridge deck and externally rinsing the filtration tentacles using a low-pressure water sprayer, as described in the Jellyfish Filter Owner's Manual. If this procedure is performed within the structure, the cartridge or individual filtration tentacles should be rinsed while safely suspended over the maintenance access wall opening in the cartridge deck, such that rinsate flows into the lower chamber of the Jellyfish Filter. If the rinsing procedure is performed outside the structure, the cartridge or individual filtration tentacles should be rinsed in a suitable basin such as a plastic barrel or tub, and rinsate subsequently poured into the maintenance access wall opening in the cartridge deck. Sediment is subsequently removed from the lower chamber by standard vacuum service.

RECORD KEEPING

Maintenance and inspection records should be kept on file by the Owner of the permanent BMPs for a period of at least three (3) years. Repair and retrofit records should be kept on file by the Owner of the permanent BMPs for a period of at least five (5) years.

Jeffrey R. Smith

Print Name

Signature of Applicant/Owner/Agent

2.11.2025

Date

ATTACHMENT P

MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

No surface streams exist within the project site. The storm water flows discharging from the site will continue to flow as they currently do. Stormwater from the site will enter off-site surface streams in the same manner that it did prior to the improvements to the site.

Temporary BMPs, as shown on the Site Plan, will be used to minimize sediments leaving the site and flowing into surface streams during construction. There will be no adverse effects to downstream surfaces or streams as a result of completion of the proposed project.

CZP Site Plan

SCALE: 1"=120'
0 120 240

LEGEND:

- PROPERTY LINE
- EXISTING CONTOUR
- 100 PROPOSED CONTOUR
- SILT FENCE
- CHAINLINK FENCE
- GRAVEL INLET FILTER
- STABILIZED CONSTRUCTION EXIT
- NEW CONCRETE SIDEWALK/FLATWORK
- CONSTRUCTION STAGING AREA
- CONCRETE WASHOUT PIT
- DRAINAGE FLOW ARROW

PROJECT AREA = 88.00 ACRES

TOTAL DISTURBED AREA = 2.29 ACRES

REVISIONS

NO.	DESCRIPTION	DATE	PROJ. #	DSN. BY:	DWN. BY:	CHKD. BY:	DATE:

• Engineers
• Surveyors
• Planners
MTR
Moy Tarin Ramirez Engineers, LLC
TBPELS: ENGINEERING F-5297/SURVEYING F-10131500
12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249
TEL: (210) 698-5051
FAX: (210) 698-5085

STATE OF TEXAS
SEAN S. SMITH
113308
REGISTERED PROFESSIONAL ENGINEER
2/11/25

CISD CANYON LAKE HIGH SCHOOL

OVERALL CONTRIBUTING ZONE SITE PLAN

SHEET
C1.0

K:\Comal\SD\Canyon Lake HS\2025 CZP Add\Drawings\CZP Site Plan.dwg 2025/02/11 10:34am bstanton

REVISIONS

NO.	DATE	DESCRIPTION	BY

PROJ. | DGN. BY | DWN. BY | CHKD. BY | DATE

Moy Tarin Ramirez Engineers, LLC
· Engineers · Surveyors · Planners
TBPELS: ENGINEERING F-5297/SURVEYING F-10131500
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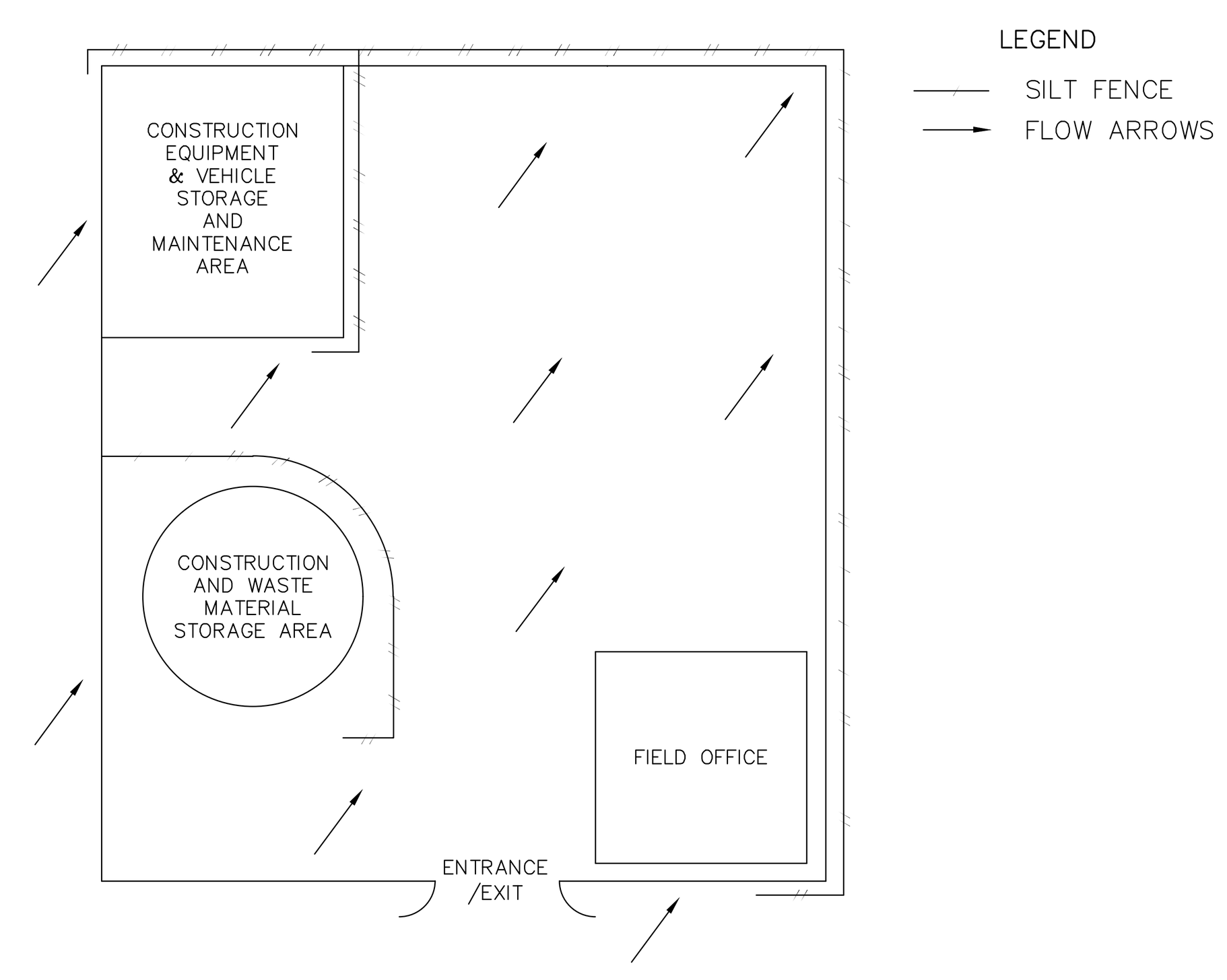
CISD CANYON LAKE HIGH SCHOOL

CONTRIBUTING ZONE SITE PLAN

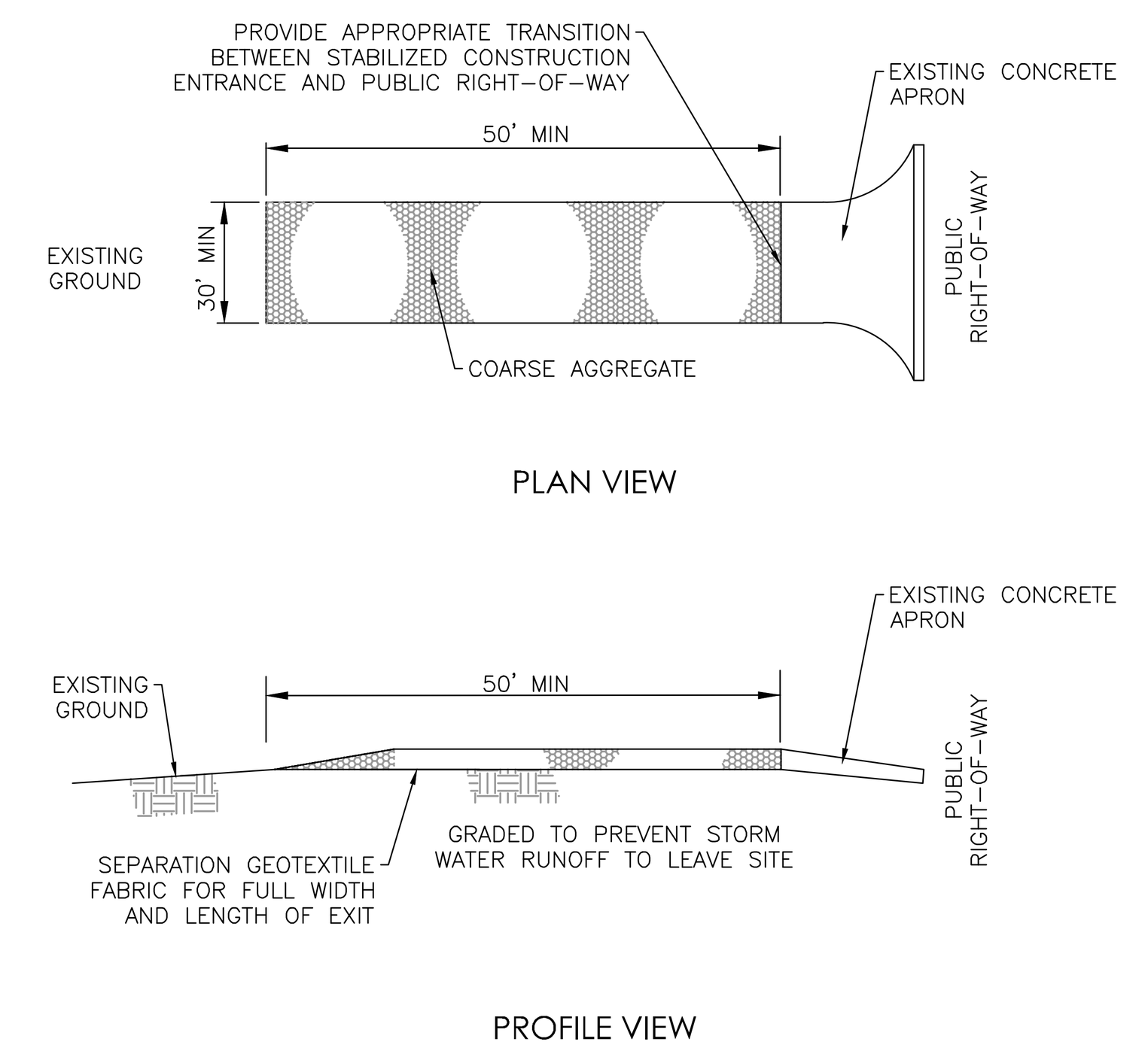
SHEET

C1.1



1 CONSTRUCTION STAGING AREA

SCALE: NONE

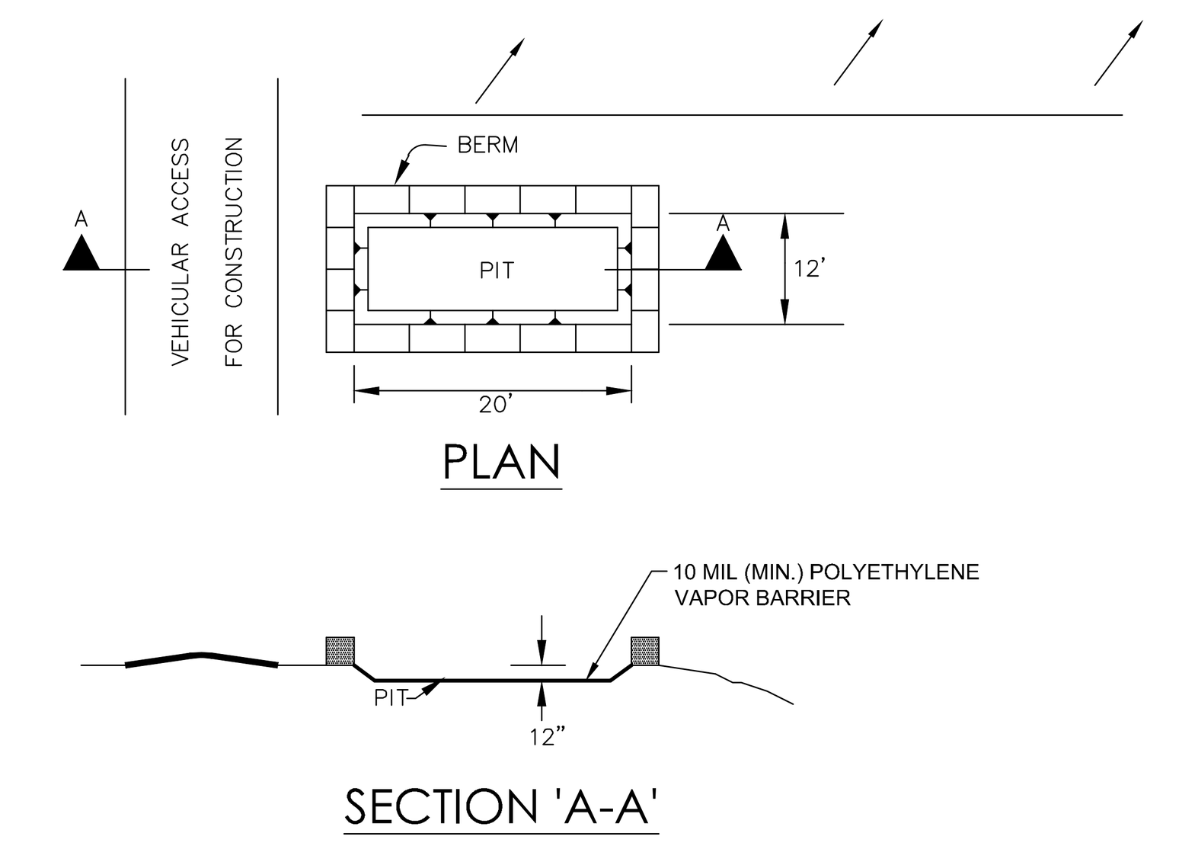


TEMPORARY CONSTRUCTION ENTRANCE/EXIT NOTES:

1. THE AGGREGATE SHOULD CONSIST OF 4 TO 8 INCH WASHED STONE OVER A STABLE FOUNDATION.
2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8 INCHES.
3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD 2 , A MULLEN BURST RATING OF 140 LB/IN 2 , AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
4. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
5. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
6. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
7. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
8. PLACE STONE TO DIMENSIONS AND GRADE SHOWN. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
9. 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.
10. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON TO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
11. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
12. 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.
13. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE.

2 STABILIZED CONSTRUCTION ENTRANCE / EXIT

SCALE: NONE

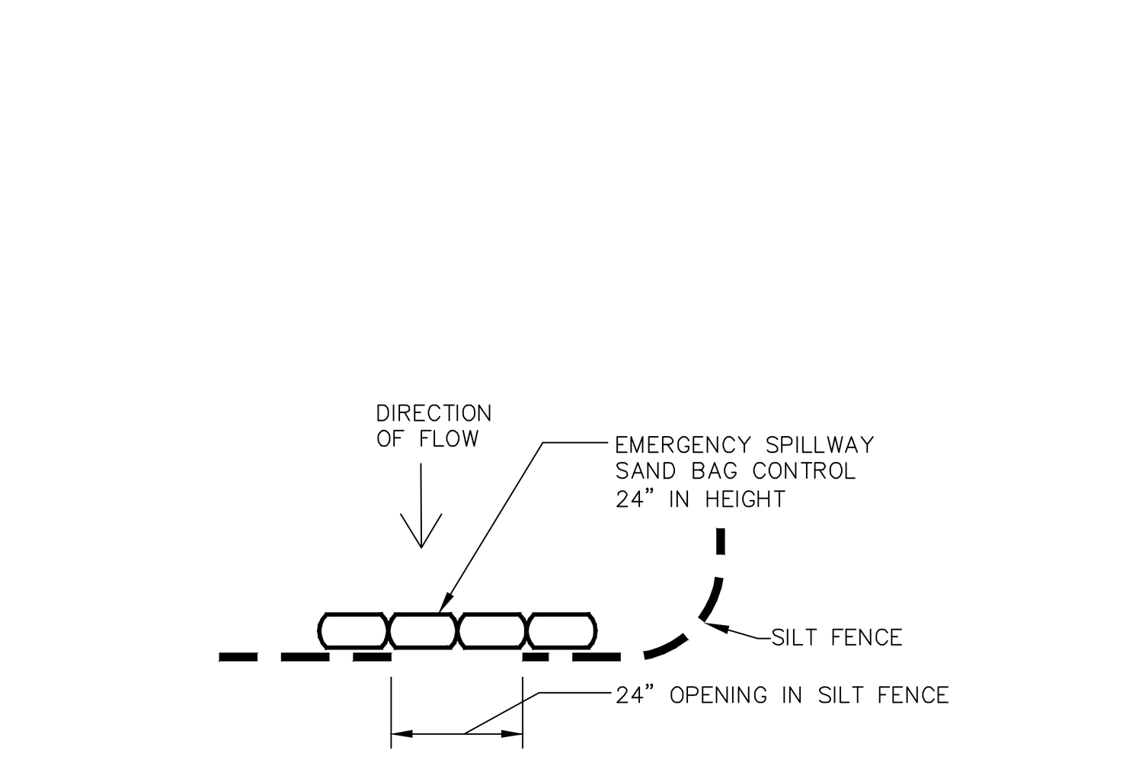


GENERAL NOTES:

1. DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
2. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
3. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.

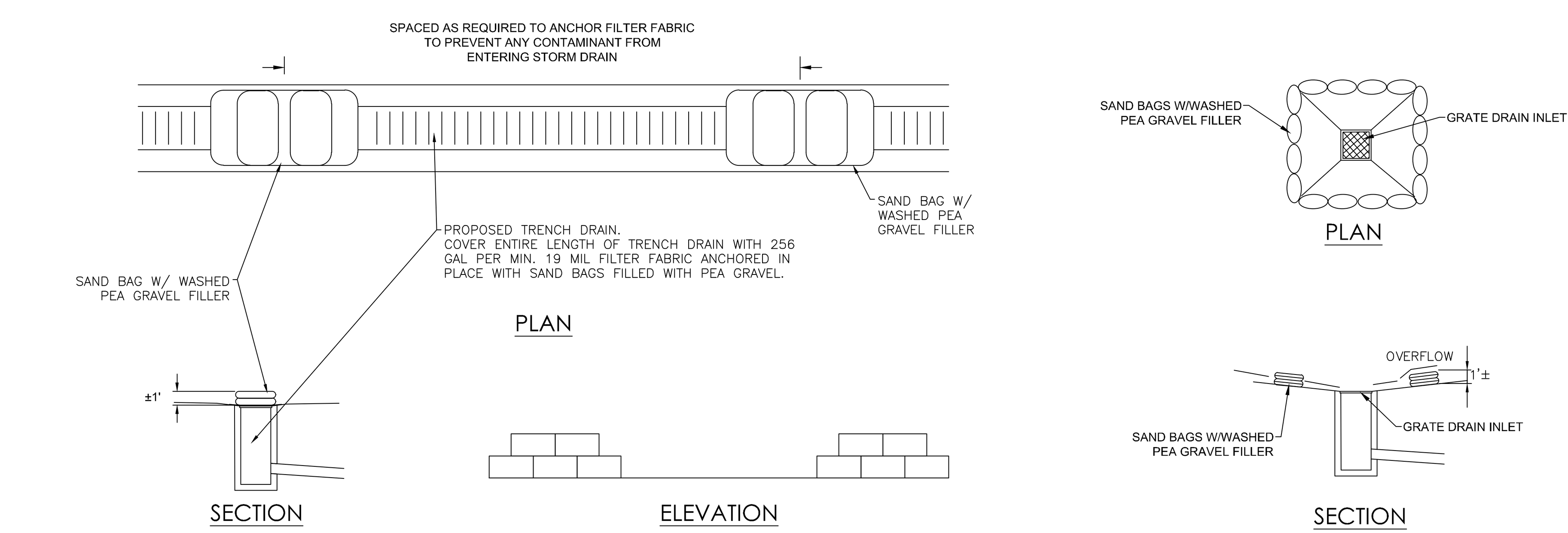
3 CONCRETE TRUCK WASHOUT PIT

SCALE: NONE



4 PLAN - SAND BAG CONTROL DETAIL

SCALE: NONE

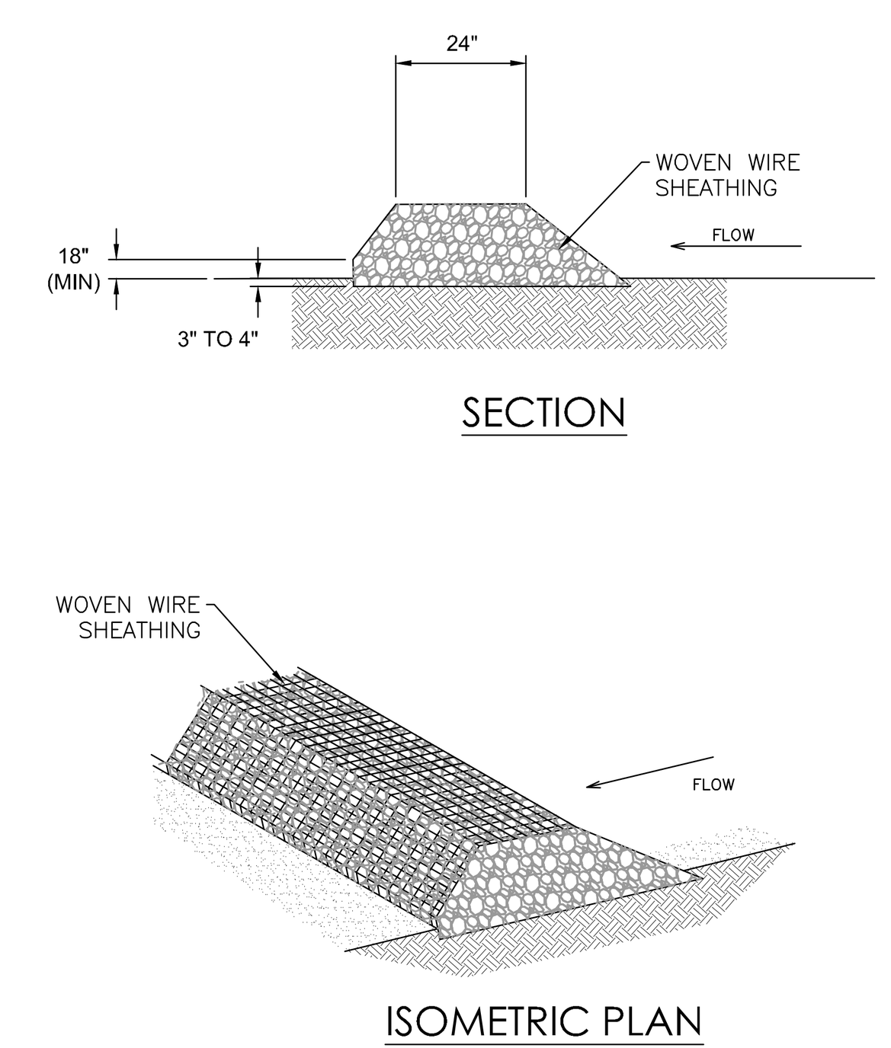


GENERAL NOTES:

1. THE GRAVEL BAG MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, POLYAMIDE OR COTTON BURLAP WOVEN FABRIC, MINIMUM UNIT WEIGHT 4 OZ/YD 2, MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70 PERCENT.
2. THE BAG LENGTH SHOULD BE 24 INCHES, WIDTH SHOULD BE 18 INCHES AND THICKNESS SHOULD BE 6 INCHES.
3. THE GRAVEL BAGS SHOULD BE FILLED WITH 3/4" GRAVEL.
4. WHEN A GRAVEL BAG IS FILED WITH GRAVEL, THE OPEN END OF THE GRAVEL BAG SHOULD BE STAPLED OR TIED WITH NYLON OR POLY CORD.
5. THE GRAVEL BAGS SHOULD BE PLACED AS SHOWN ON THE DETAIL. THE GRAVEL BAGS SHALL BE STACKED TO FORM A CONTINUOUS BARRIER AROUND THE INLETS. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.
6. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
7. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
8. 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.
9. STRUCTURE SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

5 BAGGED GRAVEL INLET FILTER DETAILS

SCALE: NONE

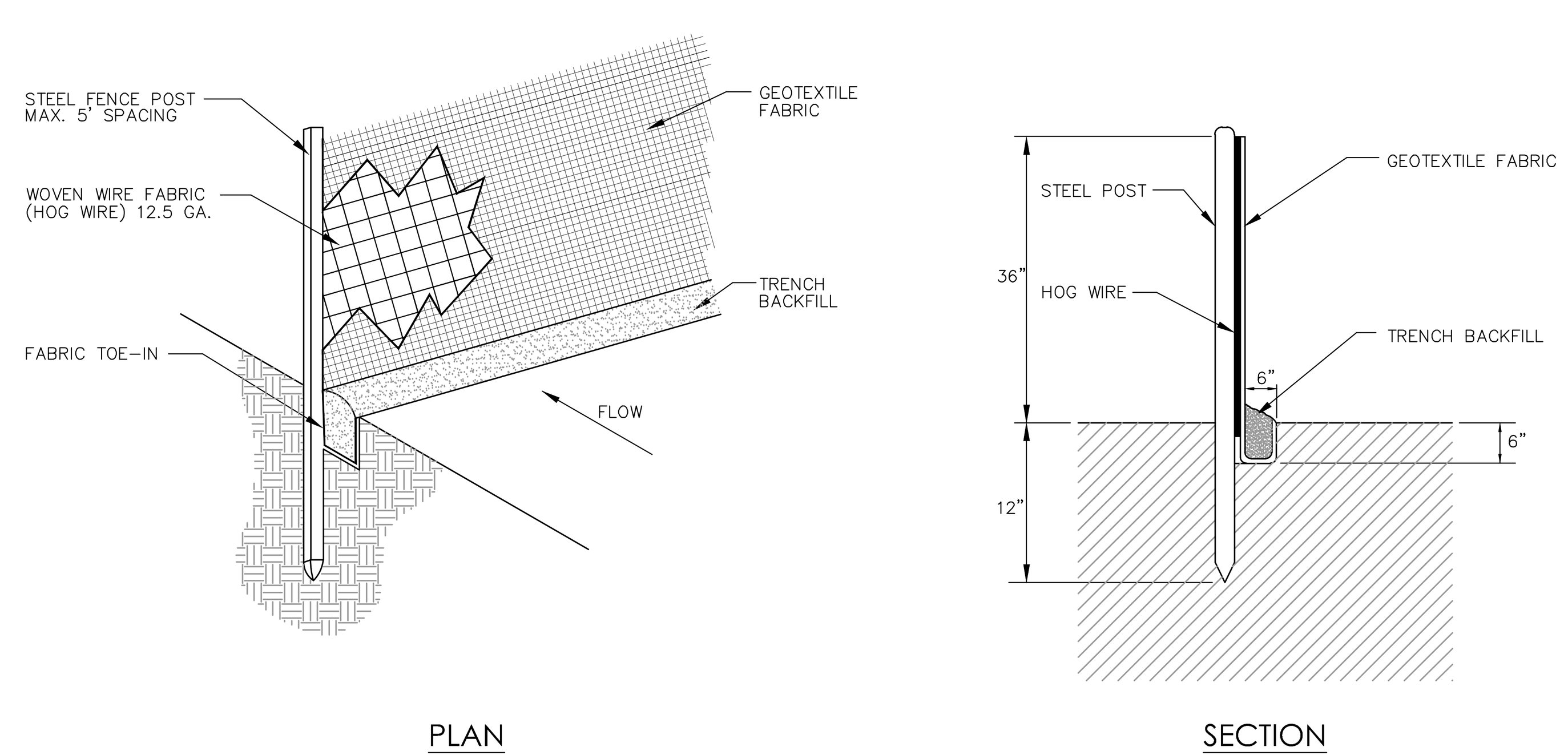


ROCK BERM NOTES:

1. THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT RINGS.
2. CLEAN, OPEN GRADED 3 TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-TO 8-INCH DIAMETER ROCKS MAY BE USED.
3. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE.
4. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.
5. PLACE THE ROCK ALONG THE SHEATHING TO A HEIGHT NOT LESS THAN 18".
6. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.
7. BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.
8. THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.
9. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
10. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT OF IN AN APPROVED MANNER AND REPAIR ANY LOOSE WIRE SHEATHING.
11. 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.
12. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

6 ROCK BERM DETAIL

SCALE: NONE

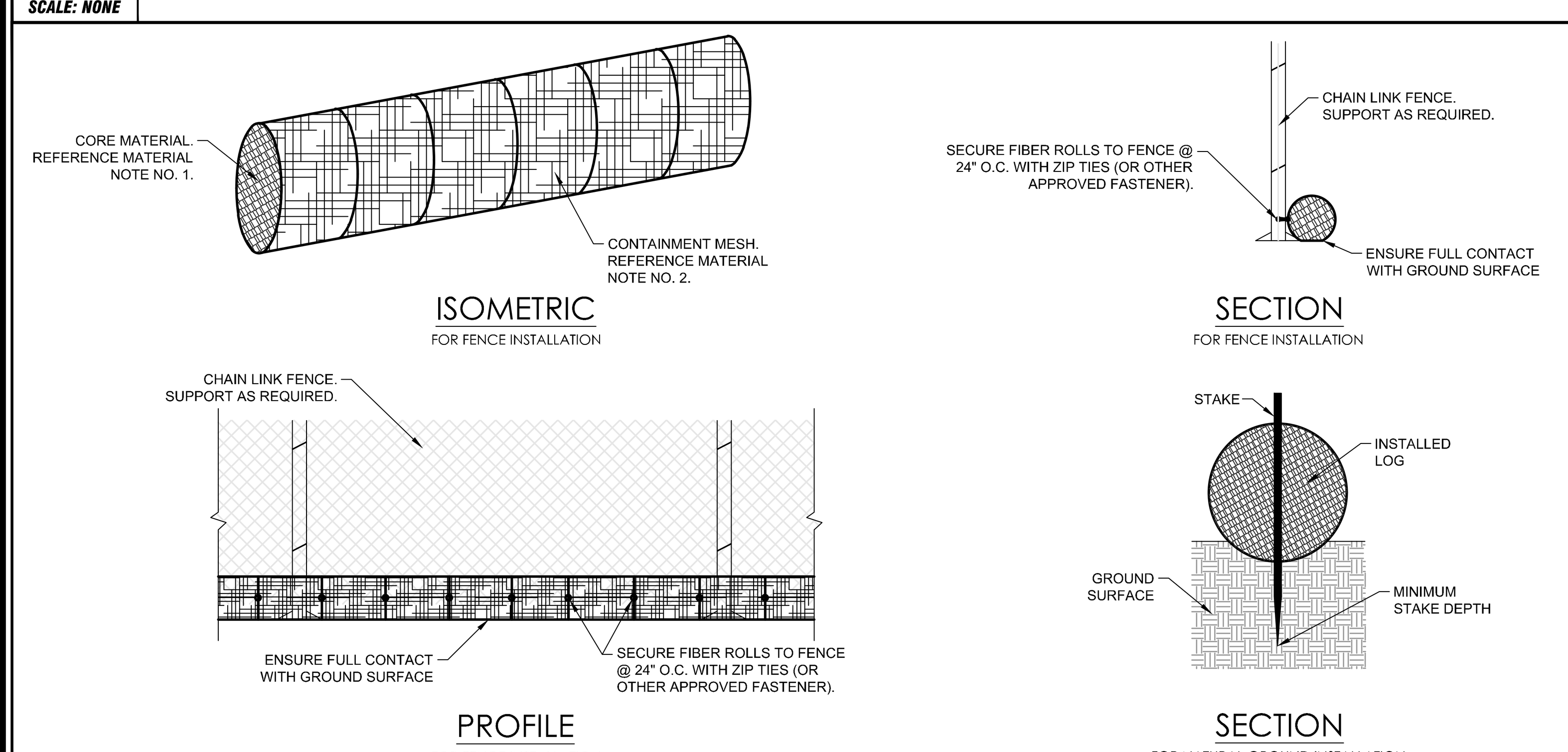


GENERAL NOTES:

1. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC WIDTH SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN 2 , ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NO. 30.
2. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR Y-BAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM NOMINAL WEIGHT 1.25 LB/FT 2 , AND BRINDELL HARDNESS EXCEEDING 140.
3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12.5 GAUGE MINIMUM.
4. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 1 FOOT DEEP AND SPACED NOT MORE THAN 5 FEET ON CENTER.
5. LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS ¼ACRE/100 FEET OF FENCE.
6. THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
7. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
8. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
9. SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
10. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES, OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE OLD FENCE.
11. REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.
12. 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.

7 SILT FENCE DETAILS

SCALE: NONE



GENERAL NOTES:

MATERIAL:

1. CORE MATERIAL: CORE MATERIAL SHOULD BE BIODEGRADABLE OR RECYCLABLE. MATERIAL MAY BE COMPOST, MULCH, ASPEN WOOD FIBERS, CHIPPED SITE VEGETATION, AGRICULTURAL RICE OR WHEAT STRAW, COCONUT FIBER, 100% RECYCLABLE FIBERS, OR SIMILAR MATERIALS.
2. CONTAINMENT MESH: CONTAINMENT MESH SHOULD BE 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE SUCH AS BURLAP, TWINE, UV PHOTODEGRADABLE PLASTIC, POLYESTER, OR SIMILAR MATERIAL. WHEN THE FIBER ROLE WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM USE BIODEGRADABLE OR PHOTODEGRADABLE MESH. FOR TEMPORARY INSTALLATION RECYCLABLE MESH IS RECOMMENDED.

IMPLEMENTATION:

1. LOCATE FIBER ROLLS ON LEVEL CONTOURS SPACED AS FOLLOWS:
   - SLOPE INCLINATION OF 4:1 (H:V) OR FLATTER: FIBER ROLLS SHOULD BE PLACED AT A MAXIMUM INTERVAL OF 20 FT.
   - SLOPE INCLINATION BETWEEN 4:1 AND 2:1 (H:V): FIBER ROLLS SHOULD BE PLACED AT A MAXIMUM INTERVAL OF 15 FT. (A CLOSER SPACING IS MORE EFFECTIVE).
   - SLOPE INCLINATION 2:1 (H:V) OR GREATER: FIBER ROLLS SHOULD BE PLACED AT A MAXIMUM INTERVAL OF 10 FT. (A CLOSER SPACING IS MORE EFFECTIVE).
2. TURN THE ENDS OF THE FIBER ROLL UP SLOPE TO PREVENT RUNOFF FROM GOING AROUND THE ROLL.
3. STAKE FIBER ROLLS INTO A 2 TO 4 IN. DEEP TRENCH WITH A WIDTH EQUAL TO THE DIAMETER OF THE FIBER ROLL.
4. DRIVE STAKES AT THE END OF EACH FIBER ROLL AND SPACED 4 FT MAXIMUM ON CENTER.
5. USE WOOD STAKES WITH A NOMINAL CLASSIFICATION OF 0.75 BY 0.75 IN. AND MINIMUM LENGTH OF 24 IN.
6. IF MORE THAN ONE FIBER ROLL IS PLACED IN A ROW, THE ROLLS SHOULD BE OVERLAPPED, NOT ABUTTED.

INSPECTION AND MAINTENANCE GUIDELINES:

1. INSPECT PRIOR TO FORECAST RAIN, DAILY DURING EXTENDED RAIN EVENTS, AFTER RAIN EVENTS, AND WEEKLY.
2. REPAIR OF REPLACE SPLIT, TORN, UNRAVELING, OR SLUMPING FIBER ROLLS.
3. IF THE FIBER ROLL IS USED AS A SEDIMENT CAPTURE DEVICE, OR AS AN EROSION CONTROL DEVICE TO MAINTAIN SHEET FLOWS, SEDIMENT THAT ACCUMULATES BEHIND THE ROLE MUST BE PERIODICALLY REMOVED TIN ORDER TO MAINTAIN ITS EFFECTIVENESS. SEDIMENT SHOULD BE REMOVED WHEN THE ACCUMULATION REACHES ONE-HALF THE DESIGNATED SEDIMENT STORAGE DEPTH, USUALLY ONE-HALF THE DISTANCE BETWEEN THE TOP OF THE FIBER ROLL AND THE ADJACENT GROUND SURFACE. SEDIMENT REMOVED DURING MAINTENANCE MAY BE INCORPORATED INTO EARTHWORK ON THE SITE OR DISPOSED OF AT AN APPROPRIATE LOCATION.

8 FIBER ROLL DETAILS

SCALE: NONE

NO.	DATE	REVISIONS DESCRIPTION	BY

PROJ. # | DGN. BY: | DWN. BY: | CHKD. BY: | DATE:

· Engineers
· Surveyors
· Planners
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STATE OF TEXAS
SEAN S. SMITH
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REGISTERED PROFESSIONAL ENGINEER
2/11/25

CISD CANYON LAKE HIGH SCHOOL

CONTRIBUTING ZONE SITE PLAN DETAILS

SHEET
C1.2

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.

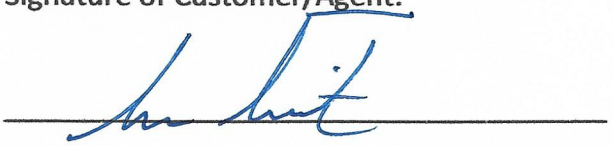
Signature

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: Sean Smith, P.E.

Date: 2/13/25

Signature of Customer/Agent:



Regulated Entity Name: CISD Canyon Lake High School

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: Canyon Lake

Temporary Best Management Practices (TBMPs)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

☒ N/A

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

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

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

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

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

Soil Stabilization Practices

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

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

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

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

Administrative Information

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

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

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

ATTACHMENT A
SPILL RESPONSE ACTIONS

1. Housekeeping

   A. Minimize materials: An effort will be made to store only enough materials required to do the job.

   B. Storage: All materials stored on site will be stored in a neat, orderly manner in their appropriate containers in a covered area. If storage in a covered area is not feasible, then the materials will be covered with polyethylene or polypropylene sheeting to protect them from the elements.

   C. Labeling: Products will be kept in their original containers with the original manufacturer's label affixed to each container.

   D. Mixing: Substances will not be mixed with one another unless this is recommended by the manufacturer.

   E. Disposal: Whenever possible, all of a product will be used prior to disposal of the container. Manufacturer's recommendations will be followed for proper use and disposal of materials on site.

   F. Inspections: The site superintendent will inspect the site daily to ensure proper use and disposal of materials on site.

   G. Spoil Materials: Any excavated earth that will not be used for fill material and all demolished pavement will be hauled off site immediately and will be disposed of properly, in accordance with all applicable state/local regulations.

2. Product Specific Practices

   A. Petroleum Products: All on site vehicles will be monitored for leaks and will receive regular preventive maintenance to reduce the chance of leakage. If petroleum products will be present at the site, then they will be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used on site will be applied according to the manufacturer's recommendations.

   B. Concrete Trucks: Ready/Transit Mix Trucks will not be allowed to wash out or discharge surplus concrete or drum wash water except in the designated location on site as shown on the SWPPP site plan.

   C. Paints: All containers will be tightly sealed and stored when not required for use. Excess paint will not be poured into storm sewer system or drainage channels, but will be properly disposed of according to manufacturers' instructions or state/local regulations.

D. Fertilizers: Fertilizers will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked into the soil to limit exposure to storm water. The fertilizer will be stored in a covered area, and any partially used bags will be transferred to a sealable plastic bin to avoid spills.

3. Spill Control and Response Measures

A spill prevention and response team will be designated by the site superintendent. In addition, the following practices will be followed for spill cleanup:

A. Information: Manufacturers' recommended methods for spill cleanup will be clearly posted, and site personnel will be made aware of the procedures and location of the information and cleanup supplies.

B. Equipment: Materials and equipment necessary for spill cleanup will be present on the site at all times. Equipment and materials will include, but not be limited to brooms, shovels, rags, gloves, goggles, absorbent materials (sand, sawdust, etc.) and plastic or metal trash containers specifically designed for this purpose. The materials and equipment necessary for spill cleanup will be dependent upon the nature and quantity of the material stored on site.

C. Response: All spills will be cleaned up immediately upon discovery.

Cleanup

(1) Clean up leaks and spills immediately

(2) Use a rag for small spills on paved surfaces, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.

(3) 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 TCEQ Technical Guidance Manual RG-348 for specific information.

Minor Spills

(1) 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.

(2) Use absorbent materials on small spills rather than hosing down or burying the spill

(3) Absorbent materials should be promptly removed and disposed of properly.

(4) Follow the practice below for a minor spill:

(5) Contain the spread of the spill.

(6) Recover spilled materials.

(7) 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:
(1) Contain spread of the spill.
(2) Notify the project foreman immediately.
(3) If the spill occurs on paved or impermeable surfaces, clean up using "dry" methods (absorbent materials, cat litter and/or rags). Contain the spill by encircling with absorbent materials and do not let the spill spread widely.
(4) If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.
(5) If the spill occurs during rain, cover the spill with tarps or other material to prevent contaminating runoff.

Significant/Hazardous Spills

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

D. Vehicle and Equipment Maintenance
(1) If maintenance must occur onsite, use a designated area and a secondary containment, located away from drainage courses, to prevent the run-on of stormwater and the runoff of spills.

(2) Regularly inspect onsite vehicles and equipment for leaks and repair immediately.
(3) Check incoming vehicles and equipment (including delivery trucks, and employee and subcontractor vehicles) for leaking oil and fluids. Do not allow leaking vehicles or equipment onsite.
(4) Always use secondary containment, such as a drain pan or drop cloth, to catch spills or leaks when removing or changing fluids.
(5) Place drip pans or absorbent materials under paving equipment when not in use.
(6) Use absorbent materials on small spills rather than hosing down or burying the spill. Remove the absorbent materials promptly and dispose of properly.
(7) Promptly transfer used fluids to the proper waste or recycling drums. Don't leave full drip pans or other open containers lying around.
(8) Oil filters disposed of in trash cans or dumpsters can leak oil and pollute stormwater. Place the oil filter in a funnel over a waste oil-recycling drum to drain excess oil before disposal. Oil filters can be recycled. Ask the oil supplier or recycler about recycling oil filters.
(9) Store cracked batteries in a non-leaking secondary container. Do this with all cracked batteries even if you think all the acid has drained out. If you drop a battery, treat it as if it is cracked. Put it into the containment area until you are sure it is not leaking.

E. Vehicle and Equipment Fueling
(1) If fueling must occur onsite, use designated areas, located away from drainage courses, to prevent the run-on of stormwater and the runoff of spills.
(2) Discourage "topping off" of fuel tanks.
(3) Always use secondary containment, such as a drain pan, when fueling to catch spills/leaks.

F. Safety: The spill area will be kept well ventilated, and personnel will wear appropriate protective clothing to prevent injury from contact with hazardous substances.

G. Reporting: Spills of toxic or hazardous material (if present on site) will be reported to the appropriate state or local government agency, regardless of the spill's size.

H. Record Keeping: The spill prevention plan will be modified to include measures to prevent this type of spill from recurring as well as improved methods for cleaning up any future spills. A description of each spill, what caused it, and the cleanup measures used will be kept with this plan.

ATTACHMENT B
POTENTIAL SOURCES OF CONTAMINATION

Potential Source Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle dripping.

Preventive Measure Vehicle maintenance, when possible, will be performed within a construction staging area specified by the General Contractor.

Potential Source Miscellaneous trash and litter from construction workers and material wrappings.

Preventive Measure Trash containers will be placed throughout the site to encourage proper trash disposal.

Potential Source Construction debris.

Preventive Measure Construction debris will be monitored daily by contractor. Debris will be collected weekly and placed in disposal bins. Situations requiring immediate attention will be addressed on a case by case basis.

Potential Source Stormwater contamination from excess application of fertilizers, herbicides and pesticides.

Preventive Measure Fertilizers, herbicides and pesticides will be applied only when necessary and in accordance with manufacturers directions.

Potential Source Soil and mud from construction vehicle tires as they leave the site.

Preventive Measure A stabilized construction exit shall be utilized as vehicles leave the site. Any soil, mud, etc. carried from the project onto public roads shall be cleaned up within 24 hours.

Potential Source Sediment from soil, sand, gravel and excavated materials stockpiled on site.

Preventive Measure Silt fence shall be installed on the downgradient side of all stockpiled materials. Reinforced rock berms shall be installed at all downstream discharge locations.

ATTACHMENT C

SEQUENCE OF MAJOR ACTIVITIES

Construction Sequencing

A. Installation of temporary BMPs as shown on the CZP Site Plan. Silt fence will be placed along the down gradient boundary.

B. Demolition and grading.

C. Seeding and soil stabilization.

ATTACHMENT D
TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

Description of Temporary Best Management Practices:

1. Silt Fence – A barrier consisting of geotextile fabric supported by metal posts to prevent soil and sediment loss from a site. Silt fences shall be installed on the downgradient side of the proposed areas to be disturbed that have a drainage area of 2 or less acres.

2. Bagged Gravel Inlet Filter – Sandbags filled with pea gravel used to construct a sediment barrier around curb and drain inlets. The sandbags should be willed with washed pea gravel and stacked to form a continuous barrier about 1 foot high around the inlets. The bags should be tightly abutted against each other to prevent runoff from flowing between the bags.

3. Temporary Construction Entrance/Exit – A temporary gravel construction entrance used to provide a stable entrance/exit condition from the construction site and keep mud and sediment off public roads. The stabilized entrance is a stabilized pad of crushed stone located at any point traffic will be entering or leaving the construction site from a public right-of-way, street, alley, sidewalk or parking area.

4. Concrete Washout Area - An area used to prevent or reduce the discharge of pollutants to stormwater from concrete waste by performing on-site washout in a designated area and training employees and subcontractors. Washout area should be located at least 50 feet from sensitive features, storm drains, open ditches, or water bodies. Below grade concrete washout facilities are typical.

5. Temporary Seeding – Temporary seeding of disturbed areas shall be performed if disturbed areas are expected to have no construction activity for a period of at least 21 days.

Sequence of installation during construction process for each phase of construction:

Temporary BMPs will be installed prior to disturbance on-site. Vegetation as a temporary control will only be utilized in the event a disturbed area has been left denuded for more than 14 days.

Up gradient storm water flowing across the site:

Upgradient flow enters the property from approximately 0.37 acres. All upgradient flow will be treated along with the stormwater generated onsite.

Onsite storm water flowing across and off the site:

The storm water originating onsite and flowing off the site will be treated through temporary BMPs. Silt fences will be installed at all locations where non-concentrated

storm water exits the site. Rock berms will be installed where concentrated storm water exits the site.

Prevention of pollutants from entering surface streams, sensitive features and the aquifer:

The storm water originating onsite and flowing off the site will be treated using temporary BMPs prior to it entering surface streams, sensitive features and the aquifer. Silt fences will be installed at all locations where non-concentrated storm water may leave the site. These silt fences should filter the storm water prior to it leaving the site. Rock berms will be used instead of silt fences for concentrated flow areas.

Maintaining flow to naturally-occurring sensitive features:

The storm water originating onsite and flowing off the site will continue to flow into the down gradient receiving waters. Any sensitive features downstream will continue to receive flow originating on the site. Prior to the flow leaving the site, it will be treated through temporary BMPs. These temporary BMPs should remove sediment, pollutants and debris if installed and maintained properly.

ATTACHMENT F
STRUCTURAL PRACTICES

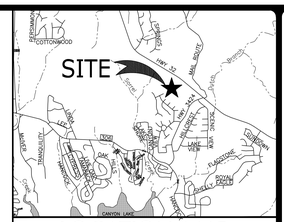
Runoff discharge of pollutants from exposed areas of the site will be limited through the utilization of temporary BMPs. Prior to leaving the site, flows containing pollutant discharges will be treated by a combination of silt fence, bagged gravel inlet filters, concrete washout areas, and temporary construction entrance/exit which will limit pollutants leaving the site.

The temporary BMPs shall be installed prior to the initiation of site preparation and earth moving activities. All temporary BMPs shall be installed and maintained in accordance with TCEQ RG-348 July 2005.

Locations of the temporary BMPs are shown on the WPAP Site Plan.

Vegetation will be used as a temporary stabilization technique for all areas disturbed by construction, not covered by pavement, buildings, or other structures. Temporary stabilization shall consist of temporary seeding of disturbed areas that are denuded beyond 14 days without construction restart within 21 days. As a temporary control, the vegetation will be used to stabilize barren areas that are inactive for long periods of time.

SCALE: 1"=100'
0 100 200



LEGEND

- SITE BOUNDARY
- EXISTING CONTOURS (1390)
- FLOW ARROWS
- AREA A
- AREA B

REVISIONS

NO.	DESCRIPTION	DATE	PROJ. #	DSN. BY:	DWN. BY:	CHKD. BY:	DATE:

• Engineers
• Surveyors
• Planners

MTR

Moy Tarin Ramirez Engineers, LLC

TBPELS: ENGINEERING F-5297/SURVEYING F-10131500
12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249
TEL: (210) 698-5051
FAX: (210) 698-5085

STATE OF TEXAS
SEAN S. SMITH
113308
REGISTERED PROFESSIONAL ENGINEER
2/11/25

CISD CANYON LAKE HIGH SCHOOL

DRAINAGE AREA MAP

SHEET

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ATTACHMENT I
INSPECTION AND MAINTENANCE FOR BMPS

Silt Fence

1. Inspect all fencing weekly, and after any rainfall.
2. Remove sediment when buildup reaches 6 inches, or install a second line of fencing parallel to the old fence.
3. Replace any torn fabric or install a second line of fencing parallel to the torn section.
4. Replace or repair any sections crushed or collapsed in the course of construction activity.

Bagged Gravel Inlet Filter

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

Temporary Construction Entrance/Exit

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

Concrete Washout Areas

1. Locate washout area at least 50 feet from sensitive features, storm drains, open ditches, or water bodies.
2. Wash out wastes into the temporary pit where the concrete can set, be broken up, and then disposed properly.

CISD CANYON LAKE HIGH SCHOOL

Responsible Party Form

Pollution Prevention Measure		Inspected	Corrective Action	
			Description	Date Completed
Silt Fence	Inspections			
	Fencing			
	Sediment Removal			
	Torn Fabric			
	Crushed/Collapsed Fencing			
Bagged Gravel Inlet Filters	Inspections			
	Replaced/Reshaped			
	Silt Removed			
Temporary Construction Entrance/Exit	Inspections			
	Entrance Condition			
	Sediment in Public ROW			
	Sediment Trap Present			
	Sediment Not Entering Storm Drain			

Inspector's Name

Inspector's Signature

Name of Owner/Operator

Date

Note: Inspector is to attach a brief statement of his qualifications to this report.

ATTACHMENT J
SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 21 days, temporary stabilization measures do not have to be initiated on that portion of the site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable.

Temporary stabilization shall consist of temporary seeding of disturbed areas that are denuded beyond 14 days without construction restart within 21 days.

As pad sites (buildings, sidewalks and pavement) are completed, permanent landscaping and sod shall be planted and irrigated. Curb and gutter will direct runoff into the permanent water quality basin.

Temporary vegetation stabilization techniques shall be in accordance with the TCEQ Technical Guidance Manual RG-248 (*Complying with the Edwards Aquifer Rules – Technical Guidance on Best Management Practices*), Chapter 1 Temporary Best Management Practices, Section 1.3.8 Temporary Vegetation, as follows:

Temporary Vegetation
Vegetation is used as a temporary or permanent stabilization technique for areas disturbed by construction, but not covered by pavement, buildings, or other structures. As a temporary control, vegetation can be used to stabilize stockpiles and barren areas that are inactive for long periods of time.

Vegetative techniques can and should apply to every construction project with few exceptions. Vegetation effectively reduces erosion in swales, stockpiles, berms, mild to medium slopes, and along roadways.

Other techniques may be required to assist in the establishment of vegetation. These other techniques include erosion control matting, mulches, surface roughening, swales and dikes to direct runoff around newly seeded areas, and proper grading to limit runoff velocities during construction. (NCTCOG, 1993b)

Materials:
The type of temporary vegetation used on a site is a function of the season and the availability of water for irrigation. For areas that are not irrigated, the year can be divided into two temporary planting seasons and one season for planting of permanent warm weather groundcovers. These periods are shown in Figure 1-19 for Bexar, Comal, Kinney, Medina, and Uvalde Counties. Appropriate temporary vegetation for these areas is shown in Table 1-4.

Other vegetation may perform as well as the recommended varieties, especially where irrigation is available. County agricultural extension agents are a good source for suggestions for other types of temporary vegetation. All seed should be high quality, U.S. Dept. of Agriculture certified seed.

Installation:
(1) Interim or final grading must be completed prior to seeding, minimizing all steep slopes. In addition, all necessary erosion structures such as dikes, swales, and diversions, should also be installed.

(2) Seedbed should be well pulverized, loose, and uniform.

(3) Fertilizer should be applied at the rate of 40 pounds of nitrogen and 40 pounds of phosphorus per acre, which is equivalent to about 1.0 pounds of nitrogen and phosphorus per 1000 square feet. Compost can be used instead of fertilizer and applied at the same time as the seed.

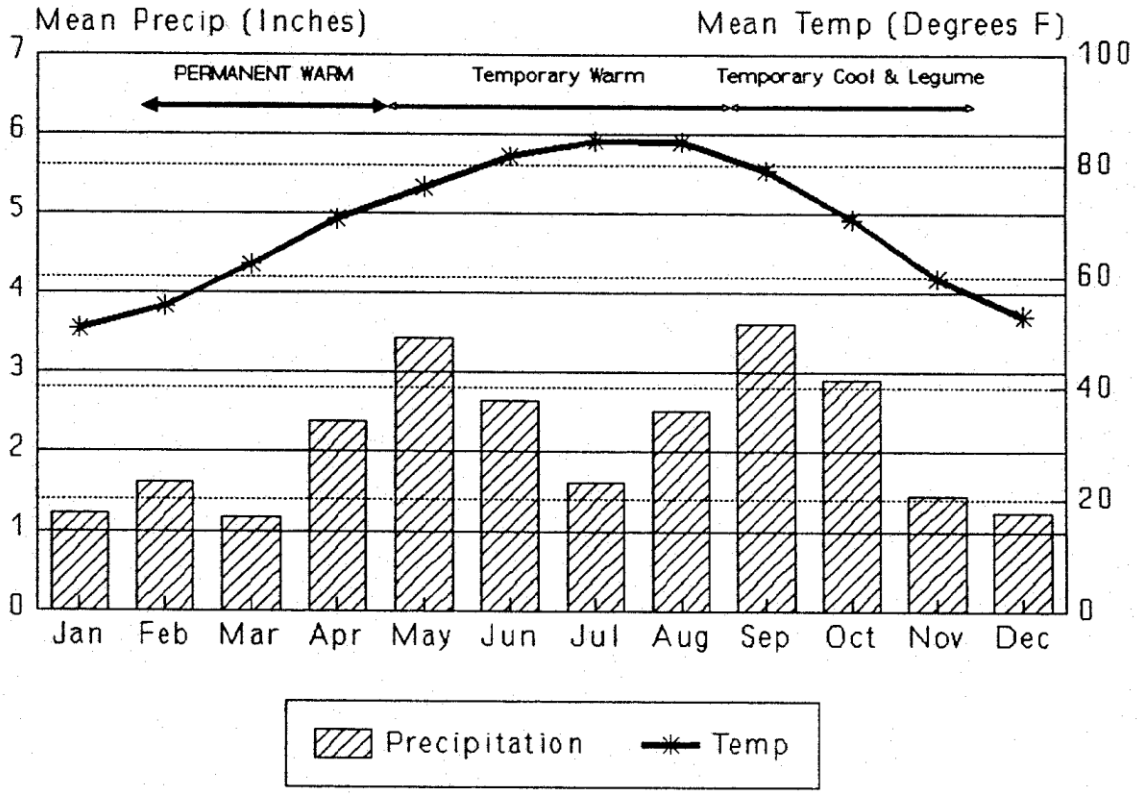

Figure 1-19 Planting Dates for Bexar, Comal, Kinney, Medina, and Uvalde Counties (Northcutt, 1993)

Table 1-4 Temporary Seeding for Bexar, Comal, Kinney, Medina, and Uvalde Counties (Northcutt, 1993)

Dates	**Climate**	**Species (lb/ac)**	
Sept 1 to Nov 30	Temporary Cool Season	Tall Fescue	4.0
		Oats	21.0
		Wheat (Red, Winter)	30.0
		Total	**55.0**
Sept 1 to Nov 30	Cool Season Legume	Hairy Vetch	8.0
May 1 to Aug 31	Temporary Warm Season	Foxtail Millet	30.0

(4) Seeding rates should be as shown in Table 1-4 or as recommended by the county agricultural extension agent.

(5) The seed should be applied uniformly with a cyclone seeder, drill, cultipacker seeder or hydroseeder (slurry includes seed, fertilizer and binder).

(6) Slopes that are steeper than 3:1 should be covered with appropriate soil stabilization matting as described in the following section to prevent loss of soil and seed.

Irrigation:
Temporary irrigation should be provided according to the schedule described below, or to
replace moisture loss to evapotranspiration (ET), whichever is greater. Significant rainfall (on-site rainfall of ½" or greater) may allow watering to be postponed until the next scheduled irrigation.

Time Period	**Irrigation Amount and Frequency**
Within 2 hours of installation	Irrigate entire root depth, or to germinate seed
During the next 10 business days	Irrigate entire root depth every Monday, Wednesday, and Friday
During the next 30 business days or until Substantial Completion	Irrigate entire root depth a minimum of once per week, or as necessary to ensure vigorous growth
During the next 4 months or until Final Acceptance of the Project	Irrigate entire root depth once every two weeks, or as necessary to ensure vigorous growth

If cool weather induces plant dormancy, water only as necessary to maintain plant health.
Irrigate in a manner that will not erode the topsoil but will sufficiently soak the entire depth of roots.

Inspection and Maintenance Guidelines:
(1) Temporary vegetation should be inspected weekly and after each rain event to locate and repair any erosion.

(2) Erosion from storms or other damage should be repaired as soon as practical by regrading the area and applying new seed.

(3) If the vegetated cover is less than 80%, the area should be reseeded.

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

I Jeffrey Smith,
Print Name

Director of Construction and Planning,
Title - Owner/President/Other

of Comal Independent School District,
Corporation/Partnership/Entity Name

have authorized Moy Tarin Ramirez Engineers, LLC
Print Name of Agent/Engineer

of Moy Tarin Ramirez Engineers, LLC
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

2.11.2025
Date

THE STATE OF Texas §

County of Comal §

BEFORE ME, the undersigned authority, on this day personally appeared Jeffrey B. Smith 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 11 day of February, 2025.

NOTARY PUBLIC

DANIEL R MENDEZ
Notary Public, State of Texas
My Commission Expires
February 21, 2026
NOTARY ID 13360093-1

Daniel Mendez
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: Feb. 21, 2026

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: CISD Canyon Lake High School
Regulated Entity Location: 8555 Farm to Market 32, Fischer, TX 78623
Name of Customer: Comal ISD
Contact Person: Jeffrey Smith Phone: (830) 221-2150
Customer Reference Number (if issued):CN 600249825
Regulated Entity Reference Number (if issued):RN 104421649
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	88.00 Acres	$ 8,000
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: 2/13/25

TCEQ-0574 (Rev. 02-24-15)

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 regarding completion of this form, please read the Core Data Form Instructions or call 512-239-5175.

SECTION I: General Information

1. Reason for Submission (*If other is checked please describe in space provided.*)

☒ New Permit, Registration or Authorization (*Core Data Form should be submitted with the program application.*)

☐ Renewal (*Core Data Form should be submitted with the renewal form*) ☐ Other

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN 600249825		RN 104421649

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:*

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

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

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

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

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

☐ Owner ☐ Operator ☐ Owner & Operator
☐ Occupational Licensee ☐ Responsible Party ☐ Voluntary Cleanup Applicant ☐ Other:

15. Mailing Address:

City		State		ZIP		ZIP + 4	

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

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

SECTION III: Regulated Entity Information

21. General Regulated Entity Information (*If 'New Regulated Entity" is selected below this form should be accompanied by a permit application*)

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

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

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

CISD CANYON LAKE HIGH SCHOOL

23. Street Address of the Regulated Entity: *(No PO Boxes)*	8555 Farm to Market 32							
	City	Fischer	**State**	TX	**ZIP**	78623	**ZIP + 4**	
24. County	Comal							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	On the east side of the intersection of FM 32 and FM 3424

26. Nearest City	**State**	**Nearest ZIP Code**
Fischer	TX	78606

27. Latitude (N) In Decimal:	29.944130		**28. Longitude (W) In Decimal:**	-98.213280	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	56	38.868	98	12	47.808

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)
8211		611110	

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

High School

34. Mailing Address:	**8555 Farm to Market 32**							
	City	**Fischer**	**State**	**TX**	**ZIP**	**78623**	**ZIP + 4**	

35. E-Mail Address:	**jeffery.smith@comalisd.org**

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(830) 221-2150		**( ) -**

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

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

SECTION IV: Preparer Information

40. Name:	Sean Smith, P.E.	**41. Title:**	Senior Vice President

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(210) 698-5051		(210) 698-5085	ssmith@mtrengineers.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:	Moy Tarin Ramirez Engineers, LLC	**Job Title:**	Senior Vice President
Name *(In Print):*	Sean Smith, P.E.	**Phone:**	(210) 698- **5051**
Signature:		**Date:**	2/13/25