TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
(TCEQ)

Modification of a Previously Approved
CONTRIBUTING ZONE PLAN
(CZP)

For:
AAA FM 3405

a 22.94-acre property located at:

4651 FM 3405
Georgetown, Texas 78633

Prepared for the Customer:

JMA Entity, LLC
4203 Spinnaker Cove
Austin, Texas 78731

Prepared by the Applicant:

Mr. Robert Thompson, P.E.
Thompson Land Engineering, LLC
904 N Cuernavaca DR
Austin, Texas 78733

October 2024

Thompson Land
Engineering, LLC
(F-10220)

10/11/2024

Modification of a Previously Approved Contributing Zone Plan Checklist

- **Edwards Aquifer Application Cover Page (TCEQ-20705)**
- **Modification of a Previously Approved Contributing Zone Plan Application Form (TCEQ-10259)**
  - Attachment A - Original Approval Letter
  - Attachment B - Narrative of Proposed Modification
  - Attachment C - Current Site Plan of the approved project
- **Contributing Zone Plan Application Form (TCEQ-10257)**
  - Attachment A - Road Map
  - Attachment B - USGS Quadrangle Map
  - Attachment C - Project Narrative
  - Attachment D - Factors Affecting Surface Water Quality
  - Attachment E - Volume and Character of Stormwater
  - Attachment F - Suitability Letter from Authorized Agent (if OSSF is proposed)
  - Attachment G - Alternative Secondary Containment Methods (if AST with an alternative method of secondary containment is proposed)
  - Attachment H - AST Containment Structure Drawings (if AST is proposed)
  - Attachment I - 20% or Less Impervious Cover Declaration (if project is multi-family residential, a school, or a small business and 20% or less impervious cover is proposed for the site)
  - Attachment J - BMPs for Upgradient Stormwater
  - Attachment K - BMPs for On-site Stormwater
  - Attachment L - BMPs for Surface Streams
  - Attachment M - Construction Plans
  - Attachment N - Inspection, Maintenance, Repair and Retrofit Plan
  - Attachment O - Pilot-Scale Field Testing Plan, if BMPs not based on Complying with the Edwards Aquifer Rules: Technical Guidance for BMPs
  - Attachment P - Measures for Minimizing Surface Stream Contamination
- **Temporary Stormwater Section (TCEQ-0602)**
  - Attachment A - Spill Response Actions
  - Attachment B - Potential Sources of Contamination
  - Attachment C - Sequence of Major Activities
  - Attachment D - Temporary Best Management Practices and Measures
  - Attachment E - Request to Temporarily Seal a Feature, if sealing a feature
  - Attachment F - Structural Practices
  - Attachment G - Drainage Area Map
  - Attachment H - Temporary Sediment Pond(s) Plans and Calculations
  - Attachment I - Inspection and Maintenance for BMPs
  - Attachment J - Schedule of Interim and Permanent Soil Stabilization Practices

- **Copy of Notice of Intent (NOI)**
- **Agent Authorization Form (TCEQ-0599), if application submitted by agent**
- **Application Fee Form (TCEQ-0574)**
- **Check Payable to the "Texas Commission on Environmental Quality (TCEQ)"**
- **Core Data Form (TCEQ-10400)**

Texas Commission on Environmental Quality

Edwards Aquifer Application Cover Page

Our Review of Your Application

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

Administrative Review

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

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

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

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

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

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

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

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

Technical Review

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

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

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

3. We evaluate the application for technical completeness and contact the applicant and agent via Notice of Deficiency (NOD) to request additional information and identify technical deficiencies. There are two deficiency response periods available to the applicant. There are 14 days to resolve deficiencies noted in the first NOD. If a second NOD is issued, there is an additional 14 days to resolve deficiencies. If the response to the second notice is not received, is incomplete or inadequate, or provides new information that is incomplete or inadequate, the application must be withdrawn or will be denied. Please note that because the technical review is underway, whether the application is withdrawn or denied **the application fee will be forfeited**.

4. The program has 90 calendar days to complete the technical review of the application. If the application is technically adequate, such that it complies with the Edwards Aquifer rules, and is protective of the Edwards Aquifer during and after construction, an approval letter will be issued. Construction or other regulated activity may not begin until an approval is issued.

Mid-Review Modifications

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

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

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

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

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

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

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

1. Regulated Entity Name: AAA FM 3405					**2. Regulated Entity No.:** RN 111705539			
3. Customer Name: JMA Entity, LLC					**4. Customer No.:** CN 606122752			
5. Project Type: (Please circle/check one)	New		Modification		Extension		Exception	
6. Plan Type: (Please circle/check one)	WPAP	CZP	SCS	UST / AST	EXP	EXT	Technical Clarification	Optional Enhanced Measures
7. Land Use: (Please circle/check one)	Residential		Non-residential		**8. Site (acres):**		22.94	
9. Application Fee:	$6,500		**10. Permanent BMP(s):**		Two (2) Sand Filter Systems and three (3) Vegetative Filter Strips			
11. SCS (Linear Ft.):	Zero		**12. AST/UST (No. Tanks):**		Zero			
13. County:	Williamson		**14. Watershed:**		North Fork San Gabriel River (Lake Georgetown)			

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.)	__	__	__	__	__
Region (1 req.)	__	__	__	__	__
County(ies)	__	__	__	__	__
Groundwater Conservation District(s)	__ Edwards Aquifer Authority __Trinity-Glen Rose	__Edwards Aquifer Authority	__Kinney	__EAA __Medina	__EAA __Uvalde
City(ies) Jurisdiction	__Castle Hills __Fair Oaks Ranch __Helotes __Hill Country Village __Hollywood Park __San Antonio (SAWS) __Shavano Park	__Bulverde __Fair Oaks Ranch __Garden Ridge __New Braunfels __Schertz	NA	__San Antonio ETJ (SAWS)	NA

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review. Robert C. Thompson
Print Name of Customer/Authorized Agent
 October 2, 2024
Signature of Customer/Authorized Agent Date

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

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: Robert C. Thompson

Date: October 1, 2024

Signature of Customer/Agent:

Project Information

1. Current Regulated Entity Name: AAA FM 3405
   Original Regulated Entity Name: AAA FM 3405
   Assigned Regulated Entity Number(s) (RN): 111705539
   Edwards Aquifer Protection Program ID Number(s): 11003541
   ☒ The applicant has not changed and the Customer Number (CN) is: 606122752
   ☐ 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	16.90	22.94
Type of Development	warehouse/self-storage	warehouse/self-storage
Number of Residential Lots	1	1
Impervious Cover (acres)	4.63	11.57
Impervious Cover (%)	59.0	50.0
Permanent BMPs	3	5
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.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

June 2, 2023

Mr. John Muhich
JMA Entity, LLC
4203 Spinnaker Cove
Austin, Texas 78731

Re: Approval of a Contributing Zone Plan (CZP)
AAA FM 3405; Located at 4651 FM 3405, Georgetown, Williamson County, Texas
Edwards Aquifer Protection Program ID: 11003541, Regulated Entity No. RN111705539

Dear Mr. Muhich:

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 Thompson Land Engineering, LLC on behalf of the applicant, JMA Entity, LLC on March 24, 2023. Final review of the application was completed after additional material was received on May 12, 2023 and May 16, 2023.

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 Edwards Aquifer protection plan. A motion for reconsideration must be filed in accordance with 30 TAC §50.139.

PROJECT DESCRIPTION

The proposed commercial project will have an area of approximately 16.90 acres. The project will include the construction of 12 metal warehouse buildings and one office building along with associated drive aisles. The impervious cover will be 10.04 acres (59.40 percent) with 0.94 acres of pre-rule impervious cover. According to a letter dated, March 15, 2023, signed by James L. Lancaster, with Williamson County, the site in the development is acceptable for the use of on-site sewage facilities.

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, two (2) sedimentation filtration basins and one (1) 50-foot natural vegetative filter strip, 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 7,921 pounds of TSS generated from the 9.10 acres of new impervious cover. 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.

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 Edwards Aquifer protection 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.

During Construction:

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 Edwards Aquifer protection plan is responsible for compliance with Chapter §213 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 and is subject to administrative rule or orders and penalties as provided under §213.10 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 Edwards Aquifer protection 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 Dianne Pavlicek-Mesa, P.G. of the Edwards Aquifer Protection Program at 210-403-4074 or the regional office at 512-339-2929.

Sincerely,

Lillian Butler

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

LIB/dpm

cc: Mr. Robert C. Thompson, P.E., Thompson Land Engineering, LLC

ATTACHMENT B – NARRATIVE OF PROPOSED MODIFICATION

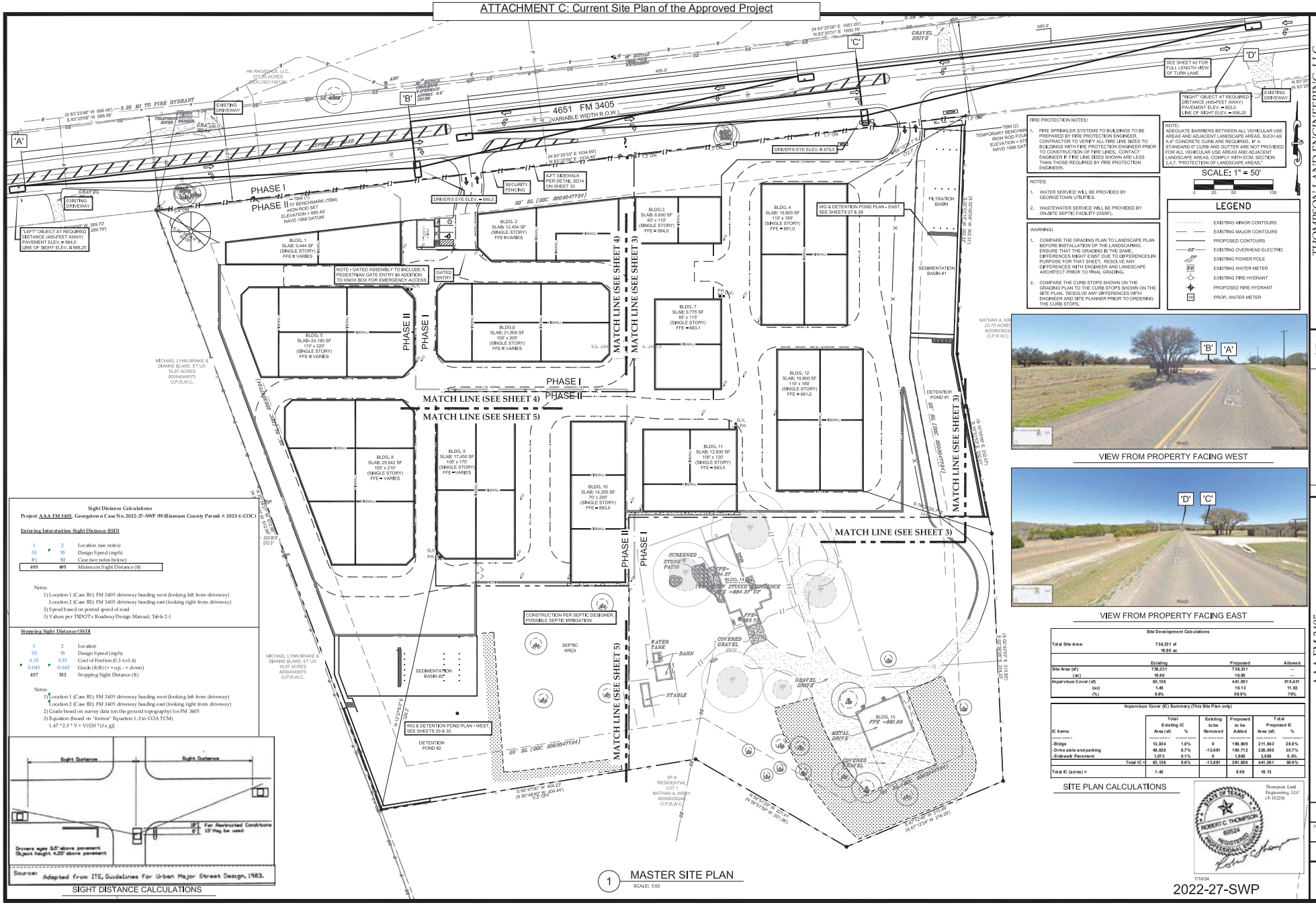
This Modification of a Previously Approved Contributing Zone Plan (CZP) application is being submitted is to permit the construction of the project known as AAA FM 3405, which is located on 16.90-acres. The address for this property is 4651 FM 3405, Georgetown, Texas 78633; the property was released from the City of Georgetown's (COA) extraterritorial jurisdiction (ETJ) on October 24th, 2023.

Due to the TXDOT requirement for this project to include public turn-lanes (for both driveway approaches), the additional work in the right-of-way (ROW) is now being included with the CZP permit that is approved for this property.

As shown in the TCEQ total suspended solids (TSS) removal calculations, this project will increase its project area by 6.04-acres (from 16.90 to **22.94-acres**) and the total new impervious cover will increase by **1.53-acres** (from 10.04 to **11.57-acres**), which is **50%** of the new project area.

Note that within the 6.04-acres, there is approximately 1.34-acres of existing pavement from FM 3405. The storm water runoff from both the existing and proposed pavement will flow onto the proposed permanent Engineered Vegetative Filter Strips (one on each side of the added roadway pavement) that will be uniformly graded with less than 20% slopes and will be at least 15-feet wide in the direction of flow, which have been designed per the TCEQ Technical Guidance Manual.

ATTACHMENT C: Current Site Plan of the Approved Project



1 MASTER SITE PLAN
SCALE: 1:50

Sight Distance Calculations

Project: AAA FM 3405, Georgetown Case No. 2022-27-SWP (Williamson County Permit # 2023-1-COC)

Entering Intersection Sight Distance (ISD)

1	2	Location (see notes)
55	55	Design Speed (mph)
B1	B2	Case (see notes below)
495	495	Minimum Sight Distance (ft)

Notes:
1) Location 1 (Case B1): FM 3405 driveway heading west (looking left from driveway)
Location 2 (Case B2): FM 3405 driveway heading east (looking right from driveway)
2) Speed based on posted speed of road
3) Values per TXDOT's Roadway Design Manual, Table 2-1

Stopping Sight Distance (SSD)

1	2	Location
55	55	Design Speed (mph)
0.35	0.35	Coef of Friction (0.3 to 0.4)
0.045	-0.045	Grade (ft/ft) (+ =up, - = down)
457	533	Stopping Sight Distance (ft)

Notes:
1) Location 1 (Case B1): FM 3405 driveway heading west (looking left from driveway)
Location 2 (Case B2): FM 3405 driveway heading east (looking right from driveway)
2) Grade based on survey data (on the ground topography) for FM 3405
3) Equation (based on "former" Equation 1-2 in COA TCM)
1.47 * 2.5 * V + V²/[30 * (± g)]

SIGHT DISTANCE CALCULATIONS

FIRE PROTECTION NOTES:
1. FIRE SPRINKLER SYSTEMS TO BUILDINGS TO BE PREPARED BY FIRE PROTECTION ENGINEER. CONTRACTOR TO VERIFY ALL FIRE LINE SIZES TO BUILDINGS WITH FIRE PROTECTION ENGINEER PRIOR TO CONSTRUCTION OF FIRE LINES. CONTACT ENGINEER IF FIRE LINE SIZES SHOWN ARE LESS THAN THOSE REQUIRED BY FIRE PROTECTION ENGINEER.

NOTE:
ADEQUATE BARRIERS BETWEEN ALL VEHICULAR USE AREAS AND ADJACENT LANDSCAPE AREAS, SUCH AS A 6" CONCRETE CURB ARE REQUIRED. IF A STANDARD 6" CURB AND GUTTER ARE NOT PROVIDED FOR ALL VEHICULAR USE AREAS AND ADJACENT LANDSCAPE AREAS, COMPLY WITH ECM, SECTION 2.4.7, "PROTECTION OF LANDSCAPE AREAS."

NOTES:
1. WATER SERVICE WILL BE PROVIDED BY GEORGETOWN UTILITIES.
2. WASTEWATER SERVICE WILL BE PROVIDED BY ON-SITE SEPTIC FACILITY (OSSF).

WARNING!
1. COMPARE THE GRADING PLAN TO LANDSCAPE PLAN BEFORE INSTALLATION OF THE LANDSCAPING. ENSURE THAT THE GRADING IS THE SAME. DIFFERENCES MIGHT EXIST DUE TO DIFFERENCES IN PURPOSE FOR THAT SHEET. RESOLVE ANY DIFFERENCES WITH ENGINEER AND LANDSCAPE ARCHITECT PRIOR TO FINAL GRADING.
2. COMPARE THE CURB STOPS SHOWN ON THE GRADING PLAN TO THE CURB STOPS SHOWN ON THE SITE PLAN. RESOLVE ANY DIFFERENCES WITH ENGINEER AND SITE PLANNER PRIOR TO ORDERING THE CURB STOPS.

SCALE: 1" = 50'
0 25 50 100

LEGEND
- EXISTING MINOR CONTOURS
- EXISTING MAJOR CONTOURS
- PROPOSED CONTOURS
- OHP EXISTING OVERHEAD ELECTRIC
- EXISTING POWER POLE
- EXISTING WATER METER
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- PROP. WATER METER

VIEW FROM PROPERTY FACING WEST

VIEW FROM PROPERTY FACING EAST

Site Development Calculations

Total Site Area: 736,331 sf / 16.90 ac

	Existing	Proposed	Allowed
Site Area (sf)	736,331	736,331	--
(ac)	16.90	16.90	--
Impervious Cover (sf)	63,136	441,051	515,431
(ac)	1.46	10.13	11.83
(%)	8.6%	59.9%	70%

Impervious Cover (IC) Summary (This Site Plan only)

IC Items:	Total Existing IC Area (sf)	%	Existing to be Removed	Proposed to be Added	Total Proposed IC Area (sf)	%
-Bldgs	13,034	1.8%	0	198,909	211,943	28.8%
-Drive aisle and parking	49,029	6.7%	-13,691	190,712	226,050	30.7%
-Sidewalk Pavement	1,073	0.1%	0	3,098	3,098	0.4%
Total IC =	63,136	8.6%	-13,691	391,805	441,051	59.9%
Total IC (acres) =	1.45			8.99	10.13	

SITE PLAN CALCULATIONS

STATE OF TEXAS ROBERT C. THOMPSON 60524 REGISTERED PROFESSIONAL ENGINEER

Thompson Land Engineering, LLC (F-10220)

7/16/24

2022-27-SWP

THOMPSON LAND ENGINEERING, LLC
Land Planning, Site Design, Subdivision Engineering
P.O. Box 160062, Austin, Texas 78716 (512-328-0002)
www.tleng.net email: rct@tleng.net

AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

MASTER SITE PLAN

DATE ISSUED July, 2024
DESIGNED BY RCT
DRAFTED BY JHMR
JOB NUMBER 1829
SHEET 2 OF 60

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: Robert C. Thompson

Date: October 2, 2024

Signature of Customer/Agent:

Regulated Entity Name: AAA FM 3405

Project Information

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

   Contact Person: John Muhich
   Entity: JMA Entity, LLC
   Mailing Address: 4203 Spinnaker Cove
   City, State: Austin, Texas Zip: 78731
   Telephone: (512) 657-6789 Fax: N/A
   Email Address: johnsmuhich@gmail.com

5. Agent/Representative (If any):

Contact Person: Robert C. Thompson
Entity: Thompson Land Engineering, LLC
Mailing Address: 904 N Cuernavaca Drive
City, State: Austin, Texas Zip: 78733
Telephone: (512) 328-0002 Fax: N/A
Email Address: ric@tleng.net

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.

The property is an existing farmstead located south of FM 3405, east of Ronald Reagan Boulevard (and east of Beltorre Drive) and west of S County Road 289.

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 residential drive, garage and parking added after 1990

12. The type of project is:

☒ Residential: # of Lots: 1
☐ Residential: # of Living Unit Equivalents: _____
☒ Commercial
☐ Industrial
☐ Other: _____

13. Total project area (size of site): 22.94 Acres

    Total disturbed area: 19.85 Acres

14. Estimated projected population: 2

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	215,293	÷ 43,560 =	4.94
Parking	219,023	÷ 43,560 =	5.03
Other paved surfaces	69,781	÷ 43,560 =	1.60
Total Impervious Cover	437,374	÷ 43,560 =	11.57

Total Impervious Cover 11.57 **÷ Total Acreage** 22.94 **X 100 =** 50.0**% Impervious Cover**

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

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

For Road Projects Only

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

☒ N/A

18. Type of project:

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

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

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

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

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

21. Pavement Area:

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

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

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

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

Stormwater to be generated by the Proposed Project

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

Wastewater to be generated by the Proposed Project

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

☐ N/A

26. Wastewater will be disposed of by:

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

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

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

☐ Sewage Collection System (Sewer Lines):

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

☐ Existing.
☐ Proposed.

☐ N/A

Permanent Aboveground Storage Tanks(ASTs) ≥ 500 Gallons

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

☒N/A

27. Tanks and substance stored:

Table 2 - Tanks and Substance Storage

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

Total x 1.5 = _____ Gallons

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

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

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

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

Table 3 - Secondary Containment

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

Total: _____ Gallons

30. Piping:

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

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

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

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

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

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

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

Site Plan Requirements

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

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

    Site Plan Scale: 1" = 20'.

35. 100-year floodplain boundaries:

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

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

    The 100-year floodplain boundaries are based on the following specific (including date of material) sources(s): FEMA FIRM No. 48491C0275E, revised September 26, 2008.

36. ☒ The layout of the development is shown with existing and finished contours at appropriate, but not greater than ten-foot contour intervals. Lots, recreation centers, buildings, roads, etc. are shown on the site plan.

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

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

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

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

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

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

42. ☐ Surface waters (including wetlands).

    ☒ N/A

43. ☐ Locations where stormwater discharges to surface water.

    ☒ There will be no discharges to surface water.

44. ☐ Temporary aboveground storage tank facilities.

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

45. ☐ Permanent aboveground storage tank facilities.

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

46. ☒ Legal boundaries of the site are shown.

Permanent Best Management Practices (BMPs)

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

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

☐ N/A

48. ☒ These practices and measures have been designed, and will be constructed, operated, and maintained to insure that 80% of the incremental increase in the annual mass loading of total suspended solids (TSS) from the site caused by the regulated activity is removed. These quantities have been calculated in accordance with technical guidance prepared or accepted by the executive director.

☒ The TCEQ Technical Guidance Manual (TGM) was used to design permanent BMPs and measures for this site.

☐ A technical guidance other than the TCEQ TGM was used to design permanent BMPs and measures for this site. The complete citation for the technical guidance that was used is: _____.

☐ N/A

49. ☒ Owners must insure that permanent BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the appropriate regional office within 30 days of site completion.

☐ N/A

50. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.

☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.

☒ The site will not be used for low density single-family residential development.

51. The executive director may waive the requirement for other permanent BMPs for multi-family residential developments, schools, or small business sites where 20% or less impervious cover is used at the site. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

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

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

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

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

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

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

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

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

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

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

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

☐ N/A

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

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

☐ N/A

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

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

☐ N/A

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

☒ N/A

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

☐ N/A

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

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

60. ☒ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development,

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

Administrative Information

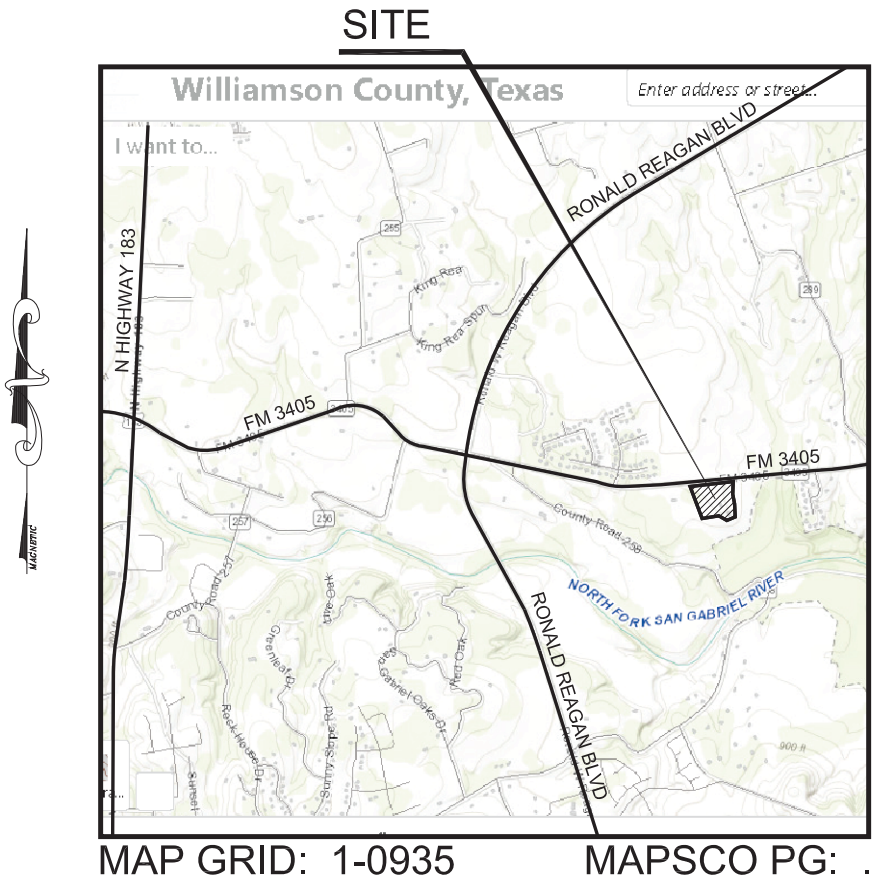
61. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions.

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

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

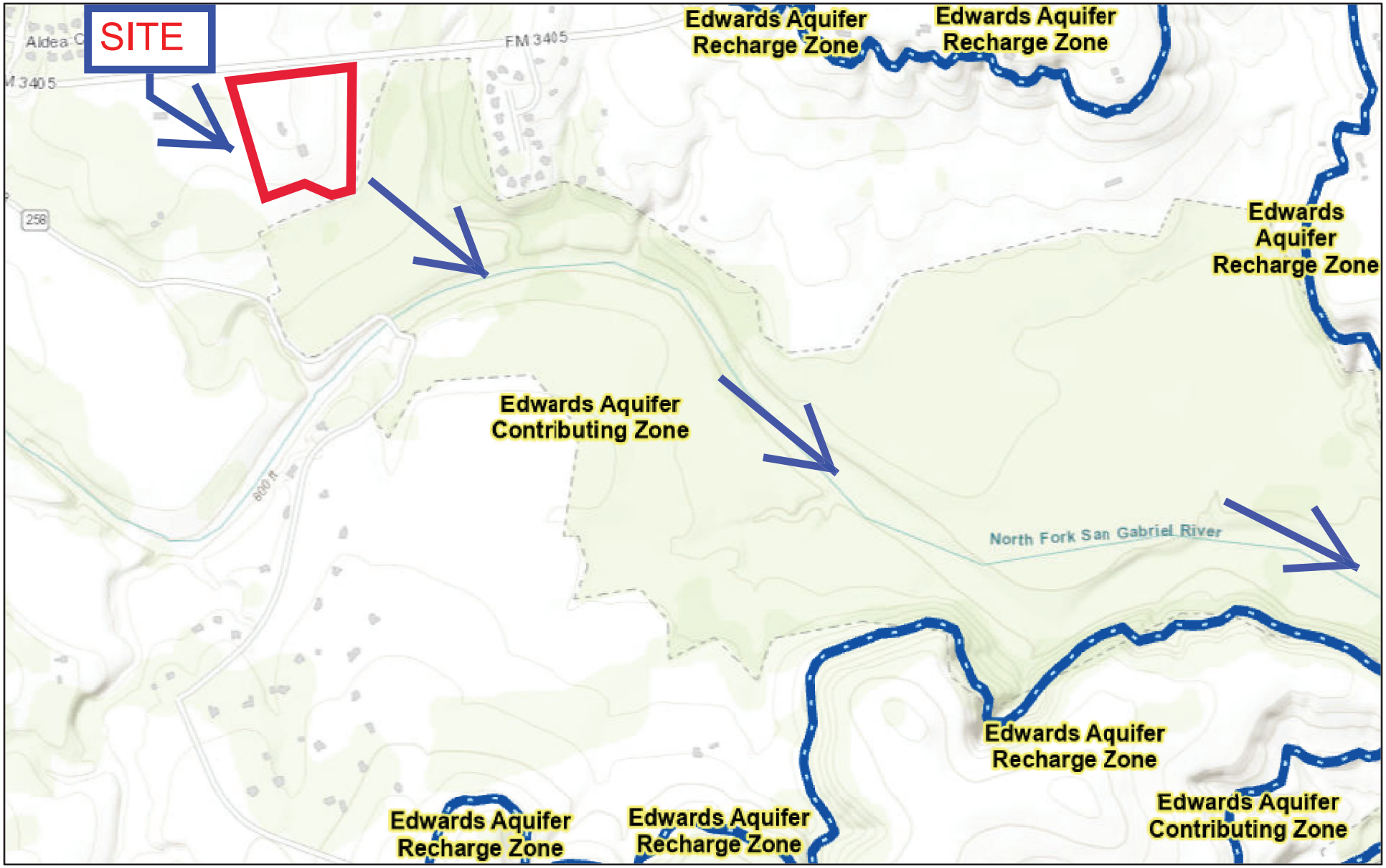
☒ The Temporary Stormwater Section (TCEQ-0602) is included with the application.

ATTACHMENT A
ROAD MAP



MAP GRID: 1-0935 MAPSCO PG: .

Edwards Aquifer Viewer Custom Print



12/8/2022, 5:22:51 PM

Edwards Aquifer Label

Edwards Aquifer Boundary

Edwards Aquifer Boundary central line

TX Counties

7.5 Minute Quad Grid

TCEQ_EDWARDS_OFFICIAL_MAPS

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

County of Williamson, Texas Parks & Wildlife, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, METI/NASA, EPA, USDA, TCEQ

Web AppBuilder for ArcGIS

County of Williamson, Texas Parks & Wildlife, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, METI/NASA, EPA, USDA | TCEQ |

ATTACHMENT B

ATTACHMENT C – PROJECT DESCRIPTION

This Contributing Zone Plan (CZP) application is proposing for the addition of various sized metal buildings (for office and warehouse use) to a 16.90-acre tract of land that is mostly vacant, but with an existing single-family residence and farmstead that was built around 1976 (per Tax records). Additionally, this property had some added drives, garage and parking improvements that occurred after 1990, therefore, this project proposes to remove some of this drive, while replacing some (to maintain access to this residence after the project is completed), while also adding water quality treatment for the remaining added drive, garage, and parking.

In addition to the metal building construction, this project will include the associated drive aisles, utilities, and storm water drainage improvements on private property in addition to the public TXDOT turn-lanes with the driveways. The project is anticipated to be constructed in two (2) phases. There are five (5) separate TCEQ BMPs proposed with this plan: two (2) sand filters and three (3) vegetative filter strip (VFS), as seen in the TCEQ total suspended solids (TSS) removal calculations that are proposed with this application. (Due to the drainage divide, the VFS is shown in separate drainage basins in the TSS calculations.) The total onsite impervious cover is expected to have an area of **11.57-acres** or **50.0%** of this **22.94-acre project area**. See the construction plan set for more details. No other construction is currently planned.

ATTACHMENT D – FACTORS AFFECTING WATER QUALITY

The following are potential sources of sediment to stormwater runoff:

1) Disturbed earth from rough grading,
2) road base for pavement, and
3) disturbed earth from the construction of the water quality controls

The following are other potential pollutants and sources to stormwater runoff:

1) Construction debris (e.g., wood form boards, nails, tie wire for rebar, survey laths, survey tape, etc.),
2) floatable items, such as cups and paper,
3) possibly oils from leaking machinery,

4) possibly fuel should any refueling activity occur,
5) possibly concrete materials from truck washout activities (if not bound), and
6) possibly paint from striping activities (if not adhered to something large).

ATTACHMENT E – VOLUME AND CHARACTER OF STORM WATER

Since this project proposes to add over 10-acres of impervious cover, the anticipated stormwater runoff is expected to produce a significant amount of volume and character (quantity and quality) that will be mitigated from the proposed water quality and detention facilities. See the Drainage Area Maps and Calculations on sheets 35-38 in the plan set for the specifics. The water quality will be treated by the BMPs and the detention ponds will reduce these flows and to be less than the existing conditions. The runoff coefficients are shown below:

Pre-construction = 79.70
Post-construction = 89.99

ATTACHMENT F – SUITABILITY LETTER FROM AUTHORIZED AGENT

See below for this property's suitability letter from Williamson County, dated March 15, 2023. The soils and site conditions for this project are suitable to allow the use of on-site sewage facilities (OSSF) based on the surrounding subdivisions, soil survey and received planning materials.

ATTACHMENT G – ALTERNATIVE SECONDARY CONTAINMENT METHODS

This is not applicable for this project.

ATTACHMENT H – AST CONTAINMENT STRUCTURE DRAWINGS

This is not applicable for this project.

ATTACHMENT I – 20% OR LESS IMPERVIOUS COVER (IC) DECLARATION

This is not applicable for this project. This site will have more than 20% IC.

ATTACHMENT J – BMPs FOR UPGRADIENT STORMWATER

Due to the existing topography, this property is situated such that there is no surface water, groundwater or stormwater that originates up-gradient of this site.

ATTACHMENT K – BMPs FOR ON-SITE STORMWATER

The proposed development will convey storm water runoff down the internal drive aisles and into splitter box facilities. There will be two (2) separate Sand Filter systems and three (3) separate Vegetative Filter Strips that are proposed to prevent the pollution of surface water or groundwater that originates onsite. The Sand Filter systems will be constructed of both earthen berms and vertical concrete walls. The natural (onsite) VFS will consist of natural grass areas that extend for at least 50-feet in the direction of flow (and will receive less than 72-feet of contributing runoff). The engineered VFS in the ROW will be 15-feet wide. The TCEQ TSS calculations and notes are provided on the **sheet 38** of the construction plan set (Calculations and Notes). The overflow from the sand filter systems will be conveyed into the adjacent detention pond facilities, which both have flow spreading walls downstream of the pond outfalls.

ATTACHMENT L – BMPs FOR SURFACE STREAMS

The primary source of pollutants from this project (on the proposed impervious cover) will either be conveyed overland on the pavement surface (bounded by curbs, etc.) or in pipes (collected roof runoff), and then, either into the onsite water quality and detention ponds, or over the vegetative filter strips, before being conveyed into any potential downstream surface stream.

ATTACHMENT M – CONSTRUCTION PLANS

See the attached construction plan set (60 sheets).

ATTACHMENT N – INSPECTION, MAINTENANCE, REPAIR AND RETROFIT (IMRR) PLAN

See next page for the IMRR Plan.

ATTACHMENT O – PILOT-SCALE FIELD TESTING PLAN

This is not applicable for this project

ATTACHMENT P – MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

The proposed storm water runoff from the development in this project will continue to match existing drainage patterns. The detention facilities are designed to reduce the flows in post-development conditions to be less than pre-development for the 2-yr, 10-yr, 25-yr and 100-yr storm events (using the latest Atlas-14 rainfall data). Additionally, during construction, erosion controls will be provided at the detention pond outfalls; therefore, there are no stream contaminations or changes to the way water enters a stream that are expected or known to be likely from this project during or after construction.

ATTACHMENT N

Inspection, Maintenance, Repair and Retrofit (IMRR) Plan

Purpose

This plan is for the "water quality" controls on this site and intended to help the site owner (and whoever is delegated) to maintain the water quality controls.

Construction Plans

This plan is for work constructed under the **Site Development Plan (SDP-_____)** from the City of Georgetown. The information and details from those plans are included in this IMRR plan, however, anyone accepting responsibility for maintaining this system should obtain a copy of those plans and become familiar with the construction specifications on those plans.

Description of Controls

The water quality controls are the **sand filter systems** (sedimentation & filtration basins) and the **vegetative filter strips** (natural grass areas) that drain water using gravity. The purpose of these controls is to capture the initial run-off contacting the buildings and parking on this site and treat pollutants washed off from the impervious surfaces before releasing back into the natural ground. The control works as follow:

- Sediments and pollutants in the storm water settle in the "sedimentation basin,"
- Following sedimentation, water flows through and over a rock gabion, and then, enters a “filtration basin” for additional removal of pollutants.
- From the filtration basin, the water goes into perforated pipes wrapped in gravel and ultimately out towards a flow spreading wall where it finally overflows and eventually infiltrates into the downstream soils.
- Vegetative filter strips to receive sheet flow from contributing areas (unconcentrated).

The sand filter systems are sized such that the ponds empty within 48 hours. Any water in excess of the water quality volume will spill over a concrete weir at the pond inlets (the splitter box) and will subsequently flow into the adjacent detention ponds.

General Description of Maintenance Required

The primary components of the water quality control are:

- the flow splitting structure,
- the sedimentation pond,
- the rock gabion dividing the sedimentation pond from the filtration pond,
- the sand bed of the filtration pond,
- the trench irrigation perforated pipe,
- the grass areas.

The flow splitting structure, sedimentation pond, rock gabion, and filtration should not take any maintenance other than periodic cleaning of accumulated silt, and in the sedimentation pond and grass areas, the mowing of the grass. The sand bed of the filtration pond should be periodically raked clean of the accumulation of silt. The opening of the underdrain outfall pipe should be kept clear of accumulation of sediment and vegetation.

The trenched perforated pipe should require no other maintenance than periodic replacement if vandalism occurs, or replacement of rocks if they were to become dislodged. The vegetative filter strips (grass field) should be maintained to allow vegetation to grow and should be kept level so that water distributes evenly.

Specific Maintenance Guidelines

The recommended maintenance guidelines are as follows. Records should be kept of the following and any other maintenance work and inspections, and those records should be kept on site for review by the TCEQ should they request to see them.

Inspections. The water quality control system should be inspected and tested at least six times a year to evaluate facility operation. One of these inspections should be during or immediately following wet weather. Any malfunctions should be repaired immediately. Items which should be inspected include:

- eroded areas at the flow splitting structure,
- distressed or dying grass within the sedimentation pond,
- gabion for accumulation of silt which might block flow
- outfall structure for blockage and/or debris accumulation, and
- areas of water accumulation (paddling).
- eroded areas or areas of uneven flow at the irrigation field,
- dislodged rocks or any problems affecting the flow spreading pipe,

It is also recommended that, at least once during wet weather, for the pond drainage to be timed to confirm that the pond is completely empty within 72 hrs. Any defects identified during these inspections should be repaired within 4 weeks of identification to ensure that significant damage does not occur and to ensure that the site remains in compliance.

Regular Maintenance.

- Sediment Removal. At a minimum, the sediment needs to be removed from the sedimentation pond when sediment buildup fills to 6 inches, or when it accumulates to such a point that it blocks the flow of water to the irrigation pipe.
- Debris and Litter Removal. The areas shall also be checked for accumulation of debris and trash. The debris and trash shall be removed. This should occur no less than 4 times a year. In addition, debris and litter should be removed after each significant rainfall event.
- Mowing and Field Leveling. Regular mowing should occur as often as necessary. If areas have become eroded in the grassy areas, they should be replenished and leveled. Fertilizers should be used at a minimum.

Additional Maintenance:

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, some basic maintenance is required to ensure the health of the treatment, including:

- ***Irrigation Areas***. Vegetation must be maintained in the designated grassy areas to prevent erosion and provide additional water quality treatment.

- ***Mowing***. The upper stage, side slopes, and embankment of the sedimentation basin and the vegetative filter strips must be mowed regularly to discourage woody growth and control weeds. Grass areas in and around basins must 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 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 and should be removed during regular mowing operations and inspections. Particular attention should be paid to floating debris that can eventually clog the system outfall.

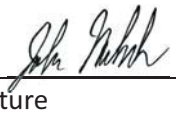
- ***Erosion Control***. The pond side slopes and embankment may periodically suffer from slumping and erosion, although this should not occur often if the soils are properly compacted during construction. Regrading and revegetation may be required to correct the problems.

- ***Nuisance Control***. Standing water or soggy conditions in the basins 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 and debris removal).

Replacement Parts

- Pipe. All of the discharge pipe is standard schedule 80 PVC and may be obtained at any hardware store (such as Home Depot or Lowes).
- Geotextile Fabric. The black, felt looking material inside the rocks at the flow distribution pipes is known as a geotextile fabric. This material might be obtained from a hardware store but can be erosion control contractor or a company specializing in selling these materials such as SI Geosolutions (www.geosolutions.com).
- Gravel. Gravel can be requested from many local soil distributors such as Geo Growers (http://www.geogrowers.net).

Responsible Party: JMA Entity LLC c/o John Muhich - Manager
Name



Signature

12/5/2022
Date

Mailing Address: 4203 Spinnaker Cove
City, State: Austin, Texas 78731
Telephone: (254) 466-7304

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: Robert C. Thompson

Date: October 2, 2024

Signature of Customer/Agent:

Regulated Entity Name: AAA FM 3405

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: North Fork San Gabriel River

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

Spill response actions will be in accordance with Texas Administrative Code (TAC) Title 30, Chapter 327. Corresponding notes have been developed based on that section of the TAC and are included on the General Notes page (in the attached construction plan set) and is also copied below (and continues through to page 5).

The person responsible for cleaning up a spill is:

- the owner or operator of a **facility** from which a spill emanates;
- the owner, operator, or demise charterer of a **vessel** from which a spill emanates; or
- any other person who **causes, suffers, allows, or permits** a spill or discharge.

Notification, emergency response, spill cleanups that take less than 180 days:

- See https://www.tceq.texas.gov/response/spills/spill_rq.html. Most spills requiring less than 6 months of cleanup are reviewed by the **TCEQ Austin Regional** office staff at (512) 339-2929 (Monday-Friday, 8 a.m. – 5 p.m.) or
- State of Texas Spill-Reporting Hotline at (800) 832-8224 (24-hours)

Cleanups requiring **more than 180 days and spills that impact groundwater** may be referred from the Region office to the Remediation Division for oversight. Contact:

- The **TCEQ Austin Regional office** at (512) 339-2929, for Travis County or
- The TCEQ Remediation Division, Environmental Cleanup sections at: (512) 239-2200.

SPILL PREVENTION AND CONTROL NOTES
(BASED ON TAC 30.327)

A DISCHARGE OR SPILL IS AN ACT OR OMISSION BY WHICH OIL, HAZARDOUS SUBSTANCES, WASTE, OR OTHER SUBSTANCES ARE SPILLED, LEAKED, PUMPED, POURED, EMITTED, ENTERED, OR DUMPED ONTO OR INTO WATERS IN THE STATE OF TEXAS OR BY WHICH THOSE SUBSTANCES ARE DEPOSITED WHERE, UNLESS CONTROLLED OR REMOVED, THEY MAY DRAIN, SEEP, RUN, OR OTHERWISE ENTER WATER IN THE STATE OF TEXAS.

NOTIFICATION REQUIREMENTS

(A) REPORTABLE DISCHARGE OR SPILL. A REPORTABLE DISCHARGE OR SPILL IS A DISCHARGE OR SPILL OF OIL, PETROLEUM PRODUCT, USED OIL, HAZARDOUS SUBSTANCES, INDUSTRIAL SOLID WASTE, OR OTHER SUBSTANCES INTO THE ENVIRONMENT IN A QUANTITY EQUAL TO OR GREATER THAN THE REPORTABLE QUANTITY LISTED IN SECTION 327.4 OF THIS TITLE (RELATING TO REPORTABLE QUANTITIES) IN ANY 24-HOUR PERIOD.

(B) INITIAL NOTIFICATION. UPON THE DETERMINATION THAT A REPORTABLE DISCHARGE OR SPILL HAS OCCURRED, THE CONTRACTOR SHALL NOTIFY THE TCEQ AS SOON AS POSSIBLE BUT NOT LATER THAN 24 HOURS AFTER THE DISCOVERY OF THE SPILL OR DISCHARGE.

(C) METHOD OF NOTIFICATION. THE CONTRACTOR SHALL NOTIFY THE TCEQ IN ANY REASONABLE MANNER INCLUDING BY TELEPHONE, IN PERSON, OR BY ANY OTHER METHOD APPROVED BY THE TCEQ. IN ALL CASES, THE INITIAL NOTIFICATION SHALL PROVIDE, TO THE EXTENT KNOWN, THE INFORMATION LISTED IN SUBSECTION (D) OF THIS SECTION. NOTICE PROVIDED UNDER THIS SECTION SATISFIES THE FEDERAL REQUIREMENT TO NOTIFY THE STATE EMERGENCY RESPONSE COMMISSION IN THE STATE OF TEXAS. THE CONTRACTOR SHALL NOTIFY ONE OF THE FOLLOWING:
(1) THE STATE EMERGENCY RESPONSE CENTER AT 1-800-832-8224;
(2) DURING NORMAL BUSINESS HOURS ONLY, THE REGIONAL OFFICE FOR THE TCEQ REGION IN WHICH THE DISCHARGE OR SPILL OCCURRED; OR
(3) THE TCEQ AT THE TCEQ 24-HOUR SPILL REPORTING NUMBER (512) 239-2507 OR (512) 463-7727.

(D) INFORMATION REQUIRED IN INITIAL NOTIFICATION. THE INITIAL NOTIFICATION SHALL PROVIDE, TO THE EXTENT KNOWN, THE INFORMATION IN THE FOLLOWING LIST. COPIES OF SPILL REPORTS PREPARED FOR OTHER GOVERNMENTAL AGENCIES SHALL SATISFY THIS REQUIREMENT IF THEY CONTAIN, OR ARE SUPPLEMENTED TO CONTAIN, ALL THE INFORMATION REQUIRED BY THIS SUBSECTION. THE INITIAL NOTIFICATION SHALL CONTAIN:
(1) THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE PERSON MAKING THE TELEPHONE REPORT;
(2) THE DATE, TIME, AND LOCATION OF THE SPILL OR DISCHARGE;
(3) A SPECIFIC DESCRIPTION OR IDENTIFICATION OF THE OIL, PETROLEUM PRODUCT, HAZARDOUS SUBSTANCES OR OTHER SUBSTANCES DISCHARGED OR SPILLED;
(4) AN ESTIMATE OF THE QUANTITY DISCHARGED OR SPILLED;
(5) THE DURATION OF THE INCIDENT;
(6) THE NAME OF THE SURFACE WATER OR A DESCRIPTION OF THE WATERS IN THE STATE AFFECTED OR THREATENED BY THE DISCHARGE OR SPILL;
(7) THE SOURCE OF THE DISCHARGE OR SPILL;
(8) A DESCRIPTION OF THE EXTENT OF ACTUAL OR POTENTIAL WATER POLLUTION OR HARMFUL IMPACTS TO THE ENVIRONMENT AND AN IDENTIFICATION OF ANY ENVIRONMENTALLY SENSITIVE AREAS OR NATURAL RESOURCES AT RISK;
(9) IF DIFFERENT FROM PARAGRAPH (1) OF THIS SUBSECTION, THE NAMES, ADDRESSES, AND TELEPHONE NUMBERS OF THE CONTRACTOR AND THE CONTACT PERSON AT THE LOCATION OF THE DISCHARGE OR SPILL;
(10) A DESCRIPTION OF ANY ACTIONS THAT HAVE BEEN TAKEN, ARE BEING TAKEN, AND WILL BE TAKEN TO CONTAIN AND RESPOND TO THE DISCHARGE OR SPILL;
(11) ANY KNOWN OR ANTICIPATED HEALTH RISKS;
(12) THE IDENTITY OF ANY GOVERNMENTAL REPRESENTATIVES, INCLUDING LOCAL AUTHORITIES OR THIRD PARTIES, RESPONDING TO THE DISCHARGE OR SPILL; AND
(13) ANY OTHER INFORMATION THAT MAY BE SIGNIFICANT TO THE RESPONSE ACTION.

(E) UPDATE NOTIFICATION. THE CONTRACTOR SHALL NOTIFY THE TCEQ AS SOON AS POSSIBLE WHENEVER NECESSARY TO PROVIDE INFORMATION THAT WOULD TRIGGER A CHANGE IN THE RESPONSE TO THE SPILL OR DISCHARGE.

(F) CORRECTION OF RECORDS. NOTIFYING THE TCEQ THAT A REPORTABLE DISCHARGE OR SPILL HAS OCCURRED SHALL NOT BE CONSTRUED AS AN ADMISSION THAT POLLUTION HAS OCCURRED. FURTHERMORE, IF THE CONTRACTOR DETERMINES, AFTER NOTIFICATION, THAT A REPORTABLE DISCHARGE OR SPILL DID NOT OCCUR, THE CONTRACTOR MAY SEND A LETTER TO THE TCEQ DOCUMENTING THAT DETERMINATION. IF THE EXECUTIVE DIRECTOR AGREES WITH THAT DETERMINATION, THE EXECUTIVE DIRECTOR WILL NOTE THE DETERMINATION IN COMMISSION RECORDS. IF THE EXECUTIVE DIRECTOR DISAGREES WITH THAT DETERMINATION, THE EXECUTIVE DIRECTOR WILL NOTIFY THE CONTRACTOR WITHIN 30 DAYS.

(G) NOTIFICATION OF LOCAL GOVERNMENTAL AUTHORITIES. IF THE DISCHARGE OR SPILL CREATES AN IMMINENT HEALTH THREAT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY AND COOPERATE WITH LOCAL EMERGENCY AUTHORITIES (FIRE DEPARTMENT, FIRE MARSHAL, LAW ENFORCEMENT AUTHORITY, HEALTH AUTHORITY, OR LOCAL EMERGENCY PLANNING COMMITTEE (LEPC), AS APPROPRIATE). THE RESPONSIBLE PARTY WILL COOPERATE WITH THE LOCAL EMERGENCY AUTHORITY IN PROVIDING SUPPORT TO IMPLEMENT APPROPRIATE NOTIFICATION AND RESPONSE ACTIONS. THE LOCAL EMERGENCY AUTHORITY, AS NECESSARY, WILL IMPLEMENT ITS EMERGENCY MANAGEMENT PLAN, WHICH MAY INCLUDE NOTIFYING AND EVACUATING AFFECTED PERSONS. IN THE ABSENCE OF A LOCAL EMERGENCY AUTHORITY, THE CONTRACTOR SHALL TAKE REASONABLE MEASURES TO NOTIFY POTENTIALLY AFFECTED PERSONS OF THE IMMINENT HEALTH THREAT.

(H) NOTIFICATION TO PROPERTY OWNER AND RESIDENTS. AS SOON AS POSSIBLE, BUT NO LATER THAN TWO WEEKS AFTER DISCOVERY OF THE SPILL OR DISCHARGE, THE CONTRACTOR SHALL REASONABLY ATTEMPT TO NOTIFY THE OWNER (IF IDENTIFIABLE) OR OCCUPANT OF THE PROPERTY UPON WHICH THE DISCHARGE OR SPILL OCCURRED AS WELL AS THE OCCUPANTS OF ANY PROPERTY THAT THE CONTRACTOR REASONABLY BELIEVES IS ADVERSELY AFFECTED.

(I) ADDITIONAL NOTIFICATION REQUIRED.
(1) NOTICE PROVIDED UNDER THIS SECTION SATISFIES THE FEDERAL REQUIREMENT TO NOTIFY THE STATE EMERGENCY RESPONSE COMMISSION IN THE STATE OF TEXAS. HOWEVER, COMPLYING WITH THE NOTIFICATION REQUIREMENTS SET FORTH IN THIS SECTION DOES NOT RELIEVE, SATISFY, OR FULFILL ANY OTHER NOTIFICATION REQUIREMENTS IMPOSED BY PERMIT OR OTHER LOCAL, STATE, OR FEDERAL LAW. THE CONTRACTOR SHOULD CONTACT THE LOCAL AUTHORITIES TO DETERMINE IF ANY ADDITIONAL NOTIFICATION IS REQUIRED AND SHOULD CONSULT WITH THE TECQ AS TO WHETHER ANY ADDITIONAL STATE OR FEDERAL NOTIFICATION IS REQUIRED.

(J) ALTERNATIVE NOTIFICATION PLANS.

(1) CONTRACTORS IN CHARGE OF ACTIVITIES AND FACILITIES MAY SUBMIT AND IMPLEMENT AN ALTERNATIVE NOTIFICATION PLAN. THIS ALTERNATIVE NOTIFICATION PLAN SHALL COMPLY WITH THE TEXAS WATER CODE, SECTION 26.039. CONTRACTORS SHALL OBTAIN THE TCEQ'S WRITTEN APPROVAL BEFORE IMPLEMENTING ANY ALTERNATIVE NOTIFICATION PLAN.
(2) UPON APPROVAL OF THE TCEQ REGIONAL MANAGER, CONTRACTORS MAY PROVIDE THE INITIAL NOTIFICATION BY FACSIMILE TO THE REGIONAL OFFICE DURING NORMAL BUSINESS HOURS.

REPORTABLE QUANTITIES (RQ)

(A) HAZARDOUS SUBSTANCES. THE REPORTABLE QUANTITIES FOR HAZARDOUS SUBSTANCES SHALL BE:
(1) FOR SPILLS OR DISCHARGES ONTO LAND--THE QUANTITY DESIGNATED AS THE FINAL REPORTABLE QUANTITY (RQ) IN TABLE 302.4 IN 40 CFR SECTION 302.4; OR
(2) FOR SPILLS OR DISCHARGES INTO WATERS IN THE STATE--THE QUANTITY DESIGNATED AS THE FINAL RQ IN TABLE 302.4 IN 40 CFR SECTION 302.4, EXCEPT WHERE THE FINAL RQ IS GREATER THAN 100 POUNDS IN WHICH CASE THE RQ SHALL BE 100 POUNDS.
(B) OIL, PETROLEUM PRODUCT, AND USED OIL.
(1) THE RQ FOR CRUDE OIL AND OIL OTHER THAN THAT DEFINED AS PETROLEUM PRODUCT OR USED OIL SHALL BE:
(A) FOR SPILLS OR DISCHARGES ONTO LAND--210 GALLONS (FIVE BARRELS); OR
(B) FOR SPILLS OR DISCHARGES DIRECTLY INTO WATER IN THE STATE--QUANTITY SUFFICIENT TO CREATE A SHEEN.
(2) THE RQ FOR PETROLEUM PRODUCT AND USED OIL SHALL BE:
(A) EXCEPT AS NOTED IN SUBPARAGRAPH (B) OF THIS PARAGRAPH, FOR SPILLS OR DISCHARGES ONTO LAND--25 GALLONS;
(B) FOR SPILLS OR DISCHARGES TO LAND FROM PST EXEMPTED FACILITIES--210 GALLONS (FIVE BARRELS); OR
(C) FOR SPILLS OR DISCHARGES DIRECTLY INTO WATER IN THE STATE--QUANTITY SUFFICIENT TO CREATE A SHEEN.
(C) INDUSTRIAL SOLID WASTE OR OTHER SUBSTANCES. THE RQ FOR SPILLS OR DISCHARGES INTO WATER IN THE STATE SHALL BE 100 POUNDS.

ACTIONS REQUIRED

(A) THE CONTRACTOR SHALL IMMEDIATELY ABATE AND CONTAIN THE SPILL OR DISCHARGE AND COOPERATE FULLY WITH THE EXECUTIVE DIRECTOR AND THE LOCAL INCIDENT COMMAND SYSTEM. THE CONTRACTOR SHALL ALSO BEGIN REASONABLE RESPONSE ACTIONS WHICH MAY INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING ACTIONS:
(1) ARRIVAL OF THE CONTRACTOR OR RESPONSE PERSONNEL HIRED BY THE CONTRACTOR AT THE SITE OF THE DISCHARGE OR SPILL;
(2) INITIATING EFFORTS TO STOP THE DISCHARGE OR SPILL;
(3) MINIMIZING THE IMPACT TO THE PUBLIC HEALTH AND THE ENVIRONMENT;
(4) NEUTRALIZING THE EFFECTS OF THE INCIDENT;
(5) REMOVING THE DISCHARGED OR SPILLED SUBSTANCES; AND
(6) MANAGING THE WASTES.

(B) UPON REQUEST OF THE LOCAL GOVERNMENT RESPONDERS OR THE EXECUTIVE DIRECTOR, THE CONTRACTOR SHALL PROVIDE A VERBAL OR WRITTEN DESCRIPTION, OR BOTH, OF THE PLANNED RESPONSE ACTIONS AND ALL ACTIONS TAKEN BEFORE THE LOCAL GOVERNMENTAL RESPONDERS OR THE EXECUTIVE DIRECTOR ARRIVE. WHEN THE TCEQ ON-SCENE COORDINATOR REQUESTS THIS INFORMATION, IT IS SUBJECT TO POSSIBLE ADDITIONAL RESPONSE ACTION REQUIREMENTS BY THE EXECUTIVE DIRECTOR. THE INFORMATION WILL SERVE AS A BASIS FOR THE EXECUTIVE DIRECTOR TO DETERMINE THE NEED FOR:
(1) FURTHER RESPONSE ACTIONS BY THE CONTRACTOR;
(2) INITIATING STATE FUNDED ACTIONS FOR WHICH THE CONTRACTOR MAY BE HELD LIABLE TO THE MAXIMUM EXTENT ALLOWED BY LAW; AND
(3) SUBSEQUENT REPORTS ON THE RESPONSE ACTIONS.

(C) EXCEPT FOR DISCHARGES OR SPILLS OCCURRING DURING THE NORMAL COURSE OF TRANSPORTATION ABOUT WHICH CARRIERS ARE REQUIRED TO FILE A WRITTEN REPORT WITH THE U.S. DEPARTMENT OF TRANSPORTATION UNDER 49 CFR SECTION 171.16, THE CONTRACTOR SHALL SUBMIT WRITTEN INFORMATION, SUCH AS A LETTER, DESCRIBING THE DETAILS OF THE DISCHARGE OR SPILL AND SUPPORTING THE ADEQUACY OF THE RESPONSE ACTION, TO THE APPROPRIATE TCEQ REGIONAL MANAGER WITHIN 30 WORKING DAYS OF THE DISCOVERY OF THE REPORTABLE DISCHARGE OR SPILL. THE REGIONAL MANAGER HAS THE DISCRETION TO EXTEND THE DEADLINE. THE DOCUMENTATION SHALL CONTAIN ONE OF THE FOLLOWING ITEMS:
(1) A STATEMENT THAT THE DISCHARGE OR SPILL RESPONSE ACTION HAS BEEN COMPLETED AND A DESCRIPTION OF HOW THE RESPONSE ACTION WAS CONDUCTED. THE STATEMENT SHALL INCLUDE THE INITIAL REPORT INFORMATION REQUIRED BY SECTION 327.3(C) OF THIS TITLE (RELATING TO NOTIFICATION REQUIREMENTS). THE EXECUTIVE DIRECTOR MAY REQUEST ADDITIONAL INFORMATION. APPROPRIATE RESPONSE ACTIONS AT ANY TIME FOLLOWING THE DISCHARGE OR SPILL INCLUDE USE OF THE TEXAS RISK REDUCTION PROGRAM RULES IN CHAPTER 350 OF THIS TITLE (RELATING TO TEXAS RISK REDUCTION PROGRAM).
(2) A REQUEST FOR AN EXTENSION OF TIME TO COMPLETE THE RESPONSE ACTION, ALONG WITH THE REASONS FOR THE REQUEST. THE REQUEST SHALL ALSO INCLUDE A PROJECTED WORK SCHEDULE OUTLINING THE TIME REQUIRED TO COMPLETE THE RESPONSE ACTION. THE EXECUTIVE DIRECTOR MAY GRANT AN EXTENSION UP TO SIX MONTHS FROM THE DATE THE SPILL OR DISCHARGE WAS REPORTED. UNLESS OTHERWISE NOTIFIED BY THE APPROPRIATE REGIONAL MANAGER OR THE EMERGENCY RESPONSE TEAM, THE CONTRACTOR SHALL PROCEED ACCORDING TO THE TERMS OF THE PROJECTED WORK SCHEDULE.
(3) A STATEMENT THAT THE DISCHARGE OR SPILL RESPONSE ACTION HAS NOT BEEN COMPLETED NOR IS IT EXPECTED TO BE COMPLETED WITHIN THE MAXIMUM ALLOWABLE SIX-MONTH EXTENSION. THE STATEMENT SHALL EXPLAIN WHY COMPLETION OF THE RESPONSE ACTION IS NOT FEASIBLE AND INCLUDE A PROJECTED WORK SCHEDULE OUTLINING THE REMAINING TASKS TO COMPLETE THE RESPONSE ACTION. THIS INFORMATION WILL ALSO SERVE AS NOTIFICATION THAT THE RESPONSE ACTIONS TO THE DISCHARGE OR SPILL WILL BE CONDUCTED UNDER THE TEXAS RISK REDUCTION PROGRAM RULES IN CHAPTER 350 OF THIS TITLE (RELATING TO TEXAS RISK REDUCTION PROGRAM).

ATTACHMENT B – POTENTIAL SOURCES OF CONTAMINATION

The only "pollutants" expected from the work during construction are sediment. Mostly inert materials (i.e., pipe, wood, drywall, concrete, etc.) will be stored or installed on the site. No off-site fill material is expected to be brought onto the site (other than crushed limestone base, asphalt, and concrete). No significant chemicals are planned to be stored or distributed on the site. A portable toilet might be on the site during construction, but no spill is expected from maintaining this toilet. Re-fueling of the vehicles is the only other perceived threat, but short of an accidental spill, no threat should be posed. Trash containers shall be used for the construction debris. The only possible "pollutants" expected after the construction has been completed are: pesticides, fertilizers, automotive fluids, and air conditioning condensate.

ATTACHMENT C – SEQUENCE OF MAJOR ACTIVITIES

- Install erosion controls:	approximately 3-acres
Control measure: Silt Fence	approximately 1-week
- Clear, grub, and rough grade site (for the paving and building pads):	approximately 13.43-acres
Control measure: Silt Fence	approximately 3-weeks
- Install water & WW utilities:	approximately 2-acres
Control measures: Silt Fence & Tri. Filter Dikes	approximately 6-weeks
- Right-of-way Pavement:	approximately 6.0-acres
Control measures: Silt Fence & Tri. Filter Dikes	approx. 9-months
- Building Structures:	approximately 4.5-acres
Control measures: Silt Fence & Tri. Filter Dikes	approx. 18-months (each phase)

(This area intentionally blank)

ATTACHMENT D – TEMPORARY BEST MANAGEMENT PRACTICES (TBMPs)

Silt fence shall be located along the entire down slope grade of this project. No run-off should be able to leave the site without first being filtered by that silt fence. As shown on the Erosion and Sedimentation Controls Plan in the construction set, a stabilized construction entrance will be used to facilitate mud on the wheels of vehicles being removed on site. A concrete washout area shall be provided onsite to prevent or reduce the discharge of pollutants from concrete waste.

Any pollutants are expected to be either soil or attached to soil (unless it is trash which will float) and with the silt fence described, that soil (or any floating trash) is expected to be caught and held until removal. Notes are included on the plans (in relation to the Storm Water Pollution Prevention Plan, SW3P) that specify the minimum maintenance required for silt fence, including cleaning of soil and debris.

There are no sensitive features known to exist near the site; however, run-off will still be released after either filtering through the silt fence or infiltrating through the soil.

ATTACHMENT E – REQUEST TO TEMPORARILY SEAL A FEATURE

This subject is not applicable for this project.

ATTACHMENT F – STRUCTURAL PRACTICES

The drainage area to each work area will be relatively small; therefore, the flows are not diverted around it. Rather, all the run-off is caught and filtered through a silt fence. See the discussion under Temporary BMPs and Measures above.

ATTACHMENT G – DRAINAGE AREA MAP

See the attached construction plan set (sheets 33-36).

ATTACHMENT H – TEMPORARY SEDIMENT POND(S) PLAN & CALCS

This subject is not applicable for this project.

ATTACHMENT I – INSPECTION AND MAINTENANCE FOR BMPs

The following are the basic maintenance requirements of the temporary BMPs:

- Stabilized Construction Entrance – removal of sediment and periodically adding stone.
- Silt Fence – remove sediment in excess of 6-inches and replaced damaged fabric.
- Triangular Sediment Filter Dikes – remove any sediment after rainfall and realign dikes, as needed, to prevent gaps.

Each of the temporary BMP's specific maintenance requirements (from TCEQ's rules in RG-348) are included in the next few pages (after these attachments). Also, the storm water pollution prevention plan notes are included on the General Notes sheet and the Erosion and Sedimentation Controls (ESC) details (stabilized construction entrance, silt fence and concrete washout area) in the construction plan set for the inspection plan of each of these temporary BMPs and measures.

ATTACHMENT J – SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

Bare soils should be seeded or otherwise stabilized within 14 calendar days after final grading or where construction activity has temporarily ceased for more than 21 days. The work at this site is relatively small, will happen quickly, and will occur in two (2) phases. The time from the beginning of grading to stabilization is not expected to be more than 11-months; therefore, there is no schedule, other than to complete construction as quickly as possible and then to re-vegetate the site as quickly as possible, in accordance with the re-vegetation notes on the construction plans, which are copied below (on the next page):

PERMANENT EROSION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW:

A. UNLESS DIRECTED OTHERWISE BY THE OWNER, A MINIMUM OF FOUR INCHES OF TOPSOIL SHALL BE PLACED IN ALL DRAINAGE CHANNELS (EXCEPT ROCK) AND 1-INCH OF TOPSOIL IN OTHER AREAS.

B. THE SEEDING FOR PERMANENT EROSION CONTROL SHALL BE APPLIED OVER AREAS DISTURBED BY CONSTRUCTION AS FOLLOWS:

BROADCAST SEEDING:

1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH A COMBINATION OF 2 POUNDS PER 1000-SF OF UNHULLED BERMUDA AND 7 POUNDS PER 1000 SF OF WINTER RYE WITH A PURITY OF 95% WITH 90% GERMINATION.
2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 2 POUNDS PER 1000 SF WITH A PURITY OF 95% WITH 85% GERMINATION.
3. OTHER REQUIREMENTS:
   A. FERTILIZER SHALL BE A PELLETED OR GRANULAR SLOW RELEASE WITH AN ANALYSIS OF 15-15-15 TO BE APPLIED ONCE AT PLANTING AND ONCE DURING THE PERIOD OF ESTABLISHMENT AT A RATE OF 1 POUND PER 1000-SF.
   B. MULCH TYPE USED SHALL BE HAY, STRAW OR MULCH APPLIED AT A RATE OF 45 POUNDS PER 1000-SF.

HYDRAULIC SEEDING:

1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH A COMBINATION OF 1 POUND PER 1000-SF OF UNHULLED BERMUDA AND 7 POUNDS PER 1000-SF OF WINTER RYE WITH A PURITY OF 95% WITH 90% GERMINATION.

2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 1 POUND PER 1000 SF WITH A PURITY OF 95% WITH 85% GERMINATION.

3. OTHER REQUIREMENTS:
   A. FERTILIZER SHALL BE A WATER-SOLUBLE FERTILIZER WITH AN ANALYSIS OF 15-15-15 AT A RATE OF 1.5 POUNDS PER 1000 SF.
   B. MULCH TYPE USED SHALL BE HAY, STRAW OR MULCH APPLIED AT A RATE OF 45 POUNDS PER 1000 SF, WITH SOIL TACKIFIER AT A RATE OF 1.4 POUNDS PER 1000 SF.
   C. THE PLANTED AREA SHALL BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF SIX INCHES. THE IRRIGATION SHALL OCCUR AT TEN-DAY INTERVALS DURING THE FIRST TWO MONTHS. RAINFALL OCCURRENCES OF « INCH OR MORE SHALL POSTPONE THE WATERING SCHEDULE FOR ONE WEEK.
   D. RESTORATION SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1« INCHES HIGH WITH 95% COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN 16 SQUARE FEET EXIST.

1.4.2 Temporary Construction Entrance/Exit

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

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

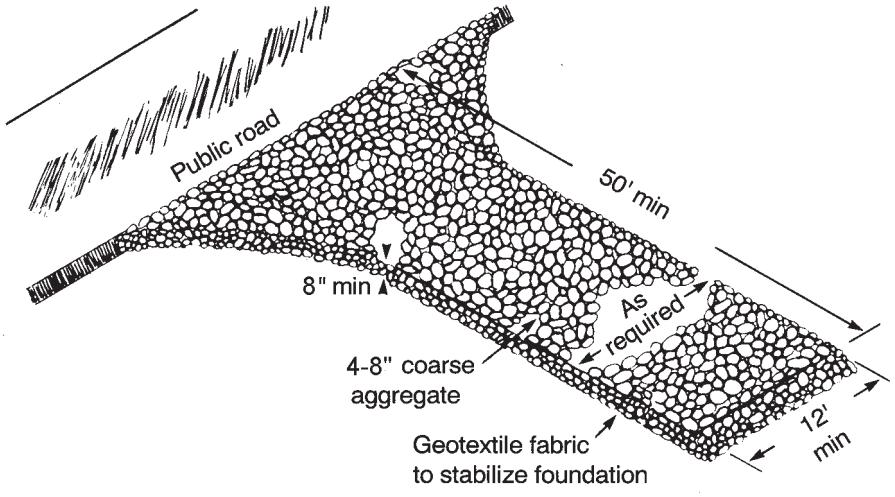


Figure 1-24 Schematic of Temporary Construction Entrance/Exit (after NC, 1993)

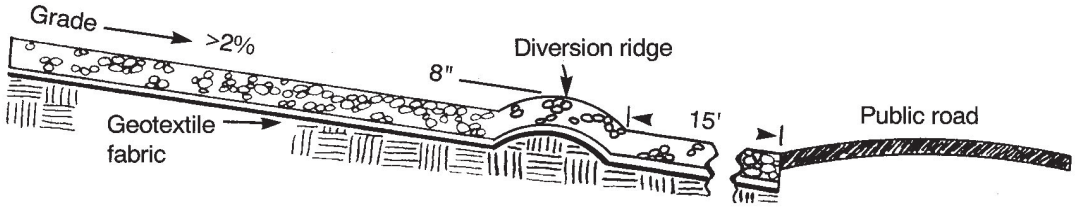


Figure 1-25 Cross-section of a Construction Entrance/Exit (NC, 1993)

Materials:

(1) The aggregate should consist of 4 to 8 inch washed stone over a stable foundation as specified in the plan.

(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) If a washing facility is required, a level area with a minimum of 4 inch diameter washed stone or commercial rack should be included in the plans. Divert wastewater to a sediment trap or basin.

Installation: (North Carolina, 1993)

(1) Avoid curves on public roads and steep slopes. Remove vegetation and other objectionable material from the foundation area. Grade crown foundation for positive drainage.

(2) The minimum width of the entrance/exit should be 12 feet or the full width of exit roadway, whichever is greater.

(3) The construction entrance should be at least 50 feet long.

(4) If the slope toward the road exceeds 2%, construct a ridge, 6 to 8 inches high with 3:1 (H:V) side slopes, across the foundation approximately 15 feet from the entrance to divert runoff away from the public road.

(5) Place geotextile fabric and grade foundation to improve stability, especially where wet conditions are anticipated.

(6) Place stone to dimensions and grade shown on plans. Leave surface smooth and slope for drainage.

(7) Divert all surface runoff and drainage from the stone pad to a sediment trap or basin.

(8) Install pipe under pad as needed to maintain proper public road drainage.

Common trouble points

(1) Inadequate runoff control – sediment washes onto public road.

(2) Stone too small or geotextile fabric absent, results in muddy condition as stone is pressed into soil.

(3) Pad too short for heavy construction traffic – extend pad beyond the minimum 50 foot length as necessary.

(4) Pad not flared sufficiently at road surface, results in mud being tracked on to road and possible damage to road edge.

(5) Unstable foundation – use geotextile fabric under pad and/or improve foundation drainage.

Inspection and Maintenance Guidelines:

(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.

1.4.3 Silt Fence

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

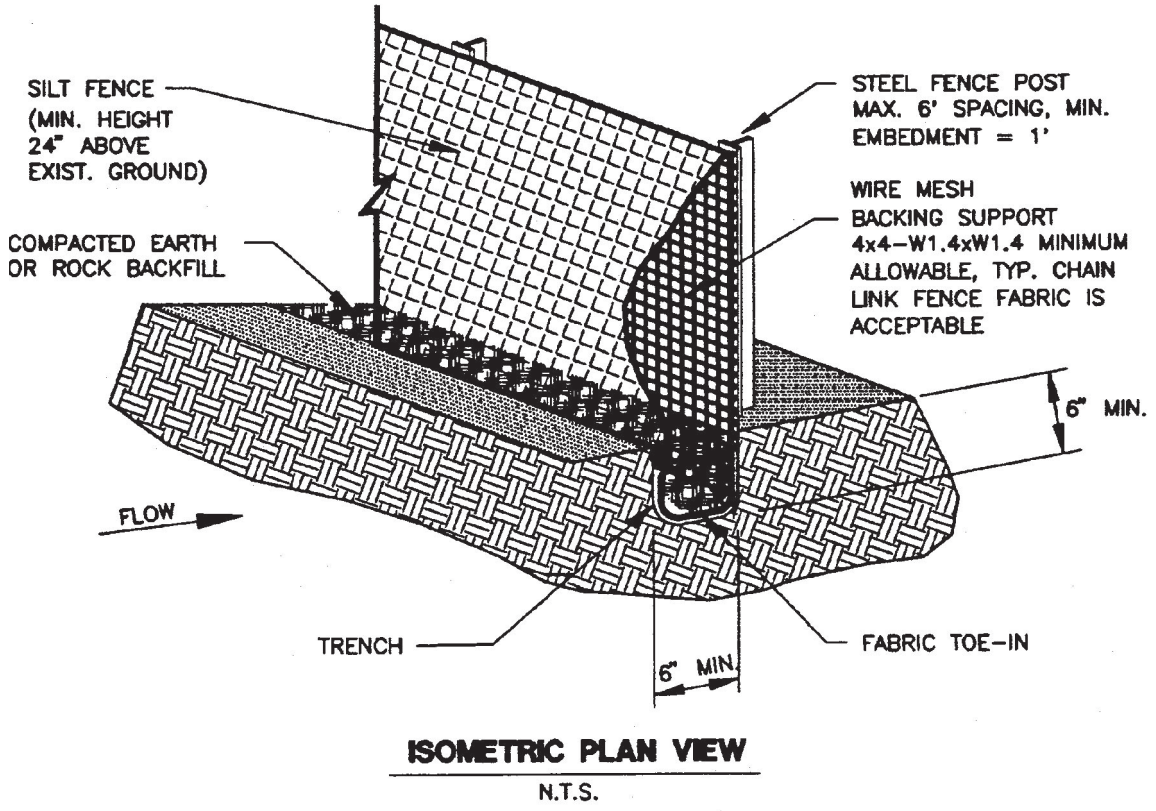


Figure 1-26 Schematic of a Silt Fence Installation (NCTCOG, 1993b)

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

Silt fencing within the site may be temporarily moved during the day to allow construction activity provided it is replaced and properly anchored to the ground at the end of the day. Silt fences on the perimeter of the site or around drainage ways should not be moved at any time.

Materials:

(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 gauge minimum.

Installation:

(1) 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 l-foot deep and spaced not more than 8 feet on center. Where water concentrates, the maximum spacing should be 6 feet.

(2) 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.

(3) 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.

(4) 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.

(5) 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.

(6) Silt fence should be removed when the site is completely stabilized so as not to block or impede storm flow or drainage.

Common Trouble Points:

(1) Fence not installed along the contour causing water to concentrate and flow over the fence.

(2) Fabric not seated securely to ground (runoff passing under fence)

(3) Fence not installed perpendicular to flow line (runoff escaping around sides)

(4) Fence treating too large an area, or excessive channel flow (runoff overtops or collapses fence)

Inspection and Maintenance Guidelines:

(1) Inspect all fencing weekly, and after any rainfall.

(2) Remove sediment when buildup reaches 6 inches.

(3) Replace any torn fabric or install a second line of fencing parallel to the torn section.

(4) Replace or repair any sections crushed or collapsed in the course of construction activity. If a section of fence is obstructing vehicular access, consider relocating it to a spot where it will provide equal protection, but will not obstruct vehicles. A triangular filter dike may be preferable to a silt fence at common vehicle access points.

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

1.4.4 Triangular Sediment Filter Dikes

The purpose of a triangular sediment filter dike (Figure 1-27) is to intercept and detain water-borne sediment from unprotected areas of limited extent. The triangular sediment filter dike is used where there is no concentration of water in a channel or other drainage way above the barrier and the contributing drainage area is less than one acre. If the uphill slope above the dike exceeds 10%, the length of the slope above the dike should be less than 50 feet. If concentrated flow occurs after installation, corrective action should be taken such as placing rock berm in the areas of concentrated flow.

This measure is effective on paved areas where installation of silt fence is not possible or where vehicle access must be maintained. The advantage of these controls is the ease with which they can be moved to allow vehicle traffic, then reinstalled to maintain sediment control.

Materials:

(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) The dike structure should be 6 gauge 6” x 6” wire mesh folded into triangular form being eighteen (18) inches on each side.

Installation:

(1) As shown in the diagram (Figure 1-27), the frame should be constructed of 6” x 6”, 6 gauge welded wire mesh, 18 inches per side, and wrapped with geotextile fabric the same composition as that used for silt fences.

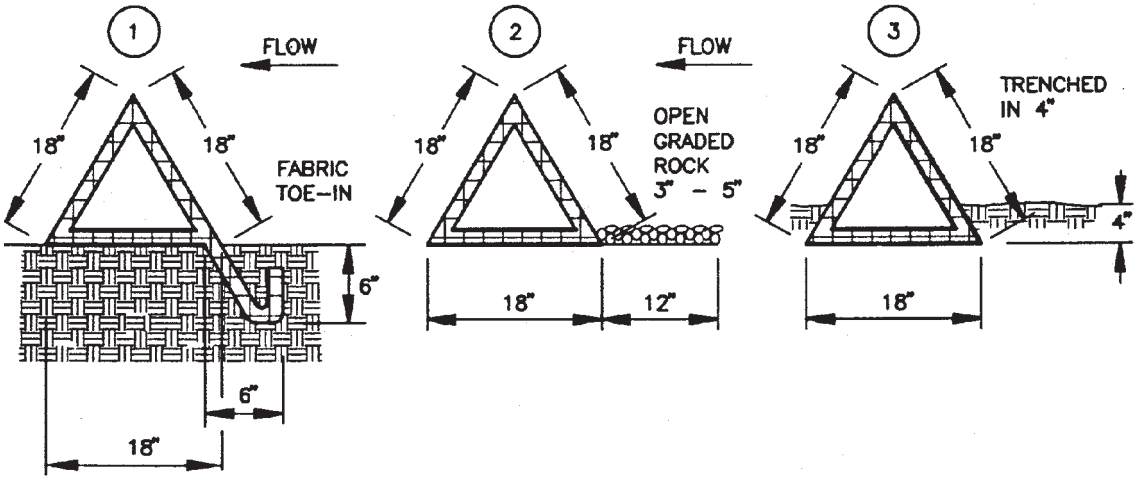
(2) Filter fabric should lap over ends six (6) inches to cover dike to dike junction; each junction should be secured by shoat rings.

(3) Position dike parallel to the contours, with the end of each section closely abutting the adjacent sections.

(4) There are several options for fastening the filter dike to the ground as shown in Figure 1-27. The fabric skirt may be toed-in with 6 inches of compacted material, or 12 inches of the fabric skirt should extend uphill and be secured with a minimum of 3 inches of open graded rock, or with staples or nails. If these two options are not feasible the dike structure may be trenched in 4 inches.

(5) Triangular sediment filter dikes should be installed across exposed slopes during construction with ends of the dike tied into existing grades to prevent failure and should intercept no more than one acre of runoff.

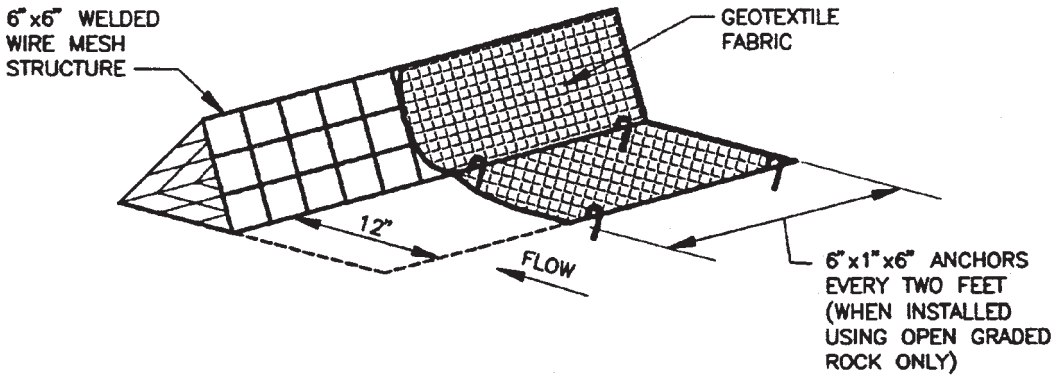
(6) When moved to allow vehicular access, the dikes should be reinstalled as soon as possible, but always at the end of the workday.



CROSS SECTION OF INSTALLATION OPTIONS

N.T.S.

1. TOE-IN 6" MIN
2. WEIGHTED W/ 3" - 5" OPEN GRADED ROCK
3. TRENCHED IN 4"



ISOMETRIC PLAN VIEW

N.T.S.

Figure 1-27 Schematic of a Triangular Filter Dike (NCTCOG, 1993)

Common Trouble Points:

(1) Fabric skirt missing, too short, or not securely anchored (flows passing under dike).

(2) Gap between adjacent dikes (runoff passing between dikes).

(3) Dike not placed parallel to contour (runoff flowing around dike).

Inspection and Maintenance Guidelines:

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

(2) Inspect and realign dikes as needed to prevent gaps between sections.

(3) Accumulated silt should be removed after each rainfall, and disposed of in a manner which will not cause additional siltation.

(4) After the site is completely stabilized, the dikes and any remaining silt should be removed. Silt should be disposed of in a manner that will not contribute to additional siltation.

1.4.18 Concrete Washout Areas

The purpose of concrete washout areas is to prevent or reduce the discharge of pollutants to stormwater from concrete waste by conducting washout offsite, performing onsite washout in a designated area, and training employees and subcontractors.

The following steps will help reduce stormwater pollution from concrete wastes:

- Incorporate requirements for concrete waste management into material supplier and subcontractor agreements.
- Avoid mixing excess amounts of fresh concrete.
- Perform washout of concrete trucks in designated areas only.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not allow excess concrete to be dumped onsite, except in designated areas.

For onsite washout:

- Locate washout area at least 50 feet from sensitive features, storm drains, open ditches, or water bodies. Do not allow runoff from this area by constructing a temporary pit or bermed area large enough for liquid and solid waste.
- Wash out wastes into the temporary pit where the concrete can set, be broken up, and then disposed properly.

Below grade concrete washout facilities are typical. These consist of a lined excavation sufficiently large to hold expected volume of washout material. Above grade facilities are used if excavation is not practical. Temporary concrete washout facility (type above grade) should be constructed as shown on the details at the end of this section, with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. Plastic lining material should be a minimum of 10 mil in polyethylene sheeting and should be free of holes, tears, or other defects that compromise the impermeability of the material.

When temporary concrete washout facilities are no longer required for the work, the hardened concrete should be removed and disposed of. Materials used to construct temporary concrete washout facilities should be removed from the site of the work and disposed of. Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities should be backfilled and repaired.

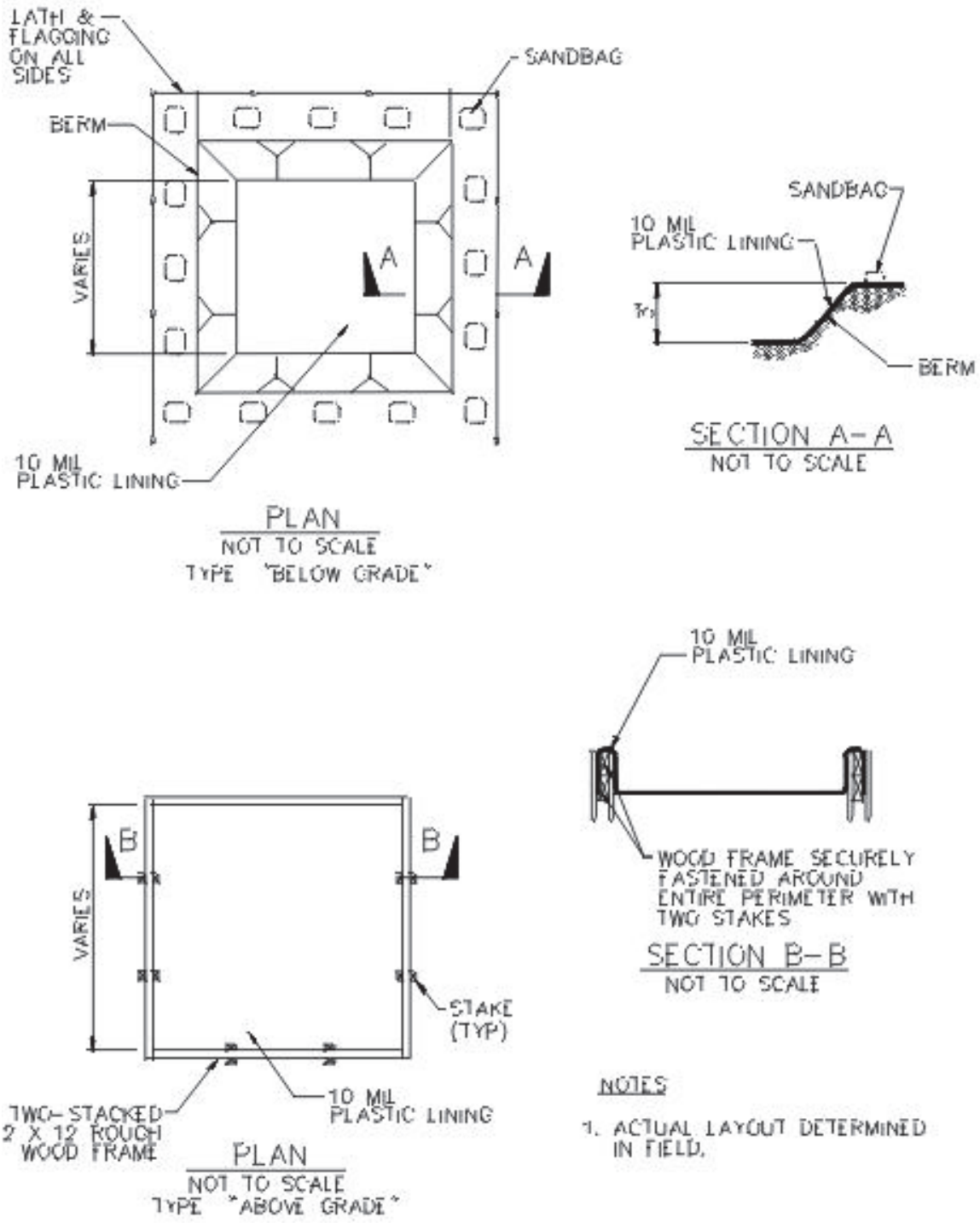


Figure 1-43 Schematics of Concrete Washout Areas

Inspection & Maintenance (Attachment I continuation)

Project Name: AAA FM 3405

SWPPP Contact: _____

BEST MANAGEMENT PRACTICE
INSPECTION AND MAINTENANCE REPORT FORM

SILT FENCE

Name of Inspector: _____ Inspection Date: _____
Days Since Last Rainfall: _____ Amount of Last Rainfall: _____inches

Where is the Silt Fence Located?	Is the Bottom of the Fabric Still Buried?	Is the Fabric Torn or Sagging?	Are the Posts Tipping Over?	How Deep is the Sediment?

MAINTENANCE REQUIRED FOR SILT FENCE: _____

_____

_____

_____

_____

_____

_____

TO BE PERFORMED BY: _____ **ON OR BEFORE:** _____

Project Name: AAA FM 3405

SWPPP Contact: _____

BEST MANAGEMENT PRACTICE
INSPECTION AND MAINTENANCE REPORT FORM

STABILIZED CONSTRUCTION ENTRANCE

Name of Inspector: _____ Inspection Date: _____
Days Since Last Rainfall: _____ Amount of Last Rainfall: ____inches

Location	Is Sediment Being Tracked onto Road?	Is the Entry Surface Clean or Sediment Filled?	Does All Traffic Use the Entrance?

MAINTENANCE REQUIRED FOR STABILIZED CONSTRUCTION ENTRANCES: _____

_____

_____

_____

_____

_____

_____

_____

_____

TO BE PERFORMED BY: _____ **ON OR BEFORE:** _____

Project Name: AAA FM 3405

SWPPP Contact: _____

BEST MANAGEMENT PRACTICE
INSPECTION AND MAINTENANCE REPORT FORM
(Completed weekly or as soon as possible after a significant storm event)

Name of Inspector: _____ Inspection Date: _____
Days Since Last Rainfall: _____
Amount of Last Rainfall: _____

STABILIZATION MEASURES					
Area or Drainage Areas*	**Date Since Last Disturbance**	**Date of Next Disturbance**	**Stabilized (Yes or No)**	**Control Measures Implemented**	**Current Conditions of Control Measures**

* See site map for drainage areas. Site may include borrow sources, haul roads, contractor's yard, stockpiles, etc.
** Areas that will be exposed more than 21 days must be stabilized within 14 days

STABILIZATION REQUIRED: _____

_____

_____

_____

TO BE PERFORMED BY: _____ **ON OR BEFORE:** _____

Control Measure Codes		**Condition Codes**
1. Temporary Seeding	14. Rock Bed at Construction Exit	U – Upgrade Needed
2. Permanent Plant, Sod, or Seed	15. Timber Mat at Construction Entrance	R – Replacement Needed
3. Mulch	16. Channel Liner	M – Maintenance Needed
4. Soil Retention Blanket	17. Sediment Trap	C – Cleaning Needed
5. Buffer Zone	18. Sediment Basin	I – Increase Measures
6. Preserve Natural Resources	19. Storm Inlet Sediment Trap	S – Stable (no action required)
7. Silt Fence	20. Stone Outlet Structure	
8. Hay Bales	21. Curb and Gutter	
9. Rock Berm	22. Storm Sewers	
10. Diversion Dike	23. Velocity Control Devices	
11. Diversion Swale	24. Excess Dirt Removed From Road	
12. Pipe Slope Drain	25. Haul Roads Dampened for Dust	
13. Paved Flume	26. Cleanup of Possible Contaminants	

Project Name: AAA FM 3405

SWPPP Contact: _____

BEST MANAGEMENT PRACTICE
INSPECTION AND MAINTENANCE REPORT FORM

CONSTRUCTION ACTIVITIES LOG

Name of Inspector	Date	Major Grading Activities	Temporary Suspension of Construction Activities	Permanent Suspension of Construction Activities	Initiation of Stabilization Measures	Comments

Date	Additional Changes

Corrective Action Log

Project Name: AAA FM 3405

SWPPP Contact: _____

Inspection Date	Inspector Name(s)	Description of BMP Deficiency	Corrective Action Needed (including planned date/responsible person)	Date Action Taken/Responsible person

TCEQ Office Use Only
Permit No:
CN:
RN:

Notice of Intent (NOI) for an Authorization for Stormwater Discharges Associated with Construction Activity under TPDES General Permit TXR150000

IMPORTANT INFORMATION

Please read and use the General Information and Instructions prior to filling out each question in the NOI form.

Use the NOI Checklist to ensure all required information is completed correctly. **Incomplete applications delay approval or result in automatic denial.**

Once processed your permit authorization can be viewed by entering the following link into your internet browser: http://www2.tceq.texas.gov/wq_dpa/index.cfm or you can contact TCEQ Stormwater Processing Center at 512-239-3700.

ePERMITS

Effective September 1, 2018, this paper form must be submitted to TCEQ with a completed electronic reporting waiver form (TCEQ-20754).

To submit an NOI electronically, enter the following web address into your internet browser and follow the instructions: https://www3.tceq.texas.gov/steers/index.cfm

APPLICATION FEE AND PAYMENT

The application fee for submitting a paper NOI is $325. The application fee for electronic submittal of a NOI through the TCEQ ePermits system (STEERS) is $225.

Payment of the application fee can be submitted by mail or through the TCEQ ePay system. The payment and the NOI must be mailed to separate addresses. To access the TCEQ ePay system enter the following web address into your internet browser: http://www.tceq.texas.gov/epay.

Provide your payment information for verification of payment:

- If payment was mailed to TCEQ, provide the following:
  - Check/Money Order Number: Click here to enter text
  - Name printed on Check: Click here to enter text
- If payment was made via ePay, provide the following:
  - Voucher Number: Click here to enter text
  - A copy of the payment voucher is attached to this paper NOI form.

RENEWAL (This portion of the NOI is not applicable after June 3, 2018)

Is this NOI for a renewal of an existing authorization? ☐ Yes ☒ No

If Yes, provide the authorization number here: TXR15 Click here to enter text

NOTE: If an authorization number is not provided, a new number will be assigned.

SECTION 1. OPERATOR (APPLICANT)

a) If the applicant is currently a customer with TCEQ, what is the Customer Number (CN) issued to this entity? CN Click here to enter text

(Refer to Section 1.a) of the Instructions)

b) What is the Legal Name of the entity (applicant) applying for this permit? (The legal name must be spelled exactly as filed with the Texas Secretary of State, County, or in the legal document forming the entity.)

A-A-A Storage Circle Dr, LLC

c) What is the contact information for the Operator (Responsible Authority)?

Prefix (Mr. Ms. Miss): Mr.

First and Last Name: John Muhich Suffix: Click here to enter text

Title: President Credentials: Click here to enter text

Phone Number: (512) 657-6789 Fax Number: Click here to enter text

E-mail: storserv@austin.rr.com

Mailing Address: 4203 Spinnaker Cove

City, State, and Zip Code: Austin, Texas 78731

Mailing Information if outside USA:

Territory: Click here to enter text

Country Code: Click here to enter text Postal Code: Click here to enter text

d) Indicate the type of customer:

☐ Individual
☐ Limited Partnership
☒ General Partnership
☐ Trust
☐ Sole Proprietorship (D.B.A.)
☐ Corporation
☐ Estate
☐ Federal Government
☐ County Government
☐ State Government
☐ City Government
☐ Other Government
☐ Other: Click here to enter text

e) Is the applicant an independent operator? ☒ Yes ☐ No

(If a governmental entity, a subsidiary, or part of a larger corporation, check No.)

f) Number of Employees. Select the range applicable to your company.

☒ 0-20
☐ 21-100
☐ 101-250
☐ 251-500
☐ 501 or higher

g) Customer Business Tax and Filing Numbers: (**Required** for Corporations and Limited Partnerships. **Not Required** for Individuals, Government, or Sole Proprietors.)

State Franchise Tax ID Number: Click here to enter text.

Federal Tax ID: 83-0896097

Texas Secretary of State Charter (filing) Number: 803043683

DUNS Number (if known): Click here to enter text.

SECTION 2. APPLICATION CONTACT

Is the application contact the same as the applicant identified above?

☒ Yes, go to Section 3

☐ No, complete this section

Prefix (Mr. Ms. Miss): Click here to enter text.

First and Last Name: Click here to enter text. Suffix: Click here to enter text.

Title: Click here to enter text. Credential: Click here to enter text.

Organization Name: Click here to enter text.

Phone Number: Click here to enter text. Fax Number: Click here to enter text.

E-mail: Click here to enter text.

Mailing Address: Click here to enter text.

Internal Routing (Mail Code, Etc.): Click here to enter text.

City, State, and Zip Code: Click here to enter text.

Mailing information if outside USA:

Territory: Click here to enter text.

Country Code: Click here to enter text. Postal Code: Click here to enter text.

SECTION 3. REGULATED ENTITY (RE) INFORMATION ON PROJECT OR SITE

a) If this is an existing permitted site, what is the Regulated Entity Number (RN) issued to this site? RN Click here to enter text.

(Refer to Section 3.a) of the Instructions)

b) Name of project or site (the name known by the community where it's located): AAA Storage Circle Drive

c) In your own words, briefly describe the type of construction occurring at the regulated site (residential, industrial, commercial, or other): The addition of a mixed use facility consisting of self-storage buildings, an office and residence for an onsite manager, warehouses, associated parking and utilities, as well as the storm & water quality facilities.

d) County or Counties (if located in more than one): Travis

e) Latitude: 30.24222 N Longitude: 97.93819 W

f) Site Address/Location

If the site has a physical address such as 12100 Park 35 Circle, Austin, TX 78753, complete *Section A*.

If the site does not have a physical address, provide a location description in *Section B*. Example: located on the north side of FM 123, 2 miles west of the intersection of FM 123 and Highway 1.

Section A:

Street Number and Name: 10505 Circle Drive

City, State, and Zip Code: Austin, Texas 78736

Section B:

Location Description: Click here to enter text

City (or city nearest to) where the site is located: Click here to enter text

Zip Code where the site is located: Click here to enter text

SECTION 4. GENERAL CHARACTERISTICS

a) Is the project or site located on Indian Country Lands?

☐ Yes, do not submit this form. You must obtain authorization through EPA Region 6.

☒ No

b) Is your construction activity associated with a facility that, when completed, would be associated with the exploration, development, or production of oil or gas or geothermal resources?

☐ Yes. Note: The construction stormwater runoff may be under jurisdiction of the Railroad Commission of Texas and may need to obtain authorization through EPA Region 6.

☒ No

c) What is the Primary Standard Industrial Classification (SIC) Code that best describes the construction activity being conducted at the site? **4225**

d) What is the Secondary SIC Code(s), if applicable? 1521

e) What is the total number of acres to be disturbed? 9.7

f) Is the project part of a larger common plan of development or sale?

☐ Yes

☒ No. The total number of acres disturbed, provided in e) above, must be 5 or more. If the total number of acres disturbed is less than 5, do not submit this form. See the requirements in the general permit for small construction sites.

g) What is the estimated start date of the project? 04/02/2020

h) What is the estimated end date of the project? 10/05/2021

i) Will concrete truck washout be performed at the site? ☒ Yes ☐ No

j) What is the name of the first water body(ies) to receive the stormwater runoff or potential runoff from the site? Slaughter Creek

k) What is the segment number(s) of the classified water body(ies) that the discharge will eventually reach? 1427A

l) Is the discharge into a Municipal Separate Storm Sewer System (MS4)?

☐ Yes ☒ No

If Yes, provide the name of the MS4 operator: Click here to enter text.

Note: The general permit requires you to send a copy of this NOI form to the MS4 operator.

m) Is the discharge or potential discharge from the site within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer, as defined in 30 TAC Chapter 213?

☒ Yes, complete the certification below.

☐ No, go to Section 5

I certify that the copy of the TCEQ-approved Plan required by the Edwards Aquifer Rule (30 TAC Chapter 213) that is included or referenced in the Stormwater Pollution Prevention Plan will be implemented. ☒ Yes

SECTION 5. NOI CERTIFICATION

a) I certify that I have obtained a copy and understand the terms and conditions of the Construction General Permit (TXR150000). ☒ Yes

b) I certify that the full legal name of the entity applying for this permit has been provided and is legally authorized to do business in Texas. ☒ Yes

c) I understand that a Notice of Termination (NOT) must be submitted when this authorization is no longer needed. ☒ Yes

d) I certify that a Stormwater Pollution Prevention Plan has been developed, will be implemented prior to construction and to the best of my knowledge and belief is compliant with any applicable local sediment and erosion control plans, as required in the Construction General Permit (TXR150000). ☒ Yes

Note: For multiple operators who prepare a shared SWP3, the confirmation of an operator may be limited to its obligations under the SWP3, provided all obligations are confirmed by at least one operator.

SECTION 6. APPLICANT CERTIFICATION SIGNATURE

Operator Signatory Name: Click here to enter text

Operator Signatory Title: Click here to enter text

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

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

Signature (use blue ink): _____Date: _____

NOTICE OF INTENT CHECKLIST (TXR150000)

Did you complete everything? Use this checklist to be sure!

Are you ready to mail your form to TCEQ? Go to the General Information Section of the Instructions for mailing addresses.

Confirm each item (or applicable item) in this form is complete. This checklist is for use by the applicant to ensure a complete application is being submitted. **Missing information may result in denial of coverage under the general permit.** (See NOI process description in the General Information and Instructions.)

APPLICATION FEE

If paying by check:

☐ Check was mailed **separately** to the TCEQs Cashier's Office. (See Instructions for Cashier's address and Application address.)

☐ Check number and name on check is provided in this application.

If using ePay:

☐ The voucher number is provided in this application and a copy of the voucher is attached.

RENEWAL

☐ If this application is for renewal of an existing authorization, the authorization number is provided.

OPERATOR INFORMATION

☐ Customer Number (CN) issued by TCEQ Central Registry

☐ Legal name as filed to do business in Texas. (Call TX SOS 512-463-5555 to verify.)

☐ Name and title of responsible authority signing the application.

☐ Phone number and e-mail address

☐ Mailing address is complete & verifiable with USPS. www.usps.com

☐ Type of operator (entity type). Is applicant an independent operator?

☐ Number of employees.

☐ For corporations or limited partnerships – Tax ID and SOS filing numbers.

☐ Application contact and address is complete & verifiable with USPS. http://www.usps.com

REGULATED ENTITY (RE) INFORMATION ON PROJECT OR SITE

☐ Regulated Entity Number (RN) (if site is already regulated by TCEQ)

☐ Site/project name and construction activity description

☐ County

☐ Latitude and longitude http://www.tceq.texas.gov/gis/sqmaview.html

☐ Site Address/Location. Do not use a rural route or post office box.

GENERAL CHARACTERISTICS

☐ Indian Country Lands –the facility is not on Indian Country Lands.

☐ Construction activity related to facility associated to oil, gas, or geothermal resources

☐ Primary SIC Code that best describes the construction activity being conducted at the site. www.osha.gov/oshstats/sicser.html

☐ Estimated starting and ending dates of the project.

☐ Confirmation of concrete truck washout.

☐ Acres disturbed is provided and qualifies for coverage through a NOI.

☐ Common plan of development or sale.

☐ Receiving water body or water bodies.

☐ Segment number or numbers.

☐ MS4 operator.

☐ Edwards Aquifer rule.

CERTIFICATION

☐ Certification statements have been checked indicating Yes.

☐ Signature meets 30 Texas Administrative Code (TAC) §305.44 and is original.

Instructions for Notice of Intent (NOI) for Stormwater Discharges Associated with Construction Activity under TPDES General Permit (TXR150000)

GENERAL INFORMATION

Where to Send the Notice of Intent (NOI):

By Regular Mail:
TCEQ
Stormwater Processing Center (MC228)
P.O. Box 13087
Austin, Texas 78711-3087

By Overnight or Express Mail:
TCEQ
Stormwater Processing Center (MC228)
12100 Park 35 Circle
Austin, TX

Application Fee:

The application fee of $325 is required to be paid at the time the NOI is submitted. Failure to submit payment at the time the application is filed will cause delays in acknowledgment or denial of coverage under the general permit. Payment of the fee may be made by check or money order, payable to TCEQ, or through EPAY (electronic payment through the web).

Mailed Payments:

Use the attached General Permit Payment Submittal Form. The application fee is submitted to a different address than the NOI. Read the General Permit Payment Submittal Form for further instructions, including the address to send the payment.

ePAY Electronic Payment: http://www.tceq.texas.gov/epay

When making the payment you must select Water Quality, and then select the fee category "General Permit Construction Storm Water Discharge NOI Application". You must include a copy of the payment voucher with your NOI. Your NOI will not be considered complete without the payment voucher.

TCEQ Contact List:

Application – status and form questions:	512-239-3700, swpermit@tceq.texas.gov
Technical questions:	512-239-4671, swgp@tceq.texas.gov
Environmental Law Division:	512-239-0600
Records Management - obtain copies of forms:	512-239-0900
Reports from databases (as available):	512-239-DATA (3282)
Cashier's office:	512-239-0357 or 512-239-0187

Notice of Intent Process:

When your NOI is received by the program, the form will be processed as follows:

- **Administrative Review**: Each item on the form will be reviewed for a complete response. In addition, the operator's legal name must be verified with Texas Secretary of State as valid and active (if applicable). The address(es) on the form must be verified with the US Postal service as receiving regular mail delivery. Do not give an overnight/express mailing address.
- **Notice of Deficiency:** If an item is incomplete or not verifiable as indicated

above, a notice of deficiency (NOD) will be mailed to the operator. The operator will have 30 days to respond to the NOD. The response will be reviewed for completeness.

- **Acknowledgment of Coverage:** An Acknowledgment Certificate will be mailed to the operator. This certificate acknowledges coverage under the general permit.

  or

  Denial of Coverage: If the operator fails to respond to the NOD or the response is inadequate, coverage under the general permit may be denied. If coverage is denied, the operator will be notified.

General Permit (Your Permit)

For NOIs submitted **electronically** through ePermits, provisional coverage under the general permit begins immediately following confirmation of receipt of the NOI form by the TCEQ.

For **paper** NOIs, provisional coverage under the general permit begins **7 days after a completed NOI is postmarked for delivery** to the TCEQ.

You should have a copy of your general permit when submitting your application. You may view and print your permit for which you are seeking coverage, on the TCEQ web site http://www.tceq.texas.gov. Search using keyword TXR150000.

Change in Operator

An authorization under the general permit is not transferable. If the operator of the regulated project or site changes, the present permittee must submit a Notice of Termination and the new operator must submit a Notice of Intent. The NOT and NOI must be submitted no later than 10 days prior to the change in Operator status.

TCEQ Central Registry Core Data Form

The Core Data Form has been incorporated into this form. Do not send a Core Data Form to TCEQ. After final acknowledgment of coverage under the general permit, the program will assign a Customer Number and Regulated Entity Number, if one has not already been assigned to this customer or site.

For existing customers and sites, you can find the Customer Number and Regulated Entity Number by entering the following web address into your internet browser: http://www15.tceq.texas.gov/crpub/ or you can contact the TCEQ Stormwater Processing Center at 512-239-3700 for assistance. On the website, you can search by your permit number, the Regulated Entity (RN) number, or the Customer Number (CN). If you do not know these numbers, you can select “Advanced Search” to search by permittee name, site address, etc.

The Customer (Permittee) is responsible for providing consistent information to the TCEQ, and for updating all CN and RN data for all authorizations as changes occur. For this permit, a Notice of Change form must be submitted to the program area.

INSTRUCTIONS FOR FILLING OUT THE NOI FORM

Renewal of General Permit. Dischargers holding active authorizations under the expired General Permit are required to submit a NOI to continue coverage. The existing permit

number is required. If the permit number is not provided or has been terminated, expired, or denied, a new permit number will be issued.

Section 1. OPERATOR (APPLICANT)

a) Customer Number (CN)

TCEQ's Central Registry will assign each customer a number that begins with CN, followed by nine digits. **This is not a permit number, registration number, or license number.**

If the applicant is an existing TCEQ customer, the Customer Number is available at the following website: http://www15.tceq.texas.gov/crpub/. If the applicant is not an existing TCEQ customer, leave the space for CN blank.

b) Legal Name of Applicant

Provide the current legal name of the applicant. The name must be provided exactly as filed with the Texas Secretary of State (SOS), or on other legal documents forming the entity, as filed in the county. You may contact the SOS at 512-463-5555, for more information related to filing in Texas. If filed in the county, provide a copy of the legal documents showing the legal name.

c) Contact Information for the Applicant (Responsible Authority)

Provide information for the person signing the application in the Certification section. This person is also referred to as the Responsible Authority.

Provide a complete mailing address for receiving mail from the TCEQ. The mailing address must be recognized by the US Postal Service. You may verify the address on the following website: https://tools.usps.com/go/ZipLookupAction!input.action.

The phone number should provide contact to the applicant.

The fax number and e-mail address are optional and should correspond to the applicant.

d) Type of Customer (Entity Type)

Check only one box that identifies the type of entity. Use the descriptions below to identify the appropriate entity type. Note that the selected entity type also indicates the name that must be provided as an applicant for an authorization.

Individual

An individual is a customer who has not established a business, but conducts an activity that needs to be regulated by the TCEQ.

Partnership

A customer that is established as a partnership as defined by the Texas Secretary of State Office (TX SOS). If the customer is a 'General Partnership' or 'Joint Venture' filed in the county (not filed with TX SOS), the legal name of each partner forming the 'General Partnership' or 'Joint Venture' must be provided. Each 'legal entity' must apply as a co-applicant.

Trust or Estate

A trust and an estate are fiduciary relationships governing the trustee/executor with respect to the trust/estate property.

Sole Proprietorship (DBA)

A sole proprietorship is a customer that is owned by only one person and has not been incorporated. This business may:

1. be under the person's name
2. have its own name (doing business as or DBA)
3. have any number of employees.

If the customer is a Sole Proprietorship or DBA, the 'legal name' of the individual business 'owner' must be provided. The DBA name is not recognized as the 'legal name' of the entity. The DBA name may be used for the site name (regulated entity).

Corporation

A customer that meets all of these conditions:

1. is a legally incorporated entity under the laws of any state or country
2. is recognized as a corporation by the Texas Secretary of State
3. has proper operating authority to operate in Texas

The corporation's 'legal name' as filed with the Texas Secretary of State must be provided as applicant. An 'assumed' name of a corporation is not recognized as the 'legal name' of the entity.

Government

Federal, state, county, or city government (as appropriate)

The customer is either an agency of one of these levels of government or the governmental body itself. The government agency's 'legal name' must be provided as the applicant. A department name or other description of the organization is not recognized as the 'legal name'.

Other

This may include a utility district, water district, tribal government, college district, council of governments, or river authority. Provide the specific type of government.

e) Independent Entity

Check No if this customer is a subsidiary, part of a larger company, or is a governmental entity. Otherwise, check Yes.

f) Number of Employees

Check one box to show the number of employees for this customer's entire company, at all locations. This is not necessarily the number of employees at the site named in the application.

g) Customer Business Tax and Filing Numbers

These are required for Corporations and Limited Partnerships. These are not required for Individuals, Government, and Sole Proprietors.

State Franchise Tax ID Number

Corporations and limited liability companies that operate in Texas are issued a franchise tax identification number. If this customer is a corporation or limited liability company, enter the Tax ID number.

Federal Tax ID

All businesses, except for some small sole proprietors, individuals, or general partnerships should have a federal taxpayer identification number (TIN). Enter this number here. Use no prefixes, dashes, or hyphens. Sole proprietors, individuals, or general partnerships do not need to provide a federal tax ID.

TX SOS Charter (filing) Number

Corporations and Limited Partnerships required to register with the Texas Secretary of State are issued a charter or filing number. You may obtain further information by calling SOS at 512-463-5555.

DUNS Number

Most businesses have a DUNS (Data Universal Numbering System) number issued by Dun and Bradstreet Corp. If this customer has one, enter it here.

Section 2. APPLICATION CONTACT

Provide the name and contact information for the person that TCEQ can contact for additional information regarding this application.

Section 3. REGULATED ENTITY (RE) INFORMATION ON PROJECT OR SITE

a) Regulated Entity Number (RN)

The RN is issued by TCEQ's Central Registry to sites where an activity is regulated by TCEQ. This is not a permit number, registration number, or license number. Search TCEQ's Central Registry to see if the site has an assigned RN at http://www15.tceq.texas.gov/crpub/. If this regulated entity has not been assigned an RN, leave this space blank.

If the site of your business is part of a larger business site, an RN may already be assigned for the larger site. Use the RN assigned for the larger site.

If the site is found, provide the assigned RN and provide the information for the site to be authorized through this application. The site information for this authorization may vary from the larger site information.

An example is a chemical plant where a unit is owned or operated by a separate corporation that is accessible by the same physical address of your unit or facility. Other examples include industrial parks identified by one common address but different corporations have control of defined areas within the site. In both cases, an RN would be assigned for the physical address location and the permitted sites would be identified separately under the same RN.

b) Name of the Project or Site

Provide the name of the site or project as known by the public in the area where the site is located. The name you provide on this application will be used in the TCEQ Central Registry as the Regulated Entity name.

c) Description of Activity Regulated

In your own words, briefly describe the primary business that you are doing that requires this authorization. Do not repeat the SIC Code description.

d) County

Provide the name of the county where the site or project is located. If the site or project is located in more than one county, provide the county names as secondary.

e) Latitude and Longitude

Enter the latitude and longitude of the site in degrees, minutes, and seconds or decimal form. For help obtaining the latitude and longitude, go to: http://www.tceq.texas.gov/gis/sqmaview.html.

f) Site Address/Location

If a site has an address that includes a street number and street name, enter the complete address for the site in *Section A*. If the physical address is not recognized as a USPS delivery address, you may need to validate the address with your local police (911 service) or through an online map site used to locate a site. Please confirm this to be a complete and valid address. Do not use a rural route or post office box for a site location.

If a site does not have an address that includes a street number and street name, provide a complete written location description in *Section B*. For example: "The site is located on the north side of FM 123, 2 miles west of the intersection of FM 123 and Highway 1."

Provide the city (or nearest city) and zip code of the site location.

Section 4. GENERAL CHARACTERISTICS

a) Indian Country Lands

If your site is located on Indian Country Lands, the TCEQ does not have authority to process your application. You must obtain authorization through EPA Region 6, Dallas. Do not submit this form to TCEQ.

b) Construction activity associated with facility associated with exploration, development, or production of oil, gas, or geothermal resources

If your activity is associated with oil and gas exploration, development, or production, you may be under jurisdiction of the Railroad Commission of Texas (RRC) and may need to obtain authorization from EPA Region 6.

Construction activities associated with a facility related to oil, gas or geothermal resources may include the construction of a well site; treatment or storage facility; underground hydrocarbon or natural gas storage facility; reclamation plant; gas processing facility; compressor station; terminal facility where crude oil is stored prior to refining and at which refined products are stored solely for use at the facility; a carbon dioxide geologic storage facility; and a gathering, transmission, or distribution pipeline that will transport crude oil or natural gas, including natural gas liquids, prior to refining of such oil or the use of the natural gas in any manufacturing process or as a residential or industrial fuel.

Where required by federal law, discharges of stormwater associated with construction activities under the RRC's jurisdiction must be authorized by the EPA and the RRC, as applicable. Activities under RRC jurisdiction include construction of a facility that, when completed, would be associated with the exploration, development, or production of oil or gas or geothermal resources, such as a well site; treatment or storage facility; underground hydrocarbon or natural gas storage facility; reclamation plant; gas processing facility; compressor station; terminal facility where crude oil is stored prior to refining and at which refined products are stored solely for use at the facility; a carbon dioxide geologic storage facility under the jurisdiction of the RRC; and a gathering, transmission, or distribution pipeline that will transport crude oil or natural gas, including natural gas liquids, prior to refining of such oil or the use of the natural gas in any manufacturing process or as a residential or industrial fuel. The RRC also has jurisdiction over stormwater from land disturbance associated with a site survey that is conducted prior to construction of a facility that would be regulated by the RRC. Under 33 U.S.C. §1342(l)(2) and §1362(24), EPA cannot require a permit for discharges of stormwater from field activities or operations associated with {oil and gas} exploration, production, processing, or treatment operations, or transmission facilities, including activities necessary to prepare a site for drilling and for the movement and placement of drilling equipment, whether or not such field activities or operations may be considered to be construction activities unless the discharge is contaminated by contact with any overburden, raw material, intermediate product, finished product, byproduct, or waste product located on the site of the facility. Under §3.8 of this title (relating to Water Protection), the RRC prohibits operators from causing or allowing pollution of surface or subsurface water. Operators are encouraged to implement and maintain best management practices (BMPs) to minimize discharges of pollutants, including sediment, in stormwater during construction activities to help ensure protection of surface water quality during storm events.

For more information about the jurisdictions of the RRC and the TCEQ, read the Memorandum of Understanding (MOU) between the RRC and TCEQ at 16 Texas Administrative Code, Part 1, Chapter 3, Rule 3.30, by entering the following link into an internet browser: http://texreg.sos.state.tx.us/public/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=30 or contact the TCEQ Stormwater Team at 512-239-4671 for additional information.

c) Primary Standard Industrial Classification (SIC) Code

Provide the SIC Code that best describes the construction activity being conducted at this site.

Common SIC Codes related to construction activities include:

- 1521 - Construction of Single Family Homes
- 1522 - Construction of Residential Buildings Other than Single Family Homes
- 1541 - Construction of Industrial Buildings and Warehouses
- 1542 - Construction of Non-residential Buildings, other than Industrial Buildings and Warehouses
- 1611 - Highway and Street Construction, except Highway Construction
- 1622 - Bridge, Tunnel, and Elevated Highway Construction

- 1623 - Water, Sewer, Pipeline and Communications, and Power Line Construction

For help with SIC Codes, enter the following link into your internet browser: http://www.osha.gov/pls/imis/sicsearch.html or you can contact the TCEQ Small Business and Local Government Assistance Section at 800-447-2827 for assistance.

d) Secondary SIC Code

Secondary SIC Code(s) may be provided. Leave this blank if not applicable. For help with SIC Codes, enter the following link into your internet browser: http://www.osha.gov/pls/imis/sicsearch.html or you can contact the TCEQ Small Business and Environmental Assistance Section at 800-447-2827 for assistance.

e) Total Number of Acres Disturbed

Provide the approximate number of acres that the construction site will disturb. Construction activities that disturb less than one acre, unless they are part of a larger common plan that disturbs more than one acre, do not require permit coverage. Construction activities that disturb between one and five acres, unless they are part of a common plan that disturbs more than five acres, do not require submission of an NOI. Therefore, the estimated area of land disturbed should not be less than five, unless the project is part of a larger common plan that disturbs five or more acres. Disturbed means any clearing, grading, excavating, or other similar activities.

If you have any questions about this item, please contact the stormwater technical staff by phone at 512-239-4671 or by email at swgp@tceq.texas.gov.

f) Common Plan of Development

Construction activities that disturb less than five acres do not require submission of an NOI unless they are part of a common plan of development or for sale where the area disturbed is five or more acres. Therefore, the estimated area of land disturbed should not be less than five, unless the project is part of a larger common plan that disturbs five or more acres. Disturbed means any clearing, grading, excavating, or other similar activities.

For more information on what a common plan of development is, refer to the definition of "Common Plan of Development" in the Definitions section of the general permit or enter the following link into your internet browser: www.tceq.texas.gov/permitting/stormwater/common_plan_of_development_steps.html

For further information, go to the TCEQ stormwater construction webpage enter the following link into your internet browser: www.tceq.texas.gov/goto/construction and search for "Additional Guidance and Quick Links". If you have any further questions about the Common Plan of Development you can contact the TCEQ Stormwater Team at 512-239-4671 or the TCEQ Small Business and Environmental Assistance at 800-447-2827.

g) Estimated Start Date of the Project

This is the date that any construction activity or construction support activity is initiated at the site. If renewing the permit provide the original start date of when construction activity for this project began.

h) Estimated End Date of the Project

This is the date that any construction activity or construction support activity will end and final stabilization will be achieved at the site.

i) Will concrete truck washout be performed at the site?

Indicate if you expect that operators of concrete trucks will washout concrete trucks at the construction site.

j) Identify the water body(s) receiving stormwater runoff

The stormwater may be discharged directly to a receiving stream or through a MS4 from your site. It eventually reaches a receiving water body such as a local stream or lake, possibly via a drainage ditch. You must provide the name of the water body that receives the discharge from the site (a local stream or lake).

If your site has more than one outfall you need to include the name of the first water body for each outfall, if they are different.

k) Identify the segment number(s) of the classified water body(s)

Identify the classified segment number(s) receiving a discharge directly or indirectly. Enter the following link into your internet browser to find the segment number of the classified water body where stormwater will flow from the site: www.tceq.texas.gov/waterquality/monitoring/viewer.html or by contacting the TCEQ Water Quality Division at (512) 239-4671 for assistance.

You may also find the segment number in TCEQ publication GI-316 by entering the following link into your internet browser: www.tceq.texas.gov/publications/gi/gi-316 or by contacting the TCEQ Water Quality Division at (512) 239-4671 for assistance.

If the discharge is into an unclassified receiving water and then crosses state lines prior to entering a classified segment, select the appropriate watershed:

- 0100 (Canadian River Basin)
- 0200 (Red River Basin)
- 0300 (Sulfur River Basin)
- 0400 (Cypress Creek Basin)
- 0500 (Sabine River Basin)

Call the Water Quality Assessments section at 512-239-4671 for further assistance.

l) Discharge into MS4 – Identify the MS4 Operator

The discharge may initially be into a municipal separate storm sewer system (MS4). If the stormwater discharge is into an MS4, provide the name of the entity that operates the MS4 where the stormwater discharges. An MS4 operator is often a city, town, county, or utility district, but possibly can be another form of government. Please note that the Construction General Permit requires the Operator to supply the MS4 with a copy of the NOI submitted to TCEQ. For assistance, you may call the technical staff at 512-239-4671.

m) Discharges to the Edwards Aquifer Recharge Zone and Certification

The general permit requires the approved Contributing Zone Plan or Water Pollution Abatement Plan to be included or referenced as a part of the Stormwater Pollution Prevention Plan.

See maps on the TCEQ website to determine if the site is located within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer by entering the following link into an internet browser: www.tceq.texas.gov/field/eapp/viewer.html or by contacting the TCEQ Water Quality Division at 512-239-4671 for assistance.

If the discharge or potential discharge is within the Recharge Zone, Contributing Zone, or Contributing Zone within the Transition Zone of the Edwards Aquifer, a site-specific authorization approved by the Executive Director under the Edwards Aquifer Protection Program (30 TAC Chapter 213) is required before construction can begin.

For questions regarding the Edwards Aquifer Protection Program, contact the appropriate TCEQ Regional Office. For projects in Hays, Travis and Williamson Counties: Austin Regional Office, 12100 Park 35 Circle, Austin, TX 78753, 512-339-2929. For Projects in Bexar, Comal, Kinney, Medina and Uvalde Counties: TCEQ San Antonio Regional Office, 14250 Judson Rd., San Antonio, TX 78233-4480, 210-490-3096.

Section 5. NOI CERTIFICATION

Note: Failure to indicate Yes to all of the certification items may result in denial of coverage under the general permit.

a) Certification of Understanding the Terms and Conditions of Construction General Permit (TXR150000)

Provisional coverage under the Construction General Permit (TXR150000) begins 7 days after the completed paper NOI is postmarked for delivery to the TCEQ. Electronic applications submitted through ePermits have immediate provisional coverage. You must obtain a copy and read the Construction General Permit before submitting your application. You may view and print the Construction General Permit for which you are seeking coverage at the TCEQ web site by entering the following link into an internet browser: www.tceq.texas.gov/goto/construction or you may contact the TCEQ Stormwater processing Center at 512-239-3700 for assistance.

b) Certification of Legal Name

The full legal name of the applicant as authorized to do business in Texas is required. The name must be provided exactly as filed with the Texas Secretary of State (SOS), or on other legal documents forming the entity, that is filed in the county where doing business. You may contact the SOS at 512-463 5555, for more information related to filing in Texas.

c) Understanding of Notice of Termination

A permittee shall terminate coverage under the Construction General Permit through the submittal of a NOT when the operator of the facility changes, final stabilization has been reached, the discharge becomes authorized under an individual permit, or the construction activity never began at this site.

d) Certification of Stormwater Pollution Prevention Plan

The SWP3 identifies the areas and activities that could produce contaminated runoff at your site and then tells how you will ensure that this contamination is mitigated. For example, in describing your mitigation measures, your site's plan might identify the devices that collect and filter stormwater, tell how those devices are to be maintained, and tell how frequently that maintenance is to be carried out. You must develop this plan in accordance with the TCEQ general permit requirements. This plan must be developed and implemented before you complete this NOI. The SWP3 must be available for a TCEQ investigator to review on request.

Section 6. APPLICANT CERTIFICATION SIGNATURE

The certification must bear an original signature of a person meeting the signatory requirements specified under 30 Texas Administrative Code (TAC) §305.44.

If you are a corporation:

The regulation that controls who may sign an NOI or similar form is 30 Texas Administrative Code §305.44(a)(1) (see below). According to this code provision, any corporate representative may sign an NOI or similar form so long as the authority to sign such a document has been delegated to that person in accordance with corporate procedures. By signing the NOI or similar form, you are certifying that such authority has been delegated to you. The TCEQ may request documentation evidencing such authority.

If you are a municipality or other government entity:

The regulation that controls who may sign an NOI or similar form is 30 Texas Administrative Code §305.44(a)(3) (see below). According to this code provision, only a ranking elected official or principal executive officer may sign an NOI or similar form. Persons such as the City Mayor or County Commissioner will be considered ranking elected officials. In order to identify the principal executive officer of your government entity, it may be beneficial to consult your city charter, county or city ordinances, or the Texas statute(s) under which your government entity was formed. An NOI or similar document that is signed by a government official who is not a ranking elected official or principal executive officer does not conform to §305.44(a)(3). The signatory requirement may not be delegated to a government representative other than those identified in the regulation. By signing the NOI or similar form, you are certifying that you are either a ranking elected official or principal executive officer as required by the administrative code. Documentation demonstrating your position as a ranking elected official or principal executive officer may be requested by the TCEQ.

If you have any questions or need additional information concerning the signatory requirements discussed above, please contact the TCEQ's Environmental Law Division at 512-239-0600.

30 Texas Administrative Code

§305.44. Signatories to Applications

(a) All applications shall be signed as follows.

(1) For a corporation, the application shall be signed by a responsible corporate officer. For purposes of this paragraph, a responsible corporate officer means a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the

corporation; or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. Corporate procedures governing authority to sign permit or post-closure order applications may provide for assignment or delegation to applicable corporate positions rather than to specific individuals.

(2) For a partnership or sole proprietorship, the application shall be signed by a general partner or the proprietor, respectively.

(3) For a municipality, state, federal, or other public agency, the application shall be signed by either a principal executive officer or a ranking elected official. For purposes of this paragraph, a principal executive officer of a federal agency includes the chief executive officer of the agency, or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., regional administrator of the EPA).

Texas Commission on Environmental Quality
General Permit Payment Submittal Form

Use this form to submit your Application Fee only if you are mailing your payment.

Instructions:

- Complete items 1 through 5 below:
- Staple your check in the space provided at the bottom of this document.
- *Do not mail this form with your NOI form.*
- *Do not mail this form to the same address as your NOI.*

Mail this form and your check to either of the following:

By Regular U.S. Mail
Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
P.O. Box 13088
Austin, TX 78711-3088

By Overnight or Express Mail
Texas Commission on Environmental Quality
Financial Administration Division
Cashier's Office, MC-214
12100 Park 35 Circle
Austin, TX 78753

Fee Code: GPA General Permit: TXR150000

1. Check or Money Order No: Click here to enter text
2. Amount of Check/Money Order: Click here to enter text
3. Date of Check or Money Order: Click here to enter text
4. Name on Check or Money Order: Click here to enter text
5. NOI Information:

   If the check is for more than one NOI, list each Project or Site (RE) Name and Physical Address exactly as provided on the NOI. **Do not submit a copy of the NOI with this form, as it could cause duplicate permit application entries!**

   If there is not enough space on the form to list all of the projects or sites the authorization will cover, then attach a list of the additional sites.

   Project/Site (RE) Name: Click here to enter text

   Project/Site (RE) Physical Address: Click here to enter text

Staple the check or money order to this form in this space.

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

I John Muhich,
Print Name

Manager,
Title - Owner/President/Other

of JMA Entity, LLC,
Corporation/Partnership/Entity Name

have authorized Robert (Ric) Thompson, P.E.
Print Name of Agent/Engineer

of Thompson Land Engineering, 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:

John Muhich
Applicant's Signature

12/5/2022
Date

THE STATE OF TEXAS §

County of TRAVIS §

BEFORE ME, the undersigned authority, on this day personally appeared John muhich 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 5 day of December 2022

KIM LOWE NOTARY PUBLIC STATE OF TEXAS ID 124330303 EXP. 09-10-2026

Kim Lowe
NOTARY PUBLIC

Kim Lowe
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 09/10/2026

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: AAA FM 3405
Regulated Entity Location: 4651 FM 3405, Georgetown, Texas 78633
Name of Customer: JMA Entity, LLC
Contact Person: John Muhich Phone: (512) 657-6789
Customer Reference Number (if issued):CN 606122752
Regulated Entity Reference Number (if issued):RN 111705539

Austin Regional Office (3373)

☐ Hays ☐ Travis ☒ Williamson

San Antonio Regional Office (3362)

☐ Bexar ☐ Medina ☐ Uvalde
☐ Comal ☐ Kinney

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

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

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

Site Location (Check All That Apply):

☐ Recharge Zone ☒ Contributing Zone ☐ Transition Zone

Type of Plan	***Size***	***Fee Due***
Water Pollution Abatement Plan, Contributing Zone Plan: One Single Family Residential Dwelling	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Multiple Single Family Residential and Parks	Acres	$
Water Pollution Abatement Plan, Contributing Zone Plan: Non-residential	22.94 Acres	$ 6,500
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: Robert C Thompson Date: 10/01/2024

Application Fee Schedule

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

Water Pollution Abatement Plans and Modifications

Contributing Zone Plans and Modifications

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

Organized Sewage Collection Systems and Modifications

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

Underground and Aboveground Storage Tank System Facility Plans and Modifications

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

Exception Requests

Project	*Fee*
Exception Request	$500

Extension of Time Requests

Project	*Fee*
Extension of Time Request	$150

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

☒ Other **Modification of a Previously Approved CZP**

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 606122752		**RN 111705539**

SECTION II: Customer Information

4. General Customer Information	**5. Effective Date for Customer Information Updates** (mm/dd/yyyy)	12/1/2022

☐ 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:*
JMA Entity, LLC	

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
		85-4269080	

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

12. Number of Employees	**13. Independently Owned and Operated?**
☒ 0-20 ☐ 21-100 ☐ 101-250 ☐ 251-500 ☐ 501 and higher	☒ **Yes** ☐ **No**

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

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

15. Mailing Address:	4203 Spinnaker Cove						
	City	Austin	**State**	TX	**ZIP**	78731	**ZIP + 4**

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

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

(512) 657-6789		( ) -

SECTION III: Regulated Entity Information

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

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

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

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

AAA FM 3405

23. Street Address of the Regulated Entity: ***(No PO Boxes)***	4651 FM 3405							
	City	Georgetown	**State**	TX	**ZIP**	78736	**ZIP + 4**	
24. County	Williamson							

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

25. Description to Physical Location:	In addition to the 16.90-acre private property, there is approximately 6.04-acres of public right-of-way area in front of this property (that also extends past both the east and west sides of the property) for the TXDOT roadwork being included with this project.

26. Nearest City	**State**	**Nearest ZIP Code**

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

27. Latitude (N) In Decimal:	30.70278		**28. Longitude (W) In Decimal:**	97.83222	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	42	10	97	49	56

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)
4225	1521	531130	236115

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

storage, warehouse, office & residences

34. Mailing Address:								
	City		**State**		**ZIP**		**ZIP + 4**	
35. E-Mail Address:								

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

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
		11003541		
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Wastewater	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

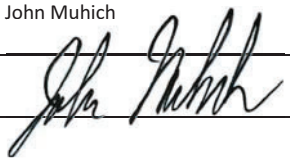
SECTION IV: Preparer Information

40. Name:	Mark Roeder	**41. Title:**	Graduate Engineer

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512 **)** 328-0002		**(** 512 **)** 328-1112	mark@tleng.net

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:	A-A-A Storage Circle Dr, LLC	**Job Title:**	President
Name *(In Print):*	John Muhich	**Phone:**	**(** 512 **)** 657- **6789**
Signature:		**Date:**	09/04/2024

SITE DEVELOPMENT PERMIT PLAN

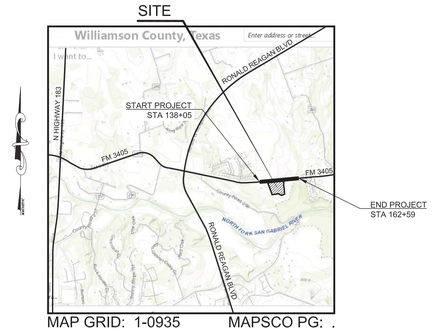
FOR

AAA FM 3405

4701 & 4721 FM 3405, GEORGETOWN TX, 78633
WILLIAMSON COUNTY
FOR: JMA ENTITY, LLC
(SEE CONTACT INFO. BELOW)
4701 = ADDRESS FOR OFFICE / WAREHOUSE BUSINESSES
4721 = ADDRESS FOR SELF-STORAGE OFFICE

SHEET INDEX

SITE



MAP GRID: 1-0935 MAPSCO PG: .

LOCATION MAP

SCALE: 1" = 2,300'

WARNING!!!!!
REVIEW THE SEQUENCE OF CONSTRUCTION ON THE GENERAL NOTES SHEET PRIOR TO BEGINNING CONSTRUCTION. MANY NOTIFICATION OBLIGATIONS (AND OTHER OBLIGATIONS) INCLUDED IN THAT SEQUENCE.

GEORGETOWN, TEXAS, UNIFIED DEVELOPMENT CODE CREATED: 2023-03-27 12:05:57 [EST] (SUPP. NO. 11)

SECTION 13.06. ELECTRIC AND COMMUNICATION STANDARDS

THE CITY'S ELECTRICAL ENGINEER SHALL DESIGN THE ELECTRICAL SYSTEM FOR ALL DEVELOPMENT, UNLESS OTHERWISE AUTHORIZED. WHERE PERMANENT ELECTRIC SERVICE IS DESIRED AND/OR IMPROVEMENTS REQUIRED, THE ELECTRIC IMPROVEMENTS SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE FOLLOWING STANDARDS:

A. FOR RESIDENTIAL SUBDIVISIONS, ALL ELECTRIC DISTRIBUTION LINES AND INDIVIDUAL SERVICE LINES SHALL BE INSTALLED UNDERGROUND. IF OVERHEAD LINES EXISTED PRIOR TO UNDERGROUND INSTALLATION, SUCH POLES, GUY WIRES, AND RELATED STRUCTURES SHALL BE REMOVED FOLLOWING CONSTRUCTION OF THE UNDERGROUND INFRASTRUCTURE.

B. FOR NON-RESIDENTIAL AND MULTI-FAMILY DEVELOPMENT WHERE NO EXISTING OVERHEAD INFRASTRUCTURE EXISTS, UNDERGROUND ELECTRIC UTILITY LINES SHALL BE REQUIRED ALONG THE STREET AND WITHIN THE SITE. WHERE EXISTING OVERHEAD INFRASTRUCTURE IS TO BE RELOCATED, IT SHALL BE RE-INSTALLED UNDERGROUND AND THE EXISTING FACILITIES SHALL BE REMOVED AT THE DISCRETION OF THE DEVELOPMENT ENGINEER. DEVELOPMENT OCCURRING IN THE DOWNTOWN OVERLAY DISTRICT SHOULD BE HIGHLY ENCOURAGED TO LOCATE OVERHEAD ELECTRIC UNDERGROUND WITH THE SITE WORK.

C. UNDERGROUND ELECTRIC AND COMMUNICATION SERVICE LINES SHALL BE LOCATED AND INSTALLED ACCORDING TO THE CONSTRUCTION MANUAL.

D. ELECTRIC TRANSFORMERS AND RELATED EQUIPMENT SHALL BE MOUNTED ON PADS AT GROUND LEVEL. FOR NON-RESIDENTIAL DEVELOPMENT, SUCH EQUIPMENT SHALL BE LOCATED OUTSIDE OF THE STREET YARD WHERE PRACTICAL AND PREFERABLY LOCATED BEHIND THE FRONT FAÇADE OF THE PRIMARY BUILDING STRUCTURE. SUCH EQUIPMENT SHALL BE REASONABLY SEPARATED FROM PEDESTRIAN OR VEHICULAR ACCESS WAYS, SHALL HAVE APPROVED DRIVEWAY OR ALL-WEATHER VEHICULAR ACCESSIBILITY, SHALL NOT CONFLICT WITH ROADWAY SIGHT VISIBILITY, AND SHALL BE LOCATED OUTSIDE OF FUTURE RIGHT-OF-WAY.

E. SCREENING OF PAD-MOUNTED TRANSFORMERS FOR NON-RESIDENTIAL DEVELOPMENT SHALL CONSIST OF BARRIER FENCING OR SHRUB PLANTINGS LOCATED NO CLOSER THAN THREE FEET FROM THE TRANSFORMER, EXCEPT FOR THE ENTRY SIDE OF THE TRANSFORMER, WHICH SHALL HAVE A MINIMUM OF TEN FEET OF UNOBSTRUCTED CLEARANCE. THE ENTRY SIDE OF THE TRANSFORMER SHALL NOT FACE A PUBLIC STREET UNLESS LOCATED BEHIND THE FRONT FAÇADE OF THE PRIMARY BUILDING STRUCTURE. THE TRANSFORMER PAD SHALL BE LOCATED WITH ADEQUATE ROOM FOR THE REQUIRED LANDSCAPE SCREENING TO BE INSTALLED CONSISTENT WITH THESE PROVISIONS. TRANSFORMERS IN THE DOWNTOWN OVERLAY DISTRICT ARE EXEMPT FROM THESE REQUIREMENTS.

F. ONCE UTILITY SERVICE LINES HAVE BEEN INSTALLED UNDERGROUND, THE INSTALLATION OF NEW ABOVE-GROUND LINES IN THAT LOCATION IS PROHIBITED.

G. THE INSTALLATION OF PUBLIC STREET LIGHTS, AND CONNECTION OF ELECTRIC SERVICE THERETO, SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AS PROVIDED IN CHAPTER 12 OF THIS CODE.

H. INSTALLED OVERHEAD AND UNDERGROUND ELECTRIC SERVICE SHALL TAKE INTO ACCOUNT HERITAGE AND PROTECTED TREES WHEN LOCATING NEW SERVICE LINES.

I. EXCEPTIONS OR ALTERNATIVES TO THE REQUIREMENTS OF THIS SECTION MAY BE CONSIDERED BY THE DEVELOPMENT ENGINEER OR THEIR DESIGNEE. AN APPEAL OF THE DECISION MADE BY THE DEVELOPMENT ENGINEER IN THIS REGARD SHALL BE HEARD BY THE CITY COUNCIL.

(ORD. NO. 2017-15, § 2, 2-28-2017)

SUBMITTAL DATE: NOVEMBER 22, 2022 EXPIRATION DATE:

WATERSHED:
THIS PROJECT IS LOCATED IN THE NORTH FORK SAN GABRIEL RIVER WATERSHED. IS CLASSIFIED AS RURAL AND SHALL BE DEVELOPED, CONSTRUCTED AND MAINTAINED IN CONFORMANCE WITH THE TERMS AND CONDITIONS OF CHAPTER 25-8 OF THE CITY LAND DEVELOPMENT CODE.

EDWARDS AQUIFER
NO PORTION OF THIS PROJECT LIES OVER THE EDWARDS AQUIFER RECHARGE ZONE.

FLOOD PLAIN NOTE:
A PORTION OF THIS PROJECT IS WITHIN THE 100 YEAR FLOOD PLAIN AND IS LOCATED IN ZONE X ACCORDING TO INFORMATION FROM FEDERAL FLOOD INSURANCE RATE MAP (FIRM) PANEL NO. 48491C0275E, EFFECTIVE DATE 09/26/2008 FOR TRAVIS COUNTY, TEXAS.

CERTIFICATE OF COMPLIANCE NO._____

	SUBMITTAL DATE:		SUBMITTAL DATE:
TCEQ WATER:	N/A	TDLR:	BY ARCHITECT
TCEQ WASTEWATER:	N/A	COUNTY:	.
TCEQ EDWARDS AQUIFER:	SEPTEMBER 2022	FIRE MARSHALL:	.
TPDES REPORT:	SEPTEMBER 2022	WATER & WASTEWATER:	.

SITE DATA:
ACREAGE: 15.9 ACRES
TAX ID: R-20-0607-000H-0021, R-20-0607-0000-0021
MAP GRID: 1-0935
DEED: 2021196924
ZONING: NONE-ETJ
EXISTING LAND USE: RESIDENTIAL
PROPOSED LAND USE: COMMERCIAL

LEGAL DESCRIPTION: AW0607-TURNER, W. SUR., ACRES 15.9, ACRES 1.0

RELATED CASES: .

ENGINEER: THOMPSON LAND ENGINEERING, LLC
904 N. CUERNAVACA
AUSTIN, TEXAS 78733
(512) 328-0002

OWNER: JMA ENTITY, LLC
4203 SPINNAKER COVE
AUSTIN, TX 78731
.

STATE OF TEXAS
ROBERT C. THOMPSON
89524
REGISTERED
PROFESSIONAL ENGINEER
Thompson Land Engineering, LLC (F-10220)
7/16/24

2022-27-SWP

REVISION/CORRECTION TABLE

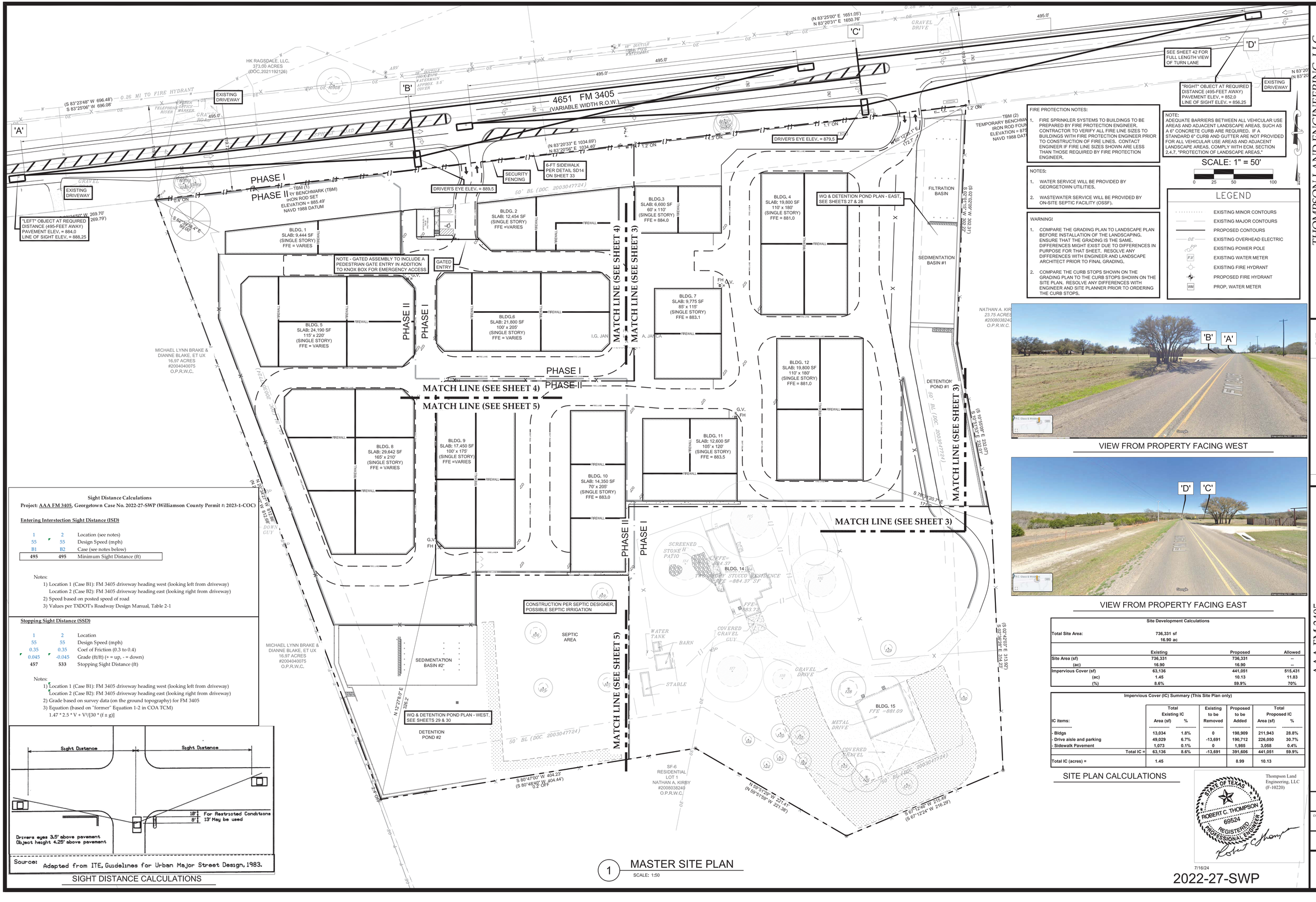
NO.	DESCRIPTION	REVISE (R) ADD (A) VOID (V) SHEET NO's	TOTAL # SHEETS IN PLAN SET	NET CHANGE IMP. COVER (SQ. FT.)	TOTAL SITE IMP. COVER (SQ. FT.)/ (%)	CITY OF GEORGETOWN APPROVAL/DATE	WILLIAMSON COUNTY APPROVAL/DATE	APPROVED BY	DATE IMAGED
△	.	.	.	.	.				

THOMPSON LAND ENGINEERING, LLC
Land Planning, Site Design, Subdivision Engineering
P.O. Box 160062, Austin, Texas 78716 (512-328-0002)
www.tleng.net email: rc@tleng.net
TBPE Reg. No. F-10220

DATE
REVISION

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN, TX, 78633
SHEET NAME: COVER SHEET

DATE ISSUED: July, 2024
DESIGNED BY: RCT
DRAFTED BY: JH/MR
JOB NUMBER: 1829
SHEET 1 OF 60



FIRE PROTECTION NOTES:

1. FIRE SPRINKLER SYSTEMS TO BUILDINGS TO BE PREPARED BY FIRE PROTECTION ENGINEER. CONTRACTOR TO VERIFY ALL FIRE LINE SIZES TO BUILDINGS WITH FIRE PROTECTION ENGINEER PRIOR TO CONSTRUCTION OF FIRE LINES. CONTACT ENGINEER IF FIRE LINE SIZES SHOWN ARE LESS THAN THOSE REQUIRED BY FIRE PROTECTION ENGINEER.

NOTE:
ADEQUATE BARRIERS BETWEEN ALL VEHICULAR USE AREAS AND ADJACENT LANDSCAPE AREAS, SUCH AS A 6" CONCRETE CURB ARE REQUIRED. IF A STANDARD 6" CURB AND GUTTER ARE NOT PROVIDED FOR ALL VEHICULAR USE AREAS AND ADJACENT LANDSCAPE AREAS, COMPLY WITH ECM, SECTION 2.4.7, "PROTECTION OF LANDSCAPE AREAS."

SCALE: 1" = 50'

0 25 50 100

NOTES:

1. WATER SERVICE WILL BE PROVIDED BY GEORGETOWN UTILITIES.
2. WASTEWATER SERVICE WILL BE PROVIDED BY ON-SITE SEPTIC FACILITY (OSSF).

LEGEND

- EXISTING MINOR CONTOURS
- EXISTING MAJOR CONTOURS
- PROPOSED CONTOURS
- OE EXISTING OVERHEAD ELECTRIC
- PP EXISTING POWER POLE
- EXISTING WATER METER
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- WM PROP. WATER METER

WARNING!

1. COMPARE THE GRADING PLAN TO LANDSCAPE PLAN BEFORE INSTALLATION OF THE LANDSCAPING. ENSURE THAT THE GRADING IS THE SAME. DIFFERENCES MIGHT EXIST DUE TO DIFFERENCES IN PURPOSE FOR THAT SHEET. RESOLVE ANY DIFFERENCES WITH ENGINEER AND LANDSCAPE ARCHITECT PRIOR TO FINAL GRADING.
2. COMPARE THE CURB STOPS SHOWN ON THE GRADING PLAN TO THE CURB STOPS SHOWN ON THE SITE PLAN. RESOLVE ANY DIFFERENCES WITH ENGINEER AND SITE PLANNER PRIOR TO ORDERING THE CURB STOPS.

VIEW FROM PROPERTY FACING WEST

VIEW FROM PROPERTY FACING EAST

Site Development Calculations

Total Site Area: 736,331 sf / 16.90 ac

	Existing	Proposed	Allowed
Site Area (sf)	736,331	736,331	--
(ac)	16.90	16.90	--
Impervious Cover (sf)	63,136	441,051	515,431
(ac)	1.45	10.13	11.83
(%)	8.6%	59.9%	70%

Impervious Cover (IC) Summary (This Site Plan only)

IC items:	Total Existing IC Area (sf)	Total Existing IC %	Existing to be Removed	Proposed to be Added	Total Proposed IC Area (sf)	Total Proposed IC %
- Bldgs	13,034	1.8%	0	198,909	211,943	28.8%
- Drive aisle and parking	49,029	6.7%	-13,691	190,712	226,050	30.7%
- Sidewalk Pavement	1,073	0.1%	0	1,985	3,058	0.4%
Total IC =	63,136	8.6%	-13,691	391,606	441,051	59.9%
Total IC (acres) =	1.45			8.99	10.13	

SITE PLAN CALCULATIONS

Sight Distance Calculations

Project: AAA FM 3405, Georgetown Case No. 2022-27-SWP (Williamson County Permit #: 2023-1-COC)

Entering Interstection Sight Distance (ISD)

1	2	Location (see notes)
55	55	Design Speed (mph)
B1	B2	Case (see notes below)
495	495	Minimum Sight Distance (ft)

Notes:
1) Location 1 (Case B1): FM 3405 driveway heading west (looking left from driveway)
Location 2 (Case B2): FM 3405 driveway heading east (looking right from driveway)
2) Speed based on posted speed of road
3) Values per TXDOT's Roadway Design Manual, Table 2-1

Stopping Sight Distance (SSD)

1	2	Location
55	55	Design Speed (mph)
0.35	0.35	Coef of Friction (0.3 to 0.4)
0.045	-0.045	Grade (ft/ft) (+ = up, - = down)
457	533	Stopping Sight Distance (ft)

Notes:
1) Location 1 (Case B1): FM 3405 driveway heading west (looking left from driveway)
Location 2 (Case B2): FM 3405 driveway heading east (looking right from driveway)
2) Grade based on survey data (on the ground topography) for FM 3405
3) Equation (based on "former" Equation 1-2 in COA TCM)
1.47 * 2.5 * V + V²/[30 * (f ± g)]

SIGHT DISTANCE CALCULATIONS

1 MASTER SITE PLAN
SCALE: 1:50

Thompson Land Engineering, LLC (F-10220)

STATE OF TEXAS
ROBERT C. THOMPSON
69524
REGISTERED PROFESSIONAL ENGINEER

7/16/24

2022-27-SWP

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TBPE Reg. No.: F-10220

DATE
REVISION

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

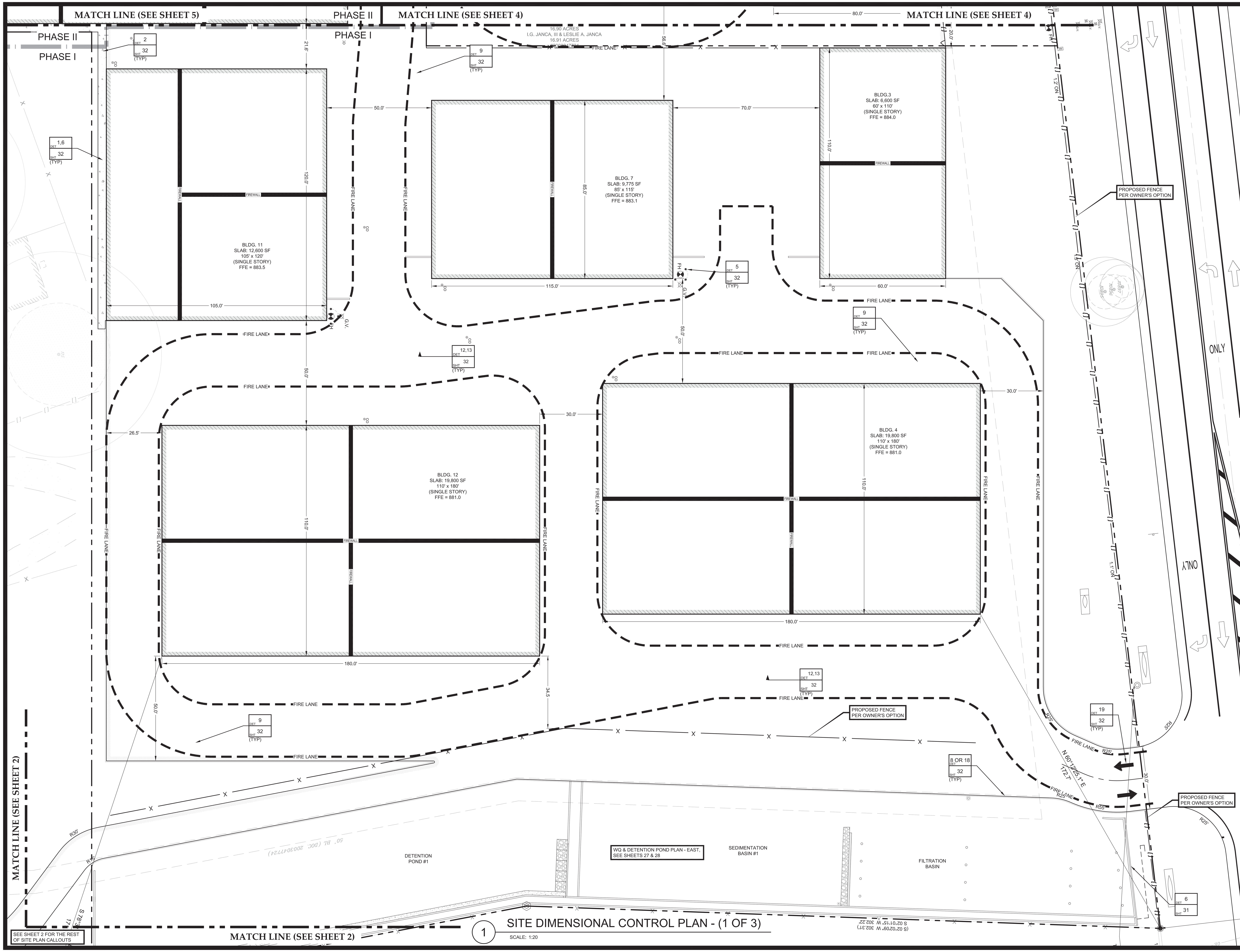
SHEET NAME: MASTER SITE PLAN

DATE ISSUED: July, 2024

DESIGNED BY: RCT
DRAFTED BY: JH/MR

JOB NUMBER: 1829

SHEET 2 OF 60



1

SITE DIMENSIONAL CONTROL PLAN - (1 OF 3)

SCALE: 1:20

SCALE: 1" = 20'

0 10 20 40

LEGEND

- PROPOSED PHASE LINE
- EXISTING OVERHEAD ELECTRIC
- EXISTING POWER POLE
- EXISTING WATER METER
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- PROPOSED WATER METER

DIMENSIONAL SITE PLANS NOTES: (CITY OF GEORGETOWN)

1. ALL LIGHTING FIXTURES SHALL BE DESIGNED TO COMPLETELY CONCEAL AND FULLY SHIELD, WITHIN AN OPAQUE HOUSING, THE LIGHT SOURCE FROM VISIBILITY FROM ANY STREET RIGHT-OF-WAY. THE CONE OF LIGHT SHALL NOT CROSS ANY ADJACENT PROPERTY LINE. THE ILLUMINATION SHALL NOT EXCEED 2 FOOT CANDLES AT A HEIGHT OF THREE FEET AT THE PROPERTY LINE. ONLY INCANDESCENT, FLUORESCENT, COLOR-CORRECTED HIGH-PRESSURE SODIUM OR METAL HALIDE MAY BE USED. ALL VEHICULAR OR PEDESTRIAN ACCESS SHALL BE SUFFICIENTLY LIGHTED TO ENSURE SECURITY OF PROPERTY AND PERSONS.
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3. PER CHAPTER 8, THE DUMPSTER ENCLOSURES MUST BE ONE (1) FOOT ABOVE THE HEIGHT OF THE WASTE CONTAINER. USE PROTECTIVE POLES IN CORNERS AND AT IMPACT AREAS. FENCE POSTS SHALL BE OF OF RUST PROTECTED METAL OR CONCRETE. A MINIMUM 6" SLAB IS REQUIRED AND MUST BE SLOPED TO DRAIN; THE ENCLOSURE MUST HAVE STEEL FRAMED GATES WITH SPRING LOADED HINGES AND FASTENERS TO KEEP CLOSED. SCREENING MUST BE ON ALL FOUR SIDES BY MASONRY WALL OR APPROVED FENCE OR SCREENING WITH OPAQUE GATES.

GENERAL NOTES: (TLE)

1) ALL LANDSCAPED AREAS ARE TO BE PROTECTED BY SIX-INCH WHEEL CURBS, WHEELSTOPS OR OTHER APPROVED BARRIERS.

2) DIMENSIONS ARE TO FACE OF CURB.

3) SEE GENERAL NOTES SHEET 17.

4) WHERE ▬ ▬ ▬ IS SHOWN, PAINT CURB, OR PAVEMENT WHERE NO CURB EXISTS, RED AND STENCIL "FIRE ZONE/TOW-AWAY ZONE" IN 3 INCH WHITE LETTERS AT 35 FOOT INTERVALS ALONG CURB.

5) WHERE ▬ · ▬ · ▬ IS SHOWN DENOTES THE ACCESSIBLE ROUTE.

KEY MAP

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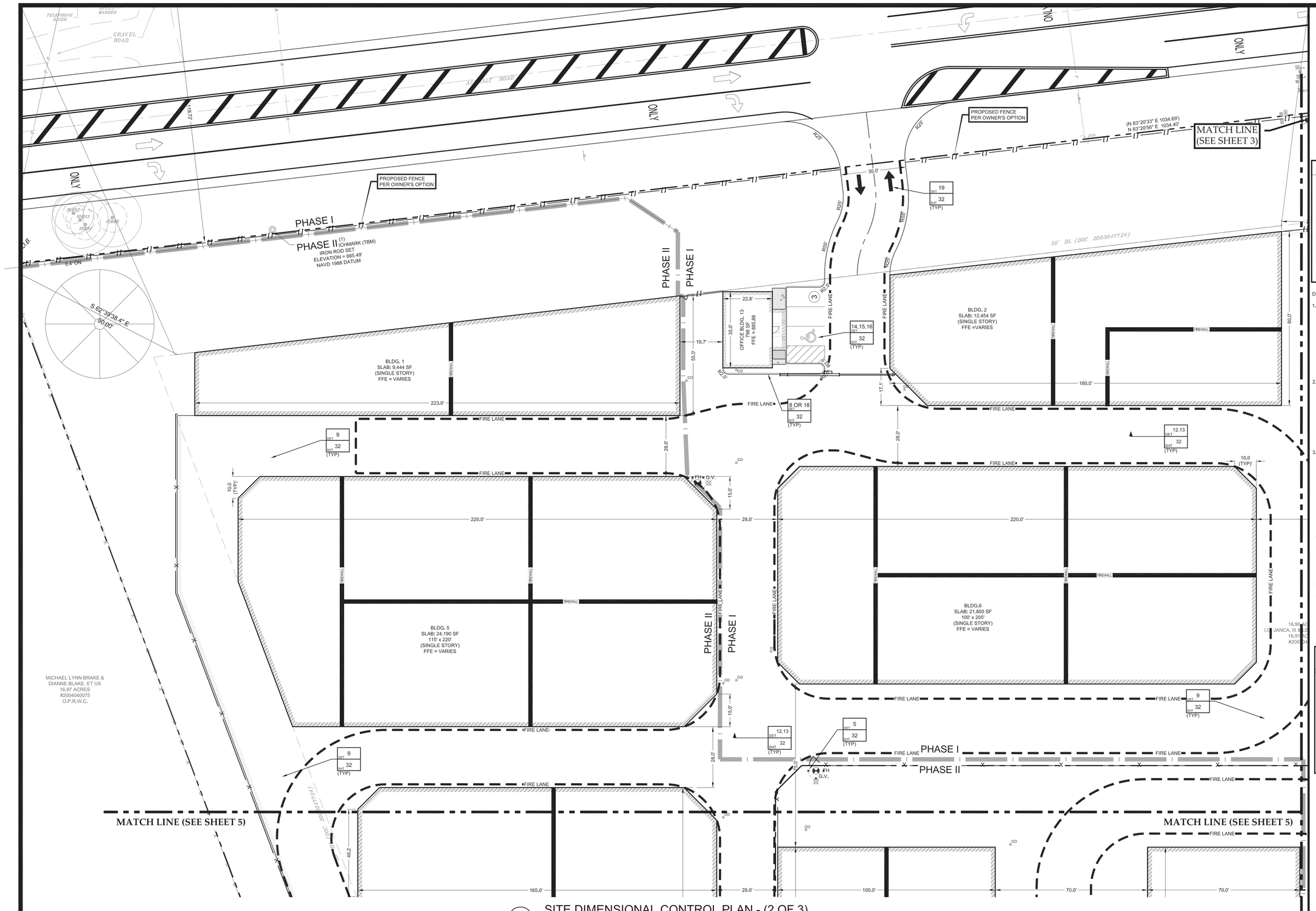
DATE	REVISION

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME: SITE DIMENSIONAL CONTROL PLAN (1 OF 3)

DATE ISSUED	July, 2024
DESIGNED BY	RCT
DRAFTED BY	JH/MR
JOB NUMBER	1829
SHEET	3 OF 60



1 SITE DIMENSIONAL CONTROL PLAN - (2 OF 3)

SCALE: 1:20

SCALE: 1" = 20'

0 10 20 40

LEGEND

- PROPOSED PHASE LINE
- OE — EXISTING OVERHEAD ELECTRIC
- PP — EXISTING POWER POLE
- WM — EXISTING WATER METER
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- WM — PROPOSED WATER METER

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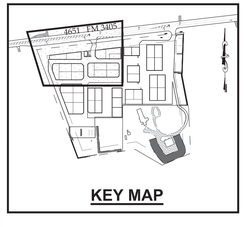

KEY MAP

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www.tleng.net

DATE
REVISION

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

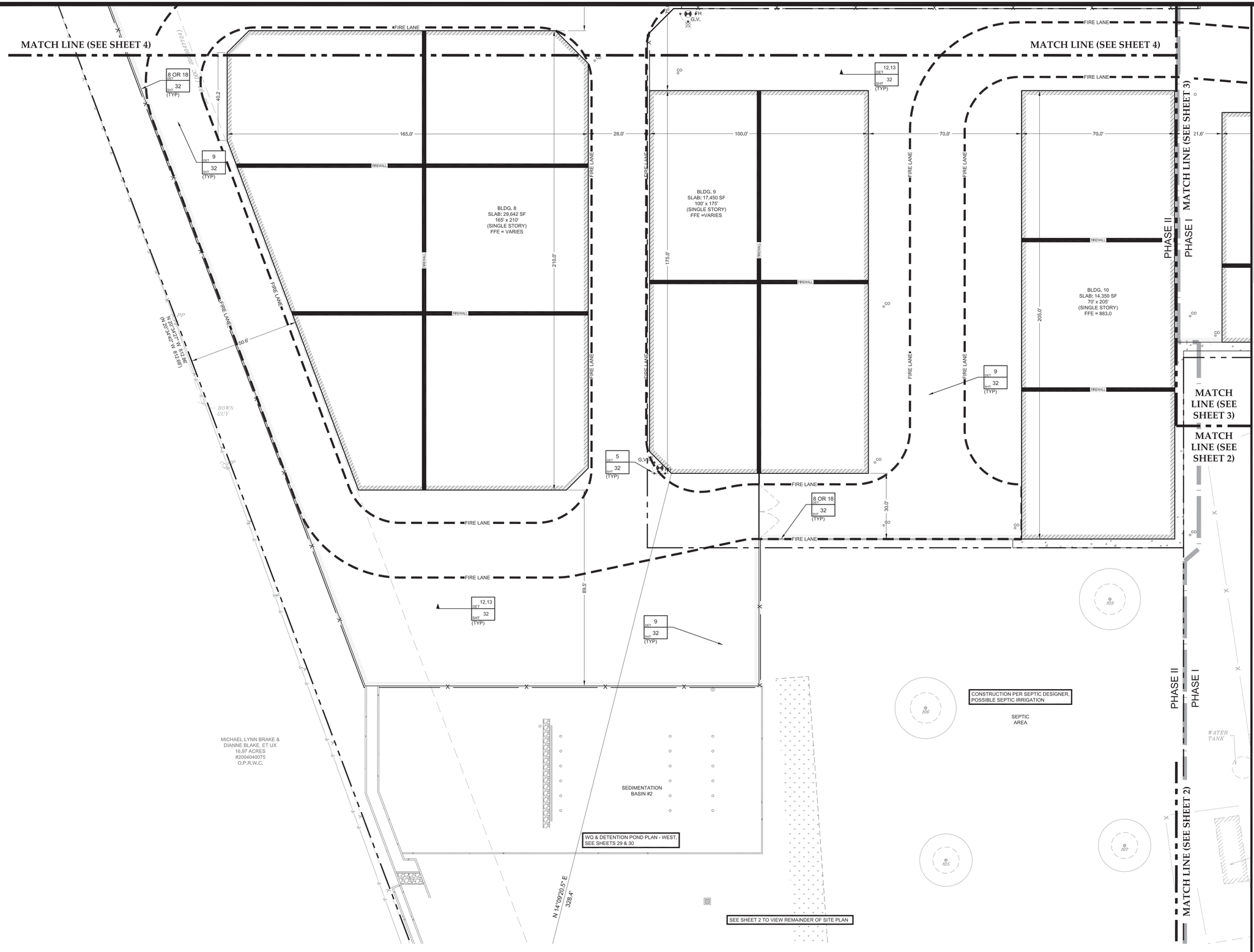
SHEET NAME: SITE DIMENSIONAL CONTROL PLAN (2 OF 3)

DATE ISSUED: July, 2024

DESIGNED BY	DRAFTED BY
RCT	JH/MR

JOB NUMBER: 1829

SHEET 4 OF 60



1 SITE DIMENSIONAL CONTROL PLAN - (3 OF 3)

SCALE: 1:20

SCALE: 1" = 20'

0 10 20 40

LEGEND

- PROPOSED PHASE LINE
- OE — EXISTING OVERHEAD ELECTRIC
- PP — EXISTING POWER POLE
- FM — EXISTING WATER METER
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- WM — PROPOSED WATER METER

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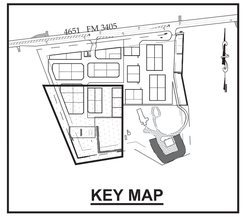

KEY MAP

STATE OF TEXAS
ROBERT C. THOMPSON
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REGISTERED
PROFESSIONAL ENGINEER

Thompson Land Engineering, LLC (F-10220)

7/16/24

2022-27-SWP

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DATE
REVISION

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

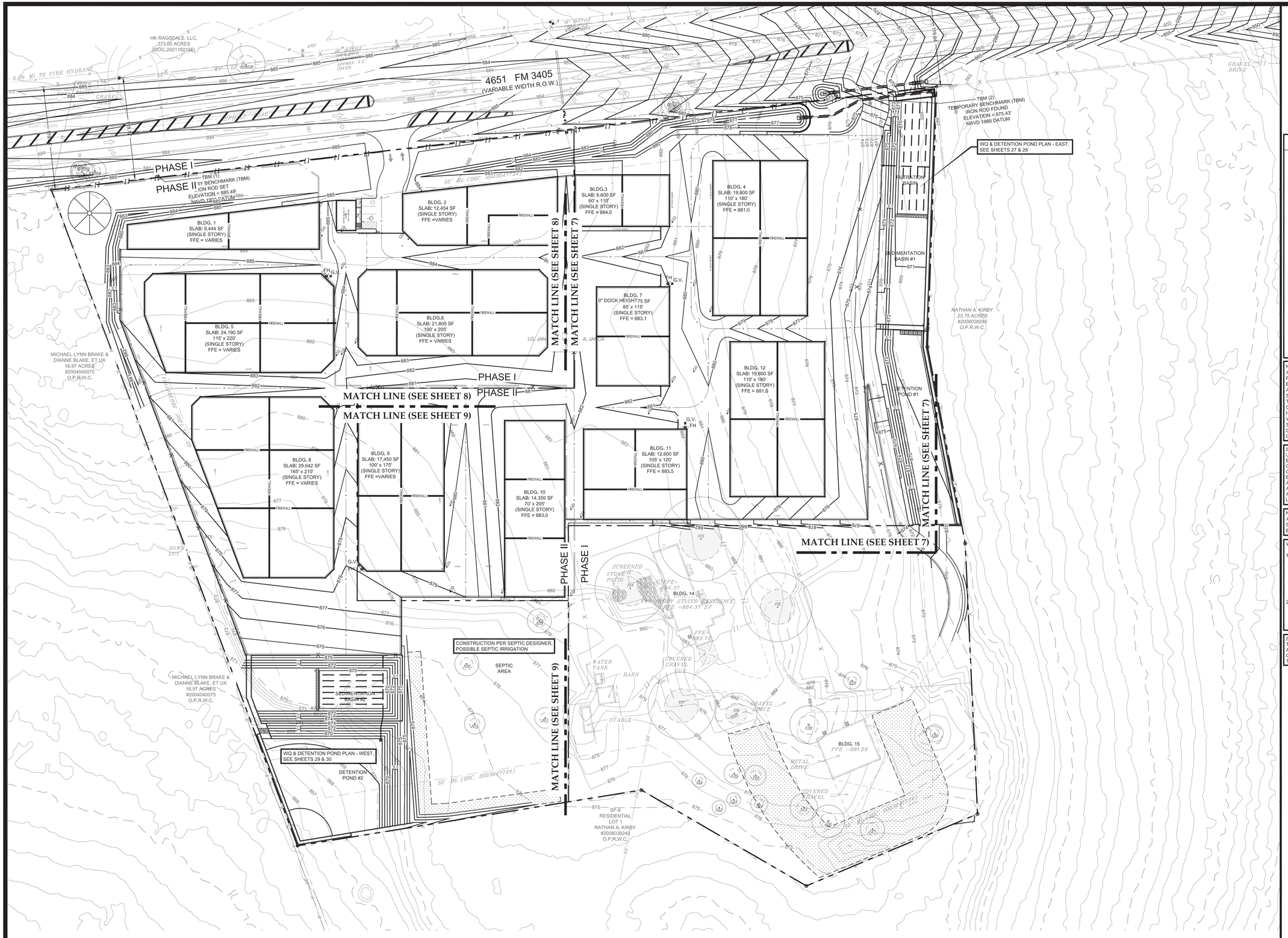
SHEET NAME: SITE DIMENSIONAL CONTROL PLAN (3 OF 3)

DATE ISSUED: July, 2024

DESIGNED BY	DRAFTED BY
RCT	JH/MR

JOB NUMBER: 1829

SHEET 5 OF 60



1 MASTER GRADING & DRAINAGE PLAN
SCALE: 1:50

SCALE: 1" = 50'
0 25 50 100

LEGEND

- TREE TO REMAIN
- HERITAGE TREE
- EXISTING MINOR CONTOURS
- EXISTING MAJOR CONTOURS
- PROPOSED CONTOURS MINOR
- PROPOSED CONTOURS MAJOR
- OE — EXISTING OVERHEAD ELECTRIC
- UT — EXISTING UNDERGROUND TELEPHONE
- G — EXISTING UNDERGROUND GAS
- W — EXISTING WATER LINE
- WW — EXISTING WASTEWATER LINE
- PP — EXISTING POWER POLE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- WM — EXISTING WATER METER
- WM — PROP. WATER METER
- V — EXISTING GATE VALVE
- GV — PROP. GATE VALVE

NOTE:
ALL PUBLIC STORM SEWER PIPING TO BE RCP PER THE PUBLIC ENTITY. ALL PRIVATE STORM SEWER PIPING TO BE CLASS III RCP IF NOT SUBJECT TO LOADING OR HAVING AT LEAST 3 FEET OF COVER. ALL STORM SEWER PIPE SUBJECT TO LOADING WITH LESS THAN 3 FEET OF COVER TO BE CLASS IV RCP. NOTE HOWEVER, AT OWNERS OPTION ALL PRIVATE STORM SEWER PIPE MAY ALSO BE HDPE OR SDR 35 PVC. WE DO NOT RECOMMEND HDPE WHERE SLOPED LESS THAN 2%, SUBJECT TO LOADING, OR SUBJECT TO DEEP BURIAL DEPTHS (DUE TO POSSIBLE CRUSHING AND SAGGING) BUT OWNER MAY USE AT THEIR OPTION AND RISK.

!!! WARNING !!!:
UNDERGROUND UTILITIES SHOWN ON THESE PLANS IS A BEST ESTIMATE BASED ON RECORDS THAT COULD BE OBTAINED AND PHYSICAL FEATURES VISIBLE AT THE GROUND LEVEL. THE ENGINEER MAKES NO ASSERTIONS BEYOND THAT THEY ARE A BEST ESTIMATE AND AN ATTEMPT TO HELP IDENTIFY POSSIBLE UTILITIES IN THE AREA. THE CONTRACTOR MUST CALL ONE CALL IN ACCORDANCE WITH THE NOTES TO BETTER LOCATE ANY UNDERGROUND UTILITIES.

NOTE:
ALL GRATED INLETS, UNLESS OTHERWISE SPECIFIED, SHALL BE PRECAST H20 RATED CONCRETE INLETS WITH BAR GRATES THAT ARE AT LEAST 90% OPEN.

WARNING!

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THE OVERHEAD POWER LINE IS ENERGIZED. INCLUDE THE APPROPRIATE TEMPORARY PLACARD SHOWING WHERE THE OVERHEAD POWER LINES ARE LOCATED WITHIN THE AREA THAT CONSTRUCTION IS BEING CONDUCTED.

STATE OF TEXAS
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4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME
MASTER GRADING & DRAINAGE PLAN

DATE ISSUED
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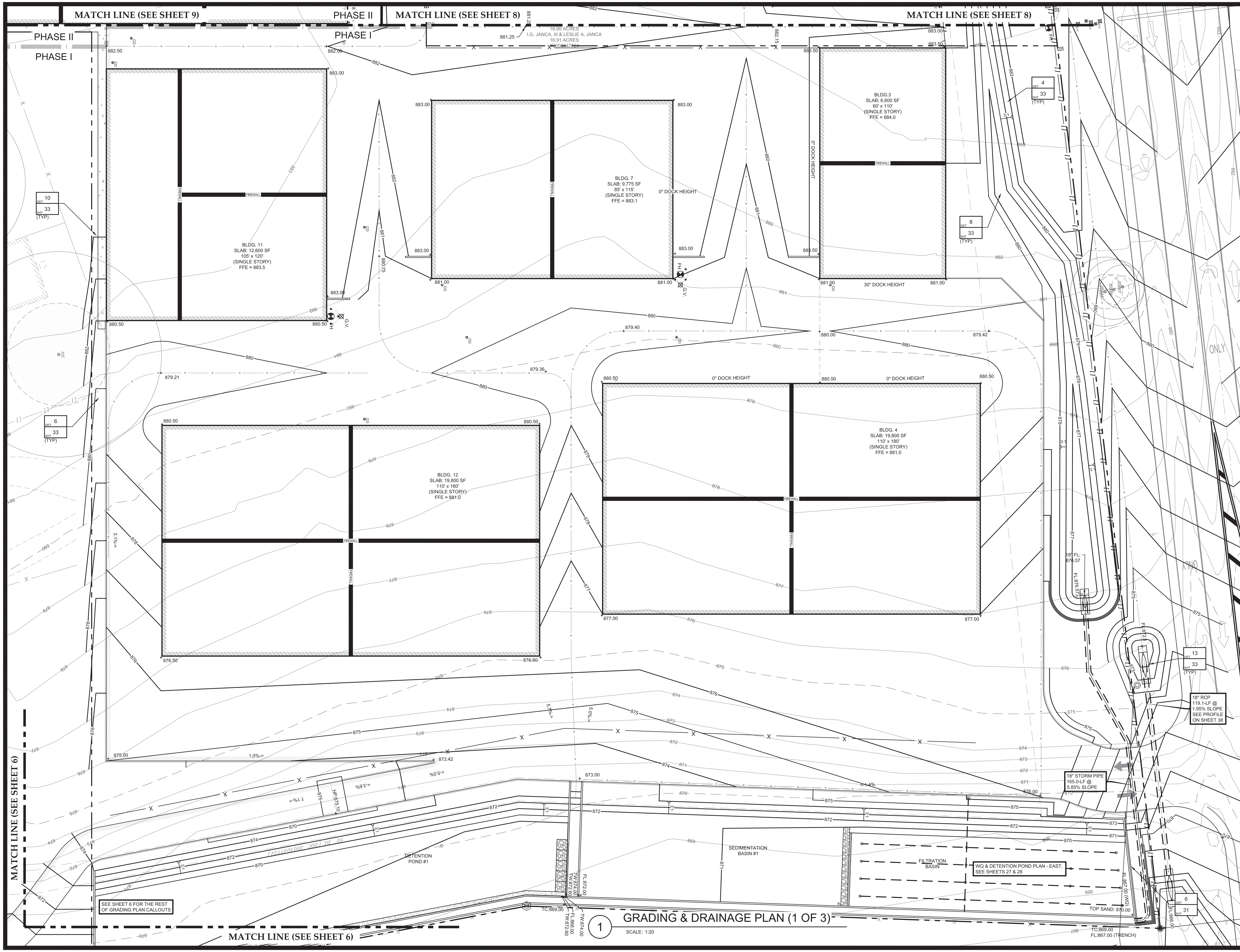
SHEET
6 OF 60



1 GRADING & DRAINAGE PLAN (1 OF 3)

SCALE: 1:20

SCALE: 1" = 20'

0 10 20 40

LEGEND

- TREE TO REMAIN
- HERITAGE TREE
- EXISTING MINOR CONTOURS
- EXISTING MAJOR CONTOURS
- PROPOSED CONTOURS MINOR
- PROPOSED CONTOURS MAJOR
- OE — EXISTING OVERHEAD ELECTRIC
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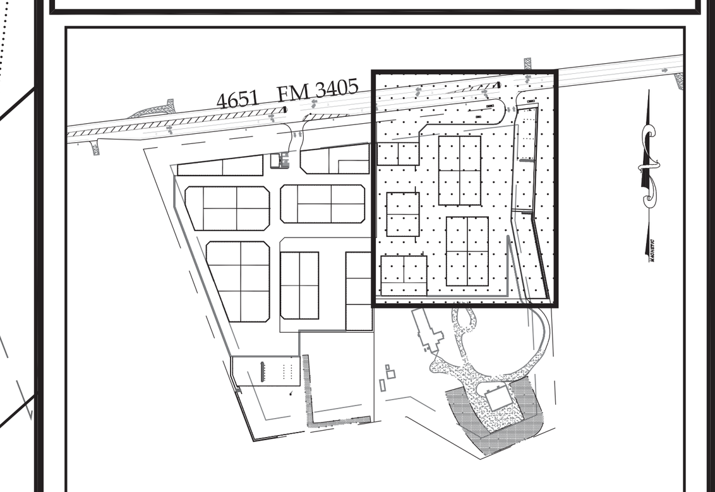

KEY MAP

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7/16/24

2022-27-SWP

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DATE	REVISION

PROJECT: AAA FM 3405
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SHEET NAME: GRADING & DRAINAGE PLAN (1 OF 3)

DATE ISSUED	July, 2024
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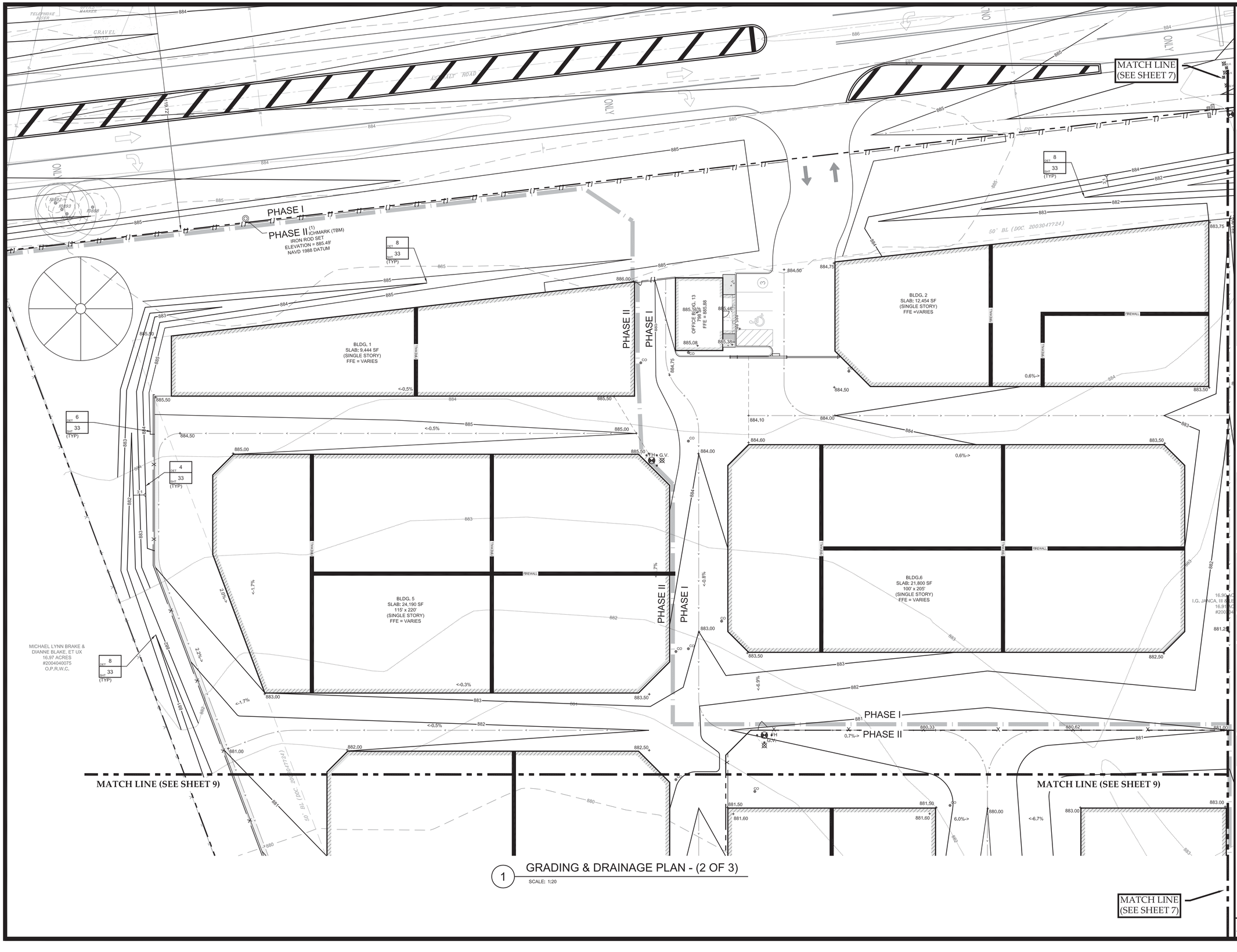

1 GRADING & DRAINAGE PLAN - (2 OF 3)

SCALE: 1:20

SCALE: 1" = 20'

0 10 20 40

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- HERITAGE TREE
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- GV — PROP. GATE VALVE

KEY MAP

NOTE:
ALL PUBLIC STORM SEWER PIPING TO BE RCP PER THE PUBLIC ENTITY. ALL PRIVATE STORM SEWER PIPING TO BE CLASS III RCP IF NOT SUBJECT TO LOADING OR HAVING AT LEAST 3 FEET OF COVER. ALL STORM SEWER PIPE SUBJECT TO LOADING WITH LESS THAN 3 FEET OF COVER TO BE CLASS IV RCP. NOTE, HOWEVER, AT OWNERS OPTION ALL PRIVATE STORM SEWER PIPE MAY ALSO BE HDPE OR SDR 35 PVC. WE DO NOT RECOMMEND HDPE WHERE SLOPED LESS THAN 2%, SUBJECT TO LOADING, OR SUBJECT TO DEEP BURIAL DEPTHS (DUE TO POSSIBLE CRUSHING AND SAGGING) BUT OWNER MAY USE AT THEIR OPTION AND RISK.

!!! WARNING !!!:
UNDERGROUND UTILITIES SHOWN ON THESE PLANS IS A BEST ESTIMATE BASED ON RECORDS THAT COULD BE OBTAINED AND PHYSICAL FEATURES VISIBLE AT THE GROUND LEVEL. THE ENGINEER MAKES NO ASSERTIONS BEYOND THAT THEY ARE A BEST ESTIMATE AND AN ATTEMPT TO HELP IDENTIFY POSSIBLE UTILITIES IN THE AREA. THE CONTRACTOR MUST CALL ONE CALL IN ACCORDANCE WITH THE NOTES TO BETTER LOCATE ANY UNDERGROUND UTILITIES.

NOTE:
ALL GRATED INLETS, UNLESS OTHERWISE SPECIFIED, SHALL BE PRECAST H20 RATED CONCRETE INLETS WITH BAR GRATES THAT ARE AT LEAST 90% OPEN.

WARNING!

1. COMPARE THE GRADING PLAN TO LANDSCAPE PLAN BEFORE INSTALLATION OF THE LANDSCAPING. ENSURE THAT THE GRADING IS THE SAME. DIFFERENCES MIGHT EXIST DUE TO DIFFERENCES IN PURPOSE FOR THAT SHEET. RESOLVE ANY DIFFERENCES WITH ENGINEER AND LANDSCAPE ARCHITECT PRIOR TO FINAL GRADING.
2. COMPARE THE CURB STOPS SHOWN ON THE GRADING PLAN TO THE CURB STOPS SHOWN ON THE SITE PLAN. RESOLVE ANY DIFFERENCES WITH ENGINEER AND SITE PLANNER PRIOR TO ORDERING THE CURB STOPS.

!!! WARNING !!!
THE OVERHEAD POWER LINE IS ENERGIZED. INCLUDE THE APPROPRIATE TEMPORARY PLACARD SHOWING WHERE THE OVERHEAD POWER LINES ARE LOCATED WITHIN THE AREA THAT CONSTRUCTION IS BEING CONDUCTED.

STATE OF TEXAS
ROBERT C. THOMPSON
69524
REGISTERED PROFESSIONAL ENGINEER
Thompson Land Engineering, LLC (F-10220)
7/16/24

2022-27-SWP

THOMPSON LAND ENGINEERING, LLC
Land Planning, Site Design, Subdivision Engineering
P.O. Box 160062, Austin, Texas 78716 (512-328-0002)
email: rc@tleng.net
www.tleng.net
TBPE Reg. No. F10220

DATE
REVISION

AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

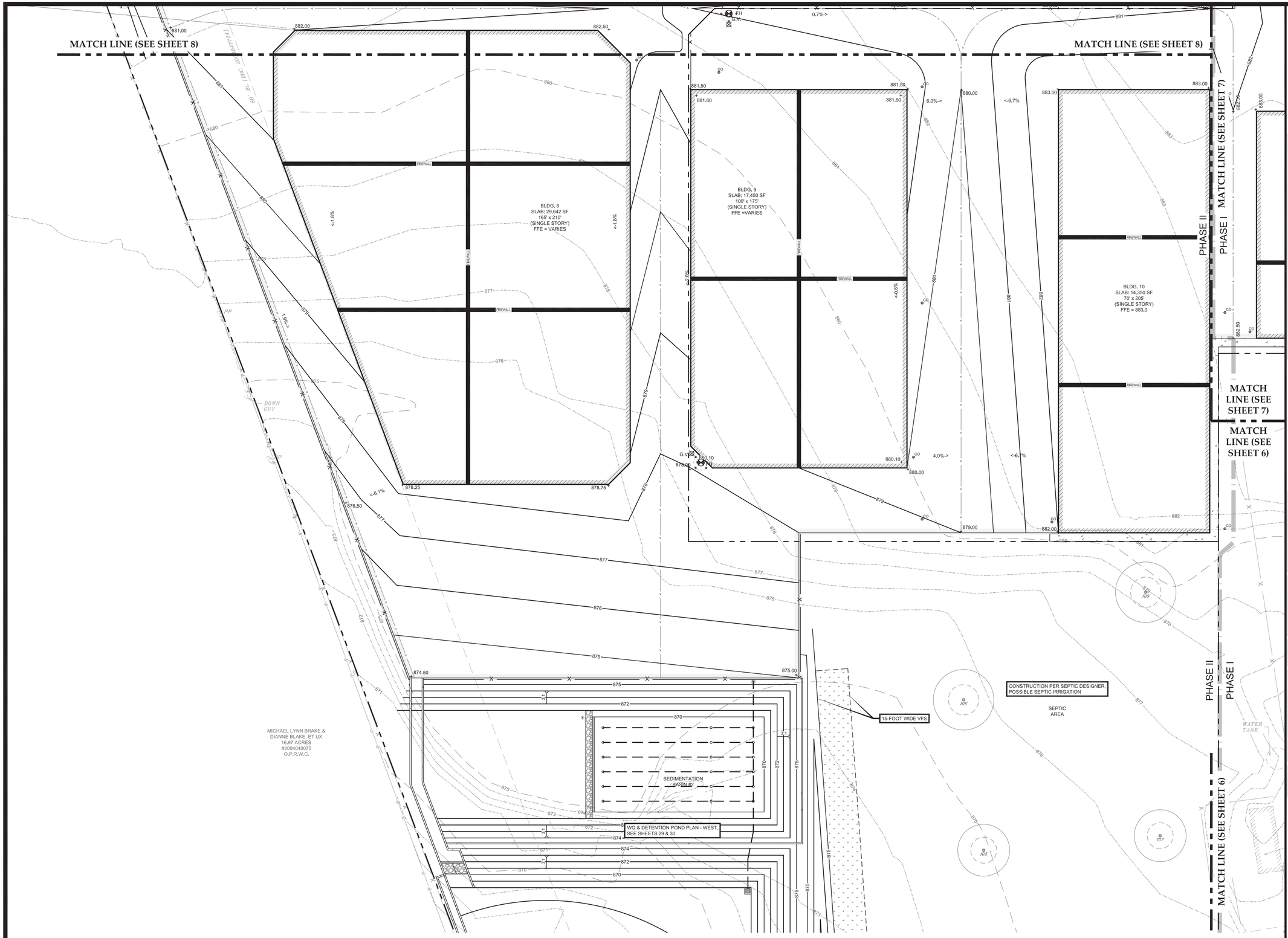
PROJECT
GRADING & DRAINAGE PLAN (2 OF 3)
SHEET NAME

DATE ISSUED
July, 2024

DESIGNED BY	DRAFTED BY
RCT	JH/MR

JOB NUMBER
1829

SHEET
8 OF 60



1 GRADING & DRAINAGE PLAN - (3 OF 3)

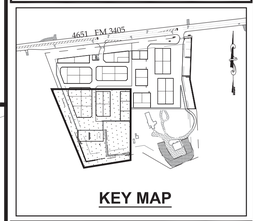
SCALE: 1:20

SCALE: 1" = 20'

0 10 20 40

LEGEND

- TREE TO REMAIN
- HERITAGE TREE
- EXISTING MINOR CONTOURS
- EXISTING MAJOR CONTOURS
- PROPOSED CONTOURS MINOR
- PROPOSED CONTOURS MAJOR
- OE — EXISTING OVERHEAD ELECTRIC
- UT — EXISTING UNDERGROUND TELEPHONE
- G — EXISTING UNDERGROUND GAS
- W — EXISTING WATER LINE
- WW — EXISTING WASTEWATER LINE
- PP — EXISTING POWER POLE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- WM — EXISTING WATER METER
- WM — PROP. WATER METER
- V — EXISTING GATE VALVE
- GV — PROP. GATE VALVE



KEY MAP

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WARNING!

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2. COMPARE THE CURB STOPS SHOWN ON THE GRADING PLAN TO THE CURB STOPS SHOWN ON THE SITE PLAN. RESOLVE ANY DIFFERENCES WITH ENGINEER AND SITE PLANNER PRIOR TO ORDERING THE CURB STOPS.

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STATE OF TEXAS
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2022-27-SWP

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TBPE Reg. No. F-10220

DATE

REVISION

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

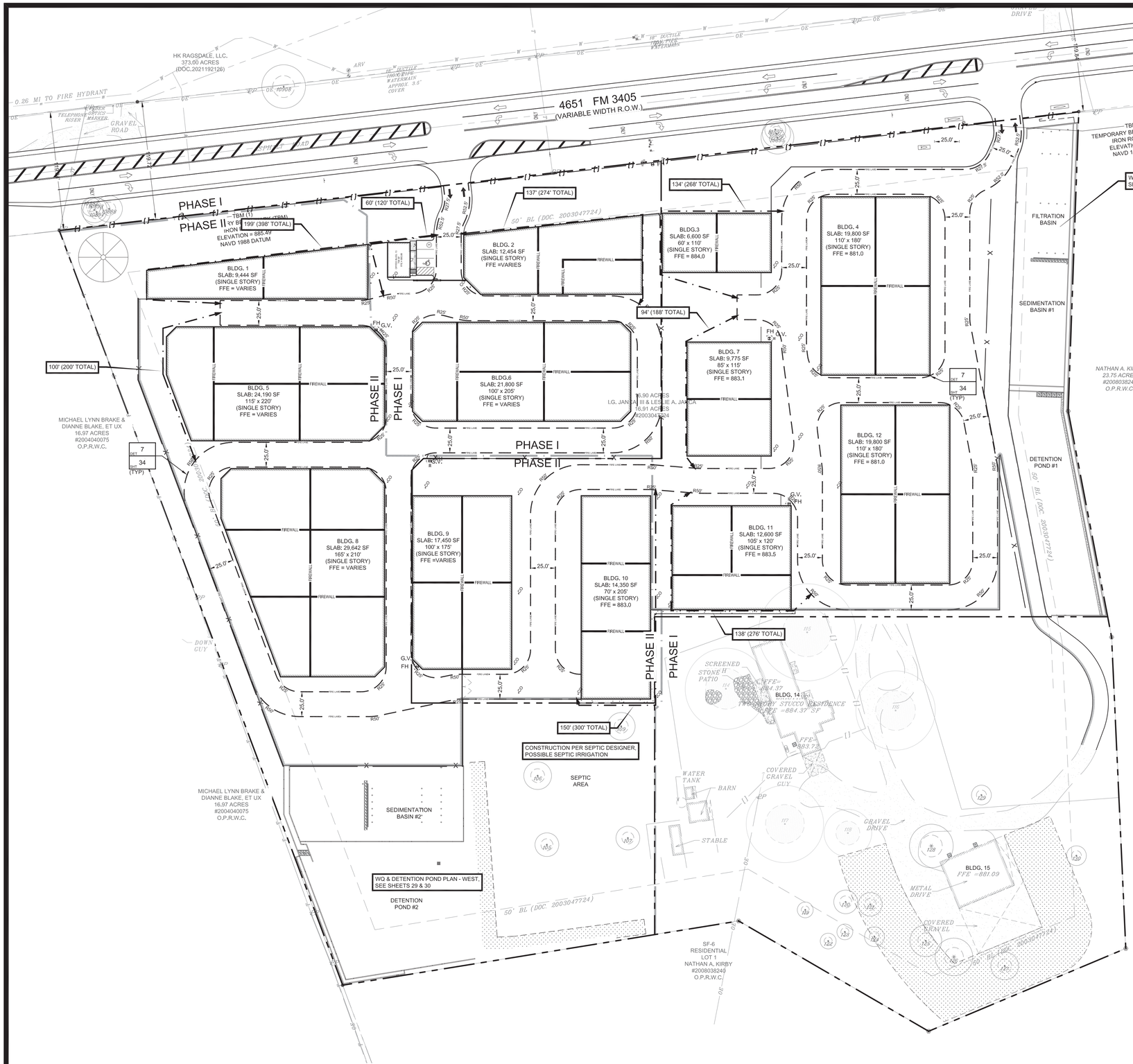
SHEET NAME: GRADING & DRAINAGE PLAN (3 OF 3)

DATE ISSUED: July, 2024

DESIGNED BY	DRAFTED BY
RCT	JH/MR

JOB NUMBER: 1829

SHEET: 9 OF 60



1 EMERGENCY ACCESS PLAN
SCALE: 1:50

SCALE: 1" = 50'
0 25 50 100

LEGEND

392' — TRUCK PROXIMITY / TRUCK PROXIMITY PULL DISTANCE

EMERGENCY ACCESS NOTES:

1. CURBS ALONG DESIGNATED FIRE LANES SHALL BE PAINTED RED, IN AREAS WITHOUT CURBS MARKING SHALL CONSIST OF SIX-INCH WIDE STRIPING THAT IS RED IN COLOR. WHITE LETTERING SHALL BE PROVIDED WHICH READS 'NO PARKING FIRE LANE'. THE LETTERING SHALL BE FOUR-INCHES IN HEIGHT AND SHALL BE SPACED AT INTERVALS NOT EXCEEDING 25 FEET.
2. A MINIMUM VERTICAL CLEARANCE OF 14 FEET WILL BE MAINTAINED FOR THE ENTIRE LENGTH AND WIDTH OF THE DESIGNATED EMERGENCY ACCESS DRIVES.
3. NO PORTION OF THE ACCESS DRIVE SERVING THIS FACILITY HAS A GRADE WHICH EXCEEDS 10%.
4. ACCESS DRIVES NEEDS TO BE DESIGNED TO SUPPORT THE WEIGHT OF A 75,000 POUNDS LIVE-LOAD UNDER ALL WEATHER CONDITIONS.
5. FIRE LANE SHALL BE CONSTRUCTED OF CONCRETE OR ASPHALT ONLY CAPABLE OF WITHSTANDING A 75,000 LB. IMPOSED LOAD.
6. ALL FIRE LANES SHALL HAVE AN UNOBSTRUCTED CLEARANCE OF NO LESS THAT 13'-6".
7. ALL GATES SHALL HAVE A KNOX KEY SWITCH INSTALLED FOR EMERGENCY ACCESS.

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DATE
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PROJECT
AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME
EMERGENCY ACCESS PLAN

STATE OF TEXAS
ROBERT C. THOMPSON
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PROFESSIONAL ENGINEER

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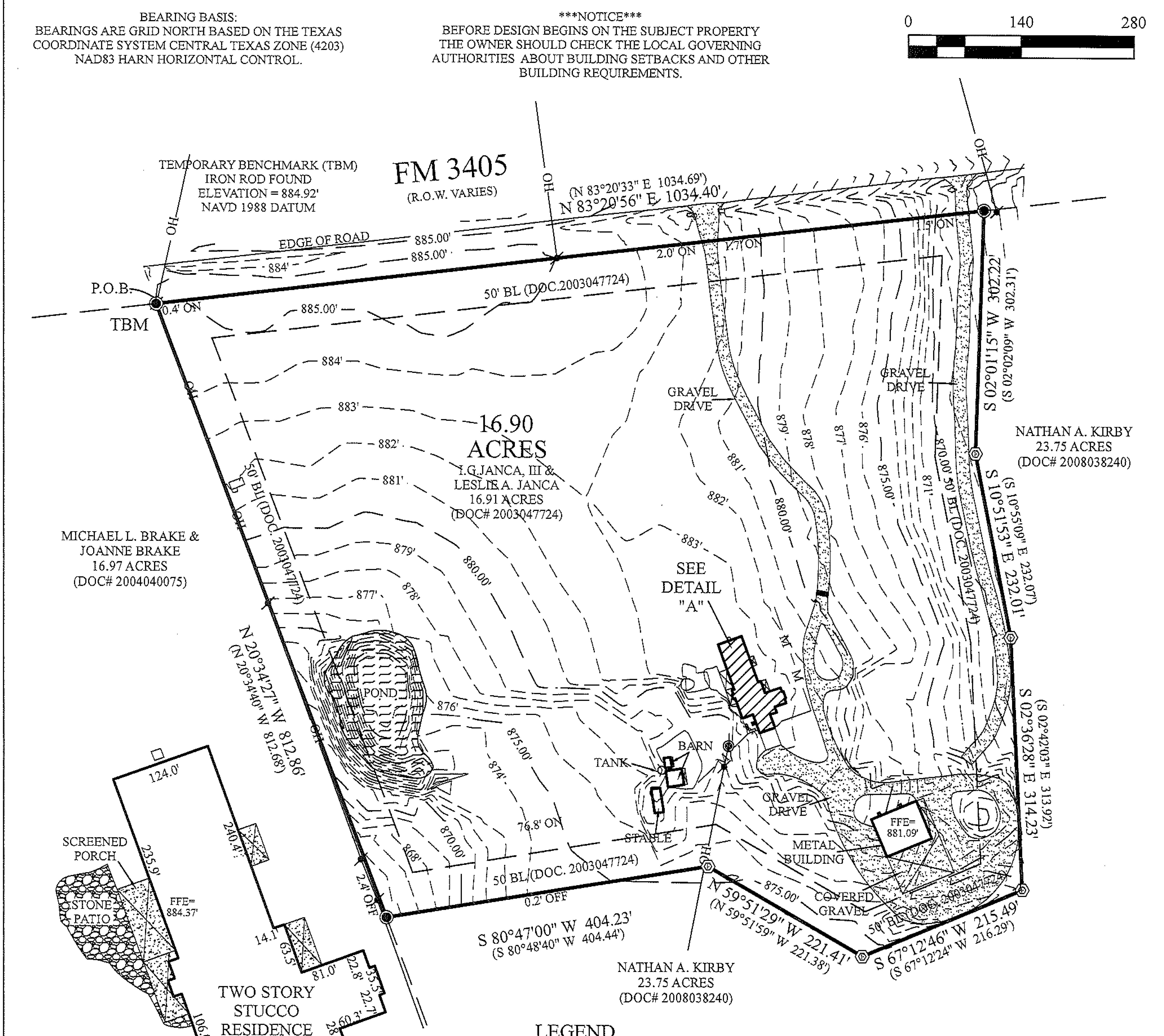
1829

SHEET
14 OF 60

2022-27-SWP

BEARING BASIS:
BEARINGS ARE GRID NORTH BASED ON THE TEXAS COORDINATE SYSTEM CENTRAL TEXAS ZONE (4203) NAD83 HARN HORIZONTAL CONTROL.

NOTICE
BEFORE DESIGN BEGINS ON THE SUBJECT PROPERTY THE OWNER SHOULD CHECK THE LOCAL GOVERNING AUTHORITIES ABOUT BUILDING SETBACKS AND OTHER BUILDING REQUIREMENTS.



LEGEND

(symbol)	1/2" ROD FOUND
(symbol)	FENCE POST FOR CORNER
— M —	METAL FENCE
— // —	WOOD FENCE
( )	RECORD INFORMATION
(symbol)	AIR CONDITIONER
(symbol)	UTILITY POLE
(symbol)	DOWN GUY
OH	OVERHEAD UTILITY LINE(S)
(symbol)	PROPANE TANK
ON	INSIDE OF SUBJECT BOUNDARY
OFF	OUTSIDE OF SUBJECT BOUNDARY
P.O.B.	POINT OF BEGINNING

STATE OF TEXAS
REGISTERED
EDWARD RUMSEY
5729
PROFESSIONAL LAND SURVEYOR

TO THE LIEN HOLDER AND / OR OWNERS OF THE PREMISES SURVEYED I DO HEREBY CERTIFY THAT THIS SURVEY SUBSTANTIALLY COMPLIES WITH THE CURRENT TEXAS SOCIETY OF PROFESSIONAL SURVEYORS MANUAL OF PRACTICE REQUIREMENTS FOR A CATEGORY 6, CONDITION 4, TOPOGRAPHIC SURVEY. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE.

RESTRICTIONS

RESTRICTIONS:
THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT AND THIS SURVEYOR DID NOT RESEARCH THE DEED RECORDS FOR PREVIOUS CONFLICTS IN TITLE, EASEMENTS AND/OR BOUNDARY LINE AGREEMENTS, THEREFORE, CERTAIN EASEMENTS MAY HAVE BEEN GRANTED WHICH ARE NOT REFLECTED HEREON. ONLY THOSE SETBACK LINES, EASEMENTS, BOUNDARY LINES AND INTERESTS WHICH ARE REPRESENTED ON THE PARENT SUBDIVISION PLAT, WHICH IS REFERENCED HEREON, ARE PLOTTED ON THIS SURVEY, NO DOCUMENTS OTHER THAN THOSE CITED ON THIS SURVEY HAVE BEEN EXAMINED.

LEGAL DESCRIPTION

BEING 16.90 ACRES OF LAND, OUT OF THE WINSLOW TURNER SURVEY, ABSTRACT NUMBER 607, WILLIAMSON COUNTY, TEXAS, SAME BEING ALL OF THAT CERTAIN I.G. JANCA III AND LESLIE A. JANCA 16.91 ACRE TRACT, RECORDED IN DOCUMENT NUMBER 2003047724, OFFICIAL PUBLIC RECORDS, WILLIAMSON COUNTY, TEXAS, SAID 16.90 ACRES OF LAND TO BE MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS IN EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF.

N / NE / E / SE / S / SW / W / NW
SCALE
1" = 140'

ALLSTAR Land Surveying
9020 ANDERSON MILL RD
AUSTIN, TEXAS 78729
(512) 249-8149 PHONE
(512) 331-5217 FAX
TBPELS FIRM NO. 10135000

F.I.R.M. MAP INFORMATION

THIS PROPERTY DOES NOT LIE WITHIN THE 100 YEAR FLOOD - PLAIN, AND HAS A ZONE "X" RATING AS SHOWN ON THE FLOOD INSURANCE RATE MAPS
F.I.R.M. MAP NO. 48491C0275E
PANEL: 0275E
DATED: 09/26/2008

THIS CERTIFICATION IS FOR INSURANCE PURPOSES ONLY AND IS NOT A GUARANTEE THAT THIS PROPERTY WILL OR WILL NOT FLOOD. CONTACT YOUR LOCAL FLOOD PLAIN ADMINISTRATOR FOR THE CURRENT STATUS OF THIS TRACT.

ADDRESS

I.G. JANCA, III and
LESLIE A. JANCA
4651 FM 3405
GEORGETOWN, WILLIAMSON COUNTY, TEXAS

SURVEY DATE:	JANUARY 21, 2022	FIELDED BY:	JACOB STINE	01/14/2022
TITLE CO.:	-	CALC. BY:	CHRIS ZOTTER	01/17/2022
G.F. NO.:	-	DRAWN BY:	DAMIAN SMITH	01/17/2022
JOB NO.:	A0100822	UPDATE BY:	-	-
		RPLS CHECK:	EDWARD RUMSEY	01/21/2022

WARNING: DRAWING HAS BEEN REDUCED TO FIT WITHIN THE BORDER. USE BAR SCALE FOR MEASUREMENT

2022-27-SWP

PROJECT	AAA FM 3405 4701 & 4721 FM 3405, GEORGETOWN TX, 78633
SHEET NAME	SURVEY
DATE ISSUED	July, 2024
DESIGNED BY	RCT
DRAFTED BY	JH/MR
JOB NUMBER	1829
SHEET	16 OF 60

REVISION | DATE

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CITY OF GEORGETOWN
GENERAL NOTES:

1. THESE CONSTRUCTION PLANS WERE PREPARED, SEALED AND DATED BY A TEXAS LICENSED PROFESSIONAL ENGINEER. THEREFORE BASED ON THE ENGINEER'S CONCURRENCE OF COMPLIANCE, THE CONSTRUCTION PLANS FOR CONSTRUCTION OF THE PROPOSED PROJECT ARE HEREBY APPROVED SUBJECT TO THE STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS MANUAL AND ALL OTHER APPLICABLE CITY, STATE AND FEDERAL REQUIREMENTS AND CODES.
2. THIS PROJECT IS SUBJECT TO ALL CITY STANDARD SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF SUBMITTAL OF THE PROJECT TO THE CITY.
3. THE SITE CONSTRUCTION PLANS SHALL MEET ALL REQUIREMENTS OF THE APPROVED SITE PLAN.
4. WASTEWATER MAINS AND SERVICE LINES SHALL BE SDR 26 PVC.
5. WASTEWATER MAINS SHALL BE INSTALLED WITHOUT HORIZONTAL OR VERTICAL BENDS.
6. MAXIMUM DISTANCE BETWEEN WASTEWATER MANHOLES IS 500 FEET.
7. WASTEWATER MAINS SHALL BE LOW PRESSURE AIR TESTED AND MANDREL TESTED BY THE CONTRACTOR ACCORDING TO CITY OF GEORGETOWN AND TCEQ REQUIREMENTS.
8. WASTEWATER MANHOLES SHALL BE VACUUM TESTED AND COATED BY THE CONTRACTOR ACCORDING TO CITY OF GEORGETOWN AND TCEQ REQUIREMENTS.
9. WASTEWATER MAINS SHALL BE CAMERA TESTED BY THE CONTRACTOR AND SUBMITTED TO THE CITY ON DVD FORMAT PRIOR TO PAVING THE STREETS.
10. PRIVATE WATER SYSTEM FIRE LINES SHALL BE TESTED BY THE CONTRACTOR TO 200 PSI FOR 2 HOURS.
11. PRIVATE WATER SYSTEM FIRE LINES SHALL BE DUCTILE IRON PIPING FROM THE WATER MAIN TO THE BUILDING SPRINKLER SYSTEM, AND 200 PSI C900 PVC FOR ALL OTHERS.
12. PUBLIC WATER SYSTEM MAINS SHALL BE 150 PSI C900 PVC AND TESTED BY THE CONTRACTOR AT 150 PSI FOR 2 HOURS.
13. ALL BENDS AND CHANGES IN DIRECTION ON WATER MAINS SHALL BE RESTRAINED AND THRUST BLOCKED.
14. LONG FIRE HYDRANT LEADS SHALL BE RESTRAINED.
15. ALL WATER LINES ARE TO BE BACTERIA TESTED BY THE CONTRACTOR ACCORDING TO THE CITY STANDARDS AND SPECIFICATIONS.
16. WATER AND SEWER MAIN CROSSINGS SHALL MEET ALL REQUIREMENTS OF THE TCEQ AND THE CITY.
17. FLEXIBLE BASE MATERIAL FOR PUBLIC STREETS SHALL BE TXDOT TYPE A GRADE 1.
18. HOT MIX ASPHALTIC CONCRETE PAVEMENT SHALL BE TYPE D UNLESS OTHERWISE SPECIFIED AND SHALL BE A MINIMUM OF 2 INCHES THICK ON PUBLIC STREETS AND ROADWAYS.
19. ALL SIDEWALK RAMPS ARE TO BE INSTALLED WITH THE PUBLIC INFRASTRUCTURE.
20. A MAINTENANCE BOND IS REQUIRED TO BE SUBMITTED TO THE CITY PRIOR TO ACCEPTANCE OF THE PUBLIC IMPROVEMENTS. THIS BOND SHALL BE ESTABLISHED FOR 1 YEAR IN THE AMOUNT OF 25% OF THE COST OF THE PUBLIC IMPROVEMENTS AND SHALL FOLLOW THE CITY FORMAT.
21. RECORD DRAWINGS OF THE PUBLIC IMPROVEMENTS SHALL BE SUBMITTED TO THE CITY BY THE DESIGN ENGINEER PRIOR TO ACCEPTANCE OF THE PROJECT. THESE DRAWINGS SHALL BE ON MYLAR OR ON TIFF OR PDF DISK (300DPI). IF A DISK IS SUBMITTED, A BOND SET SHALL BE INCLUDED WITH THE DISK.

TLE GENERAL CONTRACT NOTES

1) CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING STRUCTURES, UTILITIES, AND FACILITIES PRIOR TO ANY EXCAVATION REQUIRED FOR CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. ANY DISCREPANCIES OR CONFLICTS FOUND SHALL BE BROUGHT TO THE ATTENTION OF ENGINEER.

2) CONTRACTOR IS TO TAKE PRECAUTION TO PROTECT EXISTING STRUCTURES, UTILITIES, AND OTHER FACILITIES FROM DAMAGE WHILE CONSTRUCTION OF THE IMPROVEMENTS. ANY DAMAGE TO EXISTING STRUCTURES, UTILITIES OR OTHER FACILITIES INCURRED AS A RESULT OF CONTRACTORS ACTIONS ARE TO BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

3) CONTRACTOR IS TO GIVE NOTICE TO ALL AFFECTED PARTIES AND ALL REGULATORS OF THE COMMENCEMENT OF WORK AT LEAST 48 HOURS IN ADVANCE OF COMMENCEMENT OF WORK.

4) CONTRACTOR IS RESPONSIBLE FOR THE SOURCE AND TRANSPORT OF ALL POTABLE AND CONSTRUCTION WATER FOR THE PROJECT SITE AND TO THE PROJECT SITE AND THE CONTRACTOR IS RESPONSIBLE FOR PAYMENT OF THE SAME.

5) ANY WATER USED FOR ADDING MOISTURE FOR COMPACTION SHALL BE FREE FROM OIL, WASTE, AND ANY OTHER OBJECTIONABLE MATERIAL.

6) CONTRACTOR IS RESPONSIBLE FOR THE PERFORMANCE AND PAYMENT OF ALL DENSITY TESTS, CONCRETE TESTS, AND ASPHALT TESTS, UNLESS OTHERWISE SPECIFIED. ALL SUCH TESTS ARE TO BE PERFORMED IN ACCORDANCE WITH CITY'S SPECIFICATIONS INCLUDING FREQUENCY, UNLESS OTHERWISE SPECIFIED,. LOCATIONS FOR DENSITY TESTS WILL BE AS SPECIFIED BY THE OWNER OR THEIR REPRESENTATIVE.

7) CONTRACTOR IS RESPONSIBLE FOR THE PERFORMANCE OF AND PAYMENT OF ALL CONSTRUCTION STAKING, UNLESS OTHERWISE SPECIFIED. ENGINEER MAY ASSIST IN CONSTRUCTION STAKING AS REQUIRED BY THE GOVERNING AUTHORITIES OR AS REQUESTED, AND PAID FOR, BY CONTRACTOR.

8) ALL AS-BUILT DIMENSIONS SHALL CONFORM TO THE DESIGN DIMENSIONS PLUS OR MINUS 0.02 FEET. ALL AS-BUILT SLOPES SHALL CONFORM TO THE DESIGNED SLOPES PLUS OR MINUS 0.005 FOOT PER FOOT.

9) THE METHODOLOGY FOR THE CONSTRUCTION OF THE IMPROVEMENTS IS THE RESPONSIBILITY OF THE CONTRACTOR.

10) CONTRACTOR IS TO PROVIDE THE MATERIALS, EQUIPMENT, AND EFFORT TO COMPLETE THE INSTALLATION OF THE PROPOSED IMPROVEMENTS, WHETHER THOSE MATERIALS, EQUIPMENT, OR EFFORT IS SPECIFICALLY MENTIONED IN THESE PLANS OR NOT.

11) CONTRACTOR IS TO COMPLY WITH ALL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS AND REGULATIONS, AS WELL AS ANY OTHER APPLICABLE FEDERAL, STATE, OR LOCAL HEALTH AND SAFETY STANDARDS, LAWS, OR REGULATIONS. FAILURE TO COMPLY WITH THE REQUIREMENTS SPECIFIED WILL BE CONSIDERED JUST AND SUFFICIENT CAUSE FOR THE OWNER TO STOP WORK.

12) UNLESS OTHERWISE SPECIFIED BY THE GEOTECHNICAL ENGINEER IN THE GEOTECHNICAL REPORT FOR THIS PROJECT, SELECT BACK FILL SHALL:
    - BE SUBSTANTIALLY FREE OF ORGANIC MATERIALS
    - HAVE A PLASTICITY INDEX BETWEEN 10 AND 18,
    - HAVE A LIQUID LIMIT OF LESS THAN 35, AND
    - FREE OF STONES OR ROCKS OVER 2 INCHES IN ANY DIMENSION.

    SUCH SELECT FILL, WHEN CALLED FOR ON THE PLANS AND UNLESS OTHERWISE SPECIFIED, SHALL BE PLACED IN LOOSE, HORIZONTAL LAYERS SIX TO NINE INCHES IN THICKNESS AND COMPACTED TO 95 PERCENT OF THE STANDARD PROCTOR DENSITY OR THE MAXIMUM DENSITY AS SPECIFIED BY TXDOT TEST METHOD TEX-114-E. SANDY LOAM SHALL NOT BE USED FOR SELECT FILL.

13) UNLESS OTHERWISE SPECIFIED, THE CONTRACTOR IS RESPONSIBLE FOR THE PAYMENT OF AND PHYSICAL REMOVAL OF ALL SURPLUS MATERIAL FROM THE SITE. THE REMOVAL OF ANY MATERIAL FROM THE SITE SHALL BE TO A LOCATION APPROVED BY THE GOVERNING AGENCY AND OWNER.

14) UNLESS OTHERWISE SPECIFIED, THE PROVISION OF AND PAYMENT FOR BONDING, INCLUDING BUT NOT LIMITED TO THE PROVISION OF PERFORMANCE AND PAYMENT BONDS, IS TO BE CONSIDERED SUBSIDIARY TO OTHER WORK.

15) UNLESS OTHERWISE SPECIFIED, AND NOT INCLUDING MEASUREMENT AND PAYMENT SECTIONS, ALL WORK ON THESE PLANS SHALL BE IN CONFORMANCE WITH THE CITY'S STANDARD SPECIFICATIONS.

TLE SPECIAL NOTES FOR STORM WATER POLLUTION PREVENTION PLANS (SW3P)

1) ALL EROSION SEDIMENT CONTROLS SHALL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT SHALL BE PERFORMED AT THE EARLIEST POSSIBLE DATE BUT NO LATER THAN 7 CALENDAR DAYS AFTER THE SURROUNDING EXPOSED GROUND HAS DRIED SUFFICIENTLY TO PREVENT FURTHER DAMAGE FROM HEAVY EQUIPMENT. DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED, TEMPORARILY OR PERMANENTLY, SHALL BE STABILIZED WITHIN 14 CALENDAR DAYS UNLESS THEY ARE SCHEDULED TO AND DO RESUME WITHIN 21 CALENDAR DAYS. THE AREAS ADJACENT TO CREEKS AND DRAINAGE WAYS SHALL HAVE PRIORITY FOLLOWED BY DEVICES PROTECTING STORM SEWER INLETS.

2) AN INSPECTION OF ALL EROSION CONTROLS SHALL BE PERFORMED BY A DESIGNATED INSPECTOR EVERY 7 CALENDAR DAYS AS WELL AS AFTER EVERY HALF INCH OR MORE RAIN AS RECORDED ON A NON-FREEZING RAIN GAUGE TO BE LOCATED ON THE PROJECT SITE. AN INSPECTION AND MAINTENANCE REPORT SHALL BE FILED FOR EACH INSPECTION. BASED ON THE INSPECTION RESULTS, THE CONTROLS SHALL BE REVISED AS PER THE INSPECTION REPORT. CONTRACTOR SHALL CORRECT ANY PROBLEMS IDENTIFIED WITHIN 48 HOURS.

3) EXCEPT AS SPECIFIED ELSEWHERE, ALL WASTE MATERIALS SHALL BE COLLECTED IN A METAL DUMPSTER HAVING A SECURE COVER. THE DUMPSTER SHALL MEET ALL STATE AND LOCAL SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND DEBRIS FROM CONSTRUCTION SHALL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER SHALL BE EMPTIED, AS NECESSARY OR AS REQUIRED BY LOCAL REGULATION, AND HAULED TO A LOCAL APPROVED LAND FILL SITE. THE BURYING OF CONSTRUCTION WASTE ON THE PROJECT SITE SHALL NOT BE PERMITTED.

4) THE SPECIFICATION OF CONCRETE WASHOUT AREAS SHALL BE REQUIRED AND SHALL CONSIST AN APPROVED WASHOUT SYSTEM, SUCH AS RTC SUPPLY VINYL-CON CONCRETE WASHOUT (SIZE BASED ON SIZE OF JOB AND NUMBER OF CONCRETE TRUCKS), OR EQUAL.

5) AS A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORY ARE CONSIDERED TO BE HAZARDOUS: PAINTS, ACIDS, SOLVENTS, ASPHALT PRODUCTS, CHEMICAL ADDITIVES FOR SOIL STABILIZATION, AND CONCRETE CURING COMPOUNDS OR ADDITIVES. IN THE EVENT OF A SPILL WHICH MAY BE HAZARDOUS, THE SPILL REMEDIATED IN ACCORDANCE WITH THE LOCAL AND STATE REGULATIONS.

6) ALL SANITARY WASTE SHALL BE COLLECTED FROM PORTABLE UNITS, AS NECESSARY OR AS REQUIRED BY LOCAL REGULATIONS, BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

7) FUELS AND HAZARDOUS SUBSTANCES ARE NOT TO BE STORED ON SITE.

8) CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS WATERING WITH IRRIGATION TRUCKS AND/OR MULCH.

9) THE LIMITS OF CONSTRUCTION FOR THIS PROJECT IS 18.209 ACRES.

EXPECTED TIME FRAMES FOR SEQUENCE OF CONSTRUCTION FOR SWPPP:	
1.	GET PERMITS, SET UP EROSION CONTROLS, AND HAVE PRE-CONSTRUCTION CONFERENCE (4 WEEKS)
2.	ROUGH CUT PONDS, PERFORM ANY DEMOLITION, AND ROUGH GRADE SITE (10 WEEKS)
3.	CHECK ENVIRONMENTAL CONTROLS (ON-GOING ACTIVITY)
4.	INSTALL UNDERGROUND UTILITIES (10 WEEK)
5.	CONSTRUCTION OF BUILDING (25 WEEKS)
6.	PAVE SITE (4 WEEKS)
7.	FINISH GRADE SITE, CLEAN UP, LANDSCAPE, AND REVEGETATE (2 WEEKS)

TLE GENERAL CONCRETE NOTES

1) ALL CONCRETE, REINFORCING, AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE LATEST ACI CODES AND IBC INCLUDING LAPS, SPLICES, TERMINATIONS, BAR SUPPORTS, AND CONCRETE COVER.
2) UNLESS OTHERWISE SPECIFIED, BARS SHALL BE DEFORMED GRADE 60.
3) UNLESS OTHERWISE SPECIFIED, ALL CONCRETE FOR FLAT WORK, CURBS, AND WALLS 3 FEET IN HEIGHT OR LESS SHALL CONFORM TO CITY OF AUSTIN CLASS A (3000 psi) AND ALL CONCRETE FOR WALLS GREATER THAN 3 FEET IN HEIGHT, AND OTHER VERTICAL STRUCTURES, SHALL CONFORM TO CITY OF AUSTIN CLASS S (4000 psi).
4) UNLESS OTHERWISE SPECIFIED, ALL DOWELS SHALL BE OF THE SAME SIZE AND SPACING AS THE REINFORCEMENT TO WHICH THE DOWEL IS TO BE SPLICED. DOWELS SHALL BE FIRMLY SET PRIOR TO PLACING THE CONCRETE; DOWELS SHALL NOT BE INSERTED INTO FRESH CONCRETE.
5) UNLESS OTHERWISE SPECIFIED, ALL EXPOSED WALL EDGES ARE TO RECEIVE 3/4" CHAMFER.
6) UNLESS OTHERWISE SPECIFIED, ALL EXPOSED VERTICAL SURFACES TO RECEIVE A RUBBED FINISH AND ALL EXPOSED FLAT WORK SURFACES TO RECEIVE A BROOM FINISH.
7) UNLESS OTHERWISE SPECIFIED OR SHOWN, EXPANSION JOINTS AND CONTROL JOINTS SHOULD BE LAID OUT SO THAT NO SECTION OF CONCRETE HAS A CORNER WITH AN ANGLE LESS THAN 60 DEGREES. ANY JOINT FORMING A CORNER WITH AN ANGLE OF LESS THAN 60 DEGREES SHOULD BE REALIGNED TO INCLUDE A STRAIGHT SECTION AT 90 DEGREES THAT IS AT LEAST 6 INCHES IN LENGTH
8) UNLESS OTHERWISE SPECIFIED, CONTROL JOINTS IN CONCRETE FLAT WORK SHALL BE FORMED WITH A TROWEL, 3/4" DEEP, 5 FEET ON CENTER, AND ROUNDED. UNLESS OTHERWISE SPECIFIED, CONTROL JOINTS IN VERTICAL CONCRETE SHALL BE FORMED WITH 3/4" CHAMFER STRIPS AND SHALL BE SPACED NO FURTHER APART THAN 25 FEET ON CENTER.
9) UNLESS OTHERWISE SPECIFIED, EXPANSION JOINTS SHALL BE INCLUDED IN ALL CONCRETE FLAT WORK AT A MAXIMUM SPACING OF 25 FEET ON CENTER AND SHALL BE INCLUDED IN ALL CONCRETE WALLS AT A MAXIMUM SPACING OF 20 FEET ON CENTER. JOINTS SHALL BE 3/4-INCH WIDE AND FILLED WITH ASPHALTIC FIBER BOARD. EXPANSION JOINTS IN WALLS RETAINING WATER SHALL INCLUDE A CONTINUOUS WATER STOP EXTENDING DOWN TO THE FOOTING. DOWELS SHALL BE INCLUDED IN ALL EXPANSION JOINTS THAT ARE AT LEAST OF THE SAME SIZE AND SPACING AS THE REINFORCING

TLE GENERAL PAVEMENT NOTES:

1) ALL MARKINGS, MARKERS, SIGNAGE, BUTTONS, PAINT AND OTHER TRAFFIC RELATED CONTROLS SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) MANUAL ON UNIFORM TRAFFIC CONTROL DEVISES FOR STREETS AND HIGHWAYS (MUTCD). THESE INCLUDE ANY METHODS, PAVEMENT MARKING, SIGNAGE NECESSARY FOR WARNING MOTORISTS, WARN PEDESTRIANS, AND/OR DIVERTING TRAFFIC DURING CONSTRUCTION AS WELL AS ANY MARKINGS, MARKERS, SIGNAGE, BUTTONS, AND PAINT REQUIRED FOR THE FINISHED PRODUCT.

SPILL PREVENTION AND CONTROL NOTES (BASED ON TAC 30.327)

A DISCHARGE OR SPILL IS AN ACT OR OMISSION BY WHICH OIL, HAZARDOUS SUBSTANCES, WASTE, OR OTHER SUBSTANCES ARE SPILLED, LEAKED, PUMPED, POURED, EMITTED, ENTERED, OR DUMPED ONTO OR INTO WATERS IN THE STATE OF TEXAS OR BY WHICH THOSE SUBSTANCES ARE DEPOSITED WHERE, UNLESS CONTROLLED OR REMOVED, THEY MAY DRAIN, SEEP, RUN, OR OTHERWISE ENTER WATER IN THE STATE OF TEXAS.

NOTIFICATION REQUIREMENTS:
(A) REPORTABLE DISCHARGE OR SPILL.
A REPORTABLE DISCHARGE OR SPILL IS A DISCHARGE OR SPILL OF OIL, PETROLEUM PRODUCT, USED OIL, HAZARDOUS SUBSTANCES, INDUSTRIAL SOLID WASTE, OR OTHER SUBSTANCES INTO THE ENVIRONMENT IN A QUANTITY EQUAL TO OR GREATER THAN THE REPORTABLE QUANTITY LISTED IN SECTION 327.4 OF THIS TITLE (RELATING TO REPORTABLE QUANTITIES) IN ANY 24-HOUR PERIOD.
(B) INITIAL NOTIFICATION.
UPON THE DETERMINATION THAT A REPORTABLE DISCHARGE OR SPILL HAS OCCURRED, THE CONTRACTOR SHALL NOTIFY THE TCEQ AS SOON AS POSSIBLE BUT NOT LATER THAN 24 HOURS AFTER THE DISCOVERY OF THE SPILL OR DISCHARGE.
(C) METHOD OF NOTIFICATION.
CONTRACTOR SHALL NOTIFY TCEQ IN ANY REASONABLE MANNER INCLUDING BY TELEPHONE, IN PERSON, OR BY ANY OTHER METHOD APPROVED BY THE TCEQ. IN ALL CASES, THE INITIAL NOTIFICATION SHALL PROVIDE, TO THE EXTENT KNOWN, THE INFORMATION LISTED IN SUBSECTION (D) OF THIS SECTION. NOTICE PROVIDED UNDER THIS SECTION SATISFIES THE FEDERAL REQUIREMENT TO NOTIFY THE STATE EMERGENCY RESPONSE COMMISSION IN THE STATE OF TEXAS. THE CONTRACTOR SHALL NOTIFY ONE OF THE FOLLOWING:
    (1) THE STATE EMERGENCY RESPONSE CENTER AT 1-800-832-8224;
    (2) DURING NORMAL BUSINESS HOURS ONLY, THE REGIONAL OFFICE FOR THE TCEQ REGION IN WHICH THE DISCHARGE OR SPILL OCCURRED; OR
    (3) THE TCEQ AT THE TCEQ 24-HOUR SPILL REPORTING NUMBER(512) 239-2507 OR (512) 463-7727..
(D) INFORMATION REQUIRED IN INITIAL NOTIFICATION.
INITIAL NOTIFICATION SHALL PROVIDE, TO THE EXTENT KNOWN, THE INFORMATION IN THE FOLLOWING LIST. COPIES OF SPILL REPORTS PREPARED FOR OTHER GOVERNMENTAL AGENCIES SHALL SATISFY THIS REQUIREMENT IF THEY CONTAIN, OR ARE SUPPLEMENTED TO CONTAIN, ALL THE INFORMATION REQUIRED BY THIS SUBSECTION. THE INITIAL NOTIFICATION SHALL CONTAIN:
    (1) THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE PERSON MAKING THE TELEPHONE REPORT;
    (2) THE DATE, TIME, AND LOCATION OF THE SPILL OR DISCHARGE;
    (3) SPECIFIC DESCRIPTION OR IDENTIFICATION OF THE OIL, PETROLEUM PRODUCT, HAZARDOUS SUBSTANCES OR OTHER SUBSTANCES CHARGED/SPILLED;
    (4) AN ESTIMATE OF THE QUANTITY DISCHARGED OR SPILLED;
    (5) THE DURATION OF THE INCIDENT;
    (6) THE NAME OF THE SURFACE WATER OR A DESCRIPTION OF THE WATERS IN THE STATE AFFECTED OR THREATENED BY THE DISCHARGE OR SPILL;
    (7) THE SOURCE OF THE DISCHARGE OR SPILL;
    (8) A DESCRIPTION OF THE EXTENT OF ACTUAL OR POTENTIAL WATER POLLUTION OR HARMFUL IMPACTS TO THE ENVIRONMENT AND AN IDENTIFICATION OF ANY ENVIRONMENTALLY SENSITIVE AREAS OR NATURAL RESOURCES AT RISK;
    (9) IF DIFFERENT FROM PARAGRAPH (1) OF THIS SUBSECTION, THE NAMES, ADDRESSES, AND TELEPHONE NUMBERS OF THE CONTRACTOR AND THE CONTACT PERSON AT THE LOCATION OF THE DISCHARGE OR SPILL;
    (10) DESCRIPTION OF ANY ACTIONS THAT HAVE, WILL, AND/OR ARE BEING TAKEN TO CONTAIN AND RESPOND TO THE DISCHARGE/SPILL;
    (11) ANY KNOWN OR ANTICIPATED HEALTH RISKS;
    (12) THE IDENTITY OF ANY GOVERNMENTAL REPRESENTATIVES, INCLUDING LOCAL AUTHORITIES OR THIRD PARTIES, RESPONDING TO THE DISCHARGE/SPILL;
    (13) ANY OTHER INFORMATION THAT MAY BE SIGNIFICANT TO THE RESPONSE ACTION.
(E) UPDATE NOTIFICATION.
CONTRACTOR SHALL NOTIFY THE TCEQ AS SOON AS POSSIBLE WHENEVER NECESSARY TO PROVIDE INFORMATION THAT WOULD TRIGGER A CHANGE IN THE RESPONSE TO THE SPILL OR DISCHARGE.
(F) CORRECTION OF RECORDS.
NOTIFYING TCEQ THAT A REPORTABLE DISCHARGE OR SPILL HAS OCCURRED SHALL NOT BE CONSTRUED AS AN ADMISSION THAT POLLUTION HAS OCCURRED. FURTHERMORE, IF THE CONTRACTOR DETERMINES, AFTER NOTIFICATION, THAT A REPORTABLE DISCHARGE OR SPILL DID NOT OCCUR, THE CONTRACTOR MAY SEND A LETTER TO TCEQ DOCUMENTING THAT DETERMINATION. IF THE EXECUTIVE DIRECTOR AGREES WITH THAT DETERMINATION, THE EXECUTIVE DIRECTOR WILL NOTE THE DETERMINATION IN COMMISSION RECORDS. IF THE EXECUTIVE DIRECTOR DISAGREES WITH THAT DETERMINATION, THE EXECUTIVE DIRECTOR WILL NOTIFY THE CONTRACTOR WITHIN 30 DAYS.
(G) NOTIFICATION OF LOCAL GOVERNMENTAL AUTHORITIES.
IF THE DISCHARGE OR SPILL CREATES AN IMMINENT HEALTH THREAT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY AND COOPERATE WITH LOCAL EMERGENCY AUTHORITIES (FIRE DEPARTMENT, FIRE MARSHAL, LAW ENFORCEMENT AUTHORITY, HEALTH AUTHORITY, OR LOCAL EMERGENCY PLANNING COMMITTEE (LEPC), AS APPROPRIATE). THE RESPONSIBLE PARTY WILL COOPERATE WITH THE LOCAL EMERGENCY AUTHORITY IN PROVIDING SUPPORT TO IMPLEMENT APPROPRIATE NOTIFICATION AND RESPONSE ACTIONS. THE LOCAL EMERGENCY AUTHORITY, AS NECESSARY, WILL IMPLEMENT ITS EMERGENCY MANAGEMENT PLAN, WHICH MAY INCLUDE NOTIFYING AND EVACUATING AFFECTED PERSONS. IN THE ABSENCE OF A LOCAL EMERGENCY AUTHORITY, THE CONTRACTOR SHALL TAKE REASONABLE MEASURES TO NOTIFY POTENTIALLY AFFECTED PERSONS OF THE IMMINENT HEALTH THREAT.
(H) NOTIFICATION TO PROPERTY OWNER AND RESIDENTS.
AS SOON AS POSSIBLE, BUT NO LATER THAN TWO WEEKS AFTER DISCOVERY OF SPILL/DISCHARGE. CONTRACTOR SHALL REASONABLY ATTEMPT TO NOTIFY THE OWNER (IF IDENTIFIABLE) OR OCCUPANT OF THE PROPERTY UPON WHICH DISCHARGE/SPILL OCCURRED AS WELL AS THE OCCUPANTS OF ANY PROPERTY THAT THE CONTRACTOR REASONABLY BELIEVES IS ADVERSELY AFFECTED.
(I) ADDITIONAL NOTIFICATION REQUIRED.
NOTICE PROVIDED UNDER THIS SECTION SATISFIES THE FEDERAL REQUIREMENT TO NOTIFY THE STATE EMERGENCY RESPONSE COMMISSION IN THE STATE OF TEXAS. HOWEVER, COMPLYING WITH THE NOTIFICATION REQUIREMENTS SET FORTH IN THIS SECTION DOES NOT RELIEVE, SATISFY, OR FULFILL ANY OTHER NOTIFICATION REQUIREMENTS IMPOSED BY PERMIT OR OTHER LOCAL, STATE, OR FEDERAL LAW. THE CONTRACTOR SHOULD CONTACT THE LOCAL AUTHORITIES TO DETERMINE IF ANY ADDITIONAL NOTIFICATION IS REQUIRED AND SHOULD CONSULT WITH THE TECQ AS TO WHETHER ANY ADDITIONAL STATE OR FEDERAL NOTIFICATION IS REQUIRED.
(J) ALTERNATIVE NOTIFICATION PLANS.
    (1) CONTRACTORS IN CHARGE OF ACTIVITIES AND FACILITIES MAY SUBMIT AND IMPLEMENT AN ALTERNATIVE NOTIFICATION PLAN. THIS ALTERNATIVE NOTIFICATION PLAN SHALL COMPLY WITH THE TEXAS WATER CODE, SECTION 26.039. CONTRACTORS SHALL OBTAIN THE TCEQ'S WRITTEN APPROVAL BEFORE IMPLEMENTING ANY ALTERNATIVE NOTIFICATION PLAN.
    (2) UPON APPROVAL OF THE TCEQ REGIONAL MANAGER, CONTRACTORS MAY PROVIDE THE INITIAL NOTIFICATION BY FACSIMILE TO THE REGIONAL OFFICE DURING NORMAL BUSINESS HOURS.

REPORTABLE QUANTITIES (RQ)
(A) HAZARDOUS SUBSTANCES.
THE REPORTABLE QUANTITIES FOR HAZARDOUS SUBSTANCES SHALL BE:
    (1) FOR SPILLS/DISCHARGES ONTO LAND--THE QUANTITY DESIGNATED AS THE FINAL REPORTABLE QUANTITY (RQ) IN TABLE 302.4 IN 40 CFR SECTION 302.4;
    (2) FOR SPILLS OR DISCHARGES INTO WATERS IN THE STATE--THE QUANTITY DESIGNATED AS THE FINAL RQ IN TABLE 302.4 IN 40 CFR SECTION 302.4, EXCEPT WHERE THE FINAL RQ IS GREATER THAN 100 POUNDS IN WHICH CASE THE RQ SHALL BE 100 POUNDS.
(B) OIL, PETROLEUM PRODUCT, AND USED OIL.
    (1) THE RQ FOR CRUDE OIL AND OIL OTHER THAN THAT DEFINED AS PETROLEUM PRODUCT OR USED OIL SHALL BE:
        (A) FOR SPILLS OR DISCHARGES ONTO LAND--210 GALLONS (FIVE BARRELS); OR
        (B) FOR SPILLS OR DISCHARGES DIRECTLY INTO WATER IN THE STATE--QUANTITY SUFFICIENT TO CREATE A SHEEN.
    (2) THE RQ FOR PETROLEUM PRODUCT AND USED OIL SHALL BE:
        (A) EXCEPT AS NOTED IN SUBPARAGRAPH (B) OF THIS PARAGRAPH, FOR SPILLS OR DISCHARGES ONTO LAND--25 GALLONS;
        (B) FOR SPILLS OR DISCHARGES TO LAND FROM PST EXEMPTED FACILITIES--210 GALLONS (FIVE BARRELS); OR
        (C) FOR SPILLS OR DISCHARGES DIRECTLY INTO WATER IN THE STATE--QUANTITY SUFFICIENT TO CREATE A SHEEN.
(C) INDUSTRIAL SOLID WASTE OR OTHER SUBSTANCES.
THE RQ FOR SPILLS OR DISCHARGES INTO WATER IN THE STATE SHALL BE 100 POUNDS.

ACTIONS REQUIRED
(A) THE CONTRACTOR SHALL IMMEDIATELY ABATE AND CONTAIN THE SPILL OR DISCHARGE AND COOPERATE FULLY WITH THE EXECUTIVE DIRECTOR AND THE LOCAL INCIDENT COMMAND SYSTEM. THE CONTRACTOR SHALL ALSO BEGIN REASONABLE RESPONSE ACTIONS WHICH MAY INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING ACTIONS:
    (1) ARRIVAL OF THE CONTRACTOR OR RESPONSE PERSONNEL HIRED BY THE CONTRACTOR AT THE SITE OF THE DISCHARGE OR SPILL;
    (2) INITIATING EFFORTS TO STOP THE DISCHARGE OR SPILL;
    (3) MINIMIZING THE IMPACT TO THE PUBLIC HEALTH AND THE ENVIRONMENT;
    (4) NEUTRALIZING THE EFFECTS OF THE INCIDENT;
    (5) REMOVING THE DISCHARGED OR SPILLED SUBSTANCES; AND
    (6) MANAGING THE WASTES.
(B) UPON REQUEST OF THE LOCAL GOVERNMENT RESPONDERS OR THE EXECUTIVE DIRECTOR, THE CONTRACTOR SHALL PROVIDE A VERBAL OR WRITTEN DESCRIPTION, OR BOTH, OF THE PLANNED RESPONSE ACTIONS AND ALL ACTIONS TAKEN BEFORE THE LOCAL GOVERNMENTAL RESPONDERS OR THE EXECUTIVE DIRECTOR ARRIVE. WHEN THE TCEQ ON-SCENE COORDINATOR REQUESTS THIS INFORMATION, IT IS SUBJECT TO POSSIBLE ADDITIONAL RESPONSE ACTION REQUIREMENTS BY THE EXECUTIVE DIRECTOR. THE INFORMATION WILL SERVE AS A BASIS FOR THE EXECUTIVE DIRECTOR TO DETERMINE THE NEED FOR:
    (1) FURTHER RESPONSE ACTIONS BY THE CONTRACTOR;
    (2) INITIATING STATE FUNDED ACTIONS FOR WHICH THE CONTRACTOR MAY BE HELD LIABLE TO THE MAXIMUM EXTENT ALLOWED BY LAW; AND
    (3) SUBSEQUENT REPORTS ON THE RESPONSE ACTIONS.
(C) EXCEPT FOR DISCHARGES OR SPILLS OCCURRING DURING THE NORMAL COURSE OF TRANSPORTATION ABOUT WHICH CARRIERS ARE REQUIRED TO FILE A WRITTEN REPORT WITH THE U.S. DEPARTMENT OF TRANSPORTATION UNDER 49 CFR SECTION 171.16, THE CONTRACTOR SHALL SUBMIT WRITTEN INFORMATION, SUCH AS A LETTER, DESCRIBING THE DETAILS OF THE DISCHARGE OR SPILL AND SUPPORTING THE ADEQUACY OF THE RESPONSE ACTION, TO THE APPROPRIATE TCEQ REGIONAL MANAGER WITHIN 30 WORKING DAYS OF THE DISCOVERY OF THE REPORTABLE DISCHARGE OR SPILL. THE REGIONAL MANAGER HAS THE DISCRETION TO EXTEND THE DEADLINE. THE DOCUMENTATION SHALL CONTAIN ONE OF THE FOLLOWING ITEMS:
    (1) A STATEMENT THAT THE DISCHARGE/SPILL RESPONSE ACTION HAS BEEN COMPLETED AND A DESCRIPTION OF HOW THE RESPONSE ACTION WAS CONDUCTED SHALL INCLUDE THE INITIAL REPORT INFORMATION REQUIRED BY SECTION 327.3(C) OF THIS TITLE (RELATING TO NOTIFICATION REQUIREMENTS). THE EXECUTIVE DIRECTOR MAY REQUEST ADDITIONAL INFORMATION. APPROPRIATE RESPONSE ACTIONS AT ANY TIME FOLLOWING THE DISCHARGE/SPILL INCLUDE USE OF THE TEXAS RISK REDUCTION PROGRAM RULES IN CHAPTER 350 OF THIS TITLE (RELATING TO TEXAS RISK REDUCTION PROGRAM).
    (2) A REQUEST FOR AN EXTENSION OF TIME TO COMPLETE THE RESPONSE ACTION, ALONG WITH THE REASONS FOR THE REQUEST. THE REQUEST SHALL ALSO INCLUDE A PROJECTED WORK SCHEDULE OUTLINING THE TIME REQUIRED TO COMPLETE THE RESPONSE ACTION. THE EXECUTIVE DIRECTOR MAY GRANT AN EXTENSION UP TO SIX MONTHS FROM THE DATE THE SPILL OR DISCHARGE WAS REPORTED. UNLESS OTHERWISE NOTIFIED BY THE APPROPRIATE REGIONAL MANAGER OR THE EMERGENCY RESPONSE TEAM, THE CONTRACTOR SHALL PROCEED ACCORDING TO THE TERMS OF THE PROJECTED WORK SCHEDULE.
    (3) A STATEMENT THAT THE DISCHARGE OR SPILL RESPONSE ACTION HAS NOT BEEN COMPLETED NOR IS IT EXPECTED TO BE COMPLETED WITHIN THE MAXIMUM ALLOWABLE SIX MONTH EXTENSION. THE STATEMENT SHALL EXPLAIN WHY COMPLETION OF THE RESPONSE ACTION IS NOT FEASIBLE AND INCLUDE A PROJECTED WORK SCHEDULE OUTLINING THE REMAINING TASKS TO COMPLETE THE RESPONSE ACTION. THIS INFORMATION WILL ALSO SERVE AS NOTIFICATION THAT THE RESPONSE ACTIONS TO THE DISCHARGE OR SPILL WILL BE CONDUCTED UNDER THE TEXAS RISK REDUCTION PROGRAM RULES IN CHAPTER 350 OF THIS TITLE (RELATING TO TEXAS RISK REDUCTION PROGRAM).

THE PERSON RESPONSIBLE FOR CLEANING UP A SPILL IS:

- THE OWNER OR OPERATOR OF A **FACILITY** FROM WHICH A SPILL EMANATES;
- THE OWNER, OPERATOR, OR DEMISE CHARTERER OF A **VESSEL** FROM WHICH A SPILL EMANATES; OR
- ANY OTHER PERSON WHO **CAUSES, SUFFERS, ALLOWS, OR PERMITS** A SPILL OR DISCHARGE.

NOTIFICATION, EMERGENCY RESPONSE, SPILL CLEANUPS THAT TAKE LESS THAN 180 DAYS:

- SEE HTTPS://WWW.TCEQ.TEXAS.GOV/RESPONSE/INDEX.HTML. MOST SPILLS REQUIRING LESS THAN 6 MONTHS OF CLEANUP ARE REVIEWED BY THE **TCEQ AUSTIN REGIONAL** OFFICE STAFF AT (512) 339-2929 (MONDAY-FRIDAY, 8 A.M. - 5 P.M.) OR
- STATE OF TEXAS SPILL-REPORTING HOTLINE AT (800) 832-8224 (**24-HOURS)**

CLEANUPS REQUIRING **MORE THAN 180 DAYS AND SPILLS THAT IMPACT GROUNDWATER** MAY BE REFERRED FROM THE REGION OFFICE TO THE REMEDIATION DIVISION FOR OVERSIGHT. CONTACT:

- THE **TCEQ AUSTIN REGIONAL OFFICE** AT (512) 339-2929, FOR TRAVIS COUNTY OR
- THE TCEQ REMEDIATION DIVISION, ENVIRONMENTAL CLEANUP SECTIONS AT:
  (512) 239-2200.

TLE GENERAL DRAINAGE AND GRADING NOTES

1) UNLESS OTHERWISE SPECIFIED, ALL FINISHED EARTHEN SLOPES ARE TO BE FINE GRADED TO PROVIDE A RELATIVELY UNIFORM SURFACE WITH NO ROCKS GREATER THAN 1-INCH IN DIAMETER, NO CLODS OF SOIL GREATER THAN 2-INCHES IN DIAMETER, AND NO DEVIATIONS FROM AN OTHERWISE SMOOTH SURFACE GREATER THAN 4 INCHES IN HEIGHT OR DEPTH WITH NO AREAS OF STANDING WATER.

2) ALL FINISHED SLOPES OF A GRADE OF 3:1 OR GREATER ARE TO BE COVERED WITH A JUTE MAT, CURLEX MATTING, OR SIMILAR PRODUCT AFTER SEEDING WITH HYDROMULCH AND THE JUTE ANCHORED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

3) UNLESS OTHERWISE SPECIFIED, ALL CULVERTS 18-INCH AND LARGER SHALL BE ASTM C76 REINFORCED CONCRETE PIPE (RCP) AND ALL CULVERTS LESS THAN 18-INCHES IN DIAMETER SHALL BE SCHEDULE 40 PVC. UNLESS OTHERWISE SPECIFIED, ALL CONCRETE PIPE IN PAVEMENT AREAS SHALL BE CLASS IV. UNLESS OTHERWISE SPECIFIED, ALL CONCRETE PIPE IN NON-TRAFFIC AREAS SHALL BE CLASS III.

4) UNLESS OTHERWISE SHOWN, ALL TRICKLE CHANNELS AND PIPES SHALL HAVE A MINIMUM SLOPE OF 0.5 PERCENT AND ALL EARTHEN SLOPES SHALL HAVE A MINIMUM SLOPE OF 2.0 PERCENT.

SEQUENCE OF CONSTRUCTION

TLE 1. REVIEW THE PLANS FOR ANY ASPECTS WHICH MAY SEEM UNCLEAR AND GET ANY CLARIFICATIONS NEEDED FROM THE ENGINEER PRIOR TO BEGINNING CONSTRUCTION. DO NOT BEGIN CONSTRUCTION UNTIL YOU BELIEVE THAT YOU UNDERSTAND ALL THE NOTES AND GRAPHICS ON THE PLAN VIEWS AND PROFILES, AS WELL AS THE NOTES ON THE GENERAL NOTES SHEET AND THE DETAILS ON THE DETAILS SHEETS.

TLE 2. VERIFY WHETHER A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED AND, IF ONE IS REQUIRED, FILE A NOTICE OF INTENT (NOI) PRIOR TO COMMENCING CONSTRUCTION. ALSO POST THE REQUIRED CONSTRUCTION SITE NOTICE AND ENSURE A COPY OF THE REPORT IS KEPT IN THE LOCATION CITED ON THE CONSTRUCTION NOTICE.

TxDOT 3. NO WORK IN TxDOT R.O.W. IS ALLOWED UNLESS NTP IS ISSUED AND PRECON CONDUCTED.

TLE 4. MAKE SURE ANY DEMOLITION AND/OR WORK IN THE RIGHT-OF-WAY PERMITS HAVE BEEN OBTAINED. NO CONSTRUCTION IS TO COMMENCE WITHOUT A TRAFFIC CONTROL PLAN APPROVED BY THE CITY OF AUSTIN RIGHT-OF-WAY MANAGEMENT DIVISION.

TLE 5. MAKE SURE ALL THE PERMITS ARE ACTIVE (HAVE NOT EXPIRED) AND CONFIRM THEIR EXPIRATION DATES TO ENSURE NONE EXPIRE.

TLE 6. VERIFY THAT THESE PLANS ARE THE APPROVED SET AND, IF SO, INSTALL EROSION CONTROLS AND TREE PROTECTION AS SHOWN ON THESE PLANS.

TLE 7. CHECK THE COVER SHEET TO SEE IF A CONTRIBUTING ZONE PLAN (CZP) OR WATER POLLUTION ABATEMENT PLAN (WPAP) WAS REQUIRED BY TCEQ. IF ONE WAS REQUIRED, MAKE SURE TO OBTAIN A COPY, READ IT, AND KEEP A COPY ON-SITE. ALSO MAKE SURE TO READ THE RELATED NOTES ON THE NOTE SHEET(S) AND NOTIFY THE TCEQ 48 HOURS IN ADVANCE OF THE START OF CONSTRUCTION. ALSO MAKE SURE THAT THE NOTICE OF APPROVAL FROM THE TCEQ WAS FILED IN THE COUNTY DEED RECORDS AND PROOF OF THAT RECORDING SUBMITTED TO THE AUSTIN REGIONAL OFFICE. NOTE THAT APPROVAL SHOULD HAVE BEEN RECORDED WITHIN 60 DAYS OF APPROVAL.

COA P-4 8. TEMPORARY EROSION AND SEDIMENTATION CONTROLS ARE TO BE INSTALLED AS INDICATED ON THE APPROVED SITE PLAN OR SUBDIVISION CONSTRUCTION PLAN AND IN ACCORDANCE WITH THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) THAT IS REQUIRED TO BE POSTED ON THE SITE. INSTALL TREE PROTECTION, INITIATE TREE MITIGATION MEASURES AND CONDUCT "PRE - CONSTRUCTION" TREE FERTILIZATION (IF APPLICABLE).

COA P-4 9. THE ENVIRONMENTAL PROJECT MANAGER OR SITE SUPERVISOR MUST CONTACT THE DEVELOPMENT SERVICES DEPARTMENT, ENVIRONMENTAL INSPECTION, AT 512-974-2278, 72 HOURS PRIOR TO THE SCHEDULED DATE OF THE REQUIRED ON-SITE PRECONSTRUCTION MEETING.

TLE 10. IF ANY PART OF THE PROPOSED WORK IS IN THE ROW, MAKE SURE TO CONTACT THE OWNER OF THE ROW (TXDOT, CITY, COUNTY) TO ASCERTAIN WHAT (IF ANY) INSPECTIONS WILL BE REQUIRED AND IF ONE IS REQUIRED, GET A PRECONSTRUCTION CONFERENCE HELD WITH THE INSPECTOR.

COA P-4 11. THE ENVIRONMENTAL PROJECT MANAGER, AND/OR SITE SUPERVISOR, AND/OR DESIGNATED RESPONSIBLE PARTY, AND THE GENERAL CONTRACTOR WILL FOLLOW THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE REVISED, IF NEEDED, TO COMPLY WITH CITY INSPECTORS' DIRECTIVES, AND REVISED CONSTRUCTION SCHEDULE RELATIVE TO THE WATER QUALITY PLAN REQUIREMENTS AND THE EROSION PLAN.

TLE 12. CONTRACTOR TO CONTACT COUNTY PRIOR TO CONSTRUCTION FOR ANY PRECONSTRUCTION CONFERENCE FOR ENVIRONMENTAL, DRIVEWAY AND/OR SEPTIC INSPECTIONS.

TLE 13. CONTRACTOR IS TO EXPOSE ALL TIE-IN POINTS TO VERIFY ELEVATIONS AND NOTIFY ENGINEER OF ANY DIFFERENCES IN HORIZONTAL OR VERTICAL LOCATION.

TLE 14. VERIFY THAT ALL OF THE POSSIBLE UTILITIES HAVE BEEN MARKED BY ONE CALL AND BRING TO THE ATTENTION OF THE ENGINEER ANY DISCREPANCIES OR POSSIBLE PROBLEMS OBSERVED.

COA P-4 15. ROUGH GRADE THE POND(S) AT 100% PROPOSED CAPACITY. EITHER THE PERMANENT OUTLET STRUCTURE OR A TEMPORARY OUTLET MUST BE CONSTRUCTED PRIOR TO DEVELOPMENT OF EMBANKMENT OR EXCAVATION THAT LEADS TO PONDING CONDITIONS. THE OUTLET SYSTEM MUST CONSIST OF A SUMP PIT OUTLET AND AN EMERGENCY SPILLWAY MEETING THE REQUIREMENTS OF THE DRAINAGE CRITERIA MANUAL AND/OR THE ENVIRONMENTAL CRITERIA MANUAL, AS REQUIRED. THE OUTLET SYSTEM SHALL BE PROTECTED FROM EROSION AND SHALL BE MAINTAINED THROUGHOUT THE COURSE OF CONSTRUCTION UNTIL INSTALLATION OF THE PERMANENT WATER QUALITY POND(S).

COA P-4 16. TEMPORARY EROSION AND SEDIMENTATION CONTROLS WILL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH THE EROSION SEDIMENTATION CONTROL PLAN (ESC) AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) POSTED ON THE SITE.

(IF THIS PLAN IS PHASED, STEPS 14-25 ARE TO BE REPEATED FOR EACH PHASE)

COA P-4 17. BEGIN SITE CLEARING/CONSTRUCTION (OR DEMOLITION) ACTIVITIES.

TLE 18. CLEAR AND ROUGH GRADE THE SITE.

TLE 19. CHECK ENVIRONMENTAL CONTROLS AND KEEP LOG OF OBSERVATIONS AS REQUIRED IN THE SWP3. TEMPORARY CONTROLS TO BE INSPECTED AND MAINTAINED EVERY WEEK AND PRIOR TO ANTICIPATED RAINFALL EVENTS AND AFTER RAINFALL EVENTS OF 0.5 INCHES OR MORE. IF DISTURBED AREA IS NOT TO BE WORKED FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP OR REVEGETATION MATTING.

~~**IF WORK IS SUBDIVISION CONSTRUCTION:**~~

~~TLE 20. DELIVER APPROVED ROUGH CUT SHEETS TO THE CONSTRUCTION INSPECTION DIVISION OF DPWT PRIOR TO CLEARING AND GRUBBING.~~

~~TLE 21. ROUGH GRADE STREETS (IF APPLICABLE). NO DEVELOPMENT OF EMBANKMENT WILL BE PERMITTED AT THIS TIME. ONCE STREETS ARE ROUGH CUT, THE GEO-TECHNICAL ENGINEER IS TO FIELD VERIFY PAVEMENT DESIGN IS APPROPRIATE, AND MODIFY RECOMMENDATIONS ACCORDINGLY.~~

~~TLE 22. INSTALL ALL UTILITIES TO BE LOCATED UNDER THE PROPOSED PAVEMENT.~~

~~a. DELIVER STORM SEWER (IF APPLICABLE) CUT SHEETS TO THE CONSTRUCTION INSPECTION DIVISION OF DPWT.~~

~~b. BEGIN INSTALLATION OF STORM SEWER LINES. UPON COMPLETION, RESTORE AS MUCH DISTURBED AREA AS POSSIBLE, PARTICULARLY CHANNELS AND LARGE OPEN AREAS.~~

~~TLE 23. DELIVER FINAL GRADE CUT SHEETS TO THE CONSTRUCTION INSPECTION DIVISION OF DPWT.~~

~~TLE 24. REGRADE STREETS TO SUBGRADE (IF APPLICABLE).~~

~~**IF WORK IS SITE PLAN:**~~

~~TLE 25. INSURE THAT ALL UNDERGROUND UTILITY CROSSINGS ARE COMPLETED. LAY FIRST COURSE BASE MATERIAL ON ALL STREETS (AS APPLICABLE).~~

~~TLE 26. INSTALL CURB AND GUTTER (IF APPLICABLE).~~

~~TLE 27. LAY FINAL BASE COURSE ON ALL STREETS (IF APPLICABLE).~~

~~TLE 28. LAY ASPHALT.~~

TLE 29. COMPLETE ALL UNDERGROUND INSTALLATIONS WITHIN THE R.O.W.

TLE 30. INSTALL UNDERGROUND UTILITIES AND CONSTRUCT POND. NOTE: CONTACT ESD TO PERFORM VISUAL INSPECTION OF FIRE MAINS TO VERIFY PIPE TYPE, SIZE, WRAPPED JOINTS, AND PROPER INSTALLATION OF THRUST BLOCKING. DO NOT BURY PIPES UNTIL INSPECTION HAS BEEN CONDUCTED.

TLE 31. CONSTRUCT BUILDINGS.

TLE 32. PAVE THE SITE.

TLE 33. FINISH GRADE THE SITE INCLUDING ADJUSTING AND FINISHING DRAINAGE FEATURES, PONDS, UTILITIES, AND RETAINING WALL STRUCTURES.

COA P-4 34. IN THE BARTON SPRINGS ZONE, THE ENVIRONMENTAL PROJECT MANAGER OR SITE SUPERVISOR WILL SCHEDULE A MID-CONSTRUCTION CONFERENCE TO COORDINATE CHANGES IN THE CONSTRUCTION SCHEDULE AND EVALUATE EFFECTIVENESS OF THE EROSION CONTROL PLAN AFTER POSSIBLE CONSTRUCTION ALTERATIONS TO THE SITE. PARTICIPANTS SHALL INCLUDE THE CITY INSPECTOR, PROJECT ENGINEER, GENERAL CONTRACTOR AND ENVIRONMENTAL PROJECT MANAGER OR SITE SUPERVISOR. THE ANTICIPATED COMPLETION DATE AND FINAL CONSTRUCTION SEQUENCE AND INSPECTION SCHEDULE WILL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR.

COA P-4 35. PERMANENT WATER QUALITY PONDS OR CONTROLS WILL BE CLEANED OUT AND FILTER MEDIA WILL BE INSTALLED PRIOR TO/CONCURRENTLY WITH REVEGETATION OF SITE.

COA P-4 36. COMPLETE CONSTRUCTION AND START REVEGETATION OF THE SITE AND INSTALLATION OF LANDSCAPING.

COA P-4 37. UPON COMPLETION OF THE SITE CONSTRUCTION AND REVEGETATION OF A PROJECT SITE, THE DESIGN ENGINEER SHALL SUBMIT AN ENGINEER'S LETTER OF CONCURRENCE BEARING THE ENGINEER'S SEAL, SIGNATURE AND DATE TO THE DEVELOPMENT SERVICES DEPARTMENT INDICATING THAT CONSTRUCTION, INCLUDING REVEGETATION, IS COMPLETE AND IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED PLANS. AFTER RECEIVING THIS LETTER, A FINAL INSPECTION WILL BE SCHEDULED BY THE APPROPRIATE CITY INSPECTOR.

COA P-4 38. UPON COMPLETION OF LANDSCAPE INSTALLATION OF A PROJECT SITE, THE LANDSCAPE ARCHITECT SHALL SUBMIT A LETTER OF CONCURRENCE TO THE DEVELOPMENT SERVICES DEPARTMENT INDICATING THAT THE REQUIRED LANDSCAPING IS COMPLETE AND IN SUBSTANTIAL CONFORMITY WITH THE APPROVED PLANS. AFTER RECEIVING THIS LETTER, A FINAL INSPECTION WILL BE SCHEDULED BY THE APPROPRIATE CITY INSPECTOR.

COA P-4 39. AFTER A FINAL INSPECTION HAS BEEN CONDUCTED BY THE CITY INSPECTOR AND WITH APPROVAL FROM THE CITY INSPECTOR, REMOVE THE TEMPORARY EROSION AND SEDIMENTATION CONTROLS AND COMPLETE ANY NECESSARY FINAL REVEGETATION RESULTING FROM REMOVAL OF THE CONTROLS. CONDUCT ANY MAINTENANCE AND REHABILITATION OF THE WATER QUALITY PONDS OR CONTROLS.

TLE 40. IF AN SWPPP WAS REQUIRED, FILE A NOTICE OF TERMINATION (NOT).

TLE 41. IF A CZP OR WPAP WAS REQUIRED, WITHIN 30 DAYS OF COMPLETION, A TEXAS PE MUST CERTIFY IN WRITING THAT THE BMPS WERE CONSTRUCTED AS DESIGNED AND THAT CERTIFICATION PROVIDED TO THE TCEQ AUSTIN REGIONAL OFFICE.

COA P-4 SOURCE: RULE NO. R161-17.03, 3-2-2017

EROSION CONTROL NOTES (COA ECM APPENDIX P-1)

1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS, TREE/NATURAL AREA PROTECTIVE FENCING, AND CONDUCT "PRE-CONSTRUCTION" TREE FERTILIZATION (IF APPLICABLE) PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).
2. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE ENVIRONMENTAL CRITERIA MANUAL AND THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN. THE COA ESC PLAN SHALL BE CONSULTED AND USED AS THE BASIS FOR A TPDES REQUIRED SWPPP. IF A SWPPP IS REQUIRED, IT SHALL BE AVAILABLE FOR REVIEW BY THE CITY OF AUSTIN ENVIRONMENTAL INSPECTOR AT ALL TIMES DURING CONSTRUCTION, INCLUDING AT THE PRE-CONSTRUCTION MEETING. THE CHECKLIST BELOW CONTAINS THE BASIC ELEMENTS THAT SHALL BE REVIEWED FOR PERMIT APPROVAL BY COA EV PLAN REVIEWERS AS WELL AS COA EV INSPECTORS.
    -- PLAN SHEETS SUBMITTED TO THE CITY OF AUSTIN MUST SHOW THE FOLLOWING:
    √ DIRECTION OF FLOW DURING GRADING OPERATIONS.
    √ LOCATION, DESCRIPTION, AND CALCULATIONS FOR OFF-SITE FLOW DIVERSION STRUCTURES.
    √ AREAS THAT WILL NOT BE DISTURBED; NATURAL FEATURES TO BE PRESERVED.
    √ DELINEATION OF CONTRIBUTING DRAINAGE AREA TO EACH PROPOSED BMP (E.G., SILT FENCE, SEDIMENT BASIN, ETC.).
    √ LOCATION AND TYPE OF E&S BMPS FOR EACH PHASE OF DISTURBANCE.
    √ CALCULATIONS FOR BMPS AS REQUIRED.
    √ LOCATION AND DESCRIPTION OF TEMPORARY STABILIZATION MEASURES.
    √ LOCATION OF ON-SITE SPOILS, DESCRIPTION OF HANDLING AND DISPOSAL OF BORROW MATERIALS, AND DESCRIPTION OF ON-SITE PERMANENT SPOILS DISPOSAL AREAS, INCLUDING SIZE, DEPTH OF FILL AND REVEGETATION PROCEDURES.
    √ DESCRIBE SEQUENCE OF CONSTRUCTION AS IT PERTAINS TO ESC INCLUDING THE FOLLOWING ELEMENTS:
    1. INSTALLATION SEQUENCE OF CONTROLS (E.G. PERIMETER CONTROLS, THEN SEDIMENT BASINS, THEN TEMPORARY STABILIZATION, THEN PERMANENT, ETC.)
    2. PROJECT PHASING IF REQUIRED (LOC GREATER THAN 25 ACRES)
    3. SEQUENCE OF GRADING OPERATIONS AND NOTATION OF TEMPORARY STABILIZATION MEASURES TO BE USED
    4. SCHEDULE FOR CONVERTING TEMPORARY BASINS TO PERMANENT WQ CONTROLS
    5. SCHEDULE FOR REMOVAL OF TEMPORARY CONTROLS
    6. ANTICIPATED MAINTENANCE SCHEDULE FOR TEMPORARY CONTROLS
    -- CATEGORIZE EACH BMP UNDER ONE OF THE FOLLOWING AREAS OF BMP ACTIVITY AS DESCRIBED BELOW:
        3.1 MINIMIZE DISTURBED AREA AND PROTECT NATURAL FEATURES AND SOIL
        3.2 CONTROL STORMWATER FLOWING ONTO AND THROUGH THE PROJECT
        3.3 STABILIZE SOILS
        3.4 PROTECT SLOPES
        3.5 PROTECT STORM DRAIN INLETS
        3.6 ESTABLISH PERIMETER CONTROLS AND SEDIMENT BARRIERS
        3.7 RETAIN SEDIMENT ON-SITE AND CONTROL DEWATERING PRACTICES
        3.8 ESTABLISH STABILIZED CONSTRUCTION EXITS
        3.9 ANY ADDITIONAL BMPS
    -- NOTE THE LOCATION OF EACH BMP ON YOUR SITE MAP(S).
    -- FOR ANY STRUCTURAL BMPS, YOU SHOULD PROVIDE DESIGN SPECIFICATIONS AND DETAILS AND REFER TO THEM.
    -- FOR MORE INFORMATION, SEE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL 1.4.
3. THE PLACEMENT OF TREE/NATURAL AREA PROTECTIVE FENCING SHALL BE IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION AND THE APPROVED GRADING/TREE AND NATURAL AREA PLAN.
4. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR, DESIGN ENGINEER/PERMIT APPLICANT AND ENVIRONMENTAL INSPECTOR AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS, TREE/NATURAL AREA PROTECTION MEASURES AND "PRE-CONSTRUCTION" TREE FERTILIZATION (IF APPLICABLE) PRIOR TO BEGINNING ANY SITE PREPARATION WORK. THE OWNER OR OWNER'S REPRESENTATIVE SHALL NOTIFY THE DEVELOPMENT SERVICES DEPARTMENT, 512-974-2278 OR BY EMAIL AT ENVIRONMENTAL.INSPECTIONS@AUSTINTEXAS.GOV, AT LEAST THREE DAYS PRIOR TO THE MEETING DATE. COA APPROVED ESC PLAN AND TPDES SWPPP (IF REQUIRED) SHOULD BE REVIEWED BY COA EV INSPECTOR AT THIS TIME.
5. ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER, ENVIRONMENTAL SPECIALIST OR CITY ARBORIST AS APPROPRIATE. MAJOR REVISIONS MUST BE APPROVED BY AUTHORIZED COA STAFF. MINOR CHANGES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES.
6. THE CONTRACTOR IS REQUIRED TO PROVIDE A CERTIFIED INSPECTOR THAT IS EITHER A LICENSED ENGINEER (OR PERSON DIRECTLY SUPERVISED BY THE LICENSED ENGINEER) OR CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC OR CPESC - IT), CERTIFIED EROSION, SEDIMENT AND STORMWATER - INSPECTOR (CESSWI OR CESSWI - IT) OR CERTIFIED INSPECTOR OF SEDIMENTATION AND EROSION CONTROLS (CISEC OR CISEC - IT) CERTIFICATION TO INSPECT THE CONTROLS AND FENCES AT WEEKLY OR BI-WEEKLY INTERVALS AND AFTER ONE-HALF (½) INCH OR GREATER RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES OR ONE-THIRD (⅓) OF THE INSTALLED HEIGHT OF THE CONTROL WHICHEVER IS LESS.
7. PRIOR TO FINAL ACCEPTANCE BY THE CITY, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING DEBRIS SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
8. ALL WORK MUST STOP IF A VOID IN THE ROCK SUBSTRATE IS DISCOVERED WHICH IS; ONE SQUARE FOOT IN TOTAL AREA; BLOWS AIR FROM WITHIN THE SUBSTRATE AND/OR CONSISTENTLY RECEIVES WATER DURING ANY RAIN EVENT. AT THIS TIME IT IS THE RESPONSIBILITY OF THE PROJECT MANAGER TO IMMEDIATELY CONTACT A CITY OF AUSTIN ENVIRONMENTAL INSPECTOR FOR FURTHER INVESTIGATION. IN ADDITION, IF THE PROJECT SITE IS LOCATED WITHIN THE EDWARDS AQUIFER, THE PROJECT MANAGER MUST NOTIFY THE TRAVIS COUNTY BALCONES CANYONLANDS CONSERVATION PRESERVE (BCCP) BY EMAIL AT bccp@traviscountytx.gov. CONSTRUCTION ACTIVITIES WITHIN 50 FEET OF THE VOID MUST STOP.
9. TEMPORARY AND PERMANENT EROSION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW:
    A. ALL DISTURBED AREAS TO BE REVEGETATED ARE REQUIRED TO PLACE A MINIMUM OF SIX (6) INCHES OF TOPSOIL [SEE STANDARD SPECIFICATION ITEM NO. 601S.3(A)]. DO NOT ADD TOPSOIL WITHIN THE CRITICAL ROOT ZONE OF EXISTING TREES.

TOPSOIL SALVAGED FROM THE EXISTING SITE IS ENCOURAGED FOR USE, BUT IT SHOULD MEET THE STANDARDS SET FORTH IN 601S.

AN OWNER/ENGINEER MAY PROPOSE USE OF ONSITE SALVAGED TOPSOIL WHICH DOES NOT MEET THE CRITERIA OF STANDARD SPECIFICATION 601S BY PROVIDING A SOIL ANALYSIS AND A WRITTEN STATEMENT FROM A QUALIFIED PROFESSIONAL IN SOILS, LANDSCAPE ARCHITECTURE, OR AGRONOMY INDICATING THE ONSITE TOPSOIL WILL PROVIDE AN EQUIVALENT GROWTH MEDIA AND SPECIFYING WHAT, IF ANY, SOIL AMENDMENTS ARE REQUIRED.

SOIL AMENDMENTS SHALL BE WORKED INTO THE EXISTING ONSITE TOPSOIL WITH A DISC OR TILLER TO CREATE A WELL-BLENDED MATERIAL.

THE VEGETATIVE STABILIZATION OF AREAS DISTURBED BY CONSTRUCTION SHALL BE AS FOLLOWS:

TEMPORARY VEGETATIVE STABILIZATION:

1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH OR INCLUDE A COOL SEASON COVER CROP: (WESTERN WHEATGRASS (*PASCOPYRUM SMITHII*) AT 5.6 POUNDS PER ACRE, OATS (*AVENA SATIVA*) AT 4.0 POUNDS PER ACRE, CEREAL RYE GRAIN (*SECALE CEREALE*) AT 45 POUNDS PER ACRE. CONTRACTOR MUST ENSURE THAT ANY SEED APPLICATION REQUIRING A COOL SEASON COVER CROP DOES NOT UTILIZE ANNUAL RYEGRASS (*LOLIUM MULTIFLORUM*) OR PERENNIAL RYEGRASS (*LOLIUM PERENNE*). COOL SEASON COVER CROPS ARE NOT PERMANENT EROSION CONTROL.
2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 45 POUNDS PER ACRE OR A NATIVE PLANT SEED MIX CONFORMING TO ITEM 604S OR 609S.
    A. FERTILIZER SHALL BE APPLIED ONLY IF WARRANTED BY A SOIL TEST AND SHALL CONFORM TO ITEM NO. 606S, FERTILIZER. FERTILIZATION SHOULD NOT OCCUR WHEN RAINFALL IS EXPECTED OR DURING SLOW PLANT GROWTH OR DORMANCY. CHEMICAL FERTILIZER MAY NOT BE APPLIED IN THE CRITICAL WATER QUALITY ZONE.
    B. HYDROMULCH SHALL COMPLY WITH TABLE 1, BELOW.
    C. TEMPORARY EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1½ INCHES HIGH WITH A MINIMUM OF 95% TOTAL COVERAGE SO THAT ALL AREAS OF A SITE THAT RELY ON VEGETATION FOR TEMPORARY STABILIZATION ARE UNIFORMLY VEGETATED, AND PROVIDED THERE ARE NO BARE SPOTS LARGER THAN 10 SQUARE FEET.
    D. WHEN REQUIRED, NATIVE PLANT SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL, AND STANDARD SPECIFICATION 604S OR 609S.

TABLE 1: HYDROMULCHING FOR TEMPORARY VEGETATIVE STABILIZATION

MATERIAL	DESCRIPTION	LONGEVITY	TYPICAL APPLICATIONS	APPLICATION RATES
100% OR ANY BLEND OF WOOD, CELLULOSE, STRAW AND/OR COTTON PLANT MATERIAL (EXCEPT NO MULCH SHALL EXCEED 30% PAPER)	70% OR OR GREATER WOOD/STRAW 30% OR LESS PAPER OR NATURAL FIBERS	0 - 3 MONTHS	MODERATE SLOPES; FROM FLAT TO 3:1	1,500 TO 2,000 LBS PER ACRE

PERMANENT VEGETATIVE STABILIZATION:

1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING IS CONSIDERED TO BE TEMPORARY STABILIZATION ONLY. IF COOL SEASON COVER CROPS EXIST WHERE PERMANENT VEGETATIVE STABILIZATION IS DESIRED, THE GRASSES SHALL BE MOWED TO A HEIGHT OF LESS THAN ONE-HALF (½) INCH AND THE AREA SHALL BE RE-SEEDED IN ACCORDANCE WITH TABLE 2 BELOW. ALTERNATIVELY, THE COOL SEASON COVER CROP CAN BE MIXED WITH BERMUDAGRASS OR NATIVE SEED AND INSTALLED TOGETHER, UNDERSTANDING THAT GERMINATION OF WARM-SEASON SEED TYPICALLY REQUIRES SOIL TEMPERATURES OF 60 TO 70 DEGREES.
2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 45 POUNDS PER ACRE WITH A PURITY OF 95% AND A MINIMUM PURE LIVE SEED (PLS) OF 0.83. BERMUDA GRASS IS A WARM SEASON GRASS AND IS CONSIDERED PERMANENT EROSION CONTROL. PERMANENT VEGETATIVE STABILIZATION CAN ALSO BE ACCOMPLISHED WITH A NATIVE PLANT SEED MIX CONFORMING TO ITEM 604S OR 609S.
    A. FERTILIZER USE SHALL FOLLOW THE RECOMMENDATION OF A SOIL TEST. SEE ITEM 606S, FERTILIZER. APPLICATIONS OF FERTILIZER (AND PESTICIDE) ON CITY-OWNED AND MANAGED PROPERTY REQUIRES THE YEARLY SUBMITTAL OF A PESTICIDE AND FERTILIZER APPLICATION RECORD, ALONG WITH A CURRENT COPY OF THE APPLICATOR'S LICENSE. FOR CURRENT COPY OF THE RECORD TEMPLATE CONTACT THE CITY OF AUSTIN'S IPM COORDINATOR.
    B. HYDROMULCH SHALL COMPLY WITH TABLE 2, BELOW.
    C. WATER THE SEEDED AREAS IMMEDIATELY AFTER INSTALLATION TO ACHIEVE GERMINATION AND A HEALTHY STAND OF PLANTS THAT CAN ULTIMATELY SURVIVE WITHOUT SUPPLEMENTAL WATER. APPLY THE WATER UNIFORMLY TO THE PLANTED AREAS WITHOUT CAUSING DISPLACEMENT OR EROSION OF THE MATERIALS OR SOIL. MAINTAIN THE SEEDBED IN A MOIST CONDITION FAVORABLE FOR PLANT GROWTH. ALL WATERING SHALL COMPLY WITH CITY CODE CHAPTER 6-4 (WATER CONSERVATION), AT RATES AND FREQUENCIES DETERMINED BY A LICENSED IRRIGATOR OR OTHER QUALIFIED PROFESSIONAL, AND AS ALLOWED BY THE AUSTIN WATER UTILITY AND CURRENT WATER RESTRICTIONS AND WATER CONSERVATION INITIATIVES.
    D. PERMANENT EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1½ INCHES HIGH WITH A MINIMUM OF 95 PERCENT FOR THE NON-NATIVE MIX, AND 95 PERCENT COVERAGE FOR THE NATIVE MIX SO THAT ALL AREAS OF A SITE THAT RELY ON VEGETATION FOR STABILITY MUST BE UNIFORMLY VEGETATED, AND PROVIDED THERE ARE NO BARE SPOTS LARGER THAN 10 SQUARE FEET.
    E. WHEN REQUIRED, NATIVE PLANT SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL, ITEMS 604S AND 609S.

TABLE 2: HYDROMULCHING FOR PERMANENT VEGETATIVE STABILIZATION

MATERIAL	DESCRIPTION	LONGEVITY	TYPICAL APPLICATIONS	APPLICATION RATES
BONDED FIBER MATRIX (BFM)	80% ORGANIC DEFIBRATED FIBERS			
10% TACKIFIER		6 MONTHS	ON SLOPE UP TO 2:1 AND EROSIVE SOIL CONDITIONS	2,500 TO 4,000 LBS PER ACRE (SEE MANUFACTURERS RECOMMENDATIONS)
FIBER REINFORCED MATRIX (BFM)	65% ORGANIC DEFIBRATED FIBERS 25% REINFORCING FIBERS OR LESS 10% TACKIFIER	UP TO 12 MONTHS	ON SLOPE UP TO 1:1 AND EROSIVE SOIL CONDITIONS	3,000 TO 4,500 LBS PER ACRE (SEE MANUFACTURERS RECOMMENDATIONS)

10. DEVELOPER INFORMATION:

    OWNER: JMA ENTITY, LLC

    PHONE #: .

    ADDRESS: 4203 SPINNAKER COVE, AUSTIN, TX 78731

    OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS: THOMPSON LAND ENGINEERING, LLC

    PHONE #: 512-328-0002

    PERSON OR FIRM RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL MAINTENANCE: ___________

    PHONE #: TBD

    PERSON OR FIRM RESPONSIBLE FOR TREE/NATURAL AREA PROTECTION MAINTENANCE: ___________

    PHONE #: TBD

11. THE CONTRACTOR SHALL NOT DISPOSE OF SURPLUS EXCAVATED MATERIAL FROM THE SITE WITHOUT NOTIFYING THE DEVELOPMENT SERVICES DEPARTMENT AT 512-974-2278 AT LEAST 48 HOURS PRIOR WITH THE LOCATION AND A COPY OF THE PERMIT ISSUED TO RECEIVE THE MATERIAL.

SOURCE: RULE NO. R161-15.13, 1-4-2016 ; RULE NO. R161-17.03 , 3-2-2017; RULE NO. R161-19.02 , 3-14-2019.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY - WATER POLLUTION ABATEMENT PLAN
GENERAL CONSTRUCTION NOTES TCEQ-0592 (REVISED JULY 15, 2015)

1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:
    - THE NAME OF THE APPROVED PROJECT;
    - THE ACTIVITY START DATE; AND
    - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN (WPAP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS ARE REQUIRED TO KEEP ON-SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.
3. IF ANY SENSITIVE FEATURE(S) (CAVES, SOLUTION CAVITY, SINK HOLE, ETC.) IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TCEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING CONSTRUCTION. CONSTRUCTION ACTIVITIES MAY NOT BE RESUMED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE APPROPRIATE PROTECTIVE MEASURES IN ORDER TO PROTECT ANY SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.
4. NO TEMPORARY OR PERMANENT HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.
5. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
6. ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, ETC.
7. SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS NOT LATER THAN WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.
8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.
9. ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE MUST BE STORED ON-SITE WITH PROPER E&S CONTROLS. FOR STORAGE OR DISPOSAL OF SPOILS AT ANOTHER SITE ON THE EDWARDS AQUIFER RECHARGE ZONE, THE OWNER OF THE SITE MUST RECEIVE APPROVAL OF A WATER POLLUTION ABATEMENT PLAN FOR THE PLACEMENT OF FILL MATERIAL OR MASS GRADING PRIOR TO THE PLACEMENT OF SPOILS AT THE OTHER SITE.
10. IF PORTIONS OF THE SITE WILL HAVE A TEMPORARY OR PERMANENT CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.
11. THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST:
    - THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
    - THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
    - THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
12. THE HOLDER OF ANY APPROVED EDWARD AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
    A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURE(S), INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BERMS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES;
    B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER;
    C. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.

AUSTIN REGIONAL OFFICE
12100 PARK 35 CIRCLE, BUILDING A
AUSTIN, TEXAS 78753-1808
PHONE (512) 339-2929
FAX (512) 339-3795

SAN ANTONIO REGIONAL OFFICE
14250 JUDSON ROAD
SAN ANTONIO, TEXAS 78233-4480
PHONE (210) 490-3096
FAX (210) 545-4329

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

TLE EROSION CONTROL NOTES:
PART A:
1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).
2. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES IN ACCORDANCE WITH THE ADDITIONAL NOTES FOR SW3P PLANS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES.
3. ALL WORK MUST STOP IF A VOID IN THE ROCK SUBSTRATE IS DISCOVERED WHICH IS; ONE SQUARE FOOT IN TOTAL AREA; BLOWS AIR FROM WITHIN THE SUBSTRATE AND/OR CONSISTENTLY RECEIVES WATER DURING ANY RAIN EVENT. AT THIS TIME IT IS THE RESPONSIBILITY OF THE PROJECT MANAGER TO IMMEDIATELY CONTACT A LOCAL ENVIRONMENTAL INSPECTOR FOR FURTHER INVESTIGATION.

PART B:
PERMANENT EROSION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW.

A. UNLESS DIRECTED OTHERWISE BY THE OWNER, A MINIMUM OF FOUR INCHES OF TOPSOIL SHALL BE PLACED IN ALL DRAINAGE CHANNELS (EXCEPT ROCK) AND 1-INCH OF TOPSOIL IN OTHER AREAS.
B. THE SEEDING FOR PERMANENT EROSION CONTROL SHALL BE APPLIED OVER AREAS DISTURBED BY CONSTRUCTION AS FOLLOWS:

BROADCAST SEEDING:
1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH A COMBINATION OF 2 POUNDS PER 1000 SF OF UNHULLED BERMUDA AND 7 POUNDS PER 1000 SF OF WINTER RYE WITH A PURITY OF 95% WITH 90% GERMINATION.

2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 2 POUNDS PER 1000 SF WITH A PURITY OF 95% WITH 85% GERMINATION.

3. OTHER REQUIREMENTS:
    A. FERTILIZER SHALL BE A PELLETED OR GRANULAR SLOW RELEASE WITH AN ANALYSIS OF 15-15-15 TO BE APPLIED ONCE AT PLANTING AND ONCE DURING THE PERIOD OF ESTABLISHMENT AT A RATE OF 1 POUND PER 1000 SF.
    B. MULCH TYPE USED SHALL BE HAY, STRAW OR MULCH APPLIED AT A RATE OF 45 POUNDS PER 1000 SF.

HYDRAULIC SEEDING:
1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH A COMBINATION OF 1 POUND PER 1000 SF OF UNHULLED BERMUDA AND 7 POUNDS PER 1000 SF OF WINTER RYE WITH A PURITY OF 95% WITH 90% GERMINATION.

2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 1 POUND PER 1000 SF WITH A PURITY OF 95% WITH 85% GERMINATION.

3. OTHER REQUIREMENTS:
    A. FERTILIZER SHALL BE A WATER SOLUBLE FERTILIZER WITH AN ANALYSIS OF 15-15-15 AT A RATE OF 1.5 POUNDS PER 1000 SF.
    B. MULCH TYPE USED SHALL BE HAY, STRAW OR MULCH APPLIED AT A RATE OF 45 POUNDS PER 1000 SF, WITH SOIL TACKIFIER AT A RATE OF 1.4 POUNDS PER 1000 SF.
    C. THE PLANTED AREA SHALL BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF SIX INCHES. THE IRRIGATION SHALL OCCUR AT TEN-DAY INTERVALS DURING THE FIRST TWO MONTHS. RAINFALL OCCURRENCES OF « INCH OR MORE SHALL POSTPONE THE WATERING SCHEDULE FOR ONE WEEK.
    D. RESTORATION SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1« INCHES HIGH WITH 95% COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN 16 SQUARE FEET EXIST.

TLE GENERAL WATER AND WASTEWATER NOTES

1) THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, PAYMENT, PROVISION, OPERATION, MAINTENANCE, INSTALLATION, AND REMOVAL OF ANY REQUIRED TRENCH SAFETY SYSTEM.
2) MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, AND OTHER SUCH ITEMS LOCATED WITHIN ANY PROPOSED PAVEMENT OR SIDEWALK SHALL BE RAISED THE FINISHED GRADE PRIOR TO FINAL PAVING.
3) UNLESS OTHERWISE SPECIFIED, PIPE MATERIAL FOR 4-INCH AND LARGER WATER LINES AND MAINS SHALL BE PVC (AWWA C-900, MIN. CLASS 200) OR DUCTILE IRON (AWWA C-110 OR AWWA C-153, MIN. CLASS 50 (CLASS 51 FOR 4-INCH)). UNLESS OTHERWISE SPECIFIED, PIPE MATERIAL FOR WATER LINES AND MAINS SMALLER THAN 4-INCHES SHALL BE PVC, SCHEDULE 80.
4) UNLESS OTHERWISE SPECIFIED, PIPE MATERIAL FOR 4-INCH AND LARGER GRAVITY WASTEWATER LINES AND MAINS SHALL BE PVC (ASTM D2241 OR D3034, DR-35 OR BETTER) OR DUCTILE IRON (AWWA C-100, CLASS 50 OR BETTER).
5) UNLESS OTHERWISE SPECIFIED, PIPE MATERIAL FOR PRESSURE WASTEWATER MAINS SHALL BE PVC (AWWA C-900, CLASS 150 OR BETTER) OR DUCTILE IRON (AWWA C-100, CLASS 50).
6) ALL CAST IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH A MINIMUM OF 8-MIL POLYETHYLENE.
7) ALL VALVE BOXES AND COVERS SHALL BE CAST IRON.
8) UNLESS OTHERWISE SPECIFIED, ALL MANHOLES SHALL BE IN ACCORDANCE WITH THE STANDARD DRAWINGS OF THE CITY OF AUSTIN EXCEPT THAT, UNLESS OTHERWISE SPECIFIED OR UNLESS LOCATED OVER THE EDWARDS AQUIFER, NO COATING SHALL BE REQUIRED.
9) THE CONTRACTOR SHALL PERFORM STERILIZATION OF ALL WATER LINES AT THEIR EXPENSE. THIS INCLUDES, BUT IS NOT LIMITED TO, EQUIPMENT, SUPPLIES, AND LABOR.
10) THE CONTRACTOR SHALL PERFORM QUALITY TESTING FOR ALL WASTEWATER AND WATER PIPE AT THEIR EXPENSE. THIS INCLUDES, BUT IS NOT LIMITED TO, EQUIPMENT, SUPPLIES, AND LABOR. TESTS MAY INCLUDE LEAK TESTS, PRESSURE TESTS, AND MANDREL TESTS.
11) THE CONTRACTOR SHALL CONTACT THE ESD TO PERFORM A VISUAL INSPECTION TO VERIFY THE PIPE TYPE, SIZE, WRAPPED JOINTS, AND PROPER INSTALLATION OF THRUST BLOCKING. DO NOT BURY PIPES BEFORE INSPECTION HAS TAKEN PLACE.
12) THE OWNER OR HIS/HER REPRESENTATIVE IS TO BE NOTIFIED AT LEAST 24 HOURS IN ADVANCE OF ANY TESTING.
13) UNLESS OTHERWISE SPECIFIED, WATER AND FIRE LINES ARE TO FOLLOW FINISHED GRADE AT THE DEPTHS SHOWN ON THE PLANS. THE CONTRACTOR IS TO MINIMIZE EXCAVATION, WITHIN REASON, FOR WATER AND FIRE LINES.
14) ALL ON-SITE UTILITIES SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF THE UPC AND UBC CODES. ALL OFF-SITE UTILITIES SHALL BE IN CONFORMANCE WITH THE UTILITY PROVIDER'S CODES.
15) WHERE A WATER LINE CROSSES A SANITARY SEWER LINE, THE WATER LINE IS TO BE A MINIMUM OF 6 INCHES ABOVE THE SEWER LINE (AS MEASURED OUT TO OUT). ADDITIONALLY, ONE "STICK" SHALL BE CENTERED OVER THE CROSSING (I.E. JOINTS SHALL BE A MINIMUM OF 9 FEET FROM THE CROSSING). WHERE A WATER LINE AND SEWER LINE ARE PARALLEL TO EACH OTHER, THE MINIMUM CLEARANCE BETWEEN WATER LINES AND SEWER LINES IS TO BE 9 FEET HORIZONTALLY BETWEEN OUTSIDE OF PIPE DIAMETERS AND THE WATER LINE SHALL BE AT LEAST 6 INCHES ABOVE THE SEWER LINE.

Thompson Land
Engineering, LLC
(F-10220)

ROBERT C. THOMPSON
69524

Robert C Thompson
7/16/24

2022-27-SWP

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P.O. Box 160062, Austin, Texas 78716 (512-328-0002)
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www.tleng.net
TBPE Reg. No. F-10220 © Copyright 2012

DATE	REVISION

PROJECT
AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

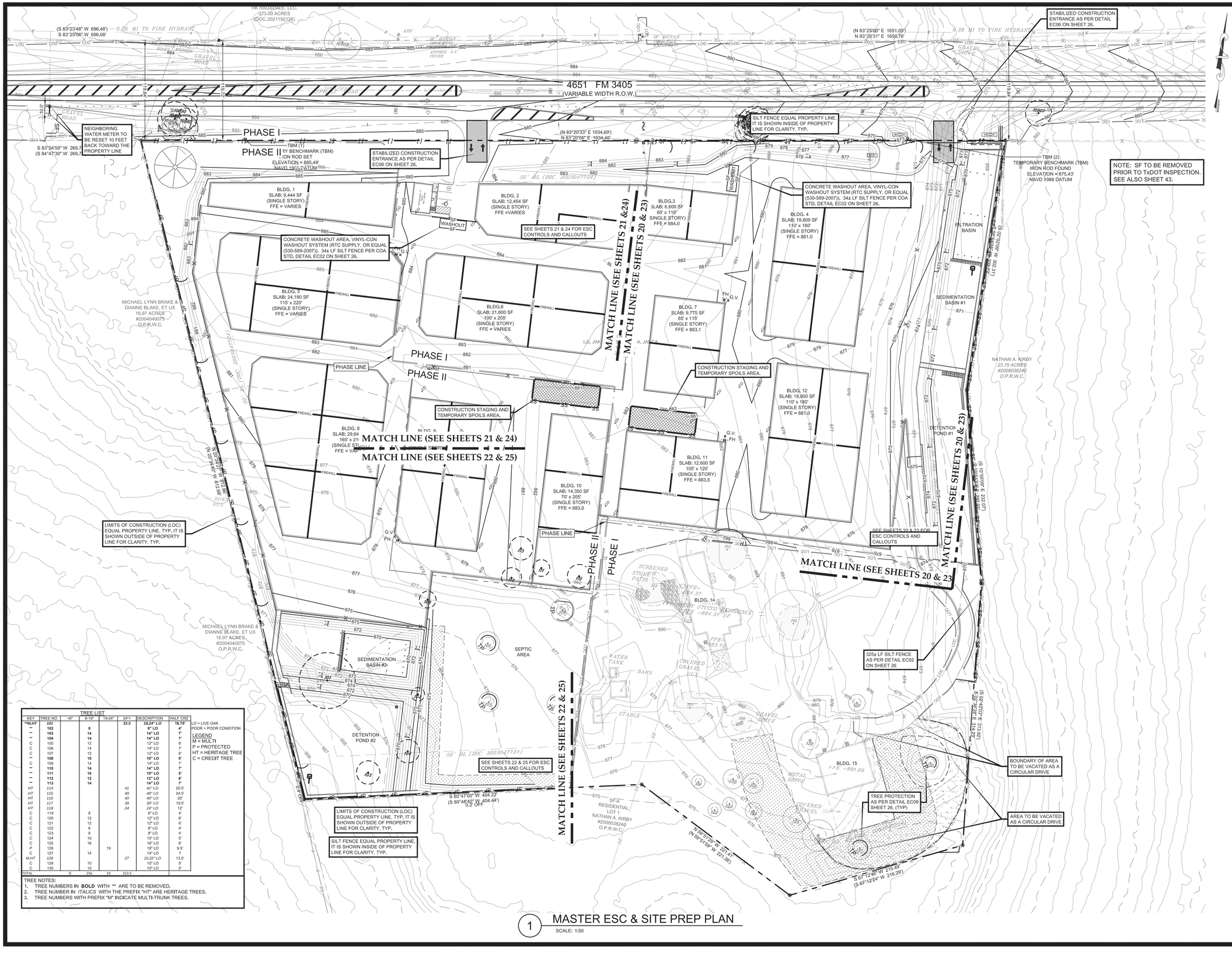
SHEET NAME
GENERAL NOTES

DATE ISSUED
July, 2024

DESIGNED BY: RCT
DRAFTED BY: JHMR

JOB NUMBER
1829

SHEET
17 OF 60



TREE LIST

KEY	TREE NO.	<8"	8-19"	19-24"	24"+	DESCRIPTION	HALF CRZ
M,HT	**101**				**33.5**	**18,24" LO**	**16.75'**
**	**102**		**8**			**8" LO**	**4'**
**	**103**		**14**			**14" LO**	**7'**
**	**104**		**14**			**14" LO**	**7'**
C	105		12			12" LO	6'
C	106		14			14" LO	7'
C	107		12			12" LO	6'
**	**108**		**10**			**10" LO**	**5'**
C	109		14			14" LO	7'
**	**110**		**14**			**14" LO**	**7'**
**	**111**		**10**			**10" LO**	**5'**
**	**112**		**12**			**12" LO**	**6'**
**	**113**		**14**			**14" LO**	**7'**
HT	*114*				*41*	*41" LO*	*20.5'*
HT	*115*				*49*	*49" LO*	*24.5'*
HT	*116*				*40*	*40" LO*	*20'*
HT	*117*				*39*	*39" LO*	*19.5'*
HT	*118*				*24*	*24" LO*	*12'*
C	119		8			8" LO	4'
C	120		12			12" LO	6'
C	121		12			12" LO	6'
C	122		8			8" LO	4'
C	123		8			8" LO	4'
C	124		10			10" LO	5'
C	125		16			16" LO	8'
P	126			19		19" LO	9.5'
C	127		14			14" LO	7
M,HT	*128*				*27*	*10,22" LO*	*13.5'*
C	129		10			10" LO	5'
C	130		10			10" LO	5'
TOTAL		0	256	19	253.5		

LO = LIVE OAK
POOR = POOR CONDITION

LEGEND
M = MULTI
P = PROTECTED
HT = HERITAGE TREE
C = CREDIT TREE

TREE NOTES:
1. TREE NUMBERS IN **BOLD** WITH ** ARE TO BE REMOVED.
2. TREE NUMBER IN *ITALICS* WITH THE PREFIX "HT" ARE HERITAGE TREES.
3. TREE NUMBERS WITH PREFIX "M" INDICATE MULTI-TRUNK TREES.

1 MASTER ESC & SITE PREP PLAN
SCALE: 1:50

SCALE: 1" = 50'
0 25 50 100

LEGEND

- TREE TO REMAIN
- TREE TO BE REMOVED
- PROTECTED TREE
- HERITAGE TREE
- TREE PROTECTION
- EXISTING WATER METER
- EXISTING FIRE HYDRANT
- EXISTING GATE VALVE
- EXISTING POWER POLE
- HATCHED ITEMS TO BE DEMOLISHED AND REMOVED
- STABILIZED CONSTRUCTION ENTRANCE
- CONSTRUCTION STAGING AND TEMP. SPOILS AREA
- LOC — LIMITS OF CONSTRUCTION
- SF — EROSION CONTROL SILT FENCE
- MS — EROSION CONTROL MULCH SOCK
- TFD — TRIANGULAR FILTER DIKE
- RB — ROCK BERM
- IP — STORM INLET PROTECTION
- EXISTING MINOR CONTOURS
- EXISTING MAJOR CONTOURS
- PROPOSED CONTOURS
- OE — EXISTING OVERHEAD ELECTRIC
- UT — EXISTING UNDERGROUND TELEPHONE
- C — EXISTING UNDERGROUND GAS
- W — EXISTING WATER LINE
- WW — EXISTING WASTEWATER LINE

WHILE UNDER CONSTRUCTION, CONTRACTOR TO HAVE TFD LOCATED IN LOCATIONS APPROXIMATELY AS SHOWN, AT THE END OF EACH DAY, OR PRIOR TO POSSIBLE RAIN EVENTS, CONTRACTOR TO LOCATE TFD ACROSS DISTURBED AREA. ONCE CONSTRUCTION IS COMPLETED AND PRIOR TO VEGETATION IS ESTABLISHED, CONTRACTOR TO LOCATE SILT FENCE IN SAME LOCATIONS WITH 5 FT. TURNED BACK UPHILL AT EACH END. SEE C.O. GEORGETOWN DETAIL EC05 ON SHEET 26.

!!! WARNING !!!:
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BENCH MARK: TEMPORARY BENCHMARK (TBM): IRON ROD FOUND (NW) CORNER POST
ELEVATION = 884.92 NAVD 1988 DATUM

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!!!WARNING!!! TOPOGRAPHY AND MOST OR ALL OF THE EXISTING FEATURES ARE BASED ON THE SURVEY BY **ALL STAR SURVEYING** DATED **JANUARY 21, 2022** AND WERE ASSUMED TO BE ACCURATE FOR THIS DESIGN.

!!CAUTION!!
OVERHEAD UTILITIES
IN THE AREA

Thompson Land Engineering, LLC
(F-10220)

STATE OF TEXAS
ROBERT C. THOMPSON
69524
REGISTERED
PROFESSIONAL ENGINEER

9/17/24

2022-27-SWP

THOMPSON LAND ENGINEERING, LLC
Land Planning, Site Design, Subdivision Engineering
P.O. Box 160062, Austin, Texas 78716 (512-328-0002)
www.tleng.net email: rc@tleng.net

DATE
REVISION

AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

PROJECT
MASTER ESC & SITE PREP PLAN
SHEET NAME

DATE ISSUED
September, 2024

DESIGNED BY	DRAFTED BY
RCT	JH/MR

JOB NUMBER
1829

SHEET
19 OF 60

MATCH LINE (SEE SHEET 22)

PHASE II
PHASE I

PHASE II MATCH LINE (SEE SHEET 21)
PHASE I

16.90 ACRES
I.G. JANCA, III & LESLIE A. JANCA
16.91 ACRES
#2003047724

MATCH LINE (SEE SHEET 21)

SILT FENCE EQUAL PROPERTY LINE, IT IS SHOWN INSIDE OF PROPERTY LINE FOR CLARITY, TYP.

!!CAUTION!!
OVERHEAD UTILITIES
IN THE AREA

REMOVE 71.2± LF OF FENCING

REMOVE APPROX. 150 LF OF FENCING

79± LF TRIANGULAR FILTER DIKE AS PER DETAIL EC05 ON SHEET 26

CONSTRUCTION STAGING AND TEMPORARY SPOILS AREA. 132,8± LF SILT FENCE AS PER DETAIL EC02 ON SHEET 26

REMOVE 106.4± LF OF FENCE

REMOVE 12.2± LF OF FENCE

REMOVE 15'x6' CATTLE GUARD AND CONCRETE

CATTLE GUARD

REMOVE 12.2± LF OF FENCE

CONCRETE WASHOUT AREA, VINYL-CON WASHOUT SYSTEM (RTC SUPPLY, OR EQUAL (530-589-2007)). 34± LF SILT FENCE PER COA STD. DETAIL EC02 ON SHEET 26.

WASHOUT

REMOVE APPROX. 46 LF OF CULVERT AND APPROX. 65.6 SF OF CONCRETE SAFETY TREATMENT

REMOVE APPROX. 858 SF OF ASPHALT APRON.

346.3± LF SILT FENCE AS PER DETAIL EC02 ON SHEET 26

J-HOOK AS PER DETAILS ON SHEET 26 (TYP)

REMOVE 325.1± LF OF FENCING

STABILIZED CONSTRUCTION ENTRANCE AS PER DETAIL EC06 ON SHEET 26.

40± LF TRIANGULAR FILTER DIKE AS PER DETAIL EC05 ON SHEET 26

56.2± LF SILT FENCE AS PER DETAIL EC02 ON SHEET 26

352.7± LF SILT FENCE AS PER DETAIL EC02 ON SHEET 26

LIMITS OF CONSTRUCTION (LOC) EQUAL PROPERTY LINE, TYP. IT IS SHOWN OUTSIDE OF PROPERTY LINE FOR CLARITY, TYP.

17.5± LF SILT FENCE AS PER DETAIL 642S-1 ON SHEET 26

17.5± LF ROCK BERM AS PER DETAIL 639S-1 ON SHEET 26

17.5± LF SILT FENCE AS PER DETAIL 642S-1 ON SHEET 26

EDGE OF PAVEMENT

ASPHALT APRON

CMP

TP

MATCH LINE (SEE SHEET 19)

SEE SHEET 19 FOR ESC CONTROLS AND CALLOUTS

MATCH LINE (SEE SHEET 19)

1 ESC & SITE PREP PLAN - STORAGE - EXISTING
SCALE: 1:20

SCALE: 1" = 20'
0 10 20 40

LEGEND

- TREE TO REMAIN
- TREE TO BE REMOVED
- PROTECTED TREE
- HERITAGE TREE
- TREE PROTECTION
- EXISTING WATER METER
- EXISTING FIRE HYDRANT
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KEY MAP

WHILE UNDER CONSTRUCTION, CONTRACTOR TO HAVE TFD LOCATED IN LOCATIONS APPROXIMATELY AS SHOWN, AT THE END OF EACH DAY, OR PRIOR TO POSSIBLE RAIN EVENTS, CONTRACTOR TO LOCATE TFD ACROSS DISTURBED AREA. ONCE CONSTRUCTION IS COMPLETED AND PRIOR TO VEGETATION IS ESTABLISHED, CONTRACTOR TO LOCATE SILT FENCE IN SAME LOCATIONS WITH 5 FT, TURNED BACK UPHILL AT EACH END. SEE C,O, GEORGETOWN DETAIL EC05 ON SHEET 26.

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STATE OF TEXAS
ROBERT C. THOMPSON
69524
REGISTERED PROFESSIONAL ENGINEER

Thompson Land Engineering, LLC (F-10220)

7/16/24

2022-27-SWP

THOMPSON LAND ENGINEERING, LLC
Land Planning, Site Design, Subdivision Engineering
P.O. Box 160062, Austin, Texas 78716 (512-328-0002)
email: rc@tleng.net
www.tleng.net

DATE
REVISION

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME: ESC & SITE PREP PLAN - EXISTING (1 OF 3)

DATE ISSUED: July, 2024

DESIGNED BY: RCT
DRAFTED BY: JH/MR

JOB NUMBER: 1829

SHEET 20 OF 60

EDGE OF PAVEMENT — 4651 FM 3405 (VARIABLE WIDTH R.O.W.)

PUBLIC CUT & CAP EXISTING WATER SERVICE

METER RETURN NOTE
COORDINATE WITH THE CITY OF GEORGETOWN FOR METER RETURN(S) AND SELL BACK TO THE CITY.

P.O.B.

PHASE I

PHASE II

TBM (1)
TEMPORARY BENCHMARK (TBM)
IRON ROD SET
ELEVATION = 885.49'
NAVD 1988 DATUM

REMOVE 600.6± LF OF FENCING

STABILIZED CONSTRUCTION ENTRANCE AS PER DETAIL EC06 ON SHEET 26.

(N 83°20'33" E 1034.69')
N 83°20'56" E 1034.40'

SCALE: 1" = 20'
0 10 20 40

SEE SHEET 20 FOR ESC CONTROLS AND CALLOUTS

50' BL (DOC. 2003047724)

MATCH LINE (SEE SHEET 20)

PHASE II
PHASE I

SF WASHOUT SF

CONCRETE WASHOUT AREA, VINYL-CON WASHOUT SYSTEM (RTC SUPPLY, OR EQUAL (530-589-2007)), 34± LF SILT FENCE PER COA STD. DETAIL EC02 ON SHEET 26.

307.1± LF SILT FENCE AS PER DETAIL EC02 ON SHEET 26

MICHAEL LYNN BRAKE & DIANNE BLAKE, ET UX
16.97 ACRES
#2004040075
O.P.R.W.C.

SILT FENCE EQUAL PROPERTY LINE, IT IS SHOWN INSIDE OF PROPERTY LINE FOR CLARITY, TYP.

LIMITS OF CONSTRUCTION (LOC) EQUAL PROPERTY LINE, TYP. IT IS SHOWN OUTSIDE OF PROPERTY LINE FOR CLARITY, TYP.

!!CAUTION!!
OVERHEAD UTILITIES IN THE AREA

J-HOOK AS PER DETAILS ON SHEET 26 (TYP)

50' BL (DOC. 2003047724)

PHASE II
PHASE I

PHASE I
PHASE II

79± LF TRIANGULAR FILTER DIKE AS PER DETAIL EC05 ON SHEET 26

CONSTRUCTION STAGING AND TEMPORARY SPOILS AREA, 132.8± LF SILT FENCE AS PER DETAIL EC02 ON SHEET 26

16.90 ACRES
I.G. JANCA, III & LESLIE
16.8 ACRES
#2004004772

MATCH LINE (SEE SHEET 20)

MATCH LINE (SEE SHEET 22)

MATCH LINE (SEE SHEET 22)

WHILE UNDER CONSTRUCTION, CONTRACTOR TO HAVE TFD LOCATED IN LOCATIONS APPROXIMATELY AS SHOWN. AT THE END OF EACH DAY, OR PRIOR TO POSSIBLE RAIN EVENTS, CONTRACTOR TO LOCATE TFD ACROSS DISTURBED AREA. ONCE CONSTRUCTION IS COMPLETED AND PRIOR TO VEGETATION IS ESTABLISHED, CONTRACTOR TO LOCATE SILT FENCE IN SAME LOCATIONS WITH 5 FT, TURNED BACK UPHILL AT EACH END. SEE C.O. GEORGETOWN DETAIL EC05 ON SHEET 26.

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1 ESC & SITE PREP PLAN - STORAGE - EXISTING
SCALE: 1:20

KEY MAP

LEGEND

- TREE TO REMAIN
- TREE TO BE REMOVED
- PROTECTED TREE
- HERITAGE TREE
- TREE PROTECTION
- EXISTING WATER METER
- EXISTING FIRE HYDRANT
- EXISTING GATE VALVE
- EXISTING POWER POLE
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TBPE Reg. No. F-10220

DATE

REVISION

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

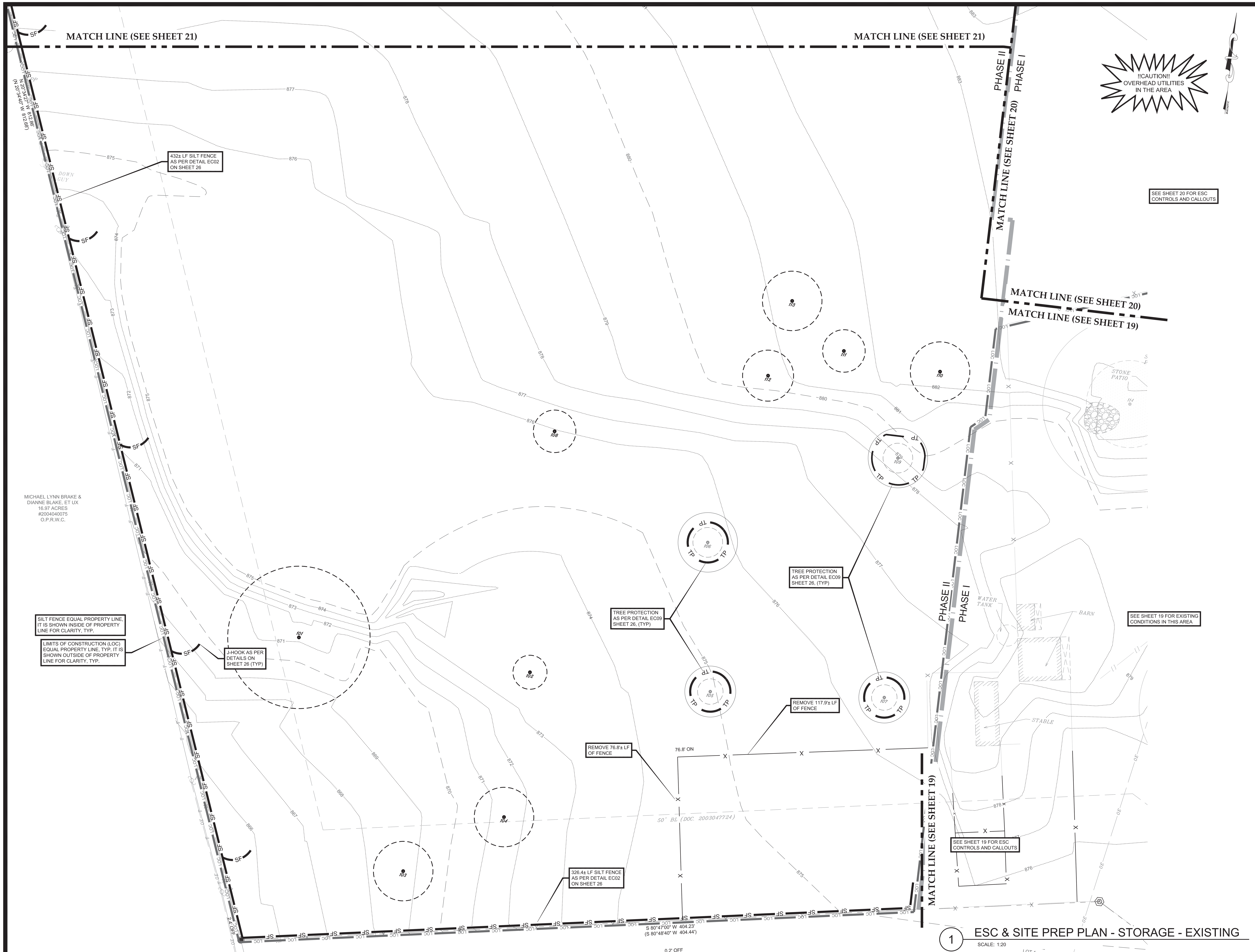
SHEET NAME: ESC & SITE PREP PLAN - EXISTING (2 OF 3)

DATE ISSUED
July, 2024

DESIGNED BY: RCT
DRAFTED BY: JH/MR

JOB NUMBER
1829

SHEET
21 OF 60



1 ESC & SITE PREP PLAN - STORAGE - EXISTING

SCALE: 1:20

SCALE: 1" = 20'

0 10 20 40

LEGEND

- TREE TO REMAIN
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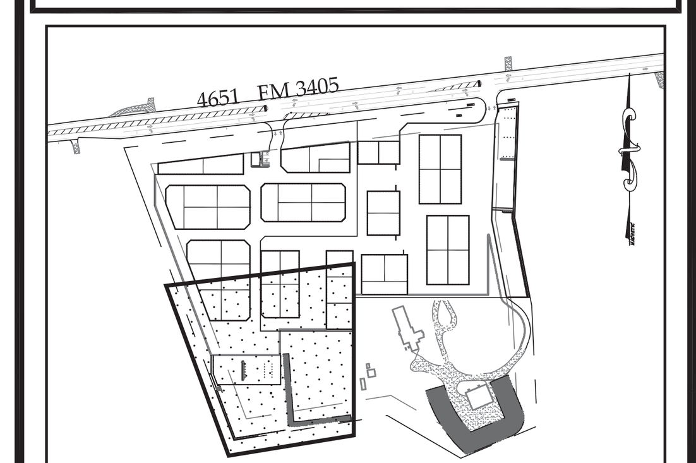

KEY MAP

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!!! WARNING !!!:
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BENCH MARK: TEMPORARY BENCHMARK (TBM): IRON ROD FOUND (NW) CORNER POST
ELEVATION = 884.92 NAVD 1988 DATUM

!!!WARNING!!! BENCH MARK BEING PROVIDED IS FROM THE SURVEYOR AND COULD HAVE BEEN ADJUSTED, CHANGED, RESET, OR DESTROYED BETWEEN THE TIME OF THE SURVEY AND THE TIME OF CONSTRUCTION. CONTRACTOR SHOULD GET THE BENCH MARK ELEVATION VERIFIED AND SHOULD CHECK INTO AT LEAST TWO POINTS ON THE PROVIDED TOPOGRAPHY TO MAKE SURE THAT THE BENCH MARK ELEVATION SEEMS REASONABLE BEFORE USING.

!!!WARNING!!! TOPOGRAPHY AND MOST OR ALL OF THE EXISTING FEATURES ARE BASED ON THE SURVEY BY **ALL STAR SURVEYING** DATED **JANUARY 21, 2022** AND WERE ASSUMED TO BE ACCURATE FOR THIS DESIGN.

STATE OF TEXAS
ROBERT C. THOMPSON
69524
REGISTERED PROFESSIONAL ENGINEER

Thompson Land Engineering, LLC (F-10220)

7/16/24

2022-27-SWP

THOMPSON LAND ENGINEERING, LLC
Land Planning, Site Design, Subdivision Engineering
P.O. Box 160062, Austin, Texas 78716 (512-328-0002)
email: ric@tleng.net
www.tleng.net

DATE

REVISION

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME: ESC & SITE PREP PLAN - EXISTING (3 OF 3)

DATE ISSUED	
July, 2024	
DESIGNED BY	DRAFTED BY
RCT	JH/MR
JOB NUMBER	
1829	

MATCH LINE (SEE SHEET 25)

PHASE II

PHASE I

PHASE II

PHASE I

MATCH LINE (SEE SHEET 24)

MATCH LINE (SEE SHEET 24)

16.90 ACRES
I.G. JANCA, III & LESLIE A. JANCA
16.91 ACRES
2003047724

79± LF TRIANGULAR FILTER DIKE AS PER DETAIL EC05 ON SHEET 26

BLDG. 11
SLAB: 12,600 SF
105' x 120'
(SINGLE STORY)
FFE = 883.5

BLDG. 7
SLAB: 9,775 SF
85' x 115'
(SINGLE STORY)
FFE = 883.1

BLDG.3
SLAB: 6,600 SF
60' x 110'
(SINGLE STORY)
FFE = 884.0

!!CAUTION!!
OVERHEAD UTILITIES
IN THE AREA

CONSTRUCTION STAGING AND TEMPORARY SPOILS AREA. 132.8± LF SILT FENCE AS PER DETAIL EC02 ON SHEET 26

CONCRETE WASHOUT AREA, VINYL-CON WASHOUT SYSTEM (RTC SUPPLY, OR EQUAL (530-589-2007)). 34± LF SILT FENCE PER COA STD. DETAIL EC02 ON SHEET 26.

TREE PROTECTION AS PER DETAIL EC09 SHEET 26, (TYP)

BLDG. 12
SLAB: 19,800 SF
110' x 180'
(SINGLE STORY)
FFE = 881.0

BLDG. 4
SLAB: 19,800 SF
110' x 180'
(SINGLE STORY)
FFE = 881.0

DETENTION POND #1

SEDIMENTATION BASIN #1

FILTRATION BASIN

DEWATERING SKIMMER LOCATION: SEE FIGURE 1.4.5.K.1 ON SHEET 9

SILT FENCE EQUAL PROPERTY LINE. IT IS SHOWN OUTSIDE OF PROPERTY LINE FOR CLARITY, TYP.

LIMITS OF CONSTRUCTION (LOC) EQUAL PROPERTY LINE, TYP. IT IS SHOWN OUTSIDE OF PROPERTY LINE FOR CLARITY, TYP.

STABILIZED CONSTRUCTION ENTRANCE AS PER DETAIL EC06 ON SHEET 26.

40± LF TRIANGULAR FILTER DIKE AS PER DETAIL EC05 ON SHEET 26

NOTE: SEE SHEET 43 FOR ESC FOR FM 3405.

MATCH LINE (SEE SHEET 19)

SEE SHEET 19 FOR ESC CONTROLS AND CALLOUTS

MATCH LINE (SEE SHEET 19)

1 ESC & SITE PREP PLAN - PROPOSED

SCALE: 1:20

SCALE: 1" = 20'

0 10 20 40

LEGEND

- TREE TO REMAIN
- TREE TO BE REMOVED
- PROTECTED TREE
- HERITAGE TREE
- TREE PROTECTION
- EXISTING WATER METER
- EXISTING FIRE HYDRANT
- EXISTING GATE VALVE
- EXISTING POWER POLE
- HATCHED ITEMS TO BE DEMOLISHED AND REMOVED
- STABILIZED CONSTRUCTION ENTRANCE
- CONSTRUCTION STAGING AND TEMP. SPOILS AREA
- LOC — LIMITS OF CONSTRUCTION
- SF — EROSION CONTROL SILT FENCE
- MS — EROSION CONTROL MULCH SOCK
- TFD — TRIANGULAR FILTER DIKE
- RB — ROCK BERM
- STORM INLET PROTECTION
- EXISTING MINOR CONTOURS
- EXISTING MAJOR CONTOURS
- PROPOSED CONTOURS
- OE — EXISTING OVERHEAD ELECTRIC
- UT — EXISTING UNDERGROUND TELEPHONE
- G — EXISTING UNDERGROUND GAS
- W — EXISTING WATER LINE
- WW — EXISTING WASTEWATER LINE

KEY MAP

WHILE UNDER CONSTRUCTION, CONTRACTOR TO HAVE TFD LOCATED IN LOCATIONS APPROXIMATELY AS SHOWN. AT THE END OF EACH DAY, OR PRIOR TO POSSIBLE RAIN EVENTS, CONTRACTOR TO LOCATE TFD ACROSS DISTURBED AREA. ONCE CONSTRUCTION IS COMPLETED AND PRIOR TO VEGETATION IS ESTABLISHED, CONTRACTOR TO LOCATE SILT FENCE IN SAME LOCATIONS WITH 5 FT, TURNED BACK UPHILL AT EACH END. SEE C.O, GEORGETOWN DETAIL EC05 ON SHEET 26.

!!! WARNING !!!
UNDERGROUND UTILITIES SHOWN ON THESE PLANS IS A BEST ESTIMATE BASED ON RECORDS THAT COULD BE OBTAINED AND PHYSICAL FEATURES VISIBLE AT THE GROUND LEVEL. THE ENGINEER MAKES NO ASSERTIONS BEYOND THAT THEY ARE A BEST ESTIMATE AND AN ATTEMPT TO HELP IDENTIFY POSSIBLE UTILITIES IN THE AREA. THE CONTRACTOR MUST CALL ONE CALL IN ACCORDANCE WITH THE NOTES TO BETTER LOCATE ANY UNDERGROUND UTILITIES.

BENCH MARK: TEMPORARY BENCHMARK (TBM): IRON ROD FOUND (NW) CORNER POST
ELEVATION = 884.92 NAVD 1988 DATUM

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STATE OF TEXAS
ROBERT C. THOMPSON
69524
REGISTERED
PROFESSIONAL ENGINEER

Thompson Land Engineering, LLC (F-10220)

9/17/24

2022-27-SWP

THOMPSON LAND ENGINEERING, LLC
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P.O. Box 160062, Austin, Texas 78716 (512-328-0002)
email: rc@tleng.net
www.tleng.net
TBPE Reg. No. F-10220

DATE

REVISION

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME: ESC & SITE PREP PLAN - PROPOSED (1 OF 3)

DATE ISSUED: September, 2024

DESIGNED BY: RCT

DRAFTED BY: JH/MR

JOB NUMBER: 1829

SHEET 23 OF 60

4651 FM 3405 (VARIABLE WIDTH R.O.W.)

ONLY

P.O.B.

PHASE I

PHASE II (1) ICHMARK (TBM)
IRON ROD SET
ELEVATION = 885.49'
NAVD 1988 DATUM

(N 83°20'33" E 1034.69')
N 83°20'56" E 1034.40'

SCALE: 1" = 20'
0 10 20 40

STABILIZED CONSTRUCTION ENTRANCE AS PER DETAIL EC06 ON SHEET 26.

SEE SHEET 23 FOR ESC CONTROLS AND CALLOUTS

50' BL (DOC. 2003047724)

MATCH LINE (SEE SHEET 23)

BLDG. 1
SLAB: 9,444 SF
(SINGLE STORY)
FFE = VARIES

OFFICE BLDG. 13
756 SF
FFE = 886.88

BLDG. 2
SLAB: 12,454 SF
(SINGLE STORY)
FFE =VARIES

SF WASHOUT SF

CONCRETE WASHOUT AREA, VINYL-CON WASHOUT SYSTEM (RTC SUPPLY, OR EQUAL (530-589-2007)), 34± LF SILT FENCE PER COA STD. DETAIL EC02 ON SHEET 26.

KEY MAP

MICHAEL LYNN BRAKE &
DIANNE BLAKE, ET UX
16.97 ACRES
#2004040075
O.P.R.W.C.

SILT FENCE EQUAL PROPERTY LINE, IT IS SHOWN INSIDE OF PROPERTY LINE FOR CLARITY, TYP.

LIMITS OF CONSTRUCTION (LOC) EQUAL PROPERTY LINE, TYP. IT IS SHOWN OUTSIDE OF PROPERTY LINE FOR CLARITY, TYP.

!!CAUTION!!
OVERHEAD UTILITIES
IN THE AREA

WHILE UNDER CONSTRUCTION, CONTRACTOR TO HAVE TFD LOCATED IN LOCATIONS APPROXIMATELY AS SHOWN, AT THE END OF EACH DAY, OR PRIOR TO POSSIBLE RAIN EVENTS, CONTRACTOR TO LOCATE TFD ACROSS DISTURBED AREA. ONCE CONSTRUCTION IS COMPLETED AND PRIOR TO VEGETATION IS ESTABLISHED, CONTRACTOR TO LOCATE SILT FENCE IN SAME LOCATIONS WITH 5 FT. TURNED BACK UPHILL AT EACH END. SEE C.O. GEORGETOWN DETAIL EC05 ON SHEET 26.

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ELEVATION = 884.92 NAVD 1988 DATUM

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PHASE II
PHASE I

BLDG. 5
SLAB: 24,190 SF
115' x 220'
(SINGLE STORY)
FFE = VARIES

BLDG.6
SLAB: 21,800 SF
100' x 200'
(SINGLE STORY)
FFE = VARIES

16.99 ACRES
I.G. JANCA, III & LESLIE
16.99 ACRES
#2004004772

PHASE I
PHASE II

79± LF TRIANGULAR FILTER DIKE AS PER DETAIL EC05 ON SHEET 26

CONSTRUCTION STAGING AND TEMPORARY SPOILS AREA. 132.9± LF SILT FENCE AS PER DETAIL EC02 ON SHEET 26

BLDG. 8
SLAB: 29,642 SF
165' x 210'
(SINGLE STORY)
FFE = VARIES

BLDG. 9
SLAB: 17,450 SF
100' x 175'
(SINGLE STORY)
FFE =VARIES

MATCH LINE (SEE SHEET 25)

MATCH LINE (SEE SHEET 23)

MATCH LINE (SEE SHEET 25)

1 ESC & SITE PREP PLAN - STORAGE - PROPOSED
SCALE: 1:20

LEGEND

- TREE TO REMAIN
- TREE TO BE REMOVED
- PROTECTED TREE
- HERITAGE TREE
- TREE PROTECTION
- WM EXISTING WATER METER
- EXISTING FIRE HYDRANT
- WV EXISTING GATE VALVE
- PP EXISTING POWER POLE
- HATCHED ITEMS TO BE DEMOLISHED AND REMOVED
- STABILIZED CONSTRUCTION ENTRANCE
- CONSTRUCTION STAGING AND TEMP. SPOILS AREA
- LOC LIMITS OF CONSTRUCTION
- SF EROSION CONTROL SILT FENCE
- MS EROSION CONTROL MULCH SOCK
- TFD TRIANGULAR FILTER DIKE
- RB ROCK BERM
- IP STORM INLET PROTECTION
- EXISTING MINOR CONTOURS
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- OE EXISTING OVERHEAD ELECTRIC
- UT EXISTING UNDERGROUND TELEPHONE
- G EXISTING UNDERGROUND GAS
- W EXISTING WATER LINE
- WW EXISTING WASTEWATER LINE

STATE OF TEXAS
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7/16/24

2022-27-SWP

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TBPE Reg. No. F-11039

DATE

REVISION

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME: ESC & SITE PREP PLAN - PROPOSED (2 OF 3)

DATE ISSUED: July, 2024

DESIGNED BY: RCT | DRAFTED BY: JH/MR

JOB NUMBER: 1829

SHEET 24 OF 60

MATCH LINE (SEE SHEET 24)

MATCH LINE (SEE SHEET 24)

BLDG. 8
SLAB: 29,642 SF
165' x 210'
(SINGLE STORY)
FFE = VARIES

BLDG. 9
SLAB: 17,450 SF
100' x 175'
(SINGLE STORY)
FFE =VARIES

BLDG. 10
SLAB: 14,350 SF
70' x 205'
(SINGLE STORY)
FFE = 883.0

PHASE II
PHASE I

!!CAUTION!!
OVERHEAD UTILITIES
IN THE AREA

SEE SHEET 23 FOR ESC CONTROLS AND CALLOUTS

MATCH LINE (SEE SHEET 23)

MATCH LINE (SEE SHEET 23)
MATCH LINE (SEE SHEET 19)

MICHAEL LYNN BRAKE &
DIANNE BLAKE, ET UX
16.97 ACRES
#2004040075
O.P.R.W.C.

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SEDIMENTATION BASIN #2

DETENTION POND #2

DEWATERING SKIMMER LOCATION: SEE FIGURE 1,4,5,K,1 ON SHEET 26

TREE PROTECTION AS PER DETAIL EC09 SHEET 26, (TYP)

SEPTIC

TREE PROTECTION AS PER DETAIL EC09 SHEET 26, (TYP)

50' BL (DOC. 2003047724)

SEE SHEET 19 FOR ESC CONTROLS AND CALLOUTS

MATCH LINE (SEE SHEET 19)

S 80°47'00" W 404.23'
(S 80°48'40" W 404.44')

0.2' OFF

STONE PATIO

WATER TANK

BARN

STABLE

NATHAN A. [illegible]

1 ESC & SITE PREP PLAN - PROPOSED
SCALE: 1:20

SCALE: 1" = 20'
0 10 20 40

LEGEND

- TREE TO REMAIN
- TREE TO BE REMOVED
- PROTECTED TREE
- HERITAGE TREE
- TREE PROTECTION
- EXISTING WATER METER
- EXISTING FIRE HYDRANT
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- EXISTING MINOR CONTOURS
- EXISTING MAJOR CONTOURS
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- OE — EXISTING OVERHEAD ELECTRIC
- UT — EXISTING UNDERGROUND TELEPHONE
- G — EXISTING UNDERGROUND GAS
- W — EXISTING WATER LINE
- WW — EXISTING WASTEWATER LINE

KEY MAP

WHILE UNDER CONSTRUCTION, CONTRACTOR TO HAVE TFD LOCATED IN LOCATIONS APPROXIMATELY AS SHOWN, AT THE END OF EACH DAY, OR PRIOR TO POSSIBLE RAIN EVENTS, CONTRACTOR TO LOCATE TFD ACROSS DISTURBED AREA. ONCE CONSTRUCTION IS COMPLETED AND PRIOR TO VEGETATION IS ESTABLISHED, CONTRACTOR TO LOCATE SILT FENCE IN SAME LOCATIONS WITH 5 FT, TURNED BACK UPHILL AT EACH END. SEE C.O. GEORGETOWN DETAIL EC05 ON SHEET 26.

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ELEVATION = 884.92 NAVD 1988 DATUM

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7/16/24

2022-27-SWP

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TBPE Reg. No. F-10220

DATE
REVISION

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME: ESC & SITE PREP PLAN - PROPOSED (3 OF 3)

DATE ISSUED: July, 2024

DESIGNED BY: RCT
DRAFTED BY: JH/MR

JOB NUMBER: 1829

SHEET: 25 OF 60

GUIDELINES FOR DESIGN AND INSTALLATION OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS

TYPE OF STRUCTURE	REACH LENGTH	MAXIMUM DRAINAGE AREA	SLOPE
SILT FENCE	N/A	2 ACRES	0 – 10%
	200 FEET	2 ACRES	10 – 20%
	100 FEET	1 ACRE	20 – 30%
	50 FEET	1/2 ACRE	> 30%
TRIANGLE FILTER DIKE	100 FEET	1/2 ACRE	< 30% SLOPE
	50 FEET	1/4 ACRE	> 30% SLOPE
ROCK BERM *, **	500 FEET	< 5 ACRES	0 – 10%

* FOR ROCK BERM DESIGN WHERE PARAMETERS ARE OTHER THAN STATED, DRAINAGE AREA CALCULATIONS AND ROCK BERM DESIGN MUST BE SUBMITTED FOR REVIEW.

** HIGH SERVICE ROCK BERMS MAY BE REQUIRED IN AREAS OF ENVIRONMENTAL SIGNIFICANCE AS DETERMINED BY THE CITY OF GEORGETOWN.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006 — CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS — TEMPORARY EROSION AND SEDIMENTATION CONTROL GUIDELINES — EC01 — SCALE: NTS — DATE: 1/2003 — DRAWN BY: MRS — APPROVED BY: TRB

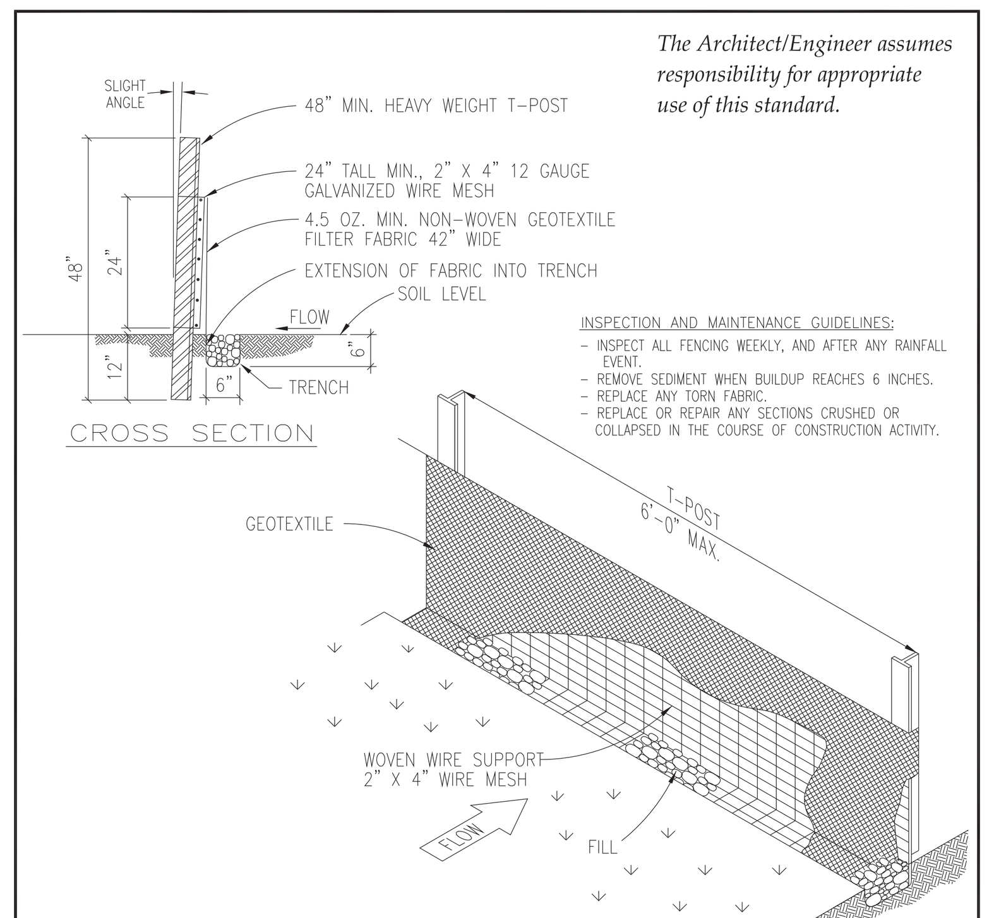
NOTE: THIS SECTION IS INTENDED TO ASSIST THOSE PERSONS PREPARING WATER POLLUTION ABATEMENT PLANS (WPAP) OR STORM WATER POLLUTION PREVENTION PLANS (SW3P) THAT COMPLY WITH FEDERAL, STATE AND/OR LOCAL STORM WATER REGULATIONS.

1. THE CONTRACTOR TO INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, GRADING, OR EXCAVATION). CONTRACTOR TO REMOVE EROSION/SEDIMENTATION CONTROLS AT THE COMPLETION OF PROJECT AND GRASS RESTORATION.
2. ALL PROJECTS WITHIN THE RECHARGE ZONE OF THE EDWARD'S AQUIFER SHALL SUBMIT A BEST MANAGEMENT PRACTICES AND WATER POLLUTION AND ABATEMENT PLAN TO THE TNRCC FOR APPROVAL PRIOR TO ANY CONSTRUCTION.
3. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS TO BE IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN AND WATER POLLUTION ABATEMENT PLAN. DEVIATIONS FROM THE APPROVED PLAN MUST BE SUBMITTED TO AND APPROVED BY THE OWNER'S REPRESENTATIVE.
4. ALL PLANTING SHALL BE DONE BETWEEN MAY 1 AND SEPTEMBER 15 EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING. IF PLANTING IS AUTHORIZED TO BE DONE OUTSIDE THE DATES SPECIFIED, THE SEED SHALL BE PLANTED WITH THE ADDITION OF WINTER FESCUE (KENTUCKY 31) AT A RATE OF 100lb/ACRE. GRASS SHALL BE COMMON BERMUDA GRASS, HULLED, MINIMUM 82% PURE LIVE SEED. ALL GRASS SEED SHALL BE FREE FROM NOXIOUS WEED, GRADE "A" RECENT CROP, RECLEANED AND TREATED WITH APPROPRIATE FUNGICIDE AT TIME OF MIXING. SEED SHALL BE FURNISHED IN SEALED, STANDARD CONTAINERS WITH DEALER'S GUARANTEED ANALYSIS.
5. ALL DISTURBED AREAS TO BE RESTORED AS NOTED IN THE WATER POLLUTION ABATEMENT PLAN.
6. THE PLANTED AREA TO BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF FOUR (4) INCHES. THE IRRIGATION TO OCCUR AT 10-DAY INTERVALS DURING THE FIRST TWO MONTHS TO INSURE GERMINATION AND ESTABLISHMENT OF THE GRASS . RAINFALL OCCURRENCES OF 1/2 INCH OR GREATER TO POSTPONE THE WATERING SCHEDULE ONE WEEK.
7. RESTORATION TO BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1-1/2 INCHES HIGH WITH 95% *COVERAGE,* PROVIDED NO BARE SPOTS LARGER THAN 25 SQUARE FEET EXIST.
8. A MINIMUM OF FOUR (4) INCHES OF TOPSOIL TO BE PLACED IN ALL AREAS DISTURBED BY CONSTRUCTION.
9. THE CONTRACTOR TO HYDROMULCH OR SOD (AS SHOWN ON PLANS) ALL EXPOSED CUTS AND FILLS UPON COMPLETION OF CONSTRUCTION.
10. EROSION AND SEDIMENTATION CONTROLS TO BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILDUP WITHIN TREE DRIPLINE.
11. TO AVOID SOIL COMPACTION, CONTRACTOR SHALL NOT ALLOW VEHICULAR TRAFFIC, PARKING, OR STORAGE OF EQUIPMENT OR MATERIALS IN THE TREE DRIPLINE AREAS.
12. WHERE A FENCE IS CLOSER THAN FOUR (4) FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF EIGHT (8) FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE FENCING.
13. TREES TO BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
14. ANY ROOT EXPOSED BY CONSTRUCTION ACTIVITY TO BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOPSOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
15. CONTRACTOR TO PRUNE VEGETATION TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND EQUIPMENT BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.). ALL FINISHED PRUNING TO BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE "NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES").
16. THE CONTRACTOR IS TO INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY RAINFALL EXCEEDING 1/4 INCH TO VERIFY THAT THEY HAVE NOT BEEN SIGNIFICANTLY DISTURBED. ANY ACCUMULATED SEDIMENT AFTER A SIGNIFICANT RAINFALL TO BE REMOVED AND PLACED IN THE OWNER DESIGNATED SPOIL DISPOSAL SITE. THE CONTRACTOR TO CONDUCT PERIODIC INSPECTIONS OF ALL EROSION/SEDIMENTATION CONTROLS AND TO MAKE ANY REPAIRS OR MODIFICATIONS NECESSARY TO ASSURE CONTINUED EFFECTIVE OPERATION OF EACH DEVICE.
17. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT IMMEDIATELY ADJACENT TO A PROTECTED TREE, ERECT THE FENCE APPROXIMATELY TWO TO FOUR FEET (2'-4') BEHIND THE AREA IN QUESTION.
18. NO ABOVE AND/OR BELOW GROUND TEMPORARY FUEL STORAGE FACILITIES TO BE STORED ON THE PROJECT SITE.
19. IF EROSION AND SEDIMENTATION CONTROL SYSTEMS ARE EXISTING FROM PRIOR CONTRACTS, OWNER'S REPRESENTATIVE AND THE CONTRACTOR TO EXAMINE THE EXISTING EROSION AND SEDIMENTATION CONTROL SYSTEMS FOR DAMAGE PRIOR TO CONSTRUCTION. ANY DAMAGE TO PREEXISTING EROSION AND SEDIMENTATION CONTROLS NOTED TO BE REPAIRED AT OWNERS EXPENSE.
20. INTENTIONAL RELEASE OF VEHICLE OR EQUIPMENT FLUIDS ONTO THE GROUND IS NOT ALLOWED. CONTAMINATED SOIL RESULTING FROM ACCIDENTAL SPILL TO BE REMOVED AND DISPOSED OF PROPERLY.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006 — CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS — EROSION AND SEDIMENTATION AND TREE PROTECTION NOTES — EC01A — SCALE: NTS — DATE: 1/2003 — DRAWN BY: MRS — APPROVED BY: TRB

The Architect/Engineer assumes responsibility for appropriate use of this standard.



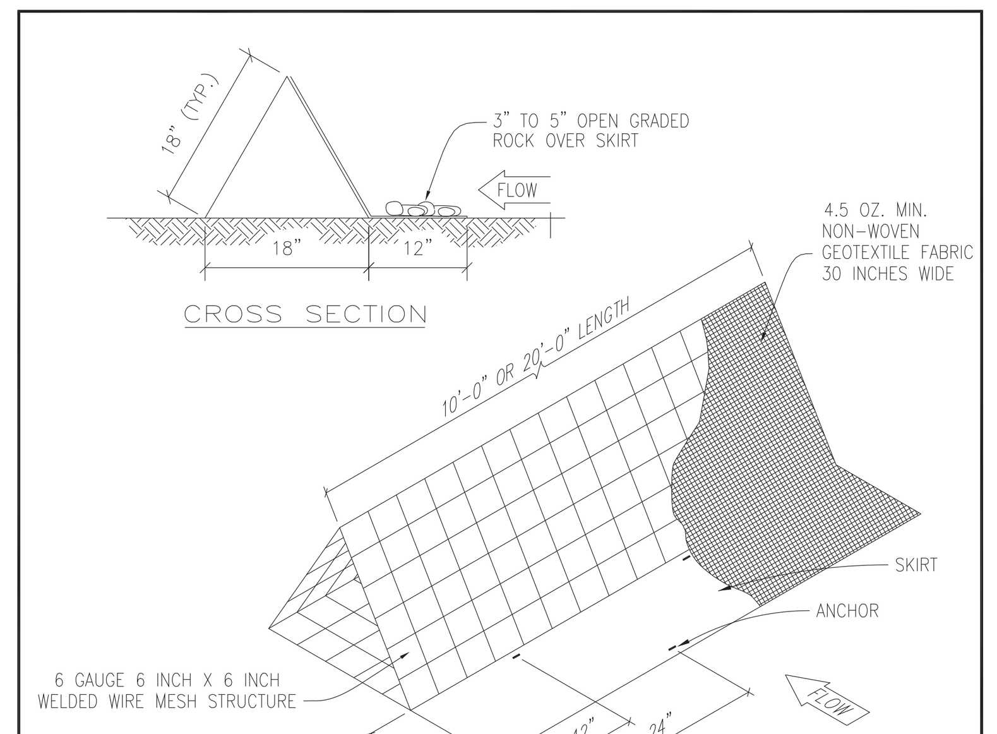
INSPECTION AND MAINTENANCE GUIDELINES:

- INSPECT ALL FENCING WEEKLY, AND AFTER ANY RAINFALL EVENT.
- REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.
- REPLACE ANY TORN FABRIC.
- REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY.

INSTALLATION:

- LAYOUT THE SILT FENCE FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS, PLANTS (INCLUDING GRASSES TALLER THAN 2") TO PROVIDE A SMOOTH FLOW APPROACH SURFACE. EXCAVATE 6" DEEP X 6" WIDE TRENCH ON UPSTREAM SIDE OF FACE PER PLANS.
- DRIVE THE HEAVY DUTY T-POST AT LEAST 12 INCHES INTO THE GROUND AND AT A SLIGHT ANGLE TOWARDS THE FLOW.
- ATTACH THE 2" X 4" 12 GAUGE WELDED WIRE MESH TO THE T-POST WITH 11 1/2 GAUGE GALVANIZED T-POST CLIPS. THE TOP OF THE WIRE TO BE 24" ABOVE GROUND LEVEL. THE WELDED WIRE MESH TO BE OVERLAPPED 6" AND TIED AT LEAST 6 TIMES WITH HOG RINGS.
- THE SILT FENCE TO BE INSTALLED WITH A SKIRT A MINIMUM OF 6" WIDE PLACED ON THE UPHILL SIDE OF THE FENCE INSIDE EXCAVATED TRENCH. THE FABRIC TO OVERLAP THE TOP OF THE WIRE BY 1".
- ANCHOR THE SILT FENCE BY BACKFILLING WITH EXCAVATED DIRT AND ROCKS (NOT LARGER THAN 2").
- GEOTEXTILE SPLICES SHOULD BE A MINIMUM OF 18" WIDE ATTACHED IN AT LEAST 6 PLACES. SPLICES IN CONCENTRATED FLOW AREAS WILL NOT BE ACCEPTED.
- SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

ADOPTED 6/21/2006 — CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS — SILT FENCE DETAIL — EC02 — SCALE: NTS — DATE: 1/2003 — DRAWN BY: MRS — APPROVED BY: TRB



INSTALLATION:

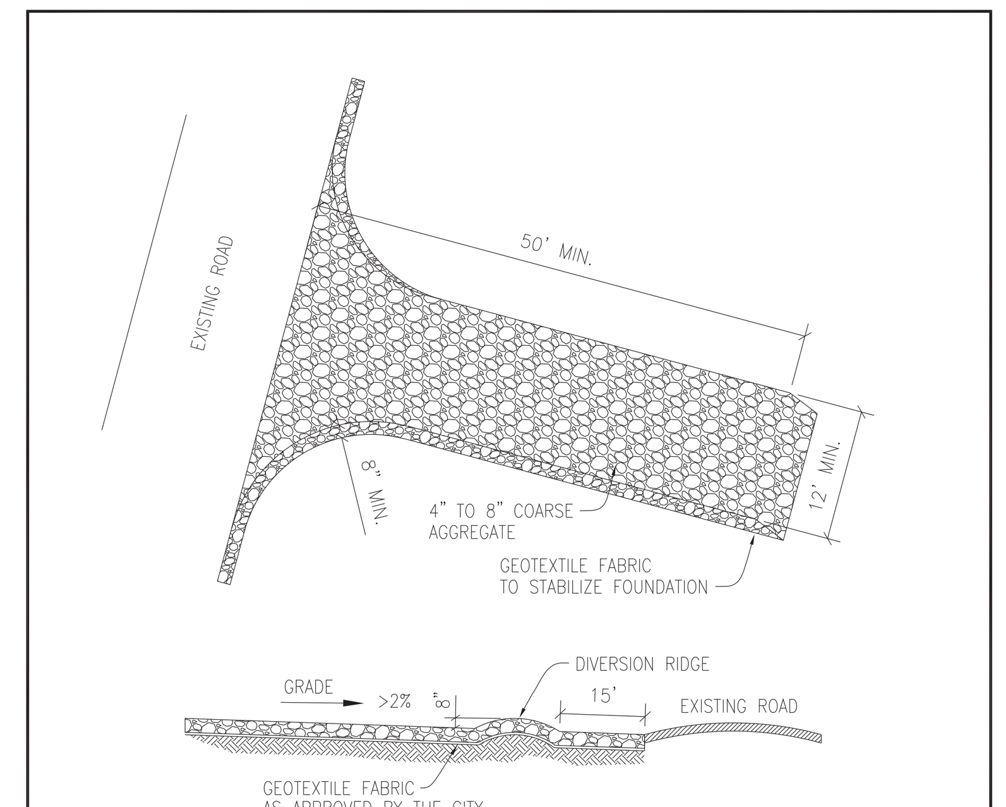
- LAYOUT THE FILTER DIKE FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- PLACE THE FILTER DIKE SECTIONS ONE AT A TIME, WITH THE SKIRT ON THE UPHILL SIDE TOWARDS THE DIRECTION OF FLOW, ANCHORING EACH SECTION TO THE GROUND BEFORE THE NEXT SECTION IS PLACED.
- ANCHORS SHOULD BE PLACED ON 2'-0" CENTERS ALTERNATING FROM FRONT TO BACK SO THAT THERE IS ACTUALLY ONLY 1'-0" IN BETWEEN ANCHORS.
- SECURELY FASTEN THE SKIRT FROM ONE SECTION OF FILTER DIKE TO THE NEXT.
- FILTER DIKES MUST MAINTAIN CONTINUOUS CONTACT WITH THE GROUND.
- AFTER THE SITE IS COMPLETELY STABILIZED, THE DIKES AND ANY REMAINING SILT SHOULD BE REMOVED. SILT SHOULD BE DISPOSED OF IN A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

INSPECTION AND MAINTENANCE GUIDELINES:

- INSPECTION SHOULD BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
- INSPECT AND REALIGN BERMS AS NEEDED TO PREVENT GAPS BETWEEN THE SECTIONS.
- ACCUMULATED SILT SHOULD BE REMOVED AFTER EACH RAINFALL EVENT, AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006 — CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS — TRIANGULAR FILTER DIKE — EC05 — SCALE: NTS — DATE: 1/2003 — DRAWN BY: MRS — APPROVED BY: TRB



INSTALLATION:

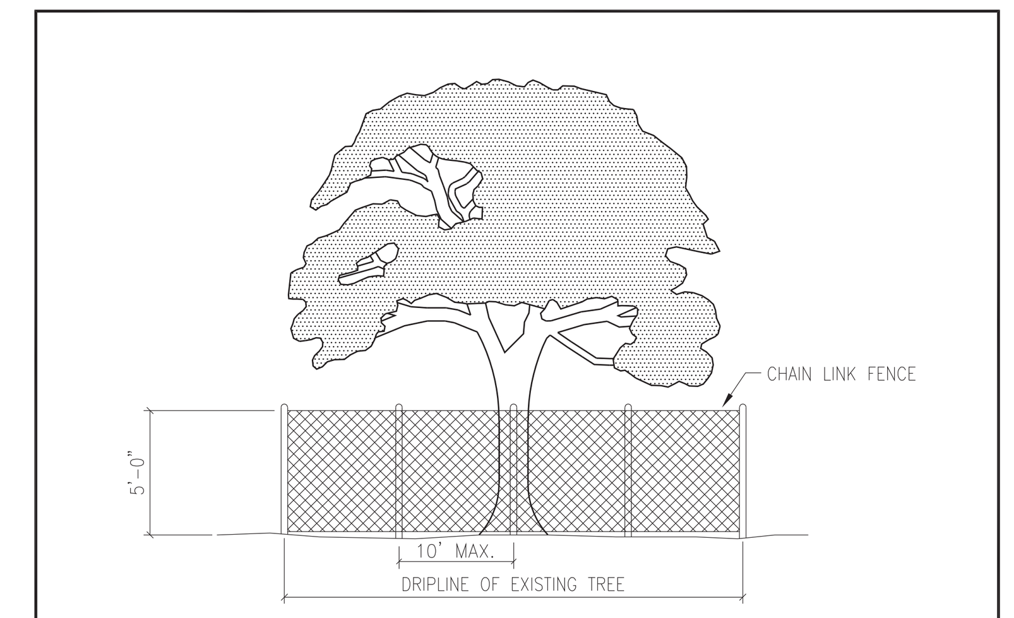
- CLEAR THE AREA OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- GRADE THE AREA FOR THE ENTRANCE TO FLOW BACK ON TO THE CONSTRUCTION SITE. RUNOFF FROM THE STABILIZED CONSTRUCTION
- PLACE GEOTEXTILE FABRIC AS APPROVED BY THE CITY.
- PLACE ROCK AS APPROVED BY THE CITY.

INSPECTIONS AND MAINTENANCE GUIDELINES:

- THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON TO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
- WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY.
- WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
- ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006 — CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS — STABILIZED CONSTRUCTION ENTRANCE — EC06 — SCALE: NTS — DATE: 1/2003 — DRAWN BY: MRS — APPROVED BY: TRB



NOTES:

1. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING).
2. FENCES SHALL COMPLETELY SURROUND THE TREE, OR CLUSTERS OF TREES; WILL BE LOCATED AT THE OUTERMOST LIMIT OF THE TREE BRANCHES (DRIPLINE), AND WILL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:
   A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MATERIALS.
   B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN SIX INCHES (6") CUT OR FILL, OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE CITY.
   C. WOUNDS TO EXPOSED ROOTS, TRUNKS OR LIMBS BY MECHANICAL EQUIPMENT.
   D. OTHER ACTIVITIES DETRIMENTAL TO TREES, SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING AND FIRE.
3. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIPLINES MAY BE PERMITTED IN THE FOLLOWING CASES:
   A. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA.
   B. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN SIX FEET (6'-0") TO BUILDING.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006 — CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS — TREE PROTECTION – CHAIN LINK FENCE — EC09 — SCALE: NTS — DATE: 1/2003 — DRAWN BY: MRS — APPROVED BY: TRB

Table 1.4.5.G.1: Maximum spacing between silt fences on slopes		
Slope	Spacing Interval (ft)	Max. Drainage Area (sf)
100:1 to 50:1 (1-2%)	500	25,000
50:1 to 30:1 (2-3.3%)	250	15,000
30:1 to 25:1 (3.3-4%)	150	12,000
25:1 to 20:1 (4-5%)	120	10,000
20:1 to 10:1 (5-10%)	100	5,000
10:1 to 5:1 (10-20%)	50	2,500
5:1 to 2:1 (20-50%)	10	1,000

SILT FENCE SPACING TABLE

TABLE 1. Silt Fence Fabric Requirements

Physical Properties	Method	Requirements
Fabric Weight in ounces per square yard (grams/square meter)	TEX-616-J[1]	5.0 minimum (150 minimum)
Equivalent Sieve Opening Size: US Standard (SI Standard sieve size)	CW-02215[2]	40 to 100 (425 to 150 µm)
Mullen Burst Strength: lbs. per sq. inch (psi) megaPascal (mPa)	ASTM D-3786[3]	280 minimum (1.9 minimum)
Ultraviolet Resistance; % Strength Retention	ASTM D-1682[4]	70 minimum

1 TxDoT Test Method Tex-616-J, "Testing of Construction Fabrics".
2 US Army Corps of Engineers Civil Works Construction Guide Specification CW-02215, "Plastic Filter Fabric".
3 ASTM D-3786, " Test Method for Hydraulic Bursting Strength of Knitting Goods and Nonwoven Fabrics: Diaphragm Bursting Strength Tester Method".
4 ASTM D-1682, "Test Methods for Breaking Load and Elongation of Textile Fabrics ".

SILT FENCE FABRIC REQUIREMENTS

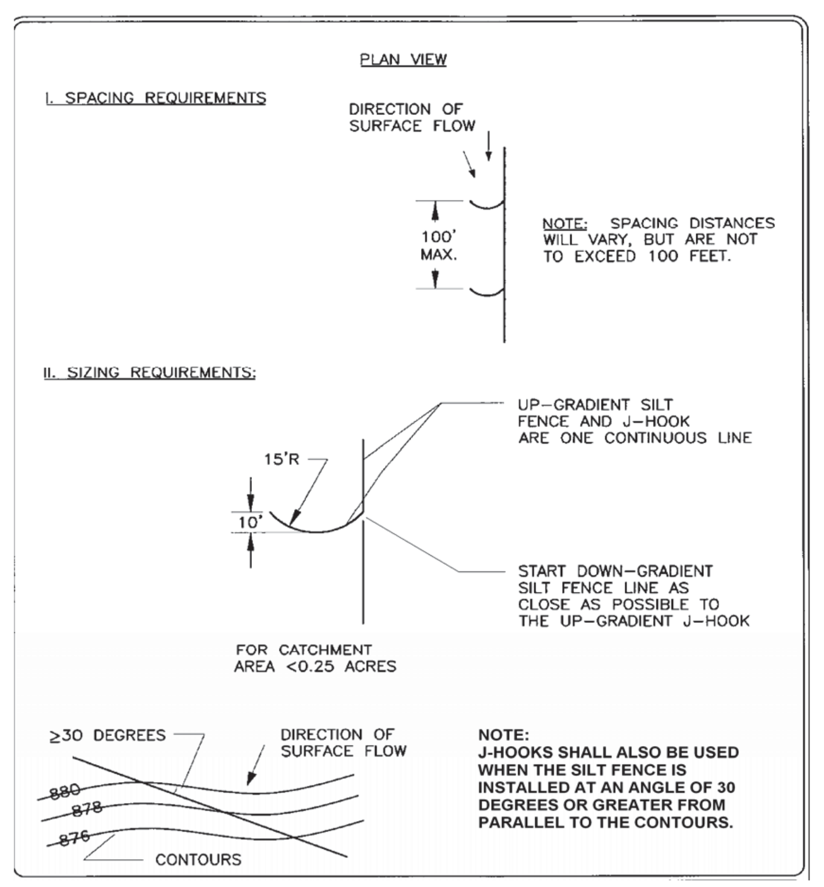
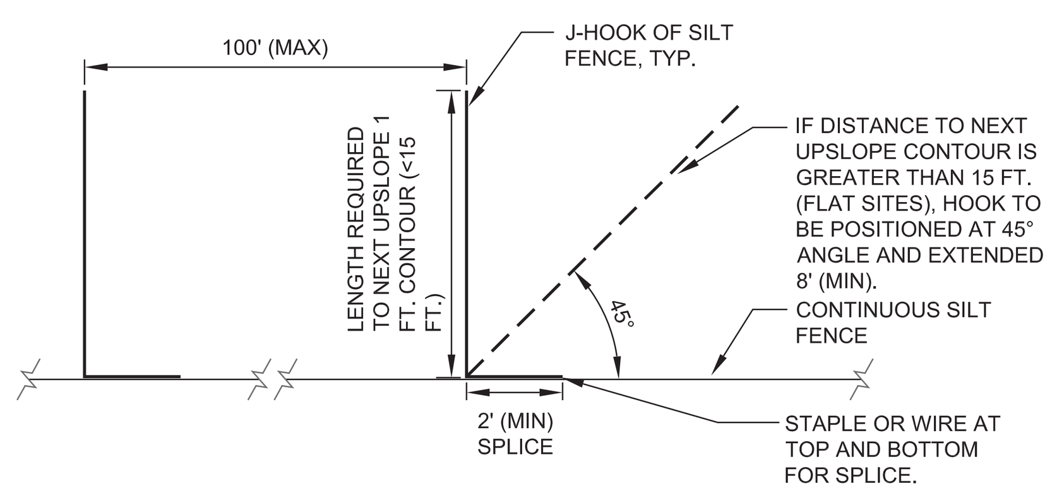
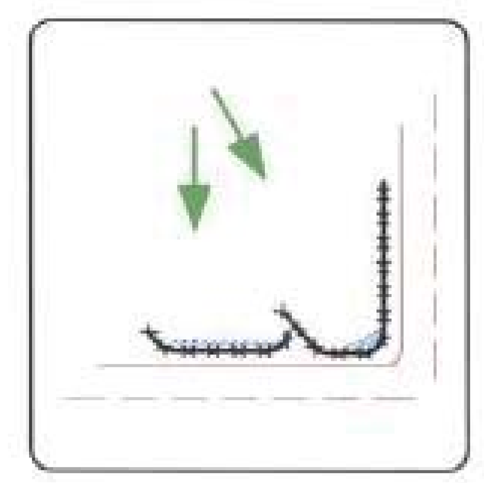


FIGURE 1.4.5.G.4 SILT FENCE J - HOOK DETAILS



SILT FENCE J-HOOK & TURNBACK DETAIL

SCALE: 1" = 4'



SILT FENCE TURN-BACK DETAIL

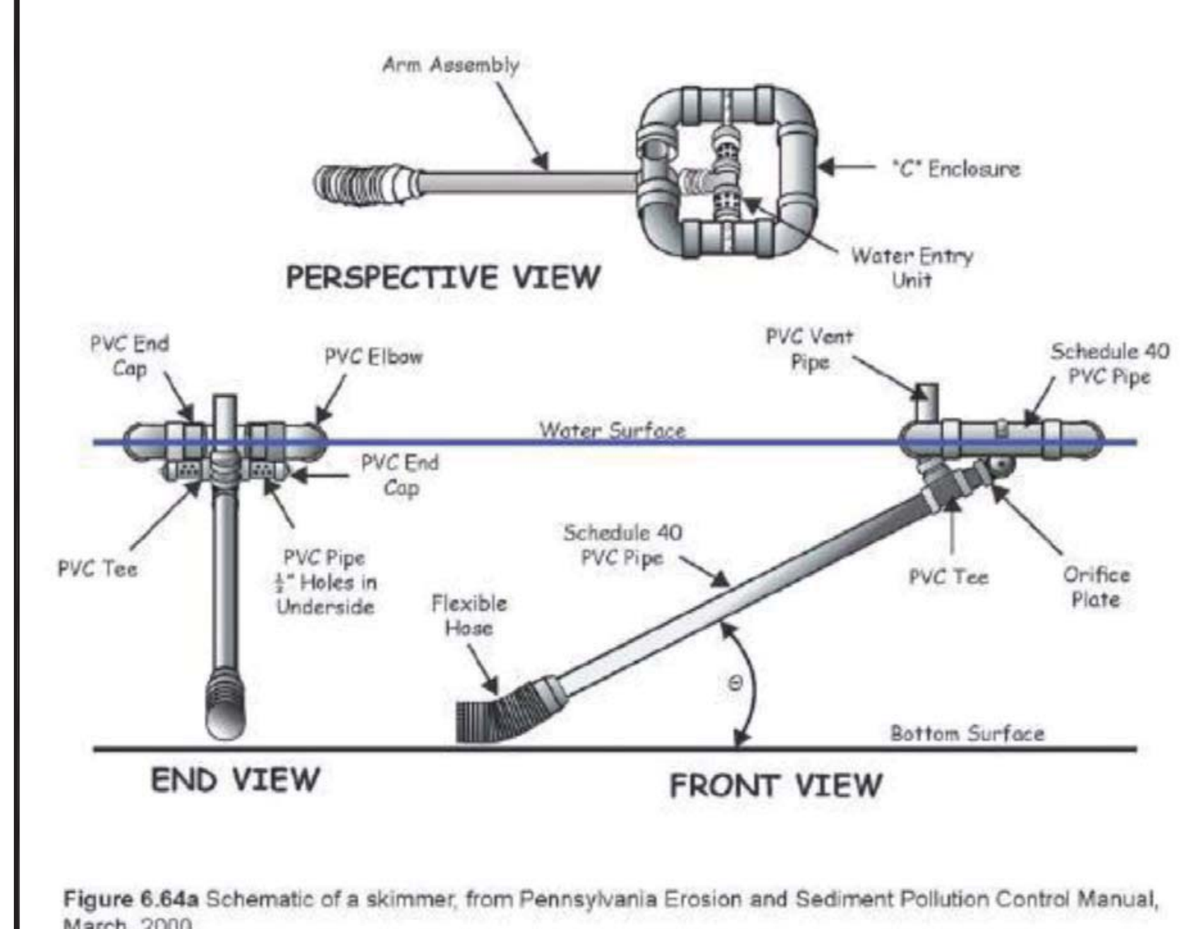
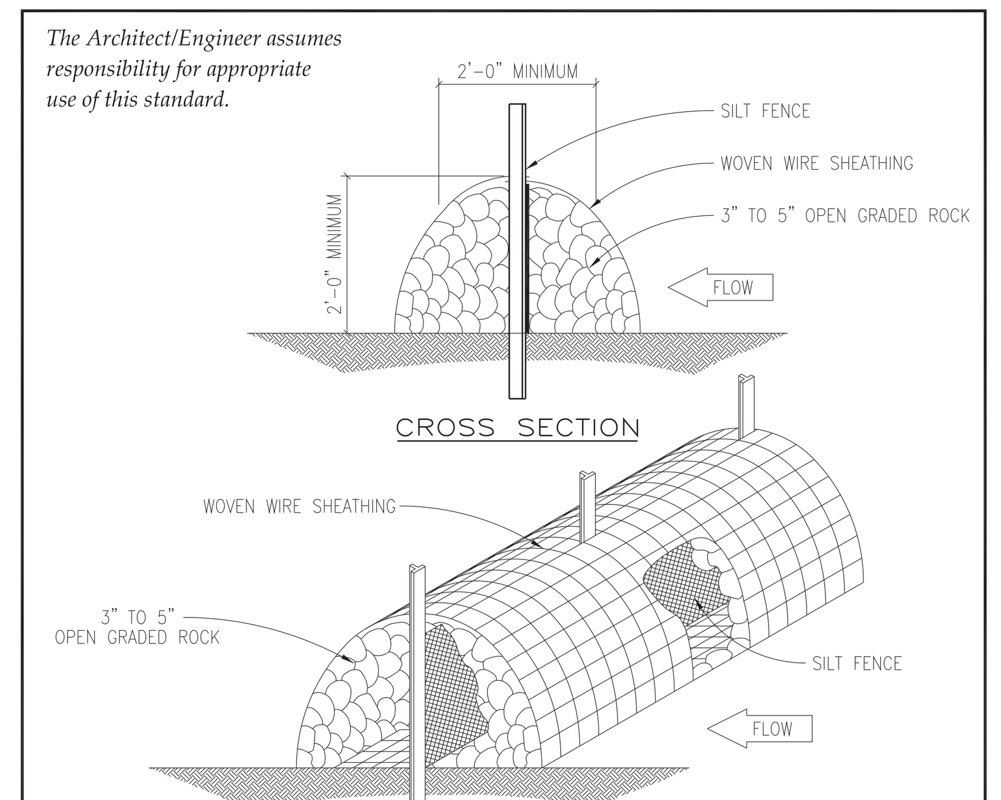


Figure 6.64a Schematic of a skimmer, from Pennsylvania Erosion and Sediment Pollution Control Manual, March, 2000.

FIGURE 1.4.5.K.1 DEWATERING SKIMMER DETAIL

The Architect/Engineer assumes responsibility for appropriate use of this standard.



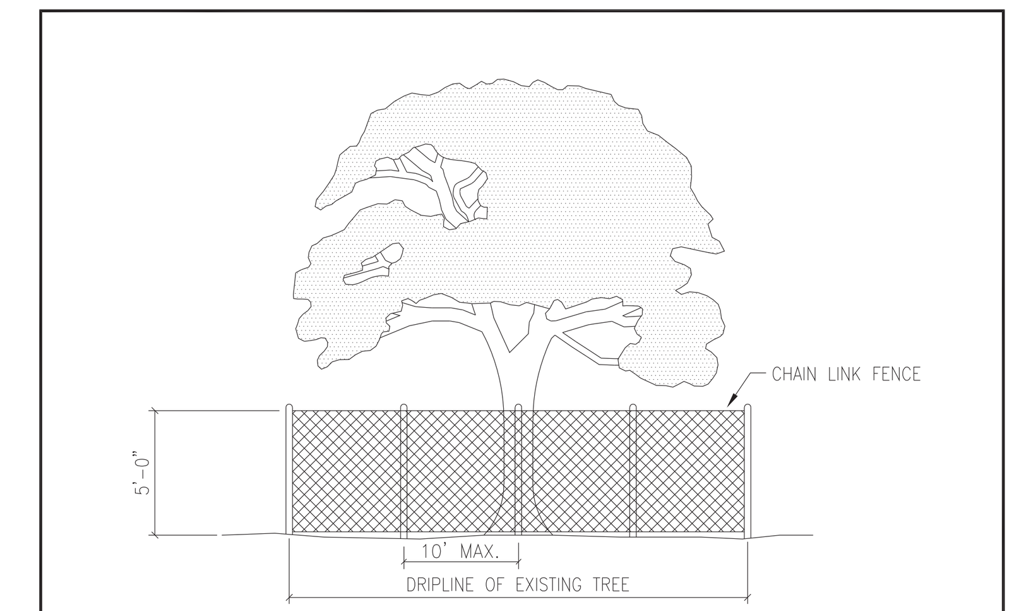
INSTALLATION:

- LAYOUT THE ROCK BERM FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOUR.
- CLEAR THE GROUND OF DEBRIS, ROCKS OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
- PLACE WOVEN WIRE FABRIC ON THE GROUND ALONG THE PROPOSED INSTALLATION WITH ENOUGH OVERLAP TO COMPLETELY ENCIRCLE THE FINISHED SIZE OF THE BERM.
- INSTALL THE SILT FENCE ALONG THE CENTER OF THE PROPOSED BERM PLACEMENT. INSTALLATION SHOULD BE AS DESCRIBED IN DRAWING NO. EC-02 "SILT FENCE DETAIL".
- PLACE THE ROCK ALONG THE CENTER OF THE WIRE AND ON BOTH SIDES OF THE SILT FENCE TO THE DESIGNATED HEIGHT.
- WRAP THE STRUCTURE WITH THE PREVIOUSLY PLACED WIRE MESH SECURE ENOUGH SO THAT WHEN WALKED ACROSS THE STRUCTURE RETAINS IT'S SHAPE.
- SECURE WITH TIE WIRE.
- THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

INSPECTION AND MAINTENANCE GUIDELINES:

- INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL EVENT BY THE CONTRACTOR. FOR THE INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE ON ROCK BERM.
- REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER.
- REPAIR ANY LOOSE WIRE SHEATHING.
- THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
- THE BERM SHOULD BE REPLACES WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

ADOPTED 6/21/2006 — CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS — HIGH SERVICE ROCK BERM DETAIL — EC04 — SCALE: NTS — DATE: 1/2003 — DRAWN BY: MRS — APPROVED BY: TRB

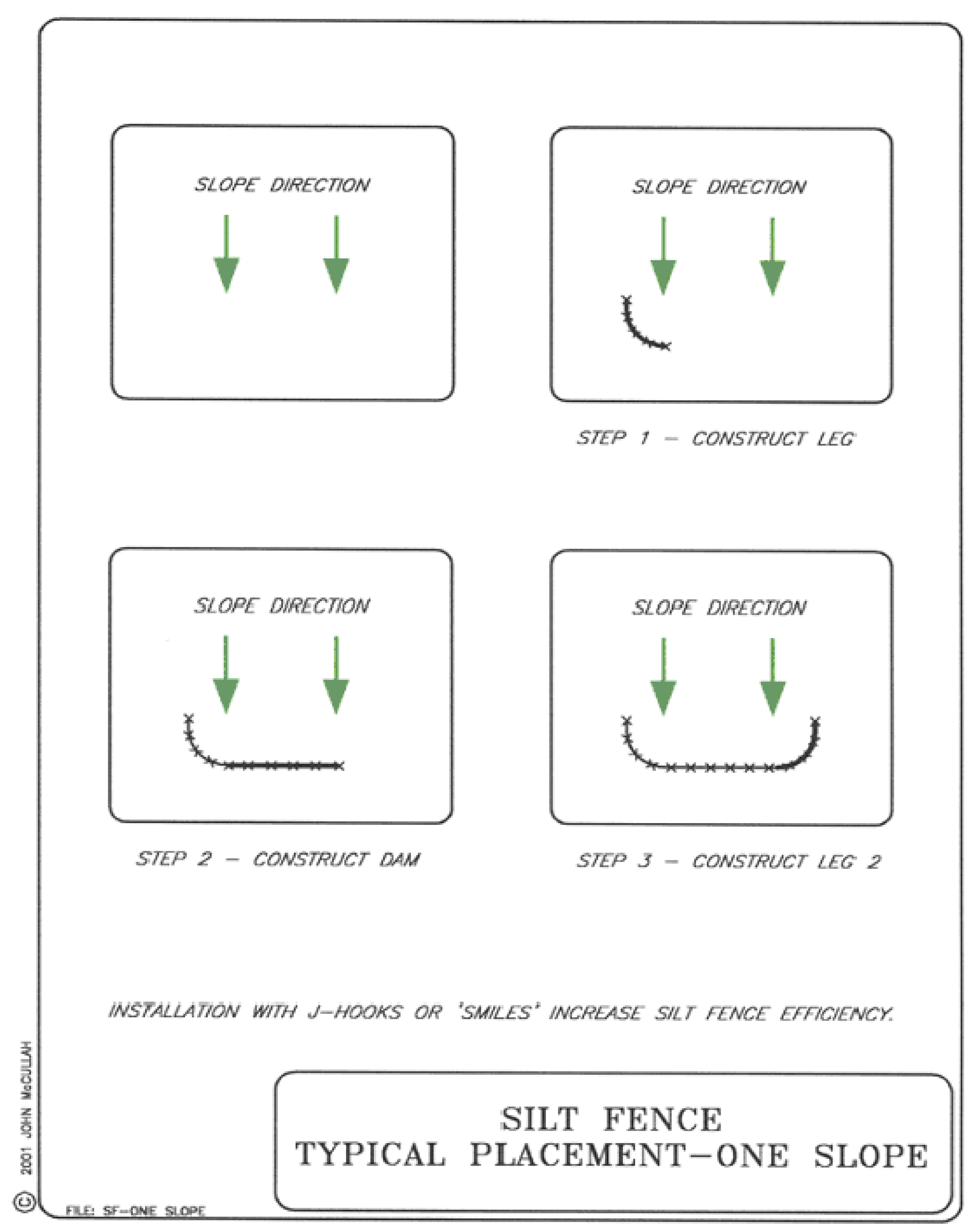


NOTES:

1. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING).
2. FENCES SHALL COMPLETELY SURROUND THE TREE, OR CLUSTERS OF TREES; WILL BE LOCATED AT THE OUTERMOST LIMIT OF THE TREE BRANCHES (DRIPLINE), AND WILL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT IN ORDER TO PREVENT THE FOLLOWING:
   A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MATERIALS.
   B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN SIX INCHES (6") CUT OR FILL, OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE CITY.
   C. WOUNDS TO EXPOSED ROOTS, TRUNKS OR LIMBS BY MECHANICAL EQUIPMENT.
   D. OTHER ACTIVITIES DETRIMENTAL TO TREES, SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING AND FIRE.
3. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIPLINES MAY BE PERMITTED IN THE FOLLOWING CASES:
   A. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA.
   B. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN SIX FEET (6'-0") TO BUILDING.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

ADOPTED 6/21/2006 — CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS — TREE PROTECTION – CHAIN LINK FENCE — EC09



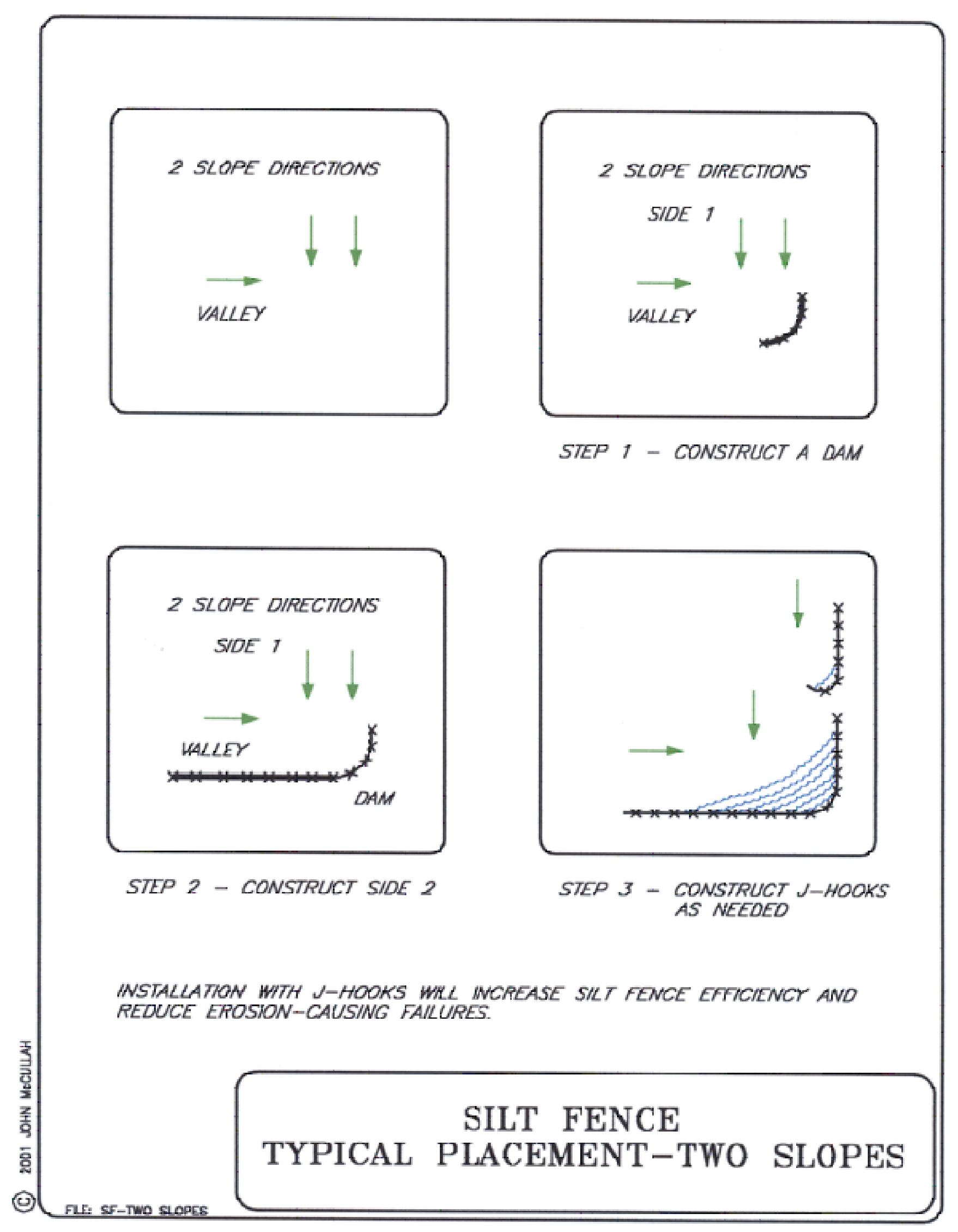


FIGURE 1.4.5.G.3 SILT FENCE PLACEMENT FOR PERIMETER CONTROL

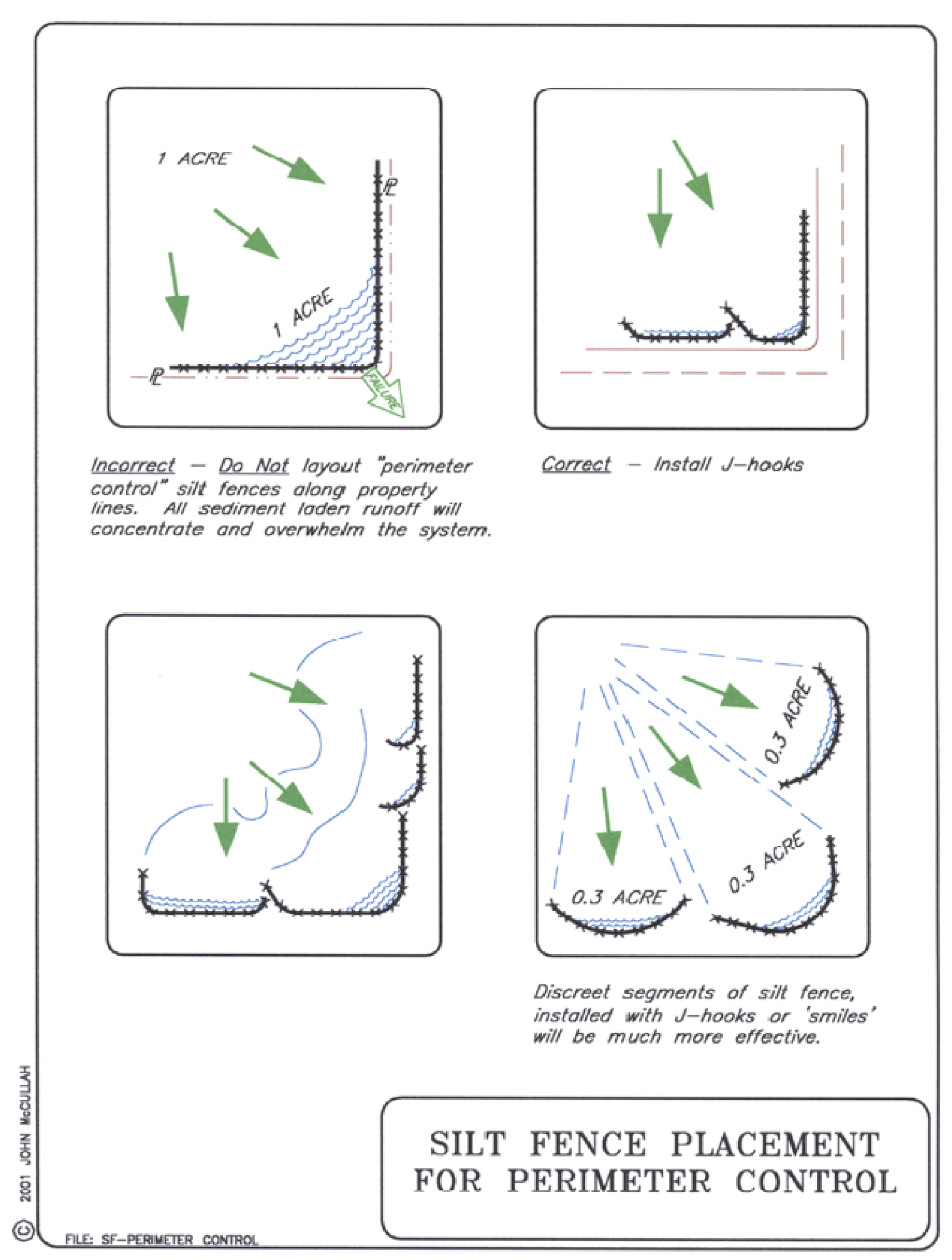
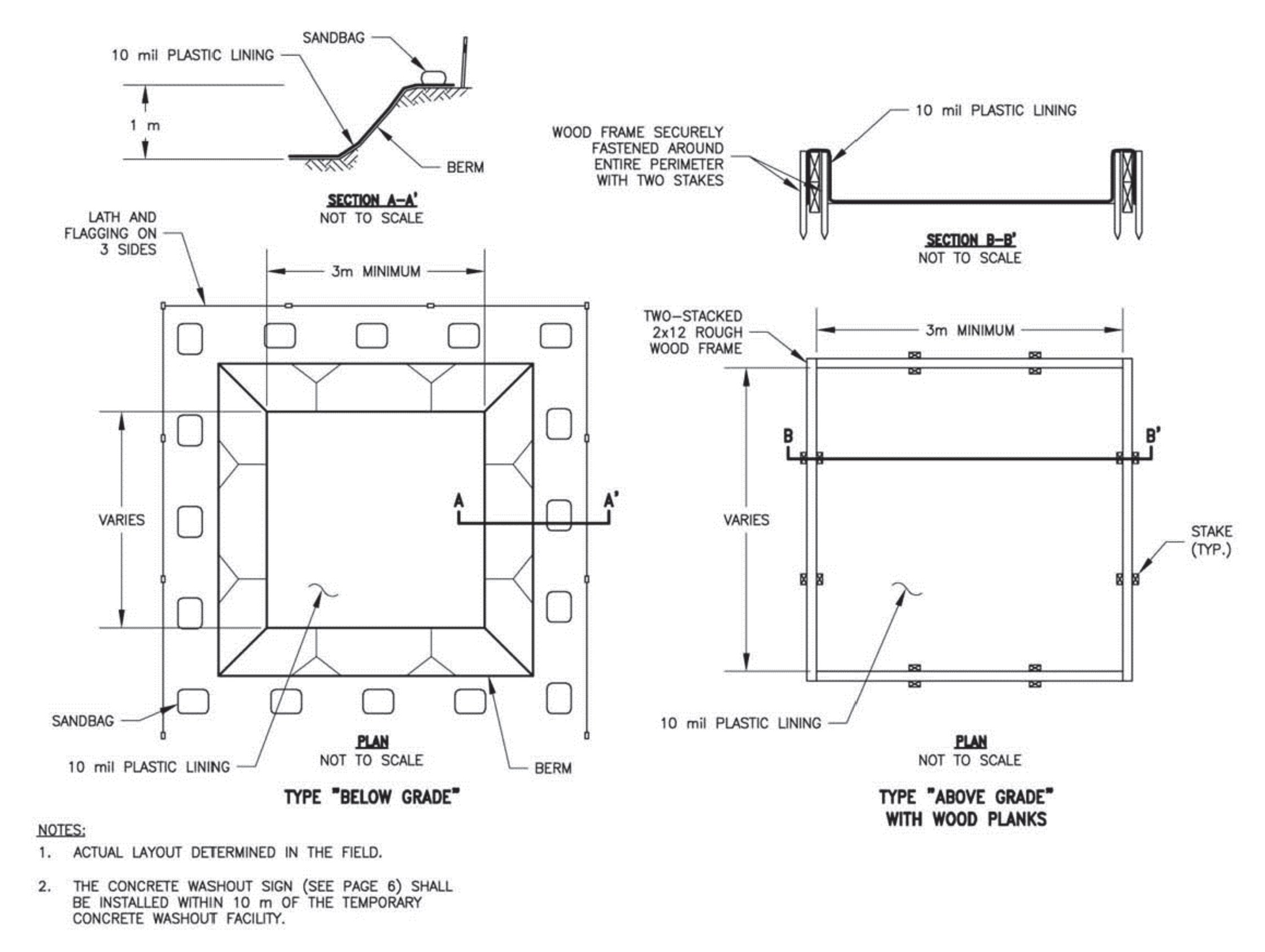


FIGURE 1.4.5.G.3 SILT FENCE PLACEMENT FOR PERIMETER CONTROL



NOTES:
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN (SEE PAGE 6) SHALL BE INSTALLED WITHIN 10 m OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

CONCRETE WASHOUT DETAILS

Thompson Land Engineering, LLC (F-10220)

7/16/24

2022-27-SWP

THOMPSON LAND ENGINEERING, LLC
Land Planning, Site Design, Subdivision Engineering
P.O. Box 160062, Austin, Texas 78716 (512-328-0002)
email: ric@tleng.net
www.tleng.net

DATE — REVISION

PROJECT: AAA FM 3405 — 4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME: EROSION SEDIMENTATION CONTROL DETAILS

DATE ISSUED: July, 2024 — DESIGNED BY: RCT — DRAFTED BY: JH/MR — JOB NUMBER: 1829

1 WQ & DETENTION POND PLAN - EAST

SCALE: 1:20

Partial Sed-Fil Pond #1	Stage	Area	Incremental Storage	Cumulative Storage
Sedimentation Pond:	(ft msl)	(sf)	(cf)	(cf)
	870.25	0	---	---
	870.50	694	87	87
	871.00	2,082	694	781
	871.50	3,632	1,428	2,209
	872.00	5,182	2,203	4,412
WQ Elevation =	**872.60**	**5,409**	**3,177**	**7,590**
	873.00	5,561	2,194	9,784
	873.50	5,897	2,864	12,648
Top of Pond =	874.00	6,233	3,032	15,681

Filtration Pond:	Stage (ft msl)	Area (sf)	Incremental Storage (cf)	Cumulative Storage (cf)
	870.00	4,702	---	---
	870.50	4,899	2,400	2,400
	871.00	5,096	2,499	4,899
	871.50	5,323	2,605	7,503
	872.00	5,550	2,718	10,222
WQ Elevation =	**872.60**	**5,788**	**3,401**	**13,623**
	873.00	5,946	2,347	15,970
	873.50	6,144	3,023	18,993
Top of Pond =	874.00	6,341	3,121	22,114

Total Pond #1	Areas	Storage	Required WQV per TCEQ TSS calcs: 18087
870.00	4,702	0	0.0%
870.50	5,593	2,487	13.7%
871.00	7,178	5,680	31.4%
871.50	8,955	9,713	53.7%
872.00	10,732	14,634	80.9%
872.60	**11,197**	**21,213**	**117.3%**
873.00	11,507	25,754	142.4%
873.50	12,041	31,641	174.9%
874.00	12,574	37,795	209.0%

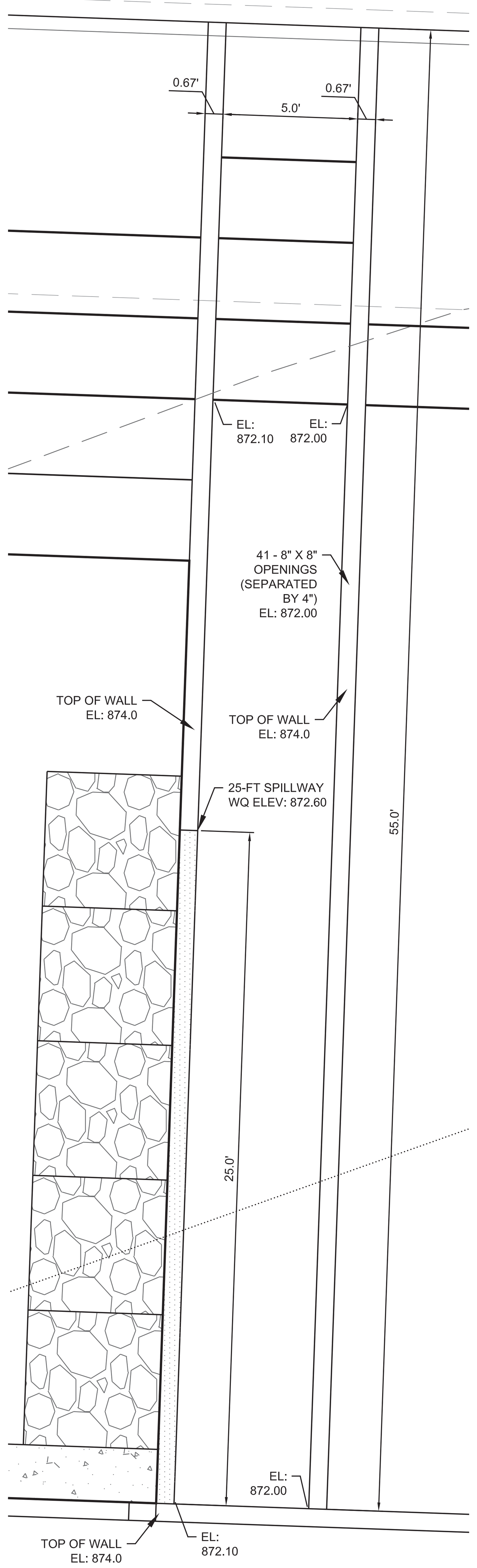
20% of WQV = 870.68

WATER QUALITY SPLITTER BOX CALCULATIONS

$H = (Q_{100}/(C*L))^{2/3}$ | $H = ((Q_{25}/CA)^2)/2g$

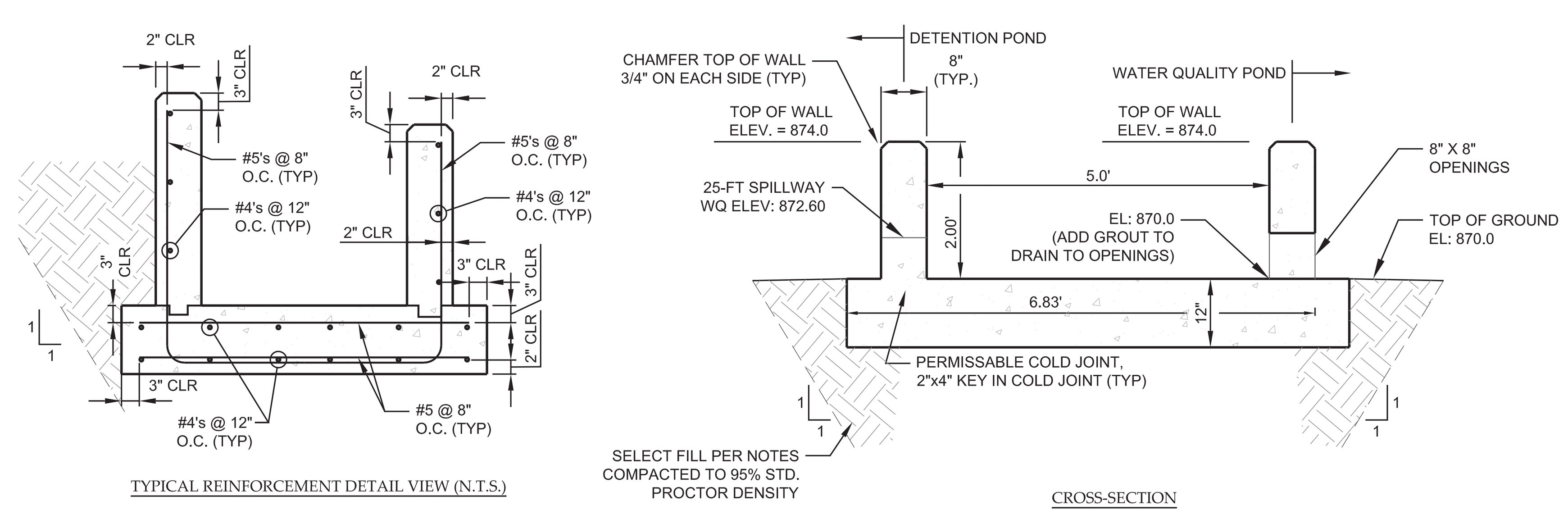
Design Peak Flow Rate = **Q_{DEV100} =**	41 cfs	**Q_{DEV100} =**	41 cfs
Water Quality Elevation =	872.60 MSL	Orifice FL in Spitter Box =	872.00 MSL
Elevation of Overflow Weir(>= WQelev) =	872.60 MSL	41 openings, height =	0.67 foot
Height of Gabion Wall (WQelev - 0.5') =	872.10 MSL	width =	0.67 foot
		Orifice area (A) =	18.2 sq feet
Length of Overflow Weir (L) =	25.0 feet	Orifice centerline =	872.33 MSL
Weir Coefficient (C) =	3.0	Orifice Coefficient (C) =	0.6
Required Head to Pass Design Flow (H) =	0.67 feet	Head on orifice (H) =	0.22 feet
High Water (100-yr) Elevation =	**873.27 MSL**	Low water (100-yr) Elevation =	**872.55 MSL**
Top of Splitter Box Wall =	874.00 MSL	Velocity into sediment pond =	2.25 fps
Water Quality Pond **Freeboard** Provided =	**0.73** feet		

MSL = Mean Sea Level



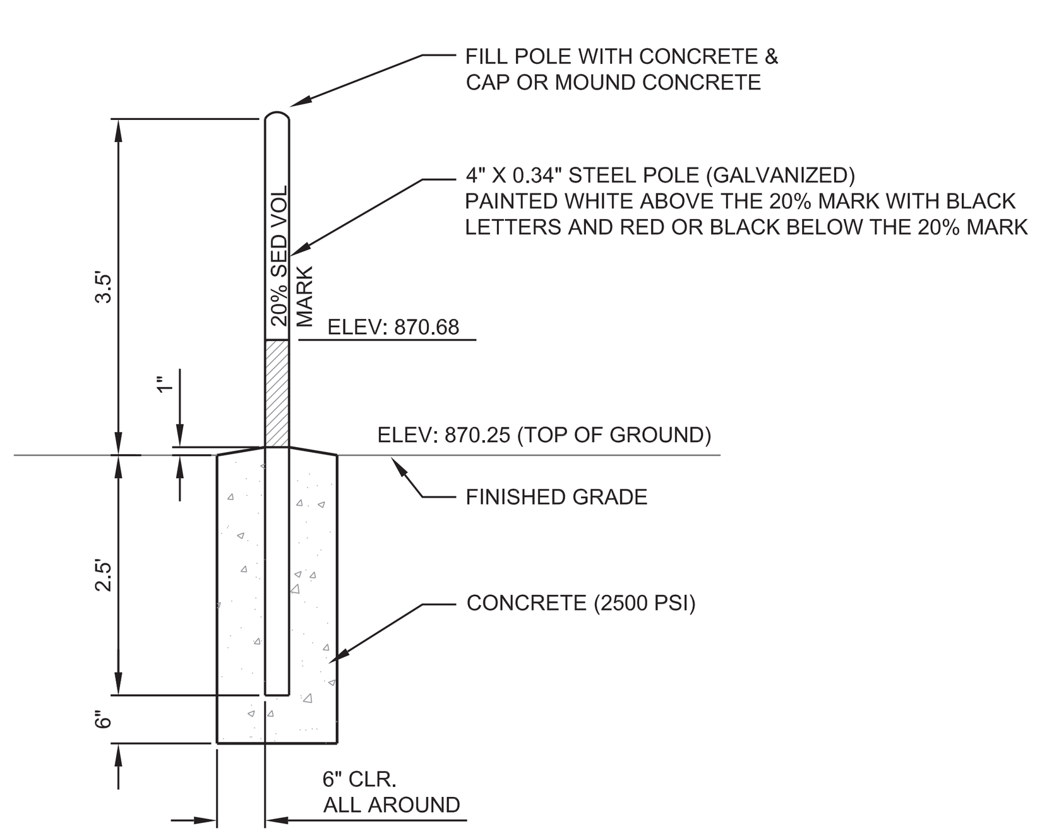
2 SPLITTER BOX PLAN VIEW

SCALE: 1" = 4'



3 SPLITTER BOX CROSS-SECTIONAL DETAILS

SCALE: 1" = 2'



4 TCEQ SEDIMENT MARKER

SCALE: N.T.S.

Thompson Land Engineering, LLC (F-10220)

STATE OF TEXAS
ROBERT C. THOMPSON
69524
REGISTERED PROFESSIONAL ENGINEER

7/16/24

2022-27-SWP

THOMPSON LAND ENGINEERING, LLC
Land Planning, Site Design, Subdivision Engineering
P.O. Box 160062, Austin, Texas 78716 (512-328-0002)
email: ric@tleng.net
www.tleng.net

DATE | REVISION

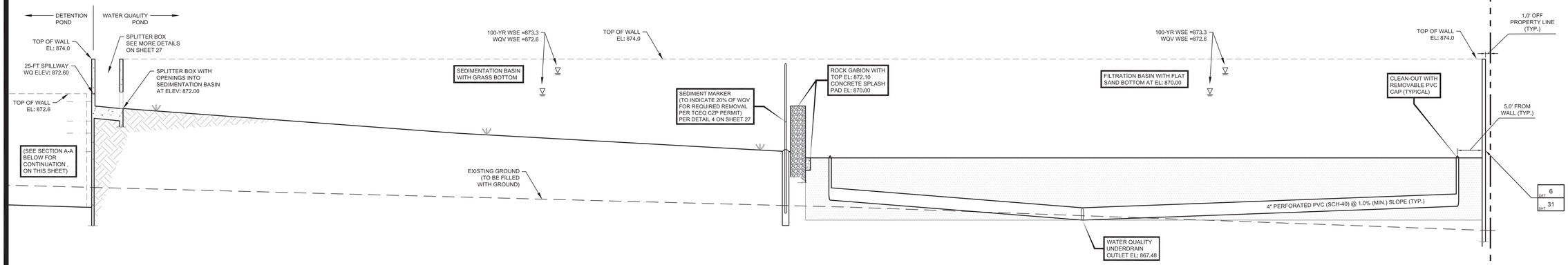
PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME: WQ & DETENTION POND PLAN - EAST

DATE ISSUED: July, 2024

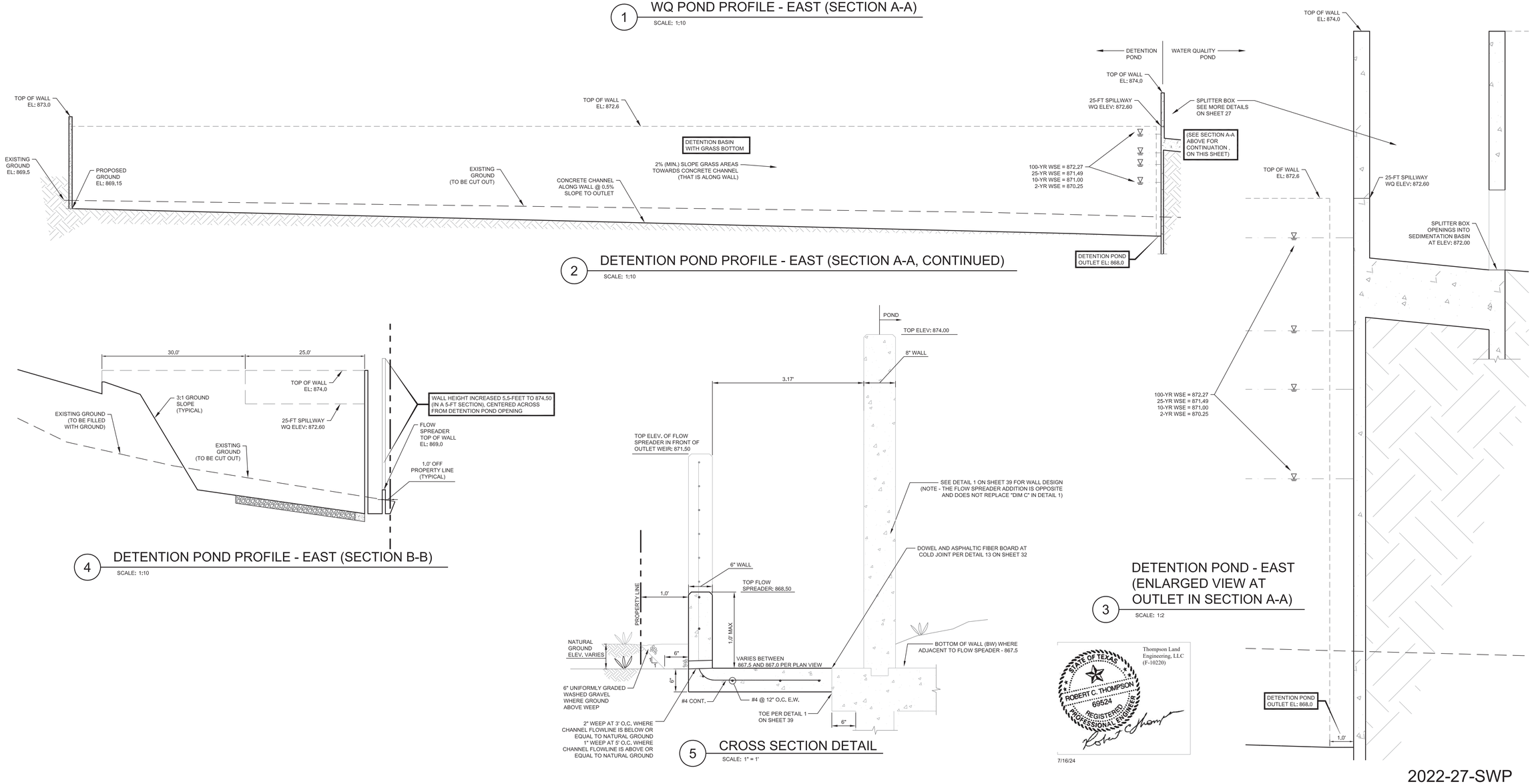
DESIGNED BY: RCT | DRAFTED BY: JH/MR

JOB NUMBER: 1829



1 WQ POND PROFILE - EAST (SECTION A-A)

SCALE: 1:10



2 DETENTION POND PROFILE - EAST (SECTION A-A, CONTINUED)

SCALE: 1:10

3 DETENTION POND - EAST (ENLARGED VIEW AT OUTLET IN SECTION A-A)

SCALE: 1:2

4 DETENTION POND PROFILE - EAST (SECTION B-B)

SCALE: 1:10

5 CROSS SECTION DETAIL

SCALE: 1" = 1'

Thompson Land Engineering, LLC (F-10220)

7/16/24

2022-27-SWP

THOMPSON LAND ENGINEERING, LLC
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email: rc@tleng.net
www.tleng.net
TBPE Reg. No. F-10220

DATE

REVISION

PROJECT
AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME
WQ & DETENTION POND SECTIONS - EAST

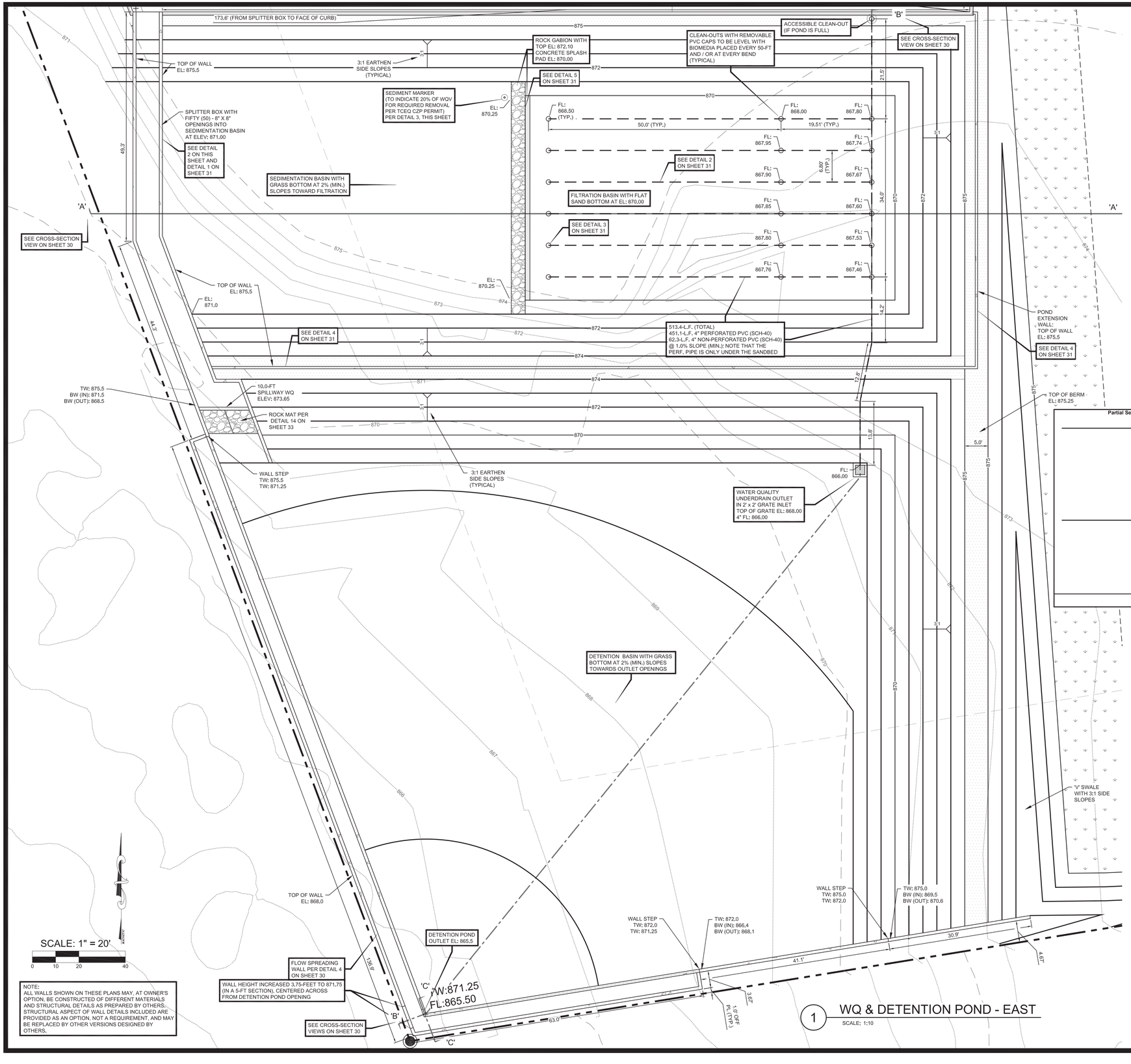
DATE ISSUED
July, 2024

DESIGNED BY RCT

DRAFTED BY JH/MR

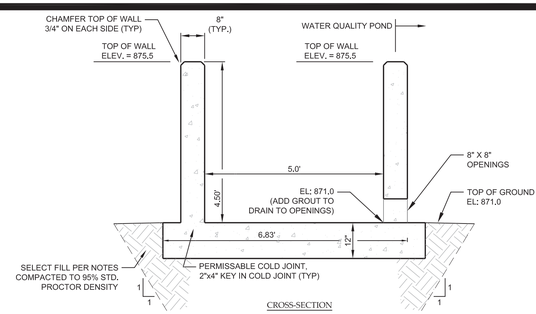
JOB NUMBER
1829

SHEET
28 OF 60



1 WQ & DETENTION POND - EAST

SCALE: 1:10



TYPICAL REINFORCEMENT DETAIL VIEW (N.T.S.)

2 SPLITTER BOX CROSS-SECTIONAL DETAILS

SCALE: 1" = 2'

Partial Sed-Fil Pond #2

Sedimentation Pond:	Stage (ft msl)	Area (sf)	Incremental Storage (cf)	Cumulative Storage (cf)
	870.25	0	---	---
	870.50	1,233	154	154
	871.00	3,697	1,232	1,386
	871.50	3,954	1,913	3,299
	872.00	4,210	2,041	5,340
	872.15	4,276	636	5,976
	873.00	4,646	3,792	9,768
WQ Elevation =	**873.65**	**4,926**	**3,111**	**12,879**
	874.00	5,077	1,751	14,630
Top of Pond =	874.25	5,487	1,320	15,950

Fitration Pond:	Stage (ft msl)	Area (sf)	Incremental Storage (cf)	Cumulative Storage (cf)
	870.00	3,498	---	---
	870.50	3,812	1,828	1,828
	871.00	4,125	1,984	3,812
	871.50	4,499	2,156	5,968
	872.00	4,873	2,343	8,311
	872.15	4,979	739	9,050
	873.00	5,581	4,488	13,538
WQ Elevation =	**873.65**	**6,064**	**3,785**	**17,322**
	874.00	6,325	2,168	19,490
Top of Pond =	874.25	7,057	1,673	21,163

3.40
2.90

Total Pond #2	Areas	Storage
870.00	3,499	0
870.50	5,045	1,982
871.00	7,822	5,198
871.50	8,453	9,267
872.00	9,083	13,651
872.15	9,254	15,026
873.00	10,227	23,306
873.65	**10,990**	**30,201**
874.00	11,401	34,120
874.25	12,543	37,113

Required WQV per TCEQ TSS calcs: 28056

	0.0%
	7.1%
	18.5%
	33.0%
	48.7%
	53.6%
	83.1%
	107.6%
	121.6%
	132.3%

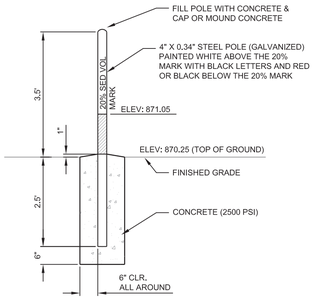
20% of WQV = 871.05

WATER QUALITY SPLITTER BOX CALCULATIONS

$H = (Q_{DEV100}/(C^*L))^{2/3}$ $H = ((Q_D/CA)^2)/2g$

Design Peak Flow Rate =	Q_{DEV100} = 60.50 cfs		Q_{DEV100} = 60.50 cfs
Water Quality Elevation =	873.65 MSL	Orifice FL in Spitter Box =	871.00 MSL
Elevation of Overflow Weir(>= WQelev) =	873.65 MSL	50 openings, height =	0.67 foot
Height of Gabion Wall (WQelev - 0.5') =	873.15 MSL	width =	0.67 foot
		Orifice area (A) =	22.2 sq feet
Length of Overflow Weir (L) =	10.0 feet	Orifice centerline =	871.33 MSL
Weir Coefficient (C) =	3.0	Orifice Coefficient (C) =	0.6
Required Head to Pass Design Flow (H) =	1.60 feet	Head on orifice (H) =	0.32 feet
High Water (100-yr) Elevation =	**875.25 MSL**	Low water (100-yr) Elevation =	**871.65 MSL**
Top of Splitter Box Wall =	875.50 MSL	Velocity into sediment pond =	2.72 fps
Water Quality Pond **Freeboard** Provided =	**0.25** feet		

MSL = Mean Sea Level



3 TCEQ SEDIMENT MARKER

SCALE: N.T.S.

Thompson Land Engineering, LLC (F-10220)

STATE OF TEXAS ROBERT C. THOMPSON 69524 REGISTERED PROFESSIONAL ENGINEER

7/16/24

2022-27-SWP

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Land Planning, Site Design, Subdivision Engineering
P.O. Box 160062, Austin, Texas 78716 (512-328-0002)
email: rc@tleng.net
www.tleng.net

DATE

REVISION

PROJECT

AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME

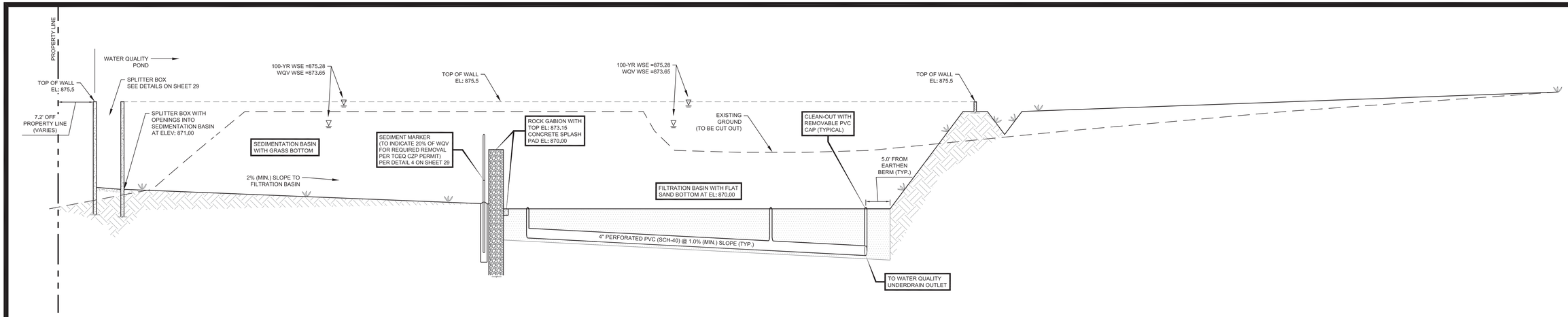
WQ & DETENTION POND PLAN - WEST

DATE ISSUED
July, 2024

DESIGNED BY	DRAFTED BY
RCT	JH/MR

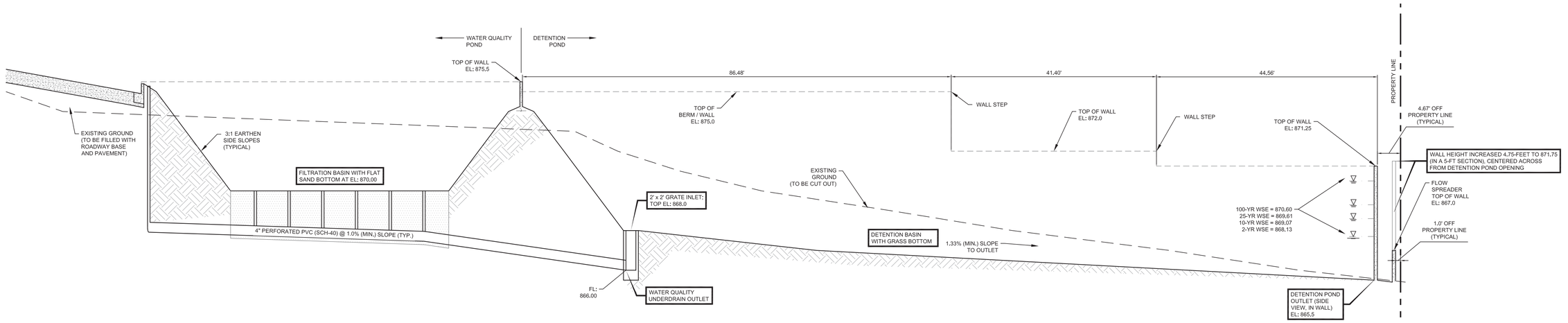
JOB NUMBER
1829

SHEET
29 OF 60



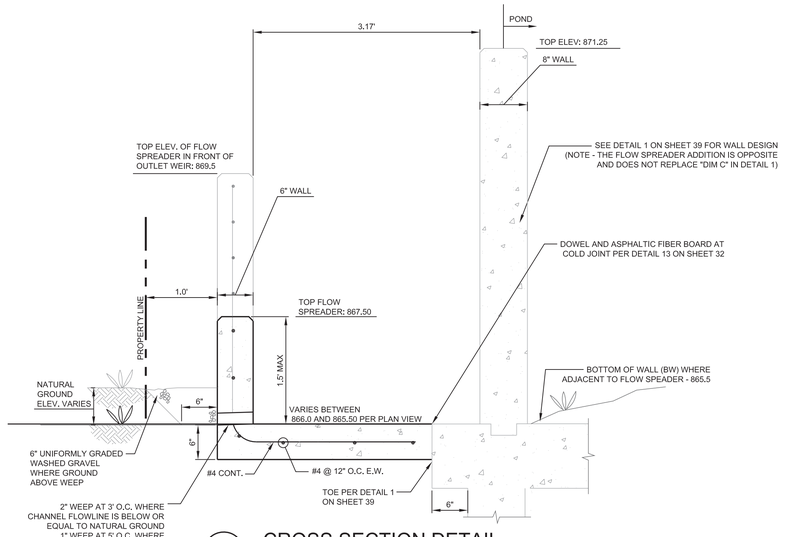
1 WQ POND PROFILE - WEST (SECTION A-A)

SCALE: N.T.S.



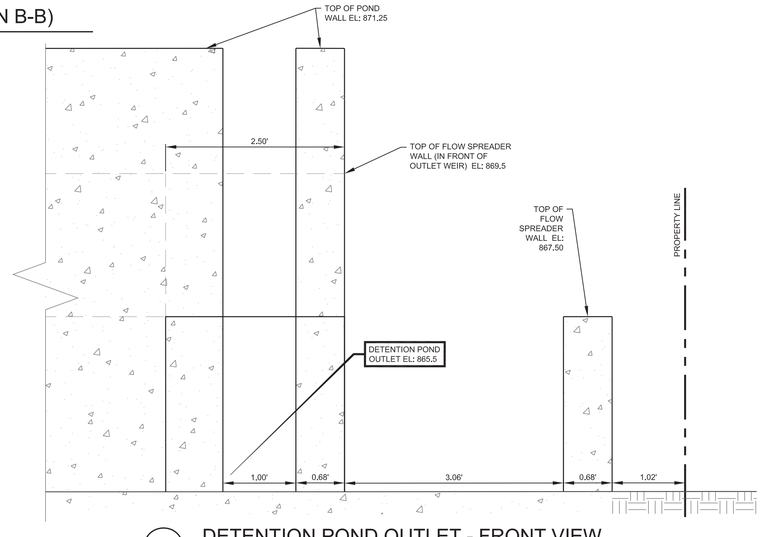
2 WQ & DETENTION POND PROFILE - WEST (SECTION B-B)

SCALE: N.T.S.



5 CROSS SECTION DETAIL

SCALE: 1" = 1'



3 DETENTION POND OUTLET - FRONT VIEW

SCALE: 1:1

Thompson Land Engineering, LLC (F-10220)

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4701 & 4721 FM 3405, GEORGETOWN TX, 78633
PROJECT

WQ & DETENTION POND SECTIONS - WEST
SHEET NAME

DATE ISSUED
July, 2024

DESIGNED BY: RCT
DRAFTED BY: JH/MR

JOB NUMBER
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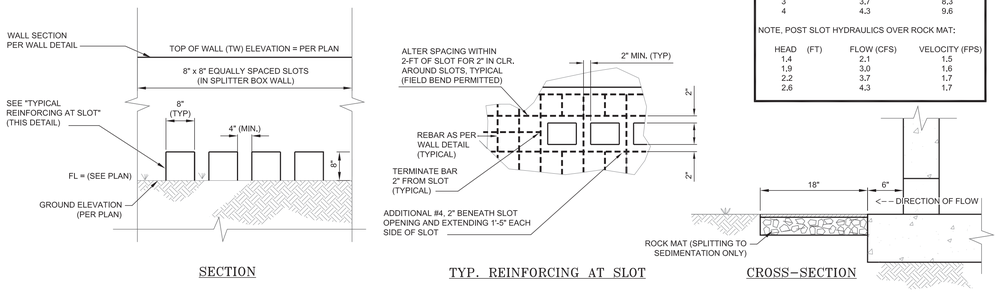
SHEET
30 OF 60



SECTION

TYP. REINFORCING AT SLOT

CROSS-SECTION

NOTE, PER SLOT HYDRAULICS:

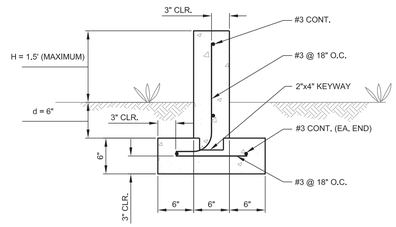
HEAD (FT)	FLOW (CFS)	VELOCITY (FPS)
1	2.1	4.8
2	3.0	6.8
3	3.7	8.3
4	4.3	9.6

NOTE, POST SLOT HYDRAULICS OVER ROCK MAT:

HEAD (FT)	FLOW (CFS)	VELOCITY (FPS)
1.4	2.1	1.5
1.9	3.0	1.6
2.2	3.7	1.7
2.6	4.3	1.7

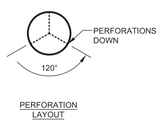
1 WALL SLOT DETAIL (SPLITTER BOX/SEDIMENTATION)

SCALE: N.T.S.

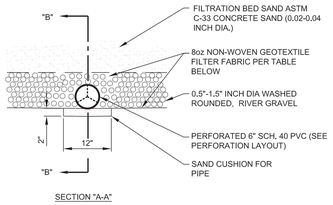


4 POND DEPTH EXTENSION WALL

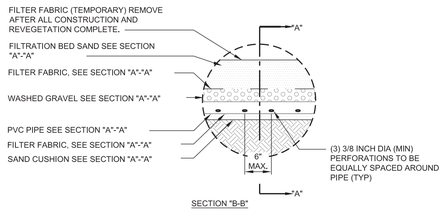
SCALE: 1" = 1'



PERFORATION
LAYOUT

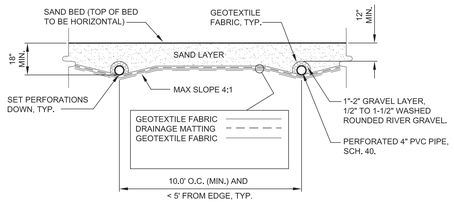


SECTION "A-A"



SECTION "B-B"

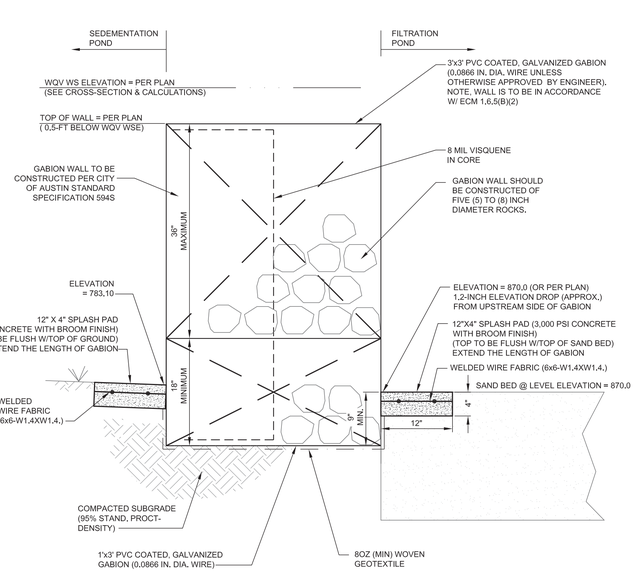
SPECIFICATIONS: 8oz NON-WOVEN GEOTEXTILE FILTER FABRIC			
PROPERTY	TEST METHOD	UNIT	SPECIFICATION
FILTRATION RATE		IN/SEC	0.08 (MIN)
PUNCTURE STRENGTH	ASTM D-751 (MODIFIED)	Lb.	125 (MIN)
MULLEN BURST STRENGTH	ASTM D-751	Psi	400 (MIN)
TENSILE STRENGTH	ASTM D-1682	Lb.	200 (MIN)
EQUIV. OPENING SIZE	US STANDARD SIEVE	No.	80 (MIN)



SAND BED PROFILE (TRENCH DESIGN)

2 WQ SAND BED DETAIL "A"

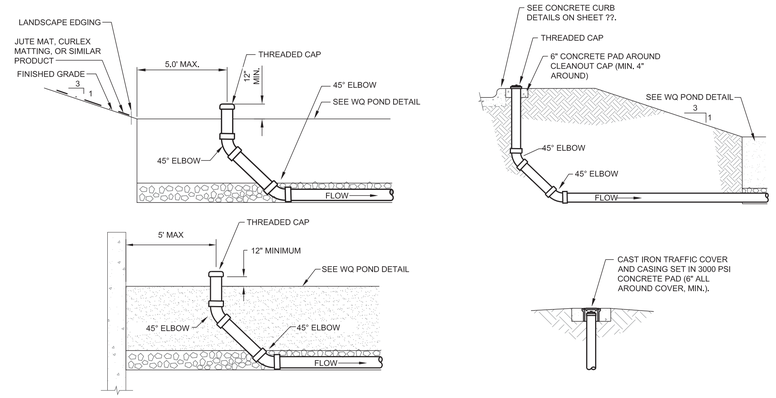
SCALE: N.T.S.



5 GABION DIVIDER WALL WITH CONCRETE SPLASH PAD

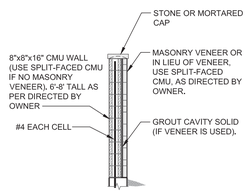
SCALE: 1" = 1' (3,0' WALL SHOWN)

NOTE: GABION CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF AUSTIN'S STANDARD SPECIFICATION 594S



3 WQ POND CLEANOUT DETAILS

SCALE: N.T.S.



6 FACADE @ POND WAL

SCALE: 1" = 4'

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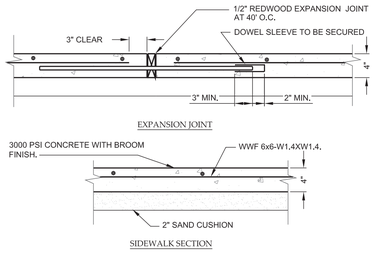
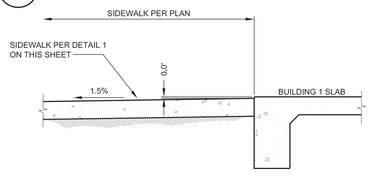


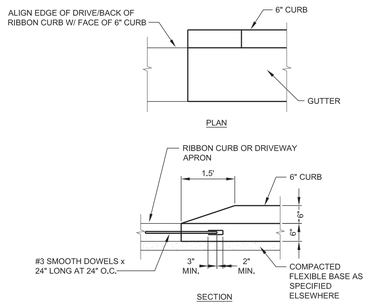
1 SIDEWALK DETAIL (PRIVATE)

SCALE: 1" = 1'



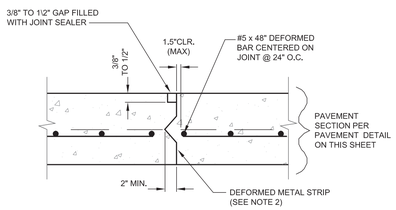
6 SIDEWALK @ BLDG. ENTRANCE

SCALE: 1" = 5'



7 CURB TERMINATION

SCALE: 1" = 2'

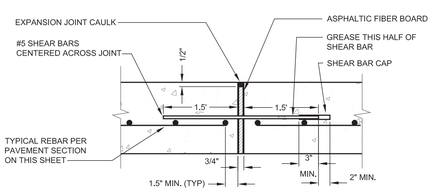


NOTES:
1.) CONTROL JOINTS SHOULD BE SPACED NO GREATER THAN 12.5 FEET FOR 5-INCH THICK CONCRETE AND NO GREATER THAN 15 FEET FOR 6-INCH THICK OR GREATER CONCRETE (OR IN ACCORDANCE WITH GEOTECHNICAL REPORT).

2.) "SCREED KEY JOINT" OR "LOAD KEY JOINT" WITH CAP STRIP AS MANUFACTURED BY DAYTON SUPERIOR OR APPROVED EQUAL. REMOVE CAP AFTER CONCRETE SETS AND FILL REMAINING GAP WITH JOINT SEALER.

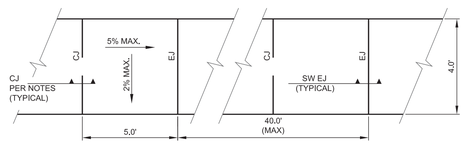
12 CONCRETE PAVEMENT CONTROL JOINT

SCALE: 1" = 0.5' FOR 6" THICKNESS SHOWN



13 DOWEL- CONCRETE PAVEMENT EXPANSION JOINT DETAIL

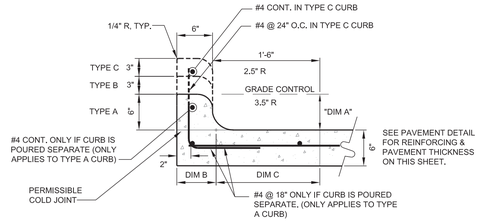
SCALE: N.T.S.



WARNING!! ALMOST ALL OF THE SIDEWALKS FOR THIS PROJECT WERE GRADED TO HAVE A MAXIMUM CROSS SLOPE OF 2% (1% TYP.), AND A MAXIMUM LONGITUDINAL SLOPE OF 5% (4% OR LESS TYP.). THESE SLOPES ARE IN COMPLIANCE WITH "AMERICANS WITH DISABILITIES ACT" AND "TEXAS ACCESSIBILITY STANDARDS". UNLESS A SIDEWALK IS OBVIOUSLY GRADED STEEPER THAN 5%, CONTRACTOR IS TO ENSURE THAT THE SIDEWALK MEETS THESE MAXIMUM SLOPES OR NOTIFIES THE ENGINEER PRIOR TO PLACING CONCRETE. FAILURE TO COMPLY WITH THIS STIPULATION COULD BE CAUSE FOR REJECTION AND SUBSEQUENT RECONSTRUCTION OF THAT SIDEWALK AT NO EXPENSE TO THE OWNER.

2 GENERAL SIDEWALK DETAIL

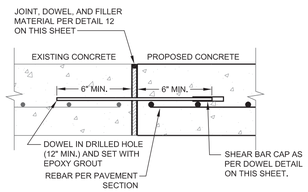
SCALE: N.T.S.



CURB TYPE	DIM "A"	DIM "B"	DIM "C"
SPILL	6-1/4"	7"	1'-5"
CATCH	5"	7"	1'-5"
LAYDOWN	5"	8"	1'-4"

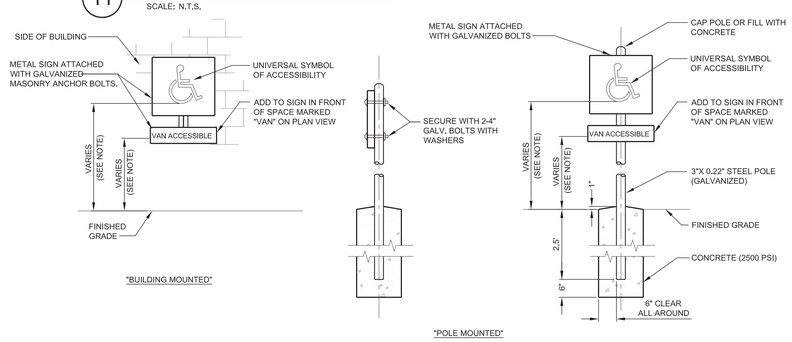
8 CURB FOR CONCRETE PAVEMENT

SCALE: 1" = 1'



11 CONCRETE PAVEMENT SAWCUT JOINT DETAIL

SCALE: N.T.S.

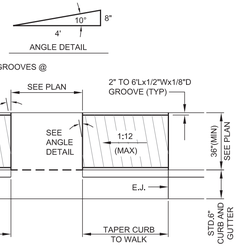


NOTE: THE HEIGHT FROM FINISHED GRADE TO EITHER THE LOWEST SYMBOL OR THE LOWEST LETTERING MUST BE A MINIMUM OF 60 INCHES. SIGN CONTENTS AND HEIGHT REQUIREMENTS ALSO APPLY TO WALL MOUNTED SIGNAGE.

14 ADA PARKING SIGN

SCALE: N.T.S (POLE OR WALL MOUNTED)

(POLE OR WALL MOUNTED)



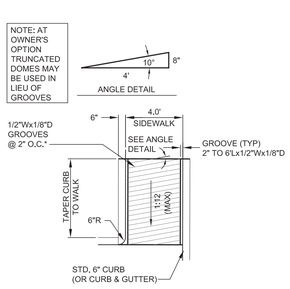
TYPE 4 RAMP

(*) 3:1 SLOPE IF SIDEWALK IS BELOW GRADE, IF ABOVE OR AT FINISHED GRADE SEE TYPICAL SIDEWALK DETAIL

(**) SLOPED PORTION OF CONCRETE TO BE COLORED RED AND BE FINISHED WITH A COURSE BROOM FINISH

3 HANDICAP RAMP (PRIVATE)

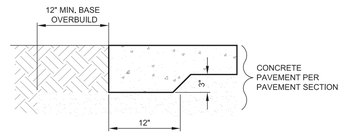
SCALE: 1" = 5'



TYPE 1 RAMP

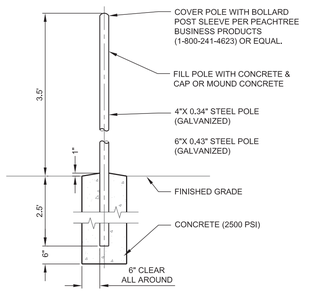
(*) 3:1 SLOPE IF SIDEWALK IS BELOW GRADE, IF ABOVE OR AT FINISHED GRADE SEE TYPICAL SIDEWALK DETAIL

(**) SLOPED PORTION OF CONCRETE TO BE COLORED RED AND BE FINISHED WITH A COURSE BROOM FINISH



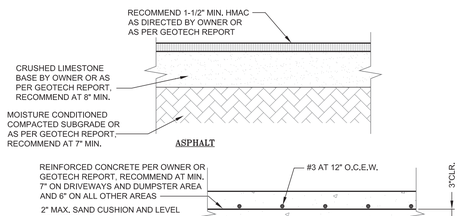
4 CONCRETE PAVEMENT EDGE TREATMENT

SCALE: 1" = 1'



5 BOLLARD DETAIL

SCALE: N.T.S.

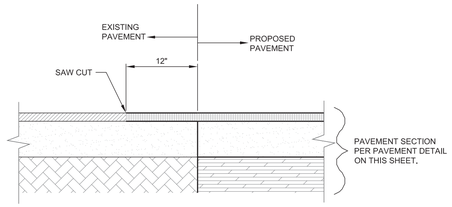


NOTE:
NO GEOTECHNICAL REPORT AVAILABLE

REFER ALSO TO DETAILS 12 & 13 ON THIS SHEET FOR EXPANSION AND CONTROL JOINTS.

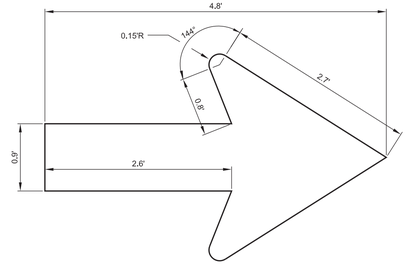
9 PAVEMENT SECTIONS

SCALE: 1" = 1'



10 TYP. SECTION THRU EXIST. AND NEW ASPHALT PAVEMENT

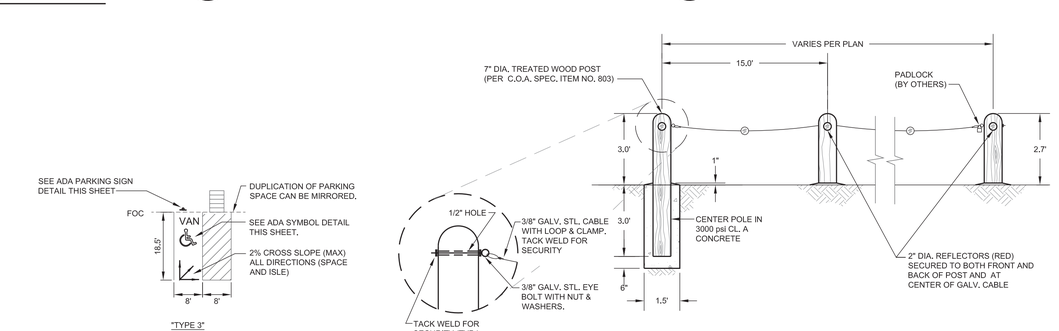
SCALE: 1" = 1'



NOTE: ARROW TO BE PAINTED WHITE ON ASPHALT PAVEMENT OR SOLID YELLOW ON CONCRETE PAVEMENT AT OWNER'S OPTION. TAPE MAY BE USED IN LIEU OF PAINT. AT OWNER'S OPTION, PAINT MAY BE REFLECTIVE. MATERIALS TO BE APPROVED BY ENGINEER. REFER TO TLE GENERAL PAVEMENT NOTES ON SHEET 17.

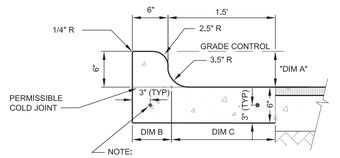
19 OPTIONAL DIRECTIONAL PAVEMENT ARROW

SCALE: 1" = 1' REFER TO SITE PLAN ON SHEET 3 & 4 FOR LOCATIONS



17 POST AND CABLE GATE DETAIL

SCALE: N,T,S.



NOTE:
NO RE-BAR REQUIRED WHEN THE PI<20.
RE-BAR @ OWNER'S OPTION REQUIRED WHEN PI>20

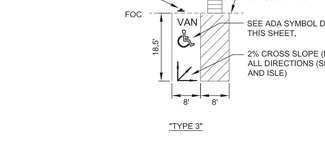
6" CURB

CURB TYPE	DIM "A"	DIM "B"	DIM "C"
SPILL	6-1/4"	7"	1'-5"
CATCH	5"	7"	1'-5"
LAYDOWN	5"	8"	1'-4"

NOTE: SEE PAVEMENT DETAIL FOR REINFORCING & PAVEMENT THICKNESS ON THIS SHEET.

18 CURB FOR ASPHALT PAVEMENT

SCALE: 1" = 1'

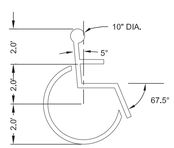


"TYPE 3"

WARNING!! EXCEEDING 2 PERCENT SLOPE IN ANY DIRECTION COULD BE CAUSE FOR REJECTION OF SPACE. CONTRACTOR IS TO VERIFY SPOT ELEVATIONS PRIOR TO CONSTRUCTION AND ENSURE 2% IS NOT EXCEEDED.

15 TYPICAL ADA PARKING SPACE

SCALE: N.T.S.



PROVIDE PAINTED WHEELCHAIR SYMBOL AT EACH DESIGNATED HANDICAP PARKING STALL. CENTER SYMBOL IN STALL.
ALL LINES ARE 5" WIDE.

16 ADA SYMBOL

SCALE: N.T.S.

THOMPSON LAND ENGINEERING, LLC
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TBPE Reg. No. F-10220

DATE

REVISION

AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SITE PLAN DETAILS

PROJECT

SHEET NAME

DATE ISSUED
July, 2024

DESIGNED BY	DRAFTED BY
RCT	JH/MR

JOB NUMBER
1829

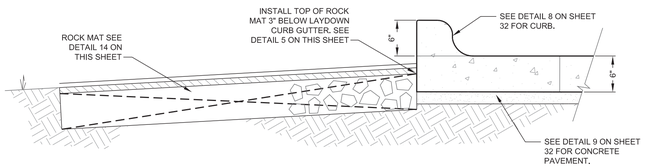
SHEET
32 OF 60

STATE OF TEXAS
ROBERT C. THOMPSON
69524
REGISTERED PROFESSIONAL ENGINEER

Thompson Land Engineering, LLC (F-10220)

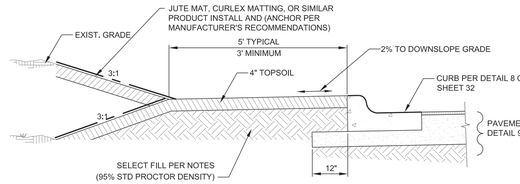
7/16/24

2022-27-SWP



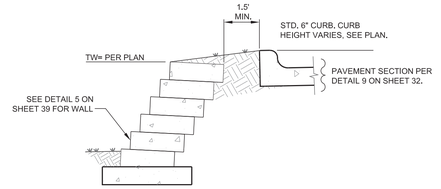
1 DRAIN MAT AT LAYDOWN CURB DETAIL

SCALE: 1" = 1'



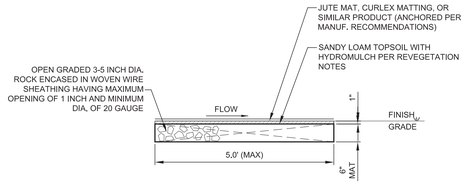
6 GRADE @ BACK OF 6" CURB

SCALE: 1" = 2'



11 RETAINING WALL BEHIND CURB

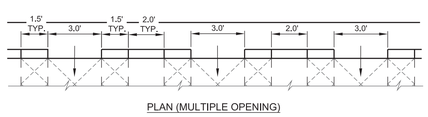
SCALE: 1" = 2'



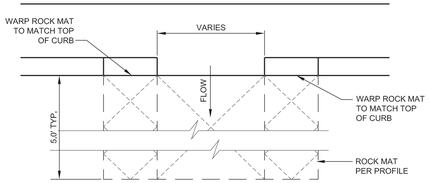
NOTE: VOIDS ARE TO BE FILLED WITH TOP SOIL.

14 TYPICAL ROCK MAT SECTION

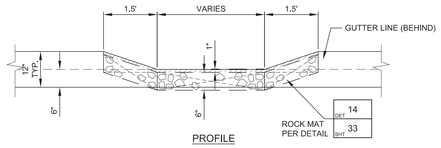
SCALE: 1" = 2'



PLAN (MULTIPLE OPENING)



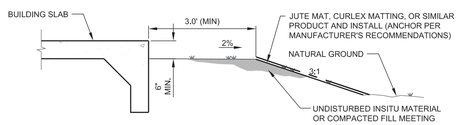
PLAN (SINGLE OPENING)



PROFILE

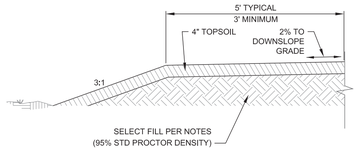
2 LAY DOWN CURB AND GUTTER SECTION

SCALE: N.T.S.



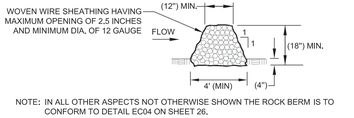
3 TYPICAL GRADING @ BUILDING

SCALE: 1" = 2'



4 3:1 SLOPING GRADE

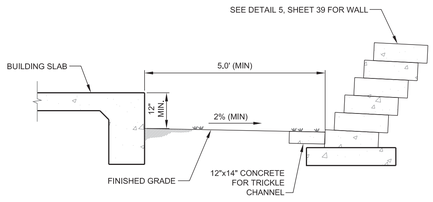
SCALE: 1" = 2'



NOTE: IN ALL OTHER ASPECTS NOT OTHERWISE SHOWN THE ROCK BERM IS TO CONFORM TO DETAIL EC04 ON SHEET 26.

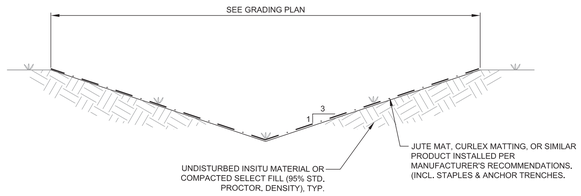
5 PERMANENT ROCK BERM

SCALE: NONE



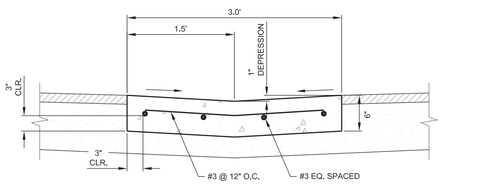
7 TYP. GRADING @ CUT FOR BUILDING

SCALE: 1" = 2'

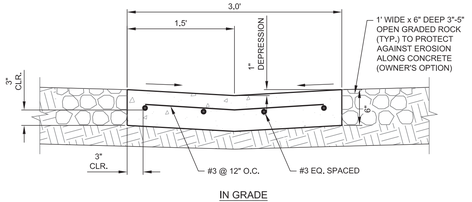


8 TYPICAL V SWALE DETAIL

SCALE: 1" = 2'



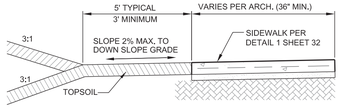
IN PAVEMENT



IN GRADE

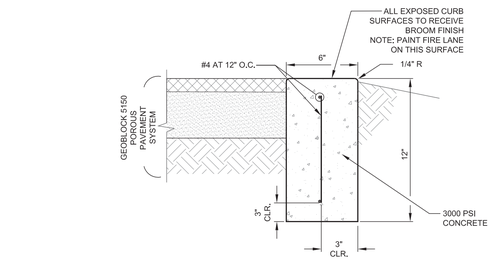
9 TRICKLE CHANNEL

SCALE: 1" = 1'



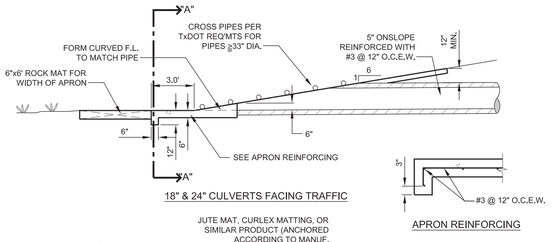
10 ON-SITE SIDEWALK AT GRADE

SCALE: 1" = 2'



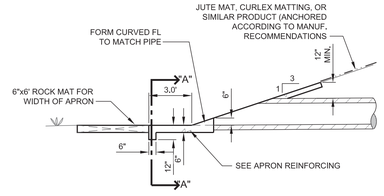
12 FIRELANE RIBBON CURB

SCALE: 1" = 1'

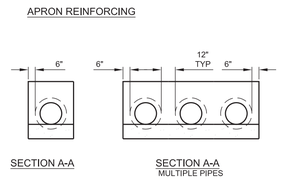


18" & 24" CULVERTS FACING TRAFFIC

APRON REINFORCING

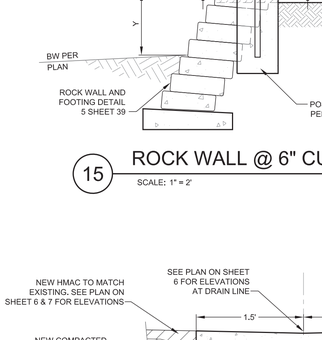


CULVERTS PERPENDICULAR TO TRAFFIC



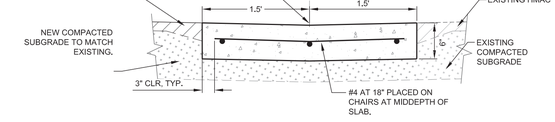
13 SAFETY END TREATMENT

SCALE: 1" = 5' (NOTE: 18" PIPE SHOWN)



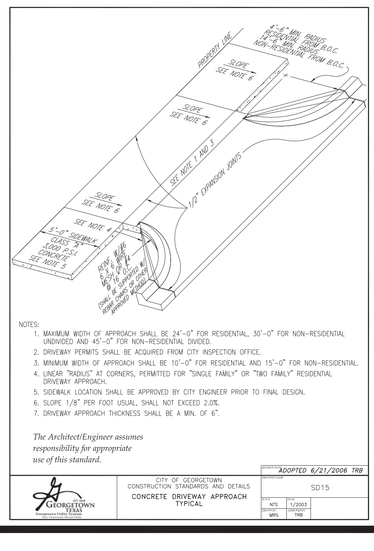
15 ROCK WALL @ 6" CURB

SCALE: 1" = 2'



16 CONCRETE VALLEY GUTTER

SCALE: 1" = 1'



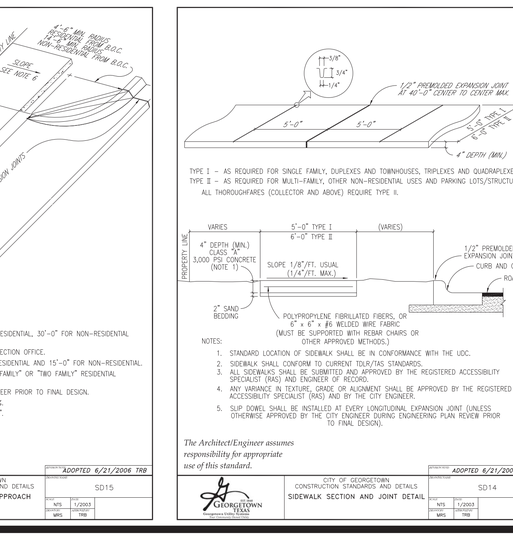
NOTES:

1. MAXIMUM WIDTH OF APPROACH SHALL BE 24'-0" FOR RESIDENTIAL, 30'-0" FOR NON-RESIDENTIAL UNDIVIDED AND 45'-0" FOR NON-RESIDENTIAL DIVIDED.
2. DRIVEWAY PERMITS SHALL BE ACQUIRED FROM CITY INSPECTION OFFICE.
3. MINIMUM WIDTH OF APPROACH SHALL BE 10'-0" FOR RESIDENTIAL AND 15'-0" FOR NON-RESIDENTIAL.
4. LINEAR "RADIUS" AT CORNERS, PERMITTED FOR "SINGLE FAMILY" OR "TWO FAMILY" RESIDENTIAL DRIVEWAY APPROACH.
5. SIDEWALK LOCATION SHALL BE APPROVED BY CITY ENGINEER PRIOR TO FINAL DESIGN.
6. SLOPE 1/8" PER FOOT USUAL, SHALL NOT EXCEED 2.0%.
7. DRIVEWAY APPROACH THICKNESS SHALL BE A MIN. OF 6".

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
CONCRETE DRIVEWAY APPROACH TYPICAL

ADOPTED 6/21/2006 TRB
SD15
NTS 1/2003
MPS TRB



TYPE I – AS REQUIRED FOR SINGLE FAMILY, DUPLEXES AND TOWNHOUSES, TRIPLEXES AND QUADRAPLEXES.
TYPE II – AS REQUIRED FOR MULTI-FAMILY, OTHER NON-RESIDENTIAL USES AND PARKING LOTS/STRUCTURES.
ALL THOROUGHFARES (COLLECTOR AND ABOVE) REQUIRE TYPE II.

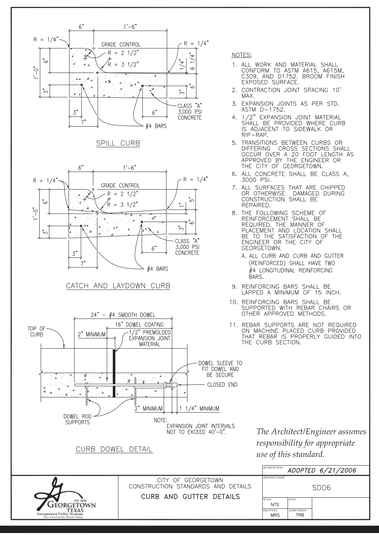
NOTES:

1. STANDARD LOCATION OF SIDEWALK SHALL BE IN CONFORMANCE WITH THE UDC.
2. SIDEWALK SHALL CONFORM TO CURRENT TDLR/TAS STANDARDS.
3. ALL SIDEWALKS SHALL BE SUBMITTED AND APPROVED BY THE REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND ENGINEER OF RECORD.
4. ANY VARIANCE IN TEXTURE, GRADE OR ALIGNMENT SHALL BE APPROVED BY THE REGISTERED ACCESSIBILITY SPECIALIST (RAS) AND BY THE CITY ENGINEER.
5. SLIP DOWEL SHALL BE INSTALLED AT EVERY LONGITUDINAL EXPANSION JOINT (UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER DURING ENGINEERING PLAN REVIEW PRIOR TO FINAL DESIGN).

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
SIDEWALK SECTION AND JOINT DETAIL

ADOPTED 6/21/2006 TRB
SD14
NTS 1/2003
MPS TRB



SPILL CURB

CATCH AND LAYDOWN CURB

CURB DOWEL DETAIL

NOTES:

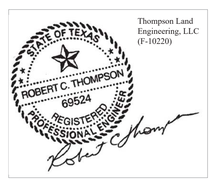
1. ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, A615M, C309, AND D1752. BROOM FINISH EXPOSED SURFACE.
2. CONTRACTION JOINT SPACING 10' MAX.
3. EXPANSION JOINTS AS PER STD. ASTM D-1752.
4. 1/2" EXPANSION JOINT MATERIAL SHALL BE PROVIDED WHERE CURB IS PLACED TO SIDEWALK OR RETAINING.
5. TRANSITIONS BETWEEN CURBS OR DIFFERING CROSS SECTIONS SHALL OCCUR OVER A 20 FOOT LENGTH AS APPROVED BY THE ENGINEER OR THE CITY OF GEORGETOWN.
6. ALL CONCRETE SHALL BE CLASS A, 3000 PSI.
7. ALL SURFACES THAT ARE CHIPPED OR OTHERWISE DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED.
8. THE FOLLOWING SCHEME OF REINFORCEMENT SHALL BE REQUIRED. THE MANNER OF PLACEMENT AND LOCATION SHALL BE TO THE SATISFACTION OF THE ENGINEER OR THE CITY OF GEORGETOWN.
   A. ALL CURB AND CURB AND GUTTER (REINFORCED) SHALL HAVE TWO #4 LONGITUDINAL REINFORCING BARS.
9. REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 15 INCH.
10. REINFORCING BARS SHALL BE SUPPORTED WITH REBAR CHAIRS OR OTHER APPROVED METHODS.
11. REBAR SUPPORTS ARE NOT REQUIRED ON MACHINE PLACED CURB PROVIDED THAT REBAR IS PROPERLY GUIDED INTO THE CURB SECTION.

The Architect/Engineer assumes responsibility for appropriate use of this standard.

CITY OF GEORGETOWN CONSTRUCTION STANDARDS AND DETAILS
CURB AND GUTTER DETAILS

ADOPTED 6/21/2006
SD06
NTS
MPS TRB

NOTE: SEE SHEET 54 FOR WORK IN R.O.W.



Thompson Land Engineering, LLC (F-10220)

9/17/24

2022-27-SWP

THOMPSON LAND ENGINEERING, LLC
Land Planning, Site Design, Subdivision Engineering
P.O. Box 160062, Austin, Texas 78716 (512-328-0002)
email: rc@tleng.net
www.tleng.net

DATE

REVISION

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME: GRADING AND DRAINAGE DETAILS

DATE ISSUED: September, 2024

DESIGNED BY: RCT | DRAFTED BY: JHMR

JOB NUMBER: 1829

SHEET: 33 OF 60

4651 FM 3405
(VARIABLE WIDTH R.O.W.)

HK RAGSDALE, LLC.
.373.00 ACRES
(DOC.202119212R)

MICHAEL LYNN BRAKE &
DIANNE BLAKE, ET UX
16.97 ACRES
#2004040075
O.P.R.W.C.

I.G. JANCA, III & LESLIE A. JANCA
16.91 ACRES
#2003047724

NATHAN A. KIRBY
23.75 ACRES
#2008038240
O.P.R.W.C.

SF-6
RESIDENTIAL
LOT 1
NATHAN A. KIRBY
#2008038240
O.P.R.W.C.

POA-E1A
POA-E1B
POA-E1C
POA-E2A
POA-E2B
POA-E2C
POA-E3

E1A
E1B
E1C
E2A
E2B
E2C
E3

NOTE - SEE FLOWPATH AND DRAINAGE AREA CALCULATION RESULTS IN THE TABLES ON SHEET 37 (TYPICAL)

NOTE - SEE PROPOSED DA MAP (SHEET 36) TO SEE THE PORTION OF IMPERVIOUS COVER TO BE REMOVED.

TBM (2)
TEMPORARY BENCHMARK (TBM)
IRON ROD FOUND
ELEVATION =875.43'
NAVD 1988 DATUM

TEMPORARY BENCHMARK (TBM)
IRON ROD SET
ELEVATION = 885.49'
NAVD 1988 DATUM

1 DRAINAGE AREA MAP - EXISTING
SCALE: 1:50

SCALE: 1" = 50'
0 25 50 100

LEGEND
EXISTING DRAINAGE AREA -LONG COURSE
EXISTING DRAINAGE AREA

Thompson Land Engineering, LLC (F-10220)

STATE OF TEXAS
ROBERT C. THOMPSON
69524
REGISTERED PROFESSIONAL ENGINEER

7/16/24

2022-27-SWP

THOMPSON LAND ENGINEERING, LLC
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TBPE Reg. No. F-10220

DATE
REVISION

AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

DRAINAGE AREA MAP - EXISTING

PROJECT
SHEET NAME

DATE ISSUED
July, 2024

DESIGNED BY: RCT
DRAFTED BY: JH/MR

JOB NUMBER
1829

SHEET
35 OF 60

DITCH CALCULATIONS

100-YEAR	100-YEAR
FLOW = 6.5-CFS	FLOW = 6.5-CFS
VELOCITY = 1.9-FPS	VELOCITY = 1.8-FPS
DEPTH = 0.62-FEET	DEPTH = 0.63-FEET

CALCULATION RESULTS ARE FROM SWMM, VERSION 5.2

DITCH CALCULATIONS

100-YEAR	100-YEAR
FLOW = 10.5-CFS	FLOW = 10.0-CFS
VELOCITY = 2.8-FPS	VELOCITY = 4.0-FPS
DEPTH = 0.65-FEET	DEPTH = 0.54-FEET

CALCULATION RESULTS ARE FROM SWMM, VERSION 5.2

① DRAINAGE AREA MAP - PROPOSED
SCALE: 1:50

SCALE: 1" = 50'
0 25 50 100

LEGEND

— · — · —	PROPOSED DRAINAGE AREA - LONG COURSE (FLOW PATH)
━━━━	PROPOSED DRAINAGE AREA

NOTE - THE BUILDINGS TO HAVE ROOF DRAINS TO CONVEY STORM WATER ONTO ONSITE DRIVES (MATCHING THE DRAINAGE DIVIDE LINES AND FLOW ARROWS ON THIS SHEET, TYPICAL)

NOTE - SEE CALCULATIONS FOR THE FLOW PATHS AND DRAINAGE AREA RESULTS IN THE TABLES ON SHEET 37 (TYPICAL)

THOMPSON LAND ENGINEERING, LLC
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email: ric@tleng.net

DATE
REVISION

PROJECT
AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME
DRAINAGE AREA MAP - PROPOSED

Thompson Land
Engineering, LLC
(F-10220)
ROBERT C. THOMPSON
69524
Robert C Thompson
9/27/24

DATE ISSUED	
September, 2024	
DESIGNED BY	DRAFTED BY
RCT	JH/MR
JOB NUMBER	
1829	

DETERMINING THE
TIME OF CONCENTRATION CALCULATIONS USING THE SOIL CONSERVATION SERVICE (SCS) METHOD
Project: AAA Storage FM 3504

INPUT PARAMETERS

A) Rainfall Volumes - See US Weather Bereau Technical Paper 40
4.14 2-year, 24-hour Rainfall "P2" (inches) - **ATLAS-14**

B) Watershed Factors (excluding any upstream area as noted)

Sheet Flow (flow depth to 0.1 ft per SCS TR-55, p.3-3 (June 1986))

	E1a	E1b	E1c (& P1c)	E2a	E2b.1	E2b.2	E3 (& P3)	P1a	P2a	P1b.1	P2b.1	NOTE - all other areas are assumed 5-min Tc.	
Reach 1	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.016	0.016	(n1)	Manning's "n"
	50	75	33	50	100	100	50	50	25	27	14	(L1)	Length, ft
	0.010	0.008	0.032	0.010	0.017	0.017	0.102	0.010	0.020	0.019	0.011	(s1)	Slope, ft/ft
Reach 2	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	(n1)	Manning's "n"
	0	0	0	0	0	0	0	0	0	0	0	(L1)	Length, ft
	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	0.010	(s1)	Slope, ft/ft

Shallow Concentrated Flow (R of 0.2 to 0.4 per SCS TR-55, Appendix F (June 1986))

Reach 1	N	N	Y	N	N	N	N	N	N	Y	Y		Paved? (Y or N)
	84	588	59	81	446	499	205	84	0	649	895	(L2)	Length, ft
	0.010	0.033	0.039	0.025	0.025	0.036	0.024	0.010	0.020	0.013	0.010	(s2)	Slope, ft/ft
Reach 2	N	N	N	N	N	N	N	N	N	N	N		Paved? (Y or N)
	0	0	207	0	0	0	0	0	0	0	0	(L2)	Length, ft
	0.020	0.020	0.058	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	(s2)	Slope, ft/ft

Channel Flow

	3.5	0.0	0.0	1.0	0.0	0.0	0.0	3.5	1.0	0.0	0.0	(V3)	Velocity (ft/s)
	0.033	0.020	0.020	0.003	0.020	0.020	0.020	0.033	0.003	0.020	0.020	(s3)	Slope, ft/ft
	526	0	0	241	0	0	0	521	370	0	0	(L3)	Length, ft

RESULTS

E1a	E1b	E1c	E2a	E2b.1	E2b.2	E3	P1a	P2a	P1b.1	P2b.1	
6.5	9.8	3.0	6.5	9.2	9.2	2.6	6.5	2.8	0.5	0.4	min (Tc-1a)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	min (Tc-1b)
1.6	2.9	4.0	2.6	2.6	3.0	2.5	1.6	2.3	2.4	2.0	V-2a (fps)
0.9	3.3	0.2	0.5	2.9	2.7	1.4	0.9	0.0	4.6	7.4	min (Tc-2a)
2.3	2.3	3.9	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	V-2b (fps)
0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	min (Tc-2b)
2.5	0.0	0.0	4.0	0.0	0.0	0.0	2.5	6.1	0.0	0.0	min = Channel Tc (Tc-3)
9.9	13.1	4.1	11.0	12.1	11.9	3.9	9.9	9.0	5.1	7.8	Total (min)
9.9	13.1	5.0	11.0	12.1	11.9	5.0	9.9	9.0	5.1	7.8	Total Used (min)
5.9	**7.9**	**3.0**	**6.6**	**7.3**	**7.2**	**3.0**	**5.9**	**5.4**	**3.1**	**4.7**	**Lag for HEC-HMS**
1.7	2.3	0.9	1.9	2.1	2.1	0.9	1.7	1.6	0.9	1.4	Min Modeling Incrument

Equations:
Tc1 = 0.007 * (L1 * n1)^0.8 / (P2^0.5 * s1^0.4) in hours
Tc2 = L / V where, per Appendix F:V = 16.1345(s)^0.5 (unpaved) or V = 20.3282(s)^0.5 (paved)
Tc3 = L3 / [V3] where, V either assumed or = 1.2*16.1345(s)^0.5 like Tc2 but w/ 20% increase for channel efficiency

TIME OF CONCENTRATION (Tc) CALCULATIONS

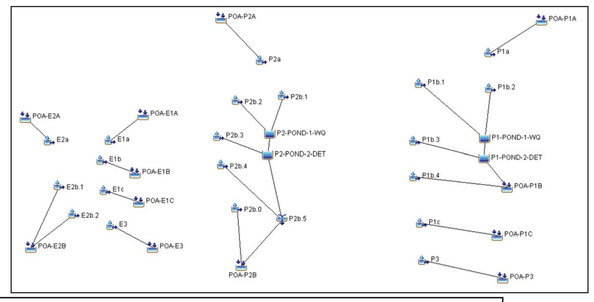
SCS RUN-OFF CURVE NUMBER CALCULATIONS

	CN [1]	E1a (Ac)	E1b (Ac)	E1c (Ac)	E2a (Ac)	E2b.1 (Ac)	E2b.2 (Ac)	E3 (Ac)	E-Total	P1a (Ac)	P1b.1 (Ac)	P1b.2 (Ac)	P1b.3 (Ac)	P1b.4 (Ac)	P1c (Ac)	P2a (Ac)	P2b.0 (Ac)	P2b.1 (Ac)	P2b.2 (Ac)	P2b.3 (Ac)	P2b.4 (Ac)	P3 (Ac)	P-Total
From Table 3-5 (Georg. DCM)																							
Agricultural lands																							
Meadow-continuous grass																							
A Soils	30	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
B Soils	58	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
C Soils	71	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
D Soils	78	0.78	4.43	1.89	0.47	5.28	2.56	1.11		0.69	0.02	0.38	0.29	0.67	1.25	0.36	0.67	0.00	0.31	0.44	1.53	1.11	
Impervious Cover (IC) Areas																							
All Soils	98	0.26	0.29	0.85	0.12	0.00	0.03	0.26	**1.81**	0.25	3.39	0.00	0.00	0.00	0.94	0.15	0.00	5.60	0.00	0.00	0.03	0.26	**10.62**
Sum																							
Total Area (Acres)		**1.04**	**4.73**	**2.75**	**0.59**	**5.28**	**2.59**	**1.37**	**18.34**	**0.94**	**3.41**	**0.38**	**0.29**	**0.67**	**2.19**	**0.51**	**0.67**	**5.60**	**0.31**	**0.44**	**1.56**	**1.37**	**18.34**
Total Area (sq. miles)		0.00162	0.00738	0.00429	0.00093	0.00825	0.00404	0.00214		0.00147	0.00533	0.00059	0.00046	0.00104	0.00342	0.00080	0.00105	0.00875	0.00049	0.00068	0.00243	0.00214	
Composite "C"		**83.02**	**79.24**	**84.22**	**81.98**	**78.00**	**78.21**	**81.83**		**83.38**	**97.90**	**78.00**	**78.00**	**78.00**	**86.60**	**83.86**	**78.00**	**97.99**	**78.00**	**78.00**	**78.35**	**81.83**	
Percent IC		**25.1%**	**6.2%**	**31.1%**	**19.9%**	**0.0%**	**1.1%**	**19.2%**	**9.9%**	**26.9%**	**99.5%**	**0.0%**	**0.0%**	**0.0%**	**43.0%**	**29.3%**	**0.0%**	**100.0%**	**0.0%**	**0.0%**	**1.7%**	**19.2%**	**57.9%**

IC BREAKDOWN TABLE	E1a	E1b	E1c	E2a	E2b.1	E2b.2	E3	E-Total	P1a	P1b.1	P1b.2	P1b.3	P1b.4	P1c	P2a	P2b.0	P2b.1	P2b.2	P2b.3	P2b.4	P3	P-Total
Existing IC																						
Building / Structure	0	0	2,387	0	0	828	2,184		0	0	0	0	0	2,387	0	0	0	0	0	828	2,184	
Driveway & Parking	11,354	6,515	6,234	5,143	0	0	3,878		9,151	0	0	0	0	6,234	5,145	0	0	0	0	0	3,878	
Sidewalk / pavement	0	0	186	0	0	358	514		0	0	0	0	0	186	0	0	0	0	0	358	514	
IC after 1990 and Proposed IC																						
Building / Structure	0	0	7,010	0	0	0	0		0	68,575	0	0	0	7,010	0	0	130,334	0	0	0	0	
Driveway & Parking	0	6,197	21,364	0	0	0	4,841		1,865	78,762	0	0	0	25,180	1,395	0	111,950	0	0	0	4,841	
Sidewalk / pavement	0	0	15	0	0	0	0		0	496	0	0	0	15	0	0	1,489	0	0	0	0	
Total Impervious Cover (SF)	**11,354**	**12,712**	**37,196**	**5,143**	**0**	**1,186**	**11,417**	**79,009 SF**	**11,016**	**147,833**	**0**	**0**	**0**	**41,013**	**6,540**	**0**	**243,773**	**0**	**0**	**0**	**1,186**	**11,417**	**462,777 SF**
Total Impervious Cover (AC)	**0.261**	**0.292**	**0.854**	**0.118**	**0.000**	**0.027**	**0.262**	**1.814 AC**	**0.253**	**3.394**	**0.000**	**0.000**	**0.000**	**0.942**	**0.150**	**0.000**	**5.596**	**0.000**	**0.000**	**0.027**	**0.262**	**10.624 AC**

Note:
1) From Tables in 1986 TR-55 Manual by Soil Conservation Service.
2) Drainage Areas E1a, E2a and P1a, P2a are primarily runoff in the ROW (and the IC in these areas is exclusively ROW).

DRAINAGE AREAS & HEC-HMS MODEL SCHEMATIC



SUMMARY of the **Hydrologic Computations** (Using the SCS Method)
Project: AAA Storage FM 3504

Hydrologic Element	Drainage Area (MI^2)	2-yr PEAK Discharge (CFS)	10-yr PEAK Discharge (CFS)	25-yr PEAK Discharge (CFS)	100-yr PEAK Discharge (CFS)	Notes
						All storm events are Atlas-14 rainfall data
Existing Discharges						
E1a	0.001623	3.58	6.34	8.18	11.31	
E1b	0.007384	13.11	24.60	32.36	45.42	
E1c	0.004289	11.60	20.28	25.94	35.67	
E2a	0.000926	1.91	3.43	4.45	6.16	
E2b.1	0.008249	14.56	27.78	36.70	51.83	
E2b.2	0.004043	7.22	13.72	18.14	25.58	
E3	0.002138	5.42	9.79	12.66	17.57	
POA-E1a	0.001623	3.58	6.34	8.18	11.31	Compare to POA-P1a
POA-E1b	0.007384	13.11	24.60	32.36	45.42	Compare to POA-P1b
POA-E1c	0.004289	11.60	20.28	25.94	35.67	Compare to POA-P1c
POA-E2a	0.000926	1.91	3.43	4.45	6.16	Compare to POA-P2a
POA-E2b	0.012292	21.78	41.50	54.84	77.41	Compare to POA-P2b
POA-E3	0.002138	5.42	9.79	12.66	17.57	Compare to POA-P3
Proposed Discharges						
P1a	0.001468	3.27	5.77	7.43	10.25	
P1b.1	0.005330	19.48	29.50	35.92	47.12	
P1b.2	0.000592	1.34	2.57	3.38	4.77	
P1b.3	0.000455	1.03	1.98	2.60	3.66	
P1b.4	0.001045	2.36	4.54	5.97	8.42	
P1c	0.003420	9.63	16.50	20.97	28.67	
P1-Pond-1(east)-WQ	0.005922	18.15	28.33	35.15	47.01	
P1-POND-2(east)-DET	0.006377	9.47	14.56	18.23	24.75	
P2a	0.000801	1.86	3.24	4.17	5.75	
P2b.0	0.001052	2.38	4.57	6.01	8.47	
P2b.1	0.008747	29.15	43.97	53.60	70.23	
P2b.2	0.000491	1.11	2.13	2.80	3.95	
P2b.3	0.000681	1.54	2.96	3.89	5.48	
P2b.4	0.002432	5.56	10.61	13.94	19.62	
P2b.5	0.012351	13.23	20.99	26.81	37.39	
P2-Pond-1(west)-WQ	0.009238	23.91	37.58	46.84	62.71	
P2-POND-2(west)-DET	0.009919	11.95	18.50	23.37	32.23	
P3	0.002138	5.42	9.79	12.66	17.57	
POA-P1a	0.001468	3.27	5.77	7.43	10.25	Compare to POA-E1a
POA-P1b	0.007422	10.37	16.21	20.42	27.96	Compare to POA-E1b
POA-P1c	0.003420	9.63	16.50	20.97	28.67	Compare to POA-E1c
POA-P2a	0.000801	1.86	3.24	4.17	5.75	Compare to POA-E2a
POA-P2b	0.013403	14.38	24.72	32.09	45.35	Compare to POA-E2b
POA-P3	0.002138	5.42	9.79	12.66	17.57	Compare to POA-E3

FLOW RESULTS OF HEC-HMS CALCULATIONS

Peak Inflows and Discharges				
P1(east)-Pond-1-WQ (IN)	20.82	32.07	39.30	51.88
P1(east)-Pond-1-WQ (OUT)	18.15	28.33	35.15	47.01
Pond Water Surface Elevations				
P1-Pond-1(east)-WQ	872.99	873.12	873.20	873.33
DEPTH over spillway [ft] =	0.99	1.12	1.20	1.33

Pond Outlets
P1(east)-Pond-1-WQ

	Elevation	Length	Coef	No.	
1	**872.60**	25.0	3.0	1	Water quality spillway (ft)

Pond - Elevation - Area - Storage - Outflow Table

Elevation (mean sea level)	Area (sf)	Area (ac)	Storage (cubic feet)	Outflow 1 (cfs)	Outflow Total (cfs)
872.60	11,630	0.267	0	0.00	0.00
873.00	11,952	0.274	4,716	18.97	18.97
874.00	13,049	0.300	12,501	124.24	124.24

Peak Inflows and Discharges				
P1(east)-Pond-2-DET (IN)	19.11	30.12	37.50	50.30
P1(east)-Pond-2-DET (OUT)	9.47	14.56	18.23	24.75
Pond Water Surface Elevations				
P1-Pond-2(east)-DET	870.25	871.00	871.49	872.27
DEPTH [ft] =	2.25	3.00	3.49	4.27

Pond Outlets
P1(east)-Pond-2-DET

	Elevation	Length	Coef	No.	
1	868.00	1.0	3.0	1	Weir (ft)
2	872.60	227.93	3.3	1	Overflow spillway (ft)

Pond - Elevation - Area - Storage - Outflow Table

Elevation (mean sea level)	Area (sf)	Area (ac)	Storage (cubic feet)	Outflow 1 (cfs)	Outflow 2 (cfs)	Outflow Total (cfs)
868.00	0	0.000	0	0.00	0.00	0.00
869.00	4,402	0.101	2,201	3.00	0.00	3.00
870.00	8,686	0.199	6,544	8.49	0.00	8.49
871.00	9,374	0.215	9,030	15.59	0.00	15.59
872.00	10,062	0.231	9,718	24.00	0.00	24.00
873.00	10,750	0.247	10,406	33.54	190.29	223.83

POND RESULTS OF HEC-HMS & OULET CALCULATIONS

Peak Inflows and Discharges				
P2(west)-Pond-1-WQ (IN)	30.19	45.91	56.13	73.78
P2(west)-Pond-1-WQ (OUT)	23.91	37.58	46.84	62.71
Pond Water Surface Elevations				
P2(west)-Pond-1-WQ	874.51	874.81	875.00	875.28
DEPTH over spillway [ft] =	0.86	1.16	1.35	1.63

Pond Outlets
P2(west)-Pond-1-WQ

	Elevation	Length	Coef	No.	
1	873.65	10.0	3.0	1	Water quality spillway (ft)

Pond - Elevation - Area - Storage - Outflow Table

Elevation (mean sea level)	Area (sf)	Area (ac)	Storage (cubic feet)	Outflow 1 (cfs)	Outflow Total (cfs)
873.65	10,814	0.248	0	0.00	0.00
874.00	11,401	0.262	3,888	0.00	0.00
874.25	12,543	0.288	2,993	13.94	13.94

Peak Inflows and Discharges				
P2(west)-Pond-2-DET (IN)	24.92	39.40	49.21	66.37
P2(west)-Pond-2-DET (OUT)	11.95	18.50	23.37	32.23
Pond Water Surface Elevations				
P2(west)-Pond-2-DET	868.13	869.02	869.61	870.60
DEPTH [ft] =	2.63	3.52	4.11	5.10

Pond Outlets
P2(west)-Pond-2-DET

	Elevation	Length	Coef	No.	
1	865.50	1.0	2.8	1	Weir (ft)
2	871.25	247.5	3.3	1	Overflow spillway (ft)

Pond - Elevation - Area - Storage - Outflow Table

Elevation (mean sea level)	Area (sf)	Area (ac)	Storage (cubic feet)	Outflow 1 (cfs)	Outflow 2 (cfs)	Outflow Total (cfs)
865.50	0	0.000	0	0.00	0.00	0.00
866.00	1,244	0.029	311	0.99	0.00	0.99
867.00	10,613	0.244	5,929	5.14	0.00	5.14
868.00	13,124	0.301	11,869	11.07	0.00	11.07
869.00	13,827	0.317	13,476	18.33	0.00	18.33
870.00	14,549	0.334	14,188	26.73	0.00	26.73
871.00	15,292	0.351	14,921	36.12	0.00	36.12
871.25	15,482	0.355	3,847	38.61	0.00	38.61
872.00	16,054	0.369	11,826	46.40	530.49	576.90

POND RESULTS OF HEC-HMS & OULET CALCULATIONS

DRAINAGE FOR THIS DEVELOPMENT DOES NOT DRAIN TO TxDOT ROW, DOES NOT CAUSE TxDOT DRAINAGE TO BE BLOCKED AND HAS BEEN DESIGNED SUCH THAT THERE WILL BE NO ADVERSE IMPACTS ON THE CAPACITY, FUNCTION OR INTEGRITY OF TEXAS DEPARTMENT OF TRANSPORTATION RIGHT OF WAY DRAINAGE FACILITIES.

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69523
REGISTERED PROFESSIONAL ENGINEER

9/17/24

2022-27-SWP

REVISION | DATE

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

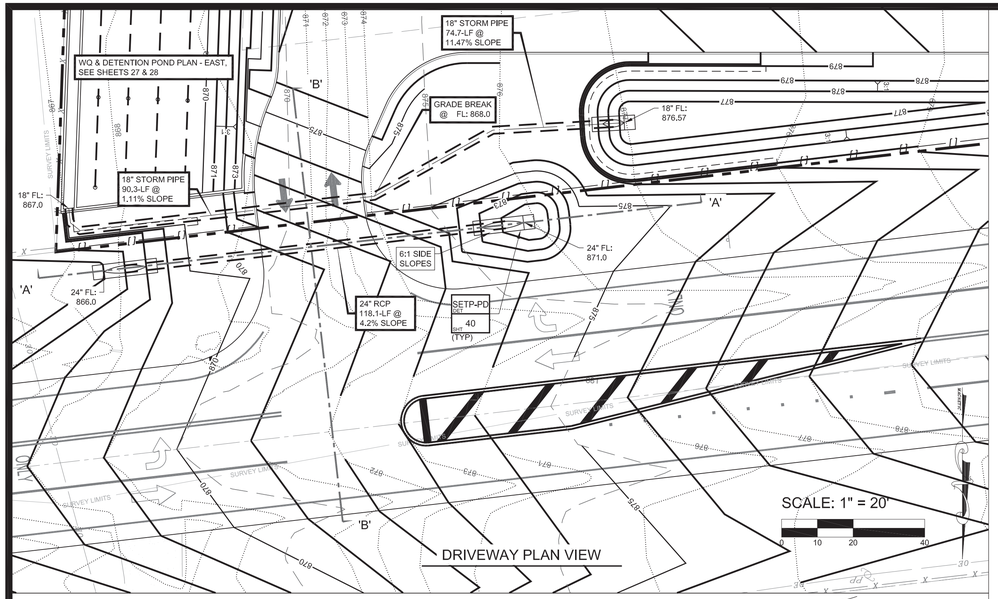
SHEET NAME: DRAINAGE REPORT & HYDRAULIC CALCULATIONS

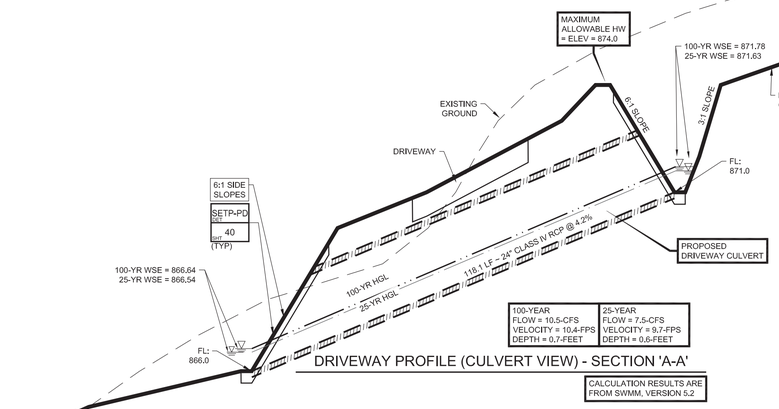
DATE ISSUED: September, 2024

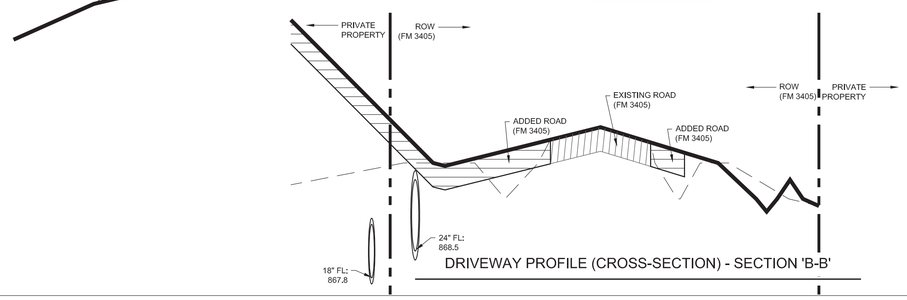
DESIGNED BY: RCT | DRAFTED BY: JHMR

JOB NUMBER: 1829

SHEET: 37 OF 60







Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: AAA FM 3504
Date Prepared: 5/16/2023
Date Updated: 10/2/2024

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

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

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

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

County =	Williamson	
Total project area included in plan =	22.94	acres
Predevelopment impervious area within the limits of the plan =	2.28	acres
Total post-development impervious area within the limits of the plan =	11.57	acres
Total post-development impervious cover fraction =	0.50	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	8092	lbs.
Number of drainage basins / outfalls areas leaving the plan area =	10	*

* NOTES:
Drainage Basins No. 1 and 4 go into the ROW.
Drainage Basins No. 2 and 5 have areas to be treated by their own Sand Filter Ponds.
Drainage Basins No. 3 and 6 are split into subareas: uncaptured IC, exempted IC, and treated IC (by VFS).

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

Drainage Basin/Outfall Area No. =	1		2		3a	3b	3c	4
Total drainage basin/outfall area =	0.59	acres	4.18	acres	0.43	0.16	1.60	0.03
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres	0.23	acres	0.00	0.00	0.53	0.00
Post-development impervious area within drainage basin/outfall area =	0.00	acres	3.39	acres	0.10	0.16	0.53	0.00
Post-development impervious fraction within drainage basin/outfall area =	0.00		0.81		0.23	1.00	0.33	0.00
$L_{M\ THIS\ BASIN}$ =	0	lbs.	2750	lbs.	87	139	0	0
	POA-P1A		POA-P1B		POA-P1C.1	POA-P1C.2	POA-P1C.3	POA-P2A
	to ROW-1		to pond #1		uncaptured replaced drive	to VFS #1	exempt IC	to ROW-2

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Sand Filter
Removal efficiency = 89 percent

Sand Filter

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_V 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

					FM 3405 ROW	5	6a	6b
A_C =	3.81	acres	5.91	acres	6.04	8.30	0.11	1.50
A_I =	3.39	acres	5.60	acres	1.34	0.03	0.00	0.15
A_P =	0.42	acres	0.31	acres	1.53	5.60	0.11	0.15
L_R =	3347	lbs	5523	lbs	0.25	0.67	1.00	0.10
					171	4848	96	0
					to VFS (ROW)	POA-P2B to pond #2	POA-P3.1 VFS #2 (drive)	POA-P3.2 exempt IC

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

	Treated by Pond #1		Treated by Pond #2		Treated by VFS		Total Treated:	
Desired $L_{M\ THIS\ BASIN}$ =	2950	lbs.	4875	lbs.	406	lbs.	8231	lbs.
F =	0.88		0.88				139	extra

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

Rainfall Depth =	1.50	inches	1.50	inches
Post Development Runoff Coefficient =	0.73		0.77	
On-site Water Quality Volume =	15072	cubic feet	24894	cubic feet

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

Off-site area draining to BMP =	0.00	acres	0.00	acres
Off-site Impervious cover draining to BMP =	0.00	acres	0.00	acres
Impervious fraction of off-site area =	0		0	
Off-site Runoff Coefficient =	0.00		0.00	
Off-site Water Quality Volume =	0	cubic feet	0	cubic feet
Storage for Sediment =	3014		4979	
Total Capture Volume (required water quality volume(s) x 1.20) =	18087	cubic feet	29873	cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.

9. Filter area for Sand Filters Designed as Required in RG-348 Pages 3-58 to 3-63

9B. Partial Sedimentation and Filtration System

Water Quality Volume for combined basins =	18087	cubic feet	29873	cubic feet
Minimum filter basin area =	1507	square feet	2489	square feet
Maximum sedimentation basin area =	6029	square feet	9958	square feet For minimum water depth of 2 feet
Minimum sedimentation basin area =	377	square feet	622	square feet For maximum water depth of 8 feet

TCEQ TSS CALCULATIONS

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: AAA Storage FM 3504
Date Prepared: 5/16/2023
Date Updated: 10/2/2024

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

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

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

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

County =	Williamson	
Total project area included in plan * =	22.94	acres
Predevelopment impervious area within the limits of the plan * =	2.28	acres
Total post-development impervious area within the limits of the plan * =	11.57	acres
Total post-development impervious cover fraction * =	0.50	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	8092	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 8

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

Drainage Basin/Outfall Area No. = 2

Total drainage basin/outfall area =	4.18	acres
Predevelopment impervious area within drainage basin/outfall area =	0.23	acres
Post-development impervious area within drainage basin/outfall area =	3.39	acres
Post-development impervious fraction within drainage basin/outfall area =	0.81	
$L_{M\ THIS\ BASIN}$ =	2750	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Sand Filter
Removal efficiency = 89 percent

Sand Filter

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_V x 34.6 + A_P x 0.54)

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

A_C =	3.81	acres
A_I =	3.39	acres
A_P =	0.42	acres
L_R =	3347	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 2950 lbs.

F = 0.88

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

Rainfall Depth =	1.50	inches
Post Development Runoff Coefficient =	0.73	
On-site Water Quality Volume =	15072	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 =	3014	
Total Capture Volume (required water quality volume(s) x 1.20) =	18087	cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.

9. Filter area for Sand Filters Designed as Required in RG-348 Pages 3-58 to 3-63

9B. Partial Sedimentation and Filtration System

Water Quality Volume for combined basins =	18087	cubic feet	
Minimum filter basin area =	1507	square feet	
Maximum sedimentation basin area =	6029	square feet	For minimum water depth of 2 feet
Minimum sedimentation basin area =	377	square feet	For maximum water depth of 8 feet

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: AAA Storage FM 3504
Date Prepared: 5/16/2023
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1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

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

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

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

County =	Williamson	
Total project area included in plan * =	22.94	acres
Predevelopment impervious area within the limits of the plan * =	2.28	acres
Total post-development impervious area within the limits of the plan * =	11.57	acres
Total post-development impervious cover fraction * =	0.50	
P =	32	inches
$L_{M\ TOTAL\ PROJECT}$ =	8092	lbs.

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

Number of drainage basins / outfalls areas leaving the plan area = 8

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

Drainage Basin/Outfall Area No. = 5

Total drainage basin/outfall area =	8.30	acres
Predevelopment impervious area within drainage basin/outfall area =	0.03	acres
Post-development impervious area within drainage basin/outfall area =	5.60	acres
Post-development impervious fraction within drainage basin/outfall area =	0.67	
$L_{M\ THIS\ BASIN}$ =	4848	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Sand Filter
Removal efficiency = 89 percent

Sand Filter

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_V 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 =	5.91	acres
A_I =	5.60	acres
A_P =	0.31	acres
L_R =	5523	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 4875 lbs.

F = 0.88

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

Rainfall Depth =	1.50	inches
Post Development Runoff Coefficient =	0.77	
On-site Water Quality Volume =	24894	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 =	4979	
Total Capture Volume (required water quality volume(s) x 1.20) =	29873	cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.

9. Filter area for Sand Filters Designed as Required in RG-348 Pages 3-58 to 3-63

9B. Partial Sedimentation and Filtration System

Water Quality Volume for combined basins =	29873	cubic feet	
Minimum filter basin area =	2489	square feet	
Maximum sedimentation basin area =	9958	square feet	For minimum water depth of 2 feet
Minimum sedimentation basin area =	622	square feet	For maximum water depth of 8 feet

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ)
CONTRIBUTING ZONE PLAN (CZP)
GENERAL CONSTRUCTION NOTES

EDWARDS AQUIFER PROTECTION PROGRAM CONSTRUCTION NOTES - LEGAL DISCLAIMER

THE FOLLOWING/LISTED "CONSTRUCTION NOTES" ARE INTENDED TO BE ADVISORY IN NATURE ONLY AND DO NOT CONSTITUTE AN APPROVAL OR CONDITIONAL APPROVAL BY THE EXECUTIVE DIRECTOR (ED), NOR DO THEY CONSTITUTE A COMPREHENSIVE LISTING OF RULES OR CONDITIONS TO BE FOLLOWED DURING CONSTRUCTION. FURTHER ACTIONS MAY BE REQUIRED TO ACHIEVE COMPLIANCE WITH TCEQ REGULATIONS FOUND IN TITLE 30, TEXAS ADMINISTRATIVE CODE (TAC), CHAPTERS 213 AND 217, AS WELL AS LOCAL ORDINANCES AND REGULATIONS PROVIDING FOR THE PROTECTION OF WATER QUALITY. ADDITIONALLY, NOTHING CONTAINED IN THE FOLLOWING/LISTED "CONSTRUCTION NOTES" RESTRICTS THE POWERS OF THE ED, THE COMMISSION OR ANY OTHER GOVERNMENTAL ENTITY TO PREVENT, CORRECT, OR CURTAIL ACTIVITIES THAT RESULT OR MAY RESULT IN POLLUTION OF THE EDWARDS AQUIFER OR HYDROLOGICALLY CONNECTED SURFACE WATERS. THE HOLDER OF ANY EDWARDS AQUIFER PROTECTION PLAN CONTAINING "CONSTRUCTION NOTES" IS STILL RESPONSIBLE FOR COMPLIANCE WITH TITLE 30, TAC, CHAPTERS 213 OR ANY OTHER APPLICABLE TCEQ REGULATION, AS WELL AS ALL CONDITIONS OF AN EDWARDS AQUIFER PROTECTION PLAN THROUGH ALL PHASES OF PLAN IMPLEMENTATION. FAILURE TO COMPLY WITH ANY CONDITION OF THE ED'S APPROVAL, WHETHER OR NOT IN CONTRADICTION OF ANY "CONSTRUCTION NOTES," IS A VIOLATION OF TCEQ REGULATIONS AND ANY VIOLATION IS SUBJECT TO ADMINISTRATIVE RULES, ORDERS, AND PENALTIES AS PROVIDED UNDER TITLE 30, TAC § 213.10 (RELATING TO ENFORCEMENT). SUCH VIOLATIONS MAY ALSO BE SUBJECT TO CIVIL PENALTIES AND INJUNCTION. THE FOLLOWING/LISTED "CONSTRUCTION NOTES" IN NO WAY REPRESENT AN APPROVED EXCEPTION BY THE ED TO ANY PART OF TITLE 30 TAC, CHAPTERS 213 AND 217, OR ANY OTHER TCEQ APPLICABLE REGULATION

1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY GROUND DISTURBANCE OR CONSTRUCTION ACTIVITIES. THIS NOTICE MUST INCLUDE:
   - THE NAME OF THE APPROVED PROJECT;
   - THE ACTIVITY START DATE; AND
   - THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT SHOULD BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED CONTRIBUTING ZONE PLAN (CZP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTOR(S) SHOULD KEEP COPIES OF THE APPROVED PLAN AND APPROVAL LETTER ON-SITE.
3. NO HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.
4. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
5. ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, ETC.
6. SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.
7. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.
8. ALL EXCAVATED MATERIAL THAT WILL BE STORED ON-SITE MUST HAVE PROPER E&S CONTROLS.
9. IF PORTIONS OF THE SITE WILL HAVE A CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.
10. THE FOLLOWING RECORDS SHOULD BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST:
    - THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
    - THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
    - THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
11. THE HOLDER OF ANY APPROVED CZP MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
    A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY BEST MANAGEMENT PRACTICES (BMPS) OR STRUCTURE(S), INCLUDING BUT NOT LIMITED TO TEMPORARY OR PERMANENT PONDS, DAMS, BERMS, SILT FENCES, AND DIVERSIONARY STRUCTURES;
    B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED;
    C. ANY CHANGE THAT WOULD SIGNIFICANTLY IMPACT THE ABILITY TO PREVENT POLLUTION OF THE EDWARDS AQUIFER; OR
    D. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE APPROVED CONTRIBUTING ZONE PLAN.

AUSTIN REGIONAL OFFICE 12100 PARK 35 CIRCLE, BUILDING A AUSTIN, TEXAS 78753-1808 PHONE (512) 339-2929 FAX (512) 339-3795	SAN ANTONIO REGIONAL OFFICE 14250 JUDSON ROAD SAN ANTONIO, TEXAS 78233-4480 PHONE (210) 490-3096 FAX (210) 545-4329

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

TCEQ CZP NOTES

THOMPSON LAND ENGINEERING, LLC
Land Planning, Site Design, Subdivision Engineering
P.O. Box 160062, Austin, Texas 78716 (512-328-0002)
www.tleng.net email: rc@tleng.net
TBPE Reg. No. F-10220

DATE
REVISION

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633
SHEETNAME: CALCULATIONS & NOTES

Thompson Land Engineering, LLC (F-10220)

STATE OF TEXAS
ROBERT C. THOMPSON
69524
REGISTERED PROFESSIONAL ENGINEER

10/2/24

DATE ISSUED
October, 2024

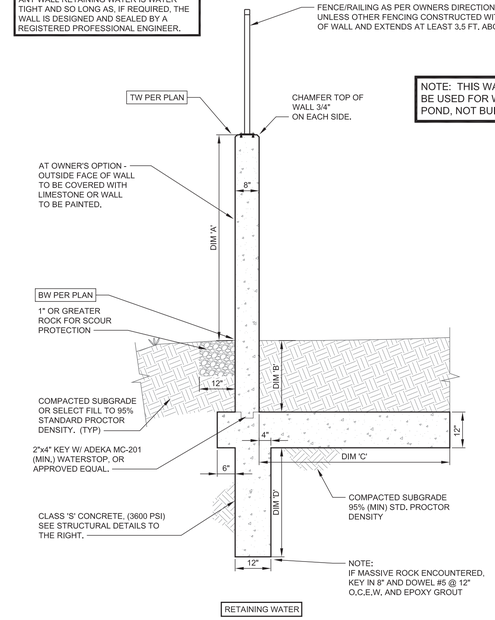
DESIGNED BY: RCT
DRAFTED BY: JH/MR

JOB NUMBER
1829

SHEET
38 OF 42

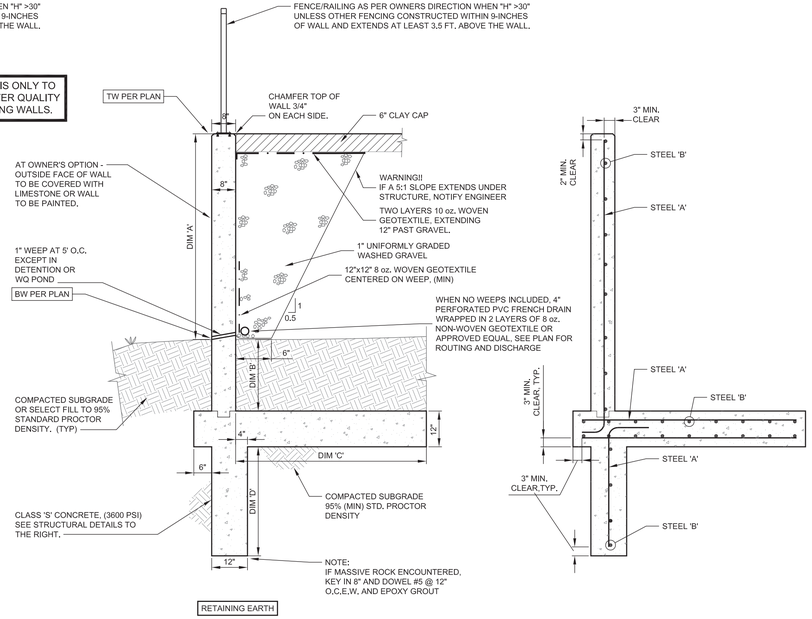
2022-27-SWP

NOTE: WALL DESIGN PROVIDED AS A COURTESY. AT OWNER'S OPTION, ANOTHER WALL DESIGN IS PERMISSIBLE SO LONG AS ANY WALL RETAINING WATER IS WATER TIGHT AND SO LONG AS, IF REQUIRED, THE WALL IS DESIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER.



RETAINING WATER

NOTE: THIS WALL IS ONLY TO BE USED FOR WATER QUALITY POND, NOT BUILDING WALLS.



RETAINING EARTH

USE DATA IN BOX. DIM A TO BE ACTUAL DIM ROUNDED UP TO THE NEXT WHOLE NUMBER.

Earth Only Loading (no water, weeps or french drain)

	W2-N	W2-L	W2-N	W2-L	
Dim A	2.00	2.00	2.00	2.00	Exposed Ht
Dim B	0.00	0.00	3.00	3.00	Burial
Dim C	2.83	2.83	2.83	2.83	Heal
Dim D	0.50	1.25	0.50	1.25	Key
Steel A	------ #4 @12" OC ------				Vertial Steel
Steel B	------ #4 @12" OC ------				Horizontal Steel
	2	4	2	4	Maximum non-countered height of soil or water (ft)
	1.9	1.5	2.0	1.8	Factor of safety, sliding
	13.1	5.6	3.7	2.3	Factor of safety, overturning
	434	801	1129	1955	Maximum Bearing Pressure (psi)

	W3-N	W3-L	W3-N	W3-L	
Dim A	3.00	3.00	3.00	3.00	Exposed Ht
Dim B	0.00	0.00	3.00	3.00	Burial
Dim C	3.83	3.83	3.83	3.83	Heal
Dim D	0.50	1.33	0.50	1.33	Key
Steel A	------ #4 @12" OC ------				Vertial Steel
Steel B	------ #4 @12" OC ------				Horizontal Steel
	3	5	3	5	Maximum non-countered height of soil or water (ft)
	1.8	1.5	1.9	1.7	Factor of safety, sliding
	13.3	6.3	4.5	2.9	Factor of safety, overturning
	573	965	1294	2036	Maximum Bearing Pressure (psi)

	W4-N	W4-L	W4-N	W4-L	
Dim A	4.00	4.00	4.00	4.00	Exposed Ht
Dim B	0.00	0.00	3.00	3.00	Burial
Dim C	4.83	4.83	4.83	4.83	Heal
Dim D	0.50	1.50	0.50	1.50	Key
Steel A	------ #4 @12" OC ------				Vertial Steel
Steel B	------ #4 @12" OC ------				Horizontal Steel
	4	6	4	6	Maximum non-countered height of soil or water (ft)
	1.8	1.5	1.6	1.6	Factor of safety, sliding
	12.9	6.7	4.8	3.3	Factor of safety, overturning
	719	1139	1479	2177	Maximum Bearing Pressure (psi)

	W5-N	W5-L	W5-N	W5-L	
Dim A	5.00	5.00	5.00	5.00	Exposed Ht
Dim B	0.00	0.00	3.00	3.00	Burial
Dim C	5.83	5.83	5.83	5.83	Heal
Dim D	0.50	1.75	0.50	1.75	Key
Steel A	------ #5 @12" OC ------				Vertial Steel
Steel B	------ #4 @12" OC ------				Horizontal Steel
	5	7	5	7	Maximum non-countered height of soil or water (ft)
	1.7	1.6	1.6	1.6	Factor of safety, sliding
	12.4	7.0	5.4	3.7	Factor of safety, overturning
	870	1316	1648	2323	Maximum Bearing Pressure (psi)

	W6-N	W6-L	W6-N	W6-L	
Dim A	6.00	6.00	6.00	6.00	Exposed Ht
Dim B	0.00	0.00	3.00	3.00	Burial
Dim C	6.83	6.83	6.83	6.83	Heal
Dim D	0.50	2.00	0.50	2.00	Key
Steel A	------ #5 @12" OC ------				Vertial Steel
Steel B	------ #4 @12" OC ------				Horizontal Steel
	6	8	6	8	Maximum non-countered height of soil or water (ft)
	1.7	1.6	1.6	1.6	Factor of safety, sliding
	11.9	7.2	5.8	4.1	Factor of safety, overturning
	1024	1491	1815	2476	Maximum Bearing Pressure (psi)

Water Loading (no earth other than burial)

	W2-W	W2-W	
Dim A	2.00	2.00	Exposed Ht
Dim B	0.00	3.00	Burial
Dim C	2.83	2.83	Heal
Dim D	0.50	0.50	Key
Steel A -- #4 @12" OC --			Vertical Steel
Steel B -- #4 @12" OC --			Horizontal Steel
	2	2	Maximum non-countered height of soil or water (ft)
	1.5	1.6	Factor of safety, sliding
	7.9	2.5	Factor of safety, overturning
	350	797	Maximum Bearing Pressure (psi)

	W3-W	W3-W	
Dim A	3.00	3.00	Exposed Ht
Dim B	0.00	3.00	Burial
Dim C	3.83	3.83	Heal
Dim D	1.25	1.25	Key
Steel A -- #4 @12" OC --			Vertical Steel
Steel B -- #4 @12" OC --			Horizontal Steel
	3	3	Maximum non-countered height of soil or water (ft)
	1.6	1.7	Factor of safety, sliding
	6.5	2.8	Factor of safety, overturning
	487	893	Maximum Bearing Pressure (psi)

	W4-W	W4-W	
Dim A	4.00	4.00	Exposed Ht
Dim B	0.00	3.00	Burial
Dim C	4.83	4.83	Heal
Dim D	1.75	1.75	Key
Steel A -- #4 @12" OC --			Vertical Steel
Steel B -- #4 @12" OC --			Horizontal Steel
	4	4	Maximum non-countered height of soil or water (ft)
	1.6	1.7	Factor of safety, sliding
	5.6	3.0	Factor of safety, overturning
	582	955	Maximum Bearing Pressure (psi)

	W5-W	W5-W	
Dim A	5.00	5.00	Exposed Ht
Dim B	0.00	3.00	Burial
Dim C	5.83	5.83	Heal
Dim D	2.50	2.50	Key
Steel A -- #5 @12" OC --			Vertical Steel
Steel B -- #4 @12" OC --			Horizontal Steel
	5	5	Maximum non-countered height of soil or water (ft)
	1.6	1.7	Factor of safety, sliding
	5.1	3.2	Factor of safety, overturning
	688	1039	Maximum Bearing Pressure (psi)

	W6-W W6-W		
Dim A	6.00	6.00	Exposed Ht
Dim B	0.00	3.00	Burial
Dim C	6.83	6.83	Heal
Dim D	3.00	3.00	Key
Steel A -- #5 @12" OC --			Vertical Steel
Steel B -- #4 @12" OC --			Horizontal Steel
	6	6	Maximum non-countered height of soil or water (ft)
	1.5	1.7	Factor of safety, sliding
	4.8	3.2	Factor of safety, overturning
	767	1133	Maximum Bearing Pressure (psi)

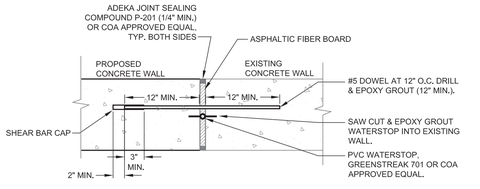
Coefficients, Wts, and Strenghts used in Calculations

120 Unit weight of soil, pcf (us) (note 5)	0.25 Friction Coeficient (F) (see note 3)	3600 Concrete Strength (psi)
0.35 Active Earth Pressure Coef (Ka)-Soil	0 Soil Cohesion, psf (c) [for sliding]	60 Rebar Strength (ksi)
150 Passive Earth Pressure (Pp), lbs/ft below grade (note 3)	2000 Allowable Bearing Pressure, psf (Pba) (note 4)	

WARNING!!! SEE CONCRETE NOTES ON THIS SHEET FOR OTHER INFORMATION SUCH AS REQUIRED JOINTS.

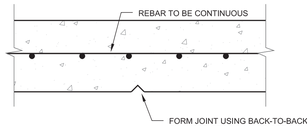
1 CONCRETE RETAINING WALL

SCALE: 1" = 2'



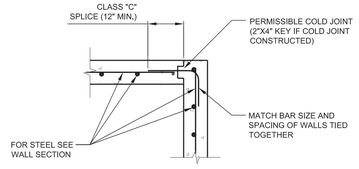
2 CONCRETE WALL EXPANSION JOINT WITH WATERSTOP

SCALE: N.T.S.



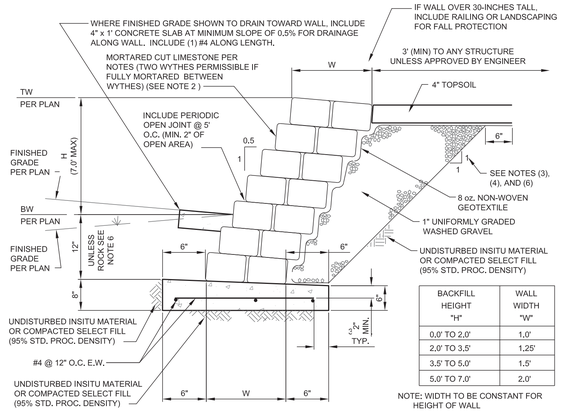
3 WALL CRACK CONTROL JOINT DETAIL

SCALE: N.T.S.



4 BAR SPLICE @ CORNER

SCALE: 1" = 2' (8 INCH WALL SHOWN)



BACKFILL HEIGHT "H"	WALL WIDTH "W"
0.0' TO 2.0'	1.0'
2.0' TO 3.5'	1.25'
3.5' TO 5.0'	1.5'
5.0' TO 7.0'	2.0'

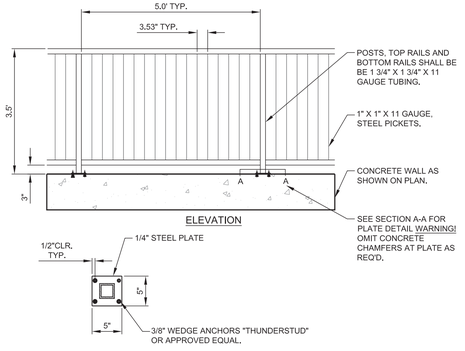
NOTE: WIDTH TO BE CONSTANT FOR HEIGHT OF WALL

NOTES:

1) DESIGN BASED ON 3000 PSF BEARING PRESSURE, 0.5 ACTIVE EARTH COEFFICIENT, PASSIVE EARTH PRESSURE COEFFICIENT OF 2.0, AND 0.35 COEFFICIENT OF FRICTION. FACTOR OF SAFETY FOR SLIDING, OVERTURNING AND BEARING IS GENERALLY 1.5 OR BETTER.
2) ROCKS TO BE LIMESTONE WITH A MINIMUM DENSITY OF 160 PCF. ALL ROCKS SHALL WEIGH A MINIMUM OF 50 POUNDS. THE ROCKS SHALL BE PLACED IN LAYERS WITH CLOSE JOINTS. THE VERTICAL AXIS OF THE ROCKS SHALL BE APPROXIMATELY PLUM EXCEPT AS BATTERED. ROCKS OF GREATER DIMENSION THAN THE REQUIRED WALL THICKNESS SHALL BE EMBEDDED IN THE EMBANKMENT TO PRESENT A UNIFORM FINISHED FACE AND TOP SURFACE SUCH THAT THE VARIATION BETWEEN ADJACENT ROCKS SHALL NOT EXCEED 2 INCHES.
3) 1:1 CAN BE 0:1 IF SOLID MASSIVE ROCK AND FACE OF ROCK IS ENCOUNTERED AT LEAST 1 FOOT FROM BACK OF WALL STONE.
4) IF SLOPE WILL EXTEND UNDER A STRUCTURE, REVISE TO VERTICAL WITHIN 6" OF STRUCTURE.
5) IF MASSIVE ROCK THAT IS 18" OR THICKER IS ENCOUNTERED, FOOTING ALONE MAY BE CAST INTO ROCK (8" KEY MIN.) AND STONE AND ADDITIONAL BURIAL DEPTH OMITTED, TWO #4 REBAR x 12" SHALL BE DOWELED AND EPOXY GROUTED INTO ROCK (ONE AT FRONT OF FOOTING AND ONE AT REAR) FOR ADDITIONAL ANCHORAGE, SPACING TO BE 24" O.C. FOR LENGTH OF WALL.
6) IF MASSIVE ROCK ENCOUNTERED FOR 75 PERCENT OF WALL HEIGHT, WALL CAN POSSIBLY BE ELIMINATED IN LIEU OF EXPOSED EXCAVATION. ENGINEERS APPROVAL REQUIRED. CONTACT ENGINEER.

5 TYPICAL MORTARED ROCK RETAINING WALL SECTION

SCALE: N.T.S.



RAILING NOTES:

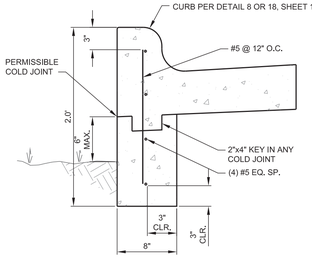
1. ALL STEEL SHALL BE HOT-DIPPED GALVANIZED AND PAINTED (COLOR PER OWNER) IN ACCORDANCE WITH ITEM 722 OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS.
2. ALL PARTS SHALL BE WELDED ALL AROUND USING EITHER A FILLET OR BUTT-WELD. THE WELDS SHALL BE FULLY-PENETRATING. WELDING SHALL CONFORM TO ITEM 723 OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS AND BE SUCH THAT THE FULL STRENGTH OF THE TUBING IS OBTAINED IN THE JOINT.
3. RAIL SHALL BE FABRICATED IN ACCORDANCE WITH ITEM 721 OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS.

6 TYPICAL PEDESTRIAN RAIL DETAIL

SCALE: 1" = 2'

TLE GENERAL CONCRETE NOTES:

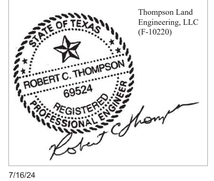
1) ALL CONCRETE, REINFORCING, AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE LATEST ACI CODES AND IBC INCLUDING LAPS, SPLICES, TERMINATIONS, BAR SUPPORTS, AND CONCRETE COVER.
2) UNLESS OTHERWISE SPECIFIED, BARS SHALL BE DEFORMED GRADE 60.
3) UNLESS OTHERWISE SPECIFIED, ALL CONCRETE FOR FLAT WORK, CURBS, AND WALLS 3 FEET IN HEIGHT OR LESS SHALL CONFORM TO CITY OF AUSTIN CLASS A (3000 psi) AND ALL CONCRETE FOR WALLS GREATER THAN 3 FEET IN HEIGHT, AND OTHER VERTICAL STRUCTURES, SHALL CONFORM TO CITY OF AUSTIN CLASS S (4000 psi).
4) UNLESS OTHERWISE SPECIFIED, ALL DOWELS SHALL BE OF THE SAME SIZE AND SPACING AS THE REINFORCEMENT TO WHICH THE DOWEL IS TO BE SPLICED. DOWELS SHALL BE FIRMLY SET PRIOR TO PLACING THE CONCRETE; DOWELS SHALL NOT BE INSERTED INTO FRESH CONCRETE.
5) UNLESS OTHERWISE SPECIFIED, ALL EXPOSED WALL EDGES ARE TO RECEIVE 3/4" CHAMFER.
6) UNLESS OTHERWISE SPECIFIED, ALL EXPOSED VERTICAL SURFACES TO RECEIVE A RUBBED FINISH AND ALL EXPOSED FLAT WORK SURFACES TO RECEIVE A BROOM FINISH.
7) UNLESS OTHERWISE SPECIFIED OR SHOWN, EXPANSION JOINTS AND CONTROL JOINTS SHOULD BE LAID OUT SO THAT NO SECTION OF CONCRETE HAS A CORNER WITH AN ANGLE LESS THAN 60 DEGREES. ANY JOINT FORMING A CORNER WITH AN ANGLE OF LESS THAN 60 DEGREES SHOULD BE REALIGNED TO INCLUDE A STRAIGHT SECTION AT 90 DEGREES THAT IS AT LEAST 6 INCHES IN LENGTH
8) UNLESS OTHERWISE SPECIFIED, CONTROL JOINTS IN CONCRETE FLAT WORK SHALL BE FORMED WITH A TROWEL, 3/4" DEEP, 5 FEET ON CENTER, AND ROUNDED. UNLESS OTHERWISE SPECIFIED, CONTROL JOINTS IN VERTICAL CONCRETE SHALL BE FORMED WITH 3/4" CHAMFER STRIPS AND SHALL BE SPACED NO FURTHER APART THAN 25 FEET ON CENTER.
9) UNLESS OTHERWISE SPECIFIED, EXPANSION JOINTS SHALL BE INCLUDED IN ALL CONCRETE FLAT WORK AT A MAXIMUM SPACING OF 25 FEET ON CENTER AND SHALL BE INCLUDED IN ALL CONCRETE WALLS AT A MAXIMUM SPACING OF 20 FEET ON CENTER. JOINTS SHALL BE 3/4-INCH WIDE AND FILLED WITH ASPHALTIC FIBER BOARD. EXPANSION JOINTS IN WALLS RETAINING WATER SHALL INCLUDE A CONTINUOUS WATER STOP EXTENDING DOWN TO THE FOOTING. DOWELS SHALL BE INCLUDED IN ALL EXPANSION JOINTS THAT ARE AT LEAST OF THE SAME SIZE AND SPACING AS THE REINFORCING



NOTE: DESIGN BASED ON 20' UNSUPPORTED LENGTH SUBJECT TO A SINGLE 1000 LB. LATERAL POINT LOAD (8500 LBS. DECELERATING FROM 5 MPH IN ONE SECOND).

7 CURB EXTENSION WALL DETAIL

SCALE: N.T.S.



Thompson Land Engineering, LLC (F-10220)

7/16/24

2022-27-SWP

THOMPSON LAND ENGINEERING, LLC
Land Planning, Site Design, Subdivision Engineering
P.O. Box 160062, Austin, Texas 78716 (512-328-0002)
www.tleng.net email: ric@tleng.net
TBPE Reg. No. F-10220

REVISION | DATE

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME: WALL DETAILS

DATE ISSUED: July, 2024

DESIGNED BY	DRAFTED BY
RCT	JH/MR

JOB NUMBER: 1829

SHEET: 39 OF 60

GENERAL NOTES: VERSION: JUNE 13, 2024

ITEM	DESCRIPTION	**RATE
**204	**SPRINKLING**	
	(DUST)	30 GAL/CY
	(ITEM 132)	30 GAL/CY
	(ITEM 247)	30 GAL/CY
**210	**ROLLING (FLAT WHEEL)**	
	(ITEM 247)	1 HR/200 TON
	(ITEM 316)	1 HR/6000 SY
**210	**ROLLING (TAMPING AND HEAVY TAMPING)**	1 HR/200 CY
**210	**ROLLING (LT PNEUMATIC TIRE)**	
	(ITEM 132)	1 HR/500 CY
	(ITEM 247)	1 HR/200 TON
	(ITEM 316 - SEAL COAT)	1 HR/6000 SY
	(ITEM 316 - TWO COURSE)	1 HR/3000 SY
247	**FLEXIBLE BASE (CMP IN PLC)**	132 LB/CF
310	**PRIME COAT**	0.20 GAL/SY
314	**EMULSIFIED ASPHALT TREATMENT (SS-1 OR MS-2)**	0.30 GAL/SY
316	**UNDERSEALS ASPHALTS (MULTI OPTION)**	0.20 GAL/SY
	SURFACE TREATMENTS	
	SEAL COAT	
	GRADE 4	
	ASPHALT	0.38 GAL/SY
	AGGREGATE	1 CY/120 SY
	GRADE 5	
	ASPHALT	0.32 GAL/SY
	AGGREGATE	1 CY/150 SY
	TWO COURSE SURFACE TREATMENT	
	ASPHALT 1ST APPLICATION	0.28 GAL/SY
	ASPHALT 2ND APPLICATION	0.24 GAL/SY
	AGGREGATE 1ST APPLICATION GRADE 4	1 CY/110 SY
	AGGREGATE 2ND APPLICATION GRADE 4	1 CY/130 SY
341/3076, 344/3077	**DENSE-GRADED HOT-MIX ASPHALT AND SUPERPAVE**	110 LB/SY/IN
342/3079	**PERMEABLE FRICTION COURSE (PFC)**	90.0 LB/SY/IN
346/3080	**STONE-MATRIX ASPHALT**	113 LB/SY/IN
347/3081	**THIN OVERLAY MIXTURES (TOM)**	
	SAC B	113.0 LB/SY/IN
	SAC A	116.0LB/SY/IN
350	**MICROSURFACING**	25 LB/SY
3084	**BONDING COURSE**	0.09 GAL/SY
3085	**UNDERSEAL COURSE**	0.20 GAL/SY
	TACK COAT	0.08 GAL/SY

** FOR INFORMATIONAL PURPOSES ONLY

GENERAL
CONTRACTOR QUESTIONS AND REQUESTS FOR DOCUMENTS ON THIS PROJECT ARE TO BE ADDRESSED TO THE FOLLOWING INDIVIDUAL(S): JOHN.PETERS@TXDOT.GOV

QUESTIONS AND REQUESTS FOR DOCUMENTS WILL BE ACCEPTED VIA THE LETTING PRE-BID Q&A WEB PAGE. ALL QUESTIONS AND ANY CORRESPONDING RESPONSES THAT ARE GENERATED WILL BE POSTED THROUGH THE SAME LETTING PRE-BID Q&A WEB PAGE. THIS WEBPAGE CAN BE ACCESSED FROM THE NOTICE TO CONTRACTORS DASHBOARD LOCATED AT THE FOLLOWING ADDRESS:
HTTPS://TABLEAU.TXDOT.GOV/VIEWS/PROJECTINFORMATIONDASHBOARD/NOTICETOCONTRACTORS

THE LETTING PRE-BID Q&A WEB PAGE FOR EACH PROJECT CAN BE ACCESSED BY USING THE DASHBOARD TO NAVIGATE TO THE PROJECT YOU ARE INTERESTED IN BY SCROLLING OR FILTERING THE DASHBOARD USING THE CONTROLS ON THE LEFT. HOVER OVER THE BLUE HYPERLINK FOR THE PROJECT YOU WANT TO VIEW THE Q&A FOR AND CLICK ON THE LINK IN THE WINDOW THAT POPS UP.

REFERENCES TO MANUFACTURER'S TRADE NAME OR CATALOG NUMBERS ARE FOR THE PURPOSE OF IDENTIFICATION ONLY. SIMILAR MATERIALS FROM OTHER MANUFACTURERS ARE PERMITTED IF THEY ARE OF EQUAL QUALITY, COMPLY WITH THE SPECIFICATIONS FOR THIS PROJECT, AND ARE APPROVED.

IF WORK IS PERFORMED AT CONTRACTOR'S OPTION, WHEN INCLEMENT WEATHER IS IMPENDING, AND THE WORK IS DAMAGED BY SUBSEQUENT PRECIPITATION, THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH REPLACING THE WORK, IF REQUIRED.

THE ROADBED WILL BE FREE OF ORGANIC MATERIAL PRIOR TO PLACING ANY SECTION OF THE PAVEMENT STRUCTURE.

EQUIP ALL CONSTRUCTION EQUIPMENT USED IN ROADWAY WORK WITH HIGHLY VISIBLE OMNIDIRECTIONAL FLASHING WARNING LIGHTS.

INTELLIGENT TRANSPORTATION SYSTEMS (ITS) INFRASTRUCTURE MAY EXIST WITHIN THE LIMITS OF THIS PROJECT AND THAT THE SYSTEM MUST REMAIN OPERATIONAL THROUGHOUT CONSTRUCTION. THE EXACT LOCATION OF ITS INFRASTRUCTURE IS NOT KNOWN. CONTACT THE TXDOT AREA ENGINEER'S OR INSPECTION TEAM'S OFFICE FOR THE LOCATION(S) AT LEAST 72 HOURS BEFORE COMMENCING ANY WORK THAT MIGHT AFFECT PRESENT ITS INFRASTRUCTURE. IN THE EVENT OF SYSTEM DAMAGE, NOTIFY TXDOT/CTECC AT (512) 974-0883 WITHIN ONE HOUR OF OCCURRENCE. REFER TO ITEM 6000 FOR ADDITIONAL DETAILS.

PROVIDE A SMOOTH, CLEAN SAWCUT ALONG THE EXISTING ASPHALT OR CONCRETE PAVEMENT STRUCTURE, AS DIRECTED. CONSIDER SUBSIDIARY TO THE PERTINENT ITEMS.

CONSTRUCT ALL MANHOLES/VALVES TO FINAL PAVEMENT ELEVATIONS PRIOR TO THE PLACEMENT OF FINAL SURFACE. IF THE MANHOLES/VALVES ARE GOING TO BE EXPOSED TO TRAFFIC, PLACE TEMPORARY ASPHALT AROUND THE MANHOLE/VALVE TO PROVIDE A 50:1 TAPER. THE ASPHALT TAPER IS SUBSIDIARY TO THE ACP WORK.

KEEP THE ROADWAY FREE OF DEBRIS AND SEDIMENT CAUSED BY CONSTRUCTION ACTIVITIES. DISPOSE OF ALL MATERIAL IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. THIS WORK IS SUBSIDIARY.

DAMAGE TO EXISTING PIPES AND SET'S DUE TO CONTRACTOR OPERATIONS WILL BE REPAIRED AT CONTRACTOR'S EXPENSE.

ALL LOCATIONS USED FOR STORING CONSTRUCTION EQUIPMENT, MATERIALS, AND STOCKPILES OF ANY TYPE, WITHIN THE RIGHT OF WAY, WILL BE AS DIRECTED. USE OF RIGHT OF WAY FOR THESE PURPOSES WILL BE RESTRICTED TO THOSE LOCATIONS WHERE DRIVER SIGHT DISTANCE TO BUSINESSES AND SIDE STREET INTERSECTIONS IS NOT OBSTRUCTED AND AT OTHER LOCATIONS WHERE AN UNSIGHTLY APPEARANCE WILL NOT EXIST. THE CONTRACTOR WILL NOT HAVE EXCLUSIVE USE OF RIGHT OF WAY BUT WILL COOPERATE IN THE USE OF THE RIGHT OF WAY WITH THE CITY/COUNTY AND VARIOUS PUBLIC UTILITY COMPANIES AS REQUIRED.

DURING EVACUATION PERIODS FOR HURRICANE EVENTS THE CONTRACTOR WILL COOPERATE WITH DEPARTMENT FOR THE RESTRICTING OF LANE CLOSURES AND ARRANGING FOR TRAFFIC CONTROL TO FACILITATE COASTAL EVACUATION EFFORTS.

ITEM 5 – CONTROL OF THE WORK
PLACE CONSTRUCTION STAKES AT INTERVALS OF NO MORE THAN 100 FT. THIS WORK IS SUBSIDIARY.

PRECAST ALTERNATE PROPOSALS.
WHEN A PRECAST OR CAST-IN-PLACE CONCRETE ELEMENT IS INCLUDED IN THE PLANS, A PRECAST CONCRETE ALTERNATE MAY BE SUBMITTED IN ACCORDANCE WITH "STANDARD OPERATING PROCEDURE FOR ALTERNATE PRECAST PROPOSAL SUBMISSION" FOUND ONLINE AT ALTERNATE PRECAST PROPOSAL SUBMISSION (TXDOT.GOV). ACCEPTANCE OR DENIAL OF AN ALTERNATE IS AT THE SOLE DISCRETION OF THE ENGINEER. IMPACTS TO THE PROJECT SCHEDULE AND ANY ADDITIONAL COSTS RESULTING FROM THE USE OF ALTERNATES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

THERMOPLASTIC PIPE ALTERNATE PROPOSALS
WHEN A REINFORCED CONCRETE OR CORRUGATED METAL PIPE IS INCLUDED IN THE PLANS, A THERMOPLASTIC POLYPROPYLENE PIPE ALTERNATE MAY BE SUBMITTED IN A 2-PHASE PROCESS. ACCEPTANCE OR DENIAL OF AN ALTERNATE IS AT THE SOLE DISCRETION OF THE ENGINEER. IMPACTS TO THE PROJECT SCHEDULE AND ANY ADDITIONAL COSTS RESULTING FROM THE USE OF ALTERNATES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

ELECTRONIC SHOP DRAWING SUBMITTALS.
SUBMIT ELECTRONIC SHOP DRAWING SUBMITTALS ACCORDING TO THE CURRENT GUIDE TO ELECTRONIC SHOP DRAWING SUBMITTAL WHICH CAN BE FOUND ONLINE AT, HTTPS://WWW.TXDOT.GOV/BUSINESS/RESOURCES/HIGHWAY/BRIDGE/SHOP-DRAWING-SUBMITTAL-CYCLE.HTML.

PRE-APPROVED PRODUCERS CAN BE FOUND ONLINE AT, HTTPS://WWW.TXDOT.GOV/BUSINESS/RESOURCES/MATERIALS/MATERIAL-PRODUCER-LIST.HTML.

USE THE FOLLOWING CONTACT LIST FOR ALL SUBMITTALS THAT ARE NOT REQUIRED TO BE SENT TO BRIDGE DIVISION AND TO COPY THE ENGINEER FOR ALL SUBMITTALS TO THE BRIDGE DIVISION.

SUBMITTAL CONTACT LIST		
GEORGETOWN	JASON.HUDSON@TXDOT.GOV	AUS_GE-SHOPREVIEW@TXDOT.GOV

ALIGNMENT AND PROFILE.
UNLESS SHOWN IN THE PLANS, PROFILE AND ALIGNMENT DATA FOR ROADWAYS BEING OVERLAID OR WIDENED ARE FOR DESIGN VERIFICATION ONLY. PROVIDE SURVEY AND CONSTRUCT THE ROADWAY IN ACCORDANCE WITH THE TYPICAL SECTION. BID ITEMS AND DATA MAY BE PROVIDED TO ADJUST CROSS SLOPE AND SUPER ELEVATIONS.

ITEM 6 - CONTROL OF MATERIALS
GIVE A MINIMUM OF 1 BUSINESS DAY NOTICE FOR MATERIALS, WHICH REQUIRE INSPECTION AT THE PLANT.

STORAGE OF MATERIAL NEAR STRUCTURES
DO NOT STORE EQUIPMENT OR FLAMMABLE MATERIAL WITHIN 100 FT. OF BRIDGES, CULVERTS, OR NEAR THEIR OPENINGS (PORTALS). FLAMMABLE MATERIALS INCLUDE ALL MATERIAL THAT IS NOT METAL OR ALUMINUM.

PERFORM MAINTENANCE OF VEHICLES OR EQUIPMENT AT DESIGNATED MAINTENANCE SITES. KEEP A SPILL KIT ON-SITE DURING FUELING AND MAINTENANCE. THIS WORK IS SUBSIDIARY.

MAINTAIN POSITIVE DRAINAGE FOR PERMANENT AND TEMPORARY WORK FOR THE DURATION OF THE PROJECT. BE RESPONSIBLE FOR ANY ITEMS ASSOCIATED WITH THE TEMPORARY OR INTERIM DRAINAGE AND ALL RELATED MAINTENANCE. THIS WORK IS SUBSIDIARY.

SUSPEND ALL ACTIVITIES NEAR ANY SIGNIFICANT RECHARGE FEATURES, SUCH AS SINKHOLES, CAVES, OR ANY OTHER SUBTERRANEAN OPENINGS THAT ARE DISCOVERED DURING CONSTRUCTION OR CORE SAMPLING. DO NOT PROCEED UNTIL THE DESIGNATED GEOLOGIST OR TCEQ REPRESENTATIVE IS PRESENT TO EVALUATE AND APPROVE REMEDIAL ACTION.

LOCATE ABOVEGROUND STORAGE TANKS KEPT ON-SITE FOR CONSTRUCTION PURPOSES IN A CONTAINED AREA AS TO NOT ALLOW ANY EXPOSURE TO SOILS. THE CONTAINMENT WILL BE SIZED TO CAPTURE 150% OF THE TOTAL CAPACITY OF THE STORAGE TANKS.

PSL IN EDWARDS AQUIFER RECHARGE AND CONTRIBUTING ZONE.
OBTAIN WRITTEN APPROVAL FROM THE ENGINEER FOR ALL ON OR OFF RIGHT OF WAY PSLS NOT SPECIFICALLY ADDRESSED IN THE PLANS. PROVIDE A SIGNED SKETCH OF THE LOCATION 30 BUSINESS DAYS PRIOR TO USE OF THE PSL. INCLUDE A LIST OF MATERIALS, EQUIPMENT AND PORTABLE FACILITIES THAT WILL BE STORED AT THE PSL. TXDOT WILL COORDINATE WITH THE NECESSARY AGENCIES. APPROVAL OF THE PSL IS NOT GUARANTEED. UN APPROVED PSL IS NOT A COMPENSABLE IMPACT.

MIGRATORY BIRDS AND BATS.
MIGRATORY BIRDS AND BATS MAY BE NESTING WITHIN THE PROJECT LIMITS AND CONCENTRATED ON ROADWAY STRUCTURES SUCH AS BRIDGES AND CULVERTS. REMOVE ALL OLD AND UNOCCUPIED MIGRATORY BIRD NESTS FROM ANY STRUCTURES, TREES, ETC. BETWEEN SEPTEMBER 16 AND FEBRUARY 28. PREVENT MIGRATORY BIRDS FROM RE-NESTING BETWEEN MARCH 1 AND SEPTEMBER 15. PREVENTION SHALL INCLUDE ALL AREAS WITHIN 25 FT. OF PROPOSED WORK. ALL METHODS USED FOR THE REMOVAL OF OLD NESTING AREAS AND THE PREVENTION OF RE-NESTING MUST BE SUBMITTED TO TXDOT 30 BUSINESS DAYS PRIOR TO BEGIN WORK. THIS WORK IS SUBSIDIARY.

IF ACTIVE NESTS ARE ENCOUNTERED ON-SITE DURING CONSTRUCTION, ALL CONSTRUCTION ACTIVITY WITHIN 25 FT. OF THE NEST MUST STOP. CONTACT THE ENGINEER TO DETERMINE HOW TO PROCEED.

TREE AND BRUSH TRIMMING AND REMOVAL.
WORK WILL BE CONDUCTED SEPTEMBER 16 THRU FEBRUARY 28. WORK CONDUCTED OUTSIDE THIS TIMEFRAME WILL REQUIRE A BIRD SURVEY. SUBMIT A SURVEY REQUEST TO TXDOT 30 BUSINESS DAYS PRIOR TO BEGIN WORK.

IF WITHIN THE REMOVAL TIME PERIOD, REMOVAL WORK MAY BE CONDUCTED DURING DELAYED START PERIOD USING PROPER TRAFFIC CONTROL PER TCP STANDARDS.

CONT'D
UPON BEGIN REMOVAL OPERATIONS, ALL REMOVAL WORK FOR THE PROJECT MUST BE COMPLETED WITHIN 21 CALENDAR DAYS. COMPLETION OF REMOVAL INCLUDES REMOVING FROM ROW OR MULCHING OF ALL DEBRIS.

NO EXTENSION OF TIME OR COMPENSATION WILL BE GRANTED FOR A DELAY OR SUSPENSION DUE TO THE ABOVE BIRD, BAT, AND TREE/BRUSH REQUIREMENTS.

LANE CLOSURE ASSESSMENT FEE.
THE MONTHLY ESTIMATE WILL BE DEDUCTED A FEE PER 15-MINUTE INTERVAL ACCORDING TO THE FOLLOWING SCHEDULE FOR EACH CLOSURE OR OBSTRUCTION THAT EXTENDS BEYOND THE ALLOWABLE CLOSURE TIME. FEE WILL BE BASED ON ANNUAL AVERAGE DAILY TRAFFIC (AADT) OF THE ROADWAY. USE AADT INFORMATION AS SHOWN ON THE PLANS. IF AADT IS NOT FOUND ON THE PLANS PLEASE USE TXDOT – STATEWIDE PLANNING MAP TXDOT - STATEWIDE PLANNING MAP. IF THE ROADWAY HAS A PEAK DIRECTION OF TRAFFIC, THE ENGINEER MAY REDUCE THE FEE BY 25 PERCENT FOR OFF-PEAK DIRECTION OF TRAFFIC FOR UP TO 30 MINUTES.

AADT		LANE CLOSURE ASSESSMENT FEE (PER LANE PER 15 MINUTES)
MORE THAN	TO AND INCLUDING	
0	10000	$150.00
10000	20000	$300.00
20000	40000	$600.00
40000	60000	$900.00
60000	80000	$1,200.00
80000	100000	$1,500.00
100000		$1,800.00
ALL OF IH 35 MAINLANES		$2,000.00

ITEM 100 - PREPARING RIGHT OF WAY
PREP ROW MUST NOT BEGIN UNTIL ACCESSIBLE TREES DESIGNATED FOR PRESERVATION HAVE BEEN PROTECTED, ITEMS LISTED IN THE EPIC HAVE BEEN ADDRESSED, AND SW3P CONTROLS INSTALLED IN ACCESSIBLE AREAS.

BACKFILL MATERIAL WILL BE TYPE B EMBANKMENT USING ORDINARY COMPACTION.

FOLLOW ITEM 752.4 WORK METHODS AND ITEM 752 GENERAL NOTES WHEN REMOVING OR WORKING ON OR NEAR TREES AND BRUSH.

UNLESS SHOWN OTHERWISE IN THE PLANS OR A DESIGNATED NON-MOW AREA, PERFORM TRIMMING OR REMOVAL FOR AREAS WITHIN 30 FT. OF EDGE OF PAVEMENT UNDER CONSTRUCTION. TRIM OR REMOVE TO PROVIDE MINIMUM OF 5 FT. OF HORIZONTAL CLEARANCE AND 7 FT. OF VERTICAL CLEARANCE FOR THE FOLLOWING: SIDEWALKS, PATHS, GUARD FENCE, RAILS, SIGNS, OBJECT MARKERS, AND STRUCTURES. TRIM TO PROVIDE A MINIMUM OF 14 FT. VERTICAL CLEARANCE UNDER ALL TREES. THIS WORK IS SUBSIDIARY.

ITEM 105 – REMOVING TREATED AND UNTREATED BASE AND ASPHALT PAVEMENT
EXISTING TYPICAL IS BASED ON INFORMATION AVAILABLE. THIS TYPICAL MAY NOT ACCOUNT FOR ALL MAINTENANCE WORK SUCH AS OVERLAYS OR PAVEMENT REPAIRS. A CHANGE IN MATERIAL TYPE OR THICKNESS DOES NOT WARRANT ADDITIONAL PAYMENT. PAYMENT IS FULL COMPENSATION FOR REMOVING ALL MATERIAL TO THE DEPTH SPECIFIED.

ITEM 134 - BACKFILLING PAVEMENT EDGES
IF SEAL COAT IS FINAL SURFACE, INSTALL BACKFILL PRIOR TO PLACING SEAL COAT.

INSTALL AT 3:1 SLOPE TO TIE INTO EXISTING TERRAIN AND APPLY EROSION CONTROL MATERIAL PER ITEM 300 AT RATE OF 0.12 GAL/SY.

FOR TY A BACKFILL, FURNISH FLEXIBLE BASE MEETING THE REQUIREMENT FOR ANY TYPE OR GRADE, EXCEPT GRADE 4, IN ACCORDANCE WITH ITEM 247. COMPRESSIVE STRENGTHS AND WET BALL MILL FOR FLEXIBLE BASE ARE WAIVED FOR THIS ITEM. ALTERNATE MATERIALS INCLUDE RAP, SALVAGED MATERIAL FROM ITEM 105, AND SALVAGED MATERIAL FROM ITEM 351. THE ALTERNATE MATERIALS ARE NOT REQUIRED TO BE TESTED BUT VISUALLY VERIFIED AS 100% PASSING A 2.5 IN. SIEVE.

ITEM 160 - TOPSOIL
OFF-SITE TOPSOIL WILL HAVE A MINIMUM PI OF 25.

NO SANDY LOAM ALLOWED.

OBTAIN APPROVAL OF THE ACTUAL DEPTH OF THE TOPSOIL SOURCES FOR BOTH ON-SITE AND OFF-SITE SOURCES.

CONSTRUCT TOPSOIL STOCKPILES OF NO MORE THAN FIVE (5) FEET IN HEIGHT.

IT IS PERMISSIBLE TO USE TOPSOIL DIKES FOR EROSION CONTROL BERMS WITHIN THE RIGHT OF WAY, AS DIRECTED.

SEED OR TRACK SLOPES WITHIN 14 DAYS OF PLACEMENT.

SALVAGE TOPSOIL FROM SITES OF EXCAVATION AND EMBANKMENT. MAXIMUM SALVAGE DEPTH IS 6 INCHES.

WINDROWING OF TOPSOIL OBTAINED FROM THE RIGHT OF WAY (ROW) IS NOT ALLOWED.

ITEM 164 – SEEDING FOR EROSION CONTROL
HYDRO MULCH SEEDING WILL BE ALLOWED AS A SUBSTITUTE FOR DRILL SEEDING IF PLACED OCTOBER 1 THRU JANUARY 31. IT MAY ONLY BE SUBSTITUTED IN AREAS WITH A SLOPE LESS THAN 1 IN. VERTICAL TO 12 IN. HORIZONTAL. IT MAY NOT BE USED IN THE BOTTOM OF A DITCH OR CHANNEL. PAYMENT WILL BE MADE USING THE EXISTING DRILL SEED ITEM.

ITEM 168 – VEGETATIVE WATERING
WATER ALL AREAS OF PROJECT TO BE SEEDED OR SODDED.

MAINTAIN THE SEEDBED IN A CONDITION FAVORABLE FOR THE GROWTH OF GRASS. WATERING CAN BE POSTPONED IMMEDIATELY AFTER A RAINFALL ON THE SITE OF ½ INCH OR GREATER, BUT WILL BE RESUMED BEFORE THE SOIL DRIES OUT. CONTINUE WATERING UNTIL FINAL ACCEPTANCE.

VEGETATIVE WATERING RATES AND QUANTITIES ARE BASED ON ¼ INCH OF WATERING PER WEEK OVER A
3-MONTH WATERING CYCLE. THE ACTUAL RATES USED AND PAID FOR WILL BE AS DIRECTED AND WILL BE BASED ON PREVAILING WEATHER CONDITIONS TO MAINTAIN THE SEEDBED.

OBTAIN WATER AT A SOURCE THAT IS METERED (FURNISH A CURRENT CERTIFICATION OF THE METER BEING USED) OR FURNISH THE MANUFACTURER'S SPECIFICATIONS SHOWING THE TANK CAPACITY FOR EACH TRUCK USED. NOTIFY THE ENGINEER, EACH DAY THAT WATERING TAKES PLACE, BEFORE WATERING, SO THAT METER READINGS OR TRUCK COUNTS CAN BE VERIFIED.

ITEM 169 – SOIL RETENTION BLANKETS
TYPE A BLANKETS CONTAINING STRAW FIBERS ARE NOT ALLOWED. TYPE B AND D BLANKETS SHALL BE A SPRAY TYPE BLANKET.

ITEM 204 – SPRINKLING
APPLY DUST CONTROL TO HAUL ROADS, CONSTRUCTION TRAFFIC ROUTES, STAGING AREAS, FIELD OFFICE AREAS, MATERIAL STORAGE AREAS, PARKING AREAS, AND STOCKPILES AS DIRECTED. IF DUST CONTROL IS NOT BEING MAINTAINED, THE DEPARTMENT MAY CEASE OPERATIONS UNTIL DUST IS CONTROLLED. THIS WORK IS SUBSIDIARY.

ITEM 216 - PROOF ROLLING
CORRECT AND PERFORM "PROOF ROLLING" RETEST AT THE CONTRACTOR'S EXPENSE, TO THE SATISFACTION OF THE ENGINEER, WHEN INITIAL "PROOF ROLLING" YIELDS A FAILING RESULT.

ITEM 247 - FLEXIBLE BASE
THE LAYER THICKNESS WILL BE 4 IN. TO 6 IN. UNLESS SHOWN ON THE PLANS. PLACING IN A SINGLE LAYER IS ALLOWED WHEN TOTAL THICKNESS OF BASE IS 8 IN. OR LESS. WHEN PLACED IN MULTIPLE LAYERS, COMPACT THE BOTTOM AND MIDDLE LAYERS TO AT LEAST 95% AND 98% OF THE MAXIMUM DRY DENSITY, RESPECTIVELY. WHEN PLACED IN A SINGLE LAYER OR THE FINAL LAYER, COMPACT TO AT LEAST 100%.

CORRECTION OF SUBGRADE SOFT SPOTS IS SUBSIDIARY.

COMPLETE PER PLANS THE SUBGRADE, DITCHES, SLOPES, AND DRAINAGE STRUCTURES PRIOR TO THE PLACEMENT OF BASE.

DO NOT USE A VIBRATORY ROLLER TO COMPACT BASE PLACED DIRECTLY ON TOP OF A DRAINAGE STRUCTURE.

GRADE 4 WILL HAVE THE SAME MATERIAL REQUIREMENTS AS GRADE 5 EXCEPT MINIMUM COMPRESSIVE STRENGTH AT LATERAL PRESSURE 3 PSI WILL BE 70 PSI AND AT LATERAL PRESSURE 15 PSI WILL BE 150 PSI. GRADE 4 DOES NOT HAVE A MINIMUM COMPRESSIVE STRENGTH AT LATERAL PRESSURE 0 PSI.

ITEMS 260 THRU 276 – SUBGRADE TREATMENTS AND BASE
USE ORDINARY COMPACTION FOR SUBGRADE TREATMENT.

PROVIDE SOIL AND BASE SAMPLES 5 BUSINESS DAYS PRIOR TO PERFORM TREATMENT WORK TO ALLOW TIME TO TEST SOIL AND CONFIRM TREATMENT RATE.

ITEM 300S – SURFACE COURSES AND PAVEMENTS
FOR SEAL COAT APPLICATIONS: ASPHALT CEMENTS, CUTBACK, PERFORMANCE-GRADED ASPHALT SEASON IS MAY 1 THRU SEPTEMBER 15. EMULSIFIED ASPHALT SEASON IS APRIL 1 THRU OCTOBER 15.

THE LATEST WORK START DATE FOR ASPHALT SEASON IS AUGUST 1 WHEN A DATE IS REQUIRED PER SPECIAL PROVISION TO ITEM 8.1.

OVERLAY AND SEAL COAT PROJECTS MUST INCLUDE PLACEMENT OF SURFACE MATERIAL ON THE EXISTING MAILBOX TURNOUTS, INCLUDING TURNOUTS THAT ARE WORN PATHS WITHOUT A PAVEMENT STRUCTURE. APPLY A NEW SURFACE AND MATERIAL AS NECESSARY TO CREATE A MAILBOX TURNOUT WITH A CROSS SLOPE THAT MATCHES THE ADJACENT PAVEMENT. PAYMENT OF WORK WILL BE IN ACCORDANCE WITH THE ITEM FOR THE TYPE OF MATERIAL PLACED.

ITEM 310 – PRIME COAT
APPLY BLOTTER MATERIAL TO ALL DRIVEWAYS AND INTERSECTIONS. THIS WORK IS SUBSIDIARY.

WHEN MULTI OPTION IS ALLOWED, PROVIDE MC 30, EC 30 OR AE-P. MC 30 IS NOT ALLOWED IN TRAVIS COUNTY.

ROLLING TO ENSURE PENETRATION IS REQUIRED.

ITEM 314 - EMULSIFIED ASPHALT TREATMENT
PROCESS THE TOP 1.5 INCHES OF BASE MATERIAL. USE 30% OF TOTAL VOLUME EMULSIFIED ASPHALT IN THE MIXTURE.

USE EMULSIFIED ASPHALT, AEP OR EQUAL, FOR DUST CONTROL. THIS WORK IS SUBSIDIARY.

ITEM 316 – SEAL COAT
ENSURE THAT ALL UNDERSEALS ARE COVERED BY HMACP BEFORE EXPOSING TO TRAFFIC FOR ROADWAYS LISTED IN TABLE 1 OF ITEM 502 OR ADT GREATER THAN 5,000.

AGGREGATES (MULTI OPTION) FOR SEAL COATS NOT EXPOSED TO TRAFFIC AND UNDERSEALS SHALL BE TYPE E, PA, PB, A OR B. THE GRADE SHALL RANGE BETWEEN 4 AND 5.

USE A MEDIUM PNEUMATIC ROLLER IN ACCORDANCE WITH ITEM 210.

SURFACE ALL TRANSITIONS, TAPERS, CLIMBING LANES AND INTERSECTIONS TO THE LIMITS AS DIRECTED.

REMOVE AND DISPOSE OF OFF THE ROW THE AUDIBLE/PROFILE MARKINGS, REFLECTORIZED MARKINGS, AND RAISED MARKERS. BLADE PAVEMENT EDGES TO REMOVE VEGETATION. ANY AREAS WITH EXCESSIVE ASPHALT OR AGGREGATE WILL BE REMOVED. CONTINUE SWEEPING EXCESS AGGREGATE OFF THE ROADWAY, RIPRAP, AND SHOULDER UP TO TWO WEEKS AFTER COMPLETING THE WORK. THIS WORK IS SUBSIDIARY.

WHEN A NEW LAYER OF HMA IS PLACED UNDER A SEAL COAT SURFACE, PROVIDE A RIDE QUALITY ON THE TOP LAYER OF HMA IN ACCORDANCE WITH ITEM 247 BEFORE PLACEMENT OF THE SEAL COAT SURFACE. THIS WORK IS SUBSIDIARY.

ITEMS 341, 344, & 3076 THRU 348/3082 - HOT-MIX ASPHALT PAVEMENT
CORE HOLES MAY BE FILLED WITH AN ASPHALTIC PATCHING MATERIAL MEETING THE REQUIREMENTS OF DMS-9203 OR WITH SCM MEETING REQUIREMENTS OF DMS-9202.

REMOVE AND DISPOSE OF OFF THE ROW THE AUDIBLE/PROFILE MARKINGS, REFLECTORIZED MARKINGS, AND RAISED MARKERS.

INSTALL TRANSVERSE BUTT JOINTS WITH 50 FT. H: 1 IN. V TRANSITION FROM THE NEW ACP TO THE EXISTING SURFACE. INSTALL A BUTT JOINT WITH 24 IN. H: 1 IN. V

CONT'D
TRANSITION FROM THE NEW ACP TO A DRIVEWAY, PULLOUT OR INTERSECTION. SAW CUT THE EXISTING PAVEMENT AT THE BUTT JOINTS. THIS WORK IS SUBSIDIARY.

USE A DEVICE TO CREATE A MAXIMUM 3H:1V NOTCHED WEDGE JOINT ON ALL LONGITUDINAL JOINTS OF 2 IN. OR GREATER. THIS WORK IS SUBSIDIARY.

PRIOR TO MILLING, CORE THE EXISTING PAVEMENT TO VERIFY THICKNESS. THIS WORK IS SUBSIDIARY.

Ensure placement sequence to avoid excess distance of longitudinal joint lap back not to exceed one day's production rates.

Submit any proposed adjustments or changes to a JMF before production of the new JMF.

Tack every layer. Do not dilute tack coat. Apply it evenly through a distributor spray bar.

Provide a minimum transition of 10' for intersections, 10' for commercial driveways, and 6' for residential driveways unless otherwise shown on the plans.

Irregularities will require the replacement of a full lane width using an asphalt paver. Replace the entire sublot if the irregularities are greater than 40% of the sublot area.

Lime or an approved anti-stripping agent must be used when crushed gravel is utilized to meet a SAC "A" requirement.

When using RAP or RAS, include the management methods of processing, stockpiling, and testing the material in the QCP submitted for the project. If RAP and RAS are used in the same mix, the QCP must document that both of these materials have dedicated feeder bins for each recycled material. Blending of RAP and RAS in one feeder bin or in a stockpile is not permitted.

Asphalt content and binder properties of RAP and RAS stockpiles must be documented when recycled asphalt content greater than 20% is utilized.

No RAS is allowed in surface courses.

Department approved warm-mix additives is required for all surface mix application when RAP is used. Dosage rates will be approved during JMF approval.

The Hamburg Wheel Test will have a minimum rut depth of 3mm except for SMA with HPG or PG 76.

ITEM 432 - RIPRAP
Mow strip riprap will be 4 in. and all other riprap will be 5 in. unless otherwise shown on the plans. Mow strip for cable barrier may be placed monolithically with the barrier foundations if using concrete in accordance with Item 543. Fiber reinforcement is not allowed except in mow strip for cable barrier if foundation and mow strip are placed monolithically. GFRP is allowed reinforcement for all applications.

Saw-cut existing riprap then epoxy 12 in. long No. 3 or No. 4 bars 6 in. deep at a maximum spacing of 18 in. in each direction to tie new riprap to existing riprap. This work is subsidiary.

Provide Type A Grade 3 or 5 flexible base for cement stabilized riprap. Compressive strengths for flexible base are waived.

SGT approach taper, paid for using mow strip item, will be installed using concrete, flexible base coated with SS-1 at a rate of 0.12 GAL/SY, or HMA Type B/C/D. Placement will be ordinary compaction and does not require placement using an asphalt paver.

ITEM 460 - CORRUGATED METAL PIPE
Field adjust pipe end to maintain the necessary slope. Field cutting of pipe end is allowed. Coat all field cuts with asphalt paint. Cut ditches to grade before laying pipe.

ITEM 467 - SAFETY END TREATMENT
Field adjust pipe end to maintain the necessary slope. Field cutting of pipe end is allowed. Coat all metal field cuts or exposed reinforcement with asphalt paint.

For all Type II SETs, provide riprap apron shown in the cast-in-place standards and precast riprap detail standard. This work is subsidiary.

Cast-in-place or precast will be allowed unless stated otherwise.

Provide continuous draw openings in slotted drainpipes.

ITEM 479 – ADJUSTING MANHOLES AND INLETS
Use style SL, per standard PSL, for capping inlets and manholes unless otherwise shown on the plans. The cap may be cast in place. The cap must be level and overhang 6 in. beyond the outside edge of the structure. Dowel or attachment of the cap to the existing structure is not required.

ITEM 502 - BARRICADES, SIGNS, AND TRAFFIC HANDLING

For roadways without defined allowable closure times, nighttime lane closures will be allowed from 8 P to 6 A.

Daytime or Friday night lane closures will not be allowed unless otherwise shown on the plans. One lane in each direction will remain open at all times for all roadways unless otherwise shown on the plans.

No closures will be allowed on the weekends, working day prior, and working day after the National Holidays defined in the Standard Specifications, Good Friday, and Easter weekend.

No closures will be allowed 1 P.M. to 11 P.M. the Sunday of the Super Bowl.

Time charges will not be suspended during the large and special events listed below. These events are provided in the contract to allow scheduling of work around these lane closure restrictions.

One-way traffic control, including work performed under Item 510, must be set up to provide a maximum of 20 minutes of delay to the traveling public.

Submit an emailed request for a lane closure (LCN) to TxDOT. The email will be submitted in the format provided. Receive concurrence prior to implementation. Submit a cancellation of lane closures a minimum of 18 hours prior to implementation. Blanket requests for extended periods are not allowed. Max duration of a request is 2 weeks prior to requiring resubmittal.

Provide 2-hour notice prior to implementation and immediately upon removal of the closure.

For all roadways: Submit request for traffic detours and full roadway closures 168 hours prior to implementation. Submit request for nighttime work 96 hours to implementation date.

Cancellations of accepted closures (not applicable to full closures or detours) due to weather will not require resubmission in accordance with the above restrictions if the work is completed during the next allowable closure time.

Closures that conflict with adjacent contractor will be prioritized according to critical path work per latest schedule. Conflicting critical path or non-critical work will be approved for first LCN submitted. Denial of a closure due to prioritization or other reasons will not be reason for time suspension, delay, overhead, etc.

Consider inclement weather prior to implementing the lane closures. Do not set up traffic control when the pavement is wet.

Install all permanent signs, delineation, and object markers required for the operation of the roadway before opening to traffic. Use of temporary mounts is allowed or may be required until the permanent mounts are installed or not impacted by construction. Maintain the temporary mounts. This work is subsidiary.

Edge condition treatment types must be in accordance with the TxDOT standard. Installation and removal of a safety slope is subsidiary.

To determine a speed limit or an advisory speed limit, submit a request to TxDOT 60 business days prior to manufacture of the sign.

For non-site-specific signal projects, 2 months of barricades will be paid per work order location.

ITEM 506 - TEMPORARY EROSION, SEDIMENTATION, AND ENV CONTROLS
If SW3P plan sheets are not provided, place the control measures as directed.

Install, maintain, remove control measures in areas of the right of way utilized by the Contractor that are outside the limits of disturbance required for construction. Permanently stabilize the area. This work is subsidiary.

Erosion control measures must be initiated immediately in areas where construction activities have ceased and will not resume for a period exceeding 14 calendar days. Vertical track all exposed soil, stockpiles, and slopes. Re-track after each rain event or every 14 days, whichever occurs first. Sheep foot roller is allowed for vertical tracking. This work is subsidiary.

For routine or anticipated dewatering, notify the engineer 72 hours before beginning dewatering. Notify the Engineer within 1 hour of beginning emergency or recent rainfall dewatering. Water located within the ROW that will leave the ROW must appear free of pollutants such as suspended sediment, oil sheen, floating solids, etc. Dirty water must pass thru adequate BMPs prior to leaving the ROW to prevent discharge of dirty water. Bypass pumping of water found in a navigable waterway that enters from outside the ROW and is discharged downstream of the ROW will not require the use of BMPs. Dewatering BMPs will be paid for in conformance with the applicable bid items. However, if the necessary BMP item is not included in the Contract, payment for the BMP will be in accordance with Article 9.7., "Payment for Extra Work and Force Account Method." The act of dewatering and the equipment used to dewater will not be paid for directly but will be subsidiary to pertinent bid items.

Unless a specific pay item is provided in the plans, the installation of the 6:1 or flatter for RFD side slopes in the safety zone will be subsidiary to pertinent bid items.

Cover small waste containers (100 gallons or less) at all times. This work is subsidiary. Large waste containers (more than 100 gallons) must have a secondary discharge containment system around the container using erosion control logs. Installation of the log for each container location will be paid using existing bid items. Repair, remove, or replace of the log will not be paid. Revisions, repairs, remove or replace of the log during exchange of empty/full containers at the same location will not be paid.

Portable restrooms must be located more than 50 ft. from a waterway. Tie or stake down portable restrooms to prevent tipping due to vandalism or weather. This work is subsidiary.

Provide a designated location for disposal when excess and waste, including waste generated from cleaning of all equipment used for mixing, hauling, and transfer concrete is disposed in the ROW or PSL. Manufactured disposal containers must be metal or a plastic material with minimum 10 mil thickness. Paper, earthen berms, or pits must be lined with minimum 10 mill thickness polyethylene sheeting. Disposal locations must be located a minimum of 50 ft. from a waterway, tree, or sensitive feature. The disposal location must have a minimum height of 6 in. Maintain a minimum 4 in. of freeboard at all times. Disposal locations are not required for cleaning of small hand tools. Hardened concrete waste may be used as embankment if placed in accordance with Item 132.

Dust Control
Stockpiles that will be inactive for greater than 14 days must be treated to contain dust by covering with chemical dust suppressant, soil blanket, vertical tracking, or method other than sprinkling with water. Stockpiles that are actively being used must be treated to contain dust by vertical tracking or a method determined by the Contractor. This work is subsidiary.

Provide designated construction traffic routes when feasible. Construction site traffic must be directed to use designated routes.

ITEM 530 – INTERSECTIONS, DRIVEWAYS, AND TURNOUTS
Notify property owners at least 48 hr. before beginning work on their driveway. Use a means and methods to construct the driveway while maintaining access to the property at all times. Full closure of a driveway is allowed for reconstruction if duration and alternate access are approved by Engineer. Install and maintain material across a work zone as temporary access. This work is subsidiary.

The following typical section notes apply to all driveways and turnouts:
For ACP or SURF TREAT, the pavement structure will match the adjacent roadway unless detailed on the plans. HMA, including surface, may use a maximum allowable quantity of 40% RAP and 5% RAS for private driveways, public driveways for 2-lane roadways or smaller, and turnouts. Blending of 2 or more sources is allowed.

For CONC, the pavement structure will be 6 in. thick and have 3 in. flexible base bedding unless detailed on the plans.
Driveways that are public (county road and city street) the pavement structure will match the adjacent roadway.

ITEMS 540, 542, & 544 - METAL BEAM GUARD FENCE AND GUARDRAIL END TREATMENTS
Furnish round timber posts for guard fence. Steel posts for low fill culvert applications is subsidiary including use of low fill culvert application due to other concrete structures such as inlets. Long span application at inlets may be used as an alternate to low fill culvert. Unless otherwise specified on the plans, use of low fill culvert or long span at inlets will be subsidiary to pertinent items. Stake the locations for approval before installation. Adjust the limits of the fence to meet field conditions. Install delineators before opening the road to traffic.

CONT'D
Retain all materials. Existing materials that are structurally sound and dent free may be reused. All reused material will be from this project and in compliance with current standards. Structurally sound rust spots with the largest dimension of 4 in. may be cleaned and repaired in accordance with Section 540.3.5. Punch or field drill holes in the metal rail element to accommodate post spacing. Additional holes for splice or connections are not allowed. Space the field holes in accordance with the latest standard but no closer than the minimum spacing shown on the current standard.

Remove, replace, and install mow strip block out material. Construct new block outs and backfill unused block outs with class B concrete. This work is subsidiary.

Repair of mow strip damage, not caused by contractor negligence, and installation of new mow strip will be paid with appropriate bid items. Backfill and shoulder up of area around fence and mow strip will be paid using embankment item.

ITEM 585 - RIDE QUALITY FOR PAVEMENT SURFACES
(See Designers Guide for guide to selecting pay schedule. Default is schedule 3.)
Use Surface Test Type B Pay Schedule ?? to evaluate ride quality of travel lanes, including service roads.

ITEM 658 – DELINEATOR AND OBJECT MARKER ASSEMBLIES
All delineator post and supports, excluding metal components, must be manufactured in the same color that matches the color of the reflector. Field painting is not allowed.

Flexible posts YFLX and WFLX must be tubular in shape. The "flat" flexible posts are not allowed.

Installation and maintenance of portable CTB reflectors will be subsidiary to the barrier.

CTB delineators must be placed on top of the CTB.

ITEM 662 - WORK ZONE PAVEMENT MARKINGS
Notify the Engineer at least 24 hours in advance of work for this item.

Maintain removable and short-term markings daily. Remove within 48 hours after permanent striping has been completed.

Item 668 is not allowed for use as Item 662.

Roadways with existing profile pavement markings or rumble strips must supplement work zone solid lines with traffic buttons spaced at 12 in. Traffic buttons used to supplement the work zone markings will be paid by the each in addition to the work zone item.

ITEM 666 - RETROREFLECTORIZED PAVEMENT MARKINGS
Notify the Engineer at least 24 hr. before beginning work.

All projects, including resurfacing, must increase center-to-center width for center line markings to 18 in. unless the plans or existing is greater than 18 in.
Place longitudinal markings nightly for IH 35 main lanes or roadways with AADT greater than 100,000. Use of temporary flexible reflective roadway marker tabs is subsidiary and at the Contractor's option. Replace missing or damaged tabs nightly. If using tabs, place longitudinal markings weekly by 5 AM Friday for all weekday work and by 5 AM Monday for all weekend work. Failure to maintain tabs or place longitudinal markings by deadline will require nightly placement of longitudinal markings.

Place longitudinal markings no later than 7 calendar days after placement of the surface for roadways with AADT greater than 20,000.

When the raised portion of a profile marking is placed as a separate operation from the pavement marking, the raised portion must be placed first then covered with TY I.

When using black shadow to cover existing stripe apply a non-retroreflective angular abrasive bead drop. The marking color shall be adjusted to resemble the pavement color. If Item 677 is not used prior to placement of black shadow, scrape the top of the marking with a blade or large piece of equipment unless surface is a seal coat. The scraping of the marking is subsidiary.

ITEM 668 – PREFABRICATED PAVEMENT MARKINGS AND RUMBLE STRIPS
For center line applications of preformed rumble strips on multilane undivided roadways, application shall be continuous even if profile markings are present.

For center line applications of preformed rumble strips on two lane two-way roadways, application shall be continuous even if profile markings are present. The preformed rumble strip must not be placed in conflict with a broken/skip pavement marking.

For edge line applications of preformed rumble strips, use option 7 of standard RS(2) unless option 8 required due to shoulder width.

ITEM 672 – RAISED PAVEMENT MARKERS
Place Type I-C and II-C-R markers at 40 ft. spacing for all lane lines.

ITEM 677 - ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS
Dispose of removed materials and debris at locations off the right of way.

Elimination using a pavement marking will not be allowed in lieu of methods listed in specification.

Remove pavement markings on concrete surfaces by a blasting method. Flail milling will be allowed when total quantity of removal on concrete surfaces is less than 1000 ft.

Strip seal is only method allowed on seal coat surface unless project includes placement of a new surface. If total quantity of removal on a seal coat surface is less than 2000 ft., elimination using a pavement marking is allowed if a test section is approved by the Engineer. Test section shall demonstrate the thermo marking color matches the existing pavement color.

Remove pavement markings outside the limits of the new surface by a blasting method.

Use a TRAIL or a non-retroreflective paint to cover stripe remnants that remain after elimination.

The test requirements for these materials are waived. The paint color shall be adjusted to resemble the existing pavement color. Installation and maintenance is subsidiary.

ITEM 730 – ROADSIDE MOWING
Perform roadside mowing along the Roadway for the length of the project, as directed.

Complete spot mowing, as directed.

ITEM 734 - LITTER REMOVAL
Complete Litter Removal Cycles along the Roadway for the length of the project, as directed.

Complete Litter Removal Cycles prior to any mowing cycles.

Remove all litter on the right of way, within project limits.

ITEM 738 – CLEANING AND SWEEPING HIGHWAYS
Complete cleaning and sweeping cycles at the intervals, as directed. Complete one cycle at the end of construction and prior to final acceptance by the Department.

ITEM 752 – TREE AND BRUSH REMOVAL
(Blind Note: Required for all projects that include Item 100.)
Follow Item 752.4 Work Methods and Item 752 general notes when removing or working on or near trees and brush even if Item 752 is not included as a pay item.

Flailing equipment is not allowed. Burning brush is not allowed in urban areas or on ROW. Use hand methods or other means of removal if doing work by mechanical methods is impractical.

Prior to begin tree pruning, send email confirmation to the Engineer that training and demonstration of work methods has been provided to the employees. This work is subsidiary.

Shredded vegetation may be blended, at a rate not to exceed 15 percent by volume, with Item 160 if the maximum dimension is not greater than 2 in.

ITEM 3084 – BONDING COURSE
The minimum application rates are listed in Table BC. Miscellaneous Tack is allowed for use with dense-graded Type B HMA. If a tack bid item is not provided, use bonding course item.

The target shear bond strengths are listed in Table BCS. The informational test cores shall be taken once a shift for first 5 lots of placement or a change to placement method of bonding course, bonding material, or hot mix material. The remaining informational test cores shall be taken once every 3 lots for surface mix. Informational tests are not required for non-surface mix beyond the first 5 lots unless there is a change to placement method of bonding course, bonding material, or hot mix material. Results from these informational tests will not be used for specification compliance.

Table BC

Material	Minimum Application Rate (gal. per square yard)
TRAIL – Emulsified Asphalt	0.06
TRAIL – Hot Asphalt	0.12
Spray Applied Underseal Membrane	0.10

Table BCS (For Informational Tests)

Material	Target Shear Bond Strength (Tex-249-F psi)
SMA – Stone-Matrix Asphalt	60.0
PFC – Permeable Friction Course	N/A
All Other Materials	40.0

ITEM 3085 – UNDERSEAL COURSE
No emulsified asphalt material allowed under PFC or SMA, except for use with Item 316, on roadways with ADT greater than 100,000.

The minimum application rates are listed in Table UC. The target shear bond strengths are listed in Table UCS. The informational test cores shall be taken once a shift for first 5 lots of placement or a change to placement method of bonding course, bonding material, or hot mix material. The remaining informational test cores shall be taken once every 3 lots for surface mix. Informational tests are not required for non-surface mix beyond the first 5 lots unless there is a change to placement method of bonding course, bonding material, or hot mix material. Results from these informational tests will not be used for specification compliance.

CONT'D

Table UC

Material	Minimum Application Rate (mat >1" gal. per square yard)	Minimum Application Rate (mat <= 1" gal. per square yard)
TRAIL – Hot Asphalt	0.15	0.10
Spray Applied Underseal Membrane	0.15	0.15
Seal Coat – Tier II emulsion	0.25	0.25
Seal Coat – Tier II asphalt	0.23	0.23

Table UCS

Material	Minimum Shear Strength (psi)
SMA – Stone-Matrix Asphalt	60.0
PFC – Permeable Friction Course	40.0
All Other Materials	40.0

ITEM 3094 – POLYMERIC COMPOSITE PAVING GEOGRID FOR ASPHALT PAVEMENT OVERLAY REINFORCEMENT
In addition to tack coat materials listed in the spec, Item 300 material that is hot-applied AC from Table 3; PG 64-22; or hot asphalt TRAIL material may be furnished. Emulsions will not be allowed.

Do not apply tack coat on top of geogrid.

In lieu of 5 projects in 3 years, the installer may provide a minimum of 250,000 SY of installation within the past 3 years.

Thompson Land
Engineering, LLC
(F-10220)

ROBERT C. THOMPSON
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Robert C Thompson

7/16/24

2022-27-SWP

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DATE

REVISION

PROJECT
AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

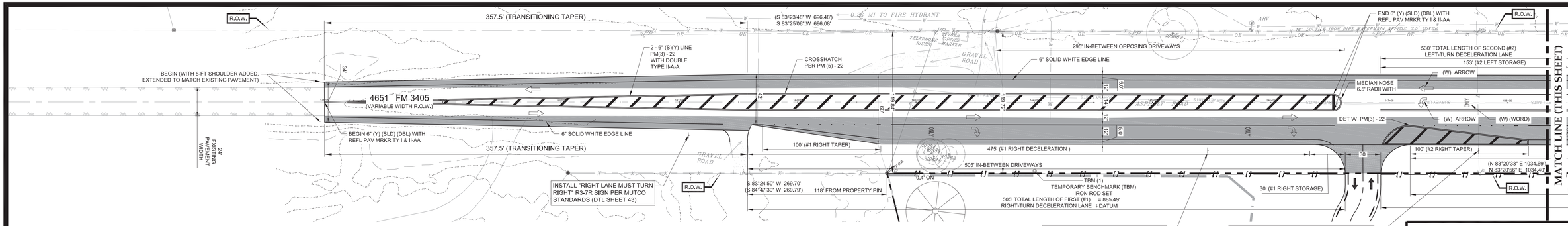
SHEET NAME
TXDOT GENERAL NOTES

DATE ISSUED
July, 2024

DESIGNED BY	DRAFTED BY
RCT	JH/MR

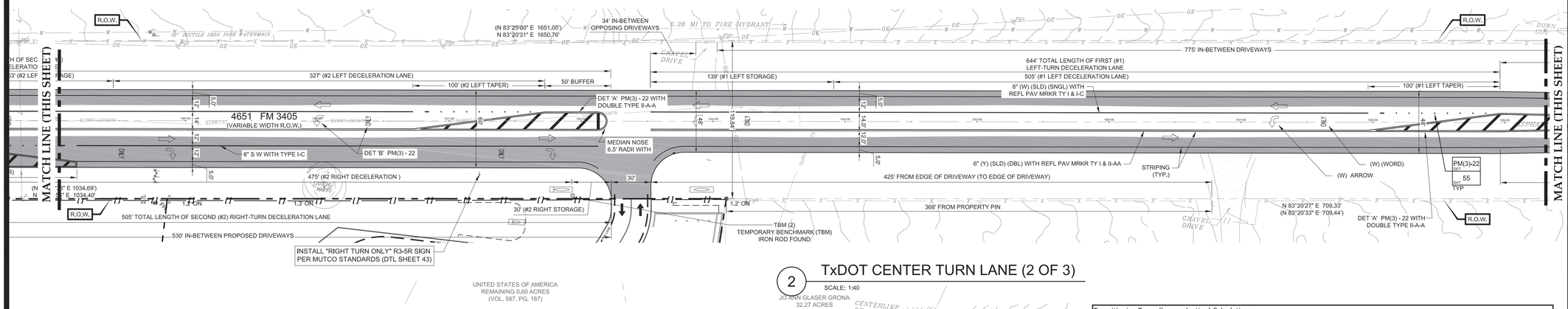
JOB NUMBER
1829

SHEET
40 OF 60



1 TxDOT CENTER TURN LANE (1 OF 3)

SCALE: 1:40



2 TxDOT CENTER TURN LANE (2 OF 3)

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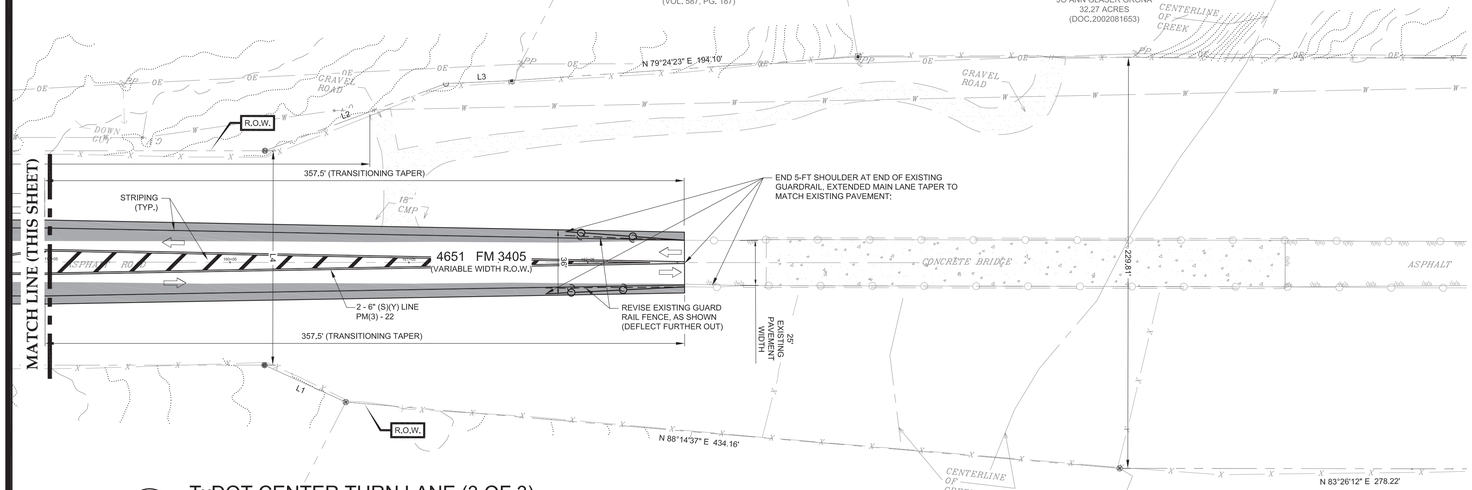


3 TxDOT CENTER TURN LANE (3 OF 3)

SCALE: 1:40

4 TxDOT CENTER TURN LANE (OVERALL VIEW)

SCALE: 1:100

SCALE: 1" = 100'

0 50 100 200

Transitioning Taper (lane reduction) Calculations:

Offset Width, W =	6.5	feet	
Speed, S =	55	mph	
Length, L = W*S =	357.5	feet	per equation in TXDOT Roadway Manual (page 2-50)

WEST & EAST DRIVEWAYS (Eastbound) = Right-Turn Deceleration Lane Calculations:

Storage length	30	feet	per TXDOT
Deceleration length	475	feet	per TXDOT
Total	**505**	**feet**	(a 100-ft Taper is included in this total)

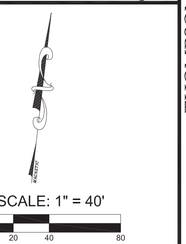
WEST DRIVEWAY (2nd Westbound) Left-Turn Deceleration Lane Calculations:

Vehicles per hour	76.3	vph	per ITE trip generation calculations (ITE Code 150, 151 & 710 - see calcs.)
Queue Storage	30	feet	per Table 3-3 in TXDOT Roadway Manual (page 3-14)
Storage length	153	feet	per Unsignalized equation in TXDOT Roadway Manual (page 3-15)
Deceleration length	505	feet	per Table 3-12 in TXDOT Roadway Manual
Total	**658**	**feet**	(a 100-ft Taper is included in this total)

EAST DRIVEWAY (1st Westbound) Left-Turn Deceleration Lane Calculations:

Vehicles per hour	69.7	vph	per ITE trip generation calculations (ITE Code 150, 210 & 710 - see calcs.)
Queue Storage	30	feet	per Table 3-3 in TXDOT Roadway Manual (page 3-14)
Storage length	139	feet	per Unsignalized equation in TXDOT Roadway Manual (page 3-15)
Deceleration length	505	feet	per Table 3-12 in TXDOT Roadway Manual
Total	**644**	**feet**	(a 100-ft Taper is included in this total)

TXDOT PAVEMENT LENGTH CALCULATIONS



LEGEND

- EXISTING MINOR CONTOURS
- EXISTING MAJOR CONTOURS
- PROPOSED CONTOURS
- EXISTING OVERHEAD ELECTRIC
- EXISTING POWER POLE
- EXISTING WATER METER
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- PROP. WATER METER

TLE GENERAL PAVEMENT NOTES

1) ALL MARKINGS, MARKERS, SIGNAGE, BUTTONS, PAINT AND OTHER TRAFFIC RELATED CONTROLS TO CONFORM WITH THE LATEST EDITION OF THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) MANUAL ON UNIFORM TRAFFIC CONTROL DEVISES FOR STREETS AND HIGHWAYS (MUTCD).
2) THE ABOVE INCLUDES ANY METHODS, PAVEMENT MARKINGS, SIGNAGE NECESSARY FOR WARNING MOTORISTS OR WARNING PEDESTRIANS, AND/OR DIVERTING TRAFFIC DURING CONSTRUCTION, AS WELL AS ANY MARKINGS, MARKERS, SIGNAGE, BUTTONS, AND PAINT THAT MAY BE REQUIRED FOR THE FINISHED PRODUCT.
3) THE FINAL LAYER OF ASPHALT TO COVER THE ENTIRE ROADWAY. (THE HATCHING SHOWN IN THE PLAN VIEW REPRESENTS NEW PAVEMENT AND BASE MATERIALS.)

Thompson Land Engineering, LLC (F-10220)

10/2/24

2022-27-SWP

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TBPE Reg. No. F10220

DATE

REVISION

PROJECT
AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

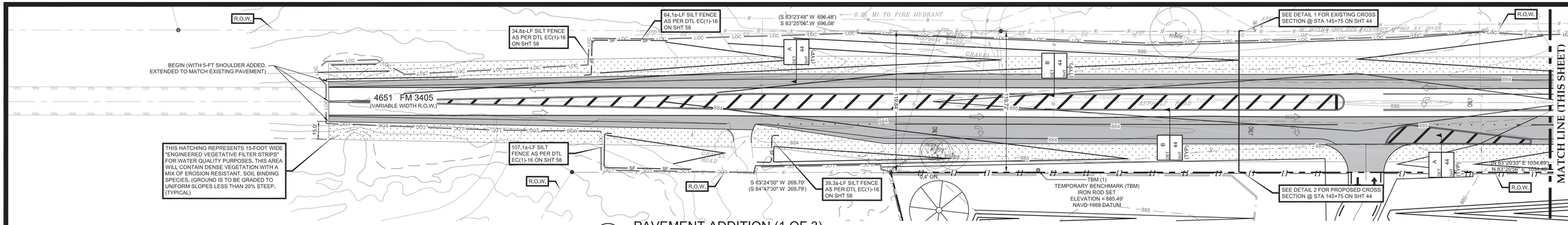
SHEET NAME
FM 3405 TURN LANE (1 OF 2)

DATE ISSUED
October, 2024

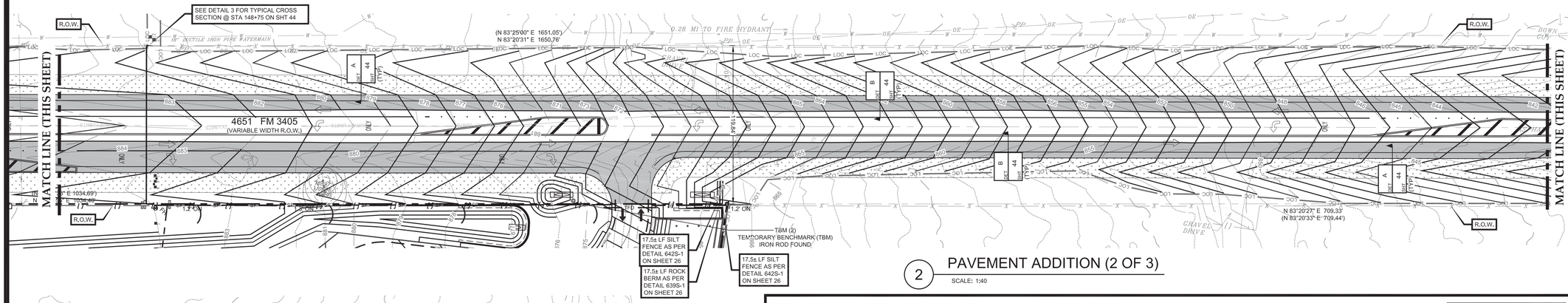
DESIGNED BY: RCT
DRAFTED BY: JH/MR

JOB NUMBER
1829

SHEET
42 OF 60



1 PAVEMENT ADDITION (1 OF 3)
SCALE: 1:40



2 PAVEMENT ADDITION (2 OF 3)
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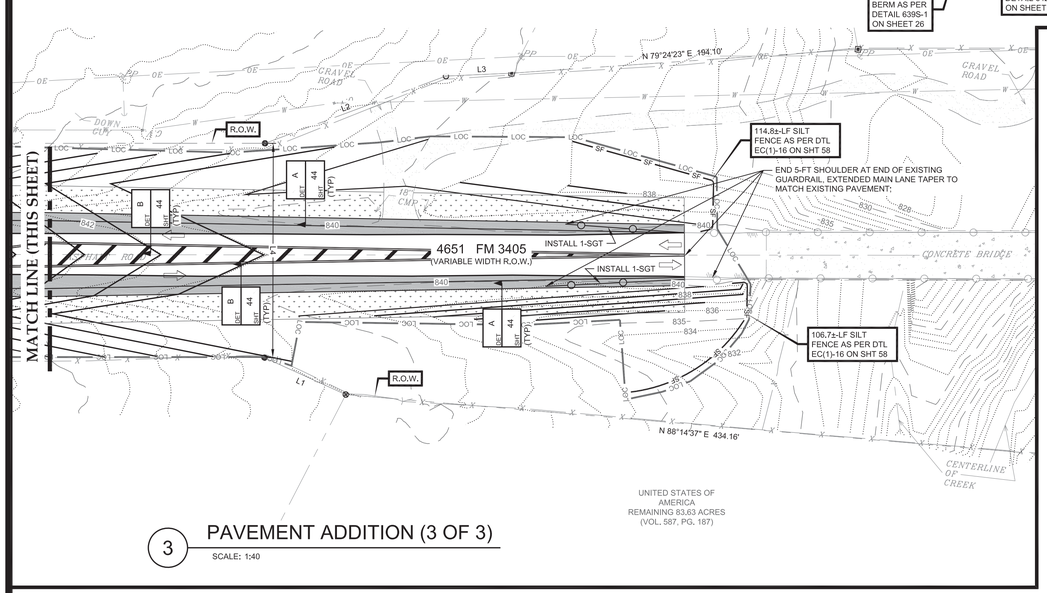

3 PAVEMENT ADDITION (3 OF 3)
SCALE: 1:40

NOTE:
- SF TO BE REMOVED PRIOR TO TxDOT INSPECTION. SEE ALSO SHEET 42.
- ROCK BERM IN TxDOT ROW SHOULD BE REMOVE PRIOR TO FINAL TxDOT INSPECTION

R3-5R

R3-7R

LEGEND

- EXISTING MINOR CONTOURS
- EXISTING MAJOR CONTOURS
- PROPOSED CONTOURS
- OE — EXISTING OVERHEAD ELECTRIC
- PP — EXISTING POWER POLE
- WM — EXISTING WATER METER
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- WM — PROP. WATER METER

TLE GENERAL PAVEMENT NOTES

1) ALL MARKINGS, MARKERS, SIGNAGE, BUTTONS, PAINT AND OTHER TRAFFIC RELATED CONTROLS TO CONFORM WITH THE LATEST EDITION OF THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) MANUAL ON UNIFORM TRAFFIC CONTROL DEVISES FOR STREETS AND HIGHWAYS (MUTCD).
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STATE OF TEXAS
ROBERT C. THOMPSON
69524
REGISTERED PROFESSIONAL ENGINEER

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4701 & 4721 FM 3405, GEORGETOWN TX, 78633
PROJECT

FM 3405 TURN LANE (2 OF 2)
SHEET NAME

DATE ISSUED
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DESIGNED BY	DRAFTED BY
RCT	JH/MR

JOB NUMBER
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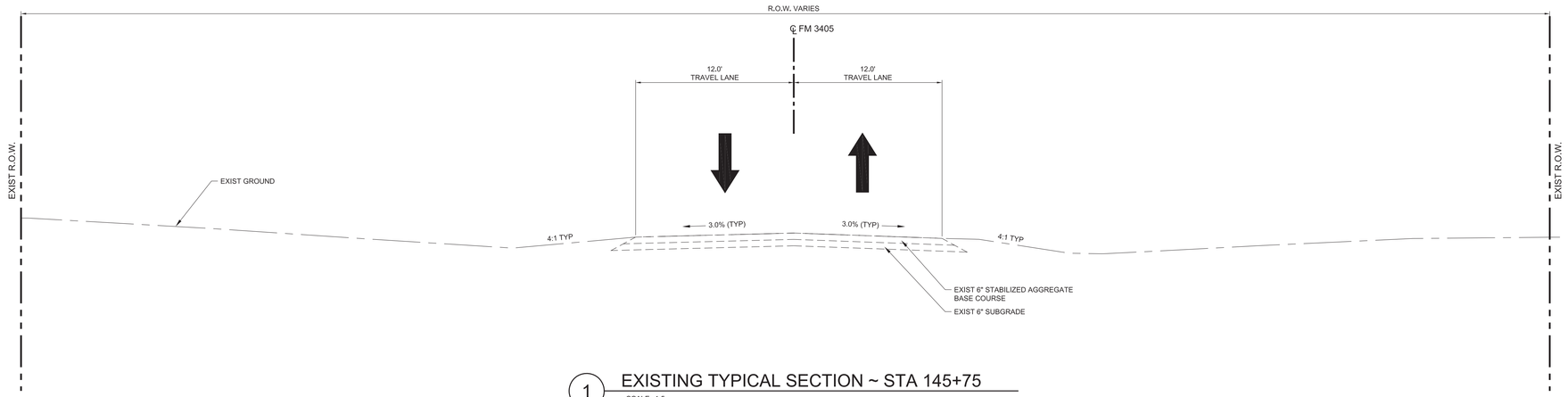
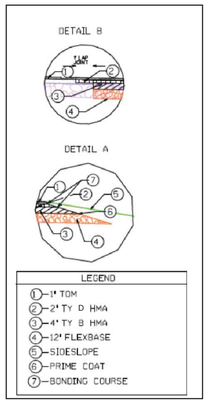
SHEET
43 OF 60

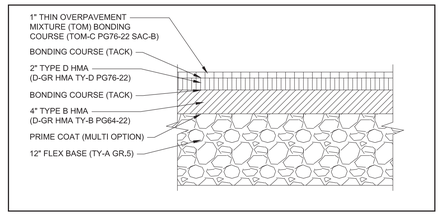


1 EXISTING TYPICAL SECTION ~ STA 145+75

SCALE: 1:5

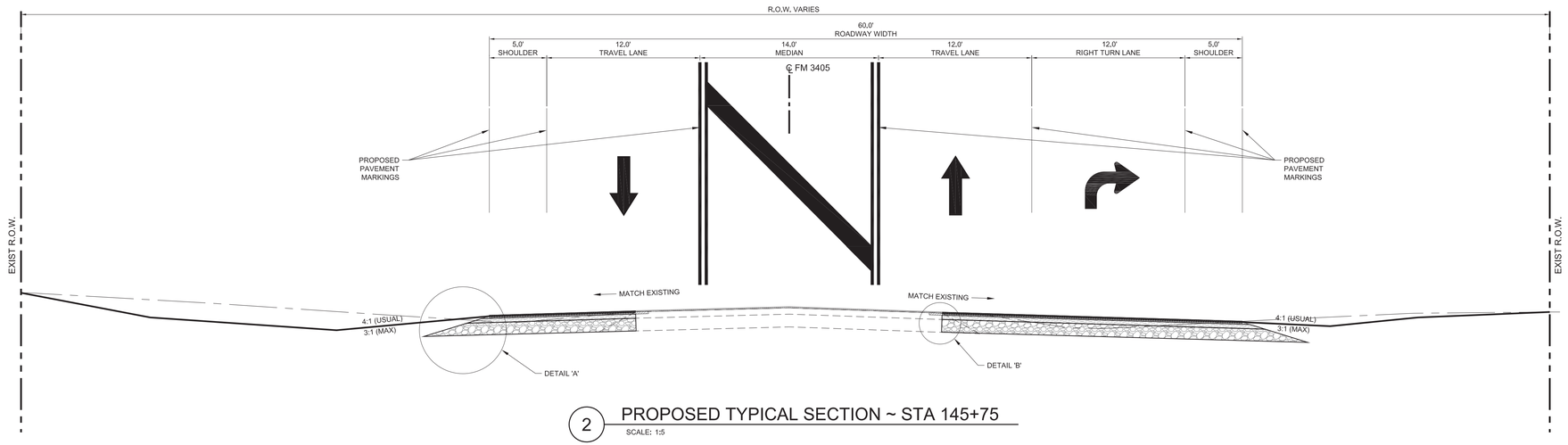


PAVEMENT DESIGN



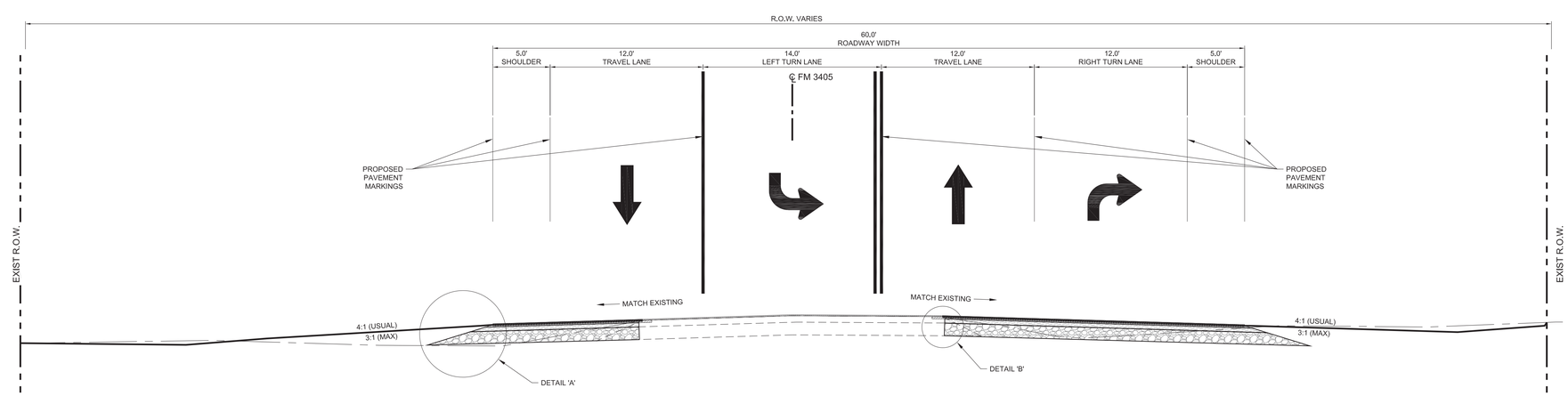
TxDOT PAVEMENT DESIGN

NOTE: 2" HMA SURFACE ELEVATION TO MATCH EXISTING PAVEMENT SURFACE ELEVATION. HMA AND FLEX BASE ON IN NEW PAVEMENT AREAS, BUT 1" TOM TO EXTEND ACROSS THE ENTIRE WIDTH OF FM 3405.



2 PROPOSED TYPICAL SECTION ~ STA 145+75

SCALE: 1:5



3 PROPOSED TYPICAL SECTION ~ STA 148+75

SCALE: 1:5

Thompson Land Engineering, LLC (F-10220)

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9/26/24

2022-27-SWP

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PROJECT
AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME
EXISTING & PROPOSED TYPICAL SECTIONS

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JOB NUMBER
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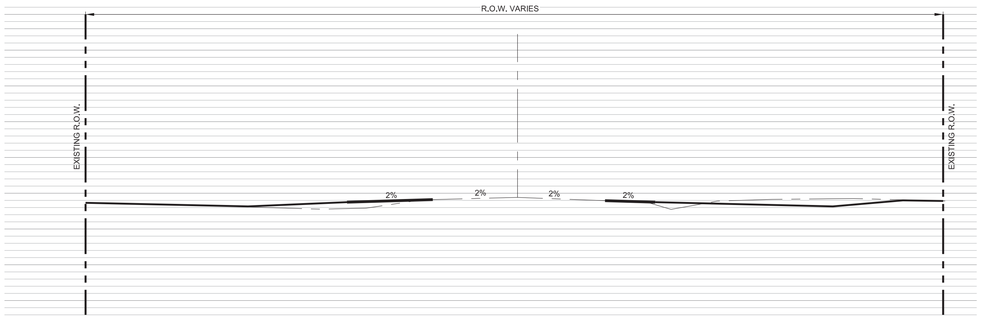
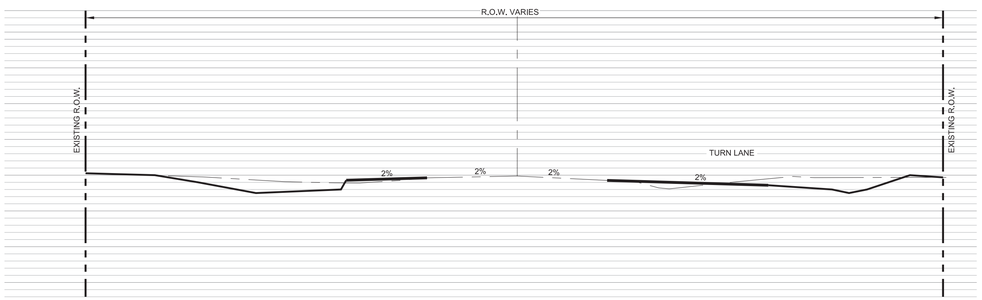
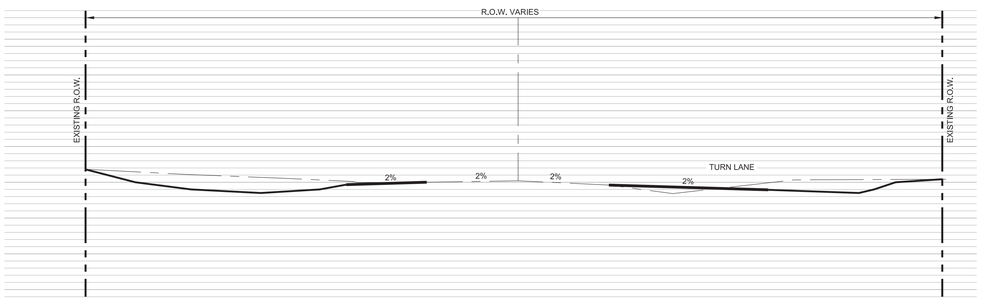
44 OF 60



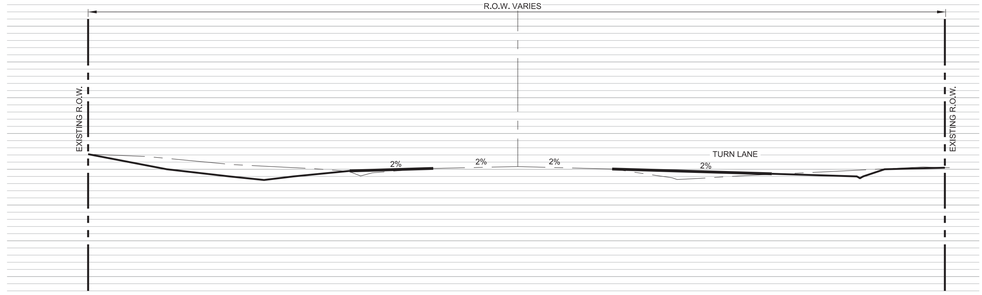
1-1 STA. 141+75
SCALE: 1:10



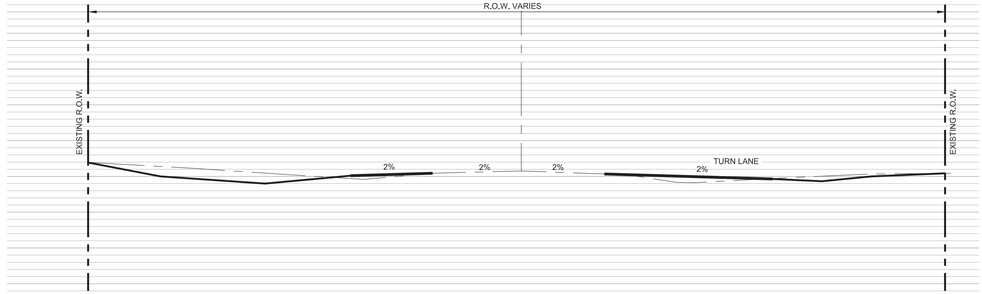
2-2 STA. 142+75
SCALE: 1:10



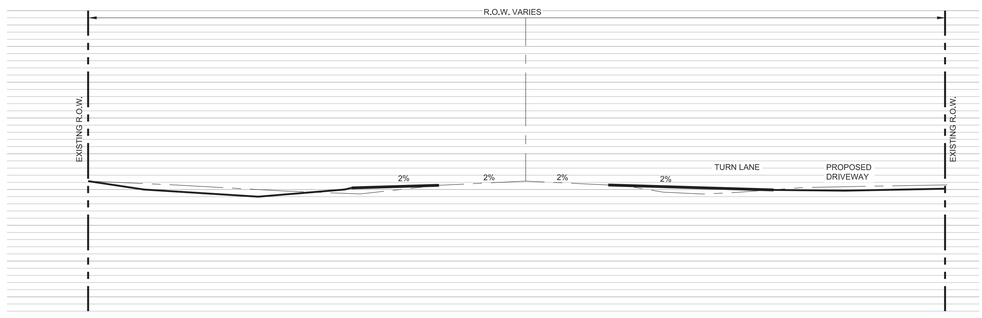
3-3 STA. 143+75
SCALE: 1:10



4-4 STA. 144+75
SCALE: 1:10



5-5 STA. 145+75
SCALE: 1:10



6-6 STA. 146+75
SCALE: 1:10

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REGISTERED PROFESSIONAL ENGINEER
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PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME: FM 3405 TURN LANE CROSS SECTIONS (1 OF 3)

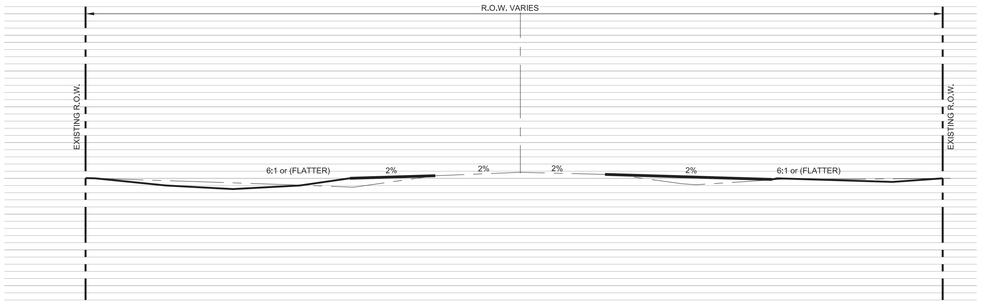
DATE ISSUED: September, 2024

DESIGNED BY	DRAFTED BY
RCT	JH/MR

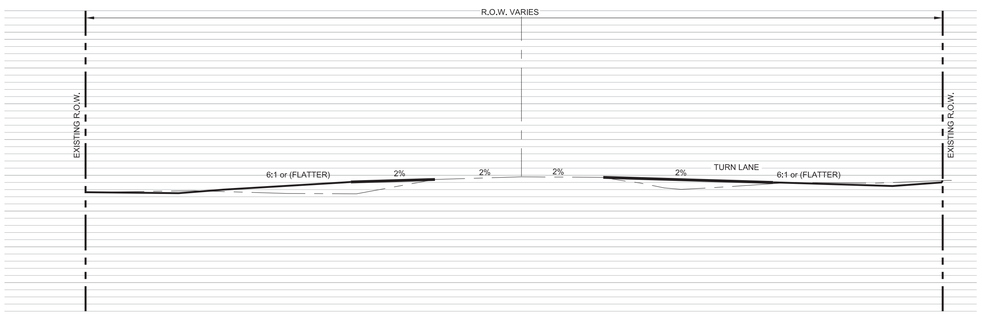
JOB NUMBER: 1829

SHEET: 45 OF 60

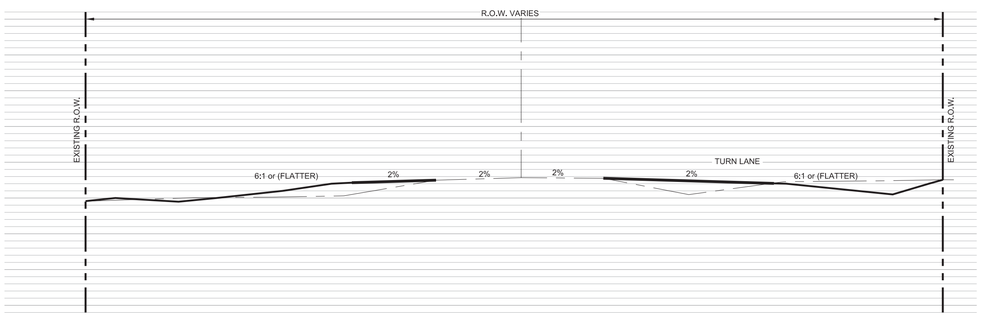
2022-27-SWP



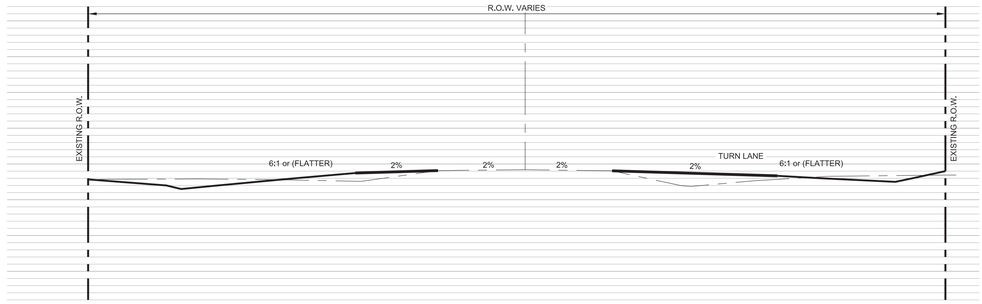
7-7 STA. 147+75
SCALE: 1:10



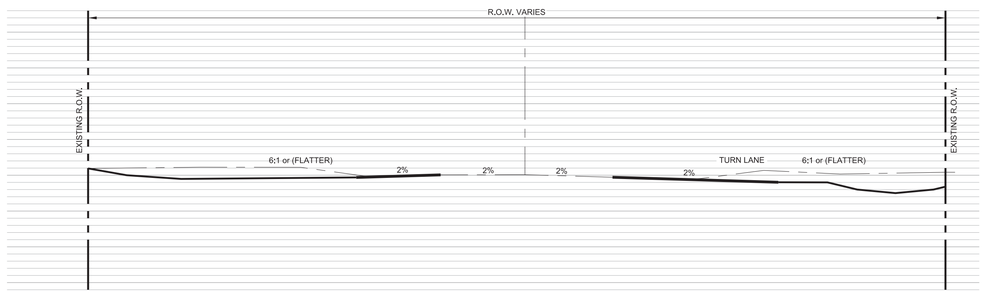
8-8 STA. 148+75
SCALE: 1:10



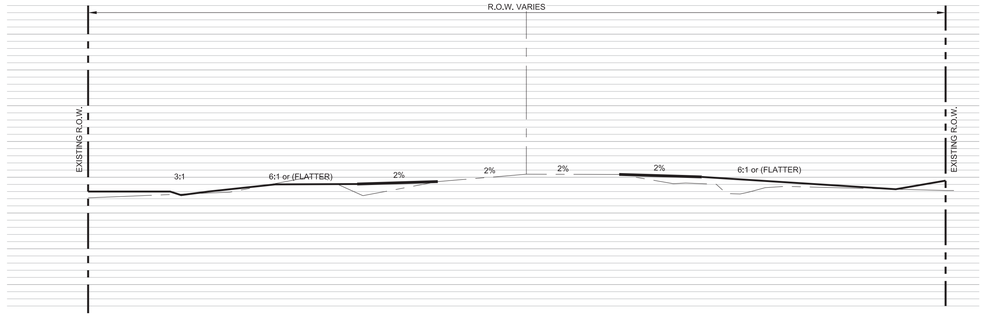
9-9 STA. 149+75
SCALE: 1:10



10-10 STA. 150+75
SCALE: 1:10



11-11 STA. 151+75
SCALE: 1:10



12-12 STA. 152+75
SCALE: 1:10

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10/1/24

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4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME
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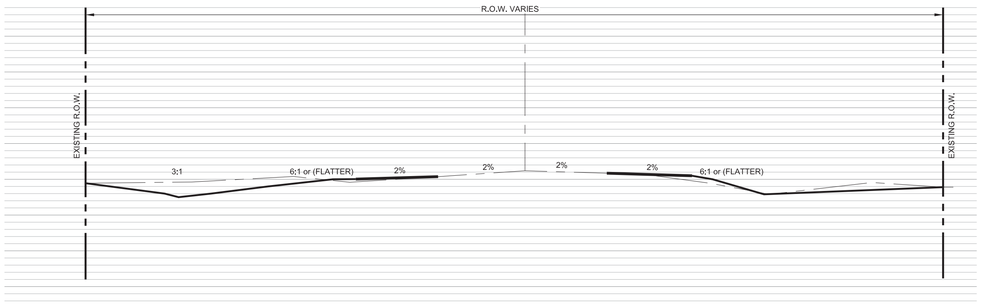
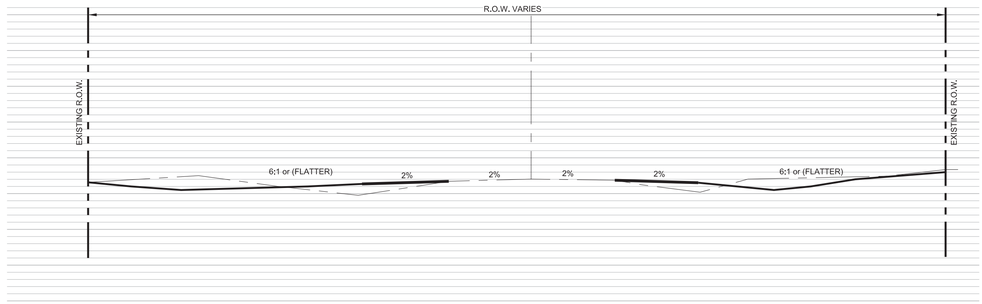
SHEET
46 OF 60

2022-27-SWP



13-13 STA. 153+75
SCALE: 1:10



16-16 STA. 156+75
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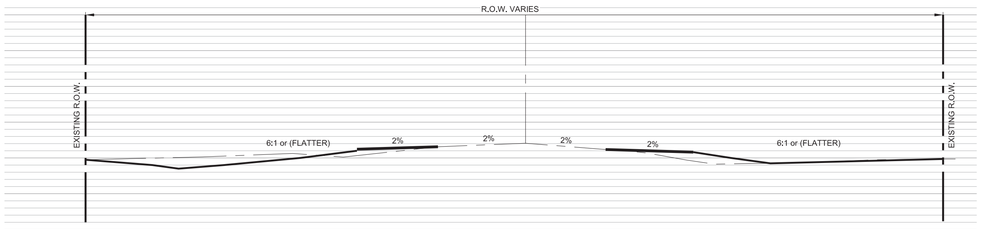

14-14 STA. 154+75
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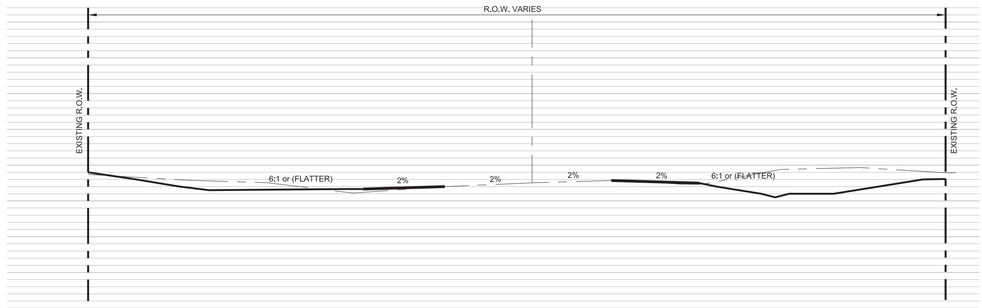
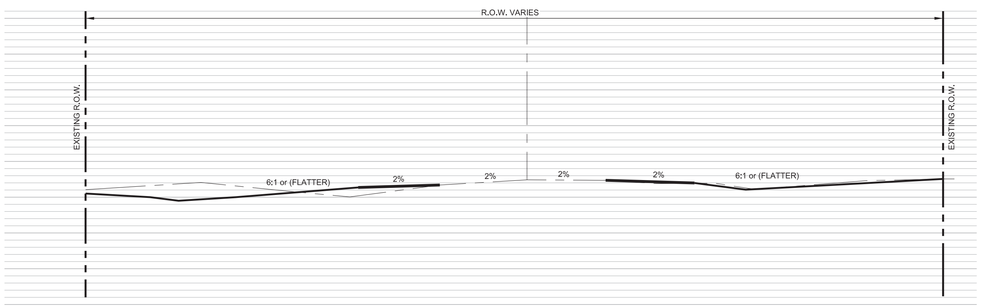


17-17 STA. 157+75
SCALE: 1:10



15-15 STA. 155+75
SCALE: 1:10

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10/1/24

2022-27-SWP

PROJECT
AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME
FM 3405 TURN LANE CROSS SECTIONS (3 OF 3)

DATE ISSUED
October, 2024

DESIGNED BY	DRAFTED BY
RCT	JH/MR

JOB NUMBER
1829

SHEET
47 OF 60

STORMWATER POLLUTION PREVENTION PLAN (SWP3):

This SWP3 has been developed in accordance with the TPDES Construction General Permit TXR150000 (CGP). The Texas Department of Transportation (TxDOT) ensures that project specifications include adequate best management practices (BMPs) for this project.

For all projects with soil disturbing activity and for projects that have Environmental, Permits, Issues, and Commitments (EPICs) dependent on stormwater controls and water quality measures TxDOT will maintain a SWP3 with all pertinent records, correspondence, environmental documents, etc. at the project field office, Area Office, or electronically.

This SWP3 is consistent with requirements specified in applicable stormwater plans and the projects environmental permits, issues, and commitments (EPICs). A copy of the CGP is included in Attachment 2.12 of the SWP3 binder.

1.0 SITE/PROJECT DESCRIPTION

1.1 PROJECT CONTROL SECTION JOB (CSJ): 1755-3-10

1.2 PROJECT LIMITS:
From: STATION 138+00.00
To: STATION 163+00.00

1.3 PROJECT COORDINATES:
BEGIN: (Lat)__________,(Long)__________
END: (Lat)__________,(Long)__________

1.4 TOTAL PROJECT AREA (Acres): 6.04-ACRES

1.5 TOTAL AREA TO BE DISTURBED (Acres): 4.70-ACRES

1.6 NATURE OF CONSTRUCTION ACTIVITY:
ADDED TURN-LANES & DRIVEWAYS
(ALONG WITH THE ON-SITE, PRIVATE DEVELOPMENT)

1.7 MAJOR SOIL TYPES:

Soil Type	Description
EaD	ECKRANT COBBLY CLAY; WELL-DRAINED, "D" GROUP
DoC	DOSS SILTY CLAY; WELL-DRAINED, "D" GROUP
DnB	DENTON SILTY CLAY; WELL-DRAINED, "D" GROUP

1.8 PROJECT SPECIFIC LOCATIONS (PSLs):
PSLs must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. PSLs may be identified during preconstruction meetings or during the construction process. Please choose from the options below:
☒ PSLs determined during preconstruction meeting
☐ PSLs determined during construction
☐ No PSLs planned for construction

Type	Sheet #s
SILT FENCE	43
ROCK BERM	43

All off-ROW PSLs required by the Contractor are the Contractor's responsibility. The Contractor shall secure all permits required by local, state, federal laws for off-ROW PSLs. The contractor shall provide diagrams, areas of disturbance, acreage, and BMPs for all off-ROW PSLs within one mile of the project.

1.9 CONSTRUCTION ACTIVITIES:
(Use the following list as a starting point when developing the Construction Activity Schedule and Ceasing Record in Attachment 2.5.)
☐ Mobilization
☐ Install sediment and erosion controls
☐ Blade existing topsoil into windrows, prep ROW, clear and grub
☐ Remove existing pavement
☐ Grading operations, excavation, and embankment
☐ Excavate and prepare subgrade for proposed pavement widening
☐ Remove existing culverts, safety end treatments (SETs)
☐ Remove existing metal beam guard fence (MBGF), bridge rail
☐ Install proposed pavement per plans
☐ Install culverts, culvert extensions, SETs
☐ Install mow strip, MBGF, bridge rail
☐ Place flex base
☐ Rework slopes, grade ditches
☐ Blade windrowed material back across slopes
☐ Revegetation of unpaved areas
☐ Achieve site stabilization and remove sediment and erosion control measures
☐ Other: __________
☐ Other: __________
☐ Other: __________

1.10 POTENTIAL POLLUTANTS AND SOURCES:
☒ Sediment laden stormwater from stormwater conveyance over disturbed area
☒ Fuels, oils, and lubricants from construction vehicles, equipment, and storage
☒ Solvents, paints, adhesives, etc. from various construction activities
☒ Transported soils from offsite vehicle tracking
☒ Construction debris and waste from various construction activities
☐ Contaminated water from excavation or dewatering pump-out water
☐ Sanitary waste from onsite restroom facilities
☒ Trash from various construction activities/receptacles
☒ Long-term stockpiles of material and waste
☒ Discharges from concrete washout activities, runoff from concrete cutting activities, and other concrete related activities.
☐ Other: __________
☐ Other: __________
☐ Other: __________

1.11 RECEIVING WATERS:
Receiving waters must be depicted on the Environmental Layout Sheets in Attachment 1.2 of this SWP3. Include Segment # for receiving waters.

Tributaries	Classified Waterbody
NORTH FORK SAN GABRIEL RIVER	FRESHWATER STREAM SEGMENT #1251

* Add (*) for impaired waterbodies with pollutant in ().

1.12 ROLES AND RESPONSIBILITIES: TxDOT
☒ Development of plans and specifications
☒ Submit Notice of Intent (NOI) to TCEQ (≥5 acres)
☒ Post Construction Site Notice
☒ Submit NOI/CSN to local MS4
☒ Perform SWP3 inspections
☒ Maintain SWP3 records and update to reflect daily operations
☒ Complete and submit Notice of Termination to TCEQ
☒ Maintain SWP3 records for 3 years
☐ Other: __________
☐ Other: __________
☐ Other: __________

1.13 ROLES AND RESPONSIBILITIES: CONTRACTOR
☒ Day To Day Operational Control
☒ Submit Notice of Intent (NOI) to TCEQ (≥5 acres)
☒ Post Construction Site Notice
☒ Submit NOI/CSN to local MS4
☒ Maintain schedule of major construction activities
☒ Install, maintain and modify BMPs
☒ Complete and submit Notice of Termination to TCEQ
☒ Maintain SWP3 records for 3 years
☐ Other: __________
☐ Other: __________
☐ Other: __________

1.14 LOCAL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) OPERATOR COORDINATION:

MS4 Entity
NOT APPLICABLE; NONE

STORMWATER POLLUTION PREVENTION PLAN (SWP3)
© 2023 July 2023 Sheet 1 of 2
Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
STATE	STATE DIST.	COUNTY	
TEXAS			
CONT.	SECT.	JOB	HIGHWAY NO.

STORMWATER POLLUTION PREVENTION PLAN (SWP3):

2.0 BEST MANAGEMENT PRACTICES (BMPs) AND CONTROLS, INSPECTION, AND MAINTENANCE

The Contractor shall be the responsible party for implementing the BMPs described herein and for complying with the SWP3 for control of erosion and sedimentation during day-to-day operations. The Contractor shall implement changes to this SWP3 approved by TxDOT within the times specified in this SWP3 or the CGP.

2.1 EROSION CONTROL AND SOIL STABILIZATION BMPs:

T / P
☐ ☐ Protection of Existing Vegetation
☐ ☐ Vegetated Buffer Zones
☐ ☐ Soil Retention Blankets
☐ ☐ Geotextiles
☐ ☐ Mulching/ Hydromulching
☐ ☐ Soil Surface Treatments
☐ ☐ Temporary Seeding
☐ ☐ Permanent Planting, Sodding or Seeding
☐ ☐ Biodegradable Erosion Control Logs
☐ ☐ Rock Filter Dams/ Rock Check Dams
☐ ☐ Vertical Tracking
☐ ☐ Interceptor Swale
☐ ☐ Riprap
☐ ☐ Diversion Dike
☐ ☐ Temporary Pipe Slope Drain
☐ ☐ Embankment for Erosion Control
☐ ☐ Paved Flumes
☐ ☐ Other: __________
☐ ☐ Other: __________
☐ ☐ Other: __________
☐ ☐ Other: __________

2.2 SEDIMENT CONTROL BMPs:

T / P
☐ ☐ Biodegradable Erosion Control Logs
☐ ☐ Dewatering Controls
☐ ☐ Inlet Protection
☐ ☐ Rock Filter Dams/ Rock Check Dams
☐ ☐ Sandbag Berms
☐ ☐ Sediment Control Fence
☐ ☐ Stabilized Construction Exit
☐ ☐ Floating Turbidity Barrier
☐ ☐ Vegetated Buffer Zones
☐ ☐ Vegetated Filter Strips
☐ ☐ Other: __________
☐ ☐ Other: __________
☐ ☐ Other: __________
☐ ☐ Other: __________

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

Sediment control BMPs requiring design capacity calculations (See SWP3 Attachment 1.3.):

T / P
☐ ☐ Sediment Trap
☐ Calculated volume runoff from 2-year, 24-hour storm for each acre of disturbed area
☐ 3,600 cubic feet of storage per acre drained

☐ ☐ Sedimentation Basin
☐ Not required (<10 acres disturbed)
☐ Required (>10 acres) and implemented.
☐ Calculated volume runoff from 2-year, 24-hour storm for each acre of disturbed area
☐ 3,600 cubic feet of storage per acre drained
☐ Required (>10 acres), but not feasible due to:
☐ Available area/Site geometry
☐ Site slope/Drainage patterns
☐ Site soils/Geotechnical factors
☐ Public safety
☐ Other: __________

2.3 PERMANENT CONTROLS:
(Coordinate post-construction BMPs with appropriate TxDOT maintenance sections.)
BMPs To Be Left In Place Post Construction:

Type	Stationing From	Stationing To

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.4 OFFSITE VEHICLE TRACKING CONTROLS:
☐ Excess dirt/mud on road removed daily
☐ Haul roads dampened for dust control
☐ Loaded haul trucks to be covered with tarpaulin
☐ Stabilized construction exit
☐ Daily street sweeping
☐ Other: __________
☐ Other: __________
☐ Other: __________
☐ Other: __________

2.5 POLLUTION PREVENTION MEASURES:
☐ Chemical Management
☐ Concrete and Materials Waste Management
☐ Debris and Trash Management
☐ Dust Control
☐ Sanitary Facilities
☐ Other: __________
☐ Other: __________
☐ Other: __________
☐ Other: __________

2.6 VEGETATED BUFFER ZONES:
Natural vegetated buffers shall be maintained as feasible to protect adjacent surface waters. If vegetated natural buffer zones are not feasible due to site geometry, the appropriate additional sediment control measures have been incorporated into this SWP3.

Type	Stationing From	Stationing To

Refer to the Environmental Layout Sheets/ SWP3 Layout Sheets located in Attachment 1.2 of this SWP3

2.7 ALLOWABLE NON-STORMWATER DISCHARGES:
☒ Fire hydrant flushings
☒ Irrigation drainage
☒ Pavement washwater (where spills or leaks have not occurred, and detergents are not used)
☒ Potable water sources
☒ Springs
☒ Uncontaminated groundwater
☒ Water used to wash vehicles or control dust
☒ Other allowable non-stormwater discharges as allowed by TPDES GP TXR150000.

2.8 DEWATERING:
Dewatering discharges of accumulated stormwater, groundwater, and surface water including discharges from dewatering of trenches, excavations, foundations, vaults, and other points of accumulation are prohibited unless managed by appropriate controls to prevent and minimize the offsite discharge of sediment and other pollutants.

2.9 INSPECTIONS:
All disturbed areas and erosion and sediment control devices shall be inspected at least once every seven (7) days. Inspections shall be performed by TxDOT as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.5 of this SWP3.
When dewatering activities are present, a daily inspection will be conducted once per day during those activities and documented in accordance with CGP and TxDOT requirements.

2.10 MAINTENANCE:
Control measures shall be properly installed according to specifications. If it is determined that a BMP or control measure is not operating effectively, maintenance must be accomplished as soon as possible and before the next anticipated rain event, but in no case later than 7 calendar days after being able to access the site. Maintenance shall be performed by the Contractor as indicated on the Field Inspection and Maintenance Report Form 2118 and retained in Attachment 2.5 of this SWP3.

STORMWATER POLLUTION PREVENTION PLAN (SWP3)
© 2023 July 2023 Sheet 2 of 2
Texas Department of Transportation

FED. RD. DIV. NO.	PROJECT NO.		SHEET NO.
STATE	STATE DIST.	COUNTY	
TEXAS			
CONT.	SECT.	JOB	HIGHWAY NO.

2022-27-SWP

STATE OF TEXAS — ROBERT C. THOMPSON — 69524 — REGISTERED PROFESSIONAL ENGINEER
Thompson Land Engineering, LLC (F-10220)
10.02.2024

SHEET 56 OF 60
JOB NUMBER 1829
DESIGNED BY RCT | DRAFTED BY JH/MR
DATE ISSUED October, 2024

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633
SHEET NAME: TXDOT SW3P STANDARD SHEETS

REVISION | DATE

THOMPSON LAND ENGINEERING, LLC
Land Planning, Site Design, Subdivision Engineering
P.O. Box 160062, Austin, Texas 78716 (512-328-0002)
www.tleng.net email: ric@tleng.net
TBPE Reg. No. F-10220 © Copyright 2012

DATE:
FILE:

I. STORMWATER POLLUTION PREVENTION-CLEAN WATER ACT SECTION 402

TPDES TXR 150000: Stormwater Discharge Permit or Construction General Permit required for projects with 1 or more acres disturbed soil. Projects with any disturbed soil must protect for erosion and sedimentation in accordance with Item 506.

List MS4 Operator(s) that may receive discharges from this project. They may need to be notified prior to construction activities.

1.

2.

- [ ] No Action Required
- [x] Required Action

Action No.

1. Prevent stormwater pollution by controlling erosion and sedimentation in accordance with TPDES Permit TXR 150000
2. Comply with the SW3P and revise when necessary to control pollution or required by the Engineer.
3. Post Construction Site Notice (CSN) with SW3P information on or near the site, accessible to the public and TCEQ, EPA or other inspectors.
4. When Contractor project specific locations (PSL's) increase disturbed soil area to 5 acres or more, submit NOI to TCEQ and the Engineer.

II. WORK IN OR NEAR STREAMS, WATERBODIES AND WETLANDS CLEAN WATER ACT SECTIONS 401 AND 404

USACE Permit required for filling, dredging, excavating or other work in any water bodies, rivers, creeks, streams, wetlands or wet areas.

The Contractor must adhere to all of the terms and conditions associated with the following permit(s):

- [x] No Permit Required
- [ ] Nationwide Permit 14 - PCN not Required (less than 1/10th acre waters or wetlands affected)
- [ ] Nationwide Permit 14 - PCN Required (1/10 to <1/2 acre, 1/3 in tidal waters)
- [ ] Individual 404 Permit Required
- [ ] Other Nationwide Permit Required: NWP# ______

Required Actions: List waters of the US permit applies to, location in project and check Best Management Practices planned to control erosion, sedimentation and post-project TSS.

1.

2.

3.

4.

The elevation of the ordinary high water marks of any areas requiring work to be performed in the waters of the US requiring the use of a nationwide permit can be found on the Bridge Layouts.

Best Management Practices:

Erosion	Sedimentation	Post-Construction TSS
☐ Temporary Vegetation	☐ Silt Fence	☐ Vegetative Filter Strips
☐ Blankets/Matting	☐ Rock Berm	☐ Retention/Irrigation Systems
☐ Mulch	☐ Triangular Filter Dike	☐ Extended Detention Basin
☐ Sodding	☐ Sand Bag Berm	☐ Constructed Wetlands
☐ Interceptor Swale	☐ Straw Bale Dike	☐ Wet Basin
☐ Diversion Dike	☐ Brush Berms	☐ Erosion Control Compost
☐ Erosion Control Compost	☐ Erosion Control Compost	☐ Mulch Filter Berm and Socks
☐ Mulch Filter Berm and Socks	☐ Mulch Filter Berm and Socks	☐ Compost Filter Berm and Socks
☐ Compost Filter Berm and Socks	☐ Compost Filter Berm and Socks	☐ Vegetation Lined Ditches
	☐ Stone Outlet Sediment Traps	☐ Sand Filter Systems
	☐ Sediment Basins	☐ Grassy Swales

III. CULTURAL RESOURCES

Refer to TxDOT Standard Specifications in the event historical issues or archeological artifacts are found during construction. Upon discovery of archeological artifacts (bones, burnt rock, flint, pottery, etc.) cease work in the immediate area and contact the Engineer immediately.

- [x] No Action Required
- [ ] Required Action

Action No.

1.

2.

3.

4.

IV. VEGETATION RESOURCES

Preserve native vegetation to the extent practical.
Contractor must adhere to Construction Specification Requirements Specs 162, 164, 192, 193, 506, 730, 751, 752 in order to comply with requirements for invasive species, beneficial landscaping, and tree/brush removal commitments.

- [x] No Action Required
- [ ] Required Action

Action No.

1.

2.

3.

4.

V. FEDERAL LISTED, PROPOSED THREATENED, ENDANGERED SPECIES, CRITICAL HABITAT, STATE LISTED SPECIES, CANDIDATE SPECIES AND MIGRATORY BIRDS.

- [x] No Action Required
- [ ] Required Action

Action No.

1.

2.

3.

4.

If any of the listed species are observed, cease work in the immediate area, do not disturb species or habitat and contact the Engineer immediately. The work may not remove active nests from bridges and other structures during nesting season of the birds associated with the nests. If caves or sinkholes are discovered, cease work in the immediate area, and contact the Engineer immediately.

LIST OF ABBREVIATIONS

BMP:	Best Management Practice	SPCC:	Spill Prevention Control and Countermeasure
CGP:	Construction General Permit	SW3P:	Storm Water Pollution Prevention Plan
DSHS:	Texas Department of State Health Services	PCN:	Pre-Construction Notification
FHWA:	Federal Highway Administration	PSL:	Project Specific Location
MOA:	Memorandum of Agreement	TCEQ:	Texas Commission on Environmental Quality
MOU:	Memorandum of Understanding	TPDES:	Texas Pollutant Discharge Elimination System
MS4:	Municipal Separate Stormwater Sewer System	TPWD:	Texas Parks and Wildlife Department
MBTA:	Migratory Bird Treaty Act	TxDOT:	Texas Department of Transportation
NOT:	Notice of Termination	T&E:	Threatened and Endangered Species
NWP:	Nationwide Permit	USACE:	U.S. Army Corps of Engineers
NOI:	Notice of Intent	USFWS:	U.S. Fish and Wildlife Service

VI. HAZARDOUS MATERIALS OR CONTAMINATION ISSUES

General (applies to all projects):

Comply with the Hazard Communication Act (the Act) for personnel who will be working with hazardous materials by conducting safety meetings prior to beginning construction and making workers aware of potential hazards in the workplace. Ensure that all workers are provided with personal protective equipment appropriate for any hazardous materials used.

Obtain and keep on-site Material Safety Data Sheets (MSDS) for all hazardous products used on the project, which may include, but are not limited to the following categories: Paints, acids, solvents, asphalt products, chemical additives, fuels and concrete curing compounds or additives. Provide protected storage, off bare ground and covered, for products which may be hazardous. Maintain product labelling as required by the Act.

Maintain an adequate supply of on-site spill response materials, as indicated in the MSDS. In the event of a spill, take actions to mitigate the spill as indicated in the MSDS, in accordance with safe work practices, and contact the District Spill Coordinator immediately. The Contractor shall be responsible for the proper containment and cleanup of all product spills.

Contact the Engineer if any of the following are detected:

* Dead or distressed vegetation (not identified as normal)
* Trash piles, drums, canister, barrels, etc.
* Undesirable smells or odors
* Evidence of leaching or seepage of substances

Does the project involve any bridge class structure rehabilitation or replacements (bridge class structures not including box culverts)?

- [ ] Yes
- [x] No

If "No", then no further action is required.
If "Yes", then TxDOT is responsible for completing asbestos assessment/inspection.

Are the results of the asbestos inspection positive (is asbestos present)?

- [ ] Yes
- [ ] No

If "Yes", then TxDOT must retain a DSHS licensed asbestos consultant to assist with the notification, develop abatement/mitigation procedures, and perform management activities as necessary. The notification form to DSHS must be postmarked at least 15 working days prior to scheduled demolition.

If "No", then TxDOT is still required to notify DSHS 15 working days prior to any scheduled demolition.

In either case, the Contractor is responsible for providing the date(s) for abatement activities and/or demolition with careful coordination between the Engineer and asbestos consultant in order to minimize construction delays and subsequent claims.

Any other evidence indicating possible hazardous materials or contamination discovered on site. Hazardous Materials or Contamination Issues Specific to this Project:

- [x] No Action Required
- [ ] Required Action

Action No.

1.

2.

3.

VII. OTHER ENVIRONMENTAL ISSUES

(includes regional issues such as Edwards Aquifer District, etc.)

- [x] No Action Required
- [ ] Required Action

Action No.

1.

2.

3.

Texas Department of Transportation — Design Division Standard

ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS
EPIC

FILE: epic.dgn	DN: TxDOT	CK: RG	DW: VP	CK: AR
© TxDOT: February 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS 12-12-2011 (DS) 05-07-14 ADDED NOTE SECTION IV. 01-23-2015 SECTION I (CHANGED ITEM 1122 TO ITEM 506, ADDED GRASSY SWALES.	DIST	COUNTY		SHEET NO.

2022-27-SWP

THOMPSON LAND ENGINEERING, LLC
Land Planning, Site Design, Subdivision Engineering
P.O. Box 160062, Austin, Texas 78716 (512-328-0002)
www.tleng.net email: ric@tleng.net
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REVISION	DATE

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

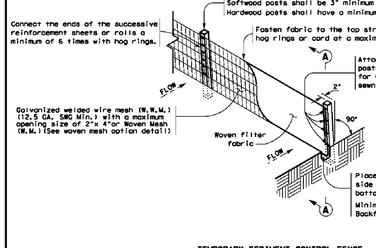
SHEET NAME: TXDOT EPIC SHEET

DATE ISSUED: July, 2024

DESIGNED BY: RCT | DRAFTED BY: JH/MR

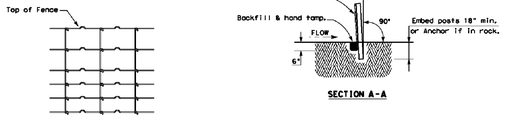
JOB NUMBER: 1829

SHEET 57 OF 60



TEMPORARY SEDIMENT CONTROL FENCE

SCF



SECTION A-A

HINGE JOINT KNOT WOVEN MESH (OPTION) DETAIL

Galvanized hinge joint knot woven mesh (12.5 GA.SMG Min.) requires a minimum of five horizonnal wires spaced at a maximum of 12 inches apart and all vertical wires spaced at a maximum of 12 inches apart.

SEDIMENT CONTROL FENCE USAGE GUIDELINES

A sediment control fence may be constructed near the downstream perimeter of a disturbed area along a contour to intercept sediment from overland runoff. A 2 year storm frequency may be used to calculate the flow rate to be filtered.

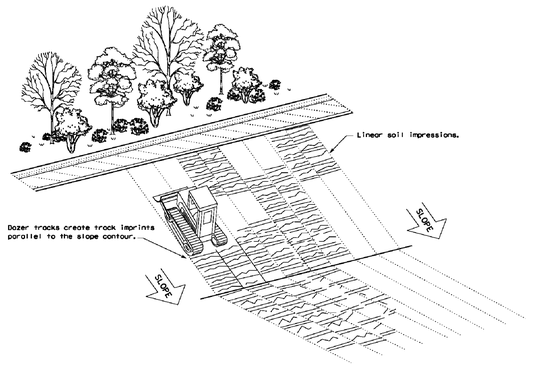
Sediment control fence should be sized to filter a maximum flow through rate of 100 GPM/FT^2. Sediment control fence is not recommended to control erosion from a drainage area larger than 2 acres.

LEGEND

Sediment Control Fence — SCF

GENERAL NOTES

1. Vertical tracking is required on projects where soil distributing activities have occurred unless otherwise approved.
2. Perform vertical tracking on slopes to temporarily stabilize soil.
3. Provide equipment with a track undercarriage capable of producing linear soil impressions measuring a minimum of 12" in length by 2" to 4" in width by 1/2" to 2" in depth.
4. Do not exceed 12" between track impressions.
5. Install continous linear track impressions where the minimum 12" length impressions are perpendicular to the slope or direction of water flow.

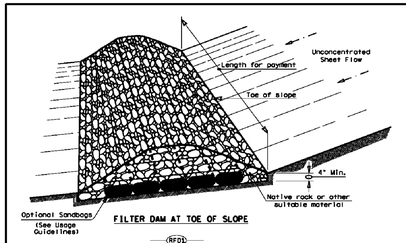


VERTICAL TRACKING

Texas Department of Transportation — Design Division Standard

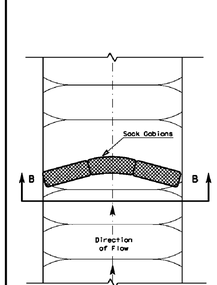
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES
FENCE & VERTICAL TRACKING
EC(1)-16

FILE= ec116	DW:TxDOT	CK: KM	DW: VP	CK:CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	6151		COUNTY	SHEET NO.

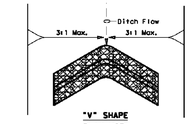


FILTER DAM AT TOE OF SLOPE

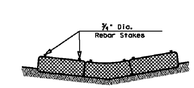
RFD1



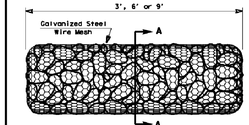
PLAN VIEW



"V" SHAPE PLAN VIEW

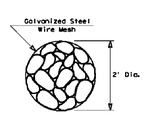


SECTION B-B

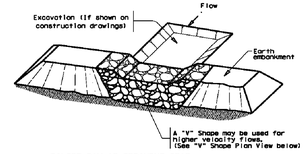


TYPE 4 (SACK GABIONS)

RFD4

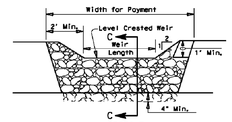


SECTION A-A

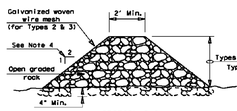


FILTER DAM AT SEDIMENT TRAP

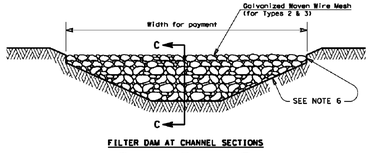
RFD1 OR RFD2



PROFILE



SECTION C-C



FILTER DAM AT CHANNEL SECTIONS

RFD1 OR RFD2 OR RFD3

GENERAL NOTES

1. If shown on the plans or directed by the Engineer, filter dams should be placed near the toe of slopes where erosion is anticipated, upstream and/or downstream of drainage structures, and in roadway ditches and channels to collect sediment.
2. Materials (aggregate, wire mesh, sandbags, etc.) shall be as indicated by the specification for "Rock Filter Dams for Erosion and Sedimentation Control".
3. The rock filter dam dimensions shall be as indicated on the SW3P plans.
4. Side slopes should be 2:1 or flatter. Dams within the safety zone shall have sideslopes of 6:1 or flatter.
5. Maintain a minimum of 1' between top of rock filter dam weir and top of embankment for filter dams at sediment traps.
6. Filter dams should be embedded a minimum of 4" into existing ground.
7. The sediment trap for ponding of sediment laden runoff shall be of the dimensions shown on the plans.
8. Rock filter dam types 2 & 3 shall be secured with 20 gauge galvanized woven wire mesh with 1" diameter hexagonal openings. The aggregate shall be placed on the mesh to the height & slopes specified. The mesh shall be folded at the upstream side over the aggregate and tightly secured to itself on the downstream side using wire ties or hog rings. For in stream use, the mesh should be secured or staked to the stream bed prior to aggregate placement.
9. Sack Gabions should be staked down with ¾" dia. rebar stakes, and have a double-twisted hexagonal weave with a nominal mesh opening of 2 ½" x 3 ¼".
10. Flow outlet should be onto a stabilized area (vegetation, rock, etc.).
11. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

PLAN SHEET LEGEND

Type 1 Rock Filter Dam — RFD1
Type 2 Rock Filter Dam — RFD2
Type 3 Rock Filter Dam — RFD3
Type 4 Rock Filter Dam — RFD4

ROCK FILTER DAM USAGE GUIDELINES

Rock Filter Dams should be constructed downstream from disturbed areas to intercept sediment from overland runoff and/or concentrated flow. The dam should be sized to filter a maximum flow through rate of 50 GPM/FT^2 of cross sectional area. A 2 year storm frequency may be used to calculate the flow rate.

Type 1 (18" high with no wire mesh) (3" to 6" aggregate): Type 1 may be used at the toe of slopes, ground inlets, in small ditches, and at dike or swale outlets. This type of dam is recomended to control erosion from a drainage area of 5 acres or less. Type 1 may not be used in concentrated high velocity flows (approximently 8 Ft/Sec or more) in which aggregate wash out may occur. Sandbags may be used at the embedded foundation (4" deep min.) for better filtering efficiency of low flows if called for on the plans or directed by the Engineer.

Type 2 (18" high with wire mesh) (3" to 6" aggregate): Type 2 may be used in ditches and at dike or swale outlets.

Type 3 (36" high with wire mesh) (4" to 8" aggregate): Type 3 may be used in stream flow and should be secured to the stream bed.

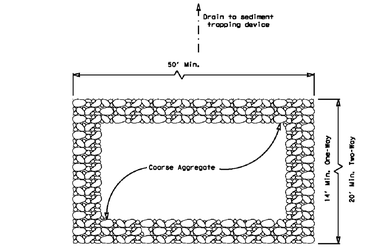
Type 4 (Sack gabions) (3" to 6" aggregate): Type 4 May be used in ditches and smaller channels to form an erosion control dam.

Type 5: Provide rock filter dams as shown on plans.

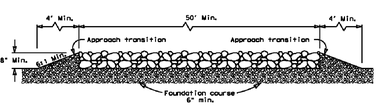
Texas Department of Transportation — Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES
ROCK FILTER DAMS
EC(2)-16

FILE= ec216	DW:TxDOT	CK: KM	DW: VP	CK:CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	6151		COUNTY	SHEET NO.



PLAN VIEW

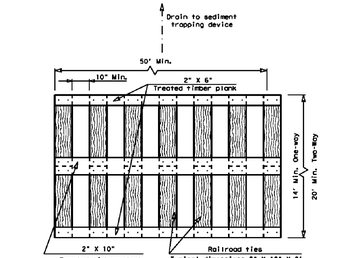


ELEVATION VIEW

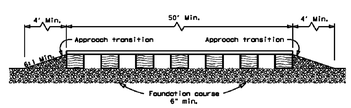
CONSTRUCTION EXIT (TYPE 1)
ROCK CONSTRUCTION (LONG TERM)

GENERAL NOTES (TYPE 1)

1. The length of the type 1 construction exit shall be as indicated on the plans, but not less than 50'.
2. The coarse aggregate should be open graded with a size of 4" to 8".
3. The approach transitions should be no steeper than 6:1 and constructed as directed by the Engineer.
4. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other materials approved by the Engineer.
5. The construction exit shall be graded to allow drainage to a sediment trapping device.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
7. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.



PLAN VIEW

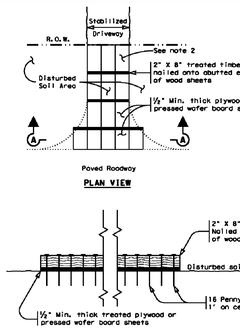


ELEVATION VIEW

CONSTRUCTION EXIT (TYPE 2)
TIMBER CONSTRUCTION (LONG TERM)

GENERAL NOTES (TYPE 2)

1. The length of the type 2 construction exit shall be as indicated on the plans, but not less than 50'.
2. The treated timber planks shall be attached to the railroad ties with ½"x 6" min. lag bolts. Other fasteners may be used as approved by the Engineer.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The approach transitions shall be no steeper than 6:1 and constructed as directed by the Engineer.
5. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other material as approved by the Engineer.
6. The construction exit should be graded to allow drainage to a sediment trapping device.
7. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
8. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.



PLAN VIEW

SECTION A-A
CONSTRUCTION EXIT (TYPE 3)
SHORT TERM

GENERAL NOTES (TYPE 3)

1. The length of the type 3 construction exit shall be as shown on the plans, or as directed by the Engineer.
2. The type 3 construction exit may be constructed from open graded crushed stone with a size of two to four inches spread a min. of 4" thick to the limits shown on the plans.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

Texas Department of Transportation — Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES
CONSTRUCTION EXITS
EC(3)-16

FILE= ec316	DW:TxDOT	CK: KM	DW: VP	CK:CK: LS
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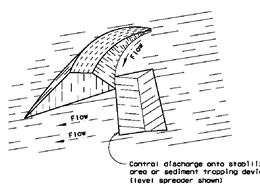
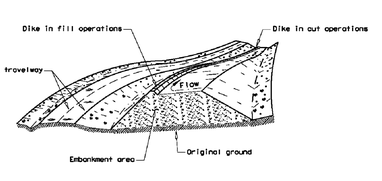


PERIMETER DIKE

D

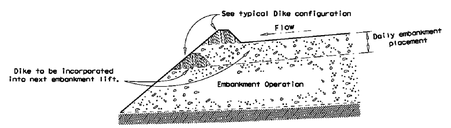


DIVERSION DIKE

D

GENERAL NOTE

1. Soil used in dike construction shall be machine compacted.
2. Top width and height of dike may be modified with prior approval of the Engineer.
3. Side slopes within the safety clear zone of a roadway shall be 6:1 or flatter.
4. Grading shall be shown elsewhere in the plans or as directed by the Engineer.
5. The Engineer reserves the right to modify the dimensions shown for the dike dependent on runoff volume characteristics.
6. Dikes that are in place for more than 14 calendar days should be stabilized to prevent sediment runoff.
7. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
8. Remove sediment and debris when accumulation affects the performance of the devices, after a rain and when directed by the engineer.



EMBANKMENT SECTION - DIVERSION DIKE

D

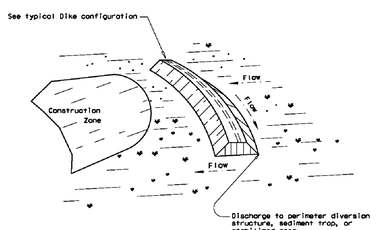
DIKE USAGE GUIDELINES

A Dike may be used to intercept runoff and divert it around unstabilized areas or to divert sediment laden runoff to an erosion control device (sediment basin or trap, rock filter dam, etc.).

The drainage area contributing runoff to a dike should not exceed 5 acres. The spacing of dikes should be as follows:

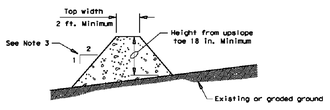
Slope of disturbed areas above dike	greater than 10%	5 - 10%	less than 5%
Maximum distance between dikes	100'	200'	300'

Intercepted runoff flowing along a dike should outlet to a stabilized area (vegetation, rock, etc.).



INTERCEPTOR DIKE

D



TYPICAL DIKE CONFIGURATION

D

PLANS SHEET LEGEND

DIKE — D

Texas Department of Transportation — Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES
DIKES (EARTHWORK FOR EROSION CONTROL)
EC(4)-16

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AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

TXDOT EC STANDARD SHEETS (1 OF 3)

PROJECT
SHEET NAME

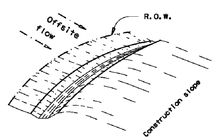
DATE ISSUED
July, 2024

DESIGNED BY: RCT
DRAFTED BY: JHMR

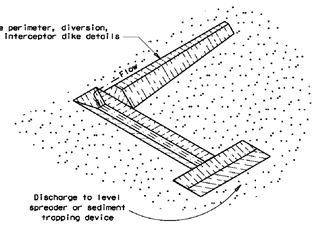
JOB NUMBER
1829

SHEET
58 OF 60

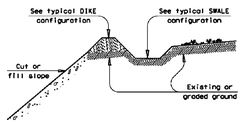
DATE:
FILE:



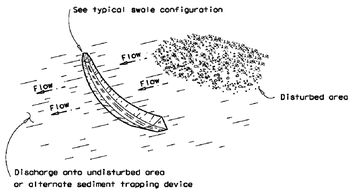
PERIMETER SWALE



DIVERSION SWALE



DIVERSION DIKE WITH SWALE



INTERCEPTOR SWALE

GENERAL NOTE

1. Dimensions of swale may be modified with prior approval of the Engineer.
2. Side slopes within the safety clear zone of a roadway shall be 6:1 or flatter.
3. Grading shall be shown elsewhere on the plans or as directed by the Engineer.
4. The Engineer reserves the right to modify the dimensions shown for the swale dependent on runoff volume characteristics.
5. Swales that are in place for more than 14 calender days should be stabilized through seeding or other measures to control sediment runoff.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
7. Remove sediment and debris when accumulation affects the performance of the devices, after a rain and when directed by the Engineer.

SWALE AND DIKE/SWALE USAGE GUIDELINES

A swale or dike/swale may be used to intercept runoff and divert it around unstabilized areas or to divert sediment laden runoff to an erosion control device (sediment basin or trap, rock filter dam, etc.).

The drainage area contributing runoff to a swale or dike/swale should not exceed 5 acres. The spacing of swales and dike/swales should be as follows:

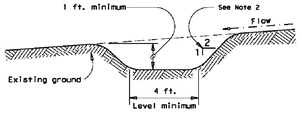
Slope of disturbed areas above dike	greater than 10%	5 - 10%	less than 5%
Maximum distance between dikes	100'	200'	300'

Intercepted runoff flowing in a swale or dike/swale should outlet to a stabilized area (vegetation, rock, etc.).

PLAN SHEET LEGEND

SWALE —(S)—

DIKE —(D)—



TYPICAL SWALE CONFIGURATION

Texas Department of Transportation — Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES
SWALES
(EARTHWORK FOR EROSION CONTROL)
EC(5)-16

FILE: ec516	DW: TxDOT	CK: KM	DW: VP	CK/CK: LS
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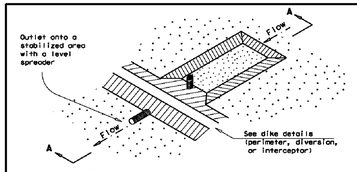
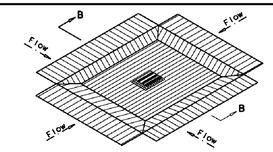


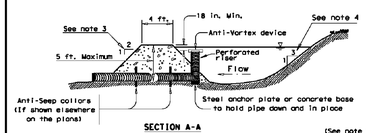
SEDIMENT BASIN AND/OR TRAP WITH PIPE OUTLET

ST/PO

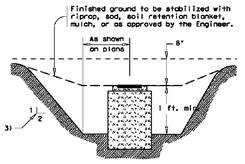


DROP INLET SEDIMENT TRAP

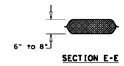
ST-DI



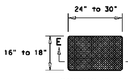
SECTION A-A



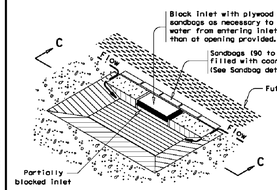
SECTION B-B



SECTION E-E

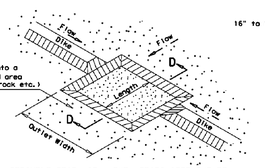


SANDBAG DETAIL



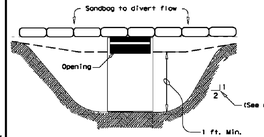
CURB INLET SEDIMENT TRAP

ST-CI

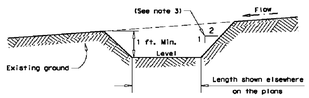


SEDIMENT TRAP WITH LEVEL STABILIZED OUTLET

ST



SECTION C-C



SECTION D-D

GENERAL NOTES

1. Pipe outlet material shall conform to the item "Pipe Underdrains" or as accepted by the Engineer.
2. All pipe connections shall be watertight.
3. Side slopes within the safety clear zone of a roadway shall be 6:1 or flatter. Protect the traveling public from inlet stacks within the clear zone.
4. Sediment basins shall have side slopes of 3:1 or flatter.
5. The dimensions and limits of excavation for sediment basins and traps will be as shown elsewhere on the plans.
6. The sandbag material shall be made of polypropylene, polyethylene or polyamide woven fabric, min. unit weight 4 ounces /SY, Mullen burst strength exceeding 300 psi and ultraviolet stability exceeding 70%.
7. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

SEDIMENT BASIN & TRAP USAGE GUIDELINES

A sediment basin and/or trap may be used to precipitate sediment out of runoff draining from an unstabilized area.

Basins: The drainage area for a sediment basin should not exceed 100 acres. The basin capacity shall be at least 1800 CF/Acre of drainage area (0.5" over the drainage area). If the disturbed area draining to the basin is larger than 10 acres, the basin capacity should be 3600 CF/Acre (1.0" over the drainage area).

The basin should have a 40 hour draw-down time with an emergency spillway. The spillway may be designed to pass the peak rate of runoff from a 25 year frequency storm. The 100 year storm should be investigated to consider possible flooding impacts.

The entrance into the basin should be protected from erosion. The basin should be cleaned when the capacity has been reduced by 1/3.

Traps: The drainage area for a sediment trap should not exceed 5 acres. The trap capacity should be 1800 CF/Acre (0.5" over the drainage area).

Sediment traps should be placed in the following locations:
1. Within drainage ditches spaced @ 500': on center
2. Immediately preceding ditch inlets
3. Just before the drainage enters a water course
4. Just before the drainage leaves the right of way

The trap outlet may either be through a perforated riser and pipe assembly designed to achieve a 40 hour draw-down time or over a level stabilized area (vegetation, rock, etc.).

The trap should be cleaned when the capacity has been reduced by ½ or the sediment has accumulated to a depth of 1', whichever is less.

PLANS SHEET LEGEND

ST/PO — Sediment Basin and / or Trap with Pipe Outlet

ST-DI — Drop Inlet Sediment Trap

ST-CI — Curb Inlet Sediment Trap

ST — Sediment Trap with Level Stabilized Outlet

Texas Department of Transportation — Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES
SEDIMENT BASINS AND TRAPS
(EARTHWORK FOR EROSION CONTROL)
EC(6)-16

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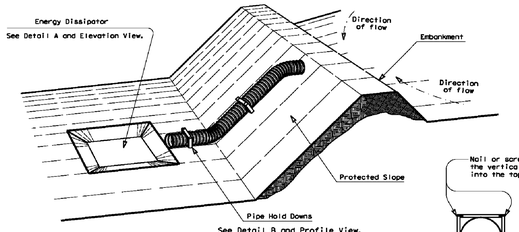
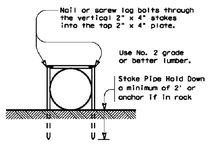
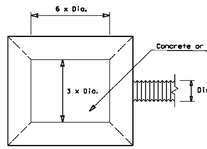


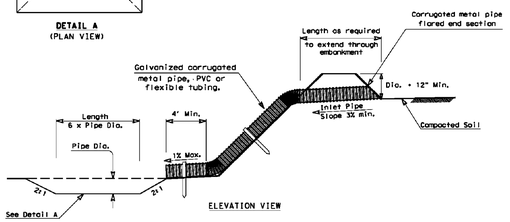
PERSPECTIVE VIEW



DETAIL B
(ELEVATION VIEW)



DETAIL A
(PLAN VIEW)



ELEVATION VIEW

PIPE SLOPE DRAIN WITH ENERGY DISSIPATOR

PSD

GENERAL NOTES

1. The inlet pipe shall have a slope of 3 percent or greater. Pipe diameter shall be as indicated on the construction drawings.
2. The top of embankment shall be at least 12" higher than the top of the inlet pipe at all points.
3. The pipe shall be galvanized corrugated metal pipe, PVC, or flexible tubing with watertight connection bands.
4. Pipe shall be secured with hold-down grommets spaced a maximum of 10' on centers or with pipe hold downs as shown in Detail B.
5. Construct embankment for the drainage system in 8" lifts to the required elevations. Hand tamp the soil around and under the entrance section to the top of the embankment as shown on the plans or as directed by the engineer.
6. The sediment trap shall be constructed to the dimensions as shown and in accordance with Special Specification, "Earthwork for Erosion Control". As otherwise detailed on the plans, the sediment trap may be stabilized using concrete or rubble riprap as per item, "Riprap".
7. A standard corrugated metal pipe flared end section shall be used at the entrance of the pipe slope drain.
8. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

PIPE SLOPE DRAIN DESIGN CRITERIA

PIPE/TUBING SIZE	DIAMETER	MAXIMUM DRAINAGE AREA
PSD 12	12"	0.5 Acre
PSD 18	18"	1.5 Acres
PSD 21	21"	2.5 Acres
PSD 24	24"	3.5 Acres
PSD 30	30"	5.0 Acres

PIPE SLOPE DRAIN USAGE GUIDELINES

A Pipe Slope Drain (PSD) should be constructed to drain concentrated surface runoff safely down slopes without causing erosion. The drainage area contributing runoff to a PSD should not exceed 5 acres. The PSD should be sized to drain the peak rate of runoff without overtopping at the earth dike entrance. A 25 year storm frequency may be used to calculate the flow rate.

PLAN SHEET LEGEND

Pipe Slope Drain —(PSD)—

Texas Department of Transportation — Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES
TEMPORARY PIPE SLOPE DRAINS
EC(7)-16

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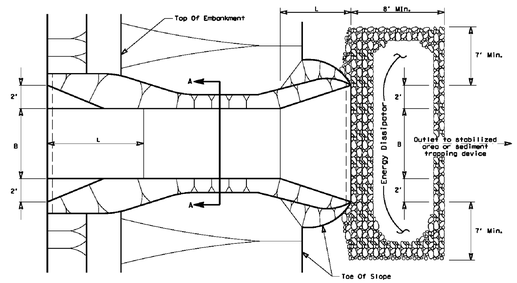
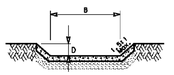
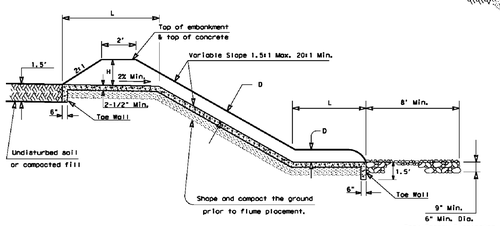


PLAN VIEW



SECTION A-A



ELEVATION VIEW

PAVED FLUME

PF

GENERAL NOTES

1. The group / size is a designator for the dimensions of the paved flume. The group / size is designated by a letter (A or B) and the bottom (B) dimension. The appropriate size shall be indicated on the construction plans.
2. Provide rock or rubble with a minimum diameter of 6" and a maximum volume of 1/2 cubic feet for construction of energy dissipaters.
3. For high velocity flows, the aggregate of the energy dissipator should be secured with 20-gauge galvanized woven wire mesh with 1" diameter hexagonal openings. The aggregate should be placed on the mesh to the dimensions specified. The mesh shall be folded at the upstream side over the aggregate and tightly secured to itself on the downstream side using wire ties or hog rings.
4. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

PAVED FLUME USAGE GUIDELINES

A Paved Flume should be constructed to drain concentrated surface runoff safely down slopes without causing erosion. The drainage area contributing runoff to a paved flume should not exceed that given in the Design Criteria above. The paved flume should be sized to drain the peak rate of runoff without overtopping the embankment at the earth dike entrance. A 25 year storm frequency may be used to calculate the flow rate.

DESIGN CRITERIA

Group/Size	B Bottom Width	H Min.	D Min.	L Min.	Maximum Drainage Area
A-2	2'	1.5'	8"	5'	5 Acres
A-4	4'	1.5'	8"	5'	8 Acres
A-6	6'	1.5'	8"	5'	11 Acres
A-8	8'	1.5'	8"	5'	14 Acres
A-10	10'	1.5'	8"	5'	18 Acres
B-4	4'	2'	10"	6'	14 Acres
B-6	6'	2'	10"	6'	20 Acres
B-8	8'	2'	10"	6'	25 Acres
B-10	10'	2'	10"	6'	31 Acres
B-12	12'	2'	10"	6'	36 Acres

PLANS SHEET LEGEND

Paved Flume —(PF)—

Texas Department of Transportation — Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES
TEMPORARY PAVED FLUMES
EC(8)-16

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www.tleng.net
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TBPE Reg. No. F-11033

REVISION

DATE

PROJECT: AAA FM 3405
4701 & 4721 FM 3405, GEORGETOWN TX, 78633

SHEET NAME: TXDOT EC STANDARD SHEETS (2 OF 3)

DATE ISSUED: July, 2024

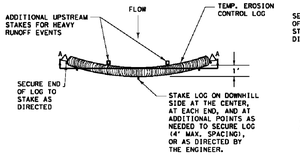
DESIGNED BY: RCT
DRAFTED BY: JHMR

JOB NUMBER: 1829

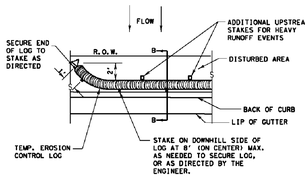
SHEET: 59 OF 60

2022-27-SWP

DATE:
FILE:



PLAN VIEW



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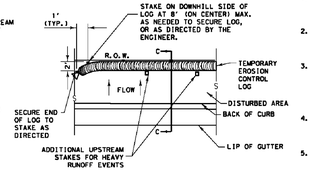
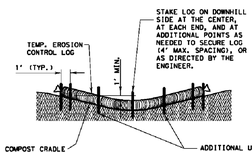


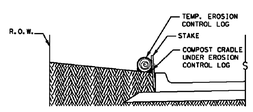
PLAN VIEW



SECTION A-A

EROSION CONTROL LOG DAM

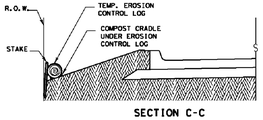
CL-D



SECTION B-B

EROSION CONTROL LOG AT BACK OF CURB

CL-BOC



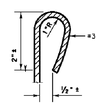
SECTION C-C

EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY

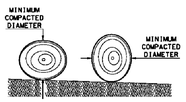
CL-ROW

LEGEND

- CL-D — EROSION CONTROL LOG DAM
- CL-BOC — EROSION CONTROL LOG AT BACK OF CURB
- CL-ROW — EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY
- CL-SST — EROSION CONTROL LOGS ON SLOPES STAKE AND TRENCHING ANCHORING
- CL-SSL — EROSION CONTROL LOGS ON SLOPES STAKE AND LASHING ANCHORING
- CL-DI — EROSION CONTROL LOG AT DROP INLET
- CL-CI — EROSION CONTROL LOG AT CURB INLET
- CL-GI — EROSION CONTROL LOG AT CURB & GRATE INLET



REBAR STAKE DETAIL



DIAMETER MEASUREMENTS OF EROSION CONTROL LOGS SPECIFIED IN PLANS

SEDIMENT BASIN & TRAP USAGE GUIDELINES

An erosion control log sediment trap may be used to filter sediment out of runoff draining from an unstabilized area.

Log Traps: The drainage area for a sediment trap should not exceed 5 acres. The trap capacity should be 1800 CF/Acre (0.5" over the drainage area).

Control logs should be placed in the following locations:
1. Within drainage ditches spaced as needed or min. 500' on center
2. Immediately preceding ditch inlets or drain inlets
3. Just before the drainage enters a water course
4. Just before the drainage leaves the right of way
5. Just before the drainage leaves the construction limits where drainage flows away from the project.

The logs should be cleaned when the sediment has accumulated to a depth of 1/2 the log diameter.

Cleaning and removal of accumulated sediment deposits is incidental and will not be paid for separately.

GENERAL NOTES:

1. EROSION CONTROL LOGS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, OR AS DIRECTED BY THE ENGINEER.
2. LENGTHS OF EROSION CONTROL LOGS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED FOR THE PURPOSE INTENDED.
3. UNLESS OTHERWISE DIRECTED, USE BIODEGRADABLE OR PHOTODEGRADABLE CONTAINMENT MESH ONLY WHERE LOG WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM. FOR TEMPORARY INSTALLATIONS, USE RECYCLABLE CONTAINMENT MESH.
4. FILL LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE THE MINIMUM COMPACTED DIAMETER SPECIFIED IN THE PLANS WITHOUT EXCESSIVE DEFORMATION.
5. STAKES SHALL BE 2" X 2" WOOD OR #3 REBAR, 2'-4" LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED BY THE ENGINEER.
6. DO NOT PLACE STAKES THROUGH CONTAINMENT MESH.
7. COMPOST CRADLE MATERIAL IS INCIDENTAL & WILL NOT BE PAID FOR SEPARATELY.
8. SANDBAGS USED AS ANCHORS SHALL BE PLACED ON TOP OF LOGS & SHALL BE OF SUFFICIENT SIZE TO HOLD LOGS IN PLACE.
9. TURN THE ENDS OF EACH ROW OF LOGS UPSLOPE TO PREVENT RUNOFF FROM FLOWING AROUND THE LOG.
10. FOR HEAVY RUNOFF EVENTS, ADDITIONAL UPSTREAM STAKES MAY BE NECESSARY TO KEEP LOG FROM FOLDING IN ON ITSELF.

SHEET 1 OF 3

Texas Department of Transportation | Design Division Standard

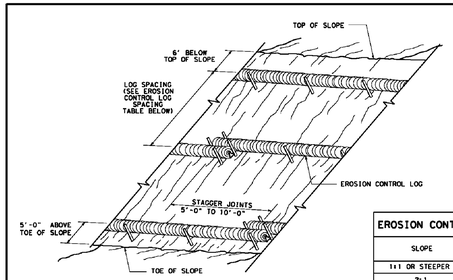
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

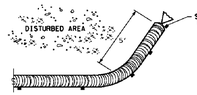
FILE: ec016	DW: TxDOT	CK: KM	DW: LS/PT	CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	DIST	COUNTY		SHEET NO.

DATE:
FILE:



EROSION CONTROL LOGS ON SLOPES STAKE AND TRENCHING ANCHORING

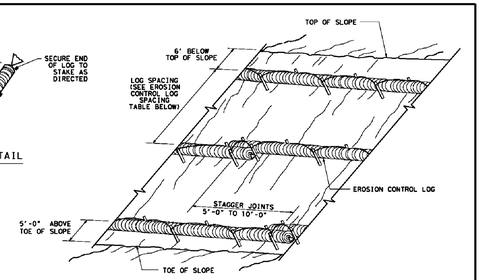
CL-SST



END SECTION RAP DETAIL

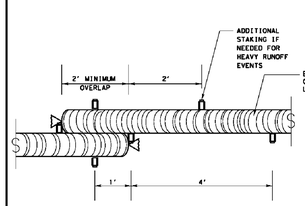
EROSION CONTROL LOG SPACING TABLE				
SLOPE	LOG DIAMETER			
	6"	8"	12"	18"
1:1 OR STEEPER	5'	10'	15'	20'
2:1	10'	20'	30'	40'
3:1	15'	30'	45'	60'
4:1 OR FLATTER	20'	40'	60'	80'

* ADJUSTMENTS CAN BE MADE FOR SOIL TYPE:
SOFT, LOAMY SOILS-ADJUST ROWS CLOSER TOGETHER;
HARD, ROCKY SOILS- ADJUST ROWS FARTHER APART



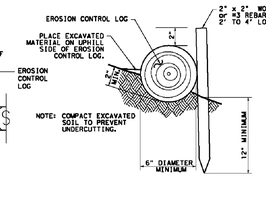
EROSION CONTROL LOGS ON SLOPES STAKE AND LASHING ANCHORING

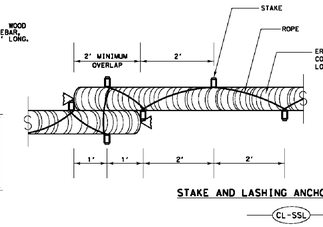
CL-SSL



STAKE AND TRENCHING ANCHORING DETAIL

CL-SST

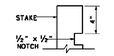




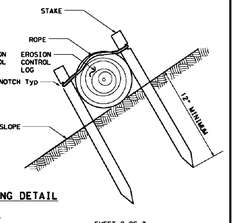
STAKE AND LASHING ANCHORING DETAIL

CL-SSL

TRENCH DEPTH TABLE	
LOG DIAMETER	DEPTH
6"	2"
8"	3"
12"	4"
18"	5"



STAKE NOTCH DETAIL



SHEET 2 OF 3

Texas Department of Transportation | Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

FILE: ec016	DW: TxDOT	CK: KM	DW: LS/PT	CK: LS
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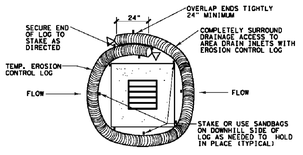
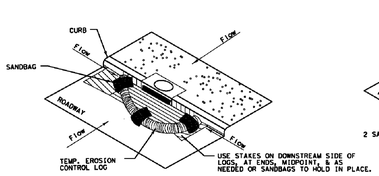
REVISIONS	DIST	COUNTY		SHEET NO.

DATE:
FILE:



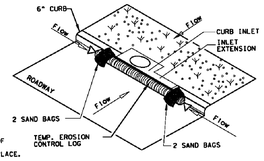
EROSION CONTROL LOG AT DROP INLET

CL-DI



EROSION CONTROL LOG AT CURB INLET

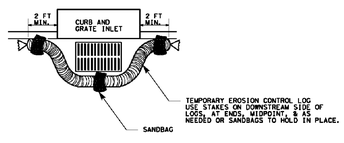
CL-CI



EROSION CONTROL LOG AT CURB INLET

CL-CI

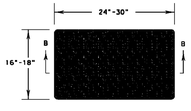
NOTE:
EROSION CONTROL LOGS USED AT CURB INLETS SHOULD ONLY BE USED IF THEY WILL NOT IMPEDE TRAFFIC OR FLOOD THE ROADWAY OR WHEN THE STORM SEWER SYSTEM IS NOT FULLY FUNCTIONAL.



EROSION CONTROL LOG AT CURB & GRADE INLET

CL-GI

SECTION B-B



SANDBAG DETAIL

SHEET 3 OF 3

Texas Department of Transportation | Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

EROSION CONTROL LOG

EC(9)-16

FILE: ec016	DW: TxDOT	CK: KM	DW: LS/PT	CK: LS
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2022-27-SWP

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4701 & 4721 FM 3405, GEORGETOWN TX, 78633
PROJECT

TXDOT EC STANDARD SHEETS (3 OF 3)
SHEET NAME

DATE ISSUED: July, 2024

DESIGNED BY: RCT | DRAFTED BY: JH/MR

JOB NUMBER: 1829

SHEET: 60 OF 60