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: Liberty Hill Middle School No. 3						**2. Regulated Entity No.: RN 111535720**			
3. Customer Name: Liberty Hill ISD						**4. Customer No.: CN 600788483**			
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):**		59.6	
9. Application Fee:	$8,000.00		**10. Permanent BMP(s):**			Sand Filter Basin			
11. SCS (Linear Ft.):	N/A		**12. AST/UST (No. Tanks):**			None			
13. County:	Williamson		**14. Watershed:**			South Fork San Gabriel River			

Application Distribution

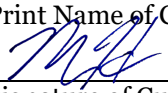
Instructions: Use the table below to determine the number of applications required. One original and one copy of the application, plus additional copies (as needed) for each affected incorporated city, county, and groundwater conservation district are required. Linear projects or large projects, which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

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

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

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	___	___	_1_
Region (1 req.)	___	___	_1_
County(ies)	___	___	_1_
Groundwater Conservation District(s)	___Edwards Aquifer Authority ___Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	___Barton Springs/ Edwards Aquifer	NA
City(ies) Jurisdiction	___Austin ___Buda ___Dripping Springs ___Kyle ___Mountain City ___San Marcos ___Wimberley ___Woodcreek	___Austin ___Bee Cave ___Pflugerville ___Rollingwood ___Round Rock ___Sunset Valley ___West Lake Hills	___Austin ___Cedar Park ___Florence ___Georgetown ___Jarrell ___Leander _1_Liberty Hill ___Pflugerville ___Round Rock

San Antonio Region					
County:	**Bexar**	**Comal**	**Kinney**	**Medina**	**Uvalde**
Original (1 req.)	___	___	___	___	___
Region (1 req.)	___	___	___	___	___
County(ies)	___	___	___	___	___
Groundwater Conservation District(s)	___ Edwards Aquifer Authority ___Trinity-Glen Rose	___Edwards Aquifer Authority	___Kinney	___EAA ___Medina	___EAA ___Uvalde
City(ies) Jurisdiction	___Castle Hills ___Fair Oaks Ranch ___Helotes ___Hill Country Village ___Hollywood Park ___San Antonio (SAWS) ___Shavano Park	___Bulverde ___Fair Oaks Ranch ___Garden Ridge ___New Braunfels ___Schertz	NA	___San Antonio ETJ (SAWS)	NA

I certify that to the best of my knowledge, that the application is complete and accurate. This application is hereby submitted to TCEQ for administrative review and technical review.	
Matt Hardy, PE	
Print Name of Customer/Authorized Agent	
	02/08/2024
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: Matt Hardy, PE

Date: 02-08-2024

Signature of Customer/Agent:

Project Information

1. Current Regulated Entity Name: Liberty Hill Middle School No. 3
   Original Regulated Entity Name: Liberty Hill Middle School No. 3
   Assigned Regulated Entity Number(s) (RN): 111535720
   Edwards Aquifer Protection Program ID Number(s): 11003161
   ☒ The applicant has not changed and the Customer Number (CN) is: 600788483
   ☐ 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	59.64	59.64
Type of Development	School	School
Number of Residential Lots	0	0
Impervious Cover (acres)	16.72	18.51
Impervious Cover (%)	28.03%	31.04%
Permanent BMPs	_____	_____
Other	_____	_____

AST Modification Summary	***Approved Project***	***Proposed Modification***
Number of ASTs	0	0
Other	0	0

UST Modification Summary	***Approved Project***	***Proposed Modification***
Number of USTs	0	0
Other	0	0

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.

Contributing Zone Plan Modification Submittal - TCEQ Form 10259

Attachment A: Original Approval Letter

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 2, 2022

Mr. Steven Snell
Liberty Hill Independent School District
301 Forrest St
Liberty Hill, Texas 78642

Re: Edwards Aquifer, Williamson County

NAME OF PROJECT: Liberty Hill Middle School 3; Located 0.5 miles north of intersection 183 & SH 29; Liberty Hill, Texas

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

Regulated Entity No. RN111535720; Additional ID No. 11003161

Dear Mr. Snell:

The Texas Commission on Environmental Quality (TCEQ) has completed its review of the CZP application for the above-referenced project submitted to the Austin Regional Office by Langan Engineering on behalf of Liberty Hill Independent School District on July 14, 2022. Final review of the CZP was completed after additional material was received on August 30, 2022. As presented to the TCEQ, the Temporary and Permanent Best Management Practices (BMPs) were selected and construction plans were prepared by a Texas Licensed Professional Engineer to be in general compliance with the requirements of 30 TAC Chapter 213. These planning materials were sealed, signed and dated by a Texas Licensed Professional Engineer. Therefore, based on the engineer's concurrence of compliance, the planning materials for construction of the proposed project and pollution abatement measures are hereby approved subject to applicable state rules and the conditions in this letter. The applicant or a person affected may file with the chief clerk a motion for reconsideration of the executive director's final action on this Edwards Aquifer Protection Plan. A motion for reconsideration must be filed no later than 23 days after the date of this approval letter. *This approval expires two (2) years from the date of this letter unless, prior to the expiration date, more than 10 percent of the construction has commenced on the project or an extension of time has been requested.*

PROJECT DESCRIPTION

The proposed commercial project will have an area of approximately 59.64 acres. It will include a new middle school, turf athletic fields, parking, drives, and various supporting elements. The impervious cover will be 16.72 acres (28.03 percent). Project wastewater will be disposed of by conveyance to the existing Liberty Hill Wastewater Treatment Plant owned by the City of Liberty Hill.

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 partial sedimentation/filtration basins, designed using the TCEQ technical guidance document, Complying with the Edwards Aquifer Rules: Technical Guidance on Best Management Practices (2005), will be constructed to treat stormwater runoff. The required total suspended solids (TSS) treatment for this project is 14,553 pounds of TSS generated from the 16.72 acres of impervious cover. The approved measures meet the required 80 percent removal of the increased load in TSS caused by the project.

SPECIAL CONDITIONS

I. All permanent pollution abatement measures shall be operational prior to first occupancy of the facilities within their respective drainage areas.

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

STANDARD CONDITIONS

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

Prior to Commencement of Construction:

4. All contractors conducting regulated activities at the referenced project location shall be provided a copy of this notice of approval. At least one complete copy of the approved Contributing Zone Plan and this notice of approval shall be maintained at the project location until all regulated activities are completed.
5. Any modification to the activities described in the referenced CZP application following the date of approval may require the submittal of a plan to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval prior to initiating construction of the modifications.
6. The applicant must provide written notification of intent to commence construction, replacement, or rehabilitation of the referenced project. Notification must be submitted to the Austin Regional Office no later than 48 hours prior to commencement of the regulated activity. Written notification must include the name of the approved plan and file number for the regulated activity, the date on which the regulated activity will commence, and the name of the prime contractor with the name and telephone number of the contact person.
7. Temporary erosion and sedimentation (E&S) controls, i.e., silt fences, rock berms, stabilized construction entrances, or other controls described in the approved Storm Water Pollution Prevention Plan (SWPPP) must be installed prior to construction and maintained during construction. Temporary E&S controls may be removed when vegetation is established and the construction area is stabilized. If a water quality pond is proposed, it shall be used as a sedimentation basin during construction. The TCEQ may monitor stormwater discharges

from the site to evaluate the adequacy of temporary E&S control measures. Additional controls may be necessary if excessive solids are being discharged from the site.

During Construction:

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

After Completion of Construction:

14. Owners of permanent BMPs and measures must insure that the BMPs and measures are constructed and function as designed. A Texas Licensed Professional Engineer must certify in writing that the permanent BMPs or measures were constructed as designed. The certification letter must be submitted to the Austin Regional Office within 30 days of site completion.
15. The applicant shall be responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred. A copy of the transfer of responsibility must be filed with the executive director through the Austin Regional Office within 30 days of the transfer. A copy of the transfer form (TCEQ-10263) is enclosed.
16. Upon legal transfer of this property, the new owner(s) is required to comply with all terms of the approved Contributing Zone Plan. If the new owner intends to commence any new regulated activity on the site, a new Contributing Zone Plan that specifically addresses the new activity must be submitted to the executive director. Approval of the plan for the new

regulated activity by the executive director is required prior to commencement of the new regulated activity.

17. A Contributing Zone Plan approval or extension will expire and no extension will be granted if more than 50 percent of the total construction has not been completed within ten years from the initial approval of a plan. A new Contributing Zone Plan must be submitted to the Austin Regional Office with the appropriate fees for review and approval by the executive director prior to commencing any additional regulated activities.
18. At project locations where construction is initiated and abandoned, or not completed, the site shall be returned to a condition such that the aquifer is protected from potential contamination.

This action is taken under authority delegated by the Executive Director of the Texas Commission on Environmental Quality. If you have any questions or require additional information, please contact the Edwards Aquifer Protection Program of the Austin Regional Office at 512-339-2929.

Sincerely,

Lillian Butler

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

LIB/jv

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

cc: Mr. Jack Garner, P.E., Langan Engineering

Change in Responsibility for Maintenance
on Permanent Best Management Practices and Measures

The applicant is no longer responsible for maintaining the permanent best management practice (BMP) and other measures. The project information and the new entity responsible for maintenance is listed below.

Customer: _____

Regulated Entity Name: _____

Site Address: _____

City, Texas, Zip: _____

County: _____

Approval Letter Date: _____

BMPs for the project: _____

New Responsible Party: _____

Name of contact: _____

Mailing Address: _____

City, State: _____ Zip: _____

Telephone: _____ FAX: _____

_____ _____

Signature of New Responsible Party Date

I acknowledge and understand that I am assuming full responsibility for maintaining all permanent best management practices and measures approved by the TCEQ for the site, until another entity assumes such obligations in writing or ownership is transferred.

If you have questions on how to fill out this form or about the Edwards Aquifer protection program, please contact us at 210/490-3096 for projects located in the San Antonio Region or 512/339-2929 for projects located in the Austin Region.

Individuals are entitled to request and review their personal information that the agency gathers on its forms. They may also have any errors in their information corrected. To review such information, contact us at 512/239-3282.

Contributing Zone Plan Modification Submittal - TCEQ Form 10259

Attachment B: Project Narrative

The subject site is located at 450 County Road 258, Liberty Hill, Texas and is located in the Edwards Aquifer Contributing Zone. The overall tract is 59.64 acres and is bisected by an existing drainage ditch that generally runs north and south. The Previously approved Liberty Hill Middle School No. 3 is located on the east side of the drainage channel and there are no proposed changes to the water quality ponds treating the eastern portion of the site. This project has commenced construction but has not been completed.

The west side of the channel remains undeveloped with open pasture and some copse of primarily oak trees with some cedar elm and cedar trees in its current condition. The proposed improvements under this package include an extension of the on-site driveway west to the subject property's intersection with the US Hwy 183 Right-of-Way, a proposed turn lane to service the new driveway, and a new sand filter water quality pond to treat stormwater from the west side of the site.

The new impervious cover is addressed using a new sand filter basin shown in the plans just west of the central channel. The overflow from the basin splitter structure is routed to a storm water detention basin and ultimately discharges to the drainage ditch east of the new pond. The drainage area discharging into the new basin is 15.31 acres and for this initial permit treats 1.79 acres of impervious cover.

When considering the total 59.64-acre site the currently proposed permit includes 1.79 acres of impervious cover in addition to 16.72 acres of impervious cover under the previous permit, for a total of 31.0% of the overall site.

This site is planned to be expanded in the future to accommodate addition education facilities resulting in additional site impervious coverage. The sand filter basin and detention basin have been over-sized to accommodate the additional impervious cover. The ultimate drainage area is anticipated to remain 15.31 acres and is designed to treat 12.25 acres or 80% impervious cover.

Upgradient storm water flowing towards the site will be intercepted at the Western boundary and routed via channel through the site to an unnamed tributary central to the site which ultimately flows to the South Fork of the San Gabriel River.

Contributing Zone Plan Modification Submittal - TCEQ Form 10259

Attachment C: Current Site Plan of the Approved Project

NOTICE TO CONTRACTORS - UTILITIES

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF ANY EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, THE GOVERNING MUNICIPALITY, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION PROVIDED IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

** NOTICE TO CONTRACTORS - TOPOGRAPHIC SURVEY **

TOPOGRAPHIC INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY PERFORMED BY JPH LAND SURVEYING, INC.. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, IN WRITING, OF ANY DISCREPANCIES OR OMISSIONS TO THE TOPOGRAPHIC INFORMATION. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR CONFIRMING THE LOCATION (HORIZONTAL/VERTICAL) OF ANY BURIED CABLES, CONDUITS, PIPES, AND STRUCTURES (STORM SEWER, SANITARY SEWER, WATER, GAS, TELEVISION, TELEPHONE, ETC.) WHICH IMPACT THE CONSTRUCTION SITE. THE CONTRACTOR(S) SHALL NOTIFY THE OWNER AND ENGINEER IF ANY DISCREPANCIES ARE FOUND BETWEEN THE ACTUAL CONDITIONS VERSUS THE DATA CONTAINED IN THE CONSTRUCTION PLANS. ANY COSTS INCURRED AS THE RESULT OF NOT CONFIRMING THE ACTUAL LOCATION (HORIZONTAL/VERTICAL) OF SAID CABLES, CONDUITS, PIPES, AND STRUCTURES SHALL BE BORNE BY THE CONTRACTOR. ADDITIONALLY, THE CONTRACTOR(S) SHALL NOTIFY THE OWNER AND ENGINEER IF ANY ERRORS OR DISCREPANCIES ARE FOUND ON THE CONSTRUCTION DOCUMENTS (PS&E), WHICH NEGATIVELY IMPACT THE PROJECT. THE ENGINEER AND OWNER SHALL BE INDEMNIFIED OF PROBLEMS AND/OR COST WHICH MAY RESULT FROM CONTRACTOR'S FAILURE TO NOTIFY ENGINEER AND OWNER.

PAVING LEGEND

- BUS TRAFFIC LOOP, ACCESS ROAD AND FIRE LANES. 6" REINFORCED CONCRETE, 6" FLEXIBLE BASE, 12" MOISTURE CONDITIONED SUBGRADE REF GEOTECH REPORT
- CAR PARKING LOT AND PARENT DROP-OFF LOOP. 5" REINFORCED CONCRETE, 6" FLEXIBLE BASE, 12" MOISTURE CONDITIONED SUBGRADE REF GEOTECH REPORT
- DUMPSTER APPROACH AND MAINTENANCE COURTYARDS, 7" REINFORCED CONCRETE, 6" FLEXIBLE BASE, 12" MOISTURE CONDITIONED SUBGRADE REF GEOTECH REPORT
- CAR PARKING LOT ASPHALT ALTERNATE (THIS SHEET) 2" HMAC - TYPE D OR C, 8" FLEXIBLE BASE, 12" MOISTURE CONDITIONED SUBGRADE REF GEOTECH REPORT
- PROPOSED REINFORCED CONCRETE SIDEWALK (WIDTH ≤ 6' = 4" THICKNESS, WIDTH ≥ 7' = 5" THICKNESS) REFERENCE PAVING DETAILS SHEET SIDEWALK SCHEDULE

CZP CALCULATIONS

SITE AREA: 59.64 ACRES

IMPERVIOUS SUMMARY

STRUCTURES/ROOFTOPS	143,039 SQ FT = 3.28 AC
PARKING, ACCESS DRIVES & SIDEWALKS	574,044 SQ FT = 13.18 AC
OTHER IMPERVIOUS COVER	11,054 SQ FT = 0.25 AC
TOTAL IC	728,137 SQ FT = 16.72 AC = 28 %

NOTE: WATER QUALITY AND DETENTION PONDS WERE DESIGNED TO ACCOMMODATE APPROXIMATELY 75% IMPERVIOUS COVER ON THE EAST SIDE OF DRAINAGE CHANNEL.

SITE BENCHMARK

TBM #1 - THE FIRST SITE BENCHMARK (TBM #1) IS A MAG NAIL WITH METAL WASHER STAMPED "JPH BENCHMARK" SET IN A CONCRETE CULVERT DRAIN ON THE EAST MARGIN OF US HIGHWAY NO. 183, LOCATED APPROXIMATELY 12 FEET WESTERLY FROM THE FROM THE EAST RIGHT-OF-WAY LINE OF US HIGHWAY NO. 183, AND APPROXIMATELY 1,125 FEET SOUTHEASTERLY FROM THE INTERSECTION OF U.S. HIGHWAY 183 AND COUNTY ROAD 258. BENCHMARK ELEVATION = 1,046.29' (NAVD'88).

TBM #2 - THE SECOND SITE BENCHMARK (TBM #2) IS A MAG NAIL WITH METAL WASHER STAMPED "JPH BENCHMARK" SET IN A CONCRETE CULVERT DRAIN ON THE NORTH MARGIN OF COUNTY ROAD 258, LOCATED APPROXIMATELY 2,580 FEET NORTHEASTERLY FROM THE INTERSECTION OF U.S. HIGHWAY 183 AND COUNTY ROAD 258, AND APPROXIMATELY 920 FEET SOUTHEASTERLY FROM THE INTERSECTION OF COUNTY ROAD 260 AND COUNTY ROAD 258. BENCHMARK ELEVATION = 1,055.98' (NAVD'88)

WILLIAMSON COUNTY FFE NOTE

THE MINIMUM FINISHED FLOOR ELEVATIONS (FFE) FOR LOTS SHOWN ON THE SITE PLAN ARE DETERMINED BY A STUDY PREPARED BY LANGAN, DATED JANUARY 6, 2023.

GRAPHIC SCALE

0 100 200 FEET

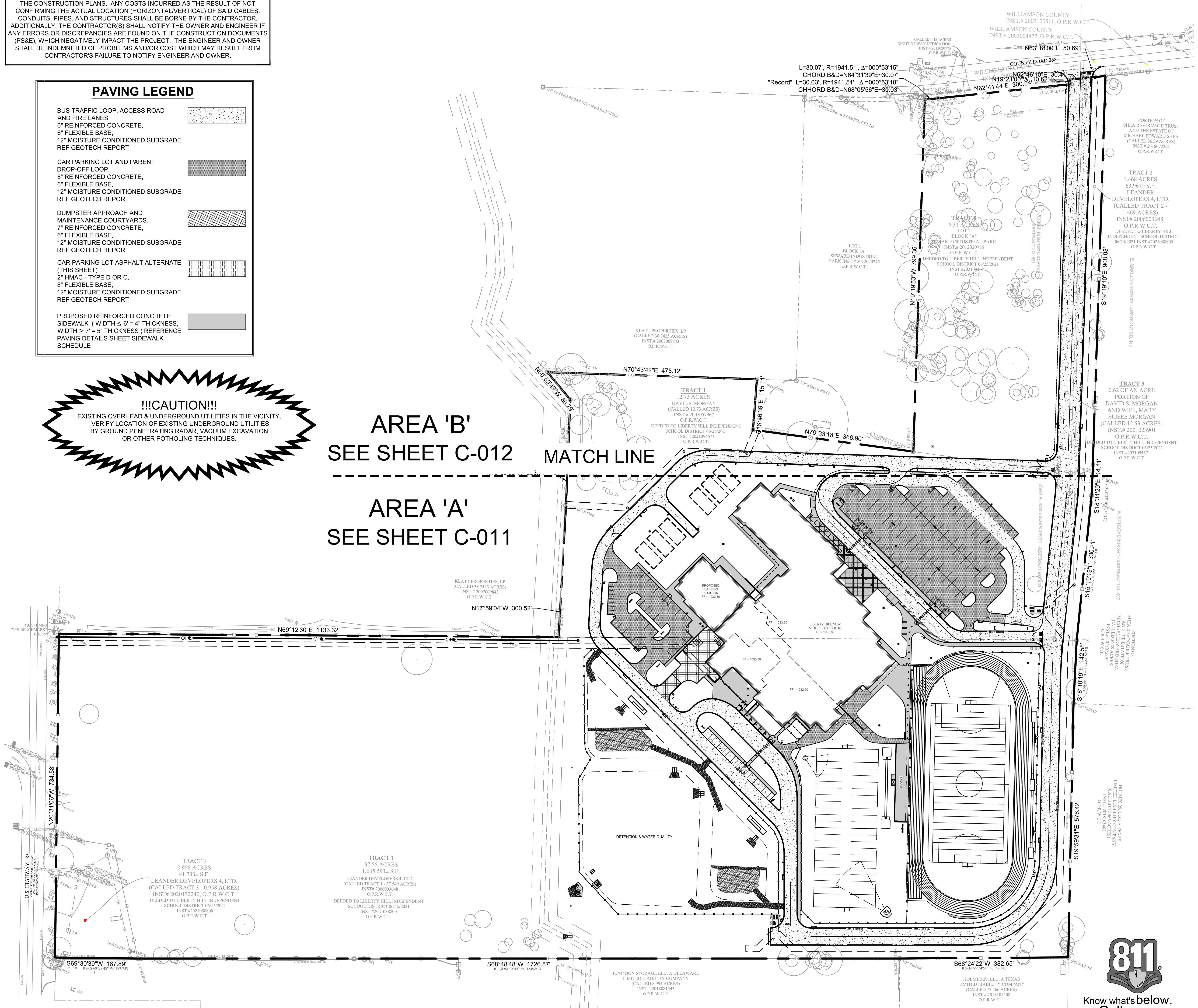
VEHICLE STACKING SUMMARY

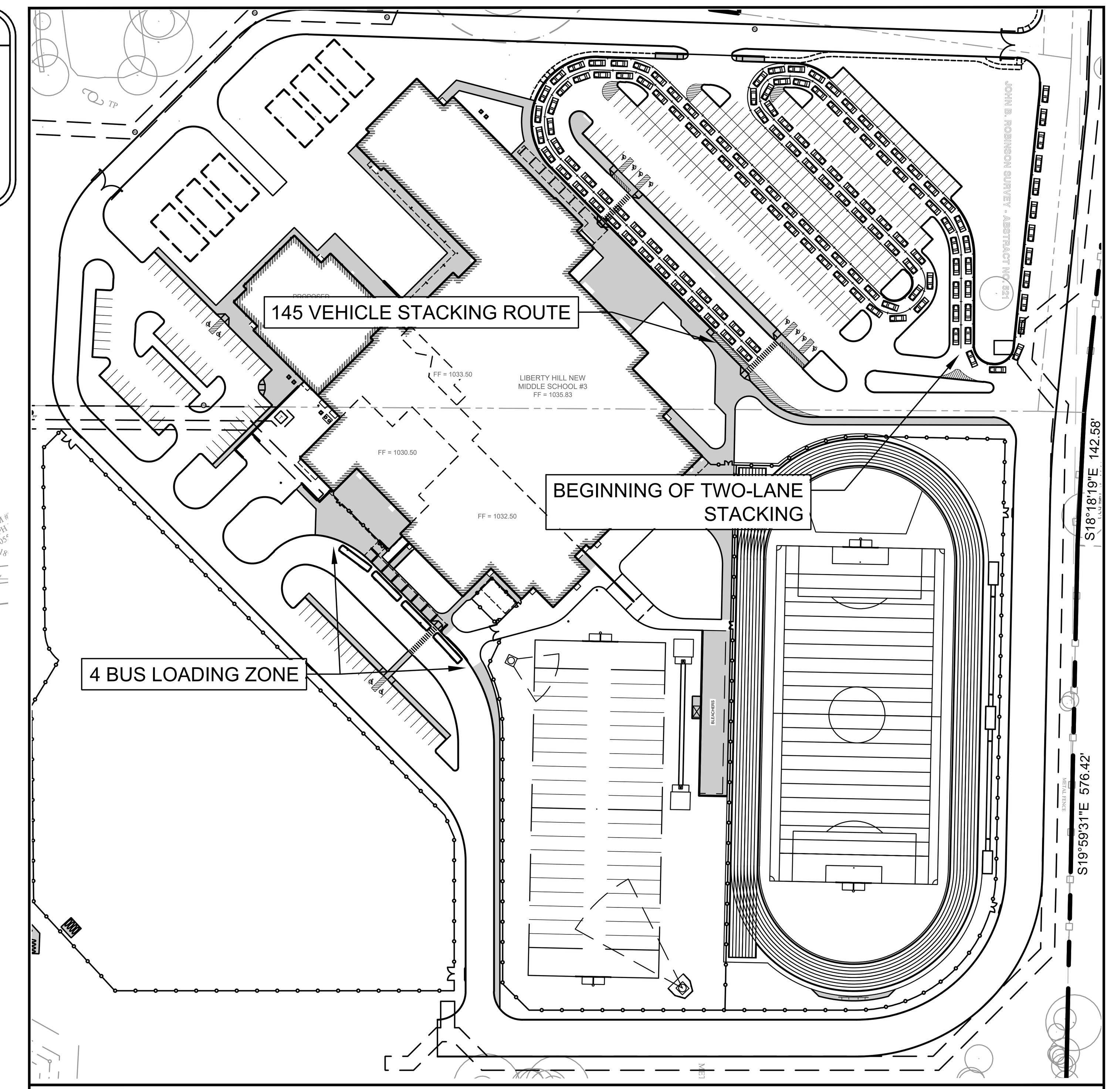
PARENT STACKING PROVIDED

TOTAL STACKING LANE LENGTH - 3600'
SINGLE CAR LENGTH - 25'
TOTAL STACKING - 3600/25 = 145 VEHICLES

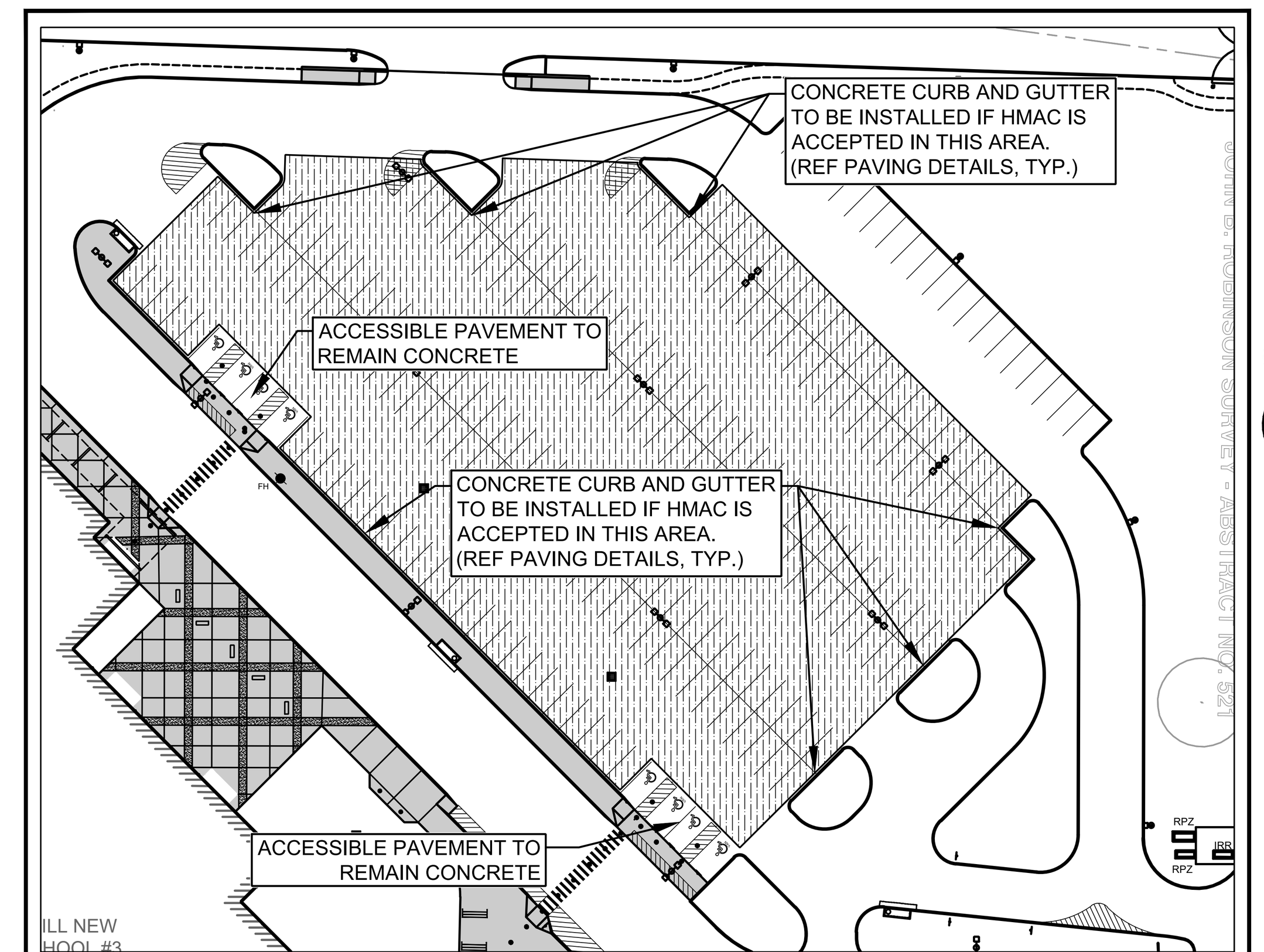
BUS STACKING PROVIDED

TOTAL STACKING LANE LENGTH - 180'
SINGLE BUS LENGTH - 45'
TOTAL STACKING - 180/45 = 4 BUSES

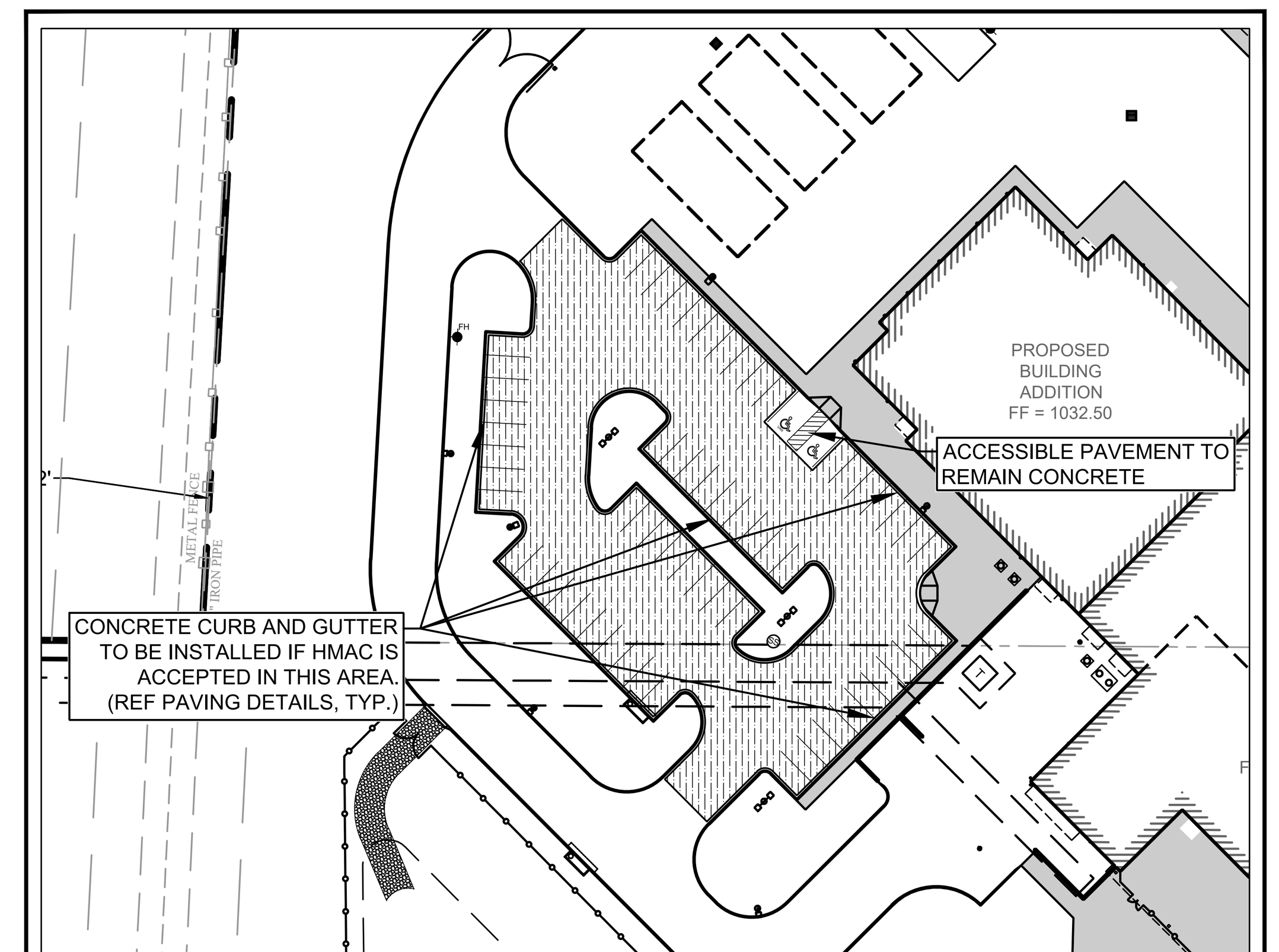




VEHICLE STACKING



BID ALTERNATE
SCALE: 1" = 60'



BID ALTERNATE
SCALE: 1" = 60'

Know what's below. Call before you dig.

THESE PLANS ARE SUBJECT TO REVIEW & APPROVAL BY JURISDICTIONAL ENTITIES.

1) CLARIFIED LOCATIONS OF TRACTS 1,2 AND 3 AND INFORMATION ABOUT THE DEED
2) 1) ADDED BID ALTERNATE FOR STAFF PARKING LOT PAVING
10) 1) ADDED WILLIAMSON COUNTY FFE NOTE

Date	Description	No.
01/30/23	CPR 03	10
11/11/22	CPR 01	2
09/26/22	ADDENDUM 1	1

Revisions

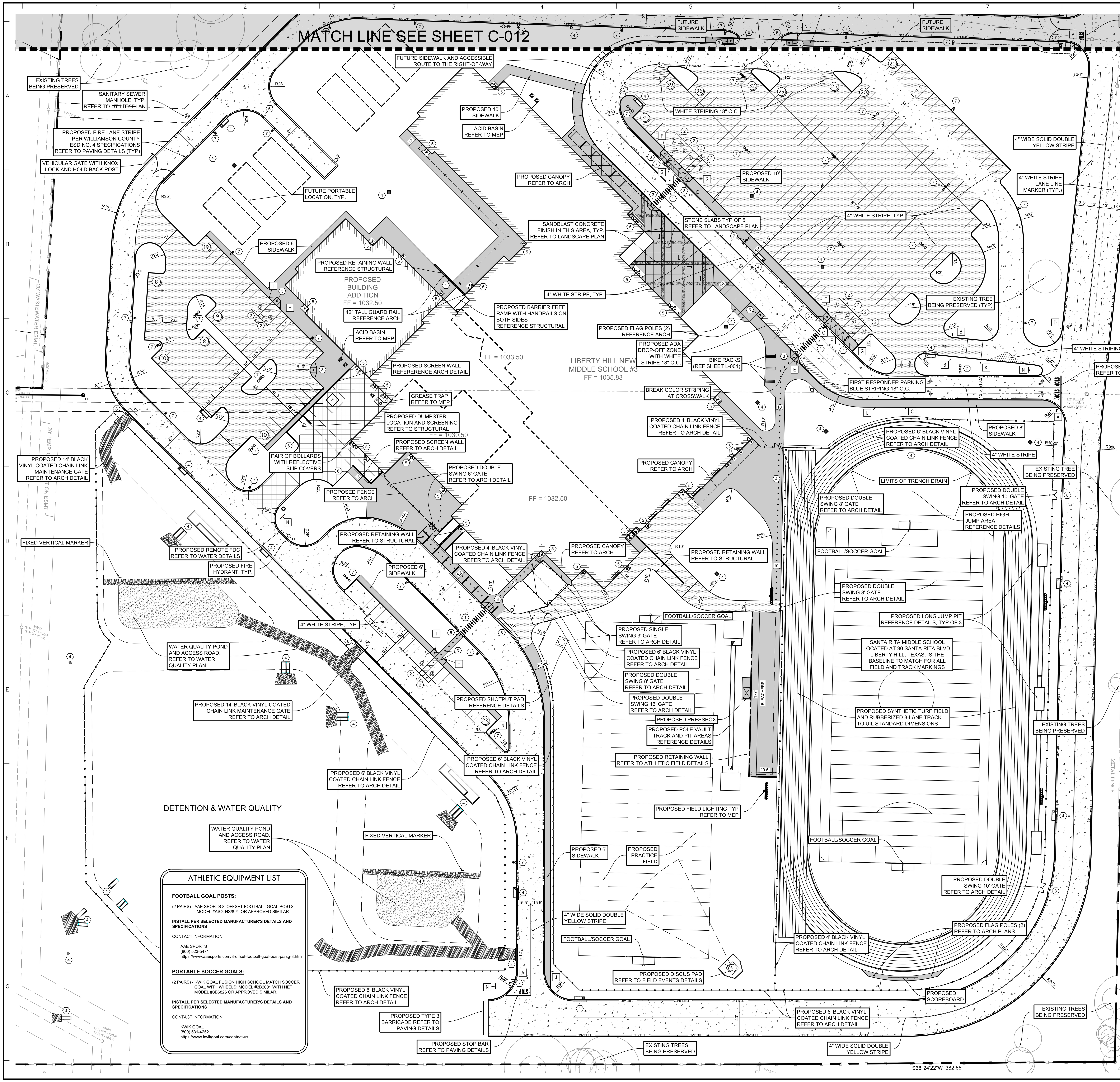
STATE OF TEXAS
JACK H. GARNER
98447
LICENSED PROFESSIONAL ENGINEER
01-30-2023
TBPE Registration #: F- 13,709

LANGAN
Langan Engineering and Environmental Services, Inc.
9606 N. Mopac Expressway, Suite 110
Austin, TX 78759
T: 737.289.7800 F: 737.289.7801 www.langan.com
TBPE FIRM REG. #F-13709

Project
NEW LIBERTY HILL MIDDLE SCHOOL #3
450 CR 258
LIBERTY HILL
WILLIAMSON COUNTY TEXAS

Drawing Title
OVERALL SITE PLAN

Project No. 531013304
Date SEPTEMBER 2022
Drawn By
Checked By
Drawing No. **C-010**



ATHLETIC EQUIPMENT LIST

FOOTBALL GOAL POSTS:

(2 PAIRS) - AAE SPORTS 8' OFFSET FOOTBALL GOAL POSTS; MODEL #ASG-HS/8-Y, OR APPROVED SIMILAR.

INSTALL PER SELECTED MANUFACTURER'S DETAILS AND SPECIFICATIONS

CONTACT INFORMATION:

AAE SPORTS
(800) 523-5471
https://www.aaesports.com/8-offset-football-goal-post-p/asg-8.htm

PORTABLE SOCCER GOALS:

(2 PAIRS) - KWIK GOAL FUSION HIGH SCHOOL MATCH SOCCER GOAL WITH WHEELS; MODEL #2B2001 WITH NET MODEL #3B6826 OR APPROVED SIMILAR.

INSTALL PER SELECTED MANUFACTURER'S DETAILS AND SPECIFICATIONS

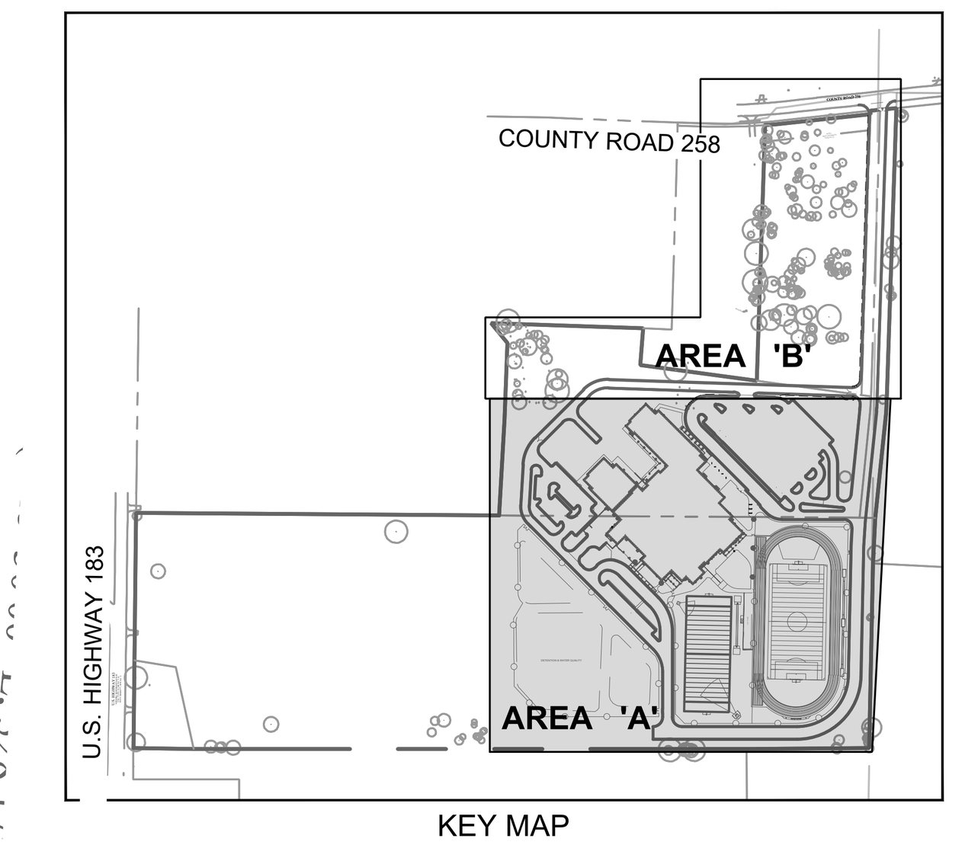
CONTACT INFORMATION:

KWIK GOAL
(800) 531-4252
https://www.kwikgoal.com/contact-us

!!!CAUTION!!!

EXISTING OVERHEAD & UNDERGROUND UTILITIES IN THE VICINITY. VERIFY LOCATION OF EXISTING UNDERGROUND UTILITIES BY GROUND PENETRATING RADAR, VACUUM EXCAVATION OR OTHER POTHOLING TECHNIQUES.

GRAPHIC SCALE
0 40 80 FEET



KEY MAP
N.T.S

LEGEND

PROPOSED FACE AND BACK OF CURB	
DUMPSTER APPROACH AND MAINTENANCE COURTYARD. 7" REINFORCED CONCRETE, 6" FLEXIBLE BASE, 12" MOISTURE CONDITIONED SUBGRADE REFER TO GEOTECH	
BUS TRAFFIC LOOP, ACCESS ROAD AND FIRE LANES. 6" REINFORCED CONCRETE, 6" FLEXIBLE BASE, 12" MOISTURE CONDITIONED SUBGRADE. REFER TO GEOTECH	
CAR PARKING LOT AND PARENT DROP OFF LOOP. 5" REINFORCED CONCRETE, 6" FLEXIBLE BASE, 12" MOISTURE CONDITIONED SUBGRADE REFER TO GEOTECH	
PROPOSED REINFORCED CONC. SIDEWALK (WIDTH ≤ 6' = 4" THICKNESS, WIDTH ≥ 7' = 5" THICKNESS) REF: PAVING DETAILS	
PROPOSED TRAFFIC SIGN	
PROPOSED RETAINING WALL	
PROPOSED THERMOPLASTIC WHITE STOP BAR AND WHITE "STOP" LETTERING	STOP
PROPOSED PAINTED WHITE TRAFFIC ARROW	
FIRE LANE STRIPING	FIRELANE
PROPOSED FIRE HYDRANT	FH
PROPOSED SANITARY SEWER MANHOLE	SS
PROPOSED CURB INLET	
PROPOSED GRATE INLET	
PROPOSED LIGHTING	
ACCESSIBLE ROUTE	
PARKING COUNT	1
PROPOSED TRANSFORMER	T

SIGNAGE SYMBOL KEY

- A "STOP" SIGN (R1-1)
- B "DO NOT ENTER" SIGN (R5-1)
- C "ONE WAY" SIGN (R6-2L)
- D "RIGHT TURN AND THROUGH ONLY" SIGN (R3-8RT)
- E ACCESSIBLE DROP-OFF SPACE
- F ACCESSIBLE PARKING SIGNAGE IN BOLLARD
- G VAN ACCESSIBLE PARKING SIGNAGE IN BOLLARD
- H ACCESSIBLE PARKING SIGNAGE (NOT IN BOLLARD)
- I VAN ACCESSIBLE PARKING SIGNAGE (NOT IN BOLLARD)
- J "BUS AND SERVICE ENTRANCE"
- K "VISITOR AND STAFF ENTRANCE"
- L "LANE ENDS MERGE LEFT" SIGN (W9-4)
- M DO NOT OBSTRUCT INTERSECTION SIGNAGE
- N SITE WAYFINDING SIGN REFERENCE ARCH

SYMBOL KEY

1. CROSSWALK / PED. CROSSING TYPICAL SEE PAVING DETAILS
2. TYPICAL ACCESSIBLE PARKING SPACES SEE PAVING DETAILS (TYP)
3. INSTALL BARRIER FREE RAMP (BFR) REFER TO PAVING DETAILS (TYP)
4. PROPOSED DRAINAGE STRUCTURE. REFER TO DRAINAGE PLAN (TYP)
5. PROPOSED STRUCTURAL STOOP REFER TO STRUCTURAL PLANS
6. TRANSITION CURB REFER TO PAVING DETAILS
7. PROPOSED LIGHT POLE REF. MEP PLANS (CIVIL FOR LOCATIONS)
8. PROPOSED LAYDOWN CURB/ MAINTENANCE CROSSING REFER TO PAVING DETAILS (TYP)

STANDARD ACCESSIBILITY REQUIREMENTS

PARKING:

(A) ACCESSIBLE PARKING SPACES SHALL BE AS NOTED TO A MIN. 96" WIDE OR A MIN. 132" WIDE FOR VAN DESIGNATED SPACES WITH A MAXIMUM SLOPE OF 2% (IN ALL DIRECTIONS). ALL BUILDINGS SHALL CONTAIN AT LEAST ONE VAN ACCESSIBLE SPACE FOR NO LESS THAN ONE VAN SPACE FOR EVERY 6 ACCESSIBLE SPACES.

(B) EACH ACCESSIBLE PARKING SPACE SHALL HAVE A VERTICALLY MOUNTED (OR SUSPENDED) SIGN SHOWING THE SYMBOL OF ACCESSIBILITY. APPROPRIATE VAN ACCESSIBLE SPACES MUST INCORPORATE "VAN-ACCESSIBLE" BELOW THE SYMBOL OF ACCESSIBILITY. SIGNS SHALL BE LOCATED AS NOTED TO 80" (MIN.) ABOVE THE ADJACENT PAVED SURFACE TO BOTTOM OF SIGN.

(C) ALL ACCESS AISLES SERVING ACCESSIBLE PARKING SPACES SHALL BE AS NOTED TO A 60" WIDE MINIMUM.

RAMPS:

(D) RAMPS EXCEEDING 6" IN RISE (EXCLUDING CURB RAMPS) SHALL HAVE APPROPRIATE EDGE PROTECTION WITH HANDRAILS ON EACH SIDE AT BETWEEN 34" AND 38", AND EXTEND 12" BEYOND THE TOP AND BOTTOM OF RAMP. HANDRAIL SHALL NOT DIMINISH THE CLEAR AREA REQUIRED FOR TOP AND BOTTOM LANDINGS SERVING THE RAMPS.

(E) RAMPS SHALL HAVE A SURFACE ARRANGED SO THAT WATER WILL NOT ACCUMULATE. COLOR OF RAMP FINISH MATERIAL (INCLUDING CONCRETE) SHALL HAVE A LIGHT AND REFLECTIVE VALUE TO SIGNIFICANTLY CONTRAST FROM ADJACENT SURFACES OR COLORS ONLY IF REQUIRED BY LOCAL OR STATE JURISDICTION

(F) LANDINGS FOR RAMPS SHALL BE AS WIDE AS THE RAMP AND 60" LONG MINIMUM (36" MINIMUM FOR CURB RAMPS)

(G) RAMPS SHALL NOT EXCEED A 1:12 RUNNING SLOPE OR 30" RISE

(H) RAMPS AND LANDINGS SHALL NOT EXCEED 1:48 (2% CROSS SLOPE)

SIDEWALKS AND ACCESSIBLE ROUTES:

(I) SIDEWALKS MUST BE AT LEAST 36" WIDE WITH 5'X5' CLEAR PASSING OPPORTUNITIES IN INCREMENTS LESS THAN 150 LF
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 1:48 (2%)

(J) LONGITUDINAL SLOPE OF ANY SIDEWALK (ACCESSIBLE ROUTE) SHALL NOT EXCEED 1:20 (5%)

NOTICE TO CONTRACTORS - UTILITIES

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF ANY EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, THE GOVERNING MUNICIPALITY, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION PROVIDED IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

** NOTICE TO CONTRACTORS - TOPOGRAPHIC SURVEY **

TOPOGRAPHIC INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY PERFORMED BY JPH LAND SURVEYING, INC.. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, IN WRITING, OF ANY DISCREPANCIES OR OMISSIONS TO THE TOPOGRAPHIC INFORMATION. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR CONFIRMING THE LOCATION (HORIZONTAL/VERTICAL) OF ANY BURIED CABLES, CONDUITS, PIPES, AND STRUCTURES (STORM SEWER, SANITARY SEWER, WATER, GAS, TELEVISION, TELEPHONE, ETC.) WHICH IMPACT THE CONSTRUCTION SITE. THE CONTRACTOR(S) SHALL NOTIFY THE OWNER AND ENGINEER IF ANY DISCREPANCIES ARE FOUND BETWEEN THE ACTUAL CONDITIONS VERSUS THE DATA CONTAINED IN THE CONSTRUCTION PLANS. ANY COSTS INCURRED AS THE RESULT OF NOT CONFIRMING THE ACTUAL LOCATION (HORIZONTAL/VERTICAL) OF SAID CABLES, CONDUITS, PIPES, AND STRUCTURES SHALL BE BORNE BY THE CONTRACTOR. ADDITIONALLY, THE CONTRACTOR(S) SHALL NOTIFY THE OWNER AND ENGINEER IF ANY ERRORS OR DISCREPANCIES ARE FOUND ON THE CONSTRUCTION DOCUMENTS (PS&E), WHICH NEGATIVELY IMPACT THE PROJECT. THE ENGINEER AND OWNER SHALL BE INDEMNIFIED OF PROBLEMS AND/OR COST WHICH MAY RESULT FROM CONTRACTOR'S FAILURE TO NOTIFY ENGINEER AND OWNER.

PARKING COUNT SUMMARY

PARKING PROVIDED

VISITOR PARKING	-	236 SPACES
STAFF	-	23 SPACES
ADA SPACES	-	10 SPACES
TOTAL SPACES		259 SPACES

62 STAFF PARKING AND 2 ADA STALLS TO BE INSTALLED WITH IN PHASE 2

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1 1) MAINTENANCE GATES WITH LAYDOWN CURB ADDED TO THE NORTH AND SOUTH OF THE LONG JUMP SAND PITS

7 1) ADDED SIDEWALK ASSOCIATED WITH PROPOSED BUILDING ADDITION
2) ADDED STAFF PARKING LOT

Date	Description	No.
11/11/22	CPR 01	7
09/29/22	ADDENDUM 2	1

Revisions

STATE OF TEXAS — JACK H. GARNER, JR. — 98447 — LICENSED PROFESSIONAL ENGINEER
11-11-2022
TBPE Registration #: F- 13,709

LANGAN
Langan Engineering and Environmental Services, Inc.
9606 N. Mopac Expressway, Suite 110
Austin, TX 78759
T: 737.289.7800 F: 737.289.7801 www.langan.com
TBPE FIRM REG. #F-13709

Project
NEW LIBERTY HILL MIDDLE SCHOOL #3
450 CR 258
LIBERTY HILL
WILLIAMSON COUNTY TEXAS

Drawing Title
SITE PLAN - AREA 'A'

Project No. 531013304	DRAWING NO. C-011
Date SEPTEMBER 2022	
Drawn By	
Checked By	Sheet 11 of 47

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LEGEND

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- PROPOSED RETAINING WALL
- PROPOSED THERMOPLASTIC WHITE STOP BAR AND WHITE "STOP" LETTERING
- PROPOSED PAINTED WHITE TRAFFIC ARROW
- FIRE LANE STRIPING
- PROPOSED FIRE HYDRANT
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED CURB INLET
- PROPOSED GRATE INLET
- PROPOSED LIGHTING
- ACCESSIBLE ROUTE
- PARKING COUNT
- PROPOSED TRANSFORMER

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- B "DO NOT ENTER" SIGN (R5-1)
- C "ONE WAY" SIGN (R6-2L)
- D "RIGHT TURN AND THROUGH ONLY" SIGN (R3-8RT)
- E ACCESSIBLE DROP-OFF SPACE
- F ACCESSIBLE PARKING SIGNAGE IN BOLLARD
- G VAN ACCESSIBLE PARKING SIGNAGE IN BOLLARD
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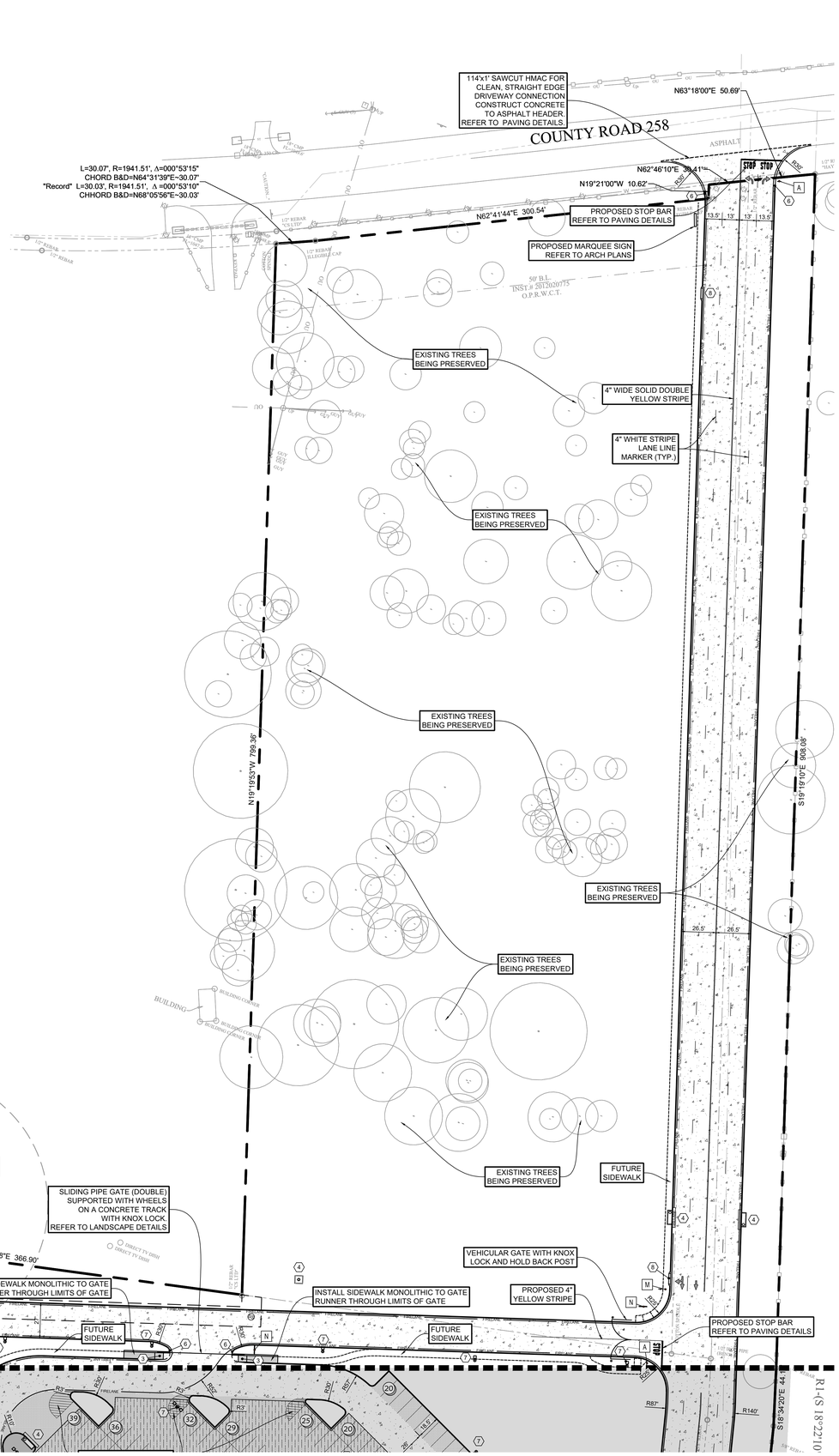
- I VAN ACCESSIBLE PARKING SIGNAGE (NOT IN BOLLARD)
- J "BUS AND SERVICE ENTRANCE"
- K "VISITOR AND STAFF ENTRANCE"
- L "LANE ENDS MERGE LEFT" SIGN (W9-4)
- M DO NOT OBSTRUCT INTERSECTION SIGNAGE
- N SITE WAYFINDING SIGN REFERENCE ARCH

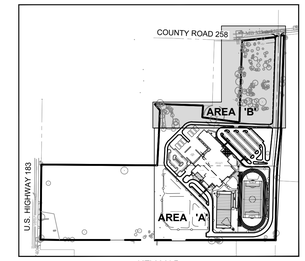
SYMBOL KEY

1. CROSSWALK / PED. CROSSING TYPICAL SEE PAVING DETAILS
2. TYPICAL ACCESSIBLE PARKING SPACES SEE PAVING DETAILS (TYP)
3. INSTALL BARRIER FREE RAMP (BFR) REFER TO PAVING DETAILS (TYP)
4. PROPOSED DRAINAGE STRUCTURE. REFER TO DRAINAGE PLAN (TYP)
5. PROPOSED STRUCTURAL STOOP REFER TO STRUCTURAL PLANS
6. TRANSITION CURB REFER TO PAVING DETAILS
7. PROPOSED LIGHT POLE REF. MEP PLANS (CIVIL FOR LOCATIONS)
8. PROPOSED LAYDOWN CURB/ MAINTENANCE CROSSING REFER TO PAVING DETAILS (TYP)



GRAPHIC SCALE

0 40 80 FEET



KEY MAP

N.T.S

Date	Description	No.

Revisions

TBPE Registration #: F- 13,709

LANGAN

Langan Engineering and Environmental Services, Inc.

9606 N. Mopac Expressway, Suite 110
Austin, TX 78759

T: 737.289.7800 F: 737.289.7801 www.langan.com

TBPE FIRM REG. #F-13709

Project

NEW LIBERTY HILL MIDDLE SCHOOL #3
450 CR 258

LIBERTY HILL
WILLIAMSON COUNTY TEXAS

Drawing Title

SITE PLAN - AREA 'B'

Project No.	531013304
Date	SEPTEMBER 2022
Drawn By	
Checked By	

DRAWING NO.

C-012

Sheet 12 of 47

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: Matt Hardy, PE

Date: 02-08-2024

Signature of Customer/Agent:

Regulated Entity Name: Liberty Hill Middle School No. 3

Project Information

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

   Contact Person: Dustin Akin
   Entity: Liberty Hill Independent School District
   Mailing Address: 301 Forrest Street
   City, State: Liberty Hill, Texas Zip: 78642
   Telephone: 512.260.5580 Fax: 512.260.5581
   Email Address: dakin@libertyhill.txed.net

5. Agent/Representative (If any):

Contact Person: Matt Hardy, PE
Entity: Langan Engineering
Mailing Address: 9606 N. Mopac Expressway, Suite 110
City, State: Austin, TX Zip: 78759
Telephone: 737.289.7800 Fax: 737.289.7801
Email Address: mhardy@langan.com

6. Project Location:

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

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

Liberty Hill Middle School #3 is located at 450 County Road 258, Liberty Hill, Texas. It is on the east side of US 183 about 0.5 miles north of its intersection with SH 29.

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 School Site

12. The type of project is:

☐ Residential: # of Lots: _____
☐ Residential: # of Living Unit Equivalents: _____
☐ Commercial
☐ Industrial
☒ Other: Additions to Middle School Site

13. Total project area (size of site): 59.64 Acres

    Total disturbed area: 21.4 Acres

14. Estimated projected population: 1,500

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	0	÷ 43,560 =	0
Parking	72,710	÷ 43,560 =	1.67
Other paved surfaces	5,263	÷ 43,560 =	0.12
Total Impervious Cover	77,973	÷ 43,560 =	1.79

Total Impervious Cover 16.72 (existing) + 1.79 (proposed) = 18.51 ac **÷ Total Acreage** 59.64 **X 100 =** 31.0**% 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" = 40'.

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 48491C0275E, effective on 09/26/2008.

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.

Contributing Zone Application - TCEQ Form 10257

Attachment A: Road Map

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

The National Map US Topo

TCEQ Form 10257 - Attachment B
USGS Map

LEANDER NE QUADRANGLE
TEXAS - WILLIAMSON COUNTY
7.5-MINUTE SERIES

-97.8750° 30.7500° -97.7500° 30.7500° -97.8750° 30.6250° -97.7500° 30.6250°

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

Imagery....NAIP, August 2016 - November 2016
Roads....U.S. Census Bureau, 2015
Names....GNIS, 1979 - 2018
Hydrography....National Hydrography Dataset, 2002 - 2011
Contours....National Elevation Dataset, 2002 - 2004
Boundaries....Multiple sources; see metadata file 2016 - 2017

Wetlands....FWS National Wetlands Inventory 1982

MN GN 0°36′ 11 MILS 3°43′ 66 MILS

UTM GRID AND 2019 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

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

SCALE 1:24 000
KILOMETERS 1 0.5 0 1 2
METERS 1000 500 0 1000 2000
MILES 1 0.5 0 1
FEET 1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 0.6.18

TEXAS
QUADRANGLE LOCATION

1	2	3
4		5
6	7	8

ADJOINING QUADRANGLES
1 Mahomet
2 Florence
3 Cobbs Cavern
4 Liberty Hill
5 Georgetown
6 Nameless
7 Leander
8 Round Rock

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

LEANDER NE, TX
2019

NSN. 7643016396982
NGA REF NO. USGSX24K25239

Contributing Zone Plan Application - TCEQ Form 10257

Attachment C: Project Narrative

The subject site is located at 450 County Road 258, Liberty Hill, Texas and is located in the Edwards Aquifer Contributing Zone. The overall tract is 59.64 acres and is bisected by an existing drainage ditch that generally runs north and south. The Previously approved Liberty Hill Middle School No. 3 is located on the east side of the drainage channel and there are no proposed changes to the water quality ponds treating the eastern portion of the site. This project has commenced construction but has not been completed.

The west side of the channel remains undeveloped with open pasture and some copse of primarily oak trees with some cedar elm and cedar trees in its current condition. The proposed improvements under this package include an extension of the on-site driveway west to the subject property's intersection with the US Hwy 183 Right-of-Way, a proposed turn lane to service the new driveway, and a new sand filter water quality pond to treat stormwater from the west side of the site.

The new impervious cover is addressed using a new sand filter basin shown in the plans just west of the central channel. The overflow from the basin splitter structure is routed to a storm water detention basin and ultimately discharges to the drainage ditch east of the new pond. The drainage area discharging into the new basin is 15.31 acres and for this initial permit treats 1.79 acres of impervious cover.

When considering the total 59.64-acre site the currently proposed permit includes 1.79 acres of impervious cover in addition to 16.72 acres of impervious cover under the previous permit, for a total of 31.0% of the overall site.

This site is planned to be expanded in the future to accommodate addition education facilities resulting in additional site impervious coverage. The sand filter basin and detention basin have been over-sized to accommodate the additional impervious cover. The ultimate drainage area is anticipated to remain 15.31 acres and is designed to treat 12.25 acres or 80% impervious cover.

Upgradient storm water flowing towards the site will be intercepted at the Western boundary and routed via channel through the site to an unnamed tributary central to the site which ultimately flows to the South Fork of the San Gabriel River.

Contributing Zone Plan Application - TCEQ Form 10257

Attachment D: Factors Affecting Surface Water Quality

The potential factors affecting **construction period surface water quality** from this site are: sediment runoff from disturbed areas, petroleum products runoff from drips from construction equipment, pesticides and fertilizers from landscaping activities, and high pH washwater from concrete and masonry cleanup/ washout facilities. Sediment runoff will be significantly reduced during construction by the use of an onsite temporary sedimentation ponds. The high pH washwater potential will be controlled by requiring the use of appropriately sized, plastic-lined containment areas for concrete and masonry cement washout and cleanup activities. The petroleum and pesticide/ fertilizer sources will be minimized by the use of good housekeeping procedures and inspections by trained personnel to ensure that all construction activities follow the procedures given on SWPPP Plan included as part of the construction drawings prepared for the site.

The potential factors affecting **post-construction surface water quality** from this site are: pesticide and fertilizer runoff from vegetated areas, petroleum products runoff from parking areas and drives. Sediment runoff from the site will be significantly reduced by the action of the water quality/ detention pond with sand filter permanent BMP. Pesticide/ fertilizer runoff will be minimized by education of the school employees or outside landscaping firm relative to acceptable landscaping practices after construction activities are completed.

Contributing Zone Plan Application TCEQ Form 10257
Attachment E: Volume and Character of Stormwater

Please refer to Drainage Area Maps in the construction plans for more details on the information presented below.

Pre-construction conditions: The total studied drainage area is 242.10 acres. All areas labeled with a suffix of "BP-" are bypassing the existing detention and water quality basins and discharging directly to the North-South running channel central to the site. Onsite hydrology is as shown on existing drainage area map with 31.68 acres contributing to the existing sand filters and detention pond that were constructed with previously approved middle school. Calculations are based on the Rational Method Q = C*I*A, as presented in the 2020 Round Rock Drainage Criteria Manual.

PRE-DEVELOPMENT DRAINAGE AREA CALCULATIONS

Drainage Area Designation	Drainage Area	Runoff Coefficient "C"				Time of Concentration	2-Year Rainfall Intensity (I2)	2-Year Peak Discharge (Q2)	10-Year Rainfall Intensity (I10)	10-Year Peak Discharge (Q10)	25-Year Rainfall Intensity (I25)	25-Year Peak Discharge (Q25)	100-Year Rainfall Intensity (I100)	100-Year Peak Discharge (Q100)
-	(ac)	2- Yr	10- Yr	25- Yr	100- Yr	(min)	(in/hr)	(cfs)	(in/hr)	(cfs)	(in/hr)	(cfs)	(in/hr)	(cfs)
BP-1	5.48	0.33	0.38	0.42	0.49	25	2.93	5.3	4.77	9.9	5.91	13.6	7.79	20.9
BP-2	4.80	0.33	0.38	0.42	0.49	26	2.87	4.5	4.68	8.5	5.79	11.7	7.64	18.0
BP-3	11.03	0.33	0.38	0.42	0.49	14	3.92	14.3	6.30	26.4	7.72	35.8	10.01	54.1
BP-4	132.49	0.43	0.48	0.52	0.60	42	2.15	121.1	3.54	226.4	4.42	307.0	5.90	468.0
BP-5	56.61	0.38	0.43	0.48	0.55	24	3.00	64.6	4.88	119.9	6.03	162.3	7.94	246.3
DA-1	31.68	-	-	-	-	-	-	46.9	-	113.0	-	140.1	-	184.4
Total	242.10							256.64		504.14		670.45		991.70

Note: Calculations based on the Rational Method: Q = C*I*A

Post-construction conditions: Similar to the existing condition, the total study area and bypass designations do not change. The peak discharge rates for post-construction are equal to or less than pre-developed discharge rates.

POST-DEVELOPMENT DRAINAGE AREA CALCULATIONS

Drainage Area Designation	Drainage Area	Runoff Coefficient "C"				Time of Concentration	2-Year Rainfall Intensity (I2)	2-Year Peak Discharge (Q2)	10-Year Rainfall Intensity (I10)	10-Year Peak Discharge (Q10)	25-Year Rainfall Intensity (I25)	25-Year Peak Discharge (Q25)	100-Year Rainfall Intensity (I100)	100-Year Peak Discharge (Q100)
-	(ac)	2- Yr	10- Yr	25- Yr	100- Yr	(min)	(in/hr)	(cfs)	(in/hr)	(cfs)	(in/hr)	(cfs)	(in/hr)	(cfs)
BP-1	5.48	0.33	0.38	0.42	0.49	25	2.93	5.3	4.77	9.9	5.91	13.6	7.79	20.9
BP-2	4.80	0.33	0.38	0.42	0.49	26	2.87	4.5	4.68	8.5	5.79	11.7	7.64	18.0
BP-3	11.03	0.33	0.38	0.42	0.49	14	3.92	14.3	6.30	26.4	7.72	35.8	10.01	54.1
BP-4	132.49	0.43	0.48	0.52	0.60	42	2.15	121.1	3.54	226.4	4.42	307.0	5.90	468.0
BP-5	19.64	0.38	0.43	0.48	0.55	20	3.30	24.7	5.35	45.6	6.60	61.6	8.65	93.0
BP-6	21.66	0.39	0.44	0.48	0.56	24	3.00	25.2	4.88	46.8	6.03	63.3	7.94	95.9
DA-1	31.68	-	-	-	-	-	-	46.9	-	113.0	-	140.1	-	184.4
DA-2	15.31	-	-	-	-	-	-	2.0	-	26.7	-	44.2	-	62.1
Total	242.10							234.17		484.92		651.95		957.50

Note: Calculations based on the Rational Method: Q = C*I*A

Contributing Zone Plan Application TCEQ Form 10257

Attachment J: BMPs for Upgradient Stormwater

Upgradient stormwater will be captured in a channel along the west property line and diverted to an unnamed tributary of the South Fork of the San Gabriel River central to the site. Therefore, no upgradient stormwater will cross the surface of the proposed school site.

Contributing Zone Plan Application TCEQ Form 10257

Attachment K: BMPs for onsite stormwater

Construction Phase
Please refer to Plan Sheets for more information and details about the information presented below.

Stabilization practices for this site include:

1. Land clearing activities shall be done only in areas where earthwork will be performed and shall progress as earthwork is needed
2. Frequent watering of excavation and fill areas to minimize wind erosion during construction.
3. Permanent seeding and planting of all unpaved areas.
4. Use of stabilization fabric for all slopes having a slope of 1V:3H or greater
5. For all disturbed areas where construction activities have temporarily or permanently ceased for more than 14 days, stabilization activities shall commence no later than the 14th day after cessation of construction activities.

Structural practices for this site include:

1. Inlet protection using block and gravel filled bags and silt fence
2. Perimeter protection using silt fencing and/or erosion control logs
3. Stabilized construction exit point
4. Contractor shall provide sufficient velocity dissipation devices in the form of rock check dams and/or rock rip rap for velocity dissipation at areas with existing or potential channelized flow.

Permanent phase: water quality/ detention pond with sand filter

An on-site water quality/ detention pond with sand filter, which has been designed in accordance with the TCEQ Edwards Aquifer Compliance Technical Guidance Manual on Best Management Practices, will be constructed by the Owner for use a permanent water quality and water quantity control system. All storm water runoff from the school site will be routed to inlets in the subsurface storm water collection system and will then flow to the on-site water quality/ detention pond with sand filter.

Contributing Zone Plan Application TCEQ Form 10257

Attachment L: BMPs for surface streams

The stormwater runoff from this site will flow into an on-site water quality/ detention pond with sand filter, built and maintained by the Owner, before passing into a seasonal tributary of the South Fork of the San Gabriel River. These ponds will provide effective protection to the water quality of this surface stream.

Contributing Zone Plan Application TCEQ Form 10257

Attachment M: Construction Plans

Please refer to construction plans prepared for this construction site which are a separate part of the permit application package.

Contributing Plan Application TCEQ Form 10257

Attachment N: Inspection, maintenance, repair, and retrofit plan for sand filter

The Owner shall implement the following inspection, maintenance, repair, and record keeping procedures for the sand filter located within the detention pond designed to serve the site.

1. Inspection: Owner's representative shall visually inspect the extended detention pond at least every 3 months, and after each large storm for the first year of operation. For the second and following years, inspections may be limited to every 6 months and at least one time per year after a large storm. Because construction activities can contribute heavy sediment and debris loads, construction activities should be completed, and all areas should be stabilized, prior to exposing the sand filter to stormwater runoff. During each inspection, erosion areas inside and downstream of the sand filter shall be identified and repaired or revegetated immediately. Any damage to structural elements of the system (pipes, concrete drainage structures, retaining walls, etc.) shall be identified and repaired immediately. Cracks, voids, and undermining effects shall be patched/ filled to prevent additional structural damage. Trees and root systems shall be removed to prevent growth in cracks and joints that can lead to structural damage.

2. Sediment Removal: Sediment shall be removed from the inlet structure and sedimentation chamber when sediment buildup reaches a depth of 6" or when the proper functioning of inlet and outlet structure is impaired. Sediment shall be cleared from the inlet structure at least once per year and from the sedimentation basin at least once every 5 years.

3. Media Replacement: Maintenance of the filter media shall be accomplished when the drawdown time exceeds 48 hours. When this maintenance is required, the upper layer of sand shall be removed and replaced with new material meeting the original specifications. Any discolored sand shall also be removed and replaced. IN filters that have been regularly maintained, this media replacement should be limited to the top 2-3".

4. Debris and Litter Removal: Debris and litter that has accumulated near the sedimentation basin outlet device should be removed during regular mowing operations and during all inspections. Particular attention shall be directed towards floating debris that could eventually clog the control device or riser.

5. Filter Underdrain: Clean underdrain piping network to remove any sediment buildup, on an as needed basis, to maintain design drawdown time.

6. Mowing: Grassy areas in and around the sand filter shall be mowed at least two times per year, with more frequent mowing as necessary to maintain aesthetic appeal. Vegetation height should be limited to 18". Vegetation on the pond embankments shall be mowed as often as is necessary to prevent the establishment of woody vegetation.

7. Record Keeping: The Owner's representative shall prepare a signed, written record of each inspection performed and actions performed as a result of the inspection observations, shall maintain those records in the Owner's office for a period of 5 years, and shall, upon request, make those records available to TCEQ personnel and other agencies with jurisdiction over the site.

Certifications:

Design Engineer

Matt Hardy, PE
Printed Name

2/9/2024
Date

PE Seal

Owner

DUSTIN AKIN
Printed Name

02/09/2024
Date

Contributing Zone Plan Application TCEQ Form 10257

Attachment P: Measures for minimizing surface stream contamination

An Owner's representative shall visually inspect all roof drains and drive/ parking area inlets in the collection system at a minimum interval of every 3 months, and at least once during or immediately following wet weather. Specific items to be observed are: the amount of sediment and/or trash buildup at inlets (removal required if > 10% of the inlet opening is blocked), the presence of standing water or soggy conditions, indicative of poor drainage, and damage to structural components (pipes, curb inlets, grate inlets, etc…)

The stormwater runoff from this site will flow into an on-site water quality/ detention pond with sand filter, built and maintained by the Owner, before passing into a seasonal tributary of the South Fork of the San Gabriel River. An Owner's representative shall visually inspect all downstream flow path at a minimum interval of every 3 months. These combined onsite and offsite practices will provide effective measures to minimize surface stream contamination.

Temporary Stormwater Section

Texas Commission on Environmental Quality

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

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

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

Signature

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

Print Name of Customer/Agent: Matt Hary, PE

Date: 02/08/2024

Signature of Customer/Agent:

Regulated Entity Name: Liberty Hill Middle School No. 3

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: South Fork of San Gabriel

Temporary Best Management Practices (TBMPs)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

☐ N/A

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

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

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

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

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

Soil Stabilization Practices

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

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

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

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

Administrative Information

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

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

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

Temporary Stormwater Management Practices TCEQ Form 0602
Attachment A Spill Response Actions

SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN

1 MATERIALS COVERED

The following materials or substances with known hazardous properties are expected to be present onsite during construction:

Concrete	Cleaning solvents
Detergents	Petroleum based products
Paints	Pesticides
Paint solvents	Acids
Fertilizers	Concrete additives
Soil stabilization additives	

2 MATERIAL MANAGEMENT PRACTICES

The following are the material management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff.

2.1 Good Housekeeping

The following good housekeeping practices will be followed onsite during the construction project.

A. An effort will be made to store only enough product required to do the job.

B. All materials stored onsite will be stored in a neat, orderly manner and, if possible, under a roof or other enclosure.

C. Products will be kept in their original containers with the original manufacturer's label in legible condition.

D. Substances will not be mixed with one another unless recommended by the manufacturer.

E. Whenever possible, all of a product will be used up before disposing of the container.

F. Manufacturer's recommendations for proper use and disposal will be followed.

G. The job site superintendent will be responsible for daily inspections to ensure proper use and disposal of materials.

2.2 Hazardous Products
These practices will be used to reduce the risks associated with hazardous materials.

A. Products will be kept in original containers with the original labels in legible condition.

B. Original labels and material safety data sheets (MSDS's) will be procured and used for each material.

C. If surplus product must be disposed of, manufacturers or local/state/federal recommended methods for proper disposal will be followed.

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

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

2.3 Product Specific Practices

The following product specific practices will be followed on the job site.

A. Petroleum Products

All onsite vehicles will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled. Any petroleum storage tanks used onsite will have a dike or berm containment structure constructed around it to contain any spills which may occur. Any asphalt substances used onsite will be applied according to the manufacturer's recommendations.

B. Fertilizers

Fertilizers will be applied only in the minimum amounts recommended by the manufacturer. Once applied, fertilizer will be worked in the soil to limit exposure to stormwater. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

C. Paints, Paint Solvents, and Cleaning Solvents

All containers will be tightly sealed and stored when not in use. Excess paint and solvents will not be discharged to the storm sewer system but will be properly disposed of according to manufacturer's instructions or state and federal regulations.

D. Concrete Trucks

The CGP authorizes the land disposal of wash out water from concrete trucks at construction sites that are regulated under the CGP, as long as the discharge is in compliance with the restrictions given in Section 3.02.4.B of this SWPPP. This authorization is limited to the land disposal of wash out water from concrete trucks only. Any other direct discharge of concrete production waste water is not authorized by the CGP and must be authorized under a separate TCEQ General Permit or individual permit.

2.4 Spill Prevention Practices

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup.

A. Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be trained regarding these procedures and the location of the information and cleanup supplies.

B. Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite in spill control and containment kit (containing, for example, absorbent such as kitty litter or sawdust, acid neutralizing powder, brooms, dust pans, mops, rags, gloves, goggles, plastic and metal trash containers, etc.).

C. All spills will be cleaned up immediately after discovery.

D. The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with the hazardous substances.

E. Spills of toxic or hazardous materials will be reported to the appropriate federal, state, and/or local government agency, regardless of the size of the spill. Spills of amounts that exceed Reportable Quantities of certain substances specifically mentioned in federal regulations (40 CFR 302 list and oil) will be immediately reported to the TCEQ National Response Center, telephone **1-800-832-8224**. Reportable Quantities of some substances which may be used at the job site are as follows:

oil - appearance of a film or sheen on water
pesticides - usually 1 lb.
acids - 5000 lb.
solvents, flammable - 100 lb.

F. The SPCC plan will be adjusted to include measures to prevent this type of spill from recurring and how to clean up the spill if there is another one. A description of the spill, what caused it, and the cleanup measures will also be included. If the spill exceeds a

Reportable Quantity, all federal regulations regarding reports of the incident will be complied with.

G. The job site superintendent will be the spill prevention and cleanup coordinator. He will designate the individuals who will receive spill prevention and cleanup training. These individuals will each become responsible for a particular phase of prevention and cleanup. The names of these personnel will be posted in the material storage area and in the office trailer onsite.

Temporary Stormwater Management Practices TCEQ Form 0602
Attachment B Potential Sources of Contamination

The following are the potential pollutants and their sources which may occur at this construction site: offsite vehicle tracking of mud from vehicle traffic through inadequate construction exit, petroleum based products from vehicle/ equipment leaks and drips (maintenance and petroleum storage areas will not be allowed on the construction site), pesticides and fertilizers from landscaping activities, and high pH washwater from concrete and masonry cleanup/ washout facilities.

Temporary Stormwater Management Practices TCEQ Form 0602
Attachment C Sequence of Major Activities

The Contractor will be responsible for implementing the following erosion and sediment control and stormwater management control structures. The Contractor may designate these tasks to certain subcontractors as he sees fit, but the ultimate responsibility for implementing these controls and ensuring their proper functioning remains with the general contractor. The order of activities will be as follows (refer to Erosion Control Plan contained in the Construction Plans for the project for details):

A. Install silt fence around perimeter of property and disturbed areas as shown on the SWPPP plan sheet. (Approx. 21.4 acres)

B. Install inlet protection for all existing grate inlets, curb inlets, and at the end of all exposed storm sewer pipes, if present. (Approx. 0.5 acres)

C. Construct temporary construction exit. (Approx 0.1 acres)

D. Commence grubbing and removal of vegetation in area to receive cut or fill. (Approx. 21.4 acres)

E. Construct temporary sediment pond with Faircloth skimmer outlet structure, as shown on the plans. (Approx. 3 acres)

F. Install all underground utilities. (Approx. 1.0 acre)

G. Finalize pavement subgrade preparation. (Approx. 5.3 acres)

H. Install all proposed storm sewer pipes and install inlet protection silt fences at ends of exposed pipes. (Approx. 0.5 acres)

I. Construct all grate inlets and drainage structures. Inlet protection silt fences may be removed temporarily for this construction. (Approx. 0.5 acres)

J. Temporary sediment pond and outlet structure may be removed after the storm sewer system is installed and functional and inlet protection is in place and functional at all storm sewer inlets. Sediment removed from the sediment pond may be relocated on site. (Approx. 3 acres)

K. Install base material as required for pavement, curb and gutter. (Approx. 5.3 acres)

L. Install all paving, curb and gutter. (Approx. 5.3 acres)

M. Complete planting and/or seeding of vegetated areas to accomplish stabilization, in accordance with the landscaping plan. (Approx. 21.4 acres)

N. Remove temporary construction exit, silt fence, inlet protection, and all other temporary sediment controls. (Approx. 21.4 acres)

Temporary Stormwater Management Practices TCEQ Form 0602
Attachment D Temporary Best Management Practices

The following temporary best management practices will be used on the construction site

Stabilization Practices

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

2. Frequent watering of excavation and fill areas to minimize wind erosion during construction.

3. Use of stabilization fabric for all slopes having a slope of 1V:3H or greater.

4. Permanent seeding and planting of all unpaved areas.

5. For all disturbed areas where construction activities have temporarily or permanently ceased for more than 14 days, stabilization activities shall commence no later than the 14th day after cessation of construction activities or after final grades have been achieved.

Temporary Stormwater Management Practices TCEQ Form 0602
Attachment F Structural Practices

The following structural best management practices will be used on the construction site

1. Inlet protection using gravel filled bags and silt fence.

2. Perimeter protection using silt fencing and/or erosion control logs

3. Stabilized construction exit point

4. Temporary sediment pond with Faircloth skimmer and emergency overflow weir outlet structures for dewatering.

5. Diversion berm/ swale to channel onsite runoff flow into the sediment basin.

6. Rock check dams

7. Temporary concrete washout area

8. Use of rock rip rap for velocity dissipation at areas with existing or potential channelized flow.

Temporary Stormwater Management Practices TCEQ Form 0602
Attachment G Drainage Area Map

Please refer to Plan Sheets Existing Drainage Area Map and Proposed Drainage Area Map of the Construction Plans for this project.

Temporary Stormwater Management Practices TCEQ Form 0602
Attachment H Temporary sediment pond plans and calculations

The temporary sediment basin has been sized to accommodate the expected stormwater runoff from the 2 yr 24 hr storm.

Sizing of the temporary sediment basin was done using the Rational method for runoff calculation with a weighted runoff coefficient of 0.30, 3.94" rainfall for the 2yr/ 24h storm in Williamson County, and 15.31 acres of drainage area. The calculated stormwater runoff to be contained in the sediment pond is 1.51 acre feet or 65,690 cubic feet. The volume provided is 69,006 cubic feet.

Runoff = 3.94" / 12 * 0.30 * 15.31ac * 43560 = 65,690 cubic feet = 1.51 AF

Sediment Basin Volume provided: 69,006 cubic feet = 1.58 AF

Three Faircloth skimmer dewatering devices will be used to release the detained stormwater over a period of 36-48 hours.

Temporary Stormwater Management Practices TCEQ Form 0602
Attachment I Inspection/ Maintenance for BMPs

I. Erosion and Sediment Control Maintenance and Inspection Practices

A. The following is a list of erosion and sediment controls to be used on this site during construction practice.

1. Stabilization practices for this site include:

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

   B. Frequent watering of excavation and fill areas to minimize wind erosion during construction.

   C. Use of stabilization fabric for all slopes having a slope of 1V:3H or greater.

   D. Permanent seeding and planting of all unpaved areas.

   E. For all disturbed areas where construction activities have temporarily or permanently ceased for more than 14 days, soil stabilization activities shall commence as soon as practicable but no later than the 14^{th} day after cessation of construction activities.

2. Structural practices for this site include:

   A. Inlet protection using block and gravel-filled bags and fabric filter material

   B. Perimeter protection using silt fencing and/or straw roll wattles

   C. Stabilized construction exit point

   D. Temporary sediment pond with outlet structure and Faircloth skimmer for dewatering

Velocity Dissipation: Contractor shall provide sufficient velocity dissipation devices to prevent soil erosion at discharge points where concentrated flow occurs or is expected to occur.

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

   1. All control measures will be inspected weekly and after each rainfall event.

2. All measures will be maintained in good working order; if repairs are found to be necessary, they will be initiated within 24 hours of report and completed prior to the next anticipated rainfall event. If completion of required repairs cannot be accomplished prior to the next anticipated rainfall event, the reason shall be documented in the SWPPP for the site and completion shall be accomplished as soon as practicable.

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

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

5. The sediment basin, if present, will be inspected for depth of sediment, and built up sediment will be removed when it reaches 50 percent of the design capacity. **Contractor shall install a depth gauge in the sediment basin to use in evaluating the depth of accumulated sediment to determine when sediment removal is required.**

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

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

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

9. Personnel selected for the inspection and maintenance responsibilities will receive training from the job site superintendent. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls that are used onsite in good working order. They will also be trained in the completion of, initiation of actions required by, and the filing of the inspection forms. Documentation of the qualifications of inspection personnel must be kept in the SWPPP for the site.

II. Inspection and Maintenance Report Forms

Once installation of any required or optional erosion control device or measure has been implemented, weekly inspections of each measure shall be performed by the Contractor's inspection personnel. The Inspection and Maintenance Reports found in the SWPPP for the site (or other forms which the Contractor desires to use that have been approved by

the Engineer) shall be used by the inspectors to inventory and report the condition of each measure to assist in maintaining the erosion and sediment control measures in good working order.

Based on the results of the periodic inspections, necessary control modifications shall be initiated within 24 hours and completed prior to the next anticipated rain event. These inspection reports shall be kept on file as part of the Storm Water Pollution Prevention Plan for at least three years from the date of completion and submission of the Notice of Termination.

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

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

III. Summary of Erosion and Sediment Control Maintenance/Inspection Procedures

- ☐ All control measures will be at least weekly and after each rainfall event.
- ☐ All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of report and completed prior to the next anticipated rain event.
- ☐ Built-up sediment will be removed from silt fences when it has reached one-third the height of the fence.
- ☐ Silt fences will be inspected for depth of sediment, tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.
- ☐ Sediment basins, if present, will be inspected for depth of sediment, and built-up sediment will be removed when it reaches 50% of the design capacity or at the end of the job. **Contractor shall install a depth gauge in the sediment basin to use in evaluating the depth of accumulated sediment to determine when sediment removal is required.**
- ☐ Diversion dikes, if present, will be inspected and any breaches promptly repaired.
- ☐ If sediment escapes the site, accumulations will be removed at a frequency to minimize further negative effects, and whenever feasible, prior to the next forecasted rain event.
- ☐ Temporary and permanent seeding and planting will be inspected for bare spots, washouts, and healthy growth.

- ☐ A maintenance inspection report will be made after each inspection. Copies of the report forms to be used are included in the SWPPP for the site.

- ☐ The site job superintendent will select the individuals who will be responsible for inspections, maintenance and repair activities, and filling out the inspection and maintenance reports.

- ☐ Personnel selected for inspection and maintenance responsibilities will receive training from the site job superintendent. They will be trained in all the inspection and maintenance practices necessary for keeping the erosion and sediment controls used onsite in good working order. Records documenting the training and experience qualifications of each and every inspector shall be kept with the Inspection Record Forms in the SWPPP for the site.

IV. Construction/Implementation Checklist

1. Maintain Records of Construction Activities, including:

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

2. Prepare Inspection Reports summarizing:

- Name of inspector
- Qualifications of Inspector
- Control measures/areas inspected
- Observed conditions and areas of non-compliance
- Location of any discharges of sediments or other pollutants from the site
- Recommended remedial actions and action on previously recommended remedial actions
- Statement that the site is or is not in compliance with the Permit/SWPPP
- Changes necessary to the SWPPP for the site

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

- Notify TCEQ Spill Response Center (**1-800-832-8224**) immediately
- Notify permitting authority in writing within 14 days
- Modify the pollution prevention plan to include:

  - the date of release

  - circumstances leading to the release

  - steps taken to prevent recurrence of the release

4. Modify Pollution Prevention Plan as necessary to:

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

Temporary Stormwater Management Practices TCEQ Form 0602
Attachment J Interim/ permanent soil stabilization practices

Final Stabilization/Termination Checklist

1. · All soil disturbing activities are complete

2. · Temporary erosion and sediment control measures have been removed or will be removed at an appropriate time

3. · All areas of the construction site not otherwise covered by a permanent pavement or structure have been stabilized with a uniform perennial vegetative cover with a density of 70% or equivalent measures have been employed

WILLIAMSON COUNTY NOTE
THE CONTRACTOR SHALL OBTAIN A "NOTICE OF PROPOSED INSTALLATION OF UTILITY LINE" PERMIT FROM WILLIAMSON COUNTY FOR ANY WORK PERFORMED IN THE EXISTING COUNTY RIGHT-OF-WAY (DRIVEWAY APRON, WATER MAIN TIE-IN, ETC.) THIS PERMIT APPLICATION WILL REQUIRE A LIABILITY AGREEMENT, A CONSTRUCTION COST ESTIMATE FOR WORK WITHIN THE RIGHT-OF-WAY INCLUDING PAVEMENT REPAIR (IF NEEDED), A PERFORMANCE BOND, CONSTRUCTION PLANS AND, IF NECESSARY, A TRAFFIC CONTROL PLAN. AN INSPECTION FEE, AND A PRE-CONSTRUCTION MEETING MAY ALSO BE REQUIRED, DEPENDING ON THE SCOPE OF WORK. THE PERMIT WILL BE REVIEWED AND APPROVED BY THE COUNTY ENGINEER, AND MUST ALSO BE APPROVED BY THE WILLIAMSON COUNTY COMMISSIONERS COURT IF ANY ROAD CLOSURE IS INVOLVED.

Plans for the Construction of

WATER, PAVING, GRADING & DRAINAGE IMPROVEMENTS

To Serve

LIBERTY HILL MIDDLE SCHOOL #3
WEST CONNECTOR DRIVE
450 COUNTY ROAD 258

JOHN B. ROBINSON SURVEY, ABSTRACT NO. 521
CITY OF LIBERTY HILL ETJ
WILLIAMSON COUNTY, TEXAS

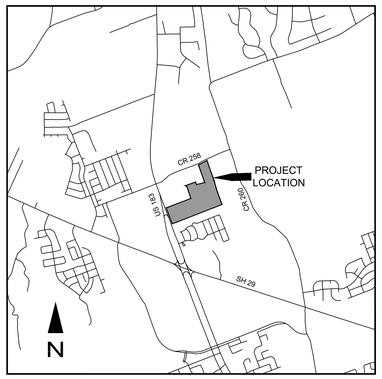
INDEPENDENT SCHOOL DISTRICT
LIBERTY HILL ISD
301 FORREST STREET
LIBERTY HILL, TX 78642
CONTACT: DUSTIN AKIN
PHONE: (512) 260-5580
EMAIL: DAKIN@LIBERTYHILL.TXED.NET

CIVIL ENGINEER
LANGAN
9606 N. MOPAC EXPRESSWAY, SUITE 110
AUSTIN, TX 78759
CONTACT: MATT HARDY, PE
PHONE: (817) 328-3240
EMAIL: MHARDY@LANGAN.COM

LANDSCAPE ARCHITECT
LANGAN
9606 N. MOPAC EXPRESSWAY, SUITE 110
AUSTIN, TX 78759
CONTACT: BEN HENRY, PLA, LEED AP BD+C
PHONE: (817) 328-3217
EMAIL: BHENRY@LANGAN.COM

SURVEYOR
JPH LAND SURVEYING, INC.
1516 E. PALM VALLEY BOULEVARD, SUITE A4
ROUND ROCK, TX 78664
CONTACT: CHRIS HENDERSON , R.P.L.S.
PHONE: (817) 431-4971
EMAIL: CHRIS@JPHLS.COM

CERTIFICATE OF COMPLIANCE (C OF C) PERMIT NUMBER _____



SITE MAP
1" = ½ MILE

SHEET LIST TABLE	
C1.00	COVER SHEET
C2.00	GENERAL NOTES
C3.00	TCEQ NOTES
C4.00	TOPOGRAPHIC SURVEY
C5.00	OVERALL GRADING AND EROSION PLAN
C6.00	183 EXTENSION PAVING PLAN-PROFILE (1 OF 2)
C6.01	183 EXTENSION PAVING PLAN-PROFILE (2 OF 2)
C7.00	183 EXTENSION EXISTING DRAINAGE AREA MAP
C8.00	183 EXTENSION PROPOSED DRAINAGE AREA MAP
C9.00	183 EXTENSION WATER QUALITY PLAN
C10.00	183 EXTENSION WATER QUALITY CALCULATIONS
C11.00	183 EXTENSION WATER PLAN-PROFILE (1 OF 2)
C11.01	183 EXTENSION WATER PLAN-PROFILE (1 OF 2)
C12.00	EROSION CONTROL DETAILS
C13.00	WATER DETAILS
C14.00	DRAINAGE DETAILS
C15.00	PAVING DETAILS

LANGAN
9606 N. Mopac Expressway, Suite 110 ■ Austin, Texas 78759 ■ (737) 289-7800

LANGAN PROJECT NO. 531013311

February 2024

MCKENZI HICKS, DIRECTOR OF PLANNING — DATE
CITY OF LIBERTY HILL, TEXAS

LIZ BRANIGAN, MAYOR — DATE
CITY OF LIBERTY HILL, TEXAS

ELAINE SIMPSON, CITY SECRETARY — DATE
CITY OF LIBERTY HILL, TEXAS

CURTIS STEGER, P.E., CITY ENGINEER — DATE
CITY OF LIBERTY HILL, TEXAS

Based on the design engineer's certification of compliance with all applicable City, State and Federal regulations, the plans and specifications contained herein have been reviewed and are found to be in compliance with the requirements of the City of Liberty Hill.

REVIEWED FOR COMPLIANCE WITH WILLIAMSON COUNTY REQUIREMENTS.

SIGNATURE — DATE

REVIEWED FOR COMPLIANCE WITH CITY OF GEORGETOWN WATER DEPARTMENT REQUIREMENTS.

SIGNATURE — DATE

Date	Description	No.
Revisions		

STATE OF TEXAS — MATTHEW S. HARDY — 134448 — LICENSED PROFESSIONAL ENGINEER
02-08-2024

TBPE Registration #: F-13709

LANGAN
Langan Engineering and Environmental Services, Inc.
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Austin, TX 78759
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TBPE FIRM REG. #F-13709

Project
LIBERTY HILL MIDDLE SCHOOL #3 WEST CONNECTOR DRIVE
LIBERTY HILL
WILLIAMSON COUNTY TEXAS

Drawing Title
COVER SHEET

Project No.	Drawing No.
531013311	C1.00
Date: FEBRUARY 2024	
Drawn By: NPF	
Checked By: MSH	

CITY OF LIBERTY HILL GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ROUND ROCK STANDARD SPECIFICATIONS MANUAL.
2. ANY EXISTING UTILITIES, PAVEMENT, CURBS, SIDEWALKS, STRUCTURES, TREES, ETC., NOT PLANNED FOR DESTRUCTION OR REMOVAL THAT ARE DAMAGED OR REMOVED SHALL BE REPAIRED OR REPLACED AT CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. ANY DISCREPANCIES WITH THE CONSTRUCTION PLANS FOUND IN THE FIELD SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE ENGINEER WHO SHALL BE RESPONSIBLE FOR REVISING THE PLANS AS APPROPRIATE.
4. MANHOLE FRAMES, COVERS, VALVES, CLEANOUTS, ETC. SHALL BE RAISED TO FINISHED GRADE PRIOR TO FINAL PAVING CONSTRUCTION.
5. THE CONTRACTOR SHALL GIVE THE CITY OF LIBERTY HILL 48 HOURS NOTICE BEFORE BEGINNING EACH PHASE OF CONSTRUCTION. TELEPHONE 512-778-5449 (PLANNING & DEVELOPMENT DEPARTMENT).
6. ALL AREAS DISTURBED OR EXPOSED DURING CONSTRUCTION SHALL BE REVEGETATED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. REVEGETATION OF ALL DISTURBED OR EXPOSED AREAS SHALL CONSIST OF SODDING OR SEEDING, AT THE CONTRACTOR'S OPTION. HOWEVER, THE TYPE OF REVEGETATION MUST EQUAL OR EXCEED THE TYPE OF VEGETATION PRESENT BEFORE CONSTRUCTION.
7. PRIOR TO ANY CONSTRUCTION, THE ENGINEER SHALL CONVENE A PRECONSTRUCTION CONFERENCE BETWEEN THE CITY OF LIBERTY HILL, HIMSELF, THE CONTRACTOR, OTHER UTILITY COMPANIES, ANY AFFECTED PARTIES AND ANY OTHER ENTITY THE CITY OR ENGINEER MAY REQUIRE.
8. THE CONTRACTOR AND THE ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. THE ENGINEER SHALL FURNISH THE CITY OF LIBERTY HILL ACCURATE "AS-BUILT" DRAWINGS FOLLOWING COMPLETION OF ALL CONSTRUCTION. THESE "AS-BUILT" DRAWINGS SHALL MEET WITH THE SATISFACTION OF THE PLANNING & DEVELOPMENT DEPARTMENT PRIOR TO FINAL ACCEPTANCE.
9. THE LIBERTY HILL CITY COUNCIL SHALL NOT BE PETITIONED FOR ACCEPTANCE UNTIL ALL NECESSARY EASEMENT DOCUMENTS HAVE BEEN SIGNED AND RECORDED.
10. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE CONTRACTOR'S WORK TO WITHIN THE PERMANENT AND ANY TEMPORARY EASEMENTS. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. CLEAN-UP SHALL BE TO THE SATISFACTION OF THE CITY ENGINEER AND/OR CITY INSPECTOR.
11. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL APPLY FOR AND SECURE ALL PROPER PERMITS FROM THE APPROPRIATE AUTHORITIES.
12. BENCHMARKS UTILIZED FOR THE CONSTRUCTION OF THIS PROJECT ARE DESCRIBED AS FOLLOWS:
AS NOTED ON THE SURVEY TITLED JOHN B. ROBINSON SURVEY, ABSTRACT NO. 521 & B. MANLOVE SURVEY, ABSTRACT NO.417, BY JPH LAND SURVEYING LLC., ROUND ROCK, TX, DATED 01/06/21, THE FIRST SITE BENCHMARK IS A MAG NAIL WITH A METAL WASHER STAMPED "JPH BENCHMARK" SET IN A CONCRETE DRAIN INLET ON THE EAST MARGIN OF U.S. HIGHWAY 183 AND COUNTY ROAD 258. BENCHMARK ELEVATION = 1046.29' (NAVD'88, GEOID 18). THE SECOND SITE BENCHMARK IS A MAG NAIL WITH A METAL WASHER STAMPED "JPH BENCHMARK" SET IN A CONCRETE CULVERT DRAIN ON THE NORTH MARGIN OF COUNTY ROAD 258, LOCATED APPROXIMATELY 2580' NORTHEASTERLY FROM INTERSECTION OF U.S. HIGHWAY 183 AND COUNTY ROAD 258, AND APPROXIMATELY 920' SOUTHEASTERLY FROM THE INTERSECTION OF OF COUNTY ROAD 258. BENCHMARK ELEVATION = 1055.98' (NAVD'88, GEOID 18).

CITY OF LIBERTY HILL TRENCH SAFETY NOTES:

1. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT WILL BE PROVIDED BY THE CONTRACTOR.
2. IN ACCORDANCE WITH THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, WHEN PERSONS ARE IN TRENCHES 4-FEET DEEP OR MORE, ADEQUATE MEANS OF EXIT, SUCH AS A LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.
3. IF TRENCH SAFETY SYSTEM DETAILS WERE NOT PROVIDED IN THE PLANS BECAUSE TRENCHES WERE ANTICIPATED TO BE LESS THAN 5 FEET IN DEPTH AND DURING CONSTRUCTION IT IS FOUND THAT TRENCHES ARE IN FACT 5 FEET OR MORE IN DEPTH OR TRENCHES LESS THAN 5 FEET IN DEPTH ARE IN AN AREA WHERE HAZARDOUS GROUND MOVEMENT IS EXPECTED, ALL CONSTRUCTION SHALL CEASE, THE TRENCHED AREA SHALL BE BARRICADED AND THE ENGINEER NOTIFIED IMMEDIATELY. CONSTRUCTION SHALL NOT RESUME UNTIL APPROPRIATE TRENCH SAFETY SYSTEM DETAILS, AS DESIGNED BY A PROFESSIONAL ENGINEER, ARE RETAINED AND COPIES SUBMITTED TO THE CITY OF LIBERTY HILL.

CITY OF LIBERTY HILL TRAFFIC MARKING NOTES:

1. ANY METHODS, STREET MARKINGS AND SIGNAGE NECESSARY FOR WARNING MOTORISTS, WARNING PEDESTRIANS OR DIVERTING TRAFFIC DURING CONSTRUCTION SHALL CONFORM TO THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION.
2. ALL PAVEMENT MARKINGS, MARKERS, PAINT, TRAFFIC BUTTONS, TRAFFIC CONTROLS AND SIGNS SHALL BE INSTALLED IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES AND, THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITIONS.

CITY OF LIBERTY HILL EROSION AND SEDIMENTATION CONTROL NOTES:

1. EROSION CONTROL MEASURES, SITE WORK AND RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF ROUND ROCK EROSION AND SEDIMENTATION CONTROL SPECIFICATIONS.
2. ALL SLOPES SHALL BE SODDED OR SEEDED WITH APPROVED GRASS, GRASS MIXTURES OR GROUND COVER SUITABLE TO THE AREA AND SEASON IN WHICH THEY ARE APPLIED.
3. SILT FENCES, ROCK BERMS, SEDIMENTATION BASINS AND SIMILARLY RECOGNIZED TECHNIQUES AND MATERIALS SHALL BE EMPLOYED DURING CONSTRUCTION TO PREVENT POINT SOURCE SEDIMENTATION LOADING OF DOWNSTREAM FACILITIES. SUCH INSTALLATION SHALL BE REGULARLY INSPECTED BY THE CITY OF LIBERTY HILL FOR EFFECTIVENESS. ADDITIONAL MEASURES MAY BE REQUIRED IF, IN THE OPINION OF THE CITY ENGINEER, THEY ARE WARRANTED.
4. ALL TEMPORARY EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL FINAL INSPECTION AND APPROVAL OF THE PROJECT BY THE ENGINEER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL TEMPORARY EROSION CONTROL STRUCTURES AND TO REMOVE EACH STRUCTURE AS APPROVED BY THE ENGINEER.
5. ALL MUD, DIRT, ROCKS, DEBRIS, ETC., SPILLED, TRACKED OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES AND AREAS USED BY THE PUBLIC SHALL BE CLEANED UP IMMEDIATELY.

CITY OF LIBERTY HILL STREET AND DRAINAGE NOTES:

1. ALL TESTING SHALL BE DONE BY AN INDEPENDENT LABORATORY AT THE OWNER'S EXPENSE. ANY RETESTING SHALL BE PAID FOR BY THE CONTRACTOR. A CITY INSPECTOR SHALL BE PRESENT DURING ALL TESTS. TESTING SHALL BE COORDINATED WITH THE CITY INSPECTOR AND HE SHALL BE GIVEN A MINIMUM OF 24 HOURS NOTICE PRIOR TO ANY TESTING. TELEPHONE 512-778-5449 (INSPECTIONS).
2. BACKFILL BEHIND THE CURB SHALL BE COMPACTED TO OBTAIN A MINIMUM OF 95% MAXIMUM DENSITY TO WITHIN 3" OF TOP OF CURB. MATERIAL USED SHALL BE PRIMARILY GRANULAR WITH NO ROCKS LARGER THAN 6" IN THE GREATEST DIMENSION. THE REMAINING 3" SHALL BE CLEAN TOPSOIL FREE FROM ALL CLODS AND SUITABLE FOR SUSTAINING PLANT LIFE.
3. DEPTH OF COVER FOR ALL CROSSINGS UNDER PAVEMENT INCLUDING GAS, ELECTRIC, TELEPHONE, CABLE TV, WATER SERVICES, ETC., SHALL BE A MINIMUM OF 30" BELOW SUBGRADE.
4. STREET RIGHTS-OF-WAY SHALL BE GRADED AT A SLOPE OF 1/4" PER FOOT TOWARD THE CURB UNLESS OTHERWISE INDICATED. HOWEVER, IN NO CASE SHALL THE WIDTH OF RIGHT-OF-WAY AT 1/4" PER FOOT SLOPE BE LESS THAN 10 FEET UNLESS A SPECIFIC REQUEST FOR AN ALTERNATE GRADING SCHEME IS MADE TO AND ACCEPTED BY THE CITY OF LIBERTY HILL PLANNING & DEVELOPMENT DEPARTMENT.
5. BARRICADES BUILT TO CITY OF LIBERTY HILL STANDARDS SHALL BE CONSTRUCTED ON ALL DEAD-END STREETS AND AS NECESSARY DURING CONSTRUCTION TO MAINTAIN JOB AND PUBLIC SAFETY.
6. ALL R.C.P. SHALL BE MINIMUM CLASS III.
7. THE SUBGRADE MATERIAL FOR THE PAVEMENT SHOWN HEREIN WAS TESTED BY ALLIANCE ENGINEERING GROUP, INC. AND THE PAVING SECTIONS DESIGNED IN ACCORDANCE WITH THE CURRENT CITY OF LIBERTY HILL DESIGN CRITERIA. THE PAVING SECTIONS ARE TO BE CONSTRUCTED AS SHOWN IN THE GEOTECHNICAL REPORT NO. AE21-1104 DATED 01/28/2022 PREPARED BY ALLIANCE ENGINEERING GROUP, INC. OF TAYLOR, TEXAS .

   THE GEOTECHNICAL ENGINEER SHALL INSPECT THE SUBGRADE FOR COMPLIANCE WITH THE DESIGN ASSUMPTIONS MADE DURING PREPARATION OF THE SOILS REPORT. ANY ADJUSTMENTS THAT ARE REQUIRED SHALL BE MADE THROUGH REVISION OF THE CONSTRUCTION PLANS.
8. WHERE PI'S ARE OVER 20, SUBGRADES MUST BE STABILIZED UTILIZING A METHOD ACCEPTABLE TO THE CITY ENGINEER. THE GEOTECHNICAL ENGINEER SHALL RECOMMEND AN APPROPRIATE SUBGRADE STABILIZATION IF SULFATES ARE DETERMINED TO BE PRESENT.

CITY OF GEORGETOWN WATER 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 OF THE CITY.
3. THE SITE CONSTRUCTION PLANS SHALL MEET ALL REQUIREMENTS OF THE APPROVED SITE PLAN.
4. PRIVATE WATER SYSTEM FIRE LINES SHALL BE TESTED BY THE CONTRACTOR TO 200 PSI FOR 2 HOURS.
5. 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.
6. PUBLIC WATER SYSTEM MAINS SHALL BE 150 PSI C900 PVC AND TESTED BY THE CONTRACTOR AT 150 PSI FOR 4 HOURS.
7. ALL BENDS AND CHANGES IN DIRECTION ON WATER MAINS SHALL BE RESTRAINED AND THRUST BLOCKED.
8. LONG FIRE HYDRANT LEADS SHALL BE RESTRAINED.
9. ALL WATER LINES ARE TO BE BACTERIA TESTED BY THE CONTRACTOR ACCORDING TO THE CITY STANDARDS AND SPECIFICATIONS.
10. WATER AND SEWER MAIN CROSSINGS SHALL MEET ALL REQUIREMENTS OF THE TCEQ AND THE CITY.
11. A MAINTENANCE BOND IS REQUIRED TO BE SUBMITTED TO THE CITY PRIOR TO ACCEPTANCE OF THE PUBLIC IMPROVEMENTS. THIS BOND SHALL BE ESTABLISHED FOR 2 YEARS IN THE AMOUNT OF 10% OF THE COST OF THE PUBLIC IMPROVEMENTS AND SHALL FOLLOW THE CITY FORMAT.
12. 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 TIFF OR PDF (300P DPI). IF A DISK IS SUBMITTED, A BOND SET SHALL BE INCLUDED WITH THE DISK.

WILLIAMSON COUNTY CONSTRUCTION NOTES

B4 - CONSTRUCTION - GENERAL

1. A PRECONSTRUCTION MEETING SHALL BE SCHEDULED PRIOR TO THE START OF CONSTRUCTION. THE DESIGN ENGINEER, OWNER, CONTRACTOR, SUBCONTRACTORS, AND COUNTY ENGINEER SHALL ATTEND THIS MEETING. ALL ROADS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AS APPROVED BY THE COUNTY ENGINEER AND IN ACCORDANCE WITH THE SPECIFICATIONS FOUND IN THE CURRENT VERSION OF THE "TEXAS DEPARTMENT OF TRANSPORTATION MANUAL STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES" UNLESS OTHERWISE STATED ON THE CONSTRUCTION DOCUMENTS APPROVED BY THE COUNTY ENGINEER.
2. ALL MATERIALS SHALL BE SAMPLED AND TESTED BY AN INDEPENDENT TESTING LABORATORY IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE COUNTY ENGINEER. THE OWNER SHALL PAY FOR ALL TESTING SERVICES AND SHALL FURNISH THE COUNTY ENGINEER WITH CERTIFIED COPIES OF THESE TEST RESULTS. THE COUNTY ENGINEER MUST APPROVE THE TEST RESULTS PRIOR TO CONSTRUCTING THE NEXT COURSE OF THE ROADWAY STRUCTURE. ANY MATERIAL WHICH DOES NOT MEET THE MINIMUM REQUIRED TEST SPECIFICATIONS SHALL BE REMOVED AND RECOMPACTED OR REPLACED UNLESS ALTERNATIVE REMEDIAL ACTION IS APPROVED IN WRITING FROM THE COUNTY ENGINEER.
3. EXCEPT FOR ELECTRICAL LINES, ALL UNDERGROUND NONFERROUS UTILITIES WITHIN A RIGHT-OF-WAY OR EASEMENT MUST BE ACCOMPANIED BY FERROUS METAL LINES TO AID IN TRACING THE LOCATION OF SAID UTILITIES THROUGH THE USE OF A METAL DETECTOR.
4. ALL PAVEMENTS ARE TO BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER. THE DESIGN SHALL BE BASED ON A 20-YEAR DESIGN LIFE AND IN CONJUNCTION WITH RECOMMENDATIONS BASED UPON A SOILS REPORT OF SAMPLES TAKEN ALONG THE PROPOSED ROADWAYS. TEST BORINGS SHALL BE PLACED AT A MAXIMUM SPACING OF 500 FEET OR OTHER SAMPLING FREQUENCY APPROVED BY THE COUNTY ENGINEER BASED ON RECOMMENDATIONS PROVIDED BY THE GEOTECHNICAL ENGINEER. THE SOILS REPORT AND PAVEMENT DESIGN SHALL BE SUBMITTED TO THE COUNTY ENGINEER FOR REVIEW. THE PAVEMENT DESIGN MUST BE APPROVED BY THE COUNTY ENGINEER PRIOR TO OR CONCURRENTLY WITH THE REVIEW AND APPROVAL OF THE CONSTRUCTION PLANS. IN ADDITION TO THE BASIS OF THE PAVEMENT DESIGN, THE SOILS REPORT SHALL CONTAIN THE RESULTS OF SAMPLED AND TESTED SUBGRADE FOR PLASTICITY INDEX, PH, SULFATE CONTENT, AND MAXIMUM DENSITY.

B5 - SUBGRADE

1. THE PREPARATION OF THE SUBGRADE SHALL FOLLOW GOOD ENGINEERING PRACTICES AS DIRECTED BY THE COUNTY ENGINEER IN CONJUNCTION WITH RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT. WHEN THE PLASTICITY INDEX (PI) IS GREATER THAN 20, A SUFFICIENT AMOUNT OF LIME SHALL BE ADDED AS DESCRIBED IN ITEM 260 OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION UNTIL THE PI IS LESS THAN 20. IF THE ADDITION OF LIME AS DESCRIBED IN ITEM 260 IS NOT FEASIBLE, AN ALTERNATE STABILIZING DESIGN SHALL BE PROPOSED AND SUBMITTED TO THE COUNTY ENGINEER FOR APPROVAL. THE SUBGRADE SHALL BE PREPARED AND COMPACTED TO ACHIEVE A DRY DENSITY PER TXDOT ITEM 132. IN ADDITION, PROOF ROLLING MAY BE REQUIRED BY THE COUNTY ENGINEER.
2. THE SUBGRADE SHALL BE INSPECTED AND APPROVED BY AN INDEPENDENT TESTING LABORATORY AND A CERTIFIED COPY OF ALL INSPECTION REPORTS FURNISHED TO THE COUNTY ENGINEER, WHO MUST APPROVE THE REPORT PRIOR TO APPLICATION OF THE BASE MATERIAL. ALL DENSITY TEST REPORTS SHALL INCLUDE A COPY OF THE WORK SHEET SHOWING THE PERCENTAGE OF THE MAXIMUM DRY (PROCTOR) DENSITY. THE NUMBER AND LOCATION OF ALL SUBGRADE TESTS SHALL BE DETERMINED BY THE COUNTY ENGINEER.

B6 - BASE MATERIAL

1. BASE MATERIAL SHALL CONFORM TO ITEM 247 OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, "FLEXIBLE BASE". THE BASE MATERIAL SHALL BE TYPE A GRADE 1, TYPE A GRADE 2, OR AS APPROVED BY THE COUNTY ENGINEER.
2. EACH LAYER OF BASE COURSE SHALL BE TESTED FOR IN-PLACE DRY DENSITY AND MEASURED FOR COMPACTED THICKNESS. THE NUMBER AND LOCATION OF ALL BASE TEST SAMPLES SHALL BE DETERMINED BY THE COUNTY ENGINEER.
3. THE BASE SHALL BE PREPARED AND COMPACTED TO ACHIEVE A MINIMUM OF 100% OF THE MAXIMUM (PROCTOR) DRY DENSITY OR AS APPROVED BY THE COUNTY ENGINEER UPON RECOMMENDATION BY THE TESTING LABORATORY. THE MAXIMUM LIFT SHALL NOT EXCEED SIX INCHES. THE BASE MUST BE INSPECTED AND APPROVED BY AN INDEPENDENT TESTING LABORATORY AND A CERTIFIED COPY OF THE TEST RESULTS FURNISHED TO THE COUNTY ENGINEER FOR APPROVAL. PRIOR TO THE PLACEMENT OF THE FIRST LIFT OF BASE, THE STOCKPILE SHALL BE TESTED FOR THE SPECIFICATIONS FOUND IN ITEM 247 TABLE 1 AND THE RESULT FURNISHED TO THE COUNTY ENGINEER FOR APPROVAL

B7 - BITUMINOUS PAVEMENT

1. URBAN ROADS REQUIRE A MINIMUM 2 INCH WEARING SURFACE OF HMAC TYPE D. THE MIX SHALL BE FROM A TXDOT CERTIFIED PLANT. THE MIX DESIGN SHALL BE SUBMITTED TO THE COUNTY ENGINEER FOR APPROVAL PRIOR TO PLACEMENT OF THE MATERIAL. CONTRACTOR'S QUALITY CONTROL (CQC) TEST REPORTS SHALL BE SUBMITTED TO THE COUNTY ENGINEER ON A DAILY BASIS. AS A MINIMUM, DAILY CQC TESTING ON THE PRODUCED MIX SHALL INCLUDE: SIEVE ANALYSIS TEX-200-F, ASPHALT CONTENT TEX-210-F, HVEEM STABILITY TEX-208-F, LABORATORY COMPACTED DENSITY TEX-207-F, AND MAXIMUM SPECIFIC GRAVITY TEX-227-F. THE NUMBER AND LOCATION OF ALL HMAC TESTS SHALL BE DETERMINED BY THE COUNTY ENGINEER WITH A MINIMUM OF THREE, 6-INCH DIAMETER FIELD CORES SECURED AND TESTED BY THE CONTRACTOR FROM EACH DAY'S PAVING. EACH HMAC COURSE SHALL BE TESTED FOR IN-PLACE DENSITY, BITUMINOUS CONTENT AND AGGREGATE GRADATION, AND SHALL BE MEASURED FOR COMPACTED THICKNESS. THE NUMBER AND LOCATION OF ALL HMAC TEST SAMPLES SHALL BE DETERMINED BY THE COUNTY ENGINEER.
2. RURAL ROADS MAY USE EITHER THE SPECIFICATIONS FOUND IN SECTION B7.1 OR A TWO-COURSE SURFACE IN ACCORDANCE WITH ITEM 316, TREATMENT WEARING SURFACE, OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. THE TYPE AND RATE OF ASPHALT AND AGGREGATE SHALL BE INDICATED ON THE PLANS AS A BASIS OF ESTIMATE AND SHALL BE DETERMINED AT THE PRECONSTRUCTION CONFERENCE. AGGREGATE USED IN THE MIX SHALL BE ON THE TXDOT QUALITY MONITORING SCHEDULE. AGGREGATE SHALL BE TYPE B GRADE 4. GRADATION TESTS SHALL BE REQUIRED FOR EACH 300 CUBIC YARDS OF MATERIAL PLACED WITH A MINIMUM OF TWO TESTS PER EACH GRADE PER EACH PROJECT. TEST RESULTS SHALL BE REVIEWED BY THE COUNTY ENGINEER PRIOR TO APPLICATION OF THE MATERIAL.

B8 - CONCRETE PAVEMENT

1. IN LIEU OF BITUMINOUS PAVEMENT, PORTLAND CEMENT CONCRETE PAVEMENT MAY BE USED. IN SUCH CASES, THE PAVEMENT THICKNESS SHALL BE A MINIMUM OF 9 INCHES OF CONCRETE, AND SHALL BE JOINTED AND REINFORCED IN ACCORDANCE WITH THE DETAIL INCLUDED IN APPENDIX J. THE MIX SHALL BE FROM A TXDOT CERTIFIED PLANT. THE MIX DESIGN SHALL BE SUBMITTED TO THE COUNTY ENGINEER FOR APPROVAL PRIOR TO PLACEMENT OF THE MATERIAL.

B9 - CONCRETE - GENERAL

1. UNLESS OTHERWISE SPECIFIED, CONCRETE SHALL BE IN ACCORDANCE WITH ITEM 421 OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND BE PLACED IN ACCORDANCE WITH THE APPLICABLE ITEM.
2. ALL CONCRETE SHALL BE TESTED FOR COMPRESSIVE STRENGTH. ONE SET OF THREE CONCRETE TEST CYLINDERS SHALL BE MOLDED FOR EVERY 50 CUBIC YARDS OF CONCRETE PLACED FOR EACH CLASS OF CONCRETE PER DAY, OR AT ANY OTHER INTERVAL AS DETERMINED BY THE COUNTY ENGINEER. A SLUMP TEST SHALL BE REQUIRED WITH EACH SET OF TEST CYLINDERS. ONE CYLINDER SHALL BE TESTED FOR COMPRESSIVE STRENGTH AT AN AGE OF SEVEN DAYS AND THE REMAINING TWO CYLINDERS SHALL BE TESTED AT 28 DAYS OF AGE.

WILLIAMSON COUNTY EMERGENCY SERVICE DISTRICT NO. 4 NOTES

1. PRIOR TO CONSTRUCTION ABOVE THE SLAB, PROVIDE AN ALL-WEATHER DRIVE SURFACE THAT IS ENGINEERED TO WITHSTAND 75,000 LBS. AN ACCEPTANCE INSPECTION BY FIRE INSPECTIONS IS REQUIRED. 2015 IFC 503 AND D102.1
2. PRIOR TO CONSTRUCTION ABOVE THE SLAB, THE FIRE HYDRANTS ON THE SITE PLAN ARE REQUIRED TO BE INSPECTED AND APPROVED FOR SERVICE BY THE FIRE CODE OFFICIAL.

GEORGETOWN UTILITY SYSTEMS - CONSTRUCTION GENERAL NOTES

1. THESE CONSTRUCTION PLANS WERE PREPARED, SEALED, SIGNED 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 200 PSI FOR 15 MINUTES AND 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 ACCEPTABLE OF THE PUBLIC IMPROVEMENTS. THIS BOND SHALL BE ESTABLISHED FOR 2 YEARS IN THE AMOUNT OF 10% OF THE COST OF THE PUBLIC IMPROVEMENTS AND SHALL FOLLOW THE CITY FORMAT.
21. RECORD DRAWINGS OF PUBLIC IMPROVEMENTS SHALL BE SUBMITTED TO THE CITY BY THE DESIGN ENGINEER PRIOR TO ACCEPTANCE OF THE PROJECT. THESE DRAWINGS SHALL BE A PDF EMAILED TO THE CITY DEVELOPMENT ENGINEER.

GENERAL NOTES

1. THE CONTRACTOR SHALL BEGIN WORK AS DIRECTED BY THE OWNER/CITY OR THE NOTICE TO PROCEED.
2. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, APPROVALS, AND INSPECTIONS PRIOR TO AND THROUGHOUT CONSTRUCTION.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN NEAT AND ACCURATE CONSTRUCTION RECORDS FOR THE OWNER/CITY'S USE. THE CONTRACTOR SHALL PROVIDE THE CITY CLEAN AND ACCURATE FULL SIZE REPRODUCIBLE RECORD DRAWINGS WHICH CLEARLY DESCRIBE ALL CONSTRUCTION AND ANY DEVIATIONS FROM THE PLANS.
4. ALL SHOP DRAWINGS AND SUBMITTALS SHALL BE PROOFREAD AND REVIEWED BY THE GENERAL CONTRACTOR FOR APPROVAL PRIOR TO SUBMITTAL TO THE ENGINEER. SUBCONTRACTOR / GENERAL CONTRACTOR SHALL CLEARLY INDICATE, MARK, HIGHLIGHT, AND PROPERLY CLARIFY PRODUCTS TO BE CONSIDERED FOR APPROVAL. SUBMITTALS NOT PROOFREAD OR REVIEWED OR CLARIFIED PROPERLY SHALL BE RETURNED UNREVIEWED. CONTRACTOR SHALL RESUBMIT SHOP DRAWINGS AND ALLOW FOR SUITABLE REVIEW TIME. SUITABLE REVIEW TIME SHALL BE SEVEN (7) WORKING DAYS FOR TYPICAL SUBMITTALS AND LONGER DEPENDING ON THE SIZE AND NATURE OF THE SUBMITTAL.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR QUALITY CONTROL IN THE REQUIRED CONSTRUCTION SURVEYING AND MATERIALS TESTING. DIMENSIONS SHOWN AND DIGITAL FILES PROVIDED SHALL BE USED TO LAYOUT THE SITE.
6. ALL EXCAVATION IS UNCLASSIFIED AND SHALL INCLUDE ALL MATERIALS ENCOUNTERED TO INCLUDE BUT NOT BE LIMITED TO ROCK, RUBBLE, DEBRIS, TRASH, ETC. UNUSABLE EXCAVATED MATERIAL AND ALL WASTE RESULTING FROM SITE CLEARING AND GRUBBING SHALL BE DISPOSED OF OFF SITE AT THE CONTRACTOR'S EXPENSE UNLESS OTHERWISE SPECIFIED OR AGREED TO BY OWNER.
7. THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL USE SILT FENCES (OR OTHER METHODS APPROVED BY THE ENGINEER AND CITY) AS REQUIRED TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM FLOWING ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL EROSION, CONSERVATION, AND SILTATION ORDINANCES. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES FOR THE ESTABLISHMENT OF GRASS OR OTHER GROWTH TO PREVENT EROSION.
8. DISTURBED AREAS THAT ARE SEEDED SHALL BE CHECKED PERIODICALLY FOR FULL COVERAGE OF GRASS. ALL DISTURBED AREAS SHALL BE WATERED, FERTILIZED, AND SEEDED OR SODDED AS NECESSARY AND BY DEFINITION 'MAINTAINED' UNTIL AN ESTABLISHED STAND OF GRASS CAN BE RELEASED TO THE OWNER. REFERENCE LANDSCAPE/IRRIGATION PLAN (IF PROVIDED) TO COORDINATE PLANTING ENHANCEMENTS AND LIMITS OF IRRIGATION COVERAGE.
9. CONTRACTOR SHALL NOT STORE MATERIALS, EQUIPMENT OR OTHER CONSTRUCTION ITEMS ON ADJACENT PROPERTIES OR ADJACENT RIGHT-OF-WAYS WITHOUT THE PRIOR WRITTEN CONSENT OF THE PROPERTY OWNER AND THE CITY. ALL CONSTRUCTION WASTE MATERIALS TO BE REMOVED SHALL BE DISPOSED OF AT A PERMITTED LOCATION OFF SITE, UNLESS WRITTEN APPROVAL IS OBTAINED FROM THE CITY.

EARTHWORK NOTES

1. PLACE TOPSOIL TO WITHIN 0.10' OF FINISH GRADE. SEE TOPSOIL SPECIFICATION SHOULD IMPORTED MATERIAL BE NECESSARY.
2. AS A RESULT OF THE SITE GEOLOGY AND PROPOSED SITE PLAN, THE CONTRACTOR SHALL ESTABLISH A SOIL MANAGEMENT PLAN/OPERATION THROUGHOUT THE CONSTRUCTION PROCESS. ALL TOPSOIL SHALL BE SALVAGED AND STOCKPILED ON-SITE. STOCKPILED TOPSOIL MAY BECOME STERILE AND NON-FERTILE OVER TIME. THE CONTRACTOR SHALL AMEND AND SUPPLEMENT THE STOCKPILED TOPSOIL AS NECESSARY TO YIELD A FERTILE TOPSOIL SUPPLY. THE CONTRACTOR'S BID SHALL INCLUDE ALL NECESSARY TOPSOIL (IMPORT MAY BE REQUIRED) AS REQUIRED TO BACKFILL AND CROWN ALL LANDSCAPE ISLANDS AND LANDSCAPE AREAS. THE LACK OF AVAILABLE ON-SITE TOPSOIL WILL NOT BE GROUNDS FOR A CHANGE ORDER OR ADDITIONAL PAY.

UTILITY NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PRIVATE OR PUBLIC, PRIOR TO MOBILIZATION. CONTRACTOR SHALL VISIT THE SITE AND MAKE ALL NECESSARY OBSERVATIONS AND INSPECTIONS TO FAMILIARIZE THEMSELVES WITH THE SITE AND THE SITE FACILITIES. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON INFORMATION FURNISHED BY THE OWNERS OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPURTENANCES OBSERVED IN THE FIELD. THE OWNER AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA; AND, THE CONTRACTOR, SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA, FOR LOCATING ALL UNDERGROUND FACILITIES, FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION, FOR THE SAFETY AND PROTECTION THEREOF, AND REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK. THE COST OF ALL WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE.
2. THE CONTRACTOR SHALL NOTIFY ALL AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 1 WEEK PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND MAKE ARRANGEMENTS FOR ANY AND ALL TEMPORARY UTILITIES, PERMITS, AND AGREEMENTS.
3. THE CONTRACTOR SHALL PROTECT ALL UTILITIES DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL GIVE THE CITY, RESIDENTS AND BUSINESSES AFFECTED BY ANY ANTICIPATED WATER OR SEWER SERVICE DISRUPTIONS AT LEAST FORTY-EIGHT (48) HOURS PRIOR NOTICE.
4. CONTRACTOR SHALL EXERCISE CAUTION AND MAINTAIN ADEQUATE CLEAR ZONE BETWEEN THE CONTRACTOR'S EQUIPMENT AND ANY POWER LINES.
5. THE CONTRACTOR SHALL PROTECT ALL EXISTING POWER POLES, SIGNS, MANHOLES, TELEPHONES RISERS, WATER VALVES, UTILITIES, ETC. DURING ALL CONSTRUCTION PHASES. CONTRACTOR WILL BE RESPONSIBLE TO REPLACE ANY DAMAGED ITEMS AND RESTORE ANY SERVICES THAT HAVE BEEN DISTURBED. ALL MANHOLES, CLEAN-OUTS, WATER VALVES, FIRE HYDRANTS AND OTHER APPURTENANCES MUST BE ADJUSTED TO FINAL GRADE BEFORE THE OWNER WILL ACCEPT THE WORK.
6. THE CONTRACTOR SHALL SALVAGE ALL EXISTING CITY UTILITIES (INCLUDING SIGNS, VALVES, FIRE HYDRANTS, ETC.) IN ACCORDANCE WITH CITY REQUIREMENTS AND PROVIDE TO THE CITY.

SEQUENCING / TRAFFIC CONTROL NOTES

1. CONTRACTOR SHALL PREPARE, FURNISH, MAINTAIN, AND REMOVE ALL TRAFFIC CONTROL BARRICADES, WARNING SIGNS, LIGHTS, CONSTRUCTION FENCES, ETC. FOR THE WORK THROUGHOUT CONSTRUCTION. ALL BARRICADES, WARNING SIGNS, LIGHTS, DEVICES, ETC., FOR THE GUIDANCE AND PROTECTION OF TRAFFIC AND PEDESTRIANS MUST CONFORM TO THE INSTALLATION SHOWN IN THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION AS CURRENTLY AMENDED BY THE TEXAS DEPARTMENT OF TRANSPORTATION.
2. CONTRACTOR SHALL PROVIDE ACCESS TO ALL REQUIRED ENTRANCES AND EXITS AT ALL TIMES THROUGHOUT CONSTRUCTION. CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL AND SEQUENCING PLAN TO ALL AUTHORITIES HAVING JURISDICTION AND COORDINATE THE PLAN AND SCHEDULE WITH THE OWNER PRIOR TO THE START OF CONSTRUCTION.

PAVING NOTES

1. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PERFORMING ALL CONSTRUCTION LAYOUTS FROM THE SITE LAYOUT DIGITAL CONTROL POINTS AND FROM THE DIMENSIONS SHOWN. THE CONTRACTOR MUST NOTIFY THE ENGINEER OF ANY DISCREPANCIES IN ADVANCE AND ALLOW FOR THE ENGINEER'S RESPONSE BEFORE PROCEEDING WITH THE WORK.
2. ALL PAVING DIMENSIONS ARE TO BACK OF CURB, AND EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
3. ALL CONCRETE PAVING SHALL BE REINFORCED.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY THE CITY AND THE ENGINEER WITH A CONCRETE MIX DESIGN AT THE PRE-CONSTRUCTION MEETING FOR REVIEW AND APPROVAL. THE COST OF THIS DESIGN SHALL BE INCLUDED IN THE UNIT PRICE OF PAVEMENT MATERIAL. FLY ASH IS NOT PERMITTED AS A SUBSTITUTE FOR CEMENT.
5. THE CONTRACTOR SHALL PROTECT ANY EXISTING AND/OR PROPOSED UTILITIES, WHICH ARE IN THE PROPOSED SUBGRADE DURING THE SUBGRADE STABILIZATION PROCESS.
6. PRIOR TO PAVING INSTALLATION, CONTRACTOR TO REFERENCE ALL PLAN SHEETS TO IDENTIFY ALL SLEEVES AND CONDUIT NECESSARY TO SUPPORT FRANCHISE UTILITY SERVICES, TECHNOLOGY/SECURITY, SITE LIGHTING, IRRIGATION, ETC. CONTRACTOR SHALL CONFIRM WITH OWNER AND/OR OWNER'S REPRESENTATIVE TO VERIFY SIZE, LOCATION, AND QUANTITY.
7. UNLESS OTHERWISE NOTED, SUBGRADE SHALL BE STABILIZED TO 12" BEYOND THE BACK OF CURB OR EDGE OF PAVEMENT PER GEOTECH RECOMMENDATIONS. ALL CONCRETE STRENGTH SHALL BE A MINIMUM OF 3,500 PSI AND REINFORCING STEEL SHALL BE A MINIMUM OF #3 BARS 18" O.C.E.W. OR PER PROJECT GEOTECHNICAL RECOMMENDATIONS, WHICHEVER IS MORE STRINGENT. FIRE LANES, PARKING STALLS, AND ROADWAY STRIPING & MARKINGS SHALL CONFORM TO CITY STANDARDS. SIDEWALKS WITHIN LANDSCAPE AREAS SHALL BE MINIMUM 4" THICK. LARGE EXPANSES OF CONCRETE FLATWORK (SUCH AS MAJOR PEDESTRIAN AREAS, PLAZA AREAS BETWEEN BUILDINGS OR OTHER STRUCTURES) SHALL BE TREATED LIKE VEHICULAR CONCRETE PAVEMENT AND RECEIVE SAME SUBGRADE STABILIZATION AS VEHICULAR PAVEMENT (6" DEEP MINIMUM AND IN ACCORDANCE WITH A LIME SERIES TEST) AND ALL JOINTS (CONTRACTION AND EXPANSION JOINTS) SHALL BE SEALED WITH SELF LEVELING POLYURETHANE SEALANT.
8. ALL PAVEMENT WITHIN 5' OF PROPOSED BUILDING(S) SHALL ADHERE TO THE STRUCTURAL RECOMMENDATIONS AND OR ARCHITECTURAL REQUIREMENTS. REFER TO STRUCTURAL AND ARCHITECTURAL PLANS AND RELATED TECHNICAL SPECIFICATIONS. CIVIL PAVEMENT LIMITS BEGIN 5' OUTSIDE THE BUILDING. IN THE EVENT OF OF A CONFLICT WITH THE STRUCTURAL AND OR ARCHITECTURAL WITHIN THIS AREA, THE STRUCTURAL/ ARCHITECT REQUIREMENTS SHALL GOVERN.
9. CONNECTION OF THE PROPOSED SIDEWALK TO EXISTING PAVING, SIDEWALK, BUILDING, AND WHEELCHAIR RAMPS SHALL BE CONSIDERED SUBSIDIARY TO THE COST OF THE CONSTRUCTION OF THE SIDEWALK. ALL JOINTS (EXPANSION, ISOLATION, CONTRACTION, & CONSTRUCTION) FOR CONCRETE PAVING AND INCIDENTAL CRACKS SHALL BE SEALED AND INSTALLED IN ACCORDANCE WITH THE AMERICAN CONCRETE PAVEMENT ASSOCIATION (ACPA) RECOMMENDATIONS. CONTRACTOR SHALL OBSERVE THE ARCHITECTURAL AND STRUCTURAL JOINTING LAYOUTS. IN THE EVENT OF A DISCREPANCY OR CONFLICT FOR SITE PAVING, THE CONTRACTOR SHALL REFER TO ACPA PUBLICATION IS061.01P AND IS400.01P FOR THE JOINT SPECIFICATIONS AND THE LAYOUT OF PAVEMENT JOINTS (NON-PAY ITEM).
10. THE CONTRACTOR SHALL USE CARE DURING SOIL STABILIZATION AND COMPACTION ACTIVITIES SO AS NOT TO ADVERSELY AFFECT LANDSCAPE AREAS OR UTILITY LINES WITH SOIL STABILIZATION TREATMENTS. AFTER COMPACTION AND PRIOR TO PLACING GRASS, THE UPPER 8 INCHES (8") OF ALL LANDSCAPED AREAS SHALL BE AERATED, TILLED, OR OTHERWISE PROCESSED SO AS TO PROMOTE HEALTHY ROOT GROWTH FOR TURF AND OTHER VEGETATION. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY REPAIRS, UNDERCUTTING, REMOVAL, DISPOSAL, AND BACKFILLING OF THESE AREAS IF STABILIZATION IS DISCOVERED (NON-PAY ITEM).

Date	Description	No.

Revisions

STATE OF TEXAS
MATTHEW S. HARDY
134448
LICENSED
PROFESSIONAL ENGINEER
02-08-2024

TBPE Registration #: F-13709

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TBPE FIRM REG. #F-13709

Project
LIBERTY HILL MIDDLE SCHOOL #3 WEST CONNECTOR DRIVE

LIBERTY HILL
WILLIAMSON COUNTY TEXAS

Drawing Title
GENERAL NOTES

Project No. 531013311
Date FEBRUARY 2024
Drawn By NPF
Checked By MSH
Drawing No. C2.00

THIS CONSTRUCTION PROJECT IS SUBJECT TO THE CONDITIONS GIVEN IN THE EDWARDS AQUIFER PROTECTION PLAN (EAPP) APPROVED AND ISSUED FOR THIS SITE BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ). NO CONSTRUCTION ACTIVITIES MAY COMMENCE UNTIL THOSE PLANS HAVE BEEN ISSUED BY THE TCEQ. CONTRACTOR SHALL COMPLY WITH ALL REQUIRED PUBLIC NOTICE POSTINGS RELATED TO THIS TCEQ PERMIT PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

CONTRACTOR AND OWNER SHALL ALSO OBTAIN COVERAGE FOR STORMWATER DISCHARGES RELATED TO CONSTRUCTION ACTIVITIES UNDER THE TEXAS GENERAL PERMIT TXR150000. CONTRACTOR SHALL COMPLY WITH ALL REQUIRED PUBLIC NOTICE POSTINGS RELATED TO THIS TCEQ PERMIT PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
CONTRIBUTING ZONE PLAN
GENERAL CONSTRUCTION NOTES

1. A written notice of construction must be submitted to the TCEQ regional office at least 48 hours prior to the start of any ground disturbance or construction activities. This notice must include:

   - the name of the approved project;
   - the activity start date; and
   - the contact information of the prime contractor.

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

TCEQ WATER DISTRIBUTION SYSTEM
GENERAL CONSTRUCTION NOTES

1. THIS WATER DISTRIBUTION SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS 30 TEXAS ADMINISTRATIVE CODE (TAC) CHAPTER 290 SUBCHAPTER D. WHEN CONFLICTS ARE NOTED WITH LOCAL STANDARDS, THE MORE STRINGENT REQUIREMENT SHALL BE APPLIED. AT A MINIMUM, CONSTRUCTION FOR PUBLIC WATER SYSTEMS MUST ALWAYS MEET TCEQ'S "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS."
2. ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)/NSF INTERNATIONAL STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI [§290.44(A)(1)].
3. PLASTIC PIPE FOR USE IN PUBLIC WATER SYSTEMS MUST BEAR THE NSF INTERNATIONAL SEAL OF APPROVAL (NSF-PW) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 150 PSI OR A STANDARD DIMENSION RATIO OF 26 OR LESS [§290.44(A)(2)].
4. NO PIPE WHICH HAS BEEN USED FOR ANY PURPOSE OTHER THAN THE CONVEYANCE OF DRINKING WATER SHALL BE ACCEPTED OR RELOCATED FOR USE IN ANY PUBLIC DRINKING WATER SUPPLY [§290.44(A)(3)].
5. ALL WATER LINE CROSSINGS OF WASTEWATER MAINS SHALL BE PERPENDICULAR [§290.44(E)(4)(B)].
6. WATER TRANSMISSION AND DISTRIBUTION LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. HOWEVER, THE TOP OF THE WATER LINE MUST BE LOCATED BELOW THE FROST LINE AND IN NO CASE SHALL THE TOP OF THE WATER LINE BE LESS THAN 24 INCHES BELOW GROUND SURFACE [§290.44(A)(4)].
7. THE MAXIMUM ALLOWABLE LEAD CONTENT OF PIPES, PIPE FITTINGS, PLUMBING FITTINGS, AND FIXTURES IS 0.25 PERCENT [§290.44(B)].
8. THE CONTRACTOR SHALL INSTALL APPROPRIATE AIR RELEASE DEVICES WITH VENT OPENINGS TO THE ATMOSPHERE COVERED WITH 16-MESH OR FINER, CORROSION RESISTANT SCREENING MATERIAL OR AN ACCEPTABLE EQUIVALENT [§290.44(D)(1)].
9. THE CONTRACTOR SHALL NOT PLACE THE PIPE IN WATER OR WHERE IT CAN BE FLOODED WITH WATER OR SEWAGE DURING ITS STORAGE OR INSTALLATION [§290.44(F)(1)].
10. WHEN WATERLINES ARE LAID UNDER ANY FLOWING OR INTERMITTENT STREAM OR SEMI-PERMANENT BODY OF WATER THE WATERLINE SHALL BE INSTALLED IN A SEPARATE WATERTIGHT PIPE ENCASEMENT. VALVES MUST BE PROVIDED ON EACH SIDE OF THE CROSSING WITH FACILITIES TO ALLOW THE UNDERWATER PORTION OF THE SYSTEM TO BE ISOLATED AND TESTED [§290.44(F)(2)].
11. PURSUANT TO 30 TAC §290.44(A)(5), THE HYDROSTATIC LEAKAGE RATE SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY THE MOST CURRENT AWWA FORMULAS FOR PVC PIPE, CAST IRON AND DUCTILE IRON PIPE. INCLUDE THE FORMULAS IN THE NOTES ON THE PLANS.
    - o THE HYDROSTATIC LEAKAGE RATE FOR POLYVINYL CHLORIDE (PVC) PIPE AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICA WATER WORKS ASSOCIATION (AWWA) C-605 AS REQUIRED IN 30 TAC §290.44(A)(5). PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND MOST CURRENT FORMULA IS IN USE;

      $$Q = [LD(P)^{*}0.5]/148{,}000$$

      WHERE:
      - Q = THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR,
      - L = THE LENGTH OF THE PIPE SECTION BEING TESTED, IN FEET,
      - D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES, AND
      - P = THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI).

    - o THE HYDROSTATIC LEAKAGE RATE FOR DUCTILE IRON (DI) PIPE AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICA WATER WORKS ASSOCIATION (AWWA) C-600 AS REQUIRED IN 30 TAC §290.44(A)(5). PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND MOST CURRENT FORMULA IS IN USE;

      $$L = [SD(P)^{*}0.5]/148{,}000$$

      WHERE:
      - L = THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR,
      - S = THE LENGTH OF THE PIPE SECTION BEING TESTED, IN FEET,
      - D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES, AND
      - P = THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI).

12. THE CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE IN ALL DIRECTIONS OF NINE FEET BETWEEN THE PROPOSED WATERLINE AND WASTEWATER COLLECTION FACILITIES INCLUDING MANHOLES. IF THIS DISTANCE CANNOT BE MAINTAINED, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROJECT ENGINEER FOR FURTHER DIRECTION. SEPARATION DISTANCES, INSTALLATION METHODS, AND MATERIALS UTILIZED MUST MEET §290.44(E)(1)-(4).
13. THE SEPARATION DISTANCE FROM A POTABLE WATERLINE TO A WASTEWATER MAIN OR LATERAL MANHOLE OR CLEANOUT SHALL BE A MINIMUM OF NINE FEET. WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE POTABLE WATERLINE SHALL BE ENCASED IN A JOINT OF AT LEAST 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE-FOOT INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHALL BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEALANT [§290.44(E)(5)].
14. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER LINE, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION [§290.44(E)(6)].
15. SUCTION MAINS TO PUMPING EQUIPMENT SHALL NOT CROSS WASTEWATER MAINS, WASTEWATER LATERALS, OR WASTEWATER SERVICE LINES. RAW WATER SUPPLY LINES SHALL NOT BE INSTALLED WITHIN FIVE FEET OF ANY TILE OR CONCRETE WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE [§290.44(E)(7)].
16. WATERLINES SHALL NOT BE INSTALLED CLOSER THAN TEN FEET TO SEPTIC TANK DRAINFIELDS [§290.44(E)(8)].
17. THE CONTRACTOR SHALL DISINFECT THE NEW WATERLINES IN ACCORDANCE WITH AWWA STANDARD C-651-14 OR MOST RECENT, THEN FLUSH AND SAMPLE THE LINES BEFORE BEING PLACED INTO SERVICE. SAMPLES SHALL BE COLLECTED FOR MICROBIOLOGICAL ANALYSIS TO CHECK THE EFFECTIVENESS OF THE DISINFECTION PROCEDURE WHICH SHALL BE REPEATED IF CONTAMINATION PERSISTS. A MINIMUM OF ONE SAMPLE FOR EACH 1,000 FEET OF COMPLETED WATERLINE WILL BE REQUIRED OR AT THE NEXT AVAILABLE SAMPLING POINT BEYOND 1,000 FEET AS DESIGNATED BY THE DESIGN ENGINEER [§290.44(F)(3)].
18. DECHLORINATION OF DISINFECTING WATER SHALL BE IN STRICT ACCORDANCE WITH CURRENT AWWA STANDARD C655-09 OR MOST RECENT.

Date	Description	No.
Revisions		

STATE OF TEXAS
MATTHEW S. HARDY
134448
LICENSED
PROFESSIONAL ENGINEER
02-08-2024

TBPE Registration #: F-13709

LANGAN
Langan Engineering and Environmental Services, Inc.
9606 N. Mopac Expressway, Suite 110
Austin, TX 78759
T: 737.289.7800 F: 737.289.7801 www.langan.com
TBPE FIRM REG. #F-13709

Project
LIBERTY HILL MIDDLE SCHOOL #3 WEST CONNECTOR DRIVE
LIBERTY HILL
WILLIAMSON COUNTY TEXAS

Drawing Title
TCEQ NOTES

Project No.	Drawing No.
531013311	C3.00
Date: FEBRUARY 2024	
Drawn By: NPF	
Checked By: MSH	

Field: AC/JR 2023/12/21 CTX7263
Drafter: RDG 2024/01/03
Revision:
Revision:

LEGEND OF SYMBOLS

- air conditioner
- borehole
- CATV cable tv
- EM electric meter
- fence or handrail
- FDC fire dept. connection
- FH fire hydrant
- FIRE LANE fire lane
- guard rail
- grease trap
- GP bollard
- GI grate inlet
- GM gas meter
- GAS gas line
- GUY utility pole anchor
- IV irrigation valve
- landscape or tree line
- LEB landscape electric box
- LSL landscape light
- LP light pole
- MB mailbox
- MW monitoring well
- OU overhead utility lines
- PE pool equipment
- road sign
- RD roof drain
- silt fence
- • 356.7' spot elevation
- SSMH sanitary sewer manhole
- sanitary sewer pipe
- SDMH storm water manhole
- storm water pipe
- TMH telephone manhole
- TFL tank fill lid
- TR telephone riser
- traffic signal pole
- UMH unknown manhole
- CO utility clean out
- UC utility cabinet
- UV utility vault
- UP utility pole
- UP/LG utility pole with riser
- utility sign
- water shutoff
- WV water valve
- water manhole
- WM water meter
- well
- water line
- one-foot contour lines
- tree trunk (with canopy)
- caliper inches at breast height
- ornamental tree
- (M) multiple trunks
- Google 360 Hyperlink

NOTE: - Some items may not pertain to this survey. The identification is subject to interpretation, verification may be required.

UTILITY WARNING

Unless otherwise stated, the client or client's representative did not provide JPH with plans and/or reports, and JPH did not coordinate a private utility locate request. If these Table A items are listed in the certification, the client, being aware of the factors listed above, has agreed for these Table A item(s) to be addressed from a combination of online GIS maps, markings from locate request(s) to municipalities and 811 and observed evidence of utilities. The client is aware locate requests to 811 and the like, may be ignored or result in an incomplete response, in which case utilities may not have been marked, or not completely marked, at the time the fieldwork was performed. Therefore, utilities may exist which are not shown on this survey. Lacking excavation and/or a private utility locate request, the exact location of underground features cannot be accurately, completely, and reliably depicted.

FLOOD ZONE CLASSIFICATION

This property lies within ZONE(S) X (UNSHADED) of the Flood Insurance Rate Map for Williamson County, Texas and Incorporated Areas, map no. 48491C0245F, dated 2019/12/20, and map no. 48491C0275F, dated 2008/09/26, via scaled map location and graphic plotting and/or the National Flood Hazard Layer (NFHL) Web Map Service (WMS) at http://hazards.fema.gov.

TEXAS811 MARKED UTILITY LEGEND

- ELECTRIC
- GAS/OIL/STEAM
- COMMUNICATION/CATV
- WATER
- SEWER

MONUMENTS / DATUMS / BEARING BASIS

Monuments are found if not marked MNS or CRS.

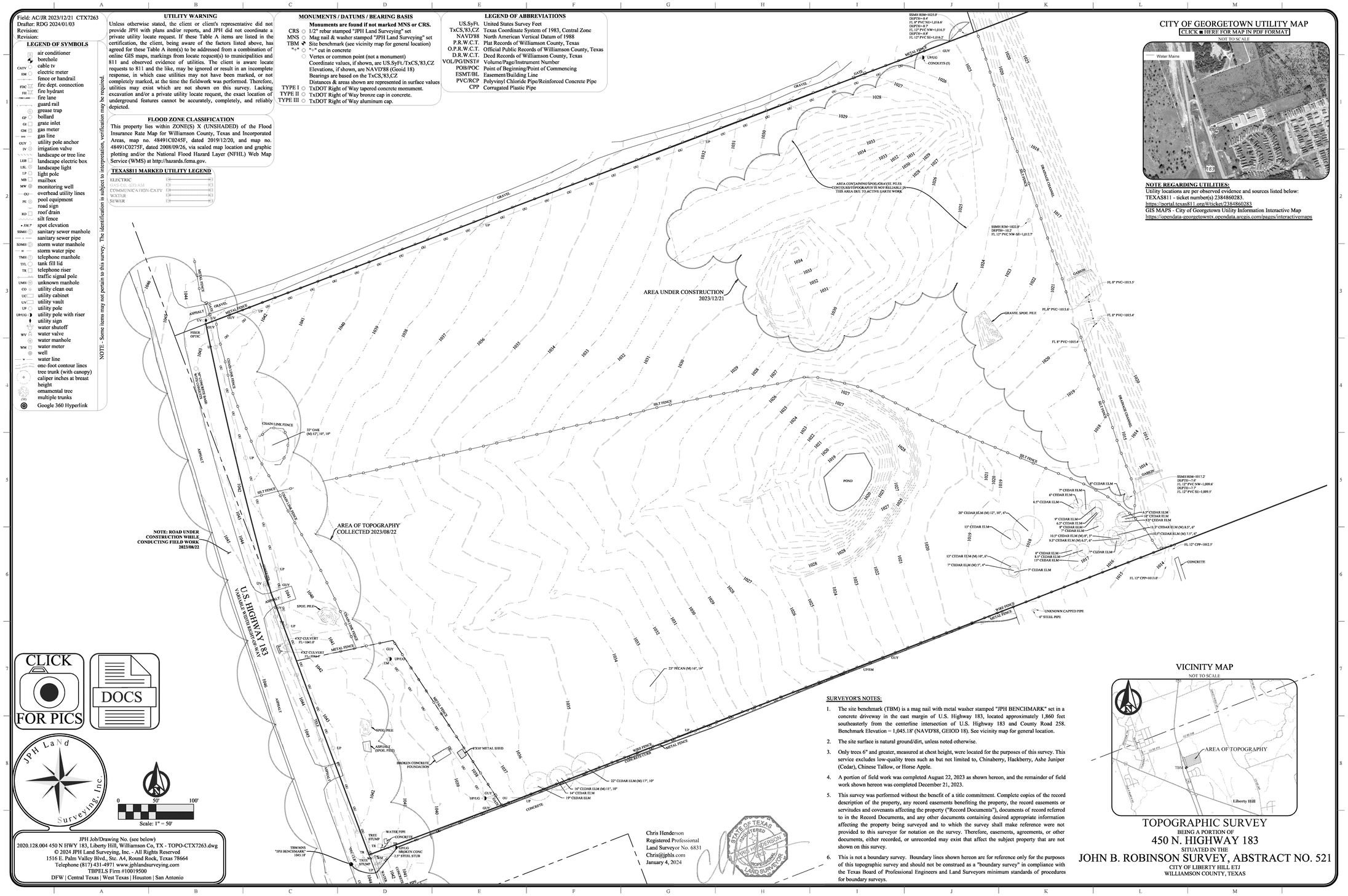
- CRS ○ 1/2" rebar stamped "JPH Land Surveying" set
- MNS ○ Mag nail & washer stamped "JPH Land Surveying" set
- TBM ◆ Site benchmark (see vicinity map for general location)
- "+" ○ "+" cut in concrete
- ○ Vertex or common point (not a monument)

Coordinate values, if shown, are US.SyFt./TxCS,'83,CZ
Elevations, if shown, are NAVD'88 (Geoid 18)
Bearings are based on the TxCS,'83,CZ
Distances & areas shown are represented in surface values

- TYPE I ○ TxDOT Right of Way tapered concrete monument.
- TYPE II ○ TxDOT Right of Way bronze cap in concrete.
- TYPE III ○ TxDOT Right of Way aluminum cap.

LEGEND OF ABBREVIATIONS

US.SyFt.	United States Survey Feet
TxCS,'83,CZ	Texas Coordinate System of 1983, Central Zone
NAVD'88	North American Vertical Datum of 1988
P.R.W.C.T.	Plat Records of Williamson County, Texas
O.P.R.W.C.T.	Official Public Records of Williamson County, Texas
D.R.W.C.T.	Deed Records of Williamson County, Texas
VOL/PG/INST#	Volume/Page/Instrument Number
POB/POC	Point of Beginning/Point of Commencing
ESMT/BL	Easement/Building Line
PVC/RCP	Polyvinyl Chloride Pipe/Reinforced Concrete Pipe
CPP	Corrugated Plastic Pipe



CLICK FOR PICS

DOCS

JPH Land Surveying, Inc.

0 50' 100'
Scale: 1" = 50'

JPH Job/Drawing No. (see below)
2020.128.004 450 N HWY 183, Liberty Hill, Williamson Co, TX - TOPO-CTX7263.dwg

1516 E. Palm Valley Blvd., Ste. A4, Round Rock, Texas 78664
Telephone (817) 431-4971 www.jphlandsurveying.com
TBPELS Firm #10019500
DFW | Central Texas | West Texas | Houston | San Antonio

SURVEYOR'S NOTES:

1. The site benchmark (TBM) is a mag nail with metal washer stamped "JPH BENCHMARK" set in a concrete driveway in the east margin of U.S. Highway 183, located approximately 1,860 feet southeasterly from the centerline intersection of U.S. Highway 183 and County Road 258. Benchmark Elevation = 1,045.18' (NAVD'88, GEOID 18). See vicinity map for general location.
2. The site surface is natural ground/dirt, unless noted otherwise.
3. Only trees 6" and greater, measured at chest height, were located for the purposes of this survey. This service excludes low-quality trees such as but not limited to, Chinaberry, Hackberry, Ashe Juniper (Cedar), Chinese Tallow, or Horse Apple.
4. A portion of field work was completed August 22, 2023 as shown hereon, and the remainder of field work shown hereon was completed December 21, 2023.
5. This survey was performed without the benefit of a title commitment. Complete copies of the record description of the property, any record easements benefiting the property, the record easements or servitudes and covenants affecting the property ("Record Documents"), documents of record referred to in the Record Documents, and any other documents containing desired appropriate information affecting the property being surveyed and to which the survey shall make reference were not provided to this surveyor for notation on the survey. Therefore, easements, agreements, or other documents, either recorded, or unrecorded may exist that affect the subject property that are not shown on this survey.
6. This is not a boundary survey. Boundary lines shown hereon are for reference only for the purposes of this topographic survey and should not be construed as a "boundary survey" in compliance with the Texas Board of Professional Engineers and Land Surveyors minimum standards of procedures for boundary surveys.

Chris Henderson
Registered Professional
Land Surveyor No. 6831
Chris@jphls.com
January 4, 2024

STATE OF TEXAS — REGISTERED — CHRIS HENDERSON — 6831 — PROFESSIONAL — LAND SURVEYOR

CITY OF GEORGETOWN UTILITY MAP

CLICK ■ HERE FOR MAP IN PDF FORMAT

NOT TO SCALE

NOTE REGARDING UTILITIES:

Utility locations are per observed evidence and sources listed below:
TEXAS811 - ticket number(s) 2384860283.
https://portal.texas811.org/#/ticket/2384860283
GIS MAPS - City of Georgetown Utility Information Interactive Map
https://opendata-georgetowntx.opendata.arcgis.com/pages/interactivemaps

VICINITY MAP

NOT TO SCALE

TOPOGRAPHIC SURVEY

BEING A PORTION OF
450 N. HIGHWAY 183
SITUATED IN THE
JOHN B. ROBINSON SURVEY, ABSTRACT NO. 521
CITY OF LIBERTY HILL ETJ
WILLIAMSON COUNTY, TEXAS

Date	Description	No.
Revisions		

STATE OF TEXAS — REGISTERED — MATTHEW S. HARDY — 134448 — LICENSED — PROFESSIONAL — ENGINEER
02-08-2024

TBPE Registration #: F-13709

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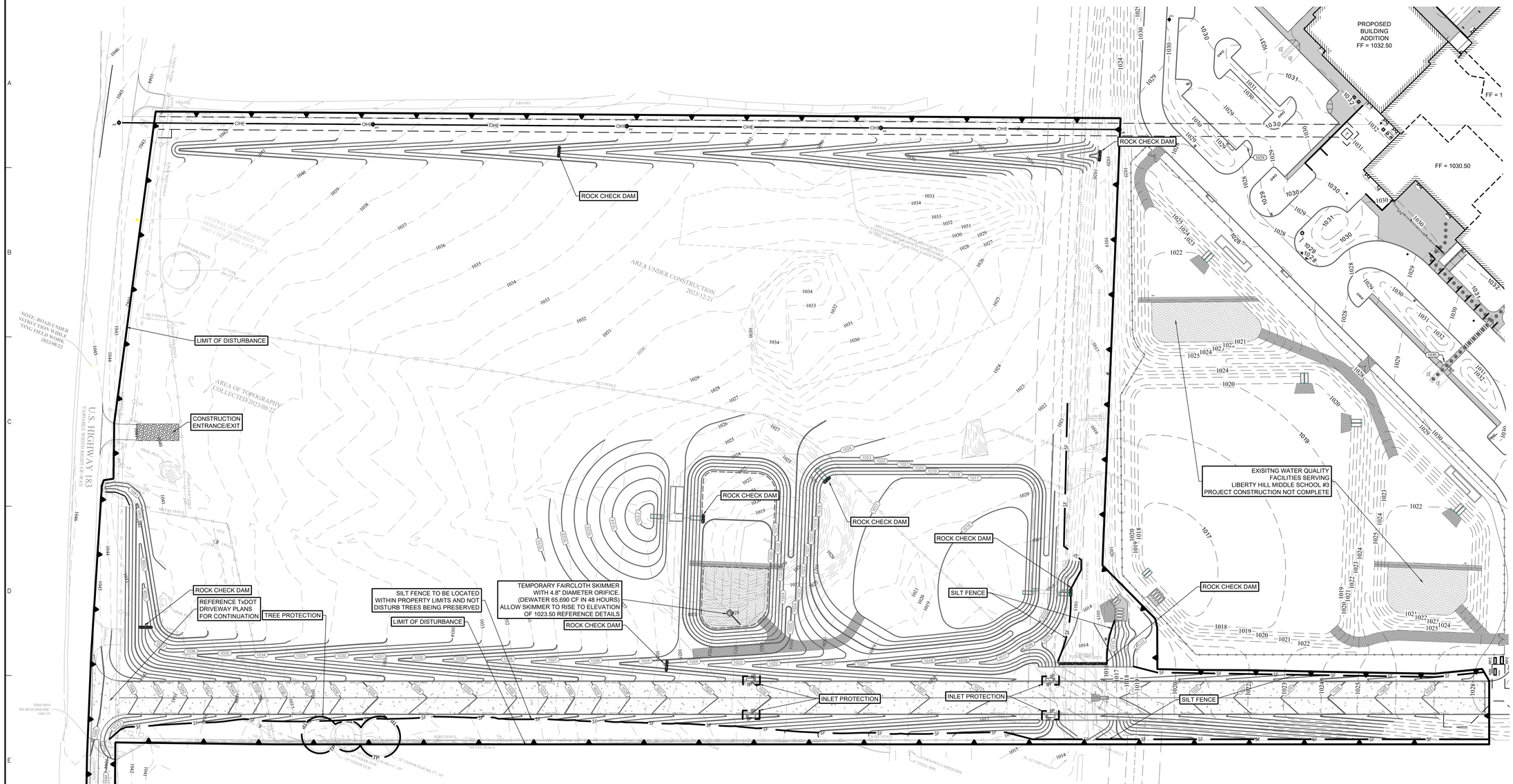

GRAPHIC SCALE
0 50 100 FEET

LEGEND

PROPOSED CONTOUR	100
EXISTING CONTOUR	
SPOT GRADE	FG=100.50
PROPOSED FLOW ARROW	
FG	FINISHED GRADE
TP	TOP OF PAVEMENT
TC	TOP OF CURB
FL	FLOWLINE
LIMITS OF DISTURBANCE	
SILT FENCE	SF
TREE PROTECTION	TP
INLET PROTECTION	IP
CONSTRUCTION EXIT	
ROCK CHECK DAM	

TURF PROJECT NOTES

EROSION CONTROL:
Throughout the project and the maintenance period for turfgrass, it is the Contractor's responsibility to maintain the topsoil in place at specified grades. **Topsoil and turfgrass losses due to erosion or any construction disturbance will be replaced by the Contractor until ESTABLISHMENT and ACCEPTANCE is achieved**.

SOIL PREPARATION :
All slopes and areas disturbed by construction, except those occupied by buildings, structures, or paving shall be graded smooth and four (4") inches of topsoil applied. If adequate topsoil is not available onsite, the Contractor shall provide topsoil as approved by the Owner. The area shall be dressed to typical sections and plowed to a depth of five (5") inches. Soil shall be further prepared by the removal of debris, weeds and stones larger than 3/4 inch in diameter. After tillage and cleaning, all areas to receive turf shall be leveled, fine graded, and drug with a weighted spike harrow or float drag. The top two (2") inches shall be pulverized to provide a uniform bed for seeding or sod as described below.

GRASS SOD:
At a minimum, three feet (3') of solid sod shall be installed along all impervious edges. This includes, but is not limited to: curbing, sidewalks, building foundation, storm water inlets, manholes, and planting bed perimeter treatments. Additional areas of sod installation will be as indicated on the design plans. Should installation occur between November and March, sod shall include an over-seed of Annual Rye for a grown-in appearance.

SPRING AND SUMMER PERMANENT GRASSING (May 15 through September 15):
Installation and establishment of turf shall follow local DOT regional specifications and guidelines; seeding shall be accomplished immediately after bed prep and consist of the following:

Green Sprangletop.....0.3 lbs./acre
Sideoats Grama.....4.5 lbs./acre
Bermuda Grass.....2.4 lbs./acre
Buffalo Grass.....4 lbs./acre

FALL AND WINTER TEMPORARY GRASSING (September 15 through May 15):
Installation and establishment of turf shall follow local DOT regional specifications and guidelines; seeding shall be accomplished immediately after bed prep and consist of the following:

Tall Fescue.....4.5 lbs./acre
Western Wheat Grass.....5 lbs./acre
Wheat (Red, Winter).....30 lbs./acre

SEEDING ON SLOPES:
All slopes 4:1 or greater and subject to erosion shall have a fully biodegradable bonded fiber matrix (BFM) applied equal to 'Soil Guard'. The BFM is not hydro seeding and shall be installed by a contractor certified by the manufacturer to be trained in the proper procedures for mixing and application of the product. The BFM shall be mixed according to manufacturer's recommendations and contractor shall demonstrate "free liquid" test to inspector upon request. BFM shall be spray-applied at a rate of 3000-4000 lb/acre, utilizing standard hydraulically seeding equipment in successive layers as to exceed the benefits of an erosion control blanket with 100% coverage of all exposed soil. The BFM shall not be applied immediately before, during or after rainfall, such that the matrix will have opportunity to dry for up to 24 hours after installation to be 100% effective.

IRRIGATION:
In the absence of an irrigation system or areas beyond the coverage limits of a permanent irrigation system, Contractor shall water sod temporarily to develop adequate growth and establishment before regular maintenance begins. Turf shall be watered until firmly established.

Water shall be furnished by the Contractor with means and methods available to achieve acceptable turf. The water source shall be clean and free of industrial wastes or other substances harmful to the growth of the turf.

MAINTENANCE REQUIREMENTS:
Vegetation should be inspected regularly to ensure that plant material is established properly and remains healthy. Mowing, trimming and supervision of water applications shall be the responsibility of the Contractor until the Owner or Owner's Representative accepts and assumes regular maintenance.

ESTABLISHMENT AND ACCEPTANCE:
All disturbed areas recieving sod shall receive topsoil as specified and be adequately established with turf such that any absence of water will not kill the turf, but promote a state of turf dormancy, until the next rainfall event.

Regardless of unseasonable climatic conditions or other adverse conditions affecting planting operations and the growth of the turf grass, it shall be the sole responsibility of the Contractor to establish a uniform stand of grass. UNIFORM STAND OF GRASS is defined as minimum 80% coverage per square foot (no bare areas).

Contractor to make a written request for inspection to Owner or Owner's representative a minimum of 5 days prior to the anticipated inspection date.

SITE DATA

TOTAL LAND AREA: 59.64 AC
DISTURBED AREA: 21.4 AC
ON-SITE: 20.8 AC
OFF-SITE: 0.6 AC OFF-SITE
EXISTING IMPERVIOUS: 16.72 AC
PROPOSED IMPERVIOUS: 1.79 AC

EROSION CONTROL SEQUENCE

1. INSTALL SILT FENCES AROUND PERIMETER OF PROPERTY AND DISTURBED AREAS AS SHOWN.
2. INSTALL INLET PROTECTION FOR ALL EXISTING GRATE INLETS, CURB INLETS.
3. INSTALL ROCK CHECK DAMS AT THE ENDS OF ALL EXPOSED STORM SEWER PIPES, IF PRESENT.
4. CONSTRUCT TEMPORARY CONSTRUCTION EXIT.
5. COMMENCE GRUBBING AND REMOVAL OF VEGETATION IN AREA TO RECEIVE CUT OR FILL.
6. INSTALL ALL UNDERGROUND UTILITIES.
7. FINALIZE PAVEMENT SUBGRADE PREPARATION.
8. INSTALL ALL PROPOSED STORM SEWER PIPES AND INSTALL INLET PROTECTION SILT FENCES AT ENDS OF EXPOSED PIPES.
9. CONSTRUCT ALL GRATE INLETS AND DRAINAGE STRUCTURES. INLET PROTECTION SILT FENCES MAY BE REMOVED TEMPORARILY FOR THIS CONSTRUCTION.
10. REMOVE SILT FENCES AROUND INLETS AND MANHOLES NO MORE THAN 48 HOURS PRIOR TO PLACING STABILIZED BASE COURSE.
11. INSTALL BASE MATERIAL AS REQUIRED FOR PAVEMENT, CURB & GUTTER.
12. INSTALL ALL PAVING, CURB & GUTTER.
13. COMPLETE PLANTING AND/OR SEEDING OF VEGETATED AREAS TO ACCOMPLISH STABILIZATION, IN ACCORDANCE WITH TURF PROJECT NOTES.
14. REMOVE TEMPORARY CONSTRUCTION EXIT, SILT FENCES & ROCK CHECK DAMS.

NOTE - STABILIZATION

ALL DISTURBED AREAS SHALL BE WATERED, FERTILIZED, AND SEEDED OR SODDED AS NECESSARY AND BY DEFINITION 'MAINTAINED' UNTIL AN ESTABLISHED STAND OF GRASS CAN BE RELEASED TO THE OWNER. REFERENCE LANDSCAPE/IRRIGATION PLAN (IF PROVIDED) TO COORDINATE PLANTING ENHANCEMENTS AND LIMITS OF IRRIGATION COVERAGE.

EROSION CONTROL MAINTENANCE NOTES

1. ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON ON A SCHEDULE WHICH COMPLIES WITH THE GENERAL PERMIT REQUIREMENTS AND CLEANED AND REPAIRED WITHIN 48 HOURS OF THE INSPECTION IN ACCORDANCE WITH THE FOLLOWING:
   - 1.A. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
   - 1.B. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED AND RESEEDED AS NEEDED.
   - 1.C. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
   - 1.D. THE TEMPORARY PARKING AND STORAGE AREA (IF PRESENT) SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
   - 1.E. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS OR SEDIMENT TRAPS (IF PRESENT) SHALL BE MAINTAINED IN OPERATIONAL CONDITION AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.

GENERAL SITE GRADING NOTE

- *AS PART OF THE BASE BID THE CONTRACTOR SHALL PROVIDE/IMPORT ALL FLEXIBLE BASE FILL AND TOPSOIL MATERIAL NECESSARY TO ACHIEVE FINAL GRADE PER PLAN.*
- *ALL AREAS WITHIN CONSTRUCTION LIMITS NOT COVERED WITH AN IMPERVIOUS MATERIAL SHALL BE COVERED WITH TOPSOIL. THE TOPSOIL SHALL BE IN CONFORMANCE WITH THE TOPSOIL NOTES LISTED IN THE PLAN SET AND SPECIFICATIONS FOR THIS PROJECT.*
- *BASE BID SHALL ALSO INCLUDE HAUL OFF OF EXCESS MATERIAL AS NECESSARY.*
- *ANY FILL PLACED ONSITE SHALL BE TESTED AND APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER AND BE IN CONFORMANCE WITH RECOMMENDATIONS LISTED IN THE SITE GEOTECHNICAL REPORT TITLED AE21-1104 AND DATED JANUARY 28,2022 OR ANY SUPPLEMENTAL ADDENDUMS.*

NOTICE TO CONTRACTORS - UTILITIES

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF ANY EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, THE GOVERNING MUNICIPALITY, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION PROVIDED IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

** NOTICE TO CONTRACTORS - TOPOGRAPHIC SURVEY **

TOPOGRAPHIC INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY PERFORMED BY JPH LAND SURVEYING, INC.. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, IN WRITING, OF ANY DISCREPANCIES OR OMISSIONS TO THE TOPOGRAPHIC INFORMATION. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR CONFIRMING THE LOCATION (HORIZONTAL/VERTICAL) OF ANY BURIED CABLES, CONDUITS, PIPES, AND STRUCTURES (STORM SEWER, SANITARY SEWER, WATER, GAS, TELEVISION, TELEPHONE, ETC.) WHICH IMPACT THE CONSTRUCTION SITE. THE CONTRACTOR(S) SHALL NOTIFY THE OWNER AND ENGINEER IF ANY DISCREPANCIES ARE FOUND BETWEEN THE ACTUAL CONDITIONS VERSUS THE DATA CONTAINED IN THE CONSTRUCTION PLANS. ANY COSTS INCURRED AS THE RESULT OF NOT CONFIRMING THE ACTUAL LOCATION (HORIZONTAL/VERTICAL) OF SAID CABLES, CONDUITS, PIPES, AND STRUCTURES SHALL BE BORNE BY THE CONTRACTOR. ADDITIONALLY, THE CONTRACTOR(S) SHALL NOTIFY THE OWNER AND ENGINEER IF ANY ERRORS OR DISCREPANCIES ARE FOUND ON THE CONSTRUCTION DOCUMENTS (PS&E), WHICH NEGATIVELY IMPACT THE PROJECT. THE ENGINEER AND OWNER SHALL BE INDEMNIFIED OF PROBLEMS AND/OR COST WHICH MAY RESULT FROM CONTRACTOR'S FAILURE TO NOTIFY ENGINEER AND OWNER.

811 Know what's below. Call before you dig.

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Date	Description	No.
Revisions		

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134448
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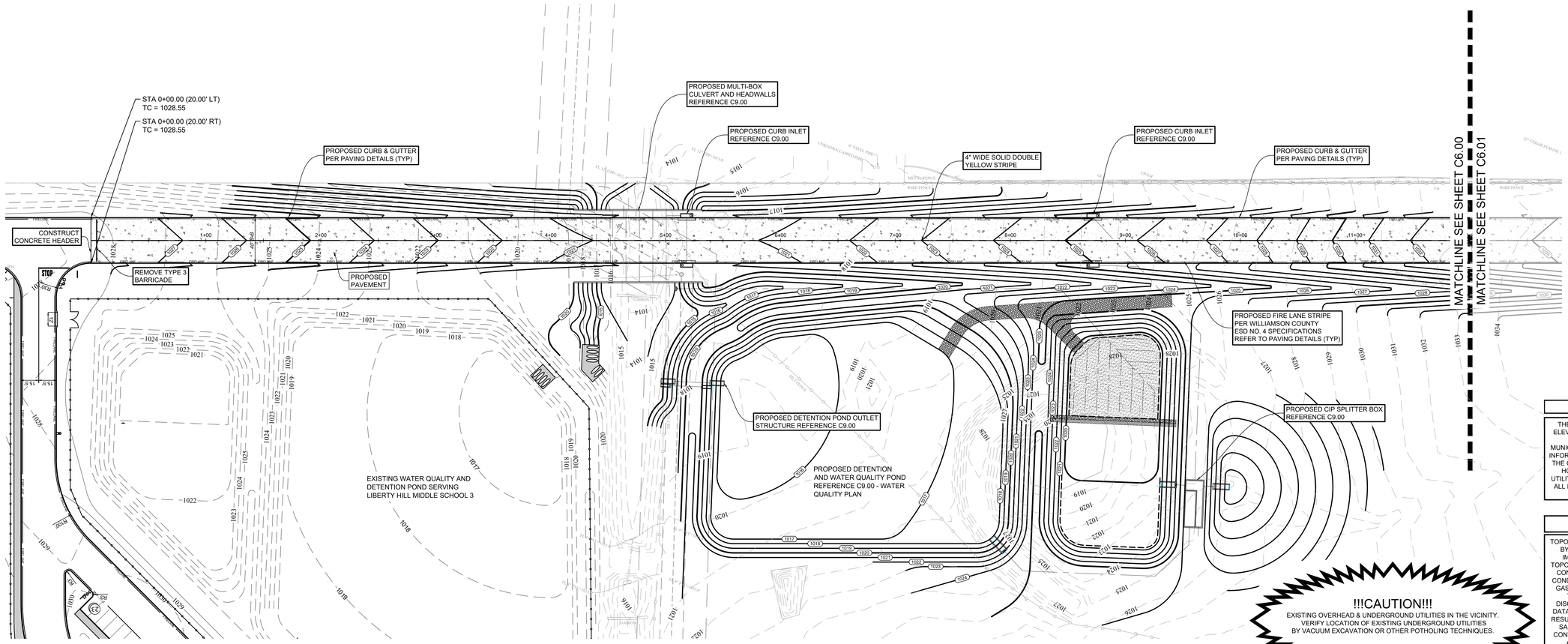
LIBERTY HILL
WILLIAMSON COUNTY TEXAS

Drawing Title
OVERALL GRADING AND EROSION CONTROL PLAN

Project No. 531013311	Drawing No. C5.00
Date FEBRUARY 2024	
Drawn By MSH	
Checked By MSH	



GRAPHIC SCALE

0 40 80 FEET

LEGEND

PROPOSED EDGE OF PAVEMENT AND BACK OF CURB	
BUS TRAFFIC LOOP, ACCESS ROAD AND FIRE LANES. 6" REINFORCED CONCRETE, 6" FLEXIBLE BASE, 12" MOISTURE CONDITIONED SUBGRADE. REFER TO GEOTECH	
TC	TOP OF CURB
TP	TOP OF PAVEMENT
CR	CURB RETURN
PROPOSED CONTOUR	1030
EXISTING CONTOUR	1034

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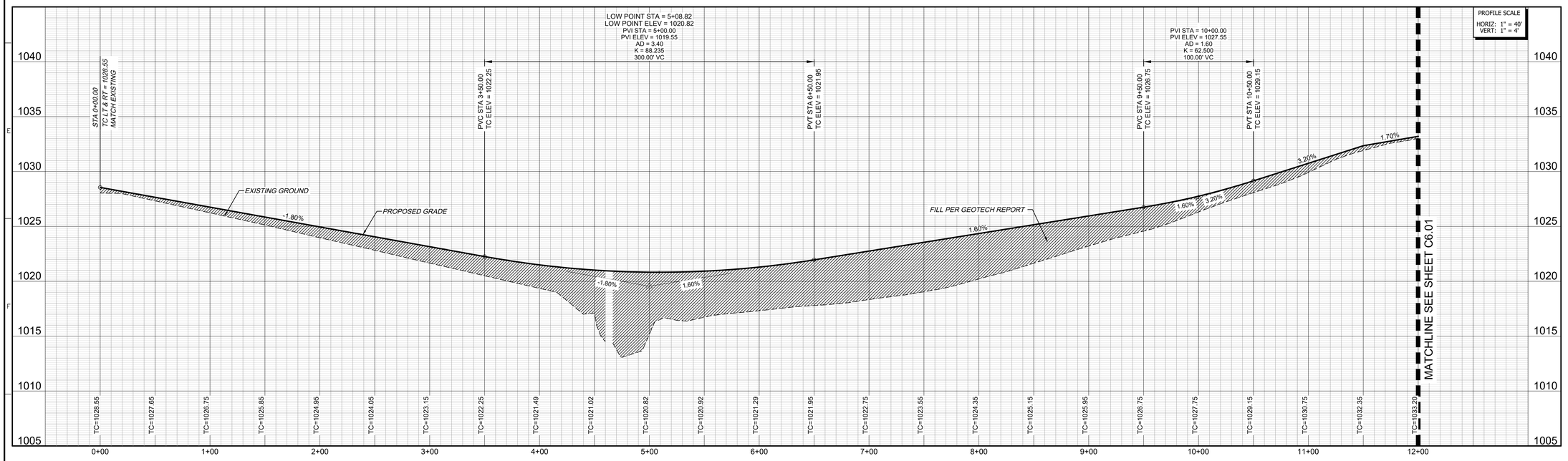
!!!CAUTION!!!

EXISTING OVERHEAD & UNDERGROUND UTILITIES IN THE VICINITY. VERIFY LOCATION OF EXISTING UNDERGROUND UTILITIES BY VACUUM EXCAVATION OR OTHER POTHOLING TECHNIQUES.

ROAD A ~ STA 0+00 TO 12+00



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183 EXTENSION PAVING PLAN-PROFILE (1 OF 2)

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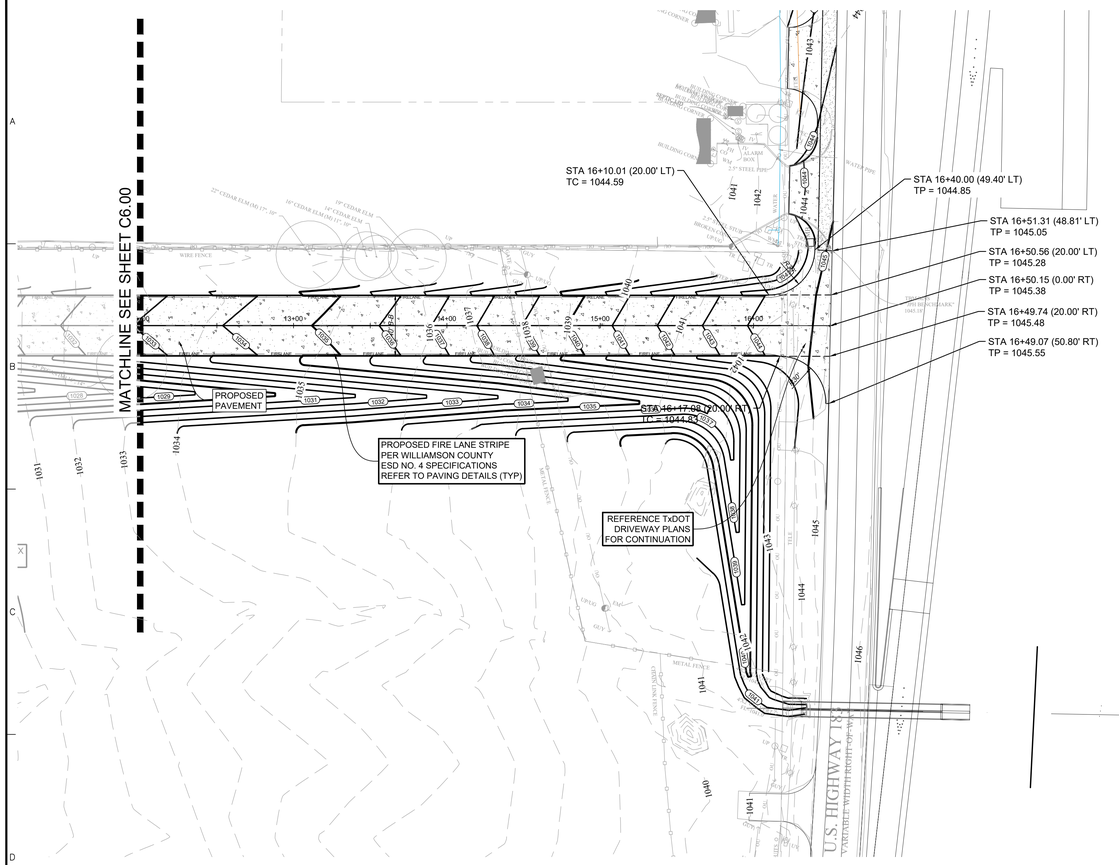
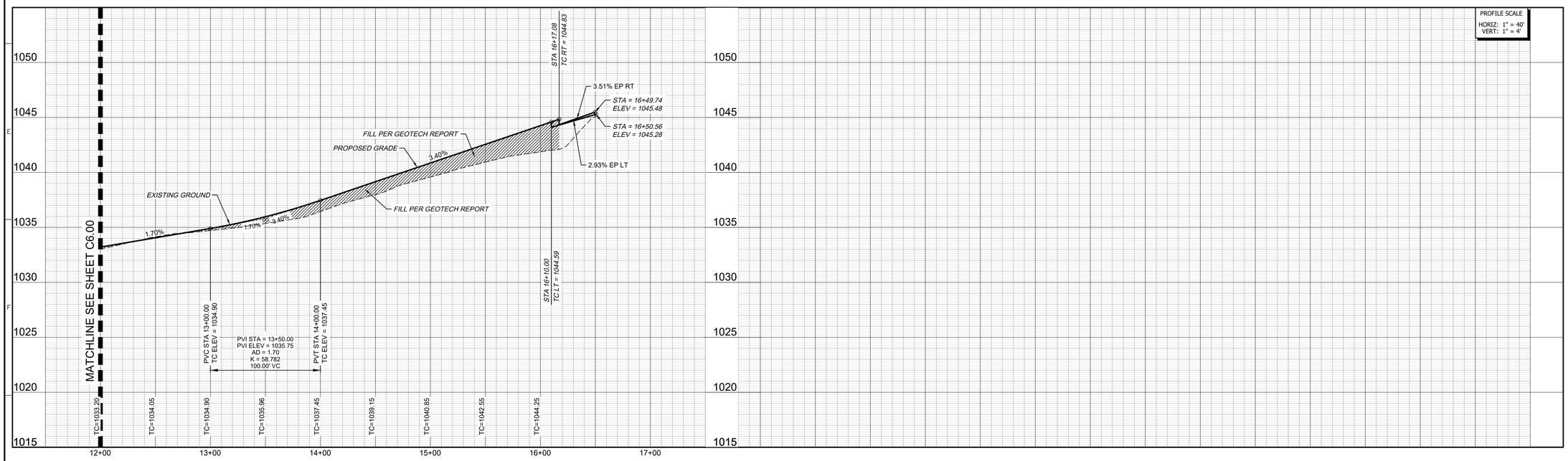


ROAD A ~ STA 12+00 TO END



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EXISTING CONTOUR	1034

NOTICE TO CONTRACTORS - UTILITIES

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF ANY EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES. THE GOVERNING MUNICIPALITY, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION PROVIDED IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS.

** NOTICE TO CONTRACTORS - TOPOGRAPHIC SURVEY **

TOPOGRAPHIC INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY PERFORMED BY JPH LAND SURVEYING. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, IN WRITING, OF ANY DISCREPANCIES OR OMISSIONS TO THE TOPOGRAPHIC INFORMATION. THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR CONFIRMING THE LOCATION (HORIZONTAL/VERTICAL) OF ANY BURIED CABLES, CONDUITS, PIPES, AND STRUCTURES (STORM SEWER, SANITARY SEWER, WATER, GAS, TELEVISION, TELEPHONE, ETC.) WHICH IMPACT THE CONSTRUCTION SITE. THE CONTRACTOR(S) SHALL NOTIFY THE OWNER AND ENGINEER IF ANY DISCREPANCIES ARE FOUND BETWEEN THE ACTUAL CONDITIONS VERSUS THE DATA CONTAINED IN THE CONSTRUCTION PLANS. ANY COSTS INCURRED AS THE RESULT OF NOT CONFIRMING THE ACTUAL LOCATION (HORIZONTAL/VERTICAL) OF SAID CABLES, CONDUITS, PIPES, AND STRUCTURES SHALL BE BORNE BY THE CONTRACTOR. ADDITIONALLY, THE CONTRACTOR(S) SHALL NOTIFY THE OWNER AND ENGINEER IF ANY ERRORS OR DISCREPANCIES ARE FOUND ON THE CONSTRUCTION DOCUMENTS (PS&E), WHICH NEGATIVELY IMPACT THE PROJECT. THE ENGINEER AND OWNER SHALL BE INDEMNIFIED OF PROBLEMS AND/OR COST WHICH MAY RESULT FROM CONTRACTOR'S FAILURE TO NOTIFY ENGINEER AND OWNER.

!!!CAUTION!!!

EXISTING OVERHEAD & UNDERGROUND UTILITIES IN THE VICINITY. VERIFY LOCATION OF EXISTING UNDERGROUND UTILITIES BY VACUUM EXCAVATION OR OTHER POTHOLING TECHNIQUES.

811 Know what's below. Call before you dig.

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Date	Description	No.
Revisions		

STATE OF TEXAS
MATTHEW S. HARDY
134448
LICENSED PROFESSIONAL ENGINEER
02-08-2024

TBPE Registration #: F-13709

LANGAN
Langan Engineering and Environmental Services, Inc.
9606 N. Mopac Expressway, Suite 110
Austin, TX 78759
T: 737.289.7800 F: 737.289.7801 www.langan.com
TBPE FIRM REG. #F-13709

Project
LIBERTY HILL MIDDLE SCHOOL #3 WEST CONNECTOR DRIVE
LIBERTY HILL
WILLIAMSON COUNTY TEXAS

Drawing Title
183 EXTENSION PAVING PLAN-PROFILE (2 OF 2)

Project No.	Drawing No.
531013311	C6.01
Date: FEBRUARY 2024	
Drawn By: RWA	
Checked By: MSH	

GRAPHIC SCALE

0 200 400 FEET

LEGEND

DRAINAGE BASIN	BASIN NAME: DA-00, ACRES: 1.00
DRAINAGE AREA	
PROPOSED FLOW ARROW	
TC PATH	

TIME OF CONCENTRATION CALCULATIONS - EXISTING CONDITIONS

Drainage Area Designation	Sheet Flow					Shallow Concentrated Flow					Channel Flow			Total
	Manning's (n)	Length (L)	Slope (s)	2-Yr, 24-hr rainfall	Time (T_t)	Length (L)	Slope (s)	Cover Type	Velocity	Time (T_t)	Length (L)	Velocity	Time (T_t)	Time (T_c)
		(ft)	(ft/ft)	(in)	(min)	(ft)	(ft/ft)	-	(ft/sec)	(min)	(ft)	(ft/sec)	(min)	(min)
BP-1	0.15	100	0.01	4.06	11.5	1066	0.017	Unpaved	2.10	8.4	1832	6.25	4.9	25
BP-2	0.15	100	0.01	4.06	11.5	1835	0.016	Unpaved	2.04	15.0	0	0.00	0.0	26
BP-3	0.15	100	0.05	4.06	6.2	839	0.023	Unpaved	2.42	5.8	587	4.00	2.4	14
BP-4	0.15	100	0.01	4.06	12.0	2458	0.011	Unpaved	1.69	24.2	1314	4.00	5.5	42
BP-5	0.15	100	0.01	4.06	11.5	602	0.0249	Unpaved	2.55	3.9	2138	4.00	8.9	24

Note: The time of concentration for each watershed was calculated using equations given in Chapter 3 of TR-55 - Urban Hydrology for Small Watersheds. Values for each overland "n" are taken from Table 3-1 of the previously reference manual.

PRE-DEVELOPMENT DRAINAGE AREA CALCULATIONS

Drainage Area Designation	Drainage Area	Runoff Coefficient "C"				Time of Concentration	2-Year Rainfall Intensity (i2)	2-Year Peak Discharge (Q2)	10-Year Rainfall Intensity (i10)	10-Year Peak Discharge (Q10)	25-Year Rainfall Intensity (i25)	25-Year Peak Discharge (Q25)	100-Year Rainfall Intensity (i100)	100-Year Peak Discharge (Q100)
-	(ac)	2- Yr	10- Yr	25- Yr	100- Yr	(min)	(in/hr)	(cfs)	(in/hr)	(cfs)	(in/hr)	(cfs)	(in/hr)	(cfs)
BP-1	5.48	0.33	0.38	0.42	0.49	25	2.93	5.3	4.77	9.9	5.91	13.6	7.79	20.9
BP-2	4.80	0.33	0.38	0.42	0.49	26	2.87	4.5	4.68	8.5	5.79	11.7	7.64	18.0
BP-3	11.03	0.33	0.38	0.42	0.49	14	3.92	14.3	6.30	26.4	7.72	35.8	10.01	54.1
BP-4	132.49	0.43	0.48	0.52	0.60	42	2.15	121.1	3.54	226.4	4.42	307.0	5.90	468.0
BP-5	56.61	0.38	0.43	0.48	0.55	24	3.00	64.6	4.88	119.9	6.03	162.3	7.94	246.3
DA-1	31.68	-	-	-	-	-	-	46.9	-	113.0	-	140.1	-	184.4
Total	242.10							256.64		504.14		670.45		991.70

Note: Calculations based on the Rational Method: Q = C*I*A

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OFF-SITE TOPOGRAPHIC INFORMATION WAS ACQUIRED FROM THE WILLIAMSON COUNTY GIS DEPARTMENT THROUGH THE LIDAR REQUEST SYSTEM.

Date	Description	No.
Revisions		

STATE OF TEXAS
MATTHEW S. HARDY
134448
LICENSED PROFESSIONAL ENGINEER
02-08-2024

TBPE Registration #: F-13709

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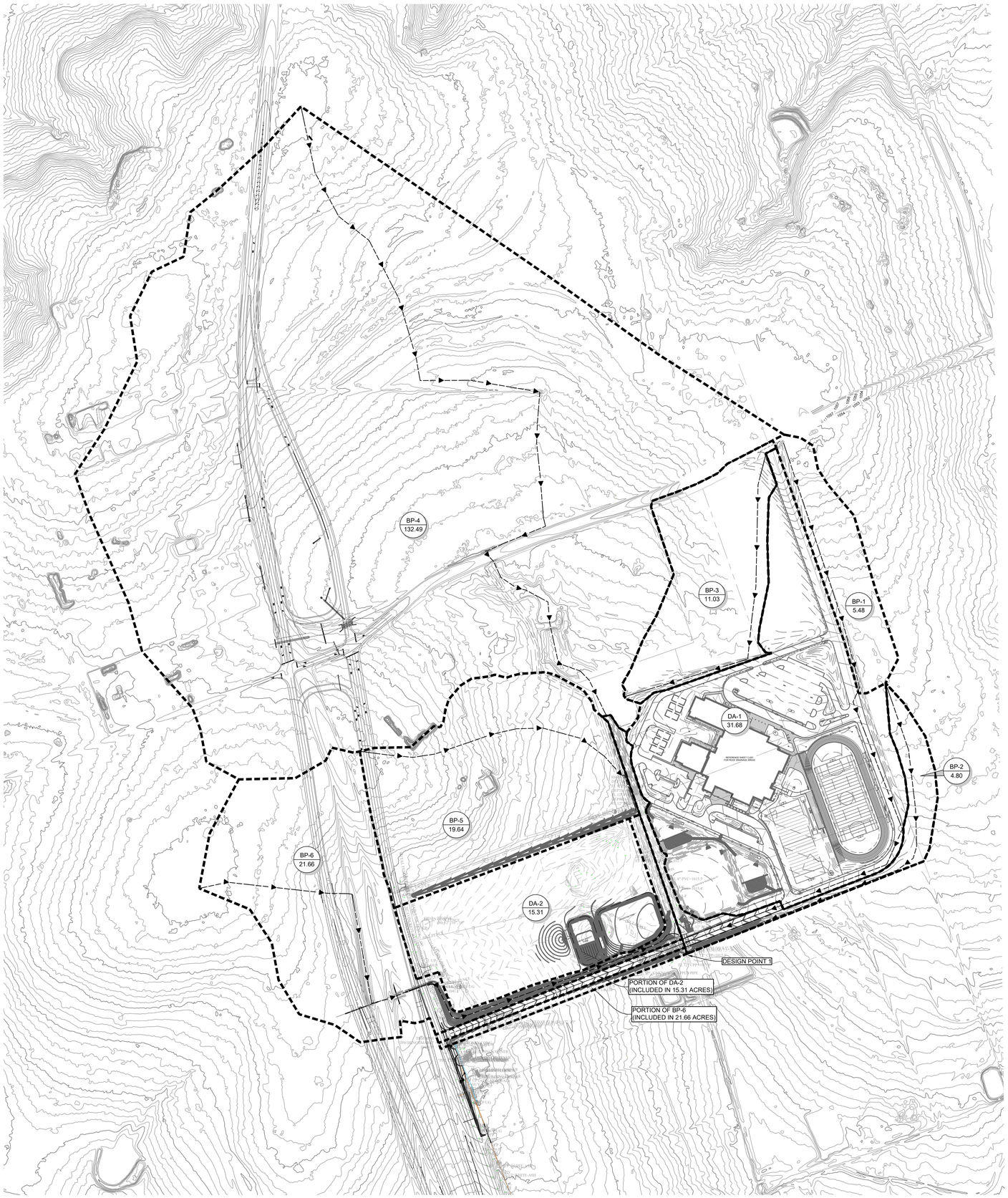
TBPE FIRM REG. #F-13709

Project
LIBERTY HILL MIDDLE SCHOOL #3 WEST CONNECTOR DRIVE
LIBERTY HILL
WILLIAMSON COUNTY TEXAS

Drawing Title
EXISTING DRAINAGE AREA PLAN

Project No. 531013311	Drawing No. C7.00
Date FEBRUARY 2024	
Drawn By NPF	
Checked By MSH	



GRAPHIC SCALE

0 200 400 FEET

LEGEND

DRAINAGE BASIN — BASIN NAME: DA-00, ACRES: 1.00

DRAINAGE AREA

PROPOSED FLOW ARROW

TC PATH

TIME OF CONCENTRATION CALCULATIONS

Drainage Area Designation	Sheet Flow					Shallow Concentrated Flow					Channel Flow			Total
	Manning's (n)	Length (L)	Slope (s)	2-Yr, 24-hr rainfall	Time (Tt)	Length (L)	Slope (s)	Cover Type	Velocity	Time (Tt)	Length (L)	Velocity	Time (Tt)	Time (Tc)
		(ft)	(ft/ft)	(in)	(min)	(ft)	(ft/ft)	-	(ft/sec)	(min)	(ft)	(ft/sec)	(min)	(min)
BP-1	0.15	100	0.01	4.06	11.5	1066	0.017	Unpaved	2.10	8.4	1832	6.25	4.9	25
BP-2	0.15	100	0.01	4.06	11.5	1835	0.016	Unpaved	2.04	15.0	0	0.00	0.0	26
BP-3	0.15	100	0.05	4.06	6.2	839	0.023	Unpaved	2.42	5.8	587	4.00	2.4	14
BP-4	0.15	100	0.01	4.06	12.0	2458	0.011	Unpaved	1.69	24.2	1314	4.00	5.5	42
BP-5	0.15	100	0.01	4.06	11.5	1187	0.0253	Unpaved	2.57	7.7	172	4.00	0.7	20
BP-6	0.15	100	0.01	4.06	11.5	602	0.0249	Unpaved	2.55	3.9	2138	4.00	8.9	24

Note: The time of concentration for each watershed was calculated using equations given in Chapter 3 of TR-55 - Urban Hydrology for Small Watersheds. Values for each overland "n" are taken from Table 3-1 of the previously reference manual.

POST-DEVELOPMENT DRAINAGE AREA CALCULATIONS

Drainage Area Designation	Drainage Area	Runoff Coefficient "C"				Time of Concentration	2-Year Rainfall Intensity (I2)	2-Year Peak Discharge (Q2)	10-Year Rainfall Intensity (I10)	10-Year Peak Discharge (Q10)	25-Year Rainfall Intensity (I25)	25-Year Peak Discharge (Q25)	100-Year Rainfall Intensity (I100)	100-Year Peak Discharge (Q100)
-	(ac)	2- Yr	10- Yr	25- Yr	100- Yr	(min)	(in/hr)	(cfs)	(in/hr)	(cfs)	(in/hr)	(cfs)	(in/hr)	(cfs)
BP-1	5.48	0.33	0.38	0.42	0.49	25	2.93	5.3	4.77	9.9	5.91	13.6	7.79	20.9
BP-2	4.80	0.33	0.38	0.42	0.49	26	2.87	4.5	4.68	8.5	5.79	11.7	7.64	18.0
BP-3	11.03	0.33	0.38	0.42	0.49	14	3.92	14.3	6.30	26.4	7.72	35.8	10.01	54.1
BP-4	132.49	0.43	0.48	0.52	0.60	42	2.15	121.1	3.54	226.4	4.42	307.0	5.90	468.0
BP-5	19.64	0.38	0.43	0.48	0.55	20	3.30	24.7	5.35	45.6	6.60	61.6	8.65	93.0
BP-6	21.66	0.39	0.44	0.48	0.56	24	3.00	25.2	4.88	46.8	6.03	63.3	7.94	95.9
DA-1	31.68	-	-	-	-	-	-	46.9	-	113.0	-	140.1	-	184.4
DA-2	15.31	-	-	-	-	-	-	2.0	-	26.7	-	44.2	-	62.1
Total	242.10							234.17		484.92		651.95		957.50

Note: Calculations based on the Rational Method: Q = C*I*A

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Date	Description	No.

Revisions

STATE OF TEXAS — MATTHEW S. HARDY — 134448 — LICENSED PROFESSIONAL ENGINEER

02-08-2024

TBPE Registration #: F-13709

LANGAN

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Austin, TX 78759

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TBPE FIRM REG. #F-13709

Project

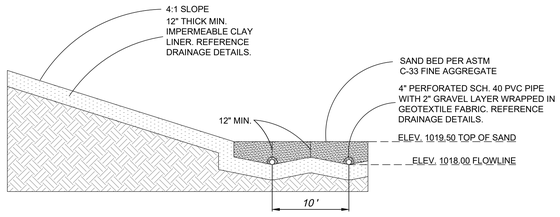
LIBERTY HILL MIDDLE SCHOOL #3 WEST CONNECTOR DRIVE

LIBERTY HILL
WILLIAMSON COUNTY TEXAS

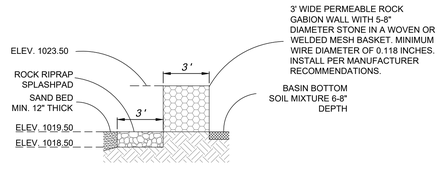
Drawing Title

PROPOSED DRAINAGE AREA PLAN

Project No.	Drawing No.
531013311	C8.00
Date: FEBRUARY 2024	
Drawn By: NPF	
Checked By: MSH	



SECTION AA
N.T.S.



SECTION BB
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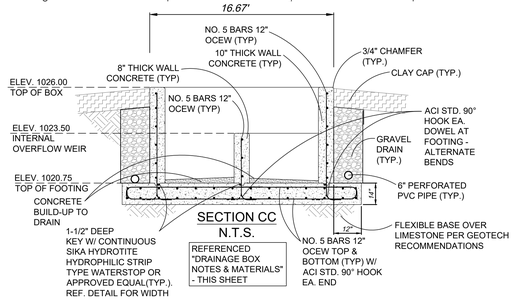


SECTION CC
N.T.S.

REFERENCED "DRAINAGE BOX NOTES & MATERIALS" - THIS SHEET

DRAINAGE BOX NOTES & MATERIALS:

CONCRETE~
- CONCRETE WORK SHALL CONFORM TO ACI 301 AND ACI 350, LATEST EDITIONS.
- f'c = 4,000 PSI COMPRESSIVE STRENGTH @ 28 DAYS
- WATER CEMENT RATIO (w/c) OF 0.45
- FLY ASH, IF USED, SHALL BE TYPE F CONFORMING TO ASTM C 618 AND SHALL NOT EXCEED 20% OF CEMENTITIOUS MATERIAL BY WEIGHT.
- ENTRAINED AIR SHALL BE 6% ± 1.5%

REBAR & ACCESSORIES ~
- ASTM 615, GRADE 60
- REBAR WORK SHALL CONFORM TO ACI 315, LATEST EDITION. ACCESSORIES TO BE EXPOSED TO EARTH, WEATHER, WATER, OR HIGH HUMIDITY SHALL BE FABRICATED OF STAINLESS STEEL OR PLASTIC. PROVIDE BOLSTERS AT WALLS, AND PROVIDE STANDEES AT SLABS WITH TWO LAYERS OF REINFORCING. FOR SLAB-ON-GRADE REINFORCING, PROVIDE CHAIRS MANUFACTURED FROM STAINLESS STEEL, PLASTIC OR PRECAST CONCRETE BLOCKS OF EQUAL OR GREATER COMPRESSIVE STRENGTH AS THE CONCRETE BEING PLACED.
- ALL BARS SHALL BE CONTINUOUS UNLESS NOTED OR SHOWN OTHERWISE. LAP SPLICES OF CONTINUOUS BARS SHALL BE 48 BAR DIAMETERS, UNLESS OTHERWISE NOTED.

DRAINAGE ~
- 2'-0" WIDE GRAVEL DRAIN TO 18" ± BELOW FINISHED SURFACE WITH 6" DIAMETER PERFORATED PVC PIPE. CONNECT PVC TO DRAIN TO 48" LINE GOING TO DETENTION POND. FOR GRAVEL DRAIN, USE WASHED-AGGREGATE GRAVEL WRAPPED IN GEOTEXTILE FABRIC (NON-WOVEN POLYESTER - OVERLAP FABRIC MIN. 12"). MAXIMUM AGGREGATE SIZE 1-1/2" (NOMINAL 1").
- MINIMUM 1'-0" CLAY CAP OVER GRAVEL DRAIN.

GENERAL SITE NOTES:
1. CONTRACTOR TO ENSURE EDWARDS AQUIFER (EA) PERMITTING IS IN PLACE AND REVIEWED BEFORE BEGINNING ANY SITE DISTURBANCE.
2. ALL TEMPORARY EROSION CONTROLS SHALL BE INSTALLED PER EA REQUIREMENTS PRIOR TO ANY SITE DISTURBANCE.
3. CONTRACTOR SHALL REVIEW AND REFERENCE SITE GEOTECHNICAL REPORT PREPARED BY ALLIANCE ENGINEERING GROUP AND TITLED "SUBSURFACE EXPLORATION AND GEOTECHNICAL EVALUATION FOR LIBERTY HILL MIDDLE SCHOOL #3 LIBERTY HILL, TEXAS" OR ANY ADDITIONS OR ADDENDUMS TO THE ORIGINAL REPORT.
4. CONTRACTOR SHALL PROPERLY DISPOSE OF ANY DEMOLISHED SITE FEATURES OR UTILITIES OFFSITE. BURYING DEMOLISHED ELEMENTS WILL NOT BE ALLOWED.
5. CONTRACTOR SHALL WORK WITH PROJECT GEOTECHNICAL ENGINEER AND PROJECT CONSTRUCTION MATERIALS TESTING LAB TO IDENTIFY ONSITE CLAY SOIL TO USE IN CREATING THE PERMANENT CLAY LINER FOR THE POND.
6. ONSITE TOPSOIL IN THE AREA OF DISTURBANCE SHALL BE STRIPPED AND STOCKPILED FOR USE IN REVEGETATION OF DISTURBED AREAS. NO ADDITIONAL PAY ITEM WILL BE ALLOWED FOR TOPSOIL IMPORT. CONTRACTOR TO USE ONSITE SOILS SUITABLE FOR HEALTHY REVEGETATION OF PROJECT.
7. ALL ONSITE FILL AREAS SHALL BE STRIPPED, PROCESSED, AND COMPACTED UNDER THE DIRECTION OF THE PROJECT GEOTECH AND PROJECT CMT LAB. THE DISTRICT WILL USE UNKNOWN PORTIONS OF THE FILL AREAS AS FUTURE BUILDING EXPANSIONS. THEREFORE, CONTRACTOR WILL NEED TO PLACE ALL FILL IN A CONTROLLED MANNER AS DIRECTED BY THE PROJECT GEOTECH AND THE PROJECT CMT LAB.
8. CONTRACTOR TO WORK CLOSELY WITH THE PROJECT GEOTECHNICAL ENGINEERING/MATERIAL TESTING FIRM TO ENSURE MATERIAL USED TO CONSTRUCT ANY FEATURE USED TO IMPOUND WATER WILL REMAIN WATER TIGHT AND RESISTANT TO SOIL PIPING THROUGH THE FEATURE'S LIFE SPAN.
9. ALL CONDUITS ENTERING THE WATER IMPOUNDMENT STRUCTURE (WATER QUALITY POND) SHALL INCLUDE CLAY DAMS TO ENSURE THERE IS NO SOIL PIPING TO OR FROM THE CONDUIT EMBEDMENT MATERIAL.

CZP CALCULATIONS

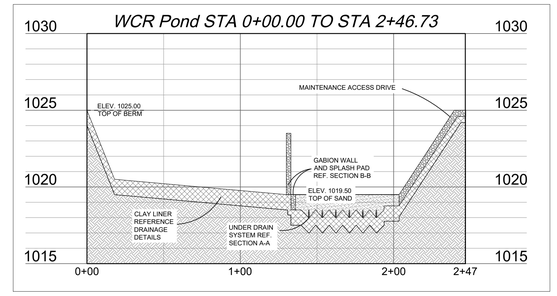
183 EXTENSION POND
PROPOSED DRAINAGE AREA = 15.31 AC
PROPOSED ON-SITE IMPERVIOUS COVER = 1.70 AC
TURN LANE DEMOLITION = 0.09 AC
PROPOSED TURN LANE IMPERVIOUS COVER = 0.18 AC
TOTAL NET INCREASE: 1.79 AC

CURRENT PROPOSED REQUIRED VOLUME = 9,684 CF
CURRENT PROPOSED MINIMUM FILTER BASIN AREA = 807 SF

*FUTURE DRAINAGE AREA = 15.31 AC
*FUTURE IMPERVIOUS COVER (80%) = 12.25 AC
*FUTURE REQUIRED VOLUME = 62,424 CF
*FUTURE MINIMUM FILTER BASIN AREA = 5,202 SF

POND VOLUME PROVIDED = 69,006 CF
FILTER BASIN AREA PROVIDED = 5,252.5 SQ FT

*ALL FUTURE CONDITIONS ARE APPROXIMATE IN NATURE AND ARE NOT BASED ON ANY COMPLETED DESIGN. ANY FUTURE ADDITIONS TO THE PROPERTY WITHIN THE DRAINAGE BASIN OF THE DETENTION AND WATER QUALITY PONDS WILL BE SUBJECT TO REVIEW CRITERIA AT THE TIME OF THAT FUTURE SUBMITTAL.



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023

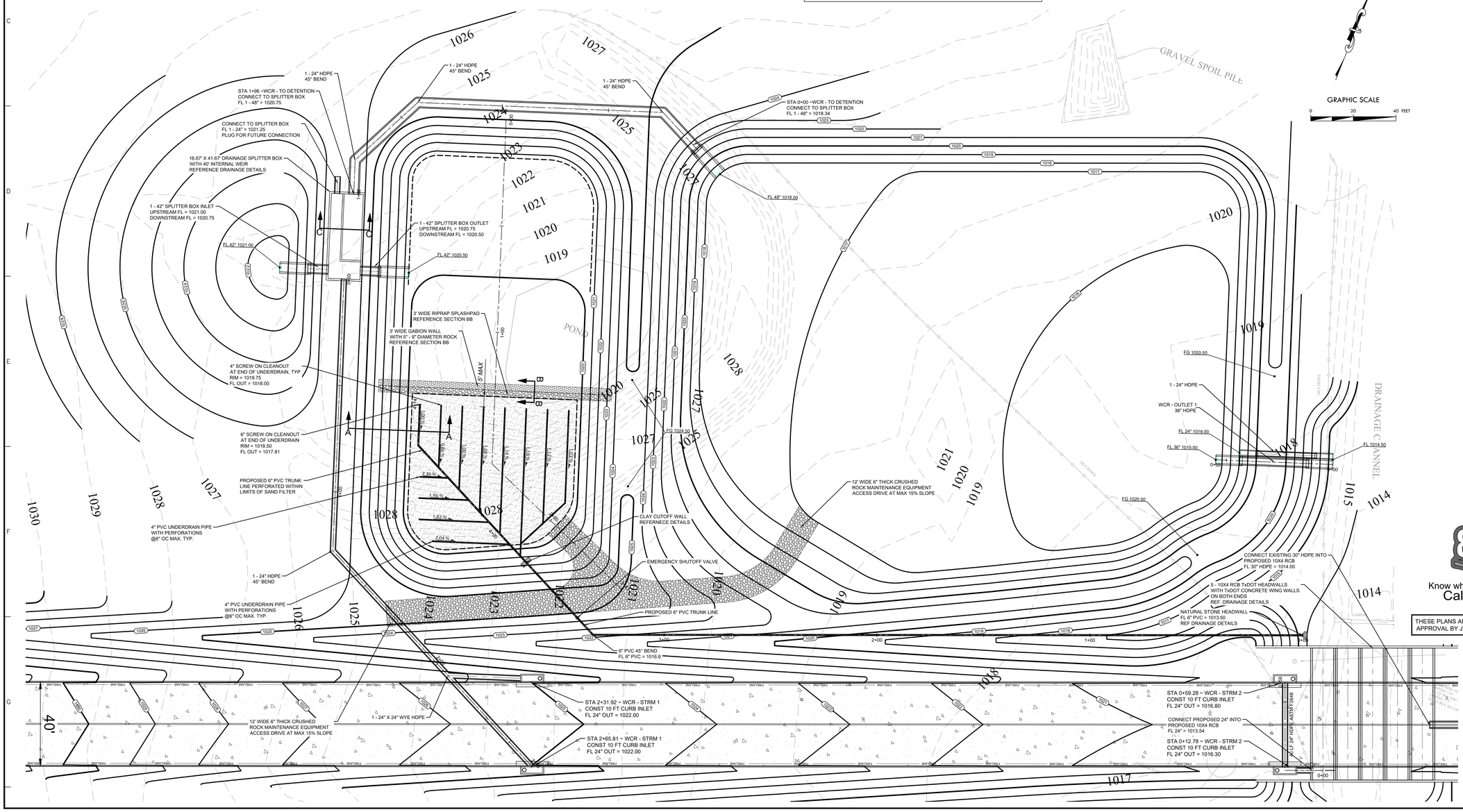
Pond No. 1 - West Connector WQ Pond

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 1019.50 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	1019.50	5,253	0	0
0.50	1020.00	14,567	4,761	4,761
1.50	1021.00	16,668	15,604	20,365
2.50	1022.00	18,870	17,756	38,121
3.50	1023.00	21,173	20,008	58,129
4.00	1023.50	22,345	10,877	69,006



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Date	Description	No.
Revisions		

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MATTHEW S. HARDY
134448
LICENSED PROFESSIONAL ENGINEER
02-08-2024

TBPE Registration #: F-13709

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TBPE FIRM REG. #F-13709

Project
LIBERTY HILL MIDDLE SCHOOL #3 WEST CONNECTOR DRIVE
LIBERTY HILL
WILLIAMSON COUNTY TEXAS

Drawing Title
183 EXTENSION WATER QUALITY PLAN

Project No.	Drawing No.
531013311	C9.00
Date: FEBRUARY 2024	
Drawn By: NPF	
Checked By: MSH	13

WEST CONNECTOR ROAD WQ POND - PROPOSED THIS PHASE

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name:Liberty Hill MS #3 Road Extension
Date Prepared: 2/8/2024

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

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

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

where:
$LM_{TOTAL\ PROJECT}$ =Required TSS removal resulting from the proposed development = 80% of increased load
AN =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 * =	15.31	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	1.79	acres
Total post-development impervious cover fraction * =	0.12	
P =	32	inches
$LM_{TOTAL\ PROJECT}$ =	1558	lbs.

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

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

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	15.31	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	1.79	acres
Post-development impervious fraction within drainage basin/outfall area =	0.12	
$LM_{THIS\ BASIN}$ =	1558	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =Sand Filter
Removal efficiency = 89 percent

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

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

RG-348 Page 3-33 Equation 3.7: $LR = (BMP\ efficiency) \times P \times (AI \times 34.6 + AP \times 0.54)$

where:
AC =Total On-Site drainage area in the BMP catchment area
AI =Impervious area proposed in the BMP catchment area
AP =Pervious area remaining in the BMP catchment area
LR =TSS Load removed from this catchment area by the proposed BMP

AC =	15.31	acres
AI =	1.79	acres
AP =	13.52	acres
LR =	1972	lbs

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

Desired $LM_{THIS\ BASIN}$ = 1558 lbs.

F = 0.79

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 =	1.04	inches
Post Development Runoff Coefficient =	0.14	
On-site Water Quality Volume =	8070	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 =	1614	
Total Capture Volume (required water quality volume(s) x 1.20) =	9684	cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.

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

Required Water Quality Volume for retention basin = NA cubic feet

Irrigation Area Calculations:

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

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

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

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 = 9684 cubic feet

Minimum filter basin area = 807 square feet

Maximum sedimentation basin area = 3228 square feetFor minimum water depth of 2 feet
Minimum sedimentation basin area = 202 square feetFor maximum water depth of 8 feet

CZP CALCULATIONS

183 EXTENSION POND
PROPOSED DRAINAGE AREA = 15.31 AC
PROPOSED ON-SITE IMPERVIOUS COVER = 1.70 AC
TURN LANE DEMOLITION = 0.09 AC
PROPOSED TURN LANE IMPERVIOUS COVER = 0.18 AC
TOTAL NET INCREASE: 1.79 AC

CURRENT PROPOSED REQUIRED VOLUME = 9,684 CF
CURRENT PROPOSED MINIMUM FILTER BASIN AREA = 807 SF

*FUTURE DRAINAGE AREA = 15.31 AC
*FUTURE IMPERVIOUS COVER (80%) = 12.25 AC
*FUTURE REQUIRED VOLUME = 62,424 CF
*FUTURE MINIMUM FILTER BASIN AREA = 5,202 SF

POND VOLUME PROVIDED = 69,006 CF
FILTER BASIN AREA PROVIDED = 5,252.5 SQ FT

*ALL FUTURE CONDITIONS ARE APPROXIMATE IN NATURE AND ARE NOT BASED ON ANY COMPLETED DESIGN. ANY FUTURE ADDITIONS TO THE PROPERTY WITHIN THE DRAINAGE BASIN OF THE DETENTION AND WATER QUALITY PONDS WILL BE SUBJECT TO REVIEW CRITERIA AT THE TIME OF THAT FUTURE SUBMITTAL.

WEST CONNECTOR ROAD WQ POND - ULTIMATE BUILD OUT

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name:Liberty Hill MS #3 Road Extension
Date Prepared: 2/8/2024

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

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

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

where:
$LM_{TOTAL\ PROJECT}$ =Required TSS removal resulting from the proposed development = 80% of increased load
AN =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 * =	15.31	acres
Predevelopment impervious area within the limits of the plan * =	0.00	acres
Total post-development impervious area within the limits of the plan* =	12.25	acres
Total post-development impervious cover fraction * =	0.80	
P =	32	inches
$LM_{TOTAL\ PROJECT}$ =	10662	lbs.

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

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

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

Drainage Basin/Outfall Area No. = 1

Total drainage basin/outfall area =	15.31	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	12.25	acres
Post-development impervious fraction within drainage basin/outfall area =	0.80	
$LM_{THIS\ BASIN}$ =	10662	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP =Sand Filter
Removal efficiency = 89 percent

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

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

RG-348 Page 3-33 Equation 3.7: $LR = (BMP\ efficiency) \times P \times (AI \times 34.6 + AP \times 0.54)$

where:
AC =Total On-Site drainage area in the BMP catchment area
AI =Impervious area proposed in the BMP catchment area
AP =Pervious area remaining in the BMP catchment area
LR =TSS Load removed from this catchment area by the proposed BMP

AC =	15.31	acres
AI =	12.25	acres
AP =	3.06	acres
LR =	12118	lbs

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

Desired $LM_{THIS\ BASIN}$ = 10662 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 =	0.62	
On-site Water Quality Volume =	52020	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 =	10404	
Total Capture Volume (required water quality volume(s) x 1.20) =	62424	cubic feet

The following sections are used to calculate the required water quality volume(s) for the selected BMP.
The values for BMP Types not selected in cell C45 will show NA.

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

Required Water Quality Volume for retention basin = NA cubic feet

Irrigation Area Calculations:

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

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

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

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 = 62424 cubic feet

Minimum filter basin area = 5202 square feet

Maximum sedimentation basin area = 20808 square feetFor minimum water depth of 2 feet
Minimum sedimentation basin area = 1301 square feetFor maximum water depth of 8 feet

Date	Description	No.

Revisions

02-08-2024

TBPE Registration #: F-13709

LANGAN
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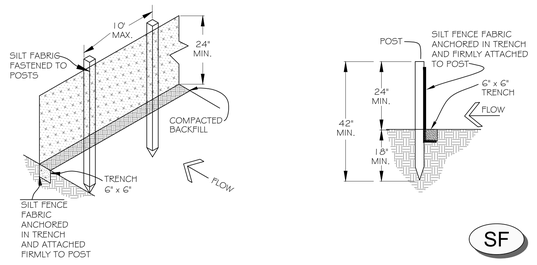
9606 N. Mopac Expressway, Suite 110
Austin, TX 78759
T: 737.289.7800 F: 737.289.7801 www.langan.com
TBPE FIRM REG. #F-13709

Project
LIBERTY HILL MIDDLE SCHOOL #3 WEST CONNECTOR DRIVE
LIBERTY HILL
WILLIAMSON COUNTY TEXAS

Drawing Title
183 EXTENSION WATER QUALITY CALCULATIONS

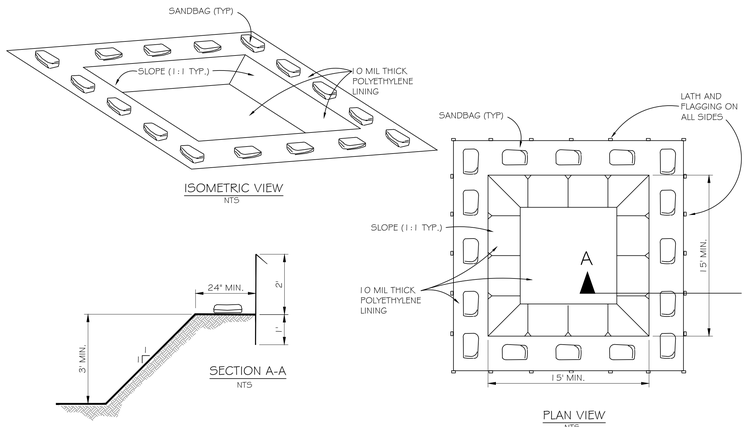
Project No. 531013311	Drawing No. C10.00
Date FEBRUARY 2024	
Drawn By NPF	
Checked By MSH	



SF

SILT FENCE GENERAL NOTES:
1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (e.g. PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
3. 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.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
5. INSPECTION SHALL BE MADE IN ACCORDANCE WITH PERMIT REQUIREMENTS. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM WATER FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

SILT FENCE
N.T.S.



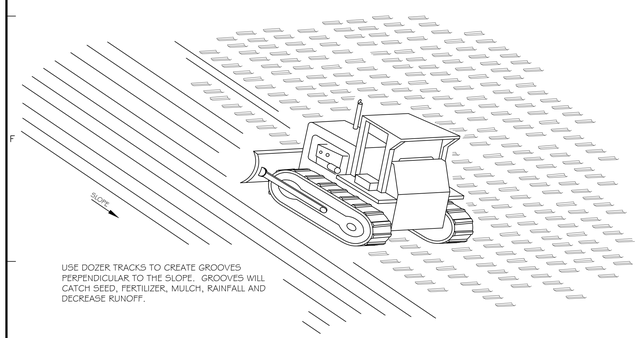
ISOMETRIC VIEW
NTS

SECTION A-A
NTS

PLAN VIEW
NTS

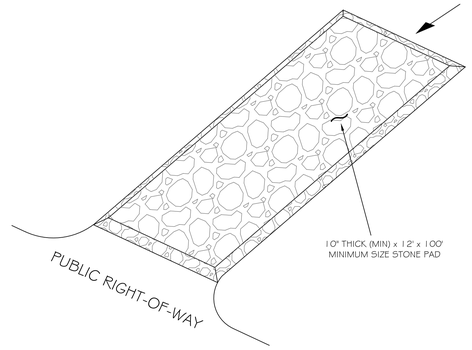
NOTES
1. Actual layout, size and location to be determined by Contractor.
2. The concrete washout sign shall be installed within 30 ft. of the temporary concrete washout facility.
3. Once concrete wastes are allowed to harden, the concrete should be broken up, removed and disposed of properly. dispose of hardened concrete on a regular basis.

TEMPORARY CONCRETE WASHOUT AREA
N.T.S.



USE DOZER TRACKS TO CREATE GROOVES PERPENDICULAR TO THE SLOPE. GROOVES WILL CATCH SEED, FERTILIZER, MULCH, RAINFALL AND DECREASE RUNOFF.

TRACKING DETAIL
N.T.S.

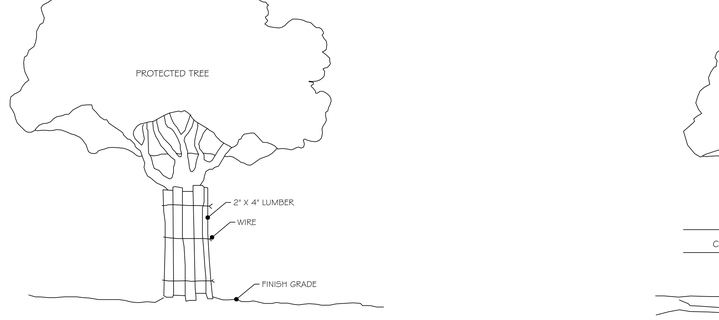


CE

SIZE OF ROCK, LBS.	% SMALLER BY WEIGHT
200	100
50	35-65
3	0

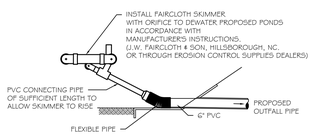
NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE DRESSING WITH ADDITIONAL STONE AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE INTO PUBLIC RIGHT-OF-WAY. WASHING SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT CONTROLLING STRUCTURE. USE SAND BAGS, GRAVEL, BOARDS OR OTHER APPROVED METHODS TO PREVENT SEDIMENT FROM ENTERING ANY STORM DRAIN, DITCH, OR WATER COURSE.
3. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

TEMPORARY CONSTRUCTION EXIT POINT
N.T.S.

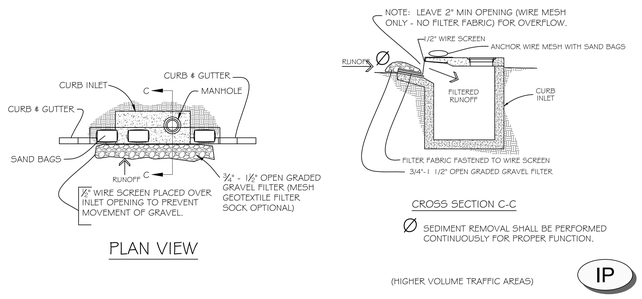


In situations where a protected tree remains in the immediate area of intended construction and the tree may be in danger of being damaged by construction equipment or other activity, the contractor or subcontractor shall protect the tree with 2" x 4" lumber encircled with wire or other means that do not damage the tree. The intent is to protect the trunk of the tree against incidental contact by large construction equipment.

BARK PROTECTION
N.T.S.



TEMPORARY OUTLET STRUCTURE DETAILS
N.T.S.



PLAN VIEW

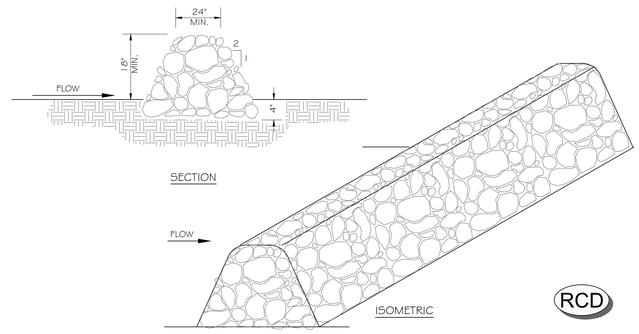
CROSS SECTION C-C

Ø SEDIMENT REMOVAL SHALL BE PERFORMED CONTINUOUSLY FOR PROPER FUNCTION.

(HIGHER VOLUME TRAFFIC AREAS)

IP

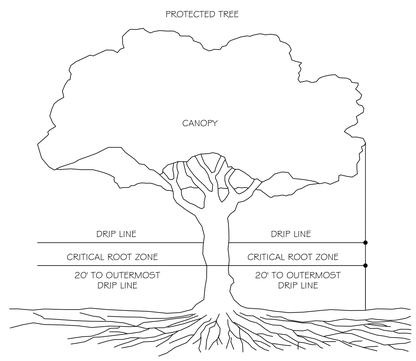
CURB INLET PROTECTION
N.T.S.



RCD

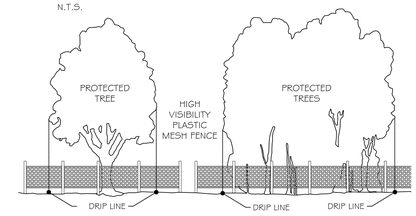
NOTES:
1. USE ONLY OPEN-GRADED ROCK, WITH MOST OF THE FINES REMOVED.
2. STONE SHALL BE CRUSHED, MIN. 3" DIAMETER, MAX. 1 CU. FT. IN VOLUME.
3. THE ROCK BERM SHALL BE EMBEDDED INTO THE SOIL A MINIMUM OF 4 INCHES.
4. INSPECT BERM AFTER EACH RAIN. REPLACE STONE WHEN THE STRUCTURE FAILS TO SERVE ITS PURPOSE DUE TO SILT ACCUMULATION, WASHOUT OR DAMAGE.
5. REMOVE SILT WHEN IT REACHES A DEPTH OF 12 INCHES, OR ONE-THIRD OF THE HEIGHT OF THE BERM, WHICHEVER IS LESS. DISPOSE OF SILT IN APPROVED LOCATIONS.
6. REMOVE BERM ONLY WHEN SITE IS COMPLETELY STABILIZED.

ROCK CHECK DAM



CRITICAL ROOT ZONE AREA
N.T.S.

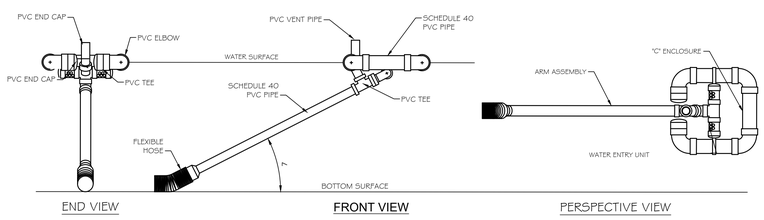
TP



PROTECTIVE FENCING: Orange vinyl construction fencing, chain link fencing, snow fencing, or other similar fencing at least four feet (4') high and supported at a maximum of ten-foot (10') intervals by approved methods sufficient enough to keep the fence upright and in place. The fencing shall be of a highly visible material.

PRIOR TO CONSTRUCTION: The contractor or subcontractor shall construct and maintain, for each protected tree or group of trees on a construction site, a protective fencing which encircles the outer limits of the critical root zone of the trees to protect it from construction activity. All protective fencing shall be in place prior to commencement of any site work and remain in place until all exterior work has been completed.

TREE PROTECTION FENCING
N.T.S.



END VIEW

FRONT VIEW

PERSPECTIVE VIEW

FAIRCLOTH SKIMMER DETAIL
N.T.S.

Date	Description	No.
Revisions		

STATE OF TEXAS
MATTHEW S. HARDY
134448
LICENSED PROFESSIONAL ENGINEER
02-08-2024

TBPE Registration #: F-13709

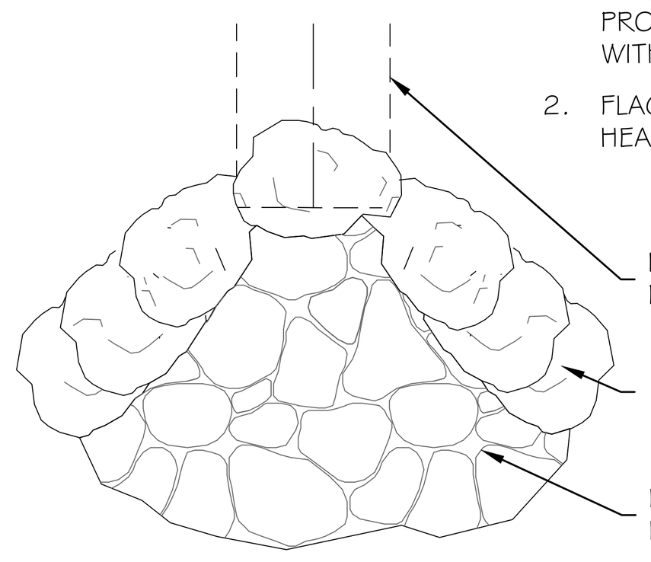
LANGAN
Langan Engineering and Environmental Services, Inc.
9606 N. Mopac Expressway, Suite 110
Austin, TX 78759
T: 737.289.7800 F: 737.289.7801 www.langan.com
TBPE FIRM REG. #F-13709

Project
LIBERTY HILL MIDDLE SCHOOL #3 WEST CONNECTOR DRIVE
LIBERTY HILL
WILLIAMSON COUNTY TEXAS

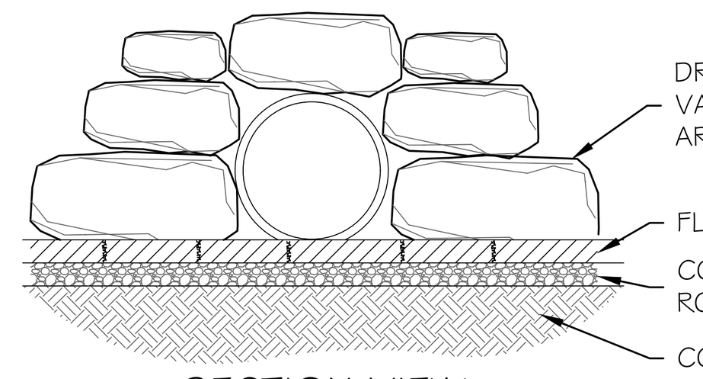
Drawing Title
EROSION CONTROL DETAILS

Project No.	Drawing No.
531013311	C12.00
Date: FEBRUARY 2024	
Drawn By: RWA	
Checked By: MSH	

NOTES:
1. UTILIZE STONE FOUND ONSITE AND PROVIDE TO SUPPLEMENT AS NEEDED WITH STONE TO COMPLIMENT.
2. FLAGSTONE COLOR TO COMPLIMENT HEADWALL STONE.



PLAN VIEW



SECTION VIEW

NATURAL STONE HEADWALL DETAIL

N.T.S.

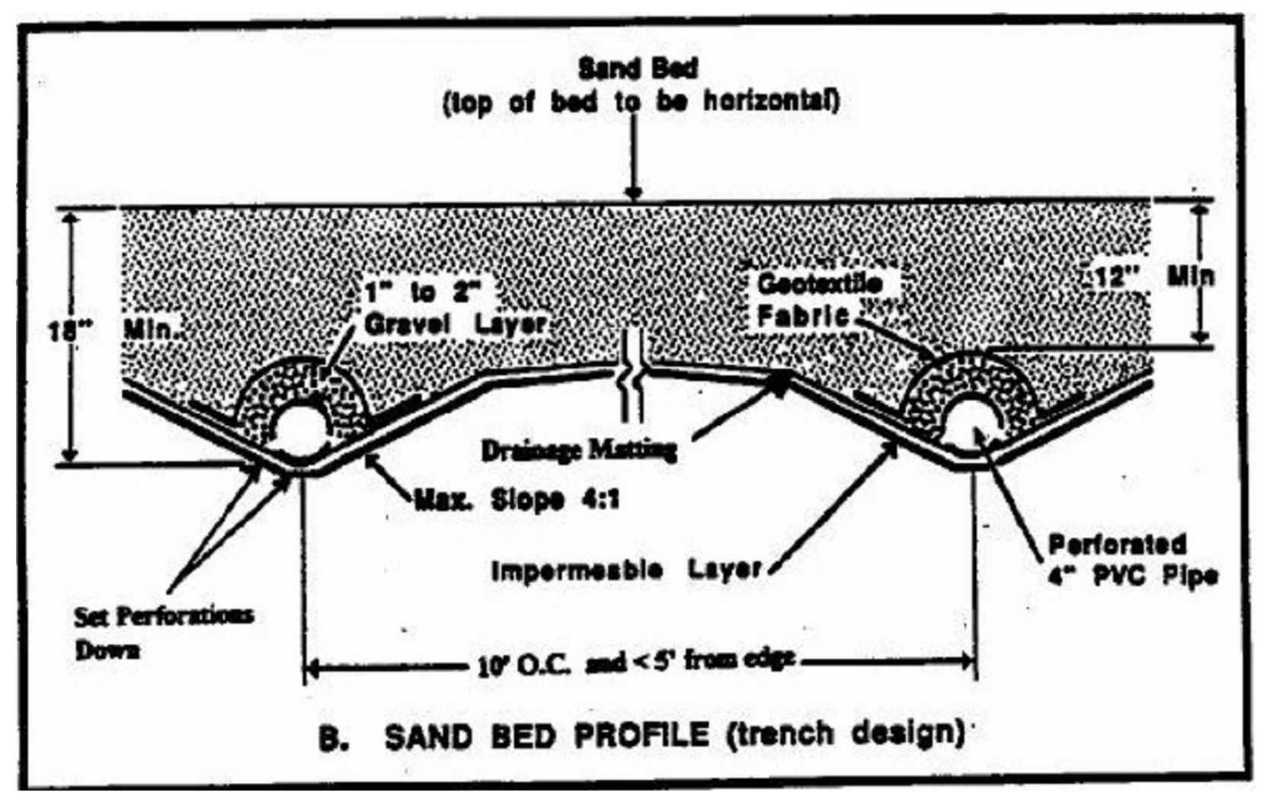
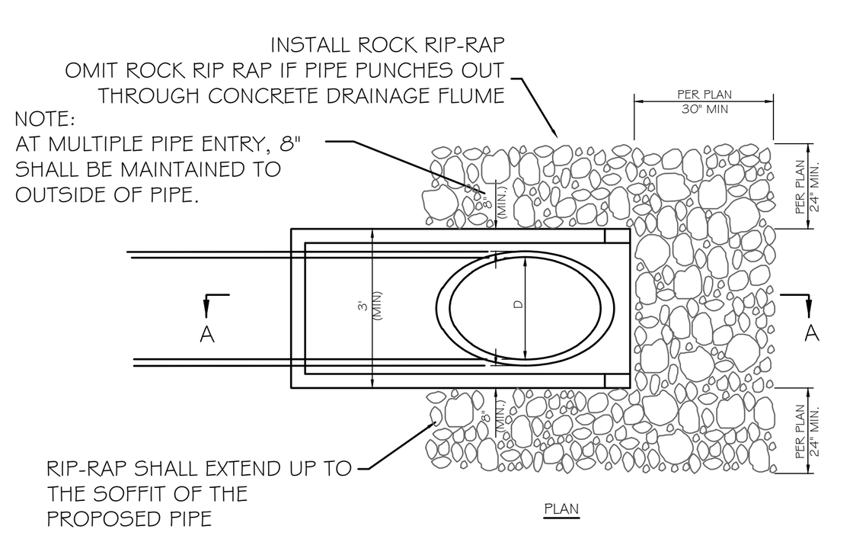
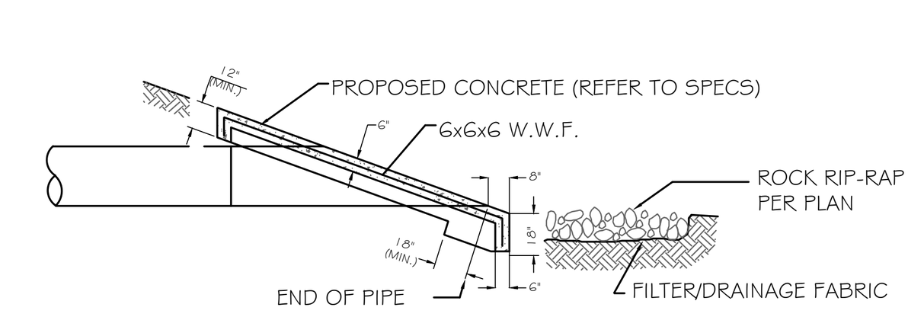


Table 3-6 Clay Liner Specifications (COA, 2004)

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

WATER QUALITY CLAY LINER REQUIREMENTS

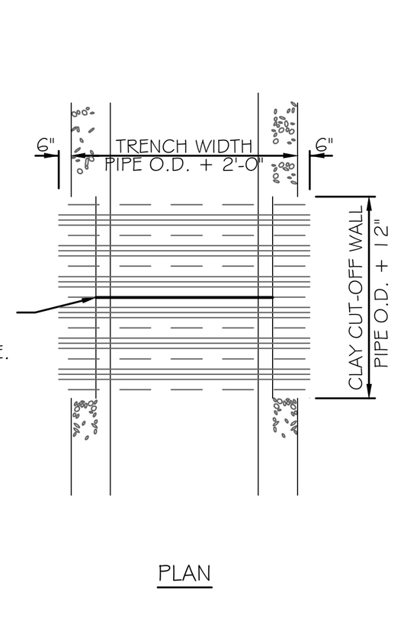




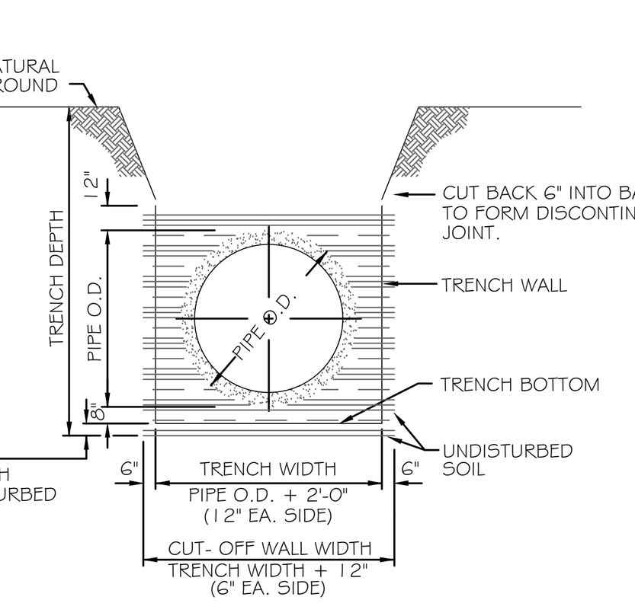
NOTES:
1. SLOPE PROTECTION SHALL BE INSTALLED ON ALL PIPES DISCHARGING INTO A POND.
2. HDPE PIPE SHALL NOT HAVE BEVELED END AND THUS SHALL UTILIZE A PRECAST HEADWALL BY OLDCASTLE PRECAST, AMERICAN INDUSTRIAL, CSR, OR HANSON PIPE.

HEADWALL/OUTFALL DETAIL

N.T.S.



PLAN



TYP. SECTION

CLAY CUT-OFF WALL NOTES:

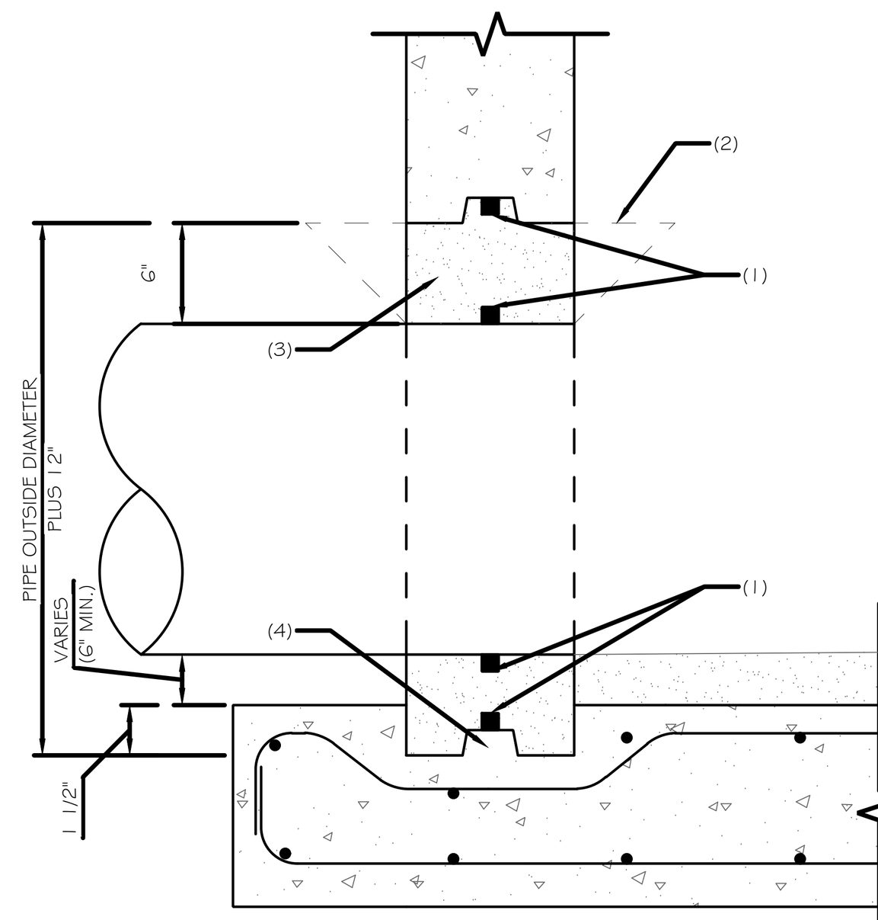
1. CLAY CUT-OFF WALLS SHALL BE CONSTRUCTED AT APPROXIMATELY 250 FOOT INTERVALS ALONG ALL STORM DRAIN CONDUITS HAVING CRUSHED STONE EMBEDMENT.

2. THE CLAY CUT-OFF WALL SHALL BE PLACED AT THE MID POINT OF THE LENGTH OF THE PIPE BEING PLACED, BUT NOT AT A LOCATION WHERE A LATERAL CONNECTS TO THE MAIN. THE MINIMUM CLEARANCE IS 10 FEET.

3. MATERIAL FOR CLAY CUT-OFF WALL TO BE CLEAN MATERIAL WITH NO LUMPS LARGER THAN 3". CLAY TO HAVE P.I. OF 30 TO 40. MATERIAL TO BE PLACED IN 6" LIFTS, MOISTENED TO OPTIMUM MOISTURE CONTENT AND COMPACTED WITH HAND HELD MECHANICAL TAMPERS, WITHOUT DAMAGING THE PIPE.

STORM DRAIN CLAY CUT-OFF WALL

N.T.S.

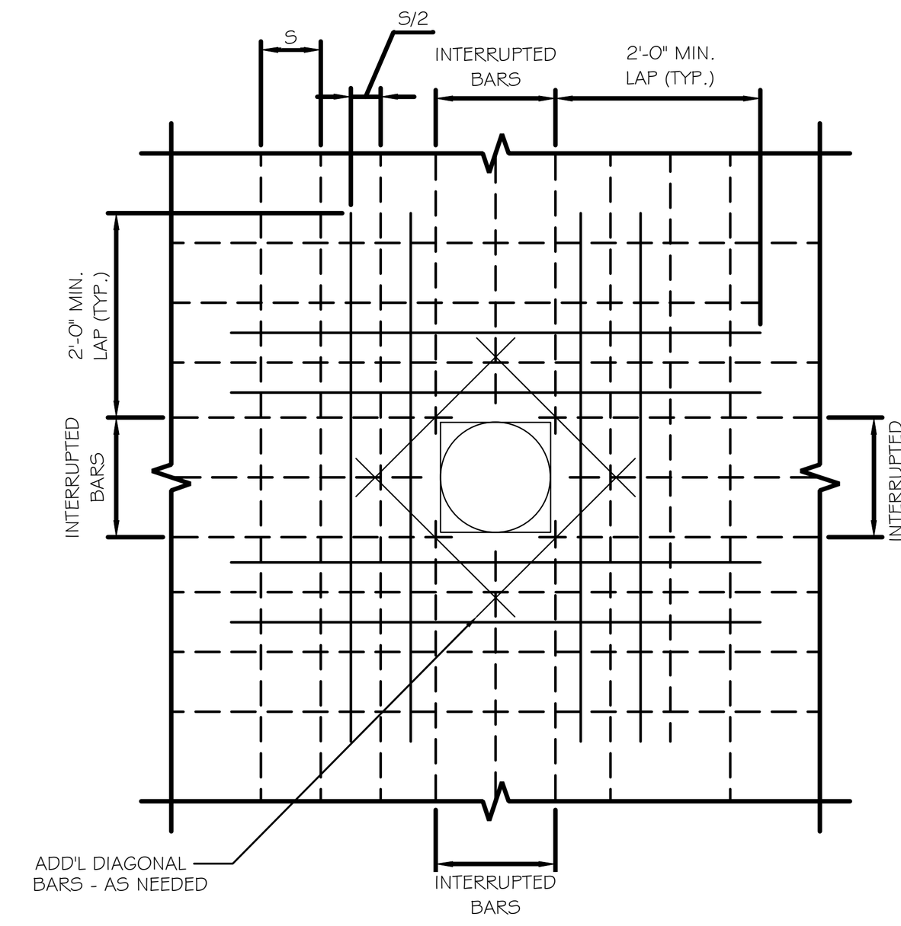


KEY NOTES:
1. CONTINUOUS HYDROPHILIC WATERSTOP
2. PROVIDE TEMPORARY "BIRDMOUTH" AT TOP OF BLOCKOUT FOR CONCRETE PLACEMENT AND CONSOLIDIATION
3. FILL BLOCKOUT WITH CONCRETET AFTER PIPE IS PLACED.
4. INVERTED KEY - REF. TYPICAL WALL KEYWAY DETAIL (SIMILAR)

NOTES:
1. BLOCKOUT TO BE AT CONTRACTOR'S OPTION
2. REFERENCE TYPICAL DETAIL - THIS SHEET - FOR ADD'L WALL REINFORCING AT PIPE PENETRATION.
3. "BIRDMOUTH" SHOWN AT TOP OF BLOCKOUT FOR CONCRETE PLACEMENT. REMOVE "BIRDMOUTH" AFTER FORMS HAVE BEEN REMOVED.
4. WALL REINF. AND ADD'L REINF. NOT SHOWN FOR GRAPHIC CLARITY.

TYPICAL CONCRETE WALL BLOCKOUT AT PIPE PENETRATION

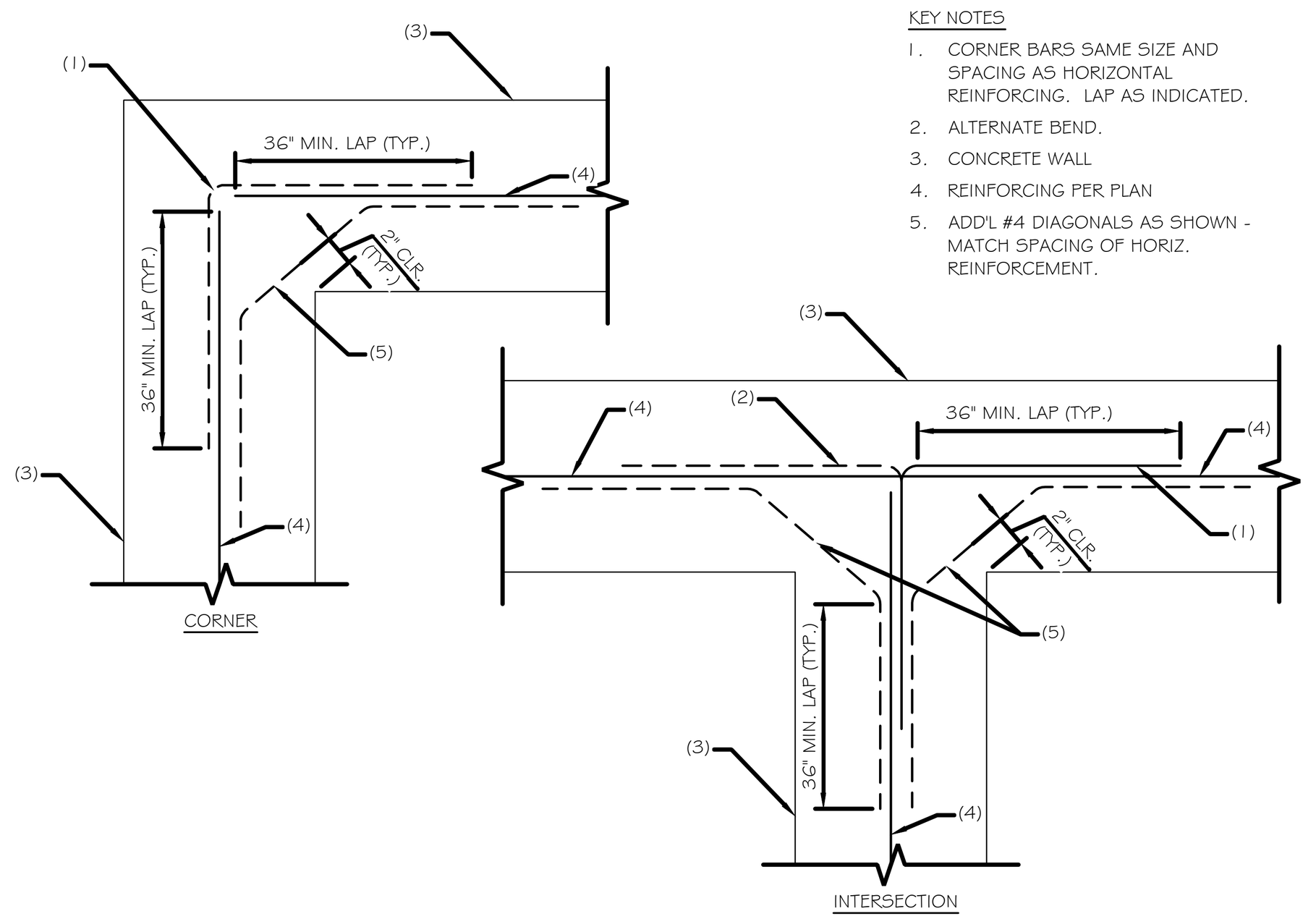
N.T.S.



NOTES:
1. ADDITIONAL REINF. ON EACH SIDE SHALL BE 1/2 OF THE AREA OF INTERRUPTED BARS RUNNING PARALLEL TO THE ADDITIONAL BARS.
2. SPACE ADDITIONAL REINF. AT A DISTANCE OF "S/2" FROM WALL REINFORCING BARS WHICH ARE PLACED AT SPACING "S".
3. ADD ADD'L 2-#4 x 2'-6" DIAGONAL BARS AT CORNERS OF RECTANGULAR AND SQUARE OPENINGS.
4. ADDITIONAL BARS TO EXTEND 2'-0" BEYOND BLOCKOUT EA. SIDE - AS SHOWN. EXCEPT PROVIDE ACI STD. 90° HOOKS INTO FOOTING (MATCH FOOTING DOWELS), AND PROVIDE ACI STD. 90° HOOKS WITH MINIMUM 13" EMBEDMENT WHERE STRAIGHT 2'-0" EMBEDMENT DOES NOT FIT.
5. SEE DETAIL - THIS SHEET - FOR BLOCKOUT DETAIL.

TYPICAL ADDITIONAL REINFORCING AT CONCRETE WALL - PIPE PENETRATIONS

N.T.S.

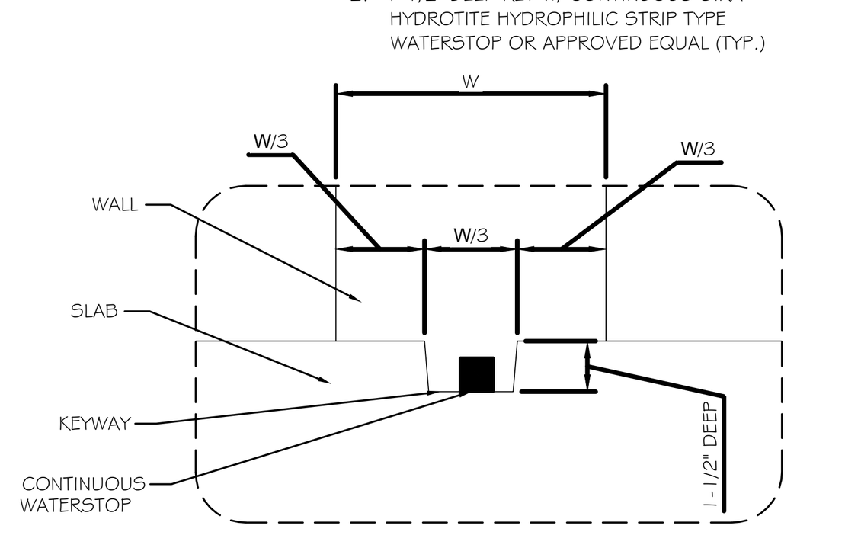


KEY NOTES
1. CORNER BARS SAME SIZE AND SPACING AS HORIZONTAL REINFORCING. LAP AS INDICATED.
2. ALTERNATE BEND.
3. CONCRETE WALL
4. REINFORCING PER PLAN
5. ADD'L #4 DIAGONALS AS SHOWN - MATCH SPACING OF HORIZ. REINFORCEMENT.

DRAINAGE BOX - CORNER REINFORCING

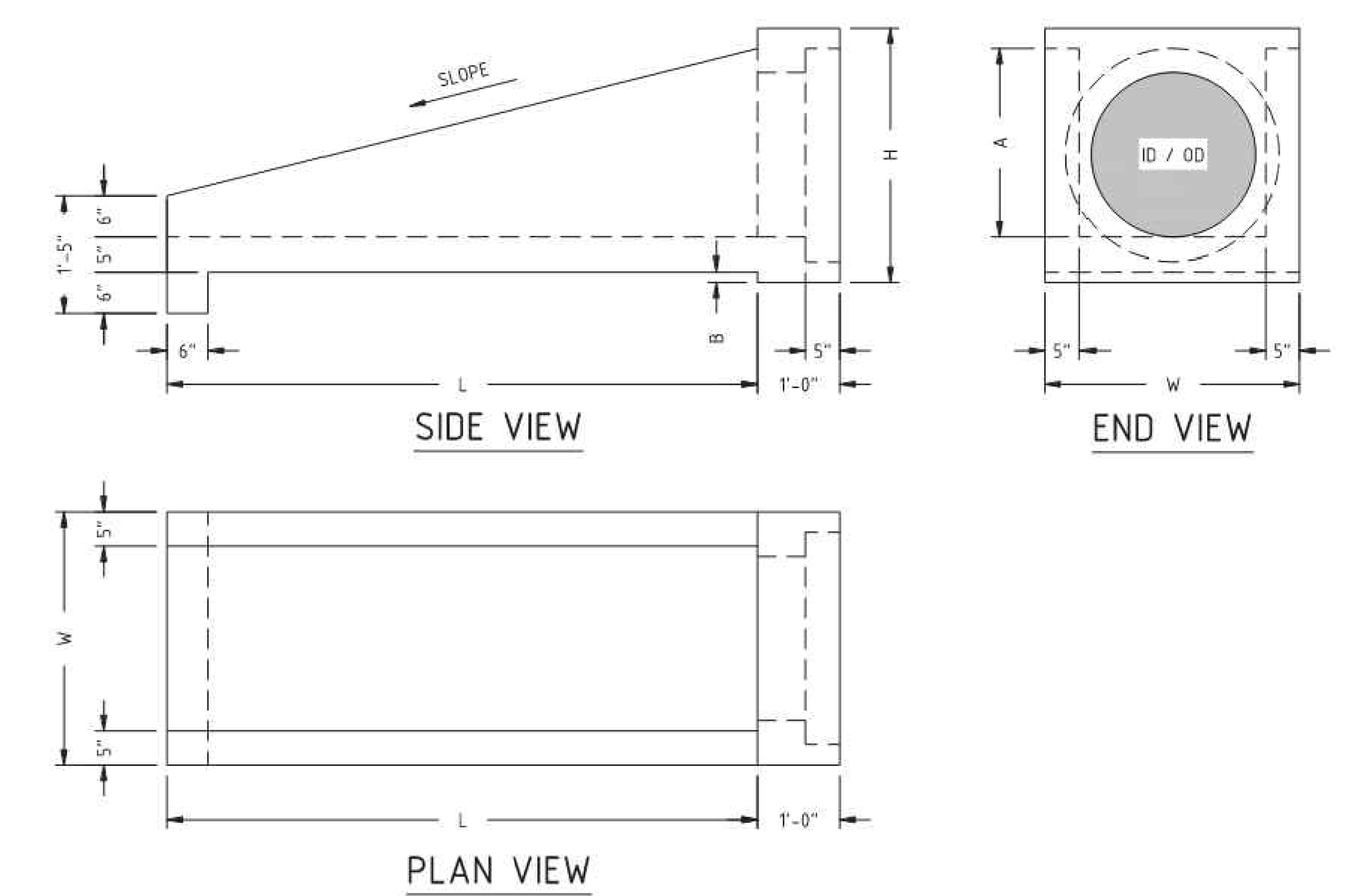
N.T.S.

NOTES:
1. WALL AND SLAB REINFORCEMENT NOT SHOWN FOR GRAPHIC CLARITY.
2. 1-1/2" DEEP KEY W/ CONTINUOUS SIKA HYDROTITE HYDROPHILIC STRIP TYPE WATERSTOP OR APPROVED EQUAL (TYP.)



TYPICAL WALL KEYWAY

N.T.S.

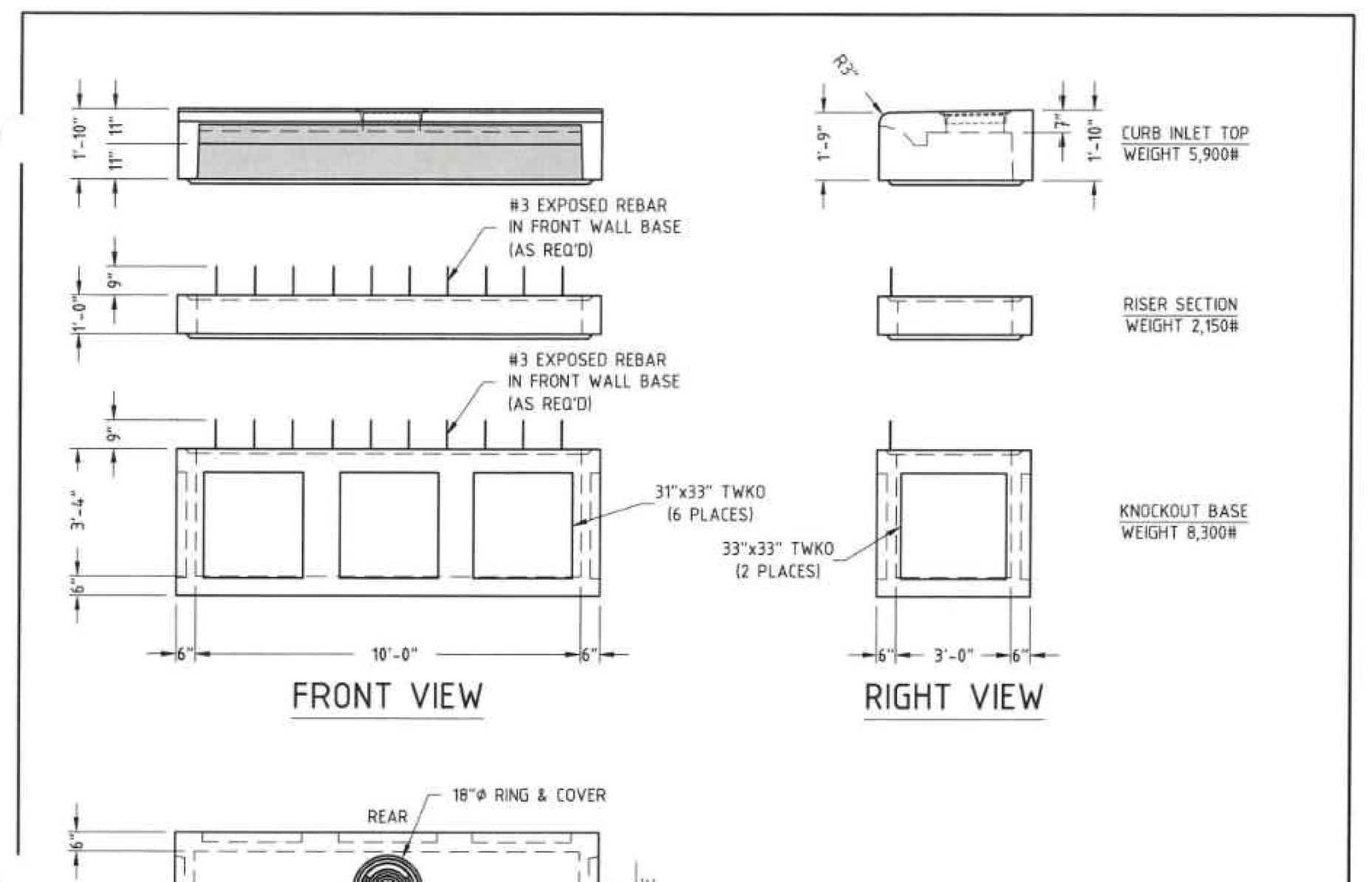


ID in. ø	OD in. ø	SLOPE	W ft.-in.	H ft.-in.	L ft.-in.	A ft.-in.	B in.	WEIGHT lbs.
* 12	17	3:1	2-4	2-2.25	2-10.5	1-5.5	.75	1,328
* 12	17	4:1	2-4	2-2.25	3-10	1-5.5	.75	1,558
12	17	6:1	2-4	2-2.25	5-9	1-5.5	.75	2,017
* 15	20.5	3:1	2-4	2-2.25	2-10.5	1-5.5	.75	1,243
* 15	20.5	4:1	2-4	2-2.25	3-10	1-5.5	.75	1,472
15	20.5	6:1	2-4	2-2.25	5-9	1-5.5	.75	1,831
* 18	24	3:1	2-6	2-6	3-9	1-9	1.00	1,751
* 18	24	4:1	2-6	2-6	5-0	1-9	1.00	2,018
18	24	6:1	2-6	2-6	7-6	1-9	1.00	2,831
* 24	31	3:1	3-1	3-1	5-4.5	2-3.5	1.50	2,831
* 24	31	4:1	3-1	3-1	7-2	2-3.5	1.50	3,596
24	31	6:1	3-1	3-1	10-9	2-3.5	1.50	4,818
* 30	38.5	3:1	3-5	3-8.5	7-1.5	2-10.5	2.25	4,092
* 30	38.5	4:1	3-5	3-8.5	9-6	2-10.5	2.25	5,082
30	38.5	6:1	3-5	3-8.5	14-3	2-10.5	2.25	7,060
* 36	45.5	3:1	3-11	4-3.5	8-9	3-5	2.50	5,544
* 36	45.5	4:1	3-11	4-3.5	11-8	3-5	2.50	6,827
* 36	45.5	6:1	3-11	4-3.5	17-6	3-5	2.50	8,722

NOTE:

-MADE IN ACCORDANCE WITH TxDOT PRECAST SAFETY END TREATMENT TYPE II DETAILS 'PSET-SP' & 'PSET-SC' FEBRUARY 2010.
-ONLY PERMITTED FOR CROSS DRAINAGE APPLICATIONS 'PSET-SC'

FORTERRA | REGION, STATE: HOUSTON TX | DATE: 2018 | SECT.PAGE: 3.9.2 | SAFETY END TREATMENT



NOTE:

-MAX. PIPE CONNECTION: 24"ø RCP AT 0° SKEW
-MADE IN ACCORDANCE WITH ASTM C913
-STEEL REINFORCEMENT: ASTM A615 GRADE 60 OR EQ. ASTM A1064 WWR
-MAX BURIAL DEPTH 8'-0" FROM INSIDE FLOOR TO FINISHED GRADE
-NO STEPS AVAILABLE
-NUMEROUS CASTINGS AVAILABLE WITH MAX SIZE OF RING NOT TO EXCEED 26"

FORTERRA | REGION, STATE: NORTH TX | DATE: 2018 | SECT.PAGE: 1.5.6 | CURB INLET 3'-0" x 10'-0"

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BOX DATA

S (ft.)	H (ft.)	TT (in.)	TB (in.)	TS (in.)	Fill Height (ft.)	M (Min) (in.)	AS1	AS2	AS3	AS4	AS5	AS7	AS8	(1) Lift Weight (tons)
							REINFORCING (sq. in. / ft.) (2)							
10	4	10	10	10	< 2	-	0.33	0.34	0.27	0.24	0.24	0.24	0.24	16.5
10	4	10	10	10	2 < 3	58	0.38	0.35	0.30	0.24	-	-	-	16.5
10	4	10	10	10	3 - 5	53	0.31	0.28	0.27	0.24	-	-	-	16.5
10	4	10	10	10	10	52	0.36	0.32	0.33	0.24	-	-	-	16.5
10	4	10	10	10	15	52	0.47	0.42	0.43	0.24	-	-	-	16.5
10	4	10	10	10	20	52	0.61	0.54	0.55	0.24	-	-	-	16.5
10	4	10	10	10	25	52	0.75	0.67	0.68	0.24	-	-	-	16.5
10	5	10	10	10	< 2	-	0.30	0.36	0.30	0.24	0.24	0.24	0.24	17.5
10	5	10	10	10	2 < 3	58	0.35	0.39	0.34	0.24	-	-	-	17.5
10	5	10	10	10	3 - 5	52	0.28	0.31	0.30	0.24	-	-	-	17.5
10	5	10	10	10	10	52	0.33	0.35	0.36	0.24	-	-	-	17.5
10	5	10	10	10	15	47	0.42	0.46	0.47	0.24	-	-	-	17.5
10	5	10	10	10	20	47	0.55	0.59	0.61	0.24	-	-	-	17.5
10	5	10	10	10	25	47	0.68	0.73	0.75	0.24	-	-	-	17.5
10	6	10	10	10	< 2	-	0.28	0.38	0.33	0.24	0.24	0.24	0.24	18.5
10	6	10	10	10	2 < 3	58	0.32	0.42	0.37	0.24	-	-	-	18.5
10	6	10	10	10	3 - 5	53	0.26	0.34	0.33	0.24	-	-	-	18.5
10	6	10	10	10	10	52	0.30	0.38	0.39	0.24	-	-	-	18.5
10	6	10	10	10	15	47	0.39	0.49	0.51	0.24	-	-	-	18.5
10	6	10	10	10	20	47	0.50	0.63	0.65	0.24	-	-	-	18.5
10	6	10	10	10	25	47	0.61	0.78	0.80	0.24	-	-	-	18.5
10	7	10	10	10	< 2	-	0.25	0.40	0.36	0.24	0.24	0.24	0.24	19.5
10	7	10	10	10	2 < 3	58	0.30	0.45	0.40	0.24	-	-	-	19.5
10	7	10	10	10	3 - 5	58	0.24	0.36	0.35	0.24	-	-	-	19.5
10	7	10	10	10	10	52	0.28	0.40	0.42	0.24	-	-	-	19.5
10	7	10	10	10	15	47	0.36	0.52	0.54	0.24	-	-	-	19.5
10	7	10	10	10	20	47	0.46	0.67	0.69	0.24	-	-	-	19.5
10	7	10	10	10	25	47	0.56	0.82	0.85	0.24	-	-	-	19.5
10	8	10	10	10	< 2	-	0.24	0.41	0.38	0.24	0.24	0.24	0.24	20.5
10	8	10	10	10	2 < 3	64	0.27	0.47	0.43	0.24	-	-	-	20.5
10	8	10	10	10	3 - 5	58	0.24	0.38	0.38	0.24	-	-	-	20.5
10	8	10	10	10	10	52	0.26	0.42	0.44	0.24	-	-	-	20.5
10	8	10	10	10	15	47	0.34	0.54	0.57	0.24	-	-	-	20.5
10	8	10	10	10	20	47	0.43	0.69	0.72	0.24	-	-	-	20.5
10	9	10	10	10	< 2	-	0.24	0.42	0.41	0.24	0.24	0.24	0.24	21.5
10	9	10	10	10	2 < 3	70	0.26	0.50	0.46	0.24	-	-	-	21.5
10	9	10	10	10	3 - 5	64	0.24	0.40	0.40	0.24	-	-	-	21.5
10	9	10	10	10	10	58	0.25	0.43	0.46	0.24	-	-	-	21.5
10	9	10	10	10	15	52	0.32	0.56	0.59	0.24	-	-	-	21.5
10	9	10	10	10	20	47	0.40	0.71	0.75	0.24	-	-	-	21.5
10	10	10	10	10	< 2	-	0.24	0.44	0.44	0.24	0.24	0.24	0.24	22.5
10	10	10	10	10	2 < 3	79	0.25	0.52	0.48	0.24	-	-	-	22.5
10	10	10	10	10	3 - 5	70	0.24	0.42	0.43	0.24	-	-	-	22.5
10	10	10	10	10	10	64	0.24	0.44	0.48	0.24	-	-	-	22.5
10	10	10	10	10	15	52	0.30	0.57	0.61	0.24	-	-	-	22.5
10	10	10	10	10	20	52	0.38	0.73	0.77	0.24	-	-	-	22.5

(1) For box length = 8'-0"

(2) AS1 thru AS4, AS7 and AS8 are minimum required areas of reinforcement per linear foot of box length. AS5 is minimum required area of reinforcement per linear foot of box width.

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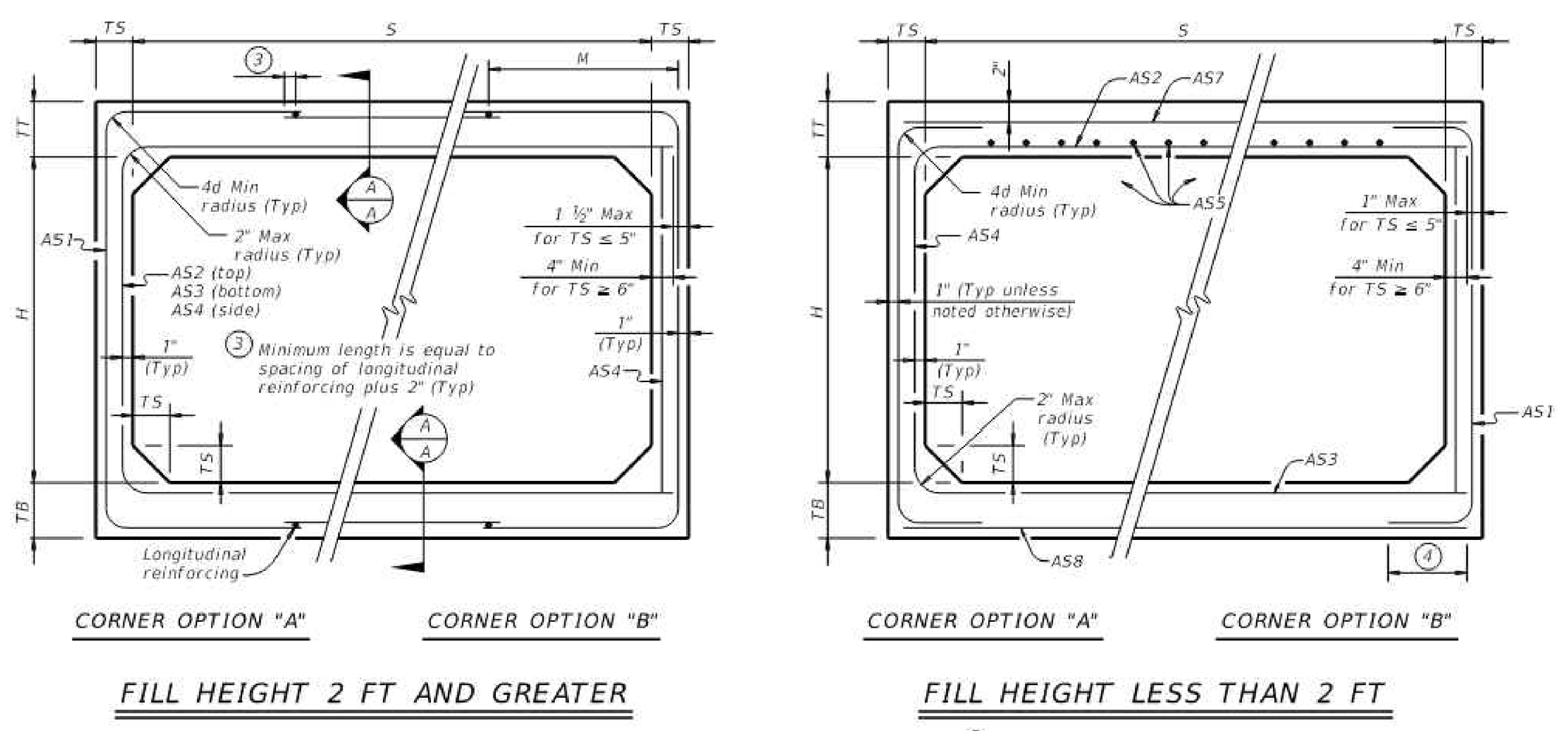
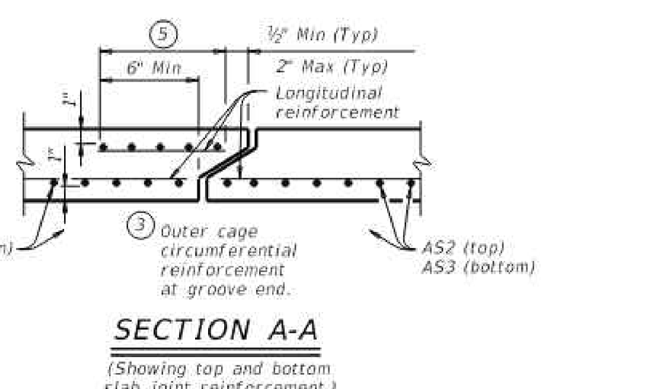


(4) Length is equal to spacing of longitudinal reinforcing plus 2". (10" Min) (Typ)



SECTION A-A
(Showing top and bottom slab joint reinforcement.)

MATERIAL NOTES:
Provide 0.03 sq. in./ft. minimum longitudinal reinforcement at each face in slabs and walls. This minimum requirement may be met by the transverse wires when wire mesh reinforcement is used.
Provide Class H concrete (f'c = 5,000 psi).

GENERAL NOTES:
Designs shown conform to ASTM C1577. Refer to ASTM C1577 for information or details not shown.
See Box Culverts Precast Miscellaneous Details (SCP-MD) standard sheet for details and notes not shown.
In lieu of furnishing the designs shown on this sheet, the contractor may furnish an alternate design that is equal to or exceeds the box design for the design fill height in the table. Submit shop plans for alternate designs in accordance with Item "Precast Concrete Structural Members (Fabrication)."

HL93 LOADING

Texas Department of Transportation — Bridge Division Standard

SINGLE BOX CULVERTS
PRECAST
10'-0" SPAN

SCP-10

FILE: CD-SCP10-20.dgn | DN: TxDOT | CK: TxDOT | DW: TxDOT | CK: TxDOT
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TABLE OF DIMENSIONS AND REINFORCING STEEL
(Wings for one structure end)

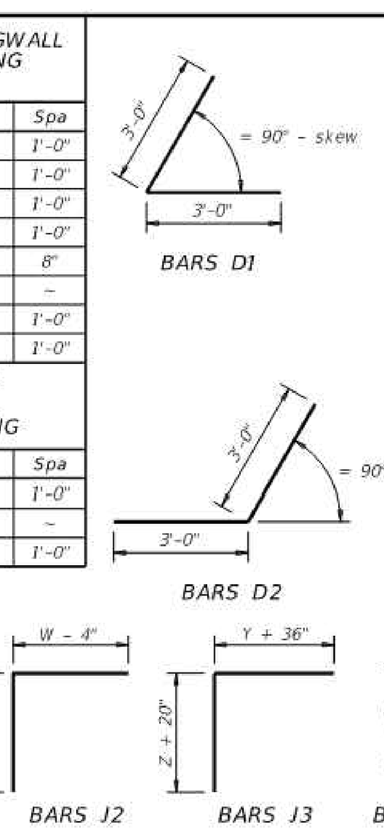
Maximum Wingwall Height Hw	W	X	Y	Z	Bars J1 Size	Bars J1 Spa	Bars J2 Size	Bars J2 Spa	Est. Quantities per ft of wing (2-wings) (4) Reinf (Lb/Ft)	Conc (CY/Ft)	Est. Quantities per ft of Toewall (1-toewall) Reinf (Lb/Ft)	Conc (CY/Ft)
2'-6"	2'-10"	10"	1'-0"	7"	#4	1'-0"	#4	1'-0"	48.64	0.406	6.85	0.071
2'-9"	2'-10"	10"	1'-0"	7"	#4	1'-0"	#4	1'-0"	49.31	0.424	6.85	0.071
3'-0"	2'-10"	10"	1'-0"	7"	#4	1'-0"	#4	1'-0"	49.98	0.444	6.85	0.071
3'-3"	2'-10"	10"	1'-0"	7"	#4	1'-0"	#4	1'-0"	53.32	0.462	6.85	0.071
3'-6"	2'-10"	10"	1'-0"	7"	#4	1'-0"	#4	1'-0"	53.98	0.480	6.85	0.071
4'-0"	3'-2"	1'-2"	1'-0"	7"	#4	1'-0"	#4	1'-0"	55.77	0.532	6.85	0.071
4'-6"	3'-2"	1'-2"	1'-0"	7"	#4	1'-0"	#4	1'-0"	59.77	0.568	6.85	0.071
5'-0"	3'-9"	1'-7"	1'-2"	7"	#4	1'-0"	#4	1'-0"	63.45	0.632	6.96	0.075
5'-6"	3'-9"	1'-7"	1'-2"	7"	#4	1'-0"	#4	1'-0"	67.46	0.668	6.96	0.075
6'-0"	4'-4"	2'-0"	1'-4"	7"	#5	1'-0"	#5	1'-0"	80.67	0.730	7.07	0.078
6'-6"	4'-4"	2'-0"	1'-4"	7"	#5	1'-0"	#5	1'-0"	85.05	0.768	7.07	0.078
7'-0"	5'-0"	2'-3"	1'-9"	8"	#5	1'-0"	#5	1'-0"	92.15	0.864	8.07	0.093
7'-6"	5'-0"	2'-3"	1'-9"	8"	#5	1'-0"	#5	1'-0"	96.54	0.902	8.07	0.093
8'-0"	5'-6"	2'-8"	1'-10"	8"	#5	6"	#5	6"	139.04	0.962	8.13	0.095
8'-6"	5'-6"	2'-8"	1'-10"	8"	#5	6"	#5	6"	144.47	1.000	8.13	0.095
9'-6"	6'-0"	2'-10"	2'-2"	9"	#5	6"	#5	6"	156.93	1.136	8.41	0.110
10'-6"	6'-5"	3'-0"	2'-5"	9"	#6	6"	#5	6"	196.27	1.234	8.57	0.117
11'-6"	7'-2"	3'-6"	2'-8"	11"	#6	6"	#6	6"	230.13	1.438	9.52	0.140
12'-6"	7'-8"	3'-9"	2'-11"	1'-0"	#7	6"	#6	6"	283.41	1.592	9.74	0.157
13'-6"	8'-2"	4'-0"	3'-2"	1'-2"	#8	6"	#6	6"	348.72	1.804	10.02	0.186
14'-6"	8'-10"	4'-5"	3'-5"	1'-4"	#9	6"	#6	6"	432.94	2.046	10.30	0.218
15'-6"	9'-6"	4'-10"	3'-8"	1'-6"	#9	6"	#7	6"	489.52	2.302	11.24	0.253
16'-0"	9'-11"	5'-0"	3'-11"	1'-7"	#9	6"	#7	6"	505.72	2.448	11.47	0.279

TABLE OF WINGWALL REINFORCING (2-wings)

Bar	Size	No.	Spa
D1	#6	~	1'-0"
D2	#6	~	1'-0"
E1	#4	~	1'-0"
F	#4	~	1'-0"
G	#6	~	8"
M1	#4	4	~
P	#4	~	1'-0"
V	#4	~	1'-0"

TABLE OF TOEWALL REINFORCING

Bar	Size	No.	Spa
J3	#4	~	1'-0"
M2	#4	2	~
E2	#4	~	1'-0"



WING DIMENSION FORMULAS:
(All values are in feet.)

Hw = H + T + C
Lw = (Hw) (SL) ÷ cosine (θ) for Type PW-1
= (Hw - 1') (SL) ÷ cosine (θ) for Type PW-2 and Hw ≥ 4'
= (Hw - 0.5') (SL) ÷ cosine (θ) for Type PW-2 and Hw < 4'

For cast-in-place culverts:
Ltw = [(N) (S) + (N + 1) (U)] ÷ cosine (θ)

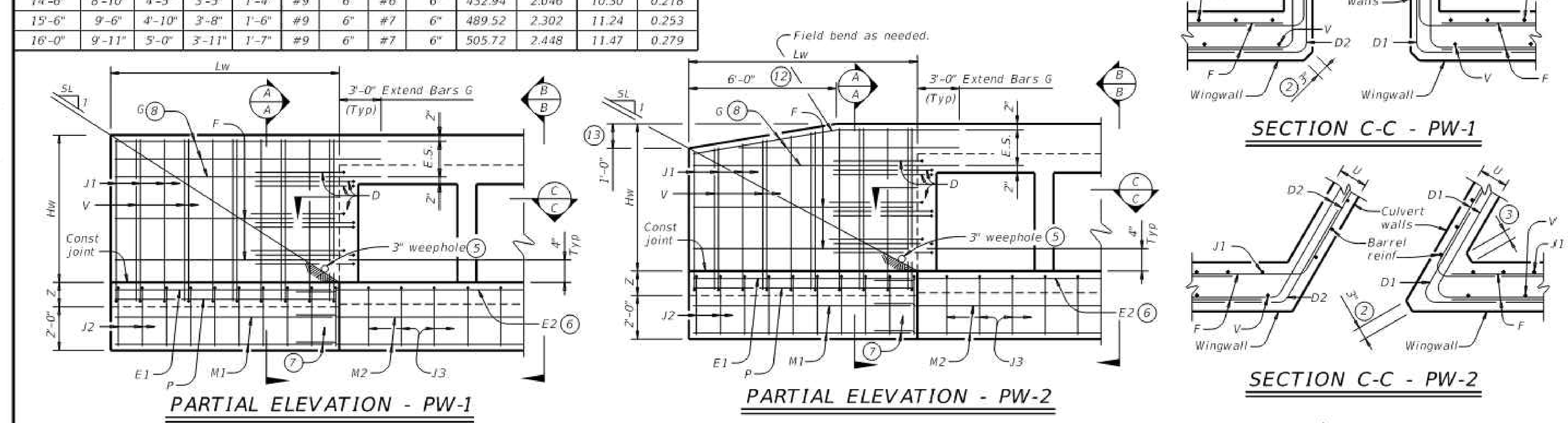
For precast culverts:
Ltw = [(N) (2 U + S) + (N - 1) (0.5')] ÷ cosine (θ)
Total Wingwall Area (two wings - SF)
= (2)(Hw)(Lw) for Type PW-1
= (2)(Hw)(Lw) - 6 SF for Type PW-2 and Hw ≥ 4'
= (2)(Hw)(Lw) - 1.5 SF for Type PW-2 and Hw < 4'

Hw = Height of wingwall
Lw = Length of wingwall
Ltw = Culvert toewall length
N = Number of culvert spans
SL:1 = Channel slope ratio. (horizontal: 1 vertical, usual value is 2:1)
θ = Culvert skew

See applicable box culvert standard sheet for S, H, T, and U values.

(1) Skew = 0°
(2) At discharge end, chamfer may be 3/4" minimum.
(3) For 15° skew ~ 1"; For 30° skew ~ 2"; For 45° skew ~ 3"
(4) Quantities shown are for two Type PW-1 wings. Adjust concrete volume for Type PW-2 wings. To determine estimated quantities for two wings, multiply the tabulated values by Lw. Quantities shown do not include weight of Bars D.
(5) Provide weepholes for Hw = 5'-0" and greater. Fill around weepholes with coarse gravel.
(6) Extend Bars E2 1'-6" minimum into the wingwall footing.
(7) Lap Bars M1 1'-6" minimum with Bars M2.
(8) Place Bars G as shown, equally spaced at 8" maximum. Provide at least two pairs of Bars G per wing.
(9) 0" Min to 5'-0" Max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail or curbs taller than 1'-0, refer to the Extended Curb Details (ECD) standard sheet. For structures with T631 or T631LS bridge rail, refer to the Mounting Details for T631 & T631LS Rails (T631-CM) standard sheet. Refer to the Box Culvert Rail Mounting Details (RAC) standard sheet for structures with bridge rail other than T631 or T631LS.
(10) For vehicle safety, the following requirements must be met:
- For structures without bridge rail, construct curbs no more than 3" above finished grade.
- For structures with bridge rail, construct curbs flush with finished grade.

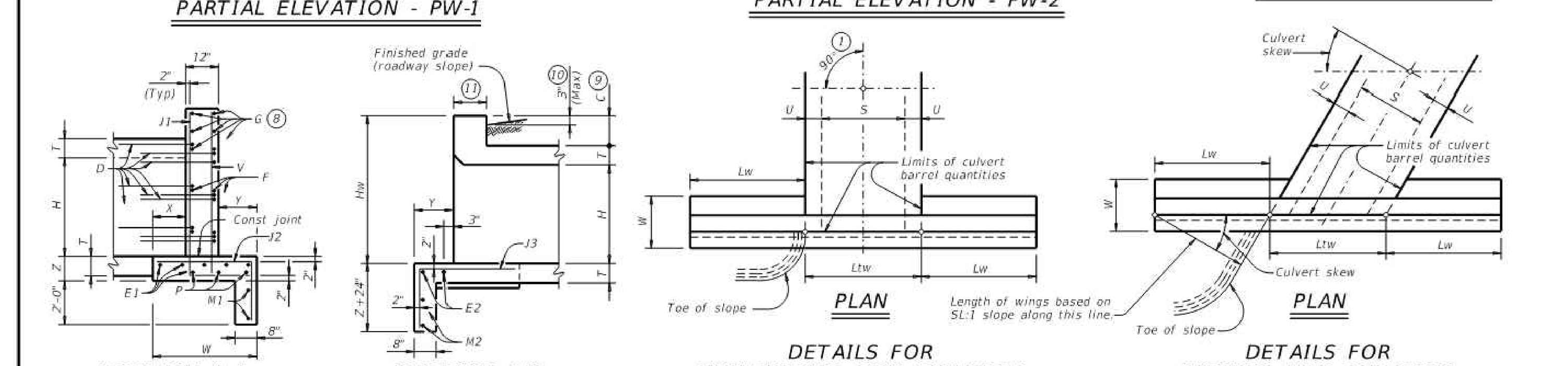
Reduce curb heights, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
(11) 1'-0" typical. 2'-3" when the Box Culvert Rail Mounting Details (RAC) standard sheet is referred to elsewhere in the plans.
(12) 3'-0" for Hw < 4'.
(13) 6" for Hw < 4'.



DESIGNER NOTES:
Type PW-1 can be used for all applications and must be used if railing is to be mounted to the wingwall.
Type PW-2 can only be used for applications without a railing mounted to the wingwall.

MATERIAL NOTES:
Provide Class C concrete (f'c=3,600 psi).
Provide Grade 60 reinforcing steel.
Provide galvanized reinforcing steel if required elsewhere in the plans.

GENERAL NOTES:
Designed in accordance with AASHTO LRFD Bridge Design Specifications.
Depth of toewalls for wingwalls and culverts may be reduced or eliminated when founded on solid rock, when directed by the Engineer.
See Box Culvert Supplement (BCS) standard sheet for wingwall type and additional dimensions and information.
Quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for the Contractor's information only.



SECTION A-A (Showing wing reinforcement.)

SECTION B-B (Showing wing reinforcement.)

DETAILS FOR NON-SKEWED BOX CULVERTS

DETAILS FOR SKEWED BOX CULVERTS (Showing 30° skew.)

Cover dimensions are clear dimensions, unless noted otherwise. Reinforcing dimensions are out-to-out of bars.

Texas Department of Transportation — Bridge Division Standard

CONCRETE WINGWALLS
WITH PARALLEL WINGS FOR
BOX CULVERTS
TYPES PW-1 AND PW-2

PW

FILE: CD-PW-20.dgn | DN: GAF | CK: CAT | DW: TxDOT | CK: TxDOT
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REVISIONS | DIST | COUNTY | SHEET NO.

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Revisions

STATE OF TEXAS — MATTHEW S. HARDY — 134448 — LICENSED PROFESSIONAL ENGINEER — 02-08-2024

TBPE Registration #: F-13709

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Austin, TX 78759
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TBPE FIRM REG. #F-13709

Project
LIBERTY HILL MIDDLE SCHOOL #3 WEST CONNECTOR DRIVE
LIBERTY HILL
WILLIAMSON COUNTY TEXAS

Drawing Title
DRAINAGE DETAILS

Project No. 531013311
Date FEBRUARY 2024
Drawn By RWA
Checked By MSH
Drawing No. C14.00

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

I Dustin Akin,
Print Name

Director of Construction,
Title - Owner/President/Other

of Liberty Hill Independent School District,
Corporation/Partnership/Entity Name

have authorized Matt Hardy, PE
Print Name of Agent/Engineer

of Langan Engineering
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:

Dustin Akin
Applicant's Signature

01/30/2024
Date

THE STATE OF Texas §

County of Williamson §

BEFORE ME, the undersigned authority, on this day personally appeared Dustin Akin 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 30th day of January 2024.

Melanie D Perkins
NOTARY PUBLIC

MELANIE D. PERKINS
MY COMMISSION EXPIRES
OCTOBER 14, 2025
NOTARY ID: 133392540

Melanie D Perkins
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 10/14/25

Application Fee Form

Texas Commission on Environmental Quality
Name of Proposed Regulated Entity: Liberty Hill Middle School No. 3
Regulated Entity Location: 30.660281, -97.874967
Name of Customer: Liberty Hill Independent School District
Contact Person: Dustin Akin Phone: 512-260-5580
Customer Reference Number (if issued):CN 600788483
Regulated Entity Reference Number (if issued):RN 111535720

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	59.6 Acres	$ 8,000.00
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: _____ Date: 02/08/2024

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

SECTION I: General Information

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

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

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

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	3. Regulated Entity Reference Number *(if issued)*
CN 600788483		RN 111535720

SECTION II: Customer Information

4. General Customer Information	5. Effective Date for Customer Information Updates (mm/dd/yyyy)	2/8/2024

☐ 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:*
Liberty Hill Independent School District	

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

11. Type of Customer: ☐ Corporation ☐ Individual Partnership: ☐ General ☐ Limited

Government: ☐ City ☐ County ☐ Federal ☐ State ☒ Other ☐ Sole Proprietorship ☒ Other: ISD

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

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

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

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

15. Mailing Address:							
	301 Forrest Street						
	City	Liberty Hill	State	TX	ZIP	78642	ZIP + 4

16. Country Mailing Information *(if outside USA)*	17. E-Mail Address *(if applicable)*
	dakin@liberty.txed.net

18. Telephone Number	19. Extension or Code	20. Fax Number *(if applicable)*
(512) 260-5580		(512) 260-5581

SECTION III: Regulated Entity Information

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

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

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

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

Liberty Hill Middle School No. 3

23. Street Address of the Regulated Entity: *(No PO Boxes)*								
	450 County Road 258							
	City	Liberty Hill	**State**	TX	**ZIP**	78642	**ZIP + 4**	
24. County	Willamson							

Enter Physical Location Description if no street address is provided.

25. Description to Physical Location:	The poposed school is located on the East side of the US 183 about 0.5 miles North of it's intersection with SH 29 and about 0.35 miles East of US 183

26. Nearest City	**State**	**Nearest ZIP Code**
Liberty Hill	TX	78642

27. Latitude (N) In Decimal:	30.660281		**28. Longitude (W) In Decimal:**	-97.874967	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
30	39	37	97	52	30

29. Primary SIC Code (4 digits)	**30. Secondary SIC Code** (4 digits)	**31. Primary NAICS Code** (5 or 6 digits)	**32. Secondary NAICS Code** (5 or 6 digits)
8211		611110	

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

Public Education

34. Mailing Address:	**301 Forrest Street**							
	City	**Liberty Hill**	**State**	**TX**	**ZIP**	**78642**	**ZIP + 4**	

35. E-Mail Address:	**dakin@libertyhill.txed.net**

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(512) 260-5580		**(512) 260-5581**

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
		11003161		
☐ Municipal Solid Waste	☐ New Source Review Air	☐ OSSF	☐ Petroleum Storage Tank	☐ PWS
☐ Sludge	☐ Storm Water	☐ Title V Air	☐ Tires	☐ Used Oil
☐ Voluntary Cleanup	☐ Waste Water	☐ Wastewater Agriculture	☐ Water Rights	☐ Other:

SECTION IV: Preparer Information

40. Name:	Matt Hardy, PE	**41. Title:**	Project Manager

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(817) 328-3240		(737) 289-7801	mhardy@langan.com

SECTION V: Authorized Signature

46. By my signature below, I certify, to the best of my knowledge, that the information provided in this form is true and complete, and that I have signature authority to submit this form on behalf of the entity specified in Section II, Field 6 and/or as required for the updates to the ID numbers identified in field 39.

Company:	Langan Engineering	**Job Title:**	Project Manager
Name *(In Print):*	Matt Hardy, P.E.	**Phone:**	(817) 328- **3240**
Signature:		**Date:**	**2/8/2024**