CLARA VISTA
LIFT STATION & FORCE MAIN
CONTRIBUTING ZONE PLAN APPLICATION

PREPARED BY:
PAPE-DAWSON CONSULTING ENGINEERS, LLC.
TBPE FIRM REGISTRATION #470
10801 N MoPac Expy., Bldg. 3, Suite 200
AUSTIN, TEXAS 78759

November 2024

PAPE-DAWSON ENGINEERS

Transportation | Water Resources | Land Development | Surveying | Environmental

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November 5, 2024

Mr. Robert Sadlier
Texas Commission on Environmental Quality
Region 11
12100 Park 35 Circle, Bldg. A
Austin, Texas 78753

Re: Clara Vista Lift Station & Force Main
Contributing Zone Plan

Dear Mr. Sadlier:

Please find attached one (1) electronic copy of the Clara Vista Lift Station & Force Main Contributing Zone Plan (CZP). This Contributing Zone Plan has been prepared in accordance with the Texas Administrative Code (30 TAC 213), and current policies for development over the Edwards Aquifer Contributing Zone.

This Contributing Zone Plan applies to an approximate 1.79-acre site as identified by the project limits. Please review the plan information for the items it is intended to address. If acceptable, please provide a written approval of the plan in order that construction may begin at the earliest opportunity.

If you have any questions or require additional information, please do not hesitate to contact me at your earliest convenience.

Sincerely,
Pape-Dawson Consulting Engineers, LLC

Aimee Chavez, P.E.
Associate Vice President

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EDWARDS AQUIFER APPLICATION COVER PAGE

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: Clara Vista Lift Station & Force Main					**2. Regulated Entity No.:** N/A				
3. Customer Name: Toll Southwest LLC.					**4. Customer No.:** CN605682475				
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	
7. Land Use: **(Please circle/check one)**	Residential		Non-residential			**8. Site (acres):**		1.79 acres	
9. Application Fee:	$4,00.00		**10. Permanent BMP(s):**			N/A			
11. SCS (Linear Ft.):	N/A		**12. AST/UST (No. Tanks):**			N/A			
13. County:	Hays		**14. Watershed:**			Blanco River			

Application Distribution

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

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

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

Austin Region			
County:	**Hays**	**Travis**	**Williamson**
Original (1 req.)	✓	___	___
Region (1 req.)	✓	___	___
County(ies)	✓	___	___
Groundwater Conservation District(s)	___Edwards Aquifer Authority ✓ Barton Springs/ Edwards Aquifer ___Hays Trinity ___Plum Creek	___Barton Springs/ Edwards Aquifer	___
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 ___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.
Aimee Chavez, P.E.
Print Name of Customer/Authorized Agent
Aimee C — 11/6/24
Signature of Customer/Authorized Agent — Date

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

CONTRIBUTING ZONE PLAN APPLICATION

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: Aimee Chavez, P.E.

Date: 11/6/24

Signature of Customer/Agent:

Aimee Chavez

Regulated Entity Name: Clara Vista Lift Station & Force Main

Project Information

1. County: Hays
2. Stream Basin: Blanco River
3. Groundwater Conservation District (if applicable): Barton Springs/Edwards Aquifer
4. Customer (Applicant):

   Contact Person: Mike Boswell
   Entity: Toll Southwest LLC
   Mailing Address: 1320 Arrow Point Dr., Suite 401
   City, State: Cedar Park, Texas Zip: 78613
   Telephone: (817) 329-7973 Fax: _____
   Email Address: mboswell@tollbrothers.com

5. Agent/Representative (If any):

   Contact Person: Aimee Chavez, P.E.
   Entity: Pape-Dawson Consulting Engineers, LLC.
   Mailing Address: 10801 N MoPac Expy., Bldg. 3, Suite 200
   City, State: Austin, TX Zip: 78759
   Telephone: (512) 454-8711 Fax: (512) 459-8867
   Email Address: achavez@pape-dawson.com

6. Project Location:

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

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

   From TCEQ's Regional Office, travel south along the IH-35 frontage road for approximately 0.7 miles. Merge onto IH-35 S and continue for approximately 26.8 miles. Take exit 215 toward FM 1626 & Kyle Parkway. In approximately 0.3 miles turn right onto Kohlers Crossing. Continue approximately 2.6 miles and then turn left onto Jack C Hays Trail. In 1.1 miles continue onto N Old Stagecoach Rd. Then in 0.5 miles turn right onto 6 Creeks Blvd and continue for approximately 1 mile before reaching the site.

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: _____

12. The type of project is:

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

13. Total project area (size of site): 1.79 Acres

Total disturbed area: 2.72 Acres

14. Estimated projected population: 0

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	286	÷ 43,560 =	0.01
Parking	0	÷ 43,560 =	0
Other paved surfaces	25,903	÷ 43,560 =	0.59
Total Impervious Cover	26,189	÷ 43,560 =	0.60

Total Impervious Cover 0.60 **÷ Total Acreage** 1.79 **X 100 =** 33.52**% 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 Kyle Wastewater Treatment Pplant (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			

AST Number	*Size (Gallons)*	*Substance to be Stored*	*Tank Material*
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" = 400'.

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 DFIRM (Digital Flood Insurance Rate Map for Hays County, Texas) Panel Numbers 48209C0270F & 48209C0385F dated September 2, 2005.

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

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

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

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

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

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

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

42. ☐ Surface waters (including wetlands).

☒ N/A

43. ☐ Locations where stormwater discharges to surface water.

    ☒ There will be no discharges to surface water.

44. ☐ Temporary aboveground storage tank facilities.

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

45. ☐ Permanent aboveground storage tank facilities.

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

46. ☒ Legal boundaries of the site are shown.

Permanent Best Management Practices (BMPs)

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

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

    ☐ N/A

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

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

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

    ☐ N/A

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

    ☐ N/A

50. Where a site is used for low density single-family residential development and has 20 % or less impervious cover, other permanent BMPs are not required. This exemption from permanent BMPs must be recorded in the county deed records, with a notice that if the percent impervious cover increases above 20% or land use changes, the exemption for the whole site as described in the property boundaries required by 30 TAC §213.4(g) (relating to

Application Processing and Approval), may no longer apply and the property owner must notify the appropriate regional office of these changes.

- ☐ The site will be used for low density single-family residential development and has 20% or less impervious cover.
- ☐ The site will be used for low density single-family residential development but has more than 20% impervious cover.
- ☒ The site will not be used for low density single-family residential development.

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

- ☐ **Attachment I - 20% or Less Impervious Cover Waiver**. The site will be used for multi-family residential developments, schools, or small business sites and has 20% or less impervious cover. A request to waive the requirements for other permanent BMPs and measures is attached.
- ☐ The site will be used for multi-family residential developments, schools, or small business sites but has more than 20% impervious cover.
- ☒ The site will not be used for multi-family residential developments, schools, or small business sites.

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

- ☒ A description of the BMPs and measures that will be used to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site is attached.
- ☐ No surface water, groundwater or stormwater originates upgradient from the site and flows across the site, and an explanation is attached.
- ☐ Permanent BMPs or measures are not required to prevent pollution of surface water, groundwater, or stormwater that originates upgradient from the site and flows across the site, and an explanation is attached.

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

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

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

☐ N/A

55. ☒ **Attachment M - Construction Plans**. Construction plans and design calculations for the proposed permanent BMPs and measures have been prepared by or under the direct supervision of a Texas Licensed Professional Engineer, and are signed, sealed, and dated. Construction plans for the proposed permanent BMPs and measures are attached and include: Design calculations, TCEQ Construction Notes, all proposed structural plans and specifications, and appropriate details.

☐ N/A

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

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

☐ N/A

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

☒ N/A

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

☐ N/A

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

59. ☒ The applicant is responsible for maintaining the permanent BMPs after construction until such time as the maintenance obligation is either assumed in writing by another entity having ownership or control of the property (such as without limitation, an

owner's association, a new property owner or lessee, a district, or municipality) or the ownership of the property is transferred to the entity. Such entity shall then be responsible for maintenance until another entity assumes such obligations in writing or ownership is transferred.

60. ☒ A copy of the transfer of responsibility must be filed with the executive director at the appropriate regional office within 30 days of the transfer if the site is for use as a multiple single-family residential development, a multi-family residential development, or a non-residential development such as commercial, industrial, institutional, schools, and other sites where regulated activities occur.

Administrative Information

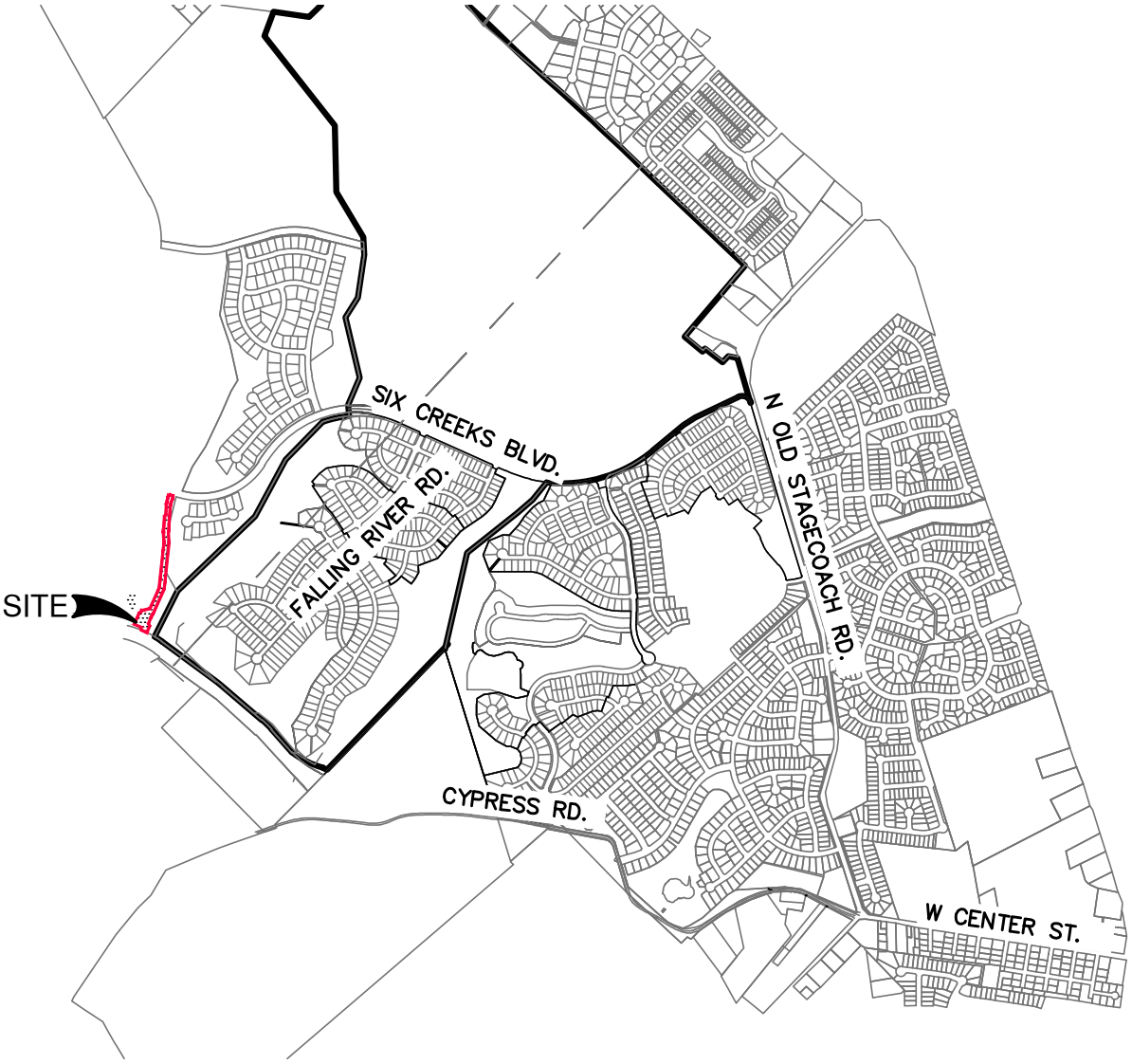
61. ☒ Submit one (1) original and one (1) copy of the application, plus additional copies as needed for each affected incorporated city, groundwater conservation district, and county in which the project will be located. The TCEQ will distribute the additional copies to these jurisdictions.

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

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

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

ATTACHMENT A



SCALE: 1"= 2,000'

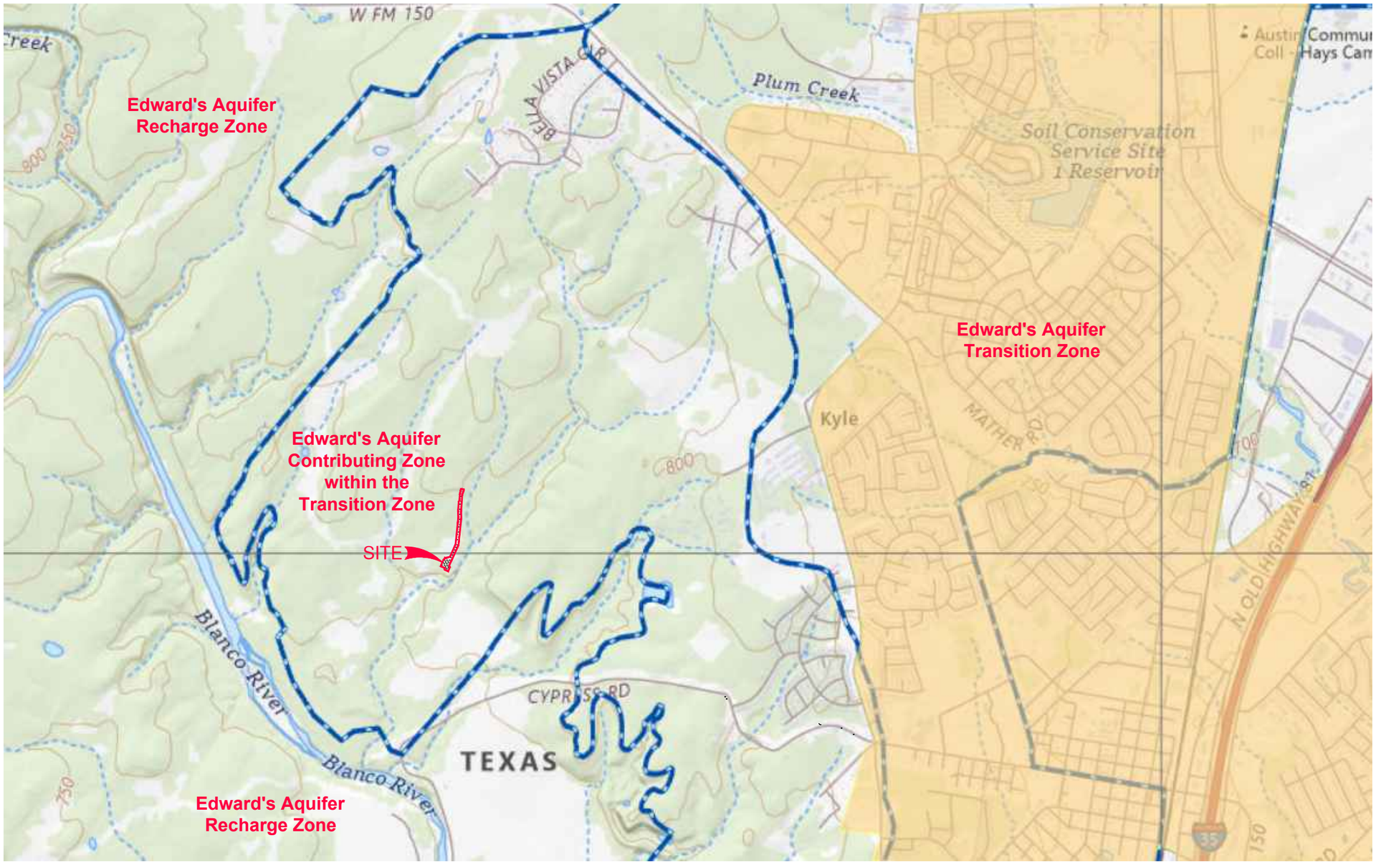
2,000' 0' 1,000' 2,000'

JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER
CHECKED AC DRAWN CK
SHEET 1 of 1

CLARA VISTA LIFT STATION & FORCE MAIN
KYLE, TEXAS
ATTACHMENT A - ROAD MAP

PAPE-DAWSON ENGINEERS
AUSTIN I SAN ANTONIO I HOUSTON I FORT WORTH I DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 I AUSTIN, TX 78759 I 512.454.8711
TBPE FIRM REGISTRATION #470 I TBPLS FIRM REGISTRATION #10028801

ATTACHMENT B



SCALE: 1"= 2,000'

2,000' 0' 1,000' 2,000'

PAPE-DAWSON ENGINEERS
AUSTIN I SAN ANTONIO I HOUSTON I FORT WORTH I DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 I AUSTIN, TX 78759 I 512.454.8711
TBPE FIRM REGISTRATION #470 I TBPLS FIRM REGISTRATION #10028801

HAWKES LANDING NORTH PHASE 3

LEANDER, TEXAS

ATTACHMENT B - USGS QUAD MAP

JOB NO. 51167-03
DATE JUNE 2024
DESIGNER
CHECKED AC
DRAWN CK
SHEET 1 of 1

ATTACHMENT C

CLARA VISTA LIFT STATION & FORCE MAIN
Contributing Zone Plan Application

PROJECT DESCRIPTION

Clara Vista Lift Station & Force Main consists of 1,461 LF of wastewater main extension to a 1.79-acre lift station site that will serve approximately 800 LUEs. The site is located over the Edwards Aquifer Contributing Zone within the Transition Zone. Please refer to the site plan and construction plans included with this application. A Sewage Collection System (SCS) Application for this development will be submitted at later date for the force main extension.

The site is currently undeveloped. Construction activities proposed with this application include excavation, construction of gravity sewer mains, manhole installation, backfill and compaction, lift station construction, and the installation of natural and engineered vegetative filter strips. Approximately 2.72 acres may be disturbed. This project will introduce approximately 0.60 acres of impervious cover within the 1.79-acre lift station site. Vegetative filter strips will treat the 0.60 acres of impervious cover.

Fifteen-foot (15') Engineered VFS are proposed as the Permanent Best Management Practices (PBMPs) for this site. All PBMPs have been designed in accordance with the TCEQ's Technical Guidance Manual (TGM) RG-348 (2005) to remove 85% of the increase in Total Suspended Solids (TSS) from the site.

ATTACHMENT D

Attachment D – Factors Affecting Water Quality

Potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges from the site during construction include:

- Soil erosion due to the clearing of the site;
- Oil, grease, fuel and hydraulic fluid contamination from construction equipment and vehicle drippings;
- Hydrocarbons from asphalt paving operations;
- Miscellaneous trash and litter from construction workers and material wrappings;
- Concrete truck washout.
- Potential overflow/spills from portable toilets

Potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges from the site after development include:

- Oil, grease, fuel and hydraulic fluid contamination from vehicle drippings;
- Dirt and dust which may fall off vehicles; and
- Miscellaneous trash and litter.

ATTACHMENT E

Attachment E – Volume and Character of Stormwater

Stormwater runoff will increase as a result of this development. For a 100-year storm event, the overall project will generate approximately 2.99 cfs outfalling from Clara Vista Lift Station. The runoff coefficients for the drainage areas of Clara Vista Lift Station change from approximately 0.16 to 0.27, before and after development. For a 100-year storm event, the overall project will generate an additional 2.99 cfs outfalling from Clara Vista Lift Station and into the Blanco River Watershed due to proposed impervious cover. Values are based on the Rational Method using runoff coefficients per the City of Austin Drainage Criteria Manual. Stormwater runoff from the proposed project can be characterized as overland, shallow-concentrated and channelized flow from the proposed lift station.

ATTACHMENT J

BMPs FOR UPGRADIENT STORMWATER

Any portion of stormwater that originates upgradient of the site shall be controlled by on-site site fences. Five (5) vegetative filter strips are proposed as the Permanent Best Management Practice (PBMP) that will directly treat and provide overtreatment for the additional impervious cover proposed with Clara Vista Lift Station & Force Main. These PBMP's were designed in accordance with the Texas Commission on Environmental Quality's (TCEQ) Technical Guidance Manual (TGM) RG-348 (2005) to remove 85% of the increase in Total Suspended Solids (TSS) from the site.

ATTACHMENT K

BMPs FOR ON-SITE STORMWATER

Five (5) vegetative filter strips are proposed as the Permanent Best Management Practice (PBMP) for this development. There are four (4) uncaptured watersheds, contributing approximately 0.03 acres of impervious cover for uncaptured portions of streets, buildings, and pavement that will be treated via overtreatment provided by the vegetative filter strips.

The PBMP has been designed in accordance with the Texas Commission on Environmental Quality's (TCEQ) Technical Guidance Manual (TGM) RG-348 (2005) to remove 85% of the increase in Total Suspended Solids (TSS) from the site. Please see the Treatment Summary Table attached for more detail.

ATTACHMENT L

BMPs FOR SURFACE STREAMS

Five (5) vegetative filter strips are proposed as the Permanent Best Management Practices (PBMPs) for this development.

The PBMPs have has been designed in accordance with the Texas Commission on Environmental Quality's (TCEQ) Technical Guidance Manual (TGM) RG-348 (2005) to remove 85% of the increase in Total Suspended Solids (TSS) from the site. Runoff from impervious cover areas will be treated by the proposed water quality basins prior to discharge downstream into the Upper Blanco River.

ATTACHMENT M

Revision #	Description	Approval

REVIEWED BY:

Leon Barba, P.E., City Engineer — DATE
City of Kyle, Texas

Mike Murphy, Director of Water Utilities — DATE
City of Kyle, Texas

Will Atkinson, Planning Director — DATE
City of Kyle, Texas

Hays County Commisioners Court — DATE
Hays County, Texas

ENGINEER/SURVEYOR:

PAPE-DAWSON CONSULTING ENGINEERS, LLC.
10801 N MOPAC EXPY., BLDG. 3, SUITE 200
AUSTIN, TEXAS 78759
(512) 454-8711
FAX (512) 459-8867

OWNER/DEVELOPER:

TOLL BROTHERS
1320 ARROW POINT DR., SUITE 401
CEDAR PARK, TX 78613
(412) 780-2312

SUBMITTAL DATE: MARCH 7, 2023
PROJECT NO. CP-23-0150
ZONING: R-1-1 SINGLE FAMILY RESIDENTIAL

DEVELOPMENT AGREEMENT: BLANCO RIVER RANCH
(PHASE TWO RESIDENTIAL-SAVANNAH DISTRICT) DEVELOPMENT AGREEMENT
FILED: RECORED 4/19/2022

THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY, REGULATORY COMPLIANCE, AND ADEQUACY OF THESE PLANS AND/ OR SPECIFICATIONS WHETHER OR NOT THE PLANS AND/OR SPECIFICATIONS WERE REVIEWED BY THE CITY ENGINEER(S).

FLOODPLAIN:
THE TRACT SHOWN HEREON LIES WITHIN ZONE "AE" AND ZONE "A" AS IDENTIFIED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, FEDERAL INSURANCE ADMINISTRATION, AS SHOWN ON MAP NO. 48209C0270F, DATED SEPTEMBER 02, 2005 FOR HAYS COUNTY, TEXAS AND INCORPORATED AREAS.

THIS FLOOD PLAIN NOTE DOES NOT IMPLY THAT THE PROPERTY AND/OR STRUCTURES THEREON WILL BE FREE FROM FLOODING OR FLOOD DAMAGE. THIS FLOOD STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR.

WATERSHED:
THIS SUBDIVISION IS LOCATED WITHIN THE BLANCO RIVER WATERSHED.

ENVIRONMENTAL:
THIS SUBDIVISION PROJECT IS LOCATED IN THE EDWARDS AQUIFER CONTRIBUTING ZONE WITHIN THE TRANSITION ZONE.

SUBMITTED BY:

I, MICHAEL S. FISHER, P.E. # 87704, DO HEREBY CERTIFY THAT THE ENGINEERING WORK BEING SUBMITTED HEREIN COMPLIES WITH ALL THE PROVISION OF THE TEXAS ENGINEERING PRACTICE ACT, INCLUDING 131.152 (e). I HEREBY ACKNOWLEDGE THAT ANY MISREPRESENTATION REGARDING THIS CERTIFICATION CONSTITUTES A VIOLATION OF THE ACT, AND MAY RESULT IN CRIMINAL, CIVIL AND/OR ADMINISTRATIVE PENALTIES AGAINST ME, AS AUTHORIZED BY THE ACT.

STATE OF TEXAS
MICHAEL S. FISHER
87704
LICENSED
PROFESSIONAL ENGINEER

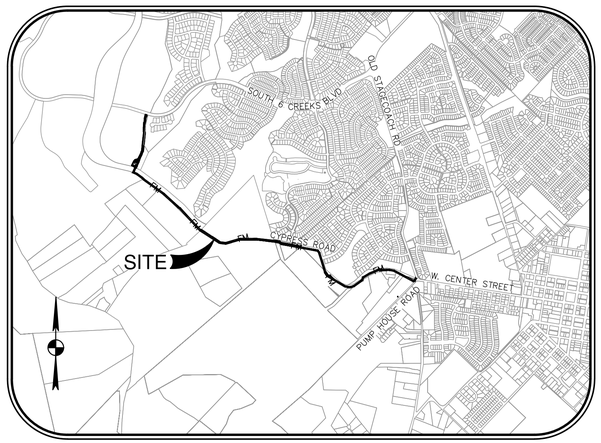
11/11/24

PAPE-DAWSON CONSULTING ENGINEERS, LLC — DATE
MICHAEL S. FISHER, P.E. #87704
SENIOR VICE PRESIDENT

CLARA VISTA
LIFT STATION & FORCE MAIN

PUBLIC IMPROVEMENTS CONSTRUCTION PLANS

PROJECT NO. CP-22-0144
CITY OF KYLE ETJ
HAYS COUNTY, TEXAS



LOCATION MAP
1: 2000

Sheet List Table	
Sheet Number	Sheet Title
1	COVER
2	GENERAL NOTES
3	TCEQ NOTES
4	EROSION AND SEDIMENTATION CONTROL PLAN 1 OF 7
5	EROSION AND SEDIMENTATION CONTROL PLAN 2 OF 7
6	EROSION AND SEDIMENTATION CONTROL PLAN 3 OF 7
7	EROSION AND SEDIMENTATION CONTROL PLAN 4 OF 7
8	EROSION AND SEDIMENTATION CONTROL PLAN 5 OF 7
9	EROSION AND SEDIMENTATION CONTROL PLAN 6 OF 7
10	EROSION AND SEDIMENTATION CONTROL PLAN 7 OF 7
11	TREE PRESERVATION PLAN TREE LIST
12	WATER QUALITY DRAINAGE MAP
13	SEWERSHED PLAN
14	OVERALL LAYOUT
15	WASTEWATER PROFILES WW-1A 1 OF 2
16	WASTEWATER PROFILES WW-1A 2 OF 2
17	FORCE MAIN PROFILES FM-1A 1 OF 11
18	FORCE MAIN PROFILES FM-1A 2 OF 11
19	FORCE MAIN PROFILES FM-1A 3 OF 11
20	FORCE MAIN PROFILES FM-1A 4 OF 11
21	FORCE MAIN PROFILES FM-1A 5 OF 11
22	FORCE MAIN PROFILES FM-1A 6 OF 11
23	FORCE MAIN PROFILES FM-1A 7 OF 11
24	FORCE MAIN PROFILES FM-1A 8 OF 11
25	FORCE MAIN PROFILES FM-1A 9 OF 11
26	FORCE MAIN PROFILES FM-1A 10 OF 11
27	FORCE MAIN PROFILES FM-1A 11 OF 11 & WW-1B
28	TRAFFIC CONTROL PLAN
29	EROSION & SEDIMENTATION CONTROL DETAILS
30	WASTEWATER DETAILS
31	LIFT STATION SITE PLAN
32	LIFT STATION GRADING, PAVING & DRAINAGE
33	LIFT STATION CIVIL DETAILS
34	LIFT STATION MECHANICAL PLAN & SECTION
35	LIFT STATION MECHANICAL DETAILS
36	STRUCTUAL ELEVATION AND DETAILS
37	STRUCTURAL NOTES AND DISCHARGE PIPING DETAILS
38	STRUCTURAL VALVE VAULT PLAN AND DETAILS
39	MISCELLANEOUS STRUCTURAL DETAILS
40	ELECTRICAL LEGENDS SCHEDULES AND NOTES
41	ELECTRICAL SITE LAYOUT
42	ELECTRICAL ONE-LINE DIAGRAM
43	LIFT STATION ELECTRICAL DETAILS 1 OF 6
44	LIFT STATION ELECTRICAL DETAILS 2 OF 6
45	LIFT STATION ELECTRICAL DETAILS 3 OF 6
46	LIFT STATION ELECTRICAL DETAILS 4 OF 6
47	LIFT STATION ELECTRICAL DETAILS 5 OF 6
48	LIFT STATION ELECTRICAL DETAILS 6 OF 6

PAPE-DAWSON ENGINEERS
AUSTIN I SAN ANTONIO I HOUSTON I FORT WORTH I DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 I AUSTIN, TX 78759 I 512.454.8711
TBPE FIRM REGISTRATION #470 I TBPLS FIRM REGISTRATION #10028801

PD JOB NO. 51456-10 CLARA VISTA LIFT STATION & FORCE MAIN

CP-22-0144

CITY OF KYLE
GENERAL CONSTRUCTION NOTES
REVISED NOVEMBER 23, 2022

GENERAL CONSTRUCTION NOTES

1. ALL CONSTRUCTION IS TO BE IN ACCORDANCE WITH THE FOLLOWING REGULATIONS AND SPECIFICATIONS. THE FIRST LISTED WILL HAVE PRIORITY OVER THOSE LISTED BELOW:

   PERMITS ISSUED FOR PROJECT BY ANY REGULATORY AGENCIES.
   TEXAS COMMISSION ON ENVIRONMENTAL QUALITY REGULATIONS.
   CITY OF KYLE CONSTRUCTION STANDARDS.
   PLANS FOR THIS PROJECT.

2. PRIOR TO THE BEGINNING OF CONSTRUCTION, THE DEVELOPER SHALL ARRANGE A PRE-CONSTRUCTION CONFERENCE. PRE-CONSTURCTION SHALL BE SCHEDULED WITH THE PW OFFICE, 512-262-3024 AND HELD AT THE PW FACILITY LOCATED AT 520 E RR150, KYLE, TEXAS. EPRESENTATIVES FROM THE FOLLOWING ORGANIZATIONS SHALL BE INVITED:

   CITY OF KYLE STAFF INCLUDING THE DIRECTOR OF PUBLIC WORKS,
   CITY ENGINEER AND THE PUBLIC WORKS INSPECTOR.
   CONTRACTOR.
   DESIGN ENGINEER.
   ELECTRIC, GAS, PHONE AND CABLE UTILITY REPRESENTATIVES, IF APPROPRIATE.

3. PRIOR TO THE BEGINNING OF CONSTRUCTION, ALL PLAN REVIEW AND CONSTRUCTION INSPECTION FEES SHALL BE PAID TO THE CITY OF KYLE AND THE FOLLOWING PERMITS SHALL BE IN PLACE, IF NECESSARY:

   TEXAS DEPARTMENT OF TRANSPORTATION, ENTRY ONTO A HIGHWAY.
   CORPS OF ENGINEERS, SECTION 404, FOR CONSTRUCTION IN
   FLOOD PLAIN.
   COMPLIANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM (TPDES) CONSTRUCTION GENERAL PERMIT (TXR150000).
   TEXAS DEPARTMENT OF LICENSING AND REGULATION FOR ACCESSIBILITY.
   TCEQ FOR SIGNIFICANT WATER AND WASTEWATER FACILITIES, INCLUDING LIFT STATIONS.

4. BENCHMARKS FOR THIS PROJECT ARE DESCRIBED AS FOLLOWS:

5. ANY EXISTING PAVEMENT, CURBS, AND/OR SIDEWALKS DAMAGED OR REMOVED SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE BEFORE ACCEPTANCE OF THE SUBDIVISION.

6. THE CONTRACTOR SHALL GIVE THE CITY OF KYLE (PHONE NO. 512-262-3024), 48 HOURS NOTICE PRIOR TO CONNECTING TO ANY EXISTING CITY UTILITY LINE.

7. SIDEWALKS FRONTING PUBLIC RIGHT-OF-WAY LAND OR INCLUDING ALL SIDEWALK RAMPS REQUIRED BY CITY ORDINANCE SHOWN ON THESE PLANS SHALL BE CONSTRUCTED WITH THIS PROJECT.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WARNING AND SAFETY SIGNS, BARRICADES AND TRAFFIC CONTROL DURING CONSTRUCTION. ALL ROAD SIGNAGE SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

9. CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE CITY OF KYLE FOR THE USE OF ALL WATER FOR CONSTRUCTION.

10. ALL FILL OR CUT ON LOTS WHICH IS GREATER THAN TWELVE (12) INCHES SHALL BE SHOWN ON THE PLANS AND SHALL CONFORM TO THE FOLLOWING:

    FILL MATERIAL SHALL NOT CONTAIN ANY ROCKS HAVING A MAXIMUM DIMENSION GREATER THAN SIX (6) INCHES.

    FILL MATERIAL SHALL HAVE AT LEAST FIFTY PERCENT (50%) PASSING THE NO. 4 SIEVE.

    FILL MATERIAL SHALL BE REASONABLY FREE OF ROOTS, TRASH, CONCRETE RUBBLE AND OTHER ORGANIC MATERIAL.

    COMPACTION SHALL BE TO NINETY-FIVE PERCENT (95%) OF MAXIMUM LABORATORY DENSITY DETERMINED IN ACCORDANCE WITH THE ASTM D 698. THE MATERIAL SHALL BE WITHIN THREE (3) PERCENTAGE POINTS OF OPTIMUM MOISTURE CONTENT DURING COMPACTION.

    PLACEMENT SHALL BE IN LIFTS NOT EXCEEDING EIGHT (8) INCHES AFTER COMPACTION. EACH COMPACTED LIFT SHOULD BE INSPECTED AND/OR TESTED FOR DENSITY COMPLIANCE BY A GEOTECHNICAL ENGINEER PRIOR TO PLACING THE NEXT LIFT. THE FILL AREA SHOULD EXTEND AT LEAST 24 INCHES (36 INCHES ON FILLS OVER SIX (6) FEET IN HEIGHT) BEYOND THE BACK OF CURB OR FOUNDATION LINE BEFORE SLOPING DOWNWARD ON NOT MORE THAN THREE (3) TO ONE (1) SLOPE TO NATURAL SOIL. BACKSLOPES SHALL BE WELL COMPACTED. MAXIMUM FILL HEIGHTS SHOULD NOT EXCEED TEN (10) FEET WITHOUT ENGINEERING CONSULTATION.

11. CONTRACTOR SHALL GIVE CITY INSPECTOR 36 HOURS NOTICE OF THE NEED FOR MATERIALS TESTING. ALL TESTING WILL BE ARRANGED AND PAID FOR BY THE CONTRACTOR. THE CITY SHALL RECEIVE A COPY OF TEST RESULTS.

12. CONTRACTOR OR THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION STAKING AND CUT SHEETS FOR PIPE LINES LAID ON GRADE AND ROAD CONSTRUCTION. CUT SHEETS SHALL BE DELIVERED TO THE CITY INSPECTOR 36 HOURS PRIOR TO CONSTRUCTION.

13. 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 STABLE 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 SHALL BE PROVIDED BY THE CONTRACTOR.

15. NO TREES OVER 6 INCHES IN DIAMETER SHALL BE REMOVED UNLESS DESIGNATED TO BE REMOVED ON THE APPROVED PLANS. ALL TREE LIMBS REMOVED OR TRIMMED SHALL BE VERTICALLY CUT AND DRESSED.

16. ALL CONSTRUCTION ACTIVITIES SHALL BE CONFINED TO PROPERTY OWNED BY THE DEVELOPER OR PUBLIC RIGHT-OF-WAY AND EASEMENT UNLESS WRITTEN PERMISSION IS OBTAINED BY THE CONTRACTOR FROM THE PROPERTY OWNER AFFECTED.

17. THE CITY OF KYLE DOES NOT ALLOW ANY BLASTING WITHIN THE CITY LIMITS.

TYPICAL SEQUENCE OF CONSTRUCTION

1. HOLD PRE-CONSTRUCTION CONFERENCE.
2. NO CLEARING OR ROUGH GRADING MAY BE DONE UNTIL THE APPROVED EROSION AND SEDIMENTATION CONTROLS ARE IN PLACE.
3. INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS AND STABILIZATION CONSTRUCTION ENTRANCE, IF REQUIRED, IN THE APPROVED PLANS.
4. ROUGH GRADE STREETS.
5. INSTALL ALL UTILITIES IN RIGHTS-OF-WAY.
6. RE-GRADE AND COMPACT SUBGRADE. MEET WITH CITY INSPECTOR AND/DESIGN ENGINEER TO DETERMINE AREAS OF DIFFERING STREET SECTION THICKNESS OR SUBGRADE PREPARATION IF CALLED FOR IN THE GEOTECHNICAL REPORT.
7. INSURE ALL UNDERGROUND UTILITY CROSSINGS ARE IN PLACE INCLUDING SLEEVES FOR DRY UTILITIES AND INSTALL FIRST COURSE OF BASE.
8. INSTALL CURBS, RIP-RAP AND MISCELLANEOUS CONCRETE.

TYPICAL SEQUENCE OF CONSTRUCTION CONTINUED

9. INSTALL SECOND COURSE OF BASE.
10. LAY ASPHALT.
11. FINAL GRADE ANY DITCHES AND PARKWAYS.
12. REVEGETATE ALL DISTURBED AREAS. DISPOSE OF SPOIL IN AN APPROVED MANNER.
13. SCHEDULE A FINAL INSPECTION WITH CITY.
14. AFTER ACCEPTANCE OF CONSTRUCTION, TEMPORARY EROSION CONTROLS MAY BE REMOVED.

MINIMUM CRITERIA FOR ACCEPTANCE

1. ALL CONSTRUCTION IS COMPLETE INCLUDING DRY UTILITIES AND RESTORATION TO THE CRITERIA.
2. ALL CITY OF KYLE FEES PAID AND MAINTENANCE BOND POSTED.
3. ALL RECORDS OF CONSTRUCTION TESTING AND RECORD DRAWINGS SHOWING ANY CHANGES DURING CONSTRUCTION PROVIDED TO THE CITY OF KYLE.
4. ALL STREET LIGHTING, SIGNS AND PAVEMENT MARKINGS SHALL BE IN PLACE.

WATER AND WASTEWATER NOTES

1. PIPE MATERIAL FOR WATER MAINS SHALL BE PVC (AWWA C-900, DR-14) OR DUCTILE IRON (AWWA C-151, CLASS 350).
2. PIPE MATERIAL FOR GRAVITY SEWER SHALL BE SDR-26 PVC IF LOCATED GREATER THAN 9 FEET FROM A WATERLINE, OTHERWISE SHALL BE PRESSURE RATED PIPE.
3. BEDDING FOR FLEXIBLE GRAVITY PIPE (I.E. SDR-26 PVC) SHALL CONFORM TO ASTM 2321 CLASS 1 MATERIAL, I.E., 3/4" - 1" CLEAN ANGULAR CRUSHED ROCK.
4. CITY INSPECTOR SHALL OBSERVE ALL TAPS TO CITY UTILITY LINES AND PRIOR TO ANY UTILITY RELOCATION.
5. CONTRACTOR SHALL DISINFECT AND PRESSURE TEST ALL WATER LINES AND PERFORM LEAK AND DEFLECTION TESTS ON GRAVITY WASTEWATER LINES AT HIS EXPENSE.
6. THE CITY INSPECTOR SHALL BE NOTIFIED 36 HOURS PRIOR TO ALL UTILITY LINE TESTING. CONTRACTOR, WITH CITY STAFF PRESENT, IS RESPONSIBLE FOR SAMPLING. CITY STAFF WILL TRANSPORT BACTERIOLOGICAL TEST SAMPLES TO THE STATE DEPARTMENT OF HEALTH. ALL TEST RESULTS, WHETHER PASSING OR FAILING, SHALL BE PROVIDED TO THE CONTRACTOR. MANDREL DEFLECTION TESTING SHALL NOT BE CONDUCTED UNTIL THE PIPES HAVE BEEN BACKFILLED FOR 30 DAYS.
7. FIRE HYDRANTS SHALL BE MUELLER SUPER CENTURION OR APPROVED EQUAL.
8. THE CONTRACTOR SHALL SUBMIT TO THE DESIGN ENGINEER, DESCRIPTIVE INFORMATION FOR MATERIALS TO BE USED ON THE PROJECT FOR REVIEW. A COPY OF THE ACCEPTED MATERIAL SHALL ALSO BE PROVIDED TO THE CITY OF KYLE TEN DAYS PRIOR TO THE INSTALLATION OF UTILITIES.
9. PRESSURE TAPS SHALL BE IN ACCORDANCE WITH THE CITY OF KYLE. THE CONTRACTOR SHALL DO ALL EXCAVATION ETC., AND SHALL FURNISH, INSTALL AND AIR TEST THE SLEEVE AND VALVE. A CITY OF KYLE INSPECTOR MUST BE PRESENT WHEN TAP IS MADE. 7/32 SIZE ON SIZE 9/32 TAPS WILL NOT BE PERMITTED WITHOUT PRIOR APPROVAL OF THE DIRECTOR OF PUBLIC WORKS. CONCRETE BLOCKING SHALL BE PLACED BEHIND AND UNDER ALL TAP SLEEVES TWENTY-FOUR (24) HOURS PRIOR TO MAKING THE WET TAP.
10. ONE CALL NOTE - CONTRACTOR MUST CALL CITY OF KYLE (512-262-3024) FOR LOCATION OF CITY UTILITIES.
11. 200 PSI, BLACK, POLYETHYLENE TUBING SHALL BE USED ON WATER SERVICES.
12. ALL MANHOLES SHALL BE INTERNALLY COATED TO CITY OF AUSTIN SPECIFICATIONS, INCLUDING THE TIE-IN MANHOLE, UNLESS WAIVED BY THE DIRECTOR OF PUBLIC WORKS.
13. ALL PUBLIC MANHOLE COVERS WITHIN THE CITY LIMITS OF KYLE SHALL HAVE THE CITY OF KYLE LOGO.
14. ALL GATE VALVE OPERATING NUT OR VALVE EXTENTION NEEDS TO BE 24 9/32 TO FINAL GRADE.

FIRE PREVENTION NOTES

1. THE CONTRACTOR SHALL PROVIDE COMPACTED FLEXIBLE BASE PAVEMENT PRIOR TO CONSTRUCTION OF COMBUSTIBLE MATERIALS AS AN 7/32 ALL WEATHER DRIVING SURFACE. 9/32
2. HYDRANTS MUST BE INSTALLED WITH THE CENTER OF THE 4 59/64 INCH OPENING AT LEAST EIGHTEEN (18) INCHES ABOVE FINISHED GRADE. THE 4 59/64 INCH OPENING MUST FACE THE DRIVEWAY OR STREET WITH 3' - 6" SETBACK FROM CURBLINE(S). NO OBSERVATION IS ALLOWED WITHIN THREE (3) FEET OF ANY HYDRANT AND THE 4 69/64 INCH OPENING MUST BE TOTALLY UNOBSTRUCTED FROM THE STREET (USE NST THREADS).
3. DESIGNATE NO PARKING - FIRE LANE WITH CURB PAINTED RED AND WHITE STENCIL IN 7/32 FIRE ZONE / TOW AWAY ZONE 9/32 IN LETTERING 3 INCHES IN HEIGHT IN PROXIMITY TO COMMERCIAL, INDUSTRIAL AND PUBLIC STRUCTURES.

EROISON AND SEDIMENTATION CONTROL

1. AFTER THE PRECONSTRUCTION MEETING IS HELD, THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND FENCING FOR AREAS OUTSIDE OF THE CONSTRUCTION AREA PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).
2. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS, AND AFTER SIGNIFICANT RAINFALL EVENTS TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES.
3. PRIOR TO FINAL ACCEPTANCE BY THE CITY, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING DEBRIS SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
4. FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE CITY INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES.
5. PERMANENT EROSION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW:

   A.A MINIMUM OF FOUR (4) INCHES OF TOPSOIL SHALL BE PLACED IN ALL DRAINAGE CHANNELS (EXCEPT ROCK), AND BETWEEN THE CURB AND RIGHT-OF-WAY.

   B. TRASH, WOOD, BRUSH, STUMPS, ROCKS OVER 1 59/64 INCHES IN SIZE AND OTHER OBJECTIONABLE MATERIAL ENCOUNTERED SHALL BE REMOVED AND DISPOSED OF AS DIRECTED BY THE ENGINEER OR INSPECTOR PRIOR TO BEGINNING OF WORK REQUIRED BY THIS ITEM. GRASS AND OTHER HERBACEOUS PLANT MATERIALS MAY REMAIN. LARGE CLUMPS SHALL BE BROKEN UP.

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

BROADCAST SEEDING

(I) FROM OCTOBER TO FEBRUARY, SEEDING SHALL BE WITH ONE (1) POUND PER 1,000 SQUARE FEET OF UNHULLED BERMUDA OR THREE (3) POUNDS PER 1,000 SQUARE FEET OF WINTER RYE.

(II) FROM MARCH TO SEPTEMBER, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF ONE (1) POUND PER 1,000 SQUARE FEET.

FERTILIZER, IF USED, SHALL BE SLOW RELEASE GRANULAR OR PALETTE TYPE, AND SHALL HAVE AN ANALYSIS OF 15-15-15, AND SHALL BE APPLIED AT THE RATE OF ONE (1) POUND PER 1,000 SQUARE FEET, ONCE AT THE TIME OF PLANTING, AND AGAIN ONCE DURING THE TIME OF ESTABLISHMENT.

MULCH TYPE USED SHALL BE STRAW OR HAY APPLIED AT A RATE OF 45 POUNDS PER 1,000 SQUARE FEET.

HYDRAULIC SEEDING

(I) FROM OCTOBER TO FEBRUARY, SEEDING SHALL BE WITH ONE (1) POUND PER 1,000 SQUARE FEET OF UNHULLED BERMUDA, OR THREE (3) POUNDS PER 1,000 SQUARE FEET OF WINTER RYE.

(II) FROM MARCH TO SEPTEMBER, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF ONE (1) POUND PER 1,000 SQUARE FEET.

FERTILIZER, IF USED, SHALL BE A WATER SOLUBLE FERTILIZER WITH AN ANALYSIS OF 15-15-15 AT A RATE OF 1.5 POUNDS PER 1,000 SQUARE FEET.

MULCH TYPE SHALL BE HAY, STRAW OR MULCH APPLIED AT A RATE OF 45 POUNDS PER 1,000 SQUARE FEET, WITH A SOIL TACKIFIER AT A RATE OF 1.4 POUNDS PER 1,000 SQUARE FEET.

D. THE PLANTED AREA SHALL BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK TO A DEPTH OF SIX (6) INCHES. THE IRRIGATION SHALL OCCUR AT 10-DAY INTERVALS DURING THE FIRST TWO (2) MONTHS. RAINFALL OCCURRENCES OF 59/64 INCH OR MORE SHALL POSTPONE THE WATERING SCHEDULE FOR TEN (10) DAYS.

E. RESTORATION SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1 INCH HIGH WITH 85% COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN 20 SQUARE FEET EXIST.

F. A SOIL RETENTION BLANKET SHALL BE PLACED ON ALL SLOPES EQUAL TO OR GREATER THAN 3:1. ALL SOIL RETENTION BLANKETS MUST BE LISTED ON THE TXDOT APPROVED PRODUCTS LIST OR APPROVED BY THE CITY.

DEVELOPER INFORMATION:

OWNER: TOLL BROTHERS

ADDRESS: 1320 ARROW POINT DRIVE, SUITE 401, CEDAR PARK, TX. 78613

PHONE: (412) 780-2312

REPRESENTATIVE: ADRIENNE DONATUCCI

DESIGN ENGINEER:REPRESENTATIVE RESPONSIBLE FOR PLAN CHANGES.

NAME: MICHAEL FISHER, P.E.

ADDRESS: 10801 N. MOPAC EXPY., BUILDING. 3, SUITE 200, AUSTIN, TX 78759

PHONE: (512) 454-8711

CITY OF KYLE:

DIRECTOR OF WATER UTILITIES: MIKE MURPHY (512) 262-3024

CITY ENGINEER: LEON BARBA, P.E. (512) 262-3958

CITY OF KYLE WATER RESTRICTIONS

1. CITY OF KYLE WATERING RESTRICTIONS MUST BE ADHERED TO. THIS MAY INCLUDE RESTRICTION ON CONSTRUCTION WATER FROM CITY OF KYLE POTABLE WATER SYSTEM.

NO.	REVISION	DATE

STATE OF TEXAS
MICHAEL S. FISHER
87704
LICENSED
PROFESSIONAL ENGINEER
11/11/24

PAPE-DAWSON ENGINEERS
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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028801

CLARA VISTA
LIFT STATION & FORCE MAIN

GENERAL NOTES

CITY JOB No. CP-22-0144
JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER AD/BA/JS
CHECKED AC DRAWN AD
SHEET 2 OF 48

Date: Nov 11, 2024, 11:46am User ID: andrewdak
File: K:\Projects\51456\01\302 Construction Documents\Civil\CN51456-10_FN.dwg

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

Edwards Aquifer Protection Program Construction Notes – Legal Disclaimer

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

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

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

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

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

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

6. If any sensitive features are discovered during the wastewater line trenching activities, all regulated activities near the sensitive feature must be suspended immediately. The applicant must immediately notify the appropriate regional office of the TCEQ of the feature discovered. A geologist's assessment of the location and extent of the feature discovered must be reported to that regional office in writing and the applicant must submit a plan for ensuring the structural integrity of the sewer line or for modifying the proposed collection system alignment around the feature. The regulated activities near the sensitive feature may not proceed until the executive director has reviewed and approved the methods proposed to protect the sensitive feature and the Edwards Aquifer from any potentially adverse impacts to water quality while maintaining the structural integrity of the line.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Equation C.3 $$T = \frac{0.085 \times D \times K}{Q}$$

Where:

T = time for pressure to drop 1.0 pound per square inch gauge in seconds
K = 0.000419 X D X L, but not less than 1.0
D = average inside pipe diameter in inches
L = length of line of same size being tested, in feet
Q = rate of loss, 0.0015 cubic feet per minute per square foot internal surface

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

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

(D) An owner may stop a test if no pressure loss has occurred during the first 25% of the calculated testing time.
(E) If any pressure loss or leakage has occurred during the first 25% of a testing period, then the test must continue for the entire test duration as outlined above or until failure.
(F) Wastewater collection system pipes with a 27 inch or larger average inside diameter may be air tested at each joint instead of following the procedure outlined in this section.
(G) A testing procedure for pipe with an inside diameter greater than 33 inches must be approved by the executive director.
(2) *Infiltration/Exfiltration Test.*
(A) The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch of diameter per mile of pipe per 24 hours at a minimum test head of 2.0 feet above the crown of a pipe at an upstream manhole.
(B) An owner shall use an infiltration test in lieu of an exfiltration test when pipes are installed below the groundwater level.
(C) The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch diameter per mile of pipe per 24 hours at a minimum test head of two feet above the crown of a pipe at an upstream manhole, or at least two feet above existing groundwater level, whichever is greater.
(D) For construction within a 25-year flood plain, the infiltration or exfiltration must not exceed 10 gallons per inch diameter per mile of pipe per 24 hours at the same minimum test head as in subparagraph (C) of this paragraph.
(E) If the quantity of infiltration or exfiltration exceeds the maximum quantity specified, an owner shall undertake remedial action in order to reduce the infiltration or exfiltration to an amount within the limits specified. An owner shall retest a pipe following a remediation action.

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

16. All manholes must be tested to meet or exceed the requirements of 30 TAC §217.58.
    (a) All manholes must pass a leakage test.
    (b) An owner shall test each manhole (after assembly and backfilling) for leakage, separate and independent of the collection system pipes, by hydrostatic exfiltration testing, vacuum testing, or other method approved by the executive director.
        (1) Hydrostatic Testing.
            (A) The maximum leakage for hydrostatic testing or any alternative test methods is 0.025 gallons per foot diameter per foot of manhole depth per hour.
            (B) To perform a hydrostatic exfiltration test, an owner shall seal all wastewater pipes coming into a manhole with an internal pipe plug, fill the manhole with water, and maintain the test for at least one hour.
            (C) A test for concrete manholes may use a 24-hour wetting period before testing to allow saturation of the concrete.
        (2) Vacuum Testing.
            (A) To perform a vacuum test, an owner shall plug all lift holes and exterior joints with a non-shrink grout and plug all pipes entering a manhole.
            (B) No grout must be placed in horizontal joints before testing.
            (C) Stub-outs, manhole boots, and pipe plugs must be secured to prevent movement while a vacuum is drawn.
            (D) An owner shall use a minimum 60 inch/lb torque wrench to tighten the external clamps that secure a test cover to the top of a manhole.
            (E) A test head must be placed at the inside of the top of a cone section, and the seal inflated in accordance with the manufacturer's recommendations.
            (F) There must be a vacuum of 10 inches of mercury inside a manhole to perform a valid test.
            (G) A test does not begin until after the vacuum pump is off.
            (H) A manhole passes the test if after 2.0 minutes and with all valves closed, the vacuum is at least 9.0 inches of mercury.

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

Austin Regional Office 12100 Park 35 Circle, Building A Austin, Texas 78753-1808 Phone (512) 339-2929 Fax (512) 339-3795	San Antonio Regional Office 14250 Judson Road San Antonio, Texas 78233-4480 Phone (210) 490-3096 Fax (210) 545-4329

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

Texas Commission on Environmental Quality
Contributing Zone Plan
General Construction Notes

Edwards Aquifer Protection Program Construction Notes – Legal Disclaimer

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

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

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

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

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

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

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

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

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

9. If portions of the site will have a cease in construction activity lasting longer than 14 days, soil stabilization in those areas shall be initiated as soon as possible prior to the 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.

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

NO. | REVISION | DATE

STATE OF TEXAS
MICHAEL S. FISHER
87704
LICENSED
PROFESSIONAL ENGINEER
11/11/24

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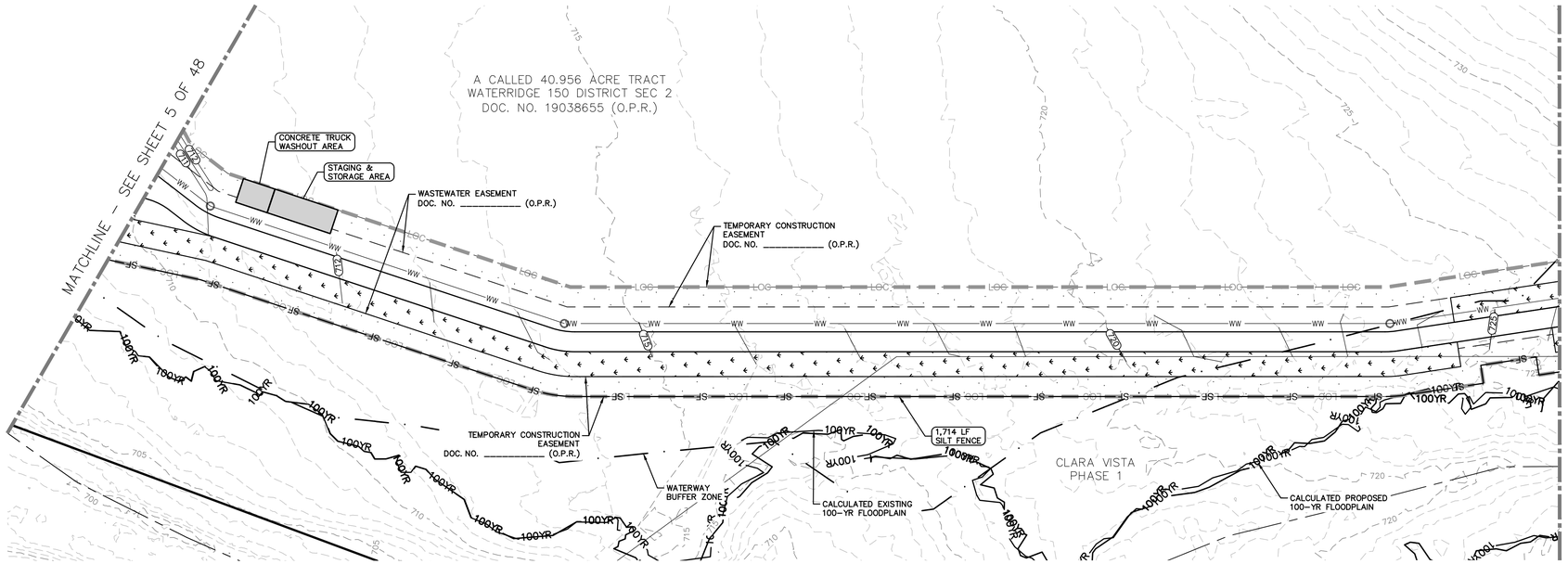
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028801

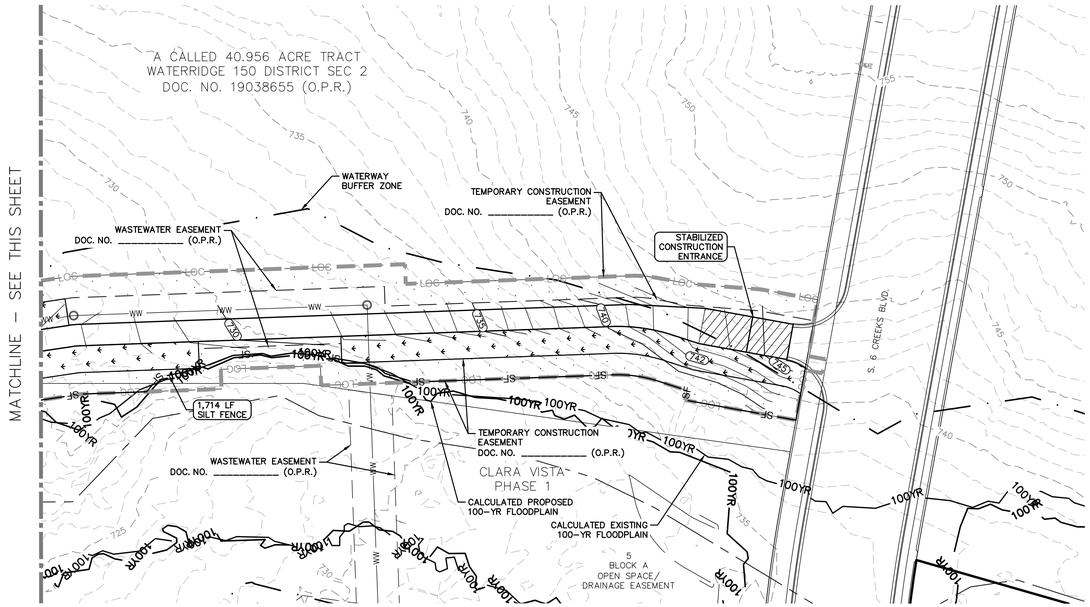
CLARA VISTA
LIFT STATION & FORCE MAIN

TCEQ NOTES

CITY JOB No. CP-22-0144
JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER AD/BA/JS
CHECKED AC DRAWN AD
SHEET 3 OF 48

CP-22-0144





SCALE: 1" = 40'

0' 40' 80' 120'

LEGEND

- LOC — LIMITS OF CONSTRUCTION
- SF — SILT FENCE
- TP — TP — TP — TREE PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE
- ROCK RIP-RAP
- ROCK BERM
- ENGINEERED VEGETATIVE FILTER STRIP
- IP — INLET PROTECTION
- 720 — PROPOSED CONTOUR LINE
- 716 — EXISTING CONTOUR LINE
- SPECIMEN TREES PRESERVED
- TREES PRESERVED
- TREES REMOVED

SCALE: 1" = 40'

0' 40' 80' 120'

NOTES

1. CONTRACTOR TO REPAIR ALL FENCES AND PAVEMENT DISTURBED DURING CONSTRUCTION TO EQUIVALENT OR BETTER STATE THAN THE EXISTING CONDITION. A 16' GATE SHALL BE INSTALLED AT EACH PROPERTY LINE WHERE FENCE REMOVAL IS REQUIRED FOR FORCE MAIN INSTALLATION.

NO.	REVISION	DATE

STATE OF TEXAS
MICHAEL S. FISHER
87704
LICENSED PROFESSIONAL ENGINEER
11/11/24

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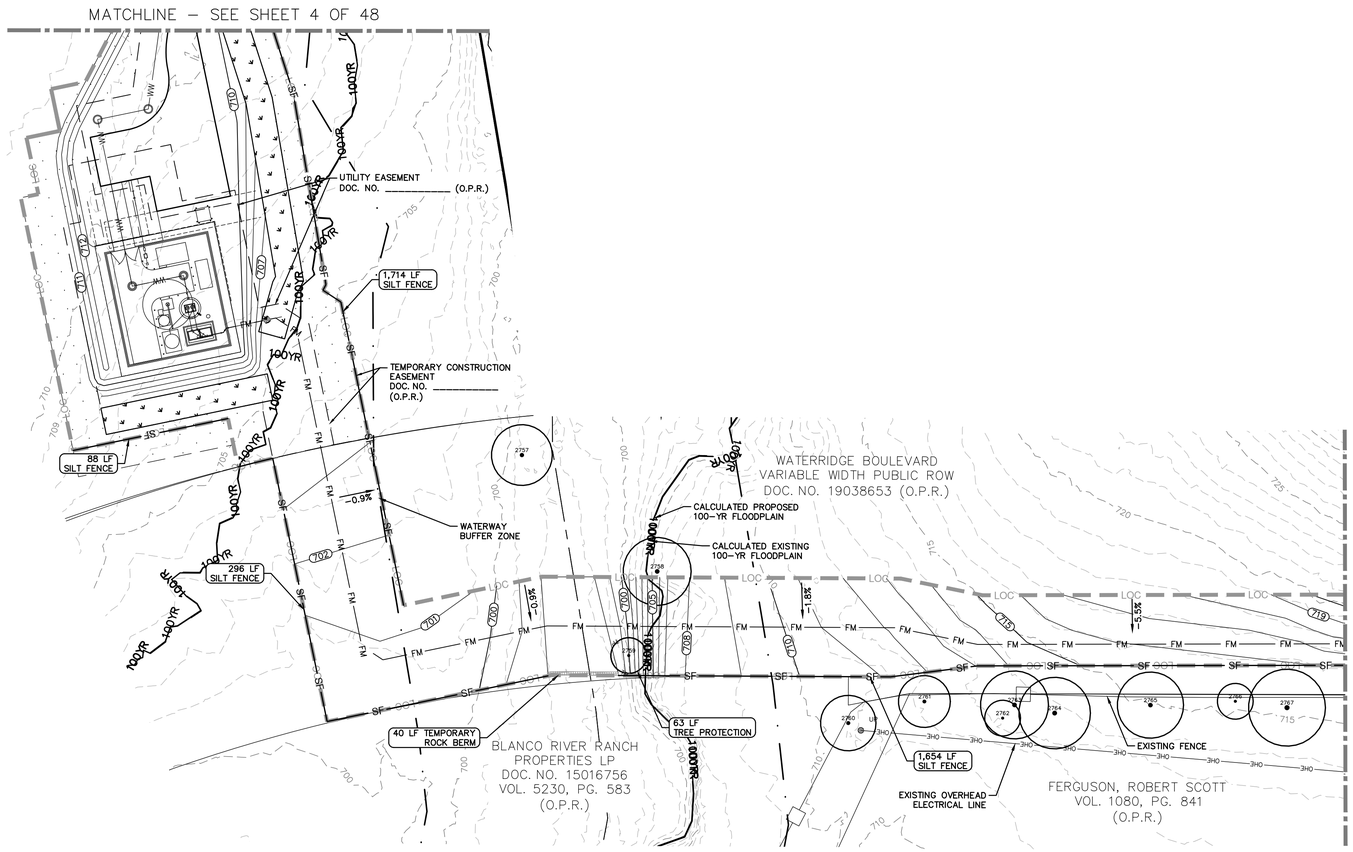
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028801

CLARA VISTA

LIFT STATION & FORCE MAIN EROSION AND SEDIMENTATION CONTROL PLAN 1 OF 7

CITY JOB No. CP-22-0144
JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER AD/BA/JS
CHECKED AC DRAWN AD
SHEET 4 OF 48

CP-22-0144



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0' 40' 80' 120'

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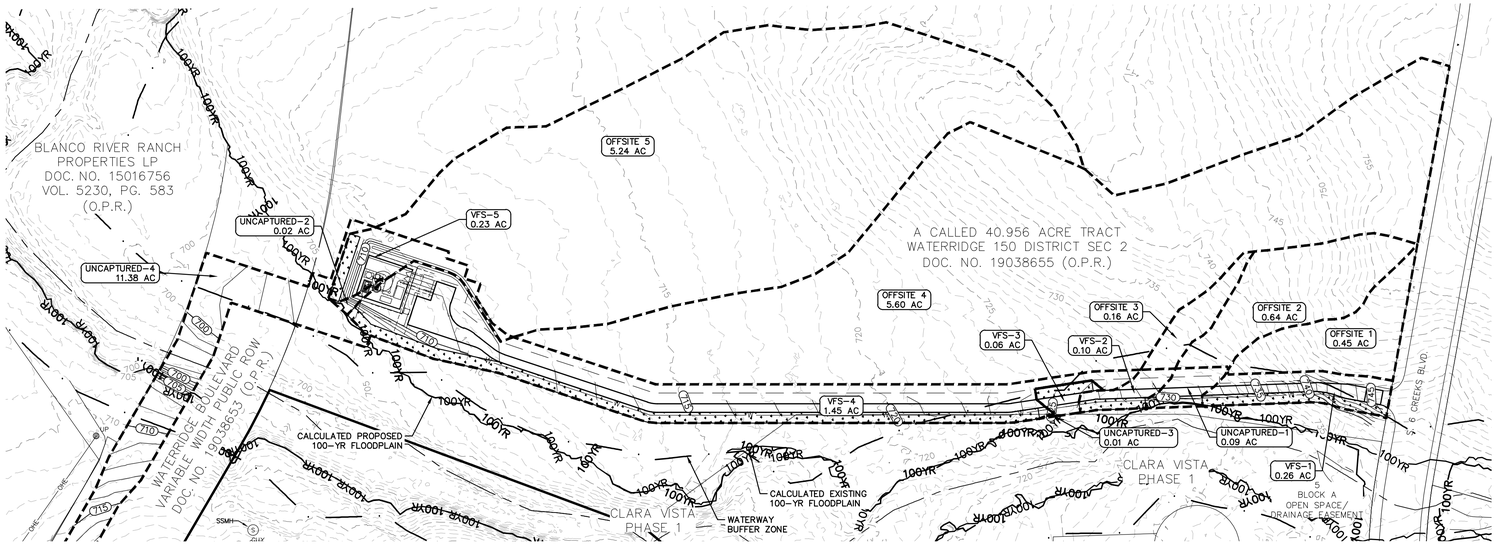
AUSTIN I SAN ANTONIO I HOUSTON I FORT WORTH I DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 I AUSTIN, TX 78759 I 512.454.8711
TBPE FIRM REGISTRATION #470 I TBPLS FIRM REGISTRATION #10028801

CLARA VISTA

LIFT STATION & FORCE MAIN
EROSION AND SEDIMENTATION
CONTROL PLAN 2 OF 7

CITY JOB No. CP-22-0144
JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER AD/BA/JS
CHECKED AC DRAWN AD
SHEET 5 OF 48

CP-22-0144



SCALE: 1"= 40'

0' 40' 80' 120'

LEGEND

- PROPOSED WATERSHED
- OFFSITE 3A 3.92 AC — WATERSHED ACREAGE
- FLOW DIRECTION
- WATERWAY BUFFER ZONE
- 100YR — CALCULATED EXISTING 100-YR FLOODPLAIN
- 100YR — CALCULATED PROPOSED 100-YR FLOODPLAIN

NOTES

1. NO ADDITIONAL IMPERVIOUS COVER IS PROPOSED TO BE ADDED IN DRAINAGE AREA UNCAPTURED 4.

Treatment Summary Table
Current Application - Hawkes Landing North Phase 1

Watershed	Watershed Area (acres)	Total Existing Impervious Cover (acres)	Total Proposed Impervious Cover (acres)	Total Net Impervious Cover (acres)	BMP	Required TSS Removal (lbs./yr.)	Designed TSS Removal (lbs./yr.)
VFS 1	0.26	0.01	0.09	0.08	ENGINEERED VFS1	71	71
VFS 2	0.10	0.00	0.03	0.03	ENGINEERED VFS2	27	27
VFS 3	0.06	0.00	0.02	0.02	ENGINEERED VFS3	14	14
VFS 4	1.45	0.00	0.39	0.39	ENGINEERED VFS4	355	379
VFS 5	0.23	0.00	0.05	0.05	ENGINEERED VFS5	43	43
UNCAPTURED 1	0.09	0.00	0.02	0.02	OVER TREATMENT BY ENGINEERED VFS4	18	0
UNCAPTURED 2	0.02	0.00	0.01	0.01	OVER TREATMENT BY ENGINEERED VFS4	7	0
UNCAPTURED 3	0.00	0.00	0.00	0.00	NO BMP REQUIRED (NO ADDITIONAL IMPERVIOUS COVER PROPOSED)	0	0
UNCAPTURED 4	11.38	2.50	2.50	0.00	NO BMP REQUIRED (NO ADDITIONAL IMPERVIOUS COVER PROPOSED)	0	0
OFFSITE1	0.45	0.00	0.00	0.00	NO BMP REQUIRED (NO ADDITIONAL IMPERVIOUS COVER PROPOSED)	0	0
OFFSITE2	0.64	0.00	0.00	0.00	NO BMP REQUIRED (NO ADDITIONAL IMPERVIOUS COVER PROPOSED)	0	0
OFFSITE3	0.16	0.00	0.00	0.00	NO BMP REQUIRED (NO ADDITIONAL IMPERVIOUS COVER PROPOSED)	0	0
OFFSITE4	5.60	0.00	0.00	0.00	NO BMP REQUIRED (NO ADDITIONAL IMPERVIOUS COVER PROPOSED)	0	0
OFFSITE5	5.24	0.00	0.00	0.00	NO BMP REQUIRED (NO ADDITIONAL IMPERVIOUS COVER PROPOSED)	0	0
Total	25.68	2.50	3.11	0.60		534	534

NO.	REVISION	DATE

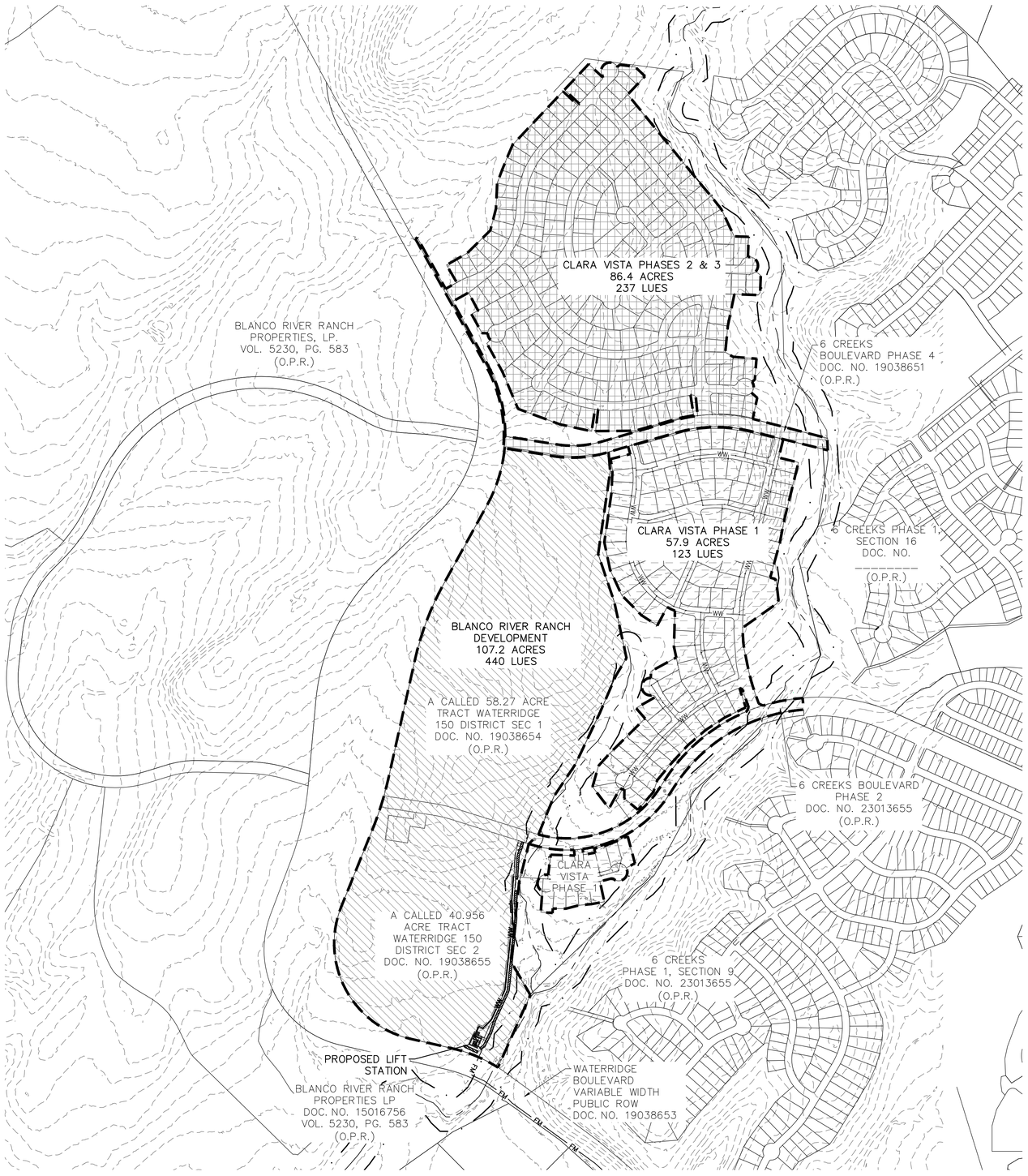
STATE OF TEXAS
MICHAEL S. FISHER
87704
LICENSED
PROFESSIONAL ENGINEER
11/13/24

PAPE-DAWSON ENGINEERS
AUSTIN | SAN ANTONIO | HOUSTON | FORT WORTH | DALLAS
10801 N MOPAC EXPY, BLDG 3, STE 200 | AUSTIN, TX 78759 | 512.454.8711
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028801

CLARA VISTA
LIFT STATION & FORCE MAIN
WATER QUALITY DRAINAGE MAP

CITY JOB No. CP-22-0144
JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER AD/BA/JS
CHECKED AC DRAWN AD
SHEET 12 OF 48

Date: Nov 13, 2024, 9:05pm User ID: andrewdoak
File: H:\Projects\51456\10\302 Construction Documents\Civil\W051456-10_FM.dwg



SCALE: 1"= 400'

0' 400' 800' 1,200'

LEGEND

- CLARA VISTA PHASE 1
  SERVICE AREA: 57.9 AC
  LUE COUNT: 123
- CLARA VISTA PHASES 2 & 3
  SERVICE AREA: 86.4 AC
  LUE COUNT: 237
- BLANCO RIVER RANCH DEVELOPMENT
  SERVICE AREA: 107.2 AC
  TOTAL LUE COUNT: 440

NOTES

OVERALL LIFT STATION SERVICE AREA
SERVICE AREA: 251.5 AC
TOTAL LUE COUNT: 800

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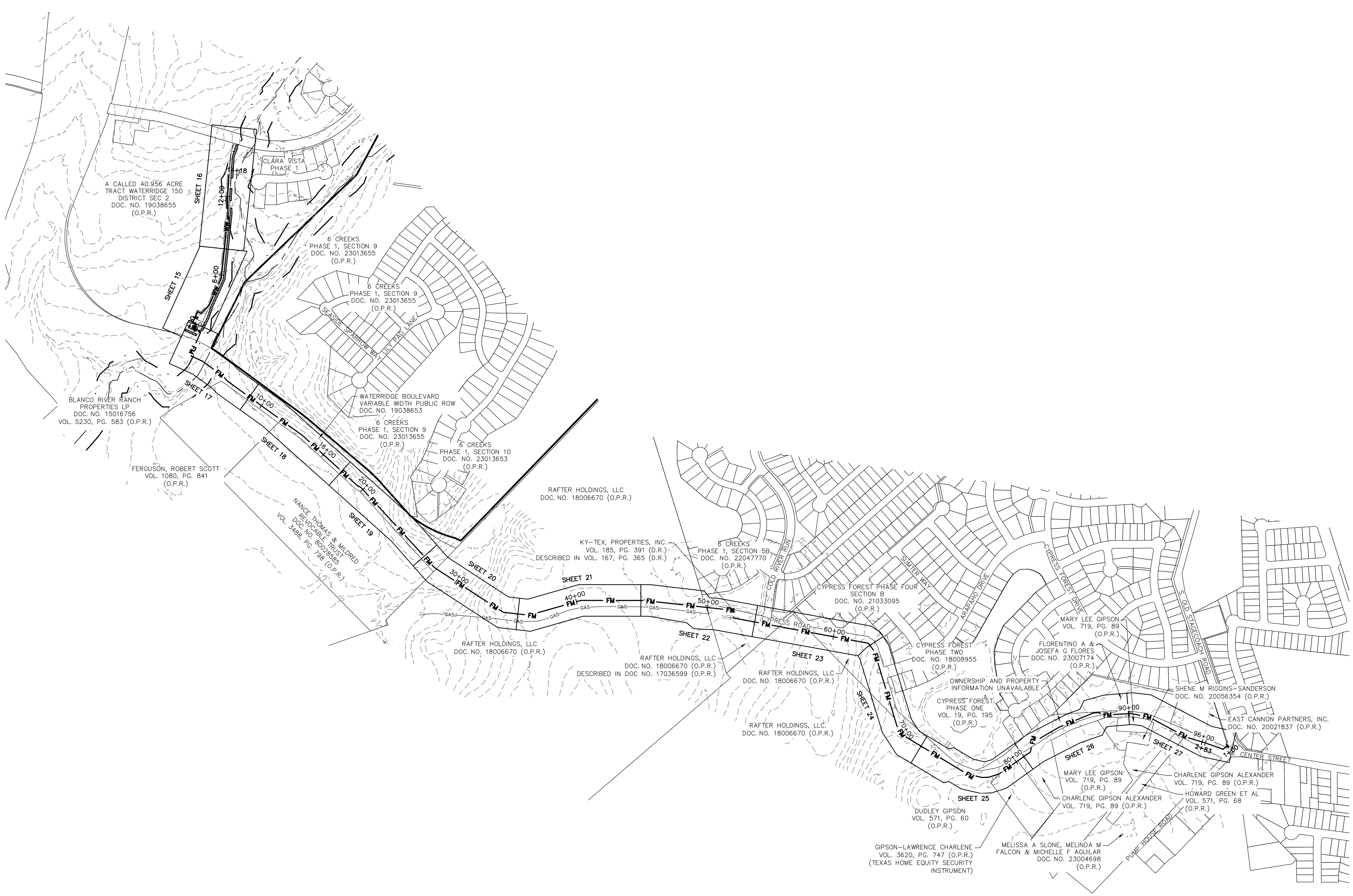
CLARA VISTA

LIFT STATION & FORCE MAIN

SEWERSHED PLAN

CITY JOB No. CP-22-0144
JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER AD/BA/JS
CHECKED AC DRAWN AD
SHEET 13 OF 48



NOTES

1. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE ASSOCIATED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
2. CONTRACTOR SHALL COORDINATE TIE-INS WITH THE CITY OF KYLE PRIOR TO BEGINNING CONSTRUCTION OF THE PROPOSED LIFT STATION AND FORCEMAIN.
3. CONTRACTOR TO CONTACT EACH OFFSITE LANDOWNER BEFORE ENTERING PROPERTY TO COORDINATE ACCESS REQUIREMENTS, ACCESS LOCATION, TEMPORARY CONSTRUCTION STAGING AREA AND LIMITS, TREE REMOVAL NEEDS, AND SCHEDULE.
4. CONTRACTOR TO REPAIR ALL FENCES AND PAVEMENT DISTURBED DURING CONSTRUCTION TO EQUIVALENT OR BETTER STATE THAN THE EXISTING CONDITION.
5. CONTRACTOR TO OPEN CUT EXISTING GRAVEL DRIVEWAY, RECONSTRUCT TO EXISTING OR BETTER CONDITION, AND MAINTAIN OWNER ACCESSIBILITY INTO PROPERTY AT ALL TIMES. LOCATE AND PROTECT EXISTING WATER AND UNDERGROUND UTILITIES INTO THE HOMESITE.
6. ALL EXISTING SERVICE CONNECTIONS (WATER, SEWER, GAS, ETC.) NOT SHOWN FOR CLARITY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY FOR LOCATING THEM.

NO.	REVISION	DATE

STATE OF TEXAS
MICHAEL S. FISHER
87704
LICENSED
PROFESSIONAL ENGINEER
11/11/24

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10801 N MOPAC EXPY, BLDG 3, STE 200 | AUSTIN, TX 78759 | 512.454.8711
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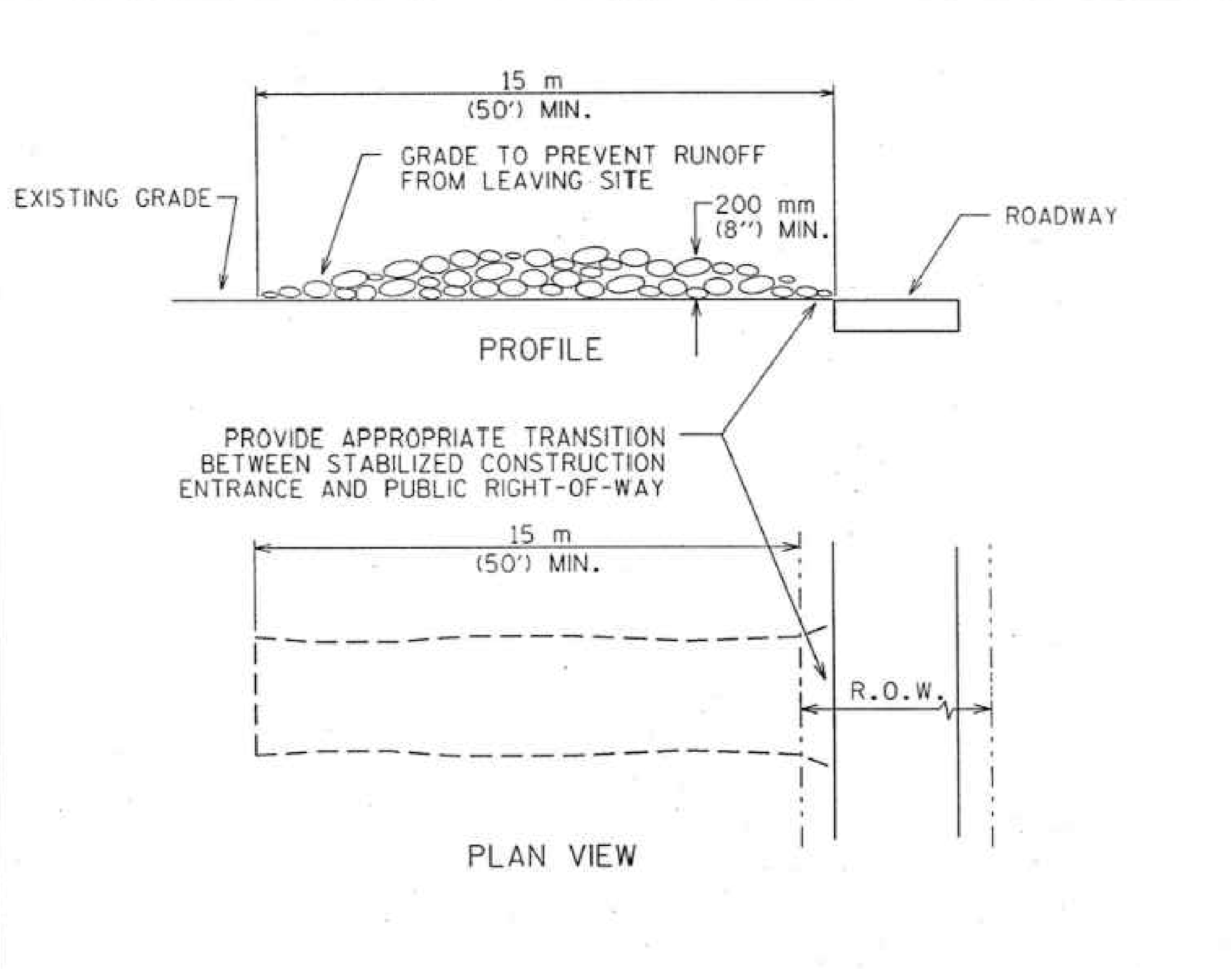
CLARA VISTA
LIFT STATION & FORCE MAIN
OVERALL LAYOUT

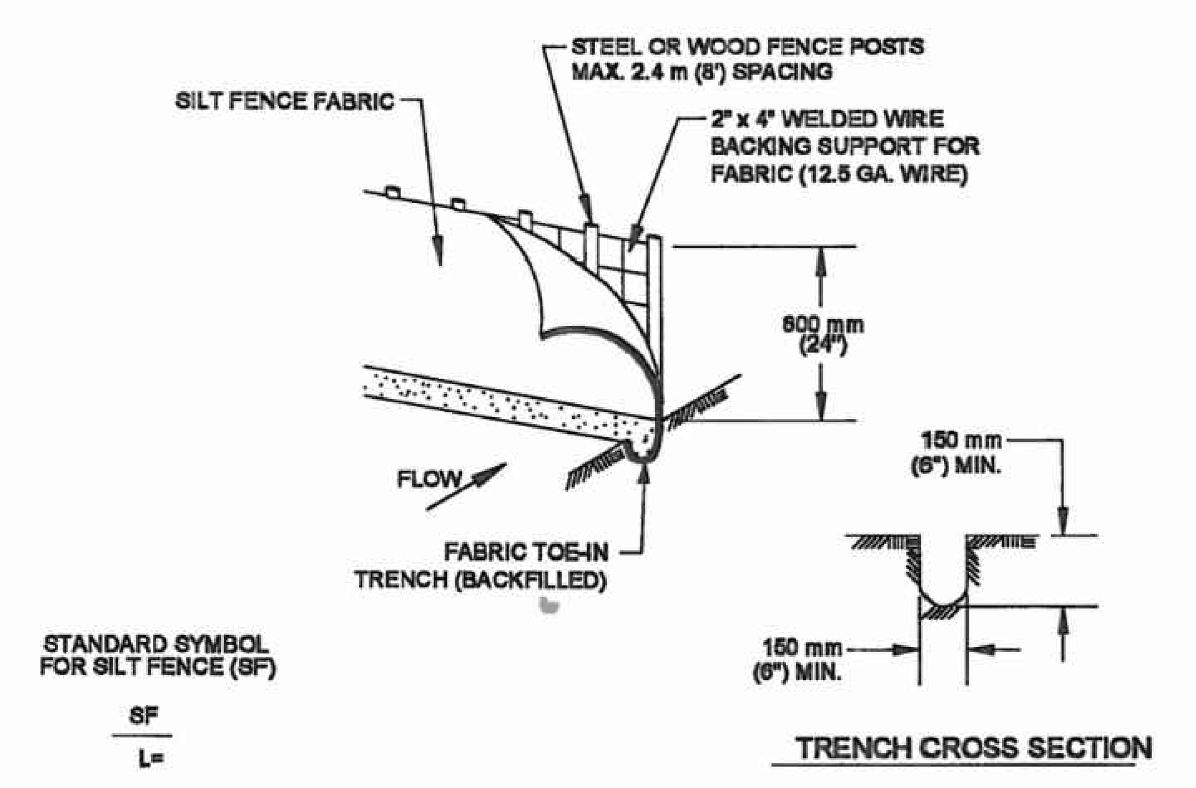
CITY JOB No. CP-22-0144
JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER AD/BA/JS
CHECKED AC DRAWN AD

SHEET 14 OF 48



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

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



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

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

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

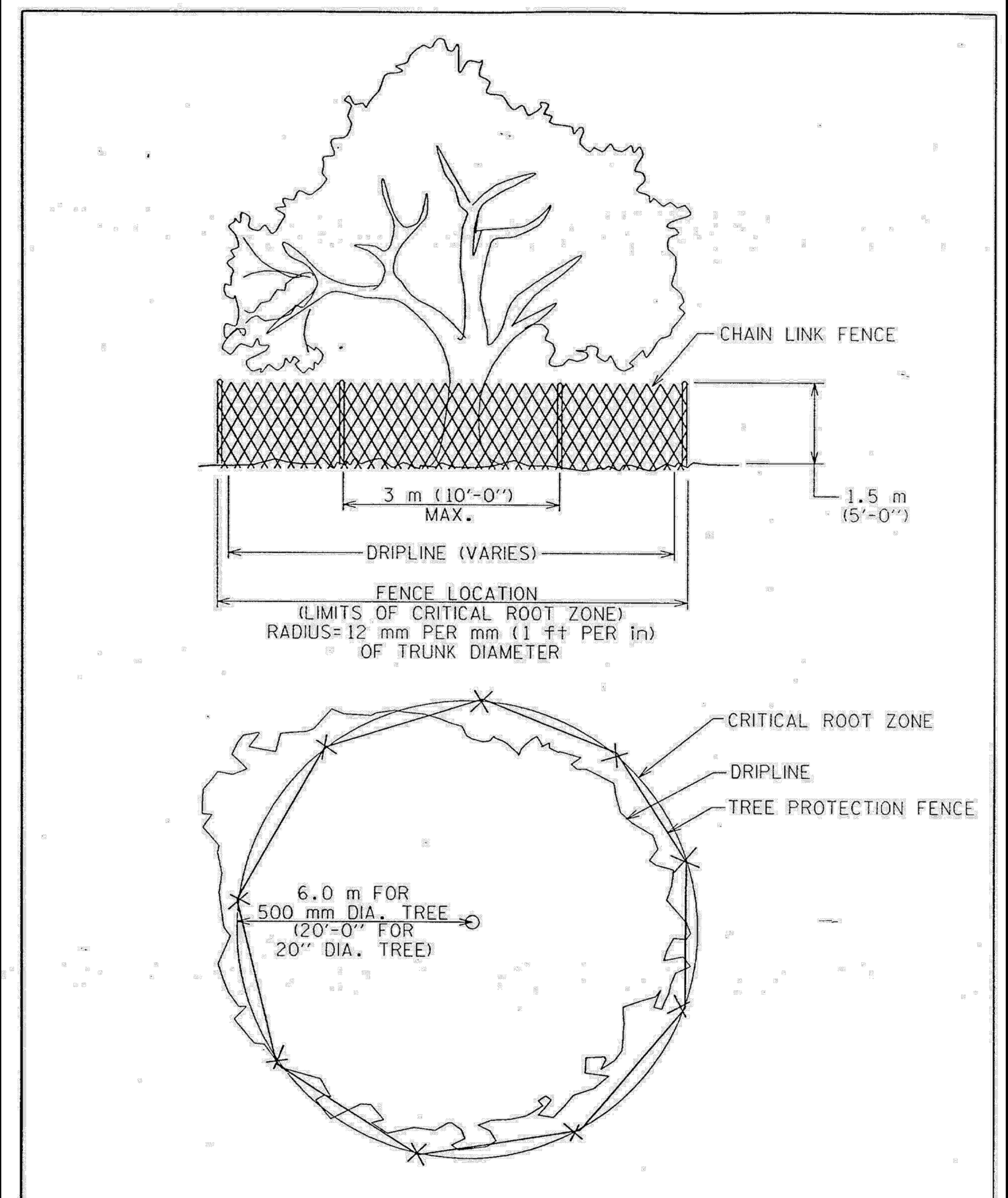
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.

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

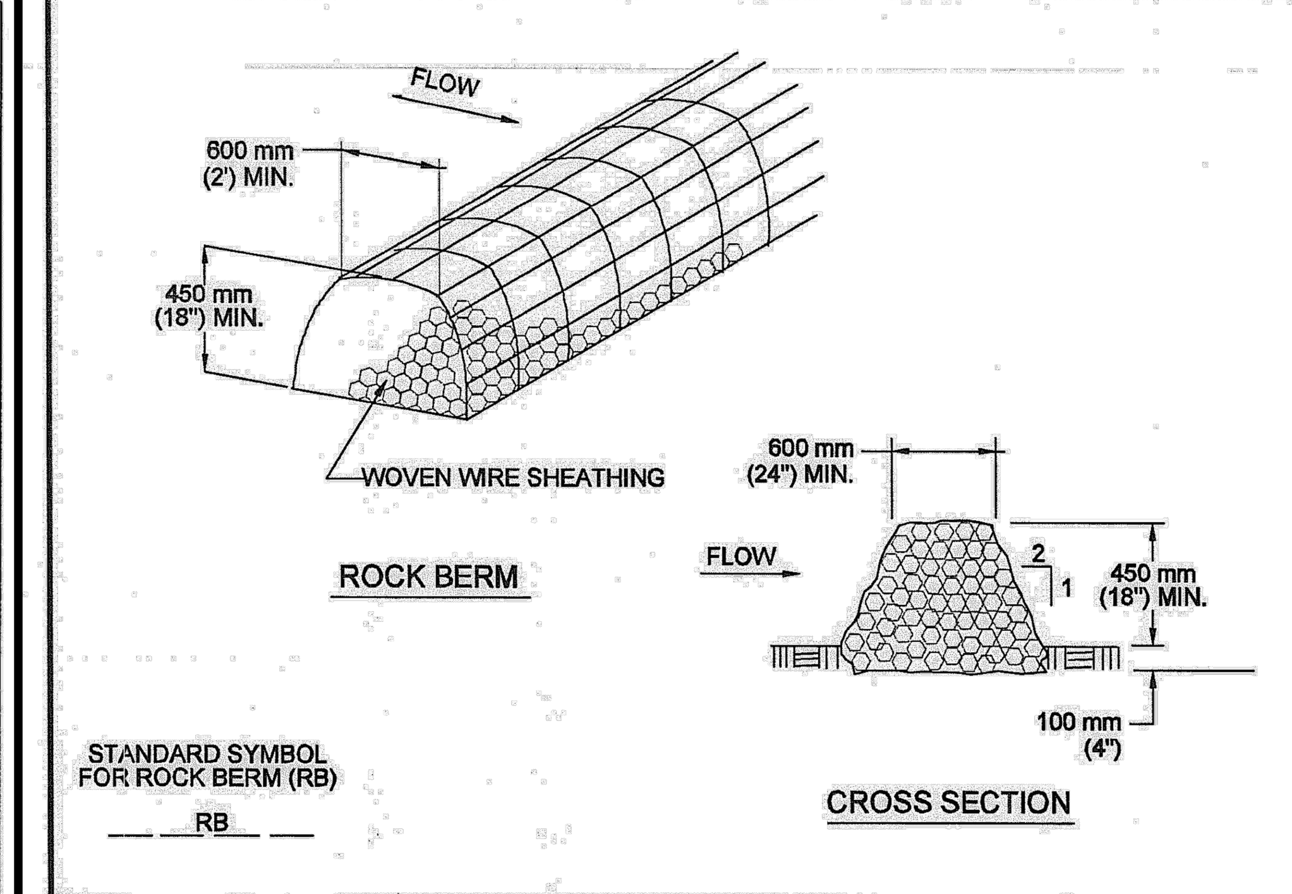
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

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

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	SILT FENCE	
9/1/2011 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 642S-1

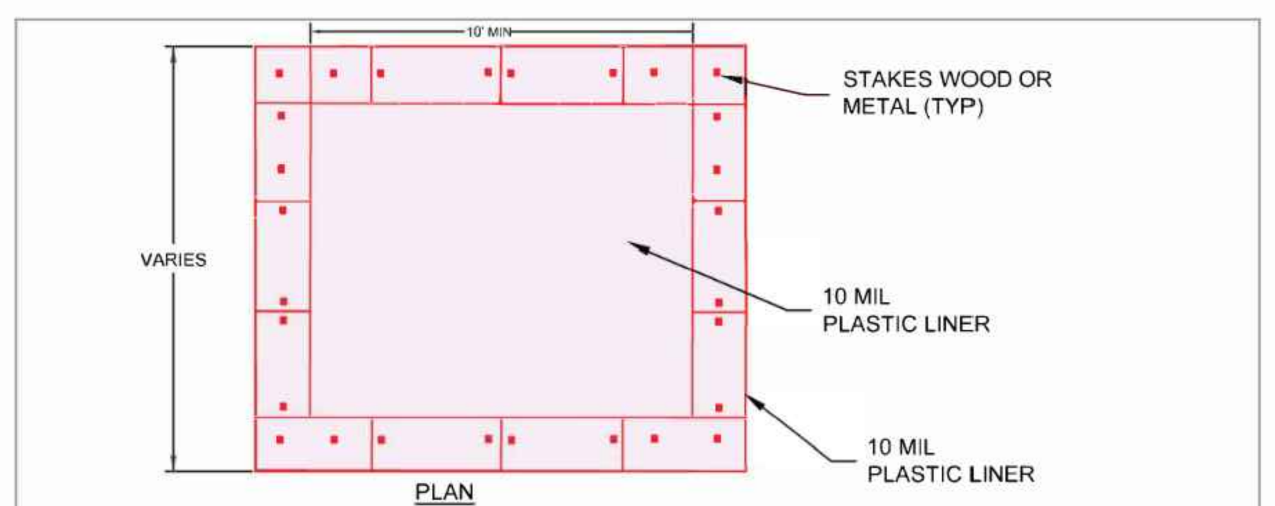


CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	TREE PROPTECTION FENCE TYPE A - CHAIN LINK	
11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-2



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

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



NOTES:

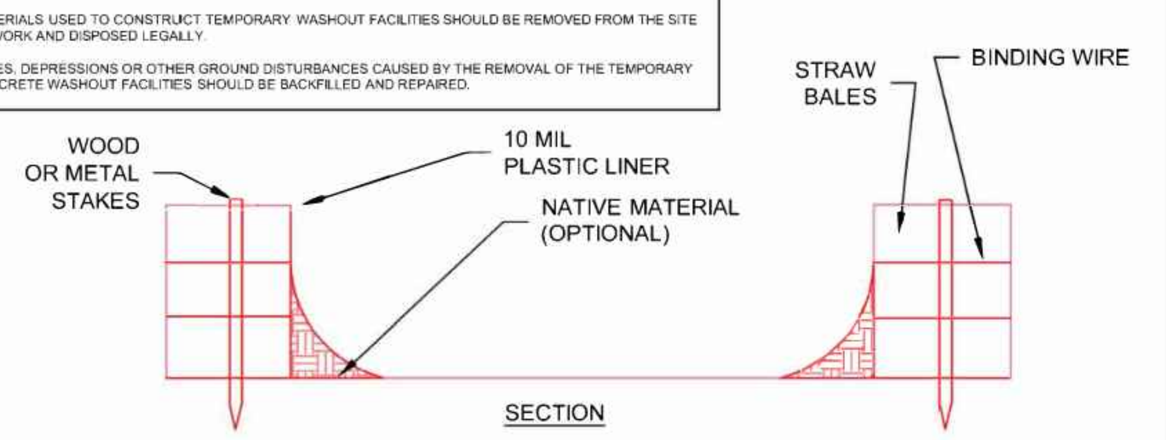
1. THE CITY RECOMMENDS PREFABRICATED CONCRETE WASHOUT CONTAINERS IF A PREFABRICATED CONCRETE WASHOUT CONTAINER IS NOT UTILIZED, THIS DETAIL IS REQUIRED.
2. DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASE IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
3. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
4. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORMWATER RUNOFF.
5. LOCATE WASHOUT AREA AT LEAST 50 FT FROM SENSITIVE FEATURES, FLOODPLAIN, STORM DRAINS, OPEN DITCHES OR WATER BODIES.
6. TEMPORARY WASHOUT FACILITY SHOULD BE CONSTRUCTED WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
7. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FT OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

MATERIALS:

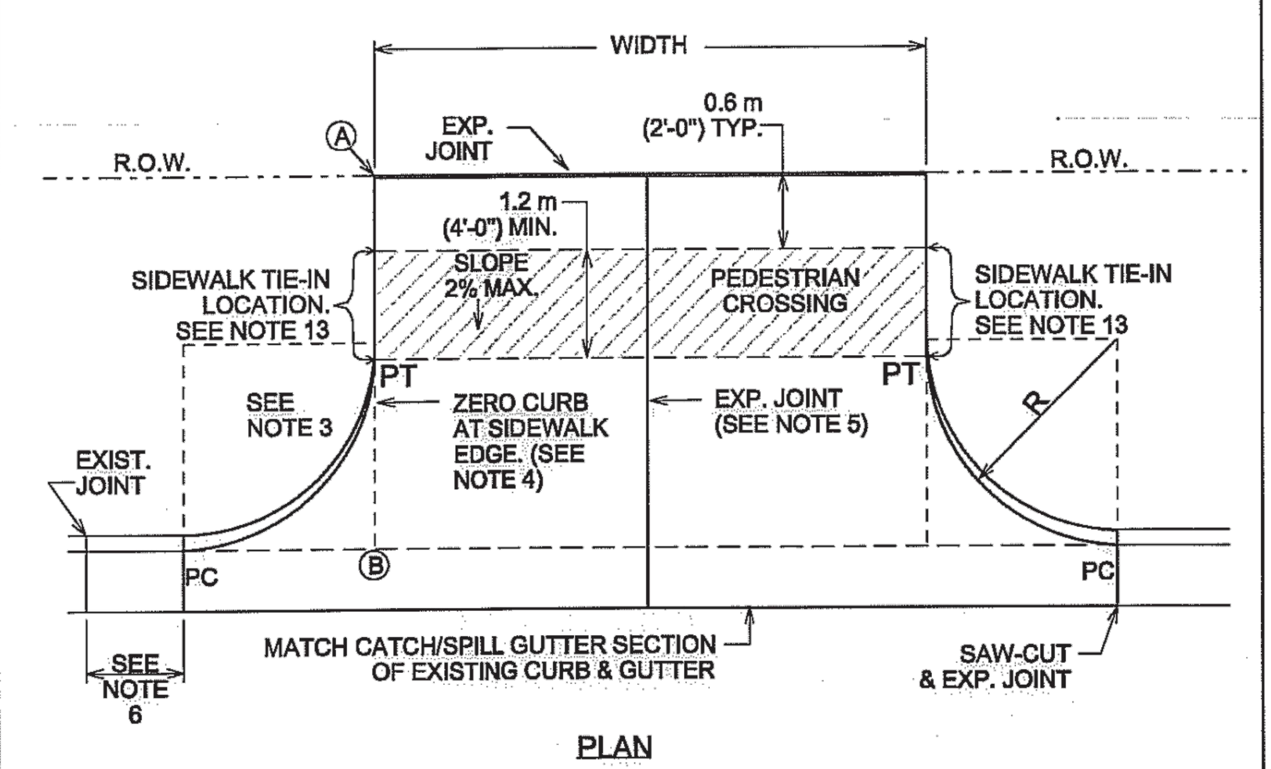
PLASTIC LINING MATERIAL SHOULD BE MINIMUM OF 10 MIL IN POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

MAINTENANCE:

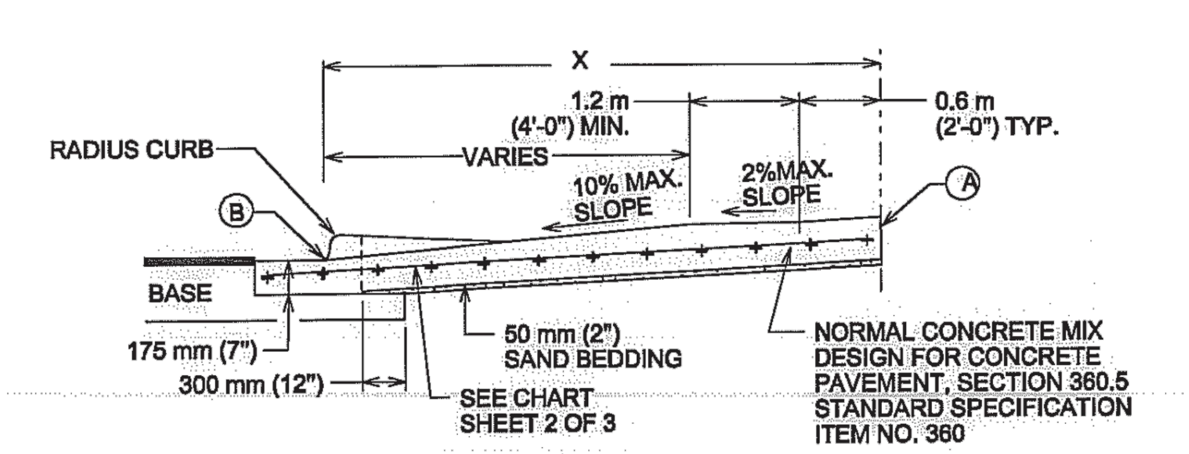
1. WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF LEGALLY.
2. MATERIALS USED TO CONSTRUCT TEMPORARY WASHOUT FACILITIES SHOULD BE REMOVED FROM THE SITE OF WORK AND DISPOSED LEGALLY.
3. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED AND REPAIRED.



CITY OF KYLE	NTS	CONCRETE WASHOUT ABOVE GRADE	PROJECT: DRAWN: CITY OF KYLE DATE:	1.0

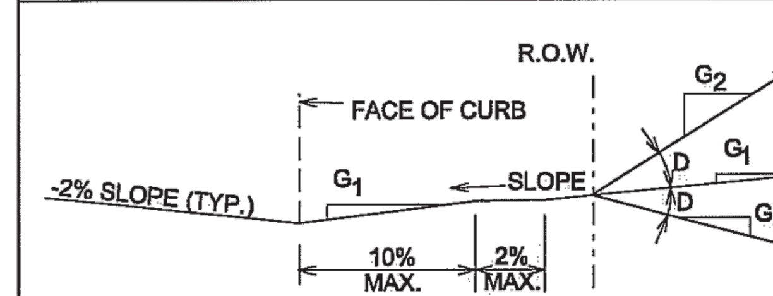


NOTE: ALL DRIVEWAYS SHALL BE SLOPED TOWARDS THE STREET FROM THE R.O.W. LINE. ELEVATION OF POINT (A) ABOVE POINT (B) IS, TYPICALLY A MINIMUM OF 150 mm (6") PLUS 20 mm/m (¼" RISE/FOOT) OVER DISTANCE "X" IN METERS (FEET).



CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE II DRIVEWAY	
2/24/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 433S-2 1 OF 2

USE	THICKNESS	REINFORCEMENT
DRIVEWAYS FOR PASSENGER VEHICLE PARKING LOTS	150 mm (6") MIN.	125 mm (5") MIN. CONCRETE WITH ONE LAYER OF13M (#4) BARS PLACED ON CHAIRS AT MIDDEPTH OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS
ALL OTHERS	175 mm (7") MIN.	125 mm (5") MIN. CONCRETE WITH ONE LAYER OF13M (#4) BARS PLACED ON CHAIRS AT MIDDEPTH OF SLAB AT NO MORE THAN 450 mm (18") O.C. BOTH DIRECTIONS

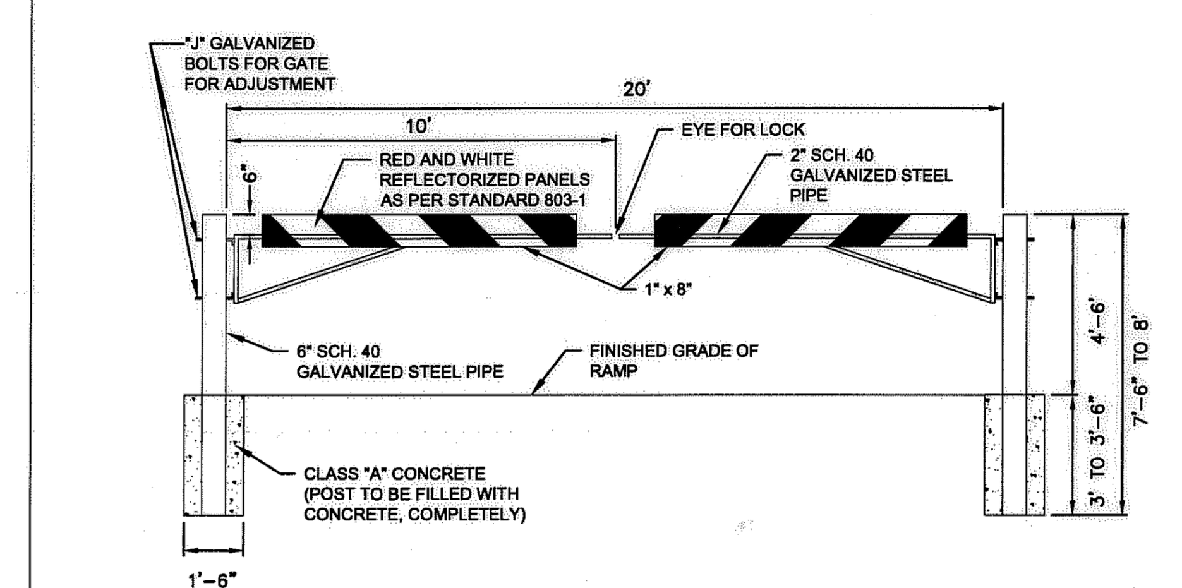


ALLOWABLE GRADES

DRIVEWAY VOLUME (ADT)	D=GRADE CHANGE	
	STD.	MAX
>1500	0%	3%
500-1500	3%	6%
<500	6%	15%

NOTES:
1. ALL TYPE II DRIVEWAYS SHALL HAVE RADIUS ENDS.
2. DRIVEWAY WIDTHS AND RADII DIMENSIONS, ONE/TWO WAY TRAVEL REQUIREMENTS, AND GEOMETRIC LAY-OUT ARE HIGHLY VARIABLE, SUBJECT TO SITE SPECIFIC CONDITIONS AND REQUIREMENTS. SEE TRANSPORTATION CRITERIA MANUAL SECTION 5 "DRIVEWAYS".
3. THE DRIVEWAY EDGE SHALL BE SMOOTHLY TRANSITITIONED INTO THE SIDEWALK TIE-IN LOCATION BEGINNING AT THE RADIUS PC LINE.
4. "ZERO" CURB AT PT OR SIDEWALK EDGE, WHICHEVER IS ENCOUNTERED FIRST.
5. PLACE AN EXPANSION JOINT DOWN THE CENTER OF DRIVEWAY ALL DRIVEWAYS.
6. IF DIMENSION IS LESS THAN 1.5 METERS (5 FEET), REMOVE CURB AND GUTTER TO EXISTING JOINT AND POUR MONOLITHICALLY WITH DRIVEWAY.
7. IF THE BASE IS OVER-EXCAVATED WHERE THE CURB AND GUTTER WERE REMOVED, BACKFILL WITH CONCRETE MONOLITHICALLY WITH THE DRIVEWAY.
8. TYPE II DRIVEWAYS ARE TO BE LOCATED NO CLOSER TO THE CORNER OF INTERSECTING RIGHT OF WAY THAN 60% OF PARCEL FRONTAGE AT 30 METERS (100 FEET): WHICHEVER IS LESS.
9. DRIVEWAY SHALL NOT BE CONSTRUCTED WITHIN THE CURB RETURN OF A STREET INTERSECTION.
10. WHILE THE PROPERTY OWNER REMAINS RESPONSIBLE FOR GRADE BREAKS WITHIN PRIVATE PROPERTY, THE FIRE DEPARTMENT SHALL BE CONSULTED WHERE THE DRIVEWAY IS ESSENTIAL TO EMERGENCY VEHICLE ACCESS AND "G2 IS GREATER THAN 15%.
11. USE 12 MM (1/2") ASPHALT BOARD OR OTHER APPROVED MATERIAL FOR CURB AND GUTTER EXPANSION JOINTS. SIDEWALK, AT THE R.O.W. LINE AND AT MIDWIDTH, SEE NOTE 5.
12. SEE TRANSPORTATION CRITERIA MANUAL, SECTION 5 FOR OTHER DRIVEWAY REQUIREMENTS.
13. THE SIDEWALK, REGARDLESS OF ITS LOCATION WITH RESPECT TO THE CURB OR PROPERTY LINE, SHALL BE CONNECTED TO THE DRIVEWAY AT THESE LOCATIONS.
14. WATER METER BOXES AND WASTEWATER CLEAN OUTS ARE PROHIBITED FROM BEING LOCATED IN DRIVEWAY AREAS.

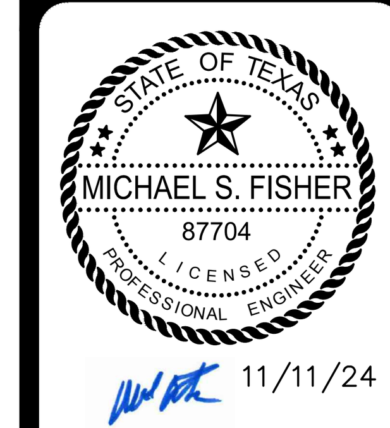
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TYPE II DRIVEWAY	
2/24/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 433S-2 2 OF 2



NOTE:
RAMP BARRICADE SUBSIDIARY TO ITEM 403-G CONCRETE STRUCTURES

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	POND PIPE GATE AT RAMP DETAIL	
P.E. 1/4/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 662S-1

NO.	REVISION	DATE



11/11/24

PAPE-DAWSON ENGINEERS
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10801 N MOPAC EXPY, BLDG 3, STE 200 | AUSTIN, TX 78759 | 512.454.8711
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CLARA VISTA
LIFT STATION & FORCE MAIN
EROSION & SEDIMENTATION CONTROL DETAILS

CITY JOB No. CP-22-0144
JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER AD/BA/JS
CHECKED AC DRAWN AD
SHEET 29 OF 48

Date: Nov 11, 2024, 12:01pm User ID: andrewdook
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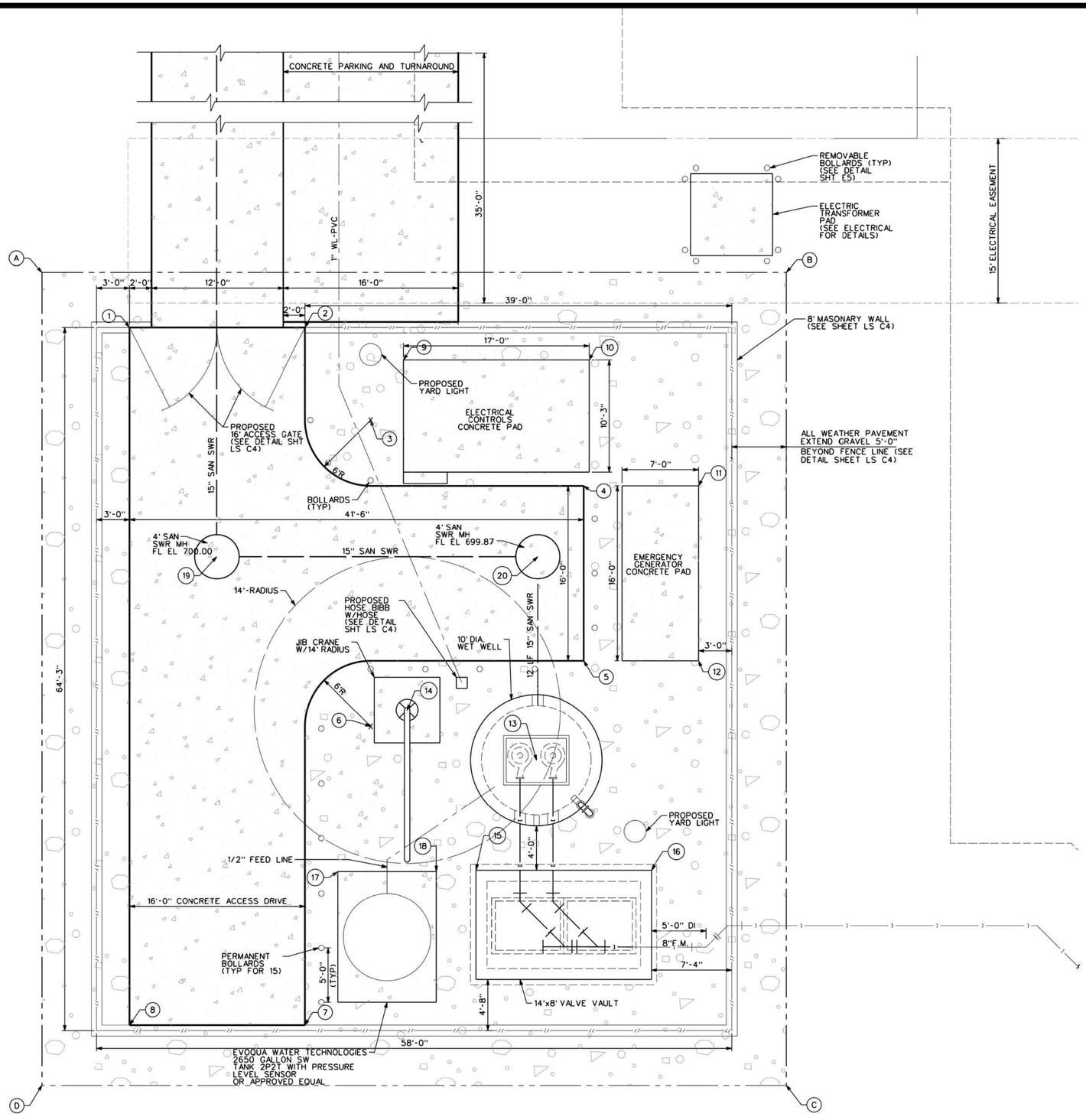

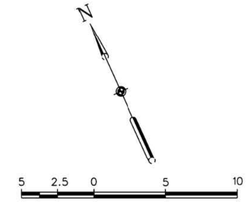

SITE COORDINATES			
POINT	NORTH	EAST	PROP. ELEV.
A	13912819.56	2311253.23	711.00
B	13912791.45	2311315.15	711.00
C	13912723.81	2311284.45	711.00
D	13912753.17	2311231.88	711.00

FACILITY COORDINATES			
POINT	NORTH	EAST	PROP. ELEV.
1	13912811.70	2311258.45	711.50
2	13912805.09	2311273.02	711.50
3	13912794.87	2311274.97	NA
4	13912781.34	2311290.24	711.50
5	13912766.77	2311283.63	711.50
6	13912769.37	2311263.39	NA
7	13912746.55	2311246.45	711.50
8	13912753.17	2311231.88	711.50
9	13912798.63	2311279.97	711.50
10	13912791.61	2311295.45	711.50
11	13912777.01	2311299.79	711.50
12	13912762.44	2311293.17	711.50
13	13912760.30	2311275.93	711.50
14	13912769.36	2311267.05	711.50
15	13912753.46	2311266.79	711.50
16	13912746.85	2311281.36	711.50
17	13912758.59	2311255.21	711.50
18	13912754.87	2311263.40	711.50
19	13912789.29	2311257.02	MATCH PAVEMENT
20	13912777.16	2311283.72	MATCH PAVEMENT

NO.	REVISION	DATE

09-23-2024

HARRY B. WALKER 82788 LICENSED PROFESSIONAL ENGINEER

PAPE-DAWSON ENGINEERS

10350 RICHMOND AVE. STE 200 | HOUSTON, TX. 77042 | 713.428.2400
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10193974

CLARA VISTA

LIFT STATION & FORCE MAIN
CIVIL
LIFT STATION PLAN
SITE PLAN

PLAT NO. CP-22-0144
JOB NO. 51456-10
DATE MAY 2024
DESIGNER HBW
CHECKED HBW DRAWN LDH
SHEET 31 OF 48

LS C1

CP-22-0144

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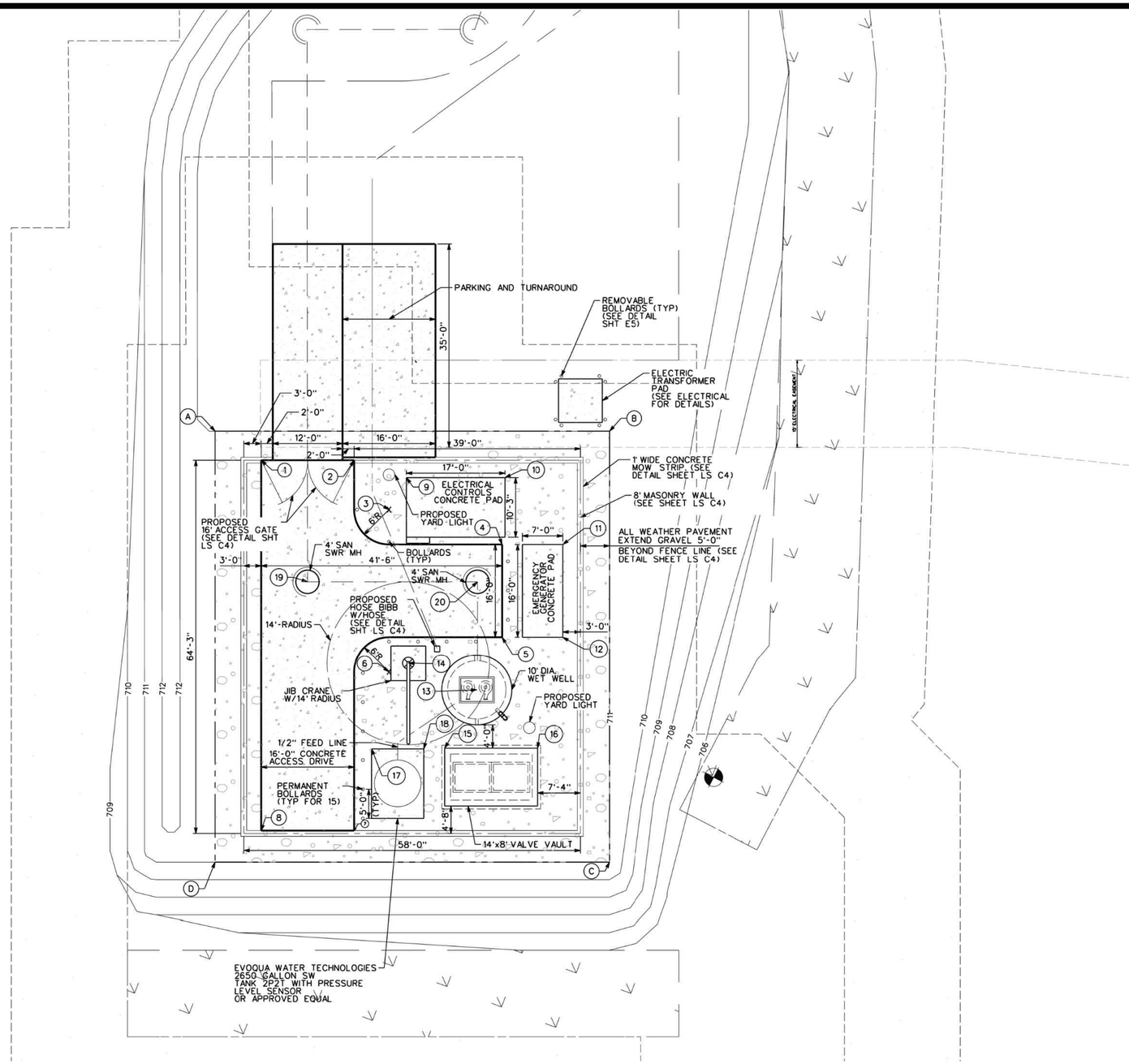

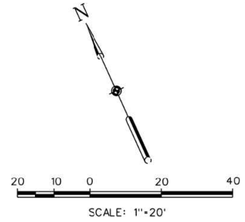

LEGEND

- PROPOSED STRUCTURE
- FUTURE PHASE
- X NG=142.3 — NATURAL GRADE
- x FG=146.0 — FINISHED GRADE
- x TP 214.5 — TOP PAVING ELEVATION
- PROP. SWALE
- FLOW DIRECTION
- 100 — EXIST. NATURAL GROUND CONTOUR
- PROP. CRUSHED GRAVEL PAVING
- ALL WEATHER PAVEMENT

SITE COORDINATES			
POINT	NORTH	EAST	PROP. ELEV.
A	13912819.56	2311253.23	711.00
B	13912791.45	2311315.15	711.00
C	13912723.81	2311284.45	711.00
D	13912753.17	2311231.88	711.00

FACILITY COORDINATES			
POINT	NORTH	EAST	PROP. ELEV.
1	13912811.70	2311258.45	711.50
2	13912805.09	2311273.02	711.50
3	13912794.87	2311274.97	NA
4	13912781.34	2311290.24	711.50
5	13912766.77	2311283.63	711.50
6	13912769.37	2311263.39	NA
7	13912746.55	2311246.45	711.50
8	13912753.17	2311231.88	711.50
9	13912798.63	2311279.97	711.50
10	13912791.61	2311295.45	711.50
11	13912777.01	2311299.79	711.50
12	13912762.44	2311293.17	711.50
13	13912760.30	2311275.93	711.50
14	13912769.36	2311267.05	711.50
15	13912753.46	2311266.79	711.50
16	13912746.85	2311281.36	711.50
17	13912758.59	2311255.21	711.50
18	13912754.87	2311263.40	711.50
19	13912789.29	2311257.02	MATCH PAVEMENT
20	13912777.16	2311283.72	MATCH PAVEMENT

NO.	REVISION	DATE

09-23-2024

STATE OF TEXAS
HARRY B. WALKER
82788
LICENSED
PROFESSIONAL ENGINEER

PAPE-DAWSON ENGINEERS
10350 RICHMOND AVE. STE 200 | HOUSTON, TX. 77042 | 713.428.2400
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10193974

CLARA VISTA
LIFT STATION & FORCE MAIN
CIVIL
LIFT STATION PLAN
GRADING, PAVING & DRAINAGE

PLAT NO. CP-22-0144
JOB NO. 51456-10
DATE MAY 2024
DESIGNER HBW
CHECKED HBW DRAWN LDH
SHEET 32 OF 48

LS C2

CP-22-0144

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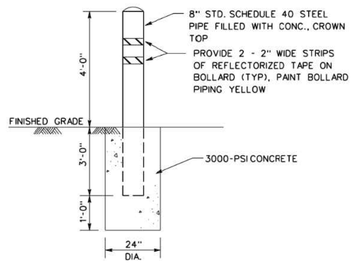
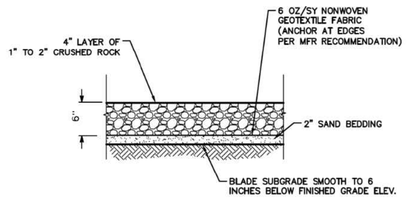


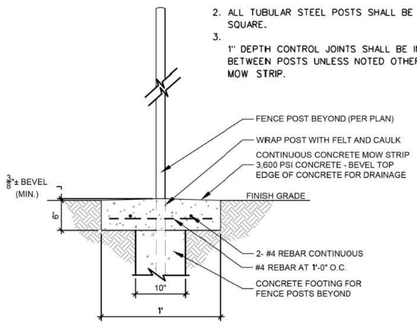
TYPICAL BOLLARD DETAIL
N.T.S.



ALL WEATHER PAVEMENT
N.T.S.

GENERAL NOTES:

1. ALL CONCRETE USED IN FOOTNG SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI @ 28 DAYS.
2. ALL TUBULAR STEEL POSTS SHALL BE INSTALLED LEVEL, PLUMB, AND SQUARE.
3. 1" DEPTH CONTROL JOINTS SHALL BE INSTALLED PERPENDICULARLY AT BETWEEN POSTS UNLESS NOTED OTHERWISE ALONG ENTIRE LENGTH OF MOW STRIP.



CONCRETE MOW STRIP DETAIL
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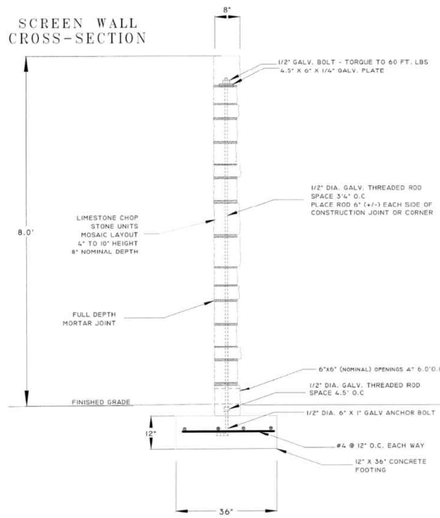
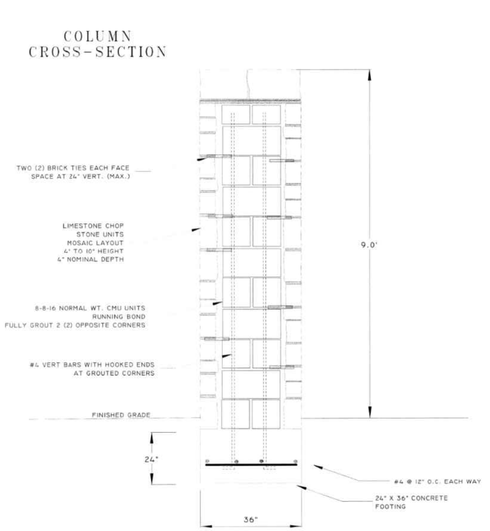




MASONRY SCREEN WALL DETAILS
N.T.S.

NOTES:

0 MATERIAL

1.1 ALL REINFORCING BARS SHALL CONFORM TO ASTM A615; FY = 40 KSI

1.2 ALL CONCRETE SHALL BE 3000 PSI COMPRESSIVE STRENGTH AT 28 DAYS

1.3 SANDSTONE UNITS SHALL BE HARD, DURABLE STONE UNITS SUITABLE FOR STRUCTURAL APPLICATIONS.

1.4 ALL MASONRY MORTAR SHALL BE TYPE 'S'; 750 PSI AT 28 DAYS

1.5 THREADED RODS SHALL BE ½" DIA; FY = 36 KSI

1.6 ALL THREADED RODS SHALL BE TENSIONED TO 60 FT. LBS. OF TORQUE

0 DESIGN

2.1 VERTICAL CONSTRUCITON JOINTS SHALL BE SPACED AT 45' O.C. MIN.

2.2 DESIGN WIND LOADS INCLUDE 90 MPH, EXPOSURE C

2.3 FOUNDATION SOIL IS ASSUMED TO BE STIFF CLAY AS DESCRIBED IN THE PROJECT SOIL REPORT PREPARED BY INTEC AND DATED OCTOBER 2, 2013.

2.4 SCREEN WALL SHOWN IS NOT DESIGNED TO ACCOMMODATE RETAING OF SOIL ON EITHER SIDE. FINSHED GRADE SHALL BE THE SAME ON BOTH SIDES OF THE WALL.

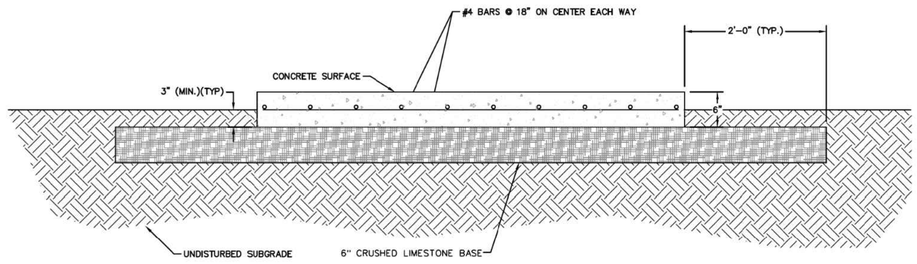
2.5 TESTING METHODS, FREQUENCY AND VERIFICATION OF MATERIAL SPECIFICATIONS SHALL BE THE RESPONSIBILITY OF THE OWNER OR OWNER'S REPRESENTATIVE.

2.6 WALL CAP UNITS SHALL BE PERMANENTLY SECURED TO THE WALL SECTION WITH FULL DEPTH MORTAR JOINTS

2.7 A COMPLETE SET OF CONSTRUCTION DRAWINGS, CONTRACT SPECIFICATIONS AND MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE ONSITE AT ALL TIMES DURING THE CONSTRUCTION OF THE WALL.

2.8 THE ENGINEERING, DESIGN, ANALYSIS DETAILING, AND MITIGATION OF BOTH SURFACE DRAINAGE AND SEEPAGE OF GROUND WATER SHALL BE THE RESPONSIBILITY OF THE OWNER OR OWNER'S REPRESENTATIVE.

2.9 STRUCTURAL DESIGN HEREIN REPRESENTS A FINISHED STRUCTURE. THE CONTRACTOR SHALL PROVIDE ALL INTERIM BRACING, SHORING, INTERIM DRAINAGE PROVISIONS AND EROSION PROTECTION REQUIRED UNTIL FINAL CAPPING, PAVING, CURBING AND COMPLETION OF FINAL STORM DRAIN SYSTEM IS COMPLETE.



CONCRETE SURFACE DETAIL
SCALE: N.T.S.

NOTES:

1. MAXIMUM WIDTH BETWEEN LONGITUDINAL JOINTS SHALL NOT EXCEED 15'-0".
2. ALL JOINTS TO BE SEALED TO BE THOROUGHLY CLEANED BY HYDROBLASTING AND/OR SAND BLASTING METHODS, THE JOINTS ARE TO BE FREE FROM ALL DUST COATINGS, ANY CONTAMINATES, AND FREE FROM ALL MOISTURE THAT MIGHT INTERFERE WITH THE PROPER AND SATISFACTORY BONDING OF THE JOINT SEALANT MATERIAL. THE JOINT WILL BE BLOWN OUT WITH DRY COMPRESSED AIR IMMEDIATELY PRIOR TO APPLYING SEALANT.
3. CONSTRUCTION EQUIPMENT AND OTHER VEHICLES AND PEDESTRIANS WHICH MAY CAUSE DAMAGE TO THE JOINTS SHALL NOT BE ALLOWED ON THE PAVEMENT & SIDEWALKS BEFORE THE JOINT SEALANT BECOMES TACK FREE.
4. USE 3/4" x 4" EXPANSION JOINT MATERIAL AROUND POLES OR OTHER OBSTRUCTIONS.
5. SAW CUT JOINTS WITHIN 24 HOURS.

NO.	REVISION	DATE

09-23-2024

STATE OF TEXAS
HARRY B. WALKER
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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10193974

CLARA VISTA
LIFT STATION & FORCE MAIN
LIFT STATION CIVIL DETAILS

PLAT NO. CP-22-0144
JOB NO. 51456-10
DATE MAY 2024
DESIGNER HBW
CHECKED HBW DRAWN LDH

SHEET 33 OF 48

LS C4

CP-22-0144

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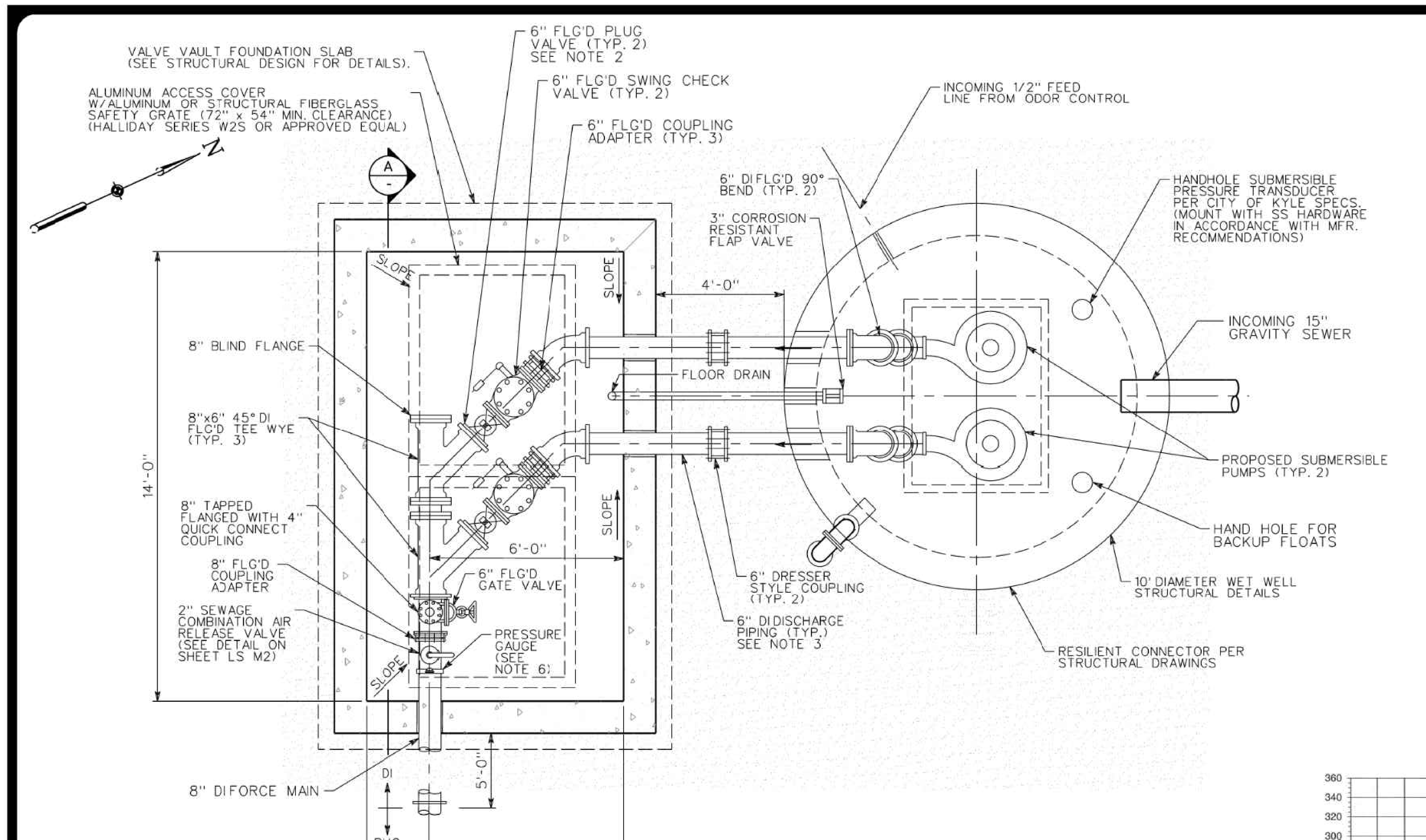
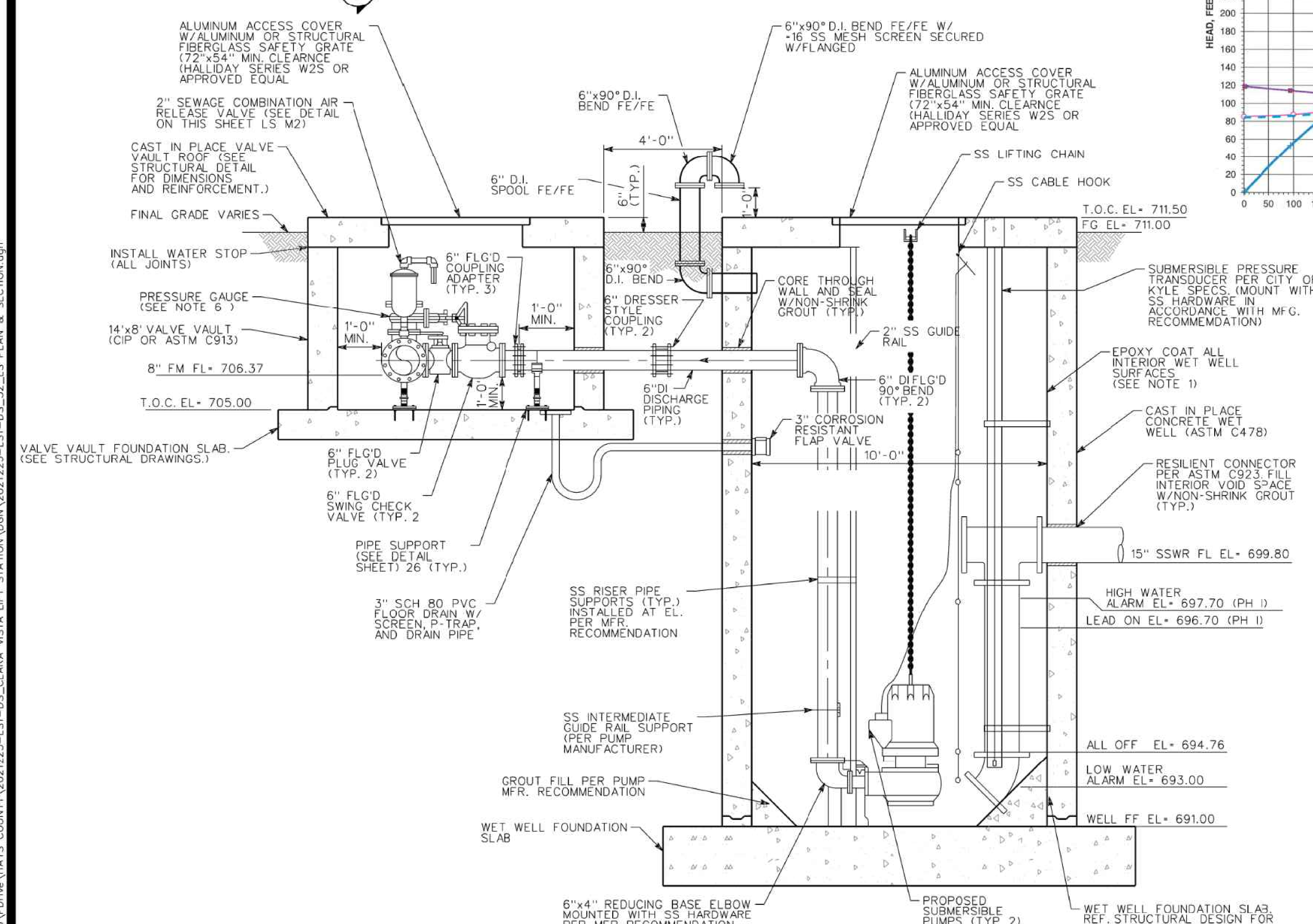


LIFT STATION PLAN VIEW

N.T.S.



LIFT STATION SECTION VIEW

N.T.S.

STATION OPERATION TABLES - CONTROLS (PHASE 1)		
RISING LEVEL CYCLE		
WATER LEVEL ELEVATION	**ACTION**	**PUMP(S) IN ACTION**
694.7	PUMPS OFF LEVEL - NO ACTION	ALL PUMPS ARE OFF
696.7	LEAD PUMP TURNS ON	LEAD PUMP ON
N/A	LAG PUMP TURNS ON	LEAD & LAG & STANDBY PUMPS ON
697.7	HIGH WATER ALARM TURNS ON	HIGH WATER ALARM ACTIVATED
FALLING LEVEL CYCLE		
WATER LEVEL ELEVATION	**ACTION**	**PUMP(S) IN ACTION**
697.2	HIGH WATER ALARM TURNS OFF	HIGH WATER ALARM DEACTIVATED
N/A	LAG PUMP TURNS OFF	LEAD PUMP IS ON
694.76	LEAD PUMP TURNS OFF	ALL PUMPS ARE OFF- STANDBY PUMP SWITCHES TO LEAD PUMP AND LEAD PUMP SWITCHES TO STANDBY PUMP

STATION OPERATION TABLES - CONTROLS (FINAL PHASE)		
RISING LEVEL CYCLE		
WATER LEVEL ELEVATION	**ACTION**	**PUMP(S) IN ACTION**
695.00	PUMPS OFF LEVEL - NO ACTION	ALL PUMPS ARE OFF
699.35	LEAD PUMP TURNS ON	LEAD PUMP ON
N/A	LAG PUMP TURNS ON	LEAD & LAG & STANDBY PUMPS ON
700.35	HIGH WATER ALARM TURNS ON	HIGH WATER ALARM ACTIVATED
FALLING LEVEL CYCLE		
WATER LEVEL ELEVATION	**ACTION**	**PUMP(S) IN ACTION**
699.85	HIGH WATER ALARM TURNS OFF	HIGH WATER ALARM DEACTIVATED
N/A	LAG PUMP TURNS OFF	LEAD PUMP IS ON
695.00	LEAD PUMP TURNS OFF	ALL PUMPS ARE OFF- STANDBY PUMP SWITCHES TO LEAD PUMP AND LEAD PUMP SWITCHES TO STANDBY PUMP

NOTE:

1. ALL PUMP DISCHARGE PIPING IN WET WELL, VALVE VAULT, AND UP TO PVC TRANSITION TO BE FLANGED (INSIDE WET WELL/VAULT) OR TR FLEX RESTRAINED MECHANICAL JOINT (WHEN BURIED DUCTILE IRON PIPING. ALL DUCTILE IRON PIPING SHALL BE EPOXY LINED WITH TNEMEC SERIES 431 PERMA-SHIELD PL CERAMIC EPOXY OR APPROVED EQUAL.
2. ALL EXPOSED DUCTILE IRON PIPING, FITTINGS, AND VALVE SHALL BE SANDBLASTED AND COATED WITH TWO (2) COATS OF TNEMEC SERIES 27WB TPOXY APPLIED AT 6.0 TO 8.0 DRY MILS AND TOPCOATED WITH TNEMEC SERIES 740 UVX APPLIED AT 3.0 TO 5.0 DRY MILS. FINAL COLOR TO BE APPROVED BY THE CITY. SHOP PRIMING WITH TNEMEC SERIES N140 IS ACCEPTABLE. BITUMASTIC COATING SHALL NOT BE APPLIED TO EXPOSED DI PIPING.
3. ALL BURIED DUCTILE IRON PIPING, FITTINGS AN VALVES SHALL BE WRAPPED WITH A POLYETHYLENE ENCASEMENT IN ACCORDANCE WITH THE LATEST REVISION OF AWWA C105.
4. ALL MECHANICAL JOINT FITTINGS TO BE RESTRAINED USING SERIES 1100 OR 2000PV MEGALUG JOINT RESTRAINTS.
5. PUMP SPACING DIMENSIONS SHOWN ARE APPROXIMATE. ACTUAL DIMENSIONS SHALL BE DETERMINED BY SPECIFIC PUMP MANUFACTURER.
6. PRESSURE GAUGE SHALL BE 4" DUAL 5% ACCURACY LIQUID FILLED W/STANDARD 1/4" NPT MOIOUNTED ON BRASS ISOLATION BALL VALVE.

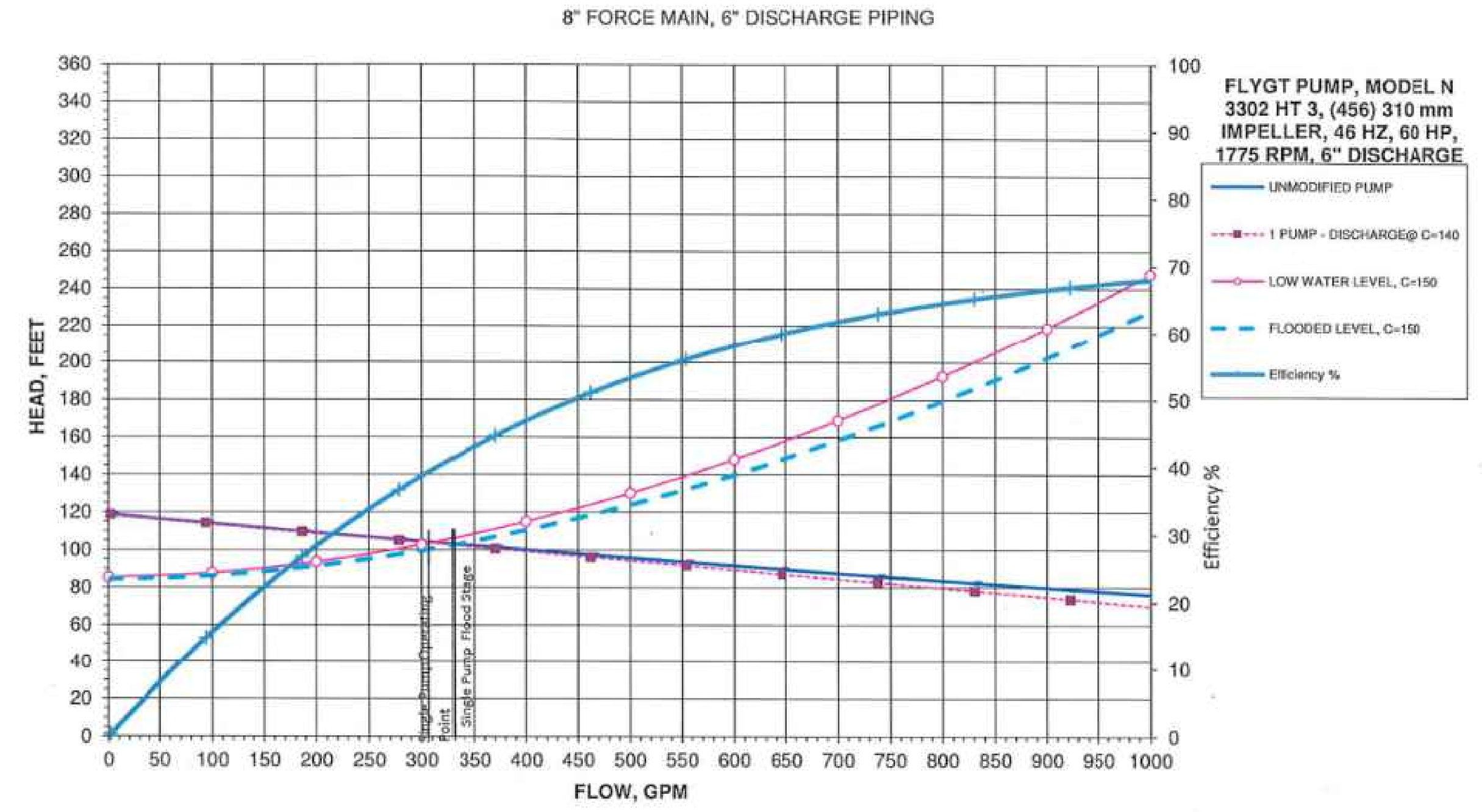
PERFORMANCE AND DESIGN REQUIREMENTS (PHASE 1)			
EACH PUMPING UNIT (P-1, P-2 & P-3) SHALL BE DESIGNED/PROVIDED TO MEET THE FOLLOWING OPERATING CONDITIONS/REQUIREMENTS, IN CONJUNCTION WITH THE GIVEN SYSTEM HEAD/CAPACITY CURVES, FOR SIMPLEX PUMP OPERATION (P-1, P-2 OR P-3) AND DUPLEX PUMP OPERATION (P-1 & P-2, P-2 & P-3, OR P-1 & P-3).			
DESIGN PUMP MODEL	FLYGT N3302 HT3 (456) SH3 276		
CONDITIONS/REQUIREMENTS FOR EACH PUMPING UNIT			
CONDITION/REQUIREMENT	**P-1**	**P-2**	
MIN PUMP EFFICIENCY AT DESIGN TDH	40%	40%	
MAX PUMP OPERATING SPEED (RPM)	1775	1775	
MOTOR HORSEPOWER	60	60	
MOTOR VOLTAGE/HERTZ/PHASE	460/60/3	460/60/3	
CONDITIONS/REQUIREMENTS FOR PUMP(S) IN OPERATION			
CONDITION/REQUIREMENT	**SIMPLEX PUMPING (326mm IMP)**	**DUPLEX PUMPING**	**TRIPLEX PUMPING**
CAPACITY AT DESIGN TDH (GPM)	303		
DESIGN TDH (FEET)	103.5		

PERFORMANCE AND DESIGN REQUIREMENTS (PHASE 2)			
EACH PUMPING UNIT (P-1, P-2 & P-3) SHALL BE DESIGNED/PROVIDED TO MEET THE FOLLOWING OPERATING CONDITIONS/REQUIREMENTS, IN CONJUNCTION WITH THE GIVEN SYSTEM HEAD/CAPACITY CURVES, FOR SIMPLEX PUMP OPERATION (P-1, P-2 OR P-3) AND DUPLEX PUMP OPERATION (P-1 & P-2, P-2 & P-3, OR P-1 & P-3).			
DESIGN PUMP MODEL	FLYGT N3302 HT3 (456)		
CONDITIONS/REQUIREMENTS FOR EACH PUMPING UNIT			
CONDITION/REQUIREMENT	**P-1**	**P-2**	
MIN PUMP EFFICIENCY AT DESIGN TDH	53%	53%	
MAX PUMP OPERATING SPEED (RPM)	1775	1775	
MOTOR HORSEPOWER	60	60	
MOTOR VOLTAGE/HERTZ/PHASE	460/60/3	460/60/3	
CONDITIONS/REQUIREMENTS FOR PUMP(S) IN OPERATION			
CONDITION/REQUIREMENT	**SIMPLEX PUMPING (326mm IMP)**	**DUPLEX PUMPING**	**TRIPLEX PUMPING**
CAPACITY AT DESIGN TDH (GPM)	640		
DESIGN TDH (FEET)	156.7		

FIRST PHASE
TOLL BROTHERS
CLARA VISTA LIFT STATION

SYSTEM AND PUMP CURVES

8" FORCE MAIN, 6" DISCHARGE PIPING



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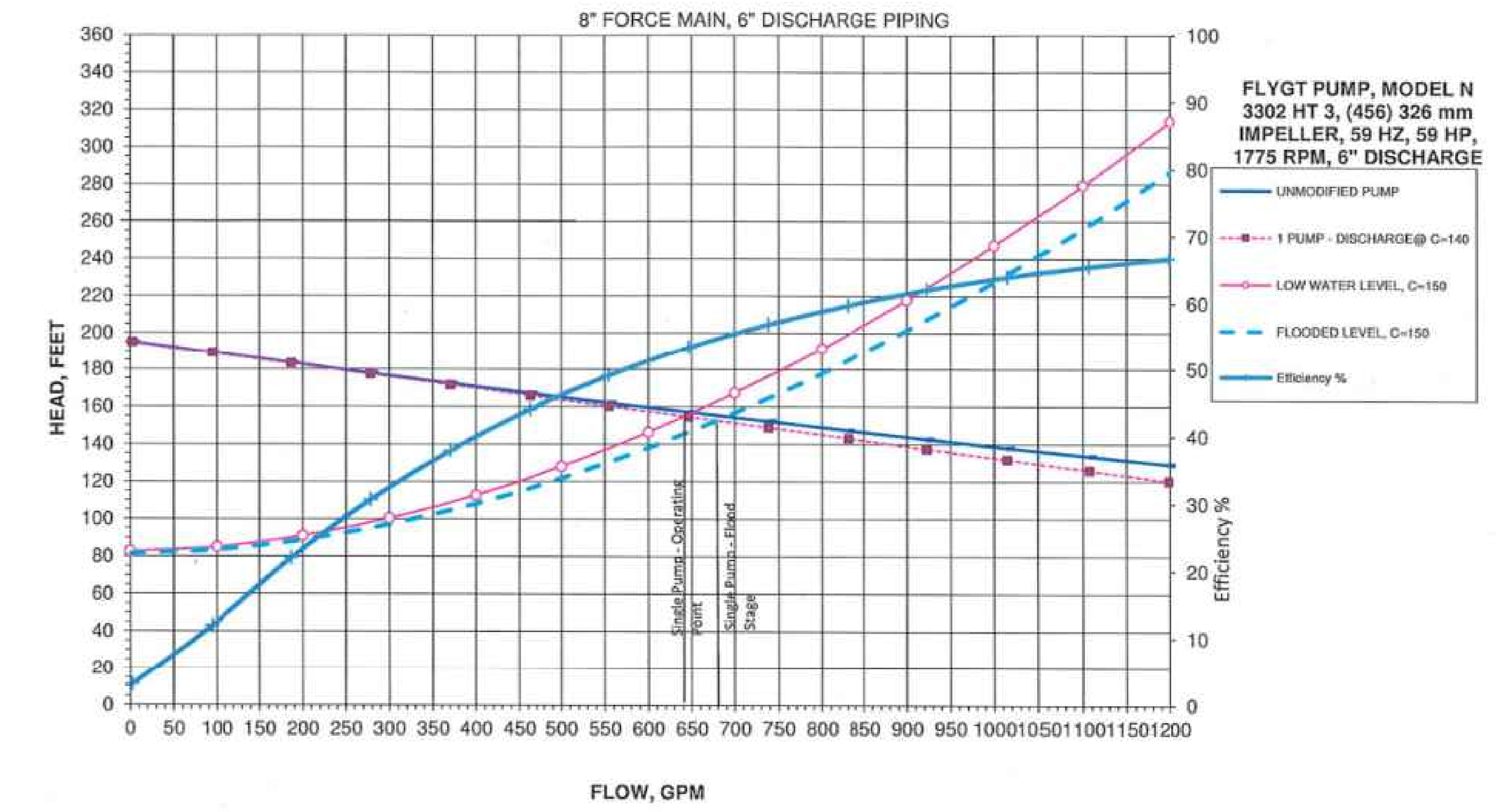
FINAL PHASE
CLARA VISTA (WATER RIDGE) LIFT STATION

SYSTEM AND PUMP CURVES

8" FORCE MAIN, 6" DISCHARGE PIPING



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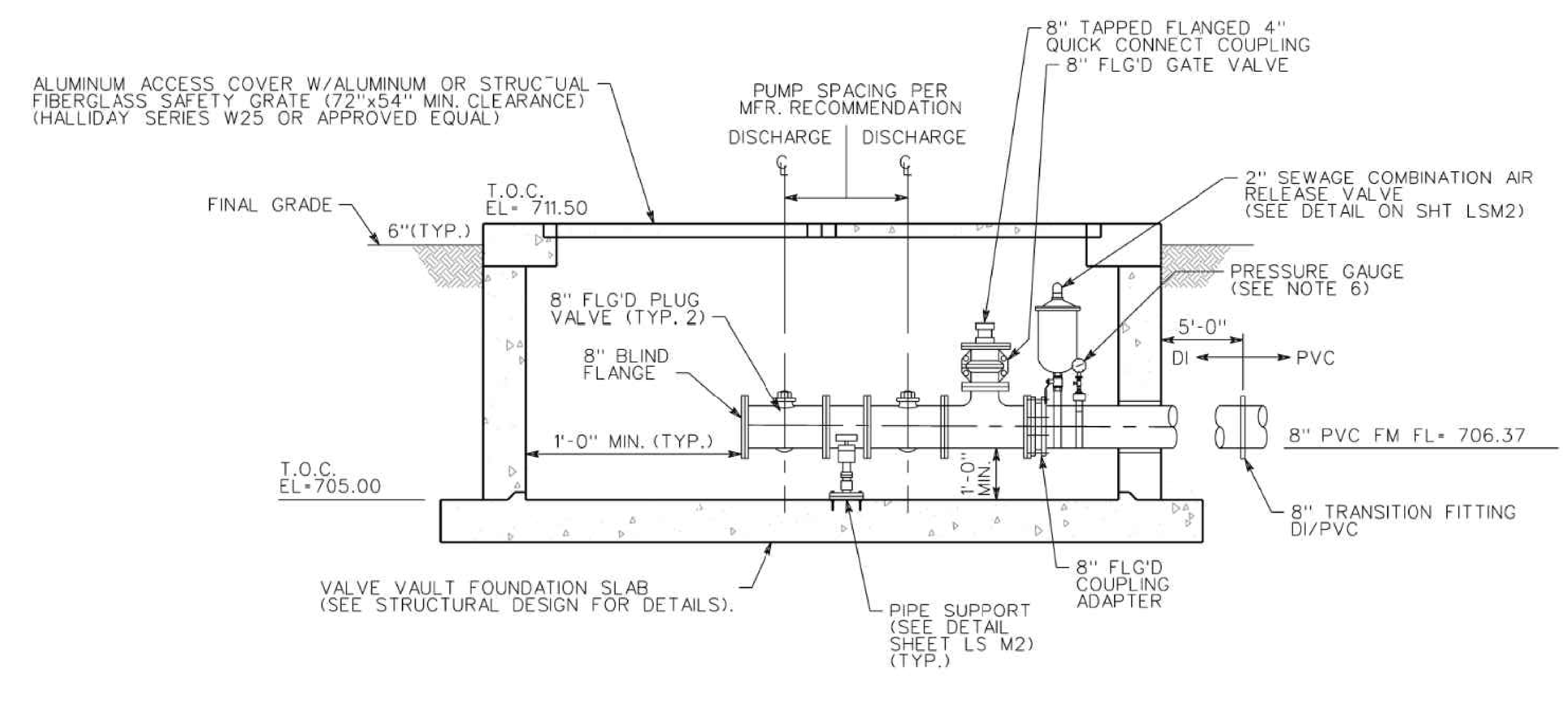

SECTION "A"

N.T.S.

NO.	REVISION	DATE

09-23-2024

STATE OF TEXAS
HARRY B. WALKER
82788
LICENSED PROFESSIONAL ENGINEER

PAPE-DAWSON ENGINEERS
10350 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10193974

CLARA VISTA

LIFT STATION & FORCE MAIN

LIFT STATION MECHANICAL PLAN & SECTION

PLAT NO. CP-22-0144
JOB NO. 51456-10
DATE MAY 2024
DESIGNER HBW
CHECKED HBW DRAWN LDH

LS M1

SHEET 34 OF 48

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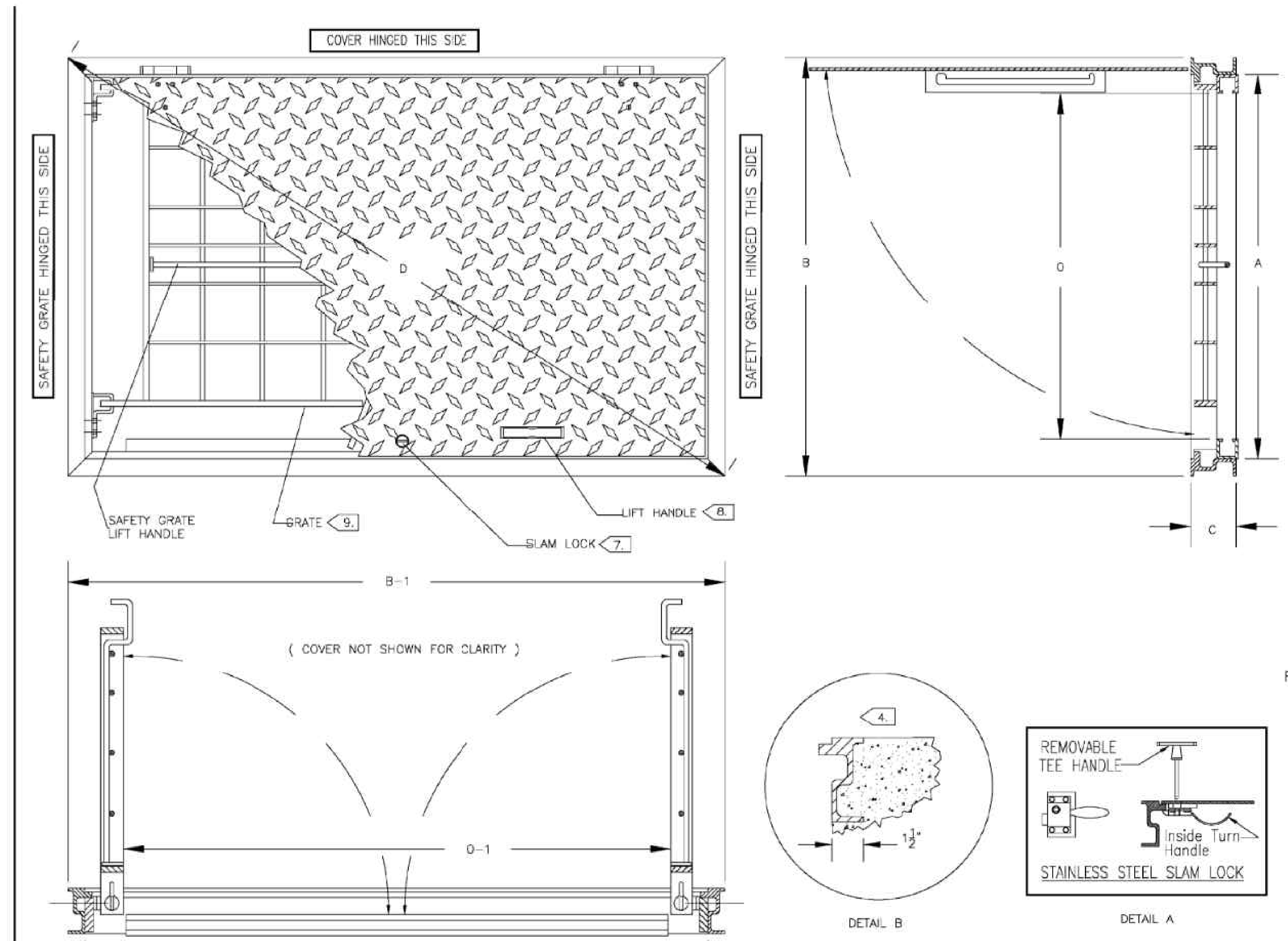


PATTERN NO	DIMENSIONS IN INCHES		UNOBSTRUCTED CLEAR OPENING	HEIGHT	DIAGONAL
ALUMINUM	A x A1	B x B1	O x O1	C	D
FLED-AOSH	PER MANUFACTURER	PER MANUFACTURER	MATCH EXISTING	PER MANUFACTURER	PER MANUFACTURER

1.) MATERIAL SHALL BE 6061-T6 ALUMINUM FOR BARS, ANGLES, AND EXTRUSIONS. 1/4" DIAMOND PLATE SHALL BE 5086 ALUMINUM. EXTERIOR OF FRAME WHICH COMES IN CONTACT WITH CONCRETE SHALL HAVE ONE COAT FOREST GREEN PAINT.

2.) UNIT DESIGNED PEDESTRIAN RATED FOR A MINIMUM LIVE LOAD OF 300 LBS./SQ.FT.

3.) DOOR SHALL BE EQUIPPED WITH A HOLD OPEN ARM. DOOR SHALL LOCK OPEN IN THE 90 DEGREE POSITION. HOLD OPEN ARM SHALL BE FASTENED TO THE FRAME WITH A 1/2" GRADE 316 STAINLESS STEEL BOLT.

4. ANGLE FRAME SHALL BE OF EXTRUDED ALUMINUM, WITH A CONTINUOUS 1-1/2" ANCHOR FLANGE.

5.) COVER HINGES SHALL BE OF HEAVY DUTY DESIGN. MATERIAL SHALL BE GRADE 316 STAINLESS STEEL. EACH HINGE SHALL HAVE A GRADE 316 STAINLESS STEEL, 3/8" DIAMETER HINGE PIN. HINGE SHALL BE FASTENED TO ANGLE AND DIAMOND PLATE WITH GRADE 316 STAINLESS STEEL BOLTS AND NY-LOCK NUTS.

6.) ALL HARDWARE SHALL BE STAINLESS STEEL.

7. EACH HATCH SHALL BE SUPPLIED WITH A GRADE 316 STAINLESS STEEL SLAM LOCK, WITH KEY WAY PROTECTED BY A THREADED PLUG. PLUG SHALL BE FLUSH WITH THE TOP OF THE 1/4" DIAMOND PLATE. SLAM LOCK SHALL BE FASTENED WITH FOUR GRADE 316 STAINLESS STEEL BOLTS AND WASHERS.

8. EACH HATCH SHALL BE EQUIPPED WITH AN ALUMINUM LIFT HANDLE. THE LIFT HANDLE SHALL BE FLUSH WITH THE TOP OF THE 1/4" DIAMOND PLATE.

9. UNITS SHALL BE SUPPLIED WITH A HINGED SAFETY GRATES (SAFETY YELLOW) TO PROVIDE PROTECTION AGAINST FALL THROUGH AND TO CONTROL ACCESS TO THE CONFINED SPACE. (SEE SAFETY GRATE SPECIFICATIONS ON SEPARATE PAGE.)

10.) HATCH COVERS SHALL BE PAINTED FOREST GREEN TO DEMARCATE AND PREVENT VANDALISM.

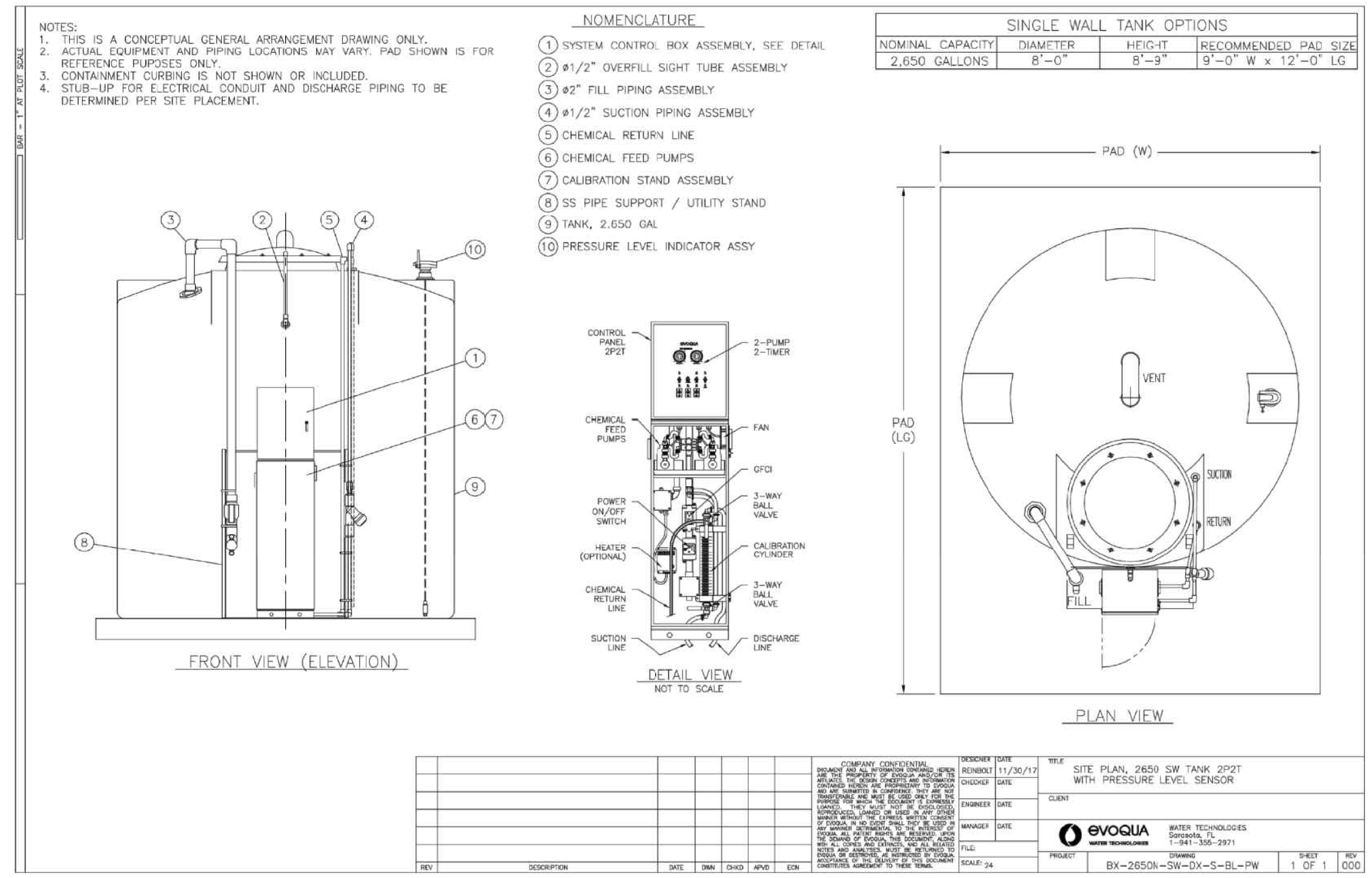
LIFT STATION WETWELL ACCESS HATCHES

N.T.S.

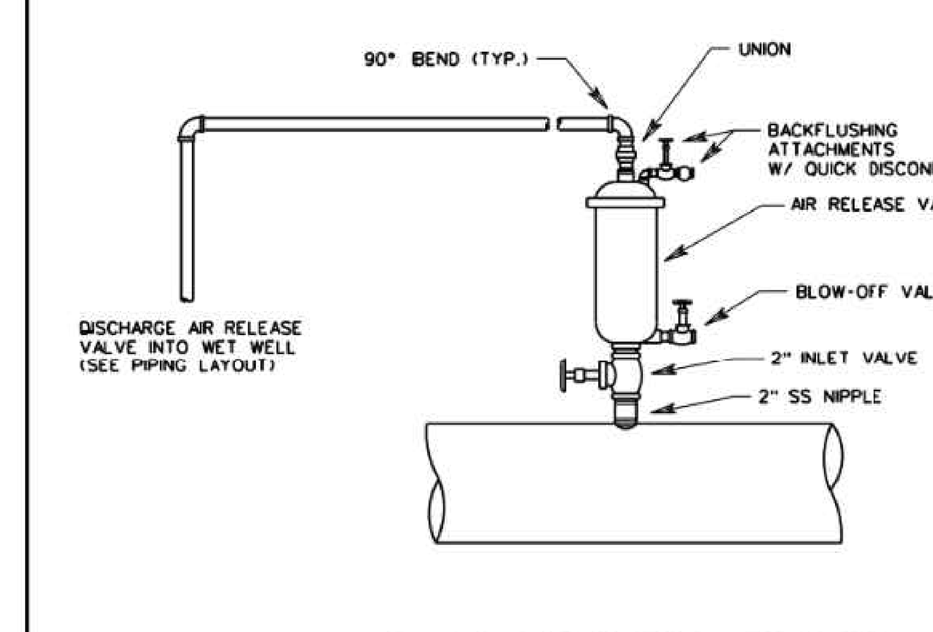
NOTES:
1. THIS IS A CONCEPTUAL GENERAL ARRANGEMENT DRAWING ONLY.
2. ACTUAL EQUIPMENT AND PIPING LOCATIONS MAY VARY. PAD SHOWN IS FOR REFERENCE PUPOSES ONLY.
3. CONTAINMENT CURBING IS NOT SHOWN OR INCLUDED.
4. STUB-UP FOR ELECTRICAL CONDUIT AND DISCHARGE PIPING TO BE DETERMINED PER SITE PLACEMENT.

NOMENCLATURE
1. SYSTEM CONTROL BOX ASSEMBLY, SEE DETAIL
2. ø1/2" OVERFILL SIGHT TUBE ASSEMBLY
3. ø2" FILL PIPING ASSEMBLY
4. ø1/2" SUCTION PIPING ASSEMBLY
5. CHEMICAL RETURN LINE
6. CHEMICAL FEED PUMPS
7. CALIBRATION STAND ASSEMBLY
8. SS PIPE SUPPORT / UTILITY STAND
9. TANK, 2.650 GAL
10. PRESSURE LEVEL INDICATOR ASSY

SINGLE WALL TANK OPTIONS			
NOMINAL CAPACITY	DIAMETER	HEIGHT	RECOMMENDED PAD SIZE
2,650 GALLONS	8'-0"	8'-9"	9'-0" W x 12'-0" LG

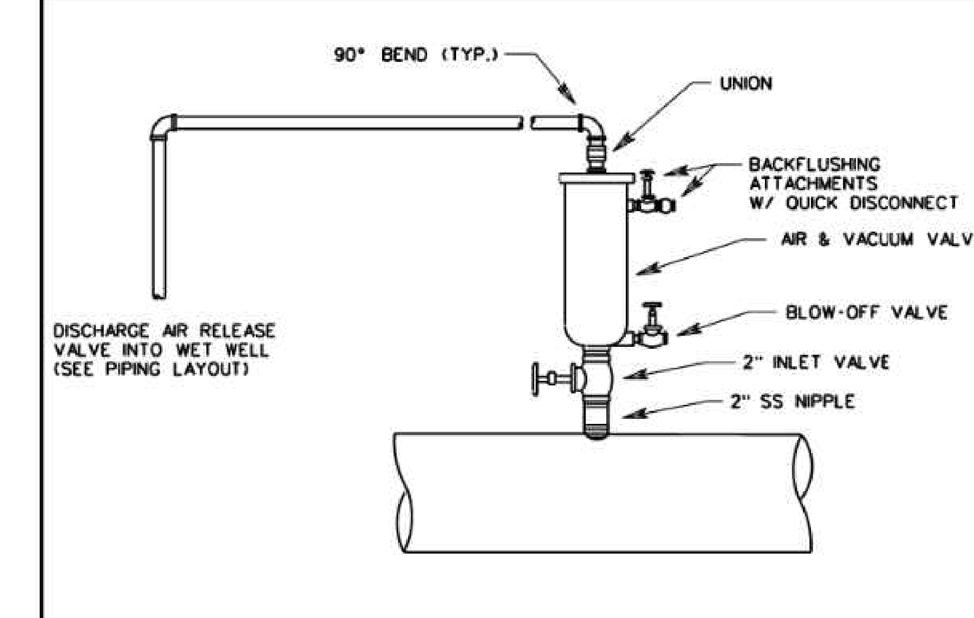


NOTES:
1. ODOR CONTROL FOUNDATION AND REINFORCEMENT TO BE SIZED BY SPECIFIC ODOR CONTROL MANUFACTURER.
2. ODOR CONTROL TANK TO BE BLACK POLYETHYLENE. PAINT COLOR SHALL BE INTEGRATED INTO THE TANK.
3. ODOR CONTROL CHEMICAL TO BE BIOXIDE 71.



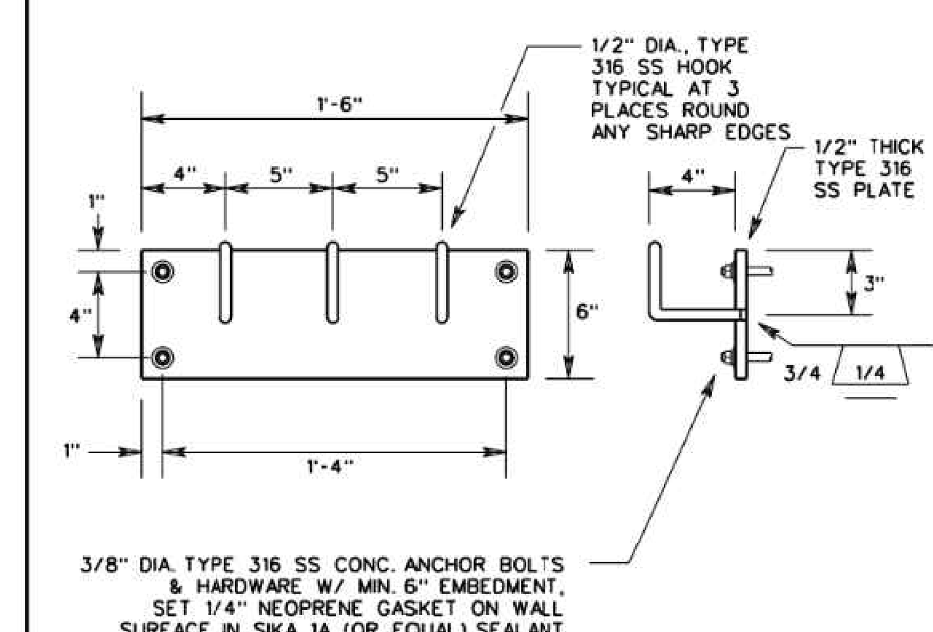
AIR RELEASE VALVE ASSEMBLY

N.T.S.



AIR & VACUUM VALVE ASSEMBLY

N.T.S.



CABLE HOLDER ASSEMBLY

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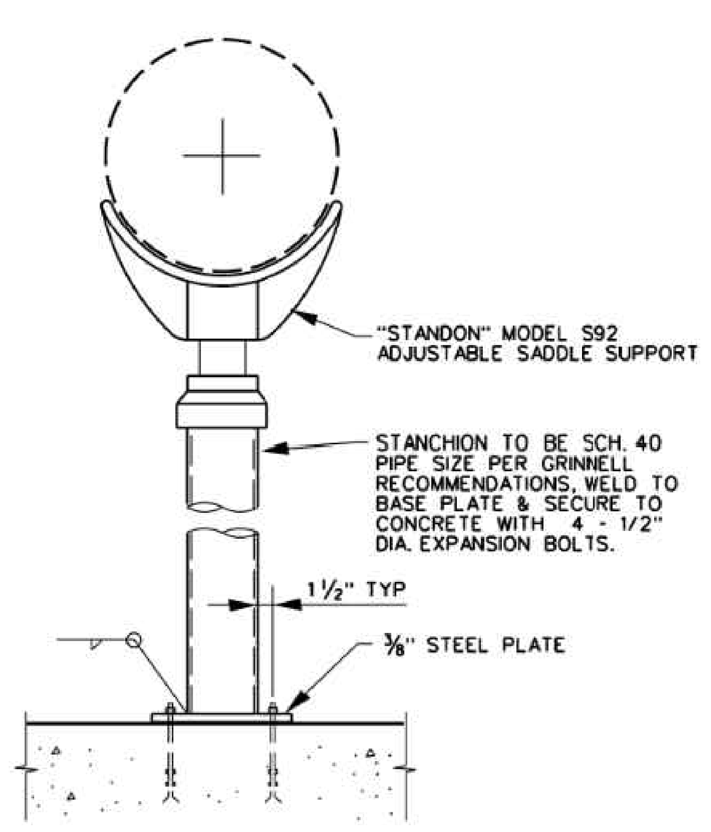


ADJUSTABLE PIPE SUPPORT

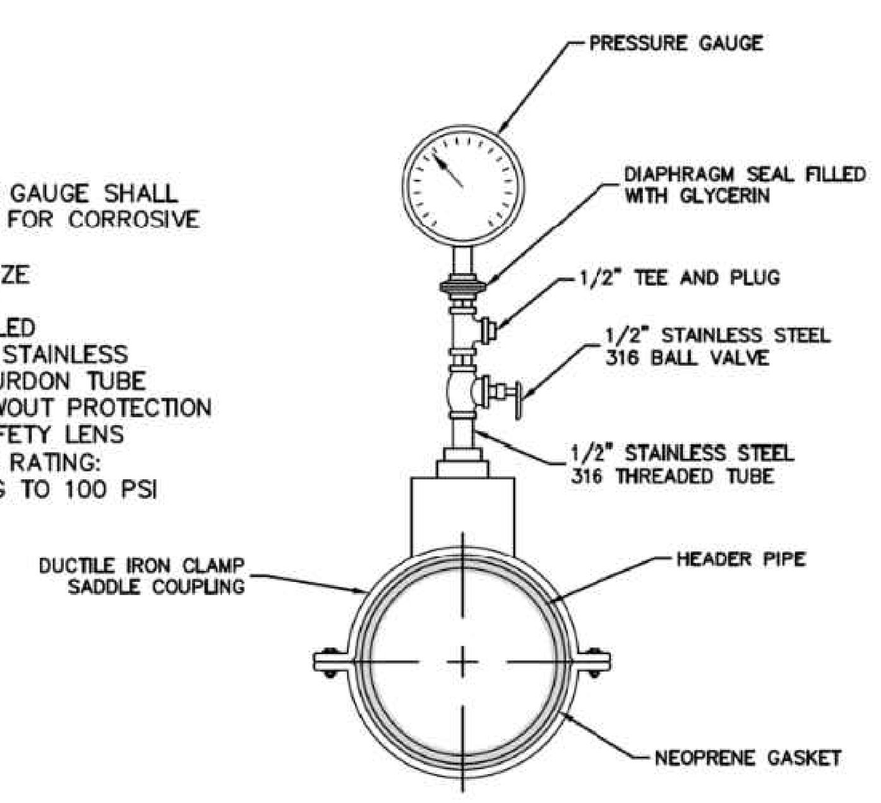
N.T.S.

•MODEL S89 (FLANGE)
MODEL C92 (CLAMP)
MODEL S96 (FLANGE CRADLE)

ALL SHALL HAVE GALVANIZED FINISH

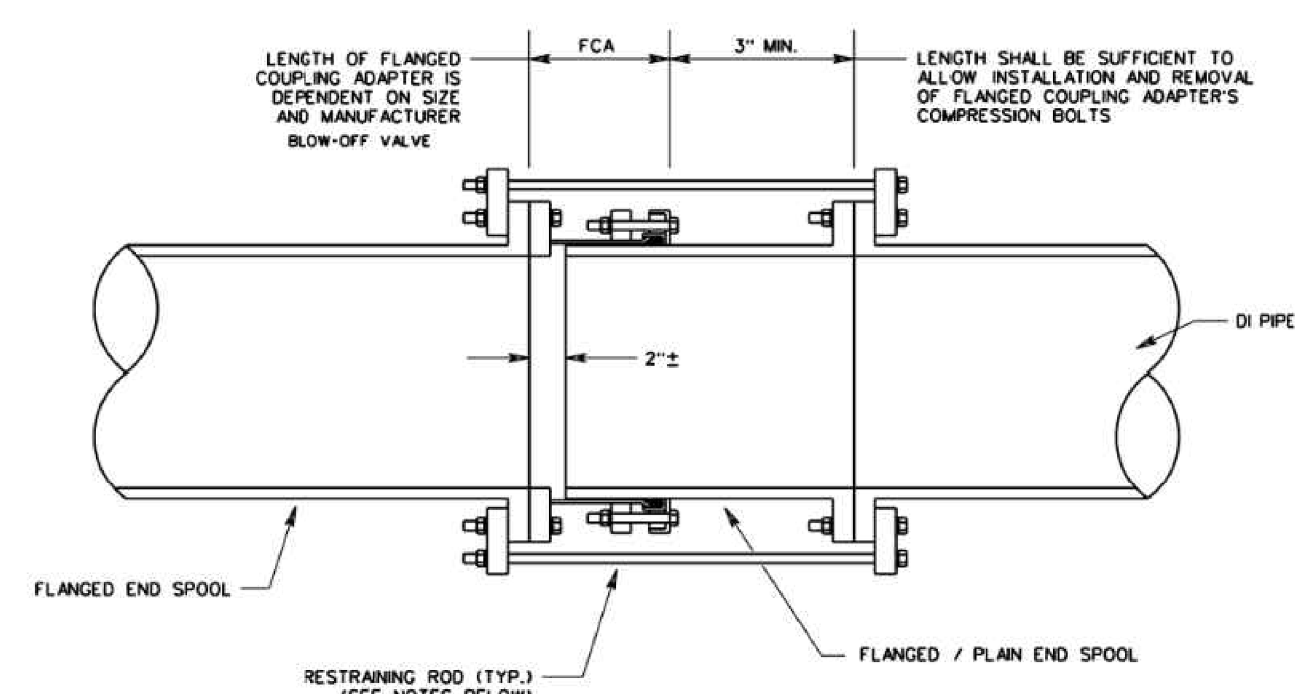
KEY NOTES:

- PRESSURE GAUGE SHALL BE RATED FOR CORROSIVE SERVICE
- 4" DIAL SIZE
- GRADE 1A
- LIQUID FILLED
- TYPE 316 STAINLESS STEEL BOURDON TUBE
- FULL BLOWOUT PROTECTION
- GLASS SAFETY LENS
- PRESSURE RATING: -30 inHG TO 100 PSI



PRESSURE GAUGE INSTALLATION DETAIL

SCALE: NTS



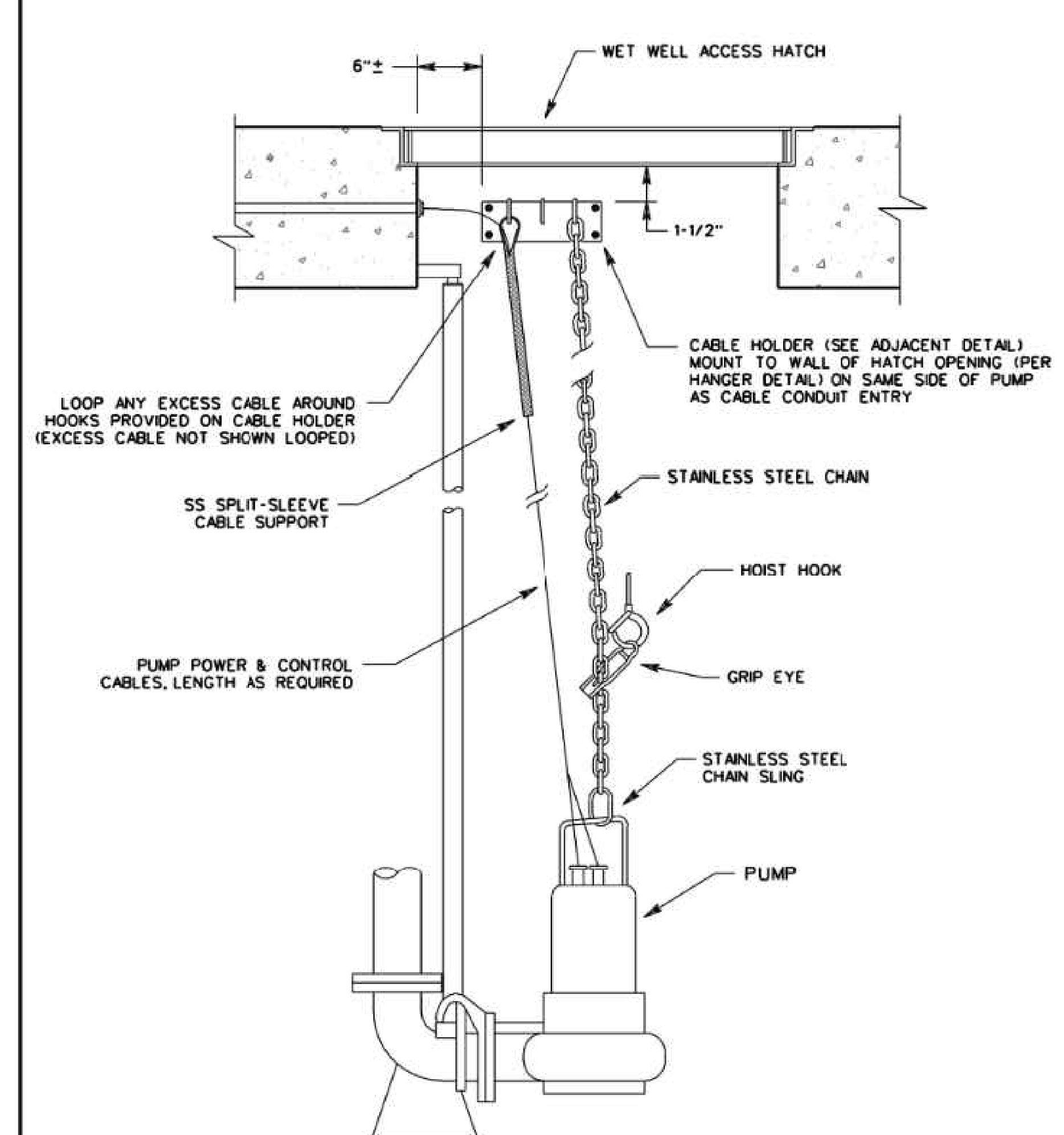
NOTES:

1. PROVIDE THRUST/RESTRAINING RODS IN ACCORDANCE WITH THE ADJACENT RESTRAINING ROD DETAIL. LENGTH OF RODS TO BE DETERMINED BY CONTRACTOR BASED ON SIZE/MANUFACTURE OF FLANGED COUPLING ADAPTOR AND FINAL LENGTH OF SPOOL PIECE.

2. THIS RESTRAINT DOES NOT REPLACE THRUST BLOCKS TO BE PROVIDED AT OTHER LOCATIONS.

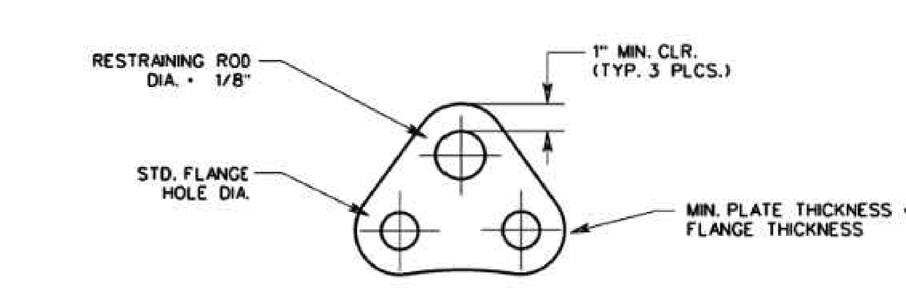
FLANGED COUPLING ADAPTER RESTRAINT

N.T.S.

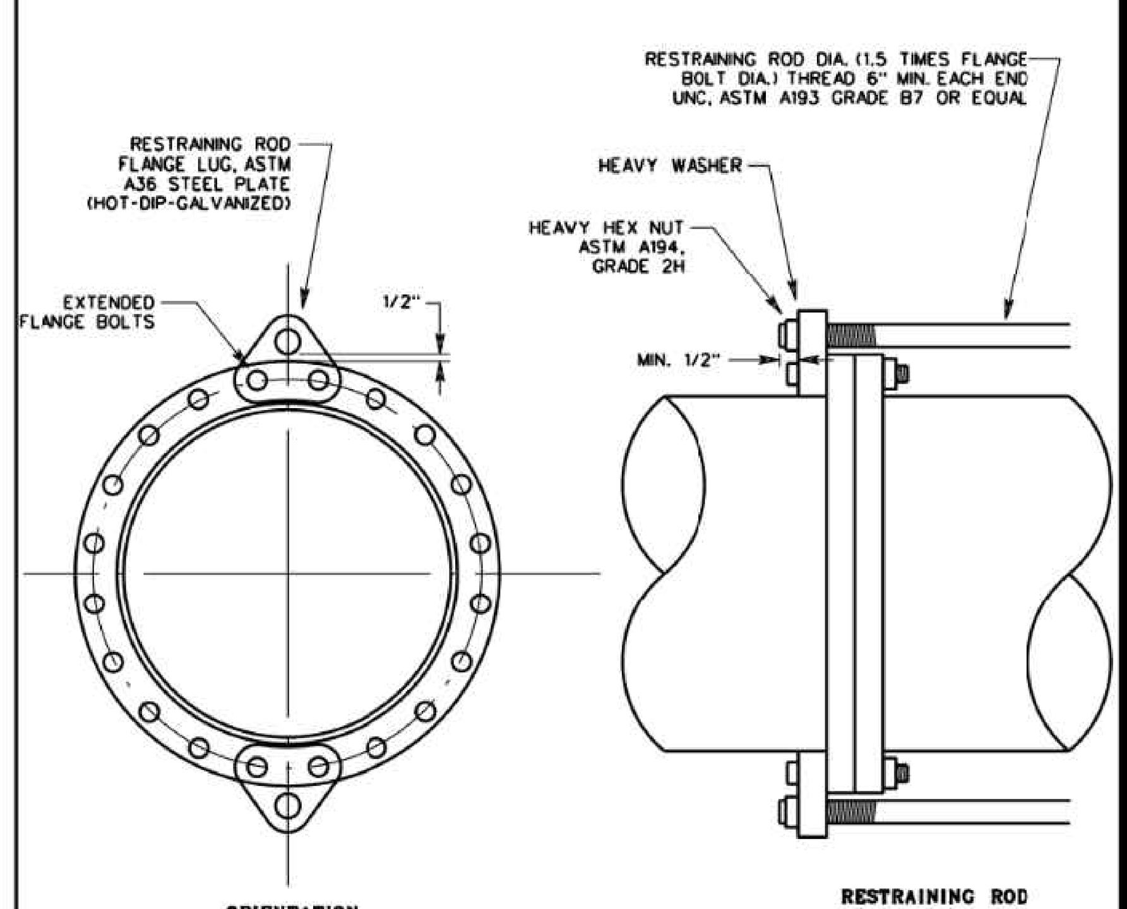


PUMP LIFTING & CABLING DETAIL

N.T.S.



RESTRAINING ROD LUG



RESTRAINING ROD

N.T.S.

NO. | REVISION | DATE

09-23-2024

STATE OF TEXAS
HARRY B. WALKER
82788
LICENSED

PAPE-DAWSON ENGINEERS
10350 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10193974

CLARA VISTA

LIFT STATION & FORCE MAIN
LIFT STATION MECHANICAL DETAILS

PLAT NO. CP-22-0144
JOB NO. 51456-10
DATE MAY 2024
DESIGNER HBW
CHECKED HBW DRAWN LDH

LS M2

9/23/2024 12:21:02 PM
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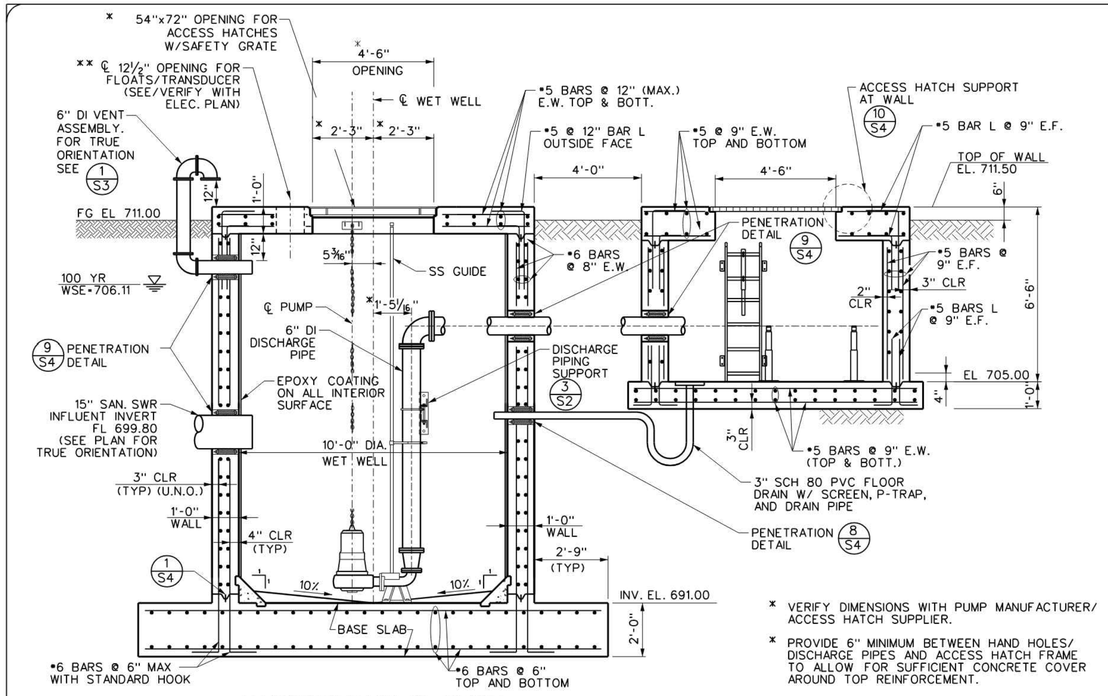
CP-22-0144

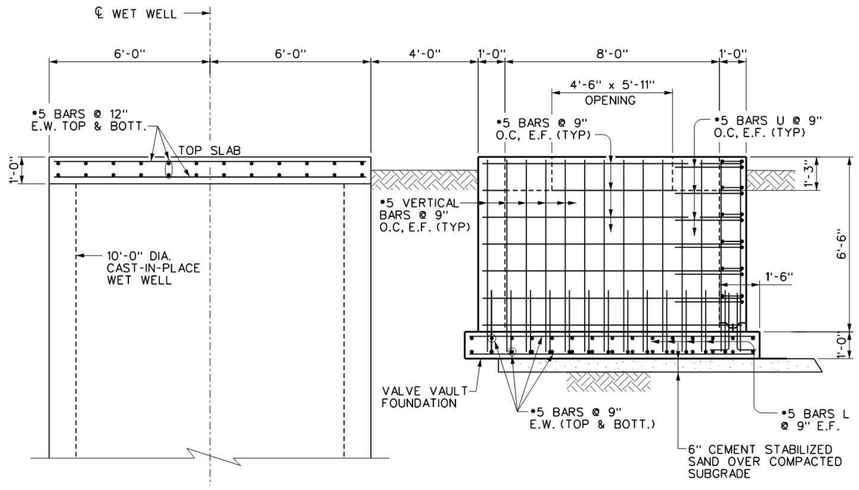


1. ELEVATION (CAST - IN - PLACE)

SCALE: 3/8" = 1'-0"

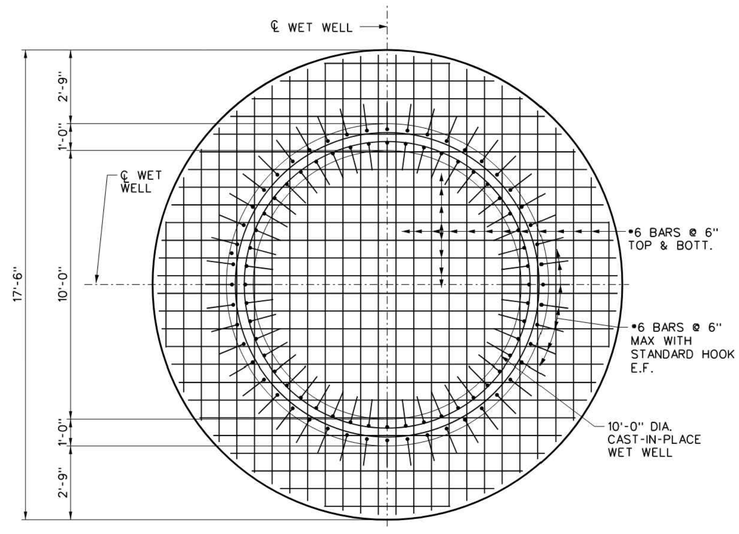
* VERIFY DIMENSIONS WITH PUMP MANUFACTURER/ ACCESS HATCH SUPPLIER.

* PROVIDE 6" MINIMUM BETWEEN HAND HOLES/ DISCHARGE PIPES AND ACCESS HATCH FRAME TO ALLOW FOR SUFFICIENT CONCRETE COVER AROUND TOP REINFORCEMENT.



2. VALVE VAULT WALL ELEVATION

SCALE: 3/8" = 1'-0"



3. FOUNDATION PLAN (CAST - IN - PLACE)

SCALE: 3/8" = 1'-0"

GENERAL NOTES:

1. SEE SHEET S2, S3, & S4 FOR ADDITIONAL STRUCTURAL DETAILS.
2. SEE SHEET S2 FOR ADDITIONAL STRUCTURAL NOTES.
3. CONTRACTOR TO CONFIRM SIZE AND LOCATION OF THE ACCESS HATCH OPENINGS PER SELECTED HATCH AND PUMP MANUFACTURERS' REQUIREMENTS.
4. DIMENSIONS NOTED ARE RELATIVE TO THE PUMP SIZE AND MANUFACTURER SELECTED. CONTRACTOR SHALL CONFIRM.
5. SEE ELECTRICAL DRAWINGS AND CIVIL DRAWINGS FOR DIMENSIONS AND INFORMATION NOT SHOWN.
6. THE INTERIOR WET WELL AND INTERIOR VALVE VAULT SHALL BE COATED WITH AN EPOXY AS SPECIFIED. PRIOR TO COATING, SURFACES SHALL BE FREE OF ALL LATENT MATTER, BURRS AND FINS. INSIDE CONCRETE SURFACE OF WET WELL SHALL BE WASHED WITH 10 PERCENT SOLUTION OF MURIATIC ACID, THEN RINSED CLEAN WITH FRESH WATER AND FINALLY, THOROUGHLY DRIED RESULTING IN A FINISHED SURFACE BEING FREE OF SCALE, DUST, OIL, GREASE, AND OTHER FOREIGN MATTER. IF THIS SURFACE COATING PREPARATION CONFLICTS WITH THE MANUFACTURER RECOMMENDATIONS, THEN THE MANUFACTURE RECOMMENDATIONS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO BEGINNING WORK.
7. IF CAISSON METHOD IS USED, DOWEL BARS WILL REQUIRE DOWEL SPLICERS OR AFTER CASTING, DRILL AND EPOXY WITH 12" MIN. EMBEDMENT (USE HILTI HIT-RE 500 V3). CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AND CALCULATIONS SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE STATE OF TEXAS.
8. THESE PLANS ARE INTENDED TO DESCRIBE THE GENERAL REQUIREMENTS FOR THIS PROJECT. NOT ALL CONDITIONS ARE SPECIFICALLY DETAILED. CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL ITEMS REQUIRED FOR A COMPLETE AND FINISHED PRODUCT.
9. THE NOTES CONTAINED HEREWITH CORRESPOND TO THE STRUCTURAL WORK CONTAINED IN THIS PROJECT. CONSTRUCTION NOTES PROVIDED IN OTHER SHEETS RELATE TO THE PORTION OF THE WORK ON THOSE SHEETS.
10. CONTRACTOR SHALL VERIFY EQUIPMENT AND MEMBER SIZES AND ACTUAL DIMENSIONS AND ACCOMMODATE THE CONSTRUCTION WORK TO ALLOW A PROPER FIT OF SAID COMPONENTS WITH THE PROPOSED STRUCTURES FOR WHICH SAID COMPONENTS WILL BE INSTALLED.
11. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES AND/OR POTENTIAL CONFLICTS WITH OTHER COMPONENTS OF THE CONSTRUCTION WORK, SUPPORTS, OR EQUIPMENT.
12. CONTRACTOR SHALL COMPLY WITH OSHA REGULATIONS AND STATE OF TEXAS LAW CONCERNING EXCAVATION, TRENCHING AND SHORING.
13. ALL MATERIAL & EQUIPMENT SHALL BE APPROVED THROUGH THE SHOP DRAWING SUBMITTAL PROCESS.
14. CONTRACTOR SHALL LOCATE PIPE OPENINGS THROUGH STRUCTURE ACCOUNTING FOR PIPE SIZE, FLANGE, AND BENDS.

NO.	REVISION	DATE

STATE OF TEXAS
JOHN C. KIME, JR
93010
LICENSED PROFESSIONAL ENGINEER
SURVEYOR
John C. Kime
Digitally signed by John C. Kime
DN: cn=jkime@pape-dawson.com, o=Pape-Dawson Engineers, ou=John Charles Kime Jr
Date: 2024.09.27 15:22:59 -05'00'

PAPE-DAWSON ENGINEERS
10350 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM # 10193974

CLARA VISTA
LIFT STATION & FORCE MAIN

STRUCTURAL
ELEVATION AND DETAILS

PLAT NO. CP-22-0144
JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER JCK
CHECKED - DRAWN LNV

LS S1

SHEET 36 OF 48

CP-22-0144

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STRUCTURAL NOTES FOR LIFT STATION

FOUNDATION NOTES:

1. ALL EXCAVATIONS SHALL BE CONDUCTED IN THE DRY, AND PROVISIONS MADE TO PREVENT THE BOTTOM OF ALL EXCAVATIONS FROM FREEZING OR FLOODING.
2. EXCAVATION MAY BE PERFORMED WITH CONVENTIONAL EXCAVATION EQUIPMENT, PREFERABLY WITH A SMOOTH-MOUTH BUCKET. IF TOOTHED BUCKET IS USED, EXCAVATION WITH THIS EQUIPMENT SHALL BE STOPPED 6" ABOVE THE FINAL GRADE AND EXCAVATION COMPLETED WITH SMOOTH-MOUTHED BUCKET OR SMOOTH LOADER. SOIL PREPARATION AT THE BOTTOM OF THE WET WELL SHALL BE AS FOLLOWS: (1) AFTER EXCAVATION, THE SUBGRADE SHALL BE COMPACTED TO PROVIDE A UNIFORMLY STABLE AND COMPACTED BOTTOM, AND (2) A MINIMUM OF 4-INCH LEAN CONCRETE MUD SLAB SHALL THEN BE PLACED IMMEDIATELY TO PREVENT THE DISTURBANCE OF THE SUPPORTING SOIL CAUSED BY CONSTRUCTION.
3. GROUNDWATER CONTROL MAY BE REQUIRED FOR INSTALLATION OF THE LIFT STATION. CONTRACTOR SHALL PROVIDE POSITIVE METHODS OF GROUNDWATER MANAGEMENT PRIOR TO STARTING EXCAVATION OPERATIONS. IF REQUIRED, GROUNDWATER SHALL BE LOWERED AT LEAST 3 FEET BELOW THE BOTTOM OF THE EXCAVATION TO PROVIDE A FIRM WORKING SURFACE. IF REQUIRED, DEWATERING SHALL CONTINUE UNTIL THE UTILITY INSTALLATION HAS BEEN COMPLETED AND THAT THE DEWATERING SYSTEM BE TURNED OFF IN STAGES TO ALLOW GROUNDWATER TO RECOVER TO ITS ORIGINAL LEVEL GRADUALLY, OVER A PERIOD OF ABOUT 3 TO 5 DAYS.
4. BENEATH THE VAULT FLOOR OR PIPE SLAB FOUNDATION, CEMENT STABILIZED SAND, HAVING A MINIMUM UNCONFINED COMPRESSIVE STRENGTH OF 100 PSI IN 48-HOURS, SHALL BE USED TO A MINIMUM DEPTH OF 6 INCHES. ALSO, USE CEMENT STABILIZED SAND BACKFILL BENEATH AND OUTSIDE THE INFLUENT LINES FROM LIMITS OF LIFT STATION EXCAVATION. ANY OVER EXCAVATION BEYOND THE 6-INCH DEPTH FOR FOUNDATION SHALL BE BACKFILLED WITH CEMENT STABILIZED SAND.
5. IF OPEN CUT CONSTRUCTION IS USED, BACKFILL BEHIND WALLS SHALL CONSIST OF A SANDY CLAY SOIL WITH A PLASTICITY INDEX BETWEEN 7 AND 15, AND COMPACTED IN 8-INCH LIFTS TO 95% ASTM D698 WITHIN -2% TO +2% OF OPTIMUM MOISTURE. BACK FILL PLACED WITHIN 5 FEET OF THE WALLS SHALL BE HAND COMPACTED.
6. IF CAISSON CONSTRUCTION IS USED, THE AREA AROUND THE ENTIRE STRUCTURE SHALL BE WELL GRADED TO DRAIN AWAY FROM THE STRUCTURE WITHOUT DRAINING TO ADJACENT PROPERTIES.

CONCRETE NOTES:

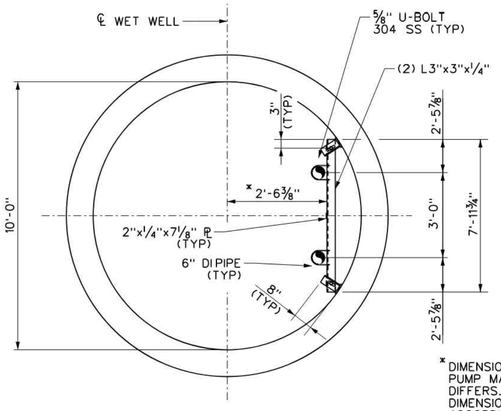
1. ALL REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60. ARRANGEMENT AND DETAILS OF REINFORCING STEEL, INCLUDING BAR SUPPORTS AND SPACERS, SHALL BE IN ACCORDANCE WITH THE LATEST ACI DETAILING MANUAL, UNLESS OTHERWISE NOTED.
2. ALL SLAB AND BEAM REINFORCEMENT SHALL HAVE A MINIMUM EXTENSION INTO THE SUPPORT IN ACCORDANCE WITH THE LATEST ACI CODE. IF SUCH EXTENSION IS NOT POSSIBLE, BARS SHALL TERMINATE IN STANDARD HOOKS.
3. HORIZONTAL WALL REINFORCEMENT AND TEMPERATURE REINFORCEMENT SHALL LAP A MINIMUM OF 1.7Ld AT SPLICES. WALL DOWELS AND WALL BAR EXTENSIONS AND ALL STRESS SPLICES SHALL LAP A MINIMUM OF 1.7 Ld, UNLESS OTHERWISE NOTED.
4. UNLESS OTHERWISE NOTED ON THE CONSTRUCTION PLANS, ALL CAST-IN-PLACE STRUCTURAL CONCRETE SHALL BE CLASS A CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI @ 28 DAYS.
5. UNLESS OTHERWISE SHOWN, CONCRETE COVER FOR REINFORCEMENT PER SPECIFICATIONS SECTION ENTITLED, "CONCRETE REINFORCEMENT".
6. HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS SHOWN OR NOTED ON THE PLANS ARE RECOMMENDED. ANY DEVIATION FROM THOSE SHOWN SHALL HAVE APPROVAL OF THE ENGINEER.
7. ANY STOP IN FRAMED CONCRETE WORK MUST BE MADE IN THE CENTER OF THE SPAN AND INCORPORATE AN APPROVED KEYWAY. REINFORCEMENT SHALL EXTEND THROUGH THESE JOINTS IF REQUIRED FOR CONTINUITY.
8. ALL EXPOSED EDGES OF BEAMS, COLUMNS, SLABS AND WALLS SHALL BE CHAMFERED ¾" UNLESS MASONRY OR OTHER MEMBERS ARE ERECTED FLUSH WITH THEM.
9. REFER TO PROCESS, MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL SLEEVES, PIPES, CONDUITS AND MISCELLANEOUS ANCHORING DEVICES TO BE INCORPORATED IN THE CONSTRUCTION.

MISCELLANEOUS NOTES:

1. EPOXY GROUT SHALL BE POR-ROK EPOXY GROUT, OR APPROVED EQUAL.
2. PROVIDE CONTINUOUS WATER STOPS IN ALL CONSTRUCTION JOINTS. WATERSTOPS SHALL BE THERMOPLASTIC VULCANIZATE WATERSTOPS BY EARTH SHIELD OR APPROVED EQUAL.
3. CONTRACTOR SHALL LOCATE PIPE OPENINGS THROUGH STRUCTURE ACCOUNTING FOR PIPE SIZE, FLANGES AND BENDS.
4. ALL DIMENSIONS AND LOCATIONS SHALL BE VERIFIED FROM CERTIFIED VENDOR DRAWINGS, PRIOR TO CONSTRUCTION.
5. DOWEL BARS WILL REQUIRE DOWEL SPLICERS OR, AFTER CASTING, DRILL & EPOXY w/12" MIN. EMBEDMENT. (USE HILTI HIT-RE 500 V3).

STRUCTURAL STEEL NOTES:

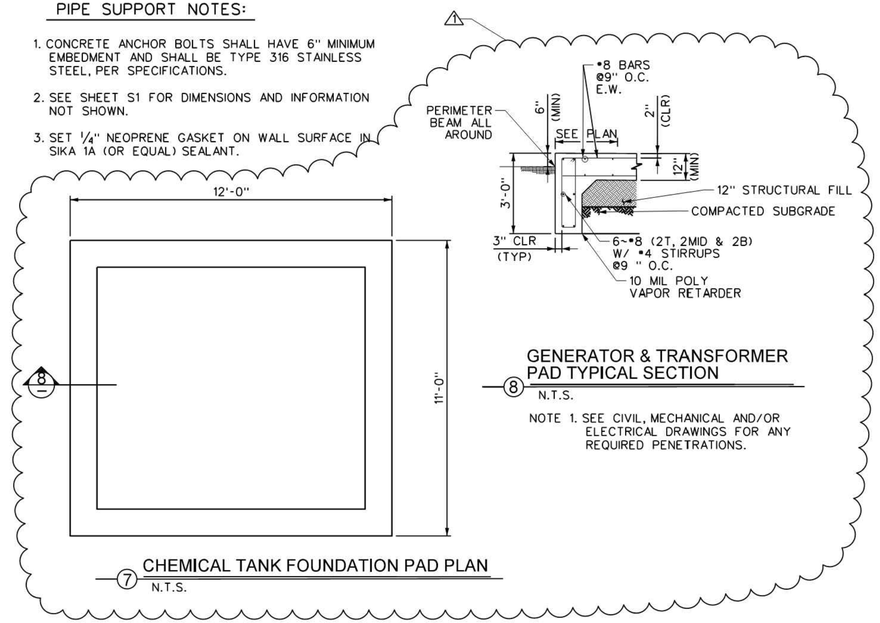
1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS". ALL STRUCTURAL STEEL SHALL BE ASTM A36, ALL STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED, UNLESS OTHERWISE NOTED.
2. ALL BOLTED CONNECTIONS SHALL BE MADE WITH 3/4-INCH DIAMETER ASTM A-325 S.S. BOLTS EXCEPT AS OTHERWISE SHOWN OR NOTED.
3. FIELD CONNECTIONS SHALL BE BOLTED, EXCEPT AS OTHERWISE SHOWN OR NOTED.
4. ALL WELDING SHALL CONFORM TO THE LATEST SPECIFICATION OF THE AMERICAN WELDING SOCIETY. ALL WELDED CONNECTIONS SHALL BE MADE WITH AWS A5.1 OR A5.5 E70 18 ELECTRODE.
5. ALL ANCHOR BOLTS & MISC. EMBEDDED STEEL SHALL BE STAINLESS STEEL SS316.



1. DISCHARGE PIPING SUPPORT PLAN
N.T.S.

PIPE SUPPORT NOTES:

1. CONCRETE ANCHOR BOLTS SHALL HAVE 6" MINIMUM EMBEDMENT AND SHALL BE TYPE 316 STAINLESS STEEL, PER SPECIFICATIONS.
2. SEE SHEET S1 FOR DIMENSIONS AND INFORMATION NOT SHOWN.
3. SET 1/4" NEOPRENE GASKET ON WALL SURFACE IN SIKA 1A (OR EQUAL) SEALANT.

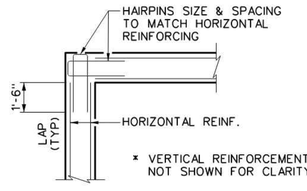


GENERATOR & TRANSFORMER PAD TYPICAL SECTION
8 N.T.S.

NOTE 1. SEE CIVIL, MECHANICAL AND/OR ELECTRICAL DRAWINGS FOR ANY REQUIRED PENETRATIONS.

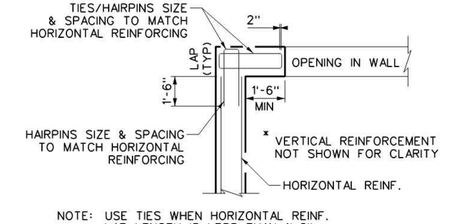
CHEMICAL TANK FOUNDATION PAD PLAN
7 N.T.S.

x DIMENSION TO BE VERIFIED WITH PUMP MANUFACTURER IF DIMENSION DIFFERS. ALL PIPE SUPPORT DIMENSIONS SHALL BE ADJUSTED ACCORDINGLY.



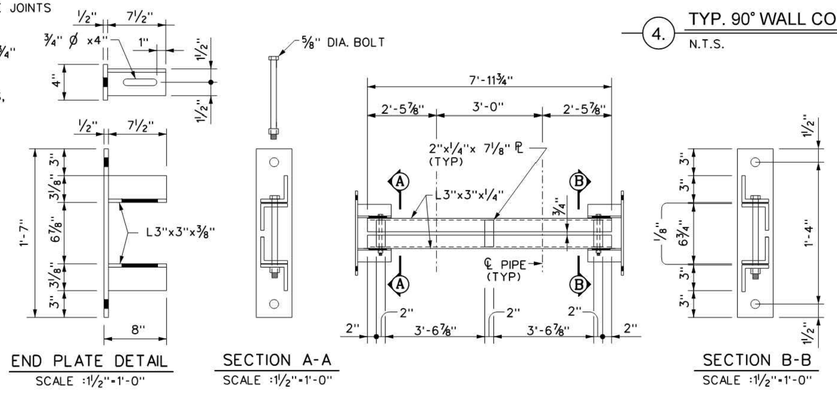
NOTE: USE TIES WHEN HORIZONTAL REINF. LAP LENGTH IS LESS THAN 1'-6".

4. TYP. 90° WALL CORNER DETAILS
N.T.S.



NOTE: USE TIES WHEN HORIZONTAL REINF. LAP LENGTH IS LESS THAN 1'-6".

5. TYP. 90° WALL CORNER DETAILS AT OPENING
N.T.S.

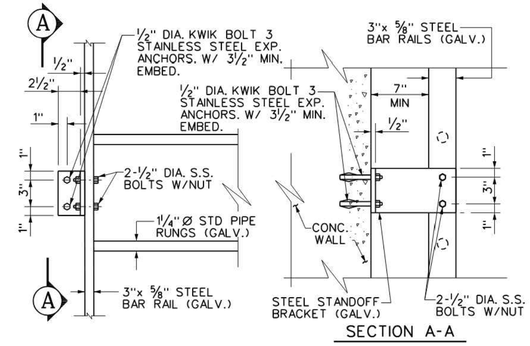


END PLATE DETAIL
SCALE :1½"=1'-0"

SECTION A-A
SCALE :1½"=1'-0"

SECTION B-B
SCALE :1½"=1'-0"

3. DISCHARGE PIPING SUPPORT ELEVATION
N.T.S.



SECTION A-A

6. ACCESS LADDER ATTACHMENT TO WALL
N.T.S.

PAPE-DAWSON ENGINEERS
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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10193974

NO.	REVISION	DATE
1	ADDED FDN PAD	11/8/24

STATE OF TEXAS — JOHN C. KIME, JR — 93010 — LICENSED PROFESSIONAL ENGINEER

CLARA VISTA
LIFT STATION & FORCE MAIN
STRUCTURAL NOTES AND DISCHARGE PIPING DETAILS

PLAT NO. CP-22-0144
JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER JCK
CHECKED - DRAWN LNV
SHEET 37 OF 48

LS S2

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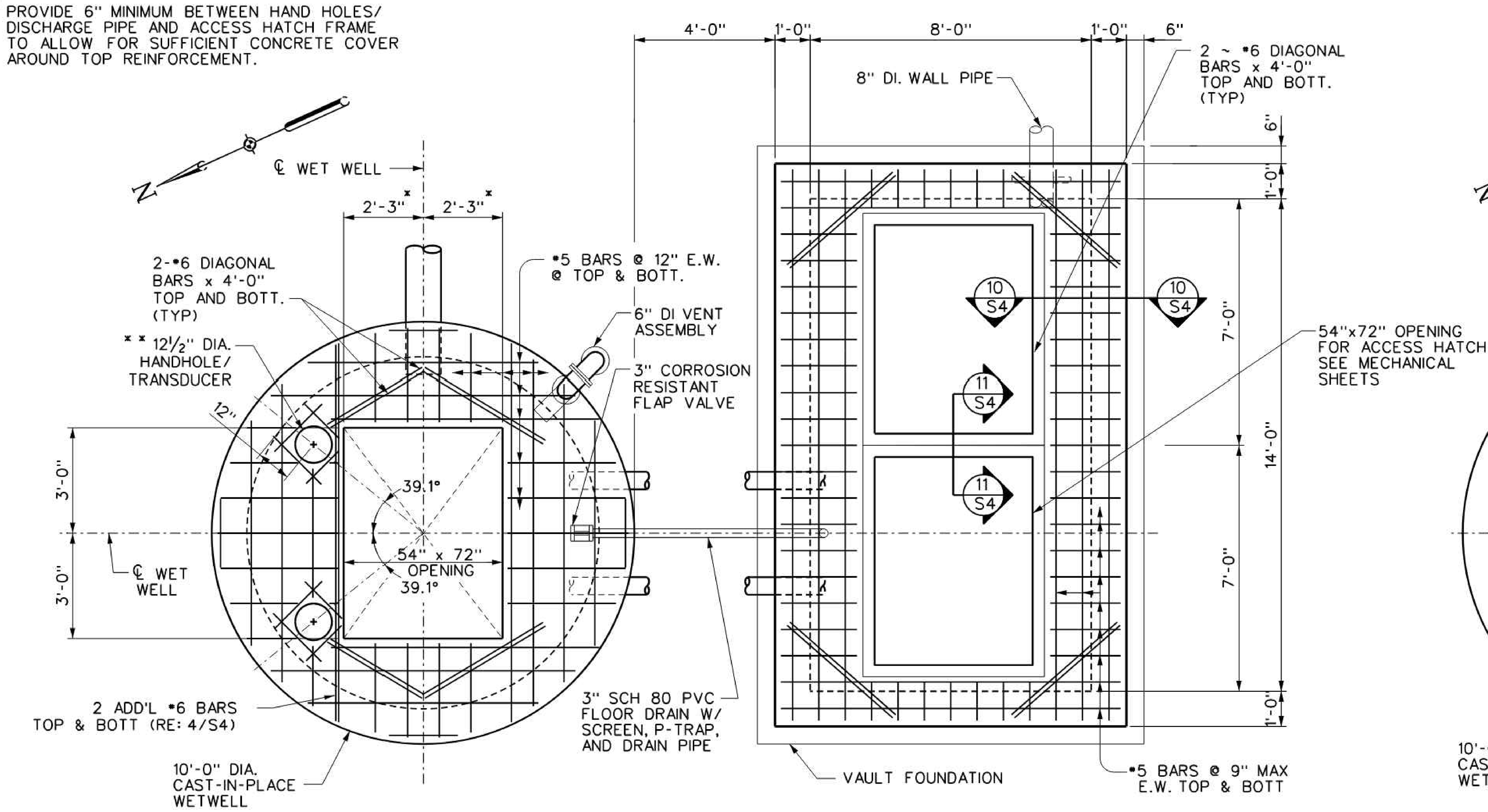
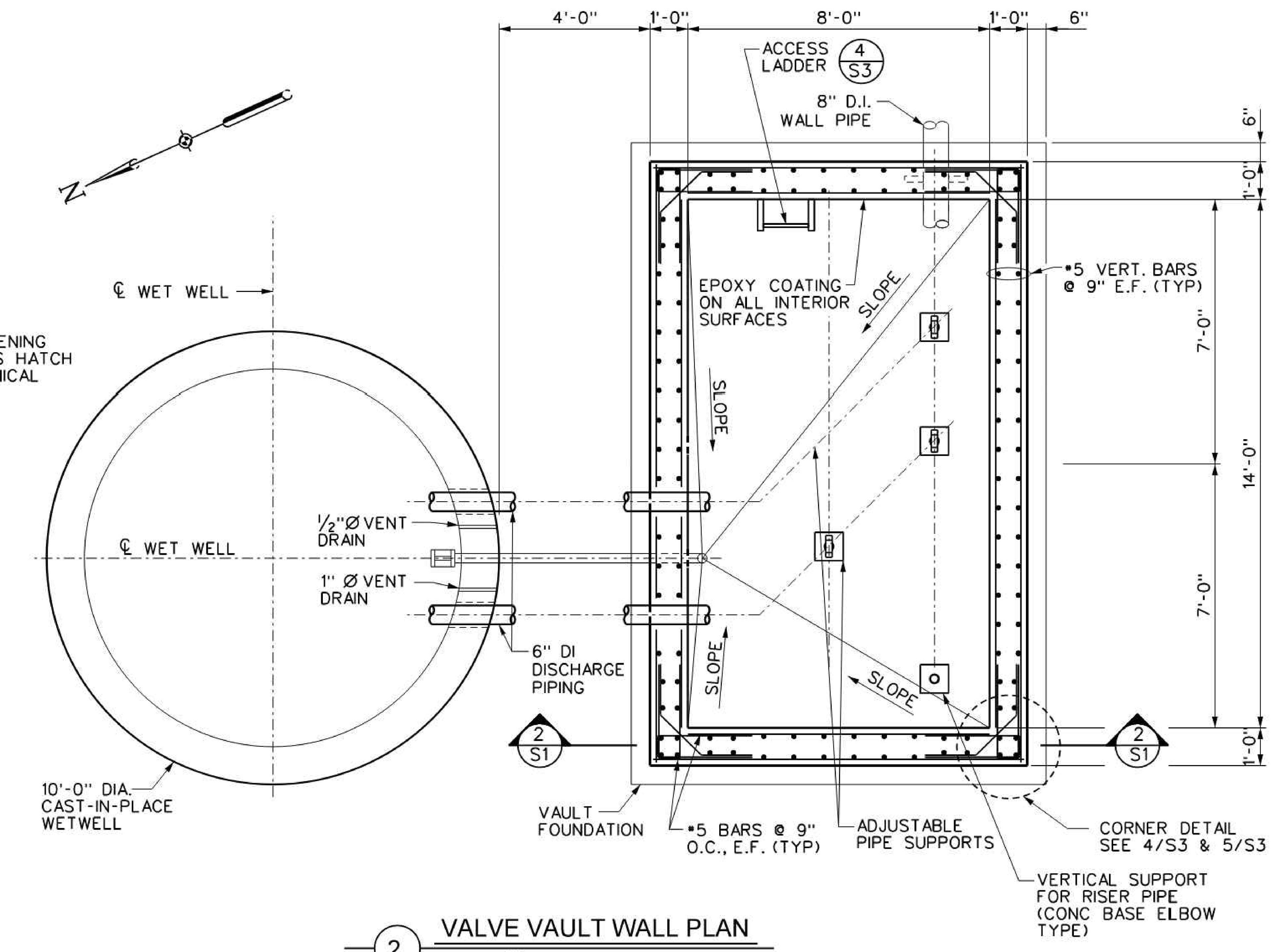
CP-22-0144

* VERIFY DIMENSIONS WITH PUMP MANUFACTURER/ ACCESS HATCH SUPPLIER.

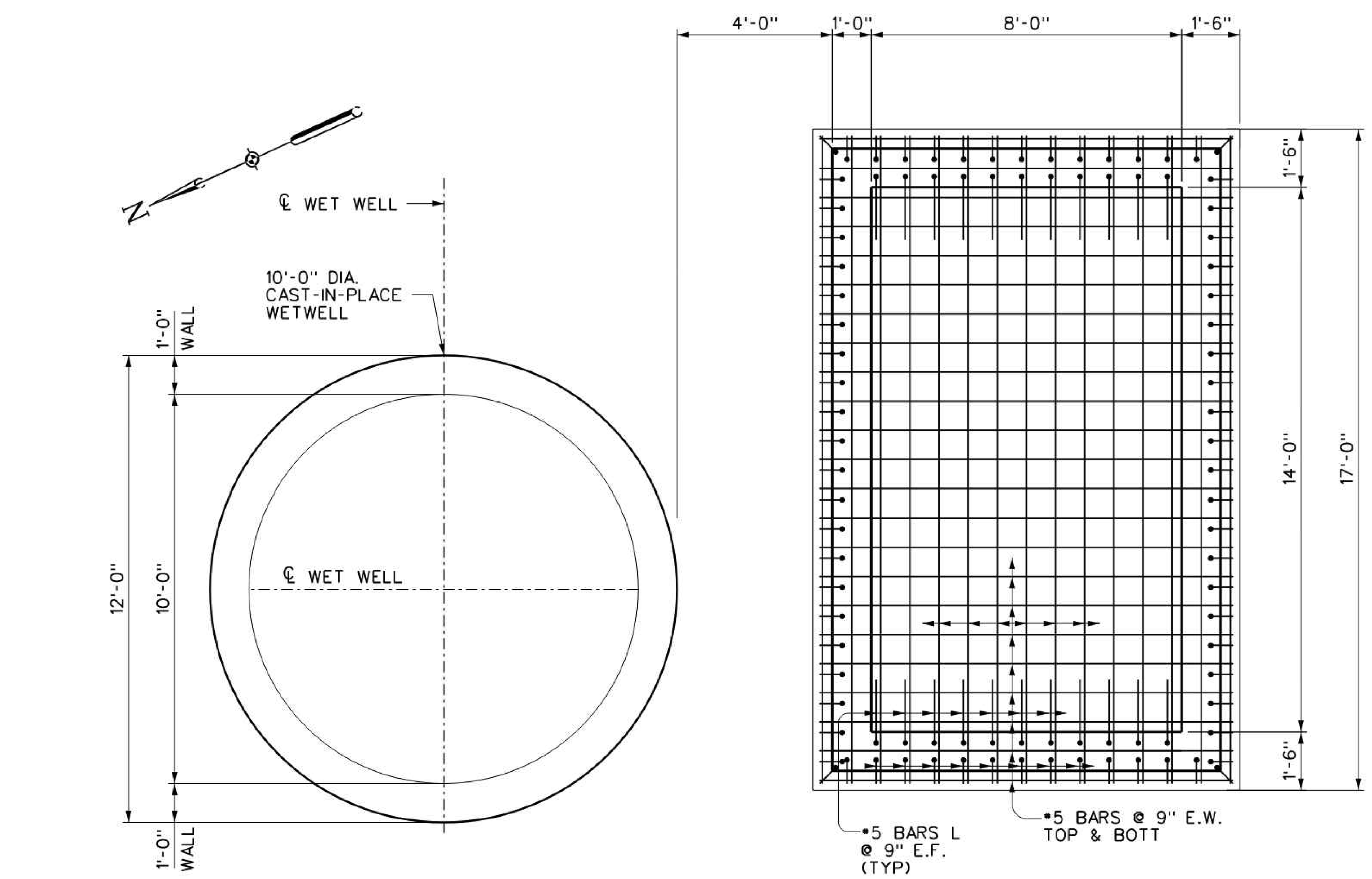
* PROVIDE 6" MINIMUM BETWEEN HAND HOLES/ DISCHARGE PIPE AND ACCESS HATCH FRAME TO ALLOW FOR SUFFICIENT CONCRETE COVER AROUND TOP REINFORCEMENT.



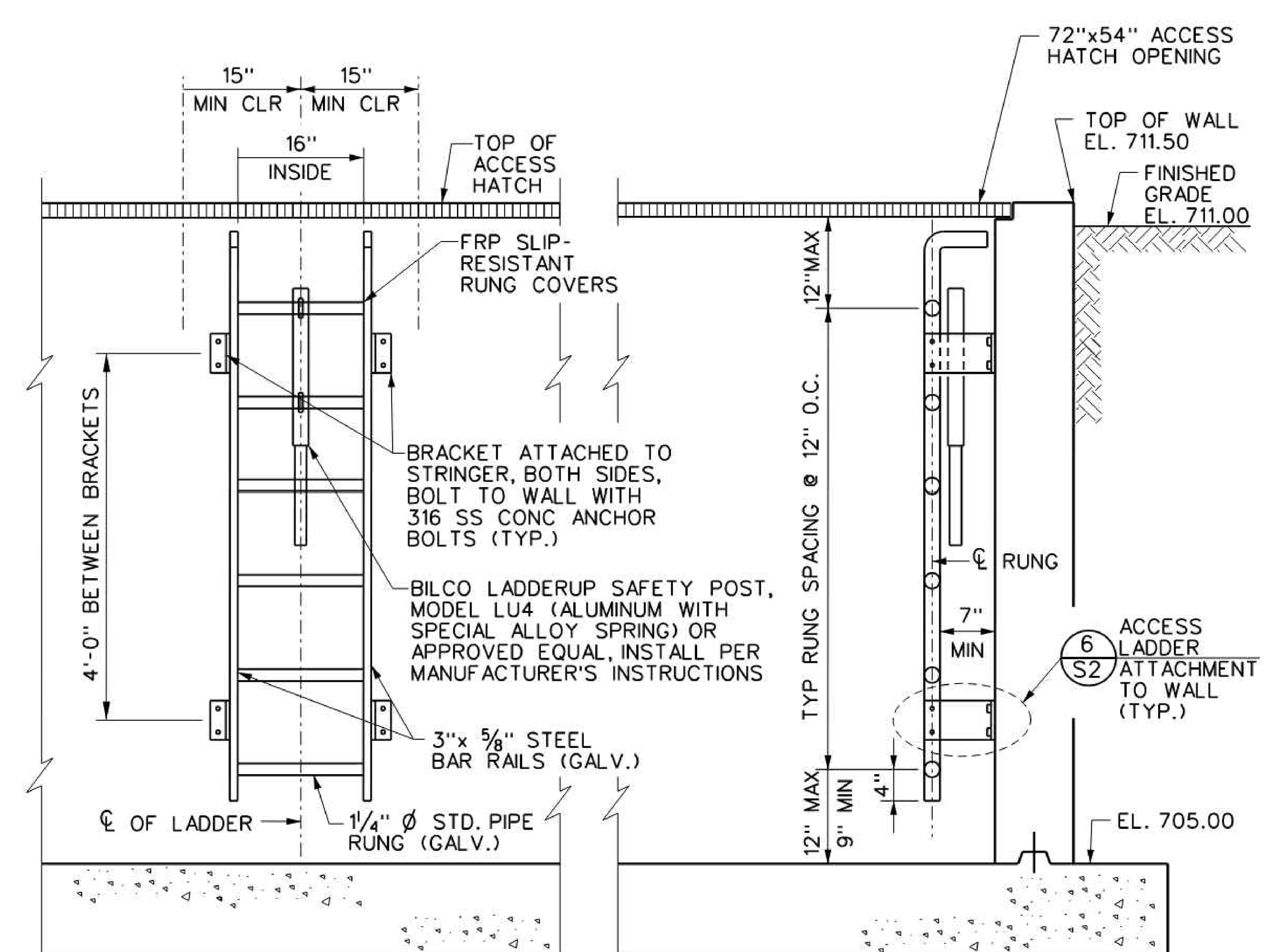
1. PLAN VIEW - TOP SLAB
SCALE: ⅜" = 1'-0"



2. VALVE VAULT WALL PLAN
SCALE: ⅜" = 1'-0"



3. PLAN VIEW - VAULT FLOOR
SCALE: ⅜" = 1'-0"



4. ENTRY ACCESS LADDER
N.T.S.

DATE | NO. | REVISION

JOHN C. KIME, JR. 93010 LICENSED PROFESSIONAL ENGINEER — STATE OF TEXAS

PAPE-DAWSON ENGINEERS
10350 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10193974

CLARA VISTA
LIFT STATION & FORCE MAIN
STRUCTURAL VALVE VAULT PLAN AND DETAILS

PLAT NO. CP-22-0144
JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER JCK
CHECKED - DRAWN LNV
SHEET 38 OF 48

LS S3

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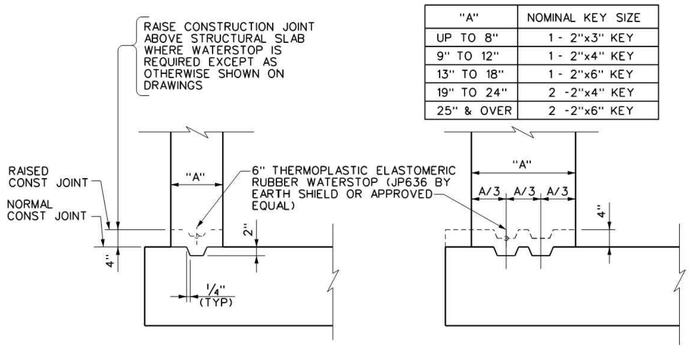
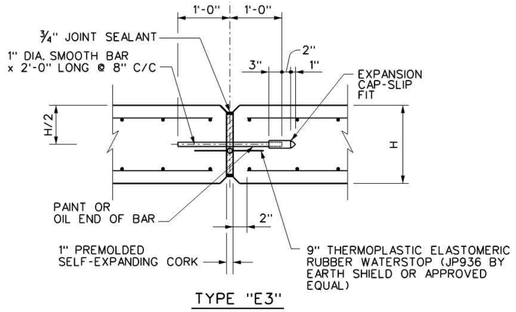


"A"	NOMINAL KEY SIZE
UP TO 8"	1 - 2"x3" KEY
9" TO 12"	1 - 2"x4" KEY
13" TO 18"	1 - 2"x6" KEY
19" TO 24"	2 -2"x4" KEY
25" & OVER	2 -2"x6" KEY

NUMBER AND SIZE OF KEYS SHOWN APPLY TO JOINTS IN SLABS AND TO BOTH VERTICAL AND HORIZONTAL JOINTS IN WALLS EXCEPT AS OTHERWISE NOTED ON DRAWINGS.

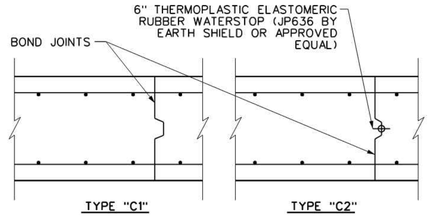
1. CONSTRUCTION JOINT KEY DETAILS
N.T.S.



TYPE "E3"

CHAMFER EXPANSION JOINTS IN WALLS AND CEILINGS FOR FLOOR JOINTS USE EDGER INSTEAD OF CHAMFERING

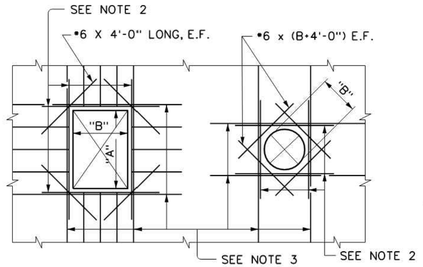
2. EXPANSION JOINT DETAILS
N.T.S.



IN JOINTS WITH MORE THAN ONE KEY, PLACE WATERSTOP IN KEY NEAREST TO SURFACE AGAINST EARTH OR WATER.

REINFORCING STEEL IS CONTINUOUS THROUGH CONSTRUCTION JOINT.

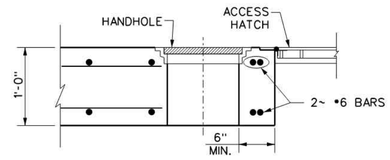
3. CONSTRUCTION JOINTS
N.T.S.



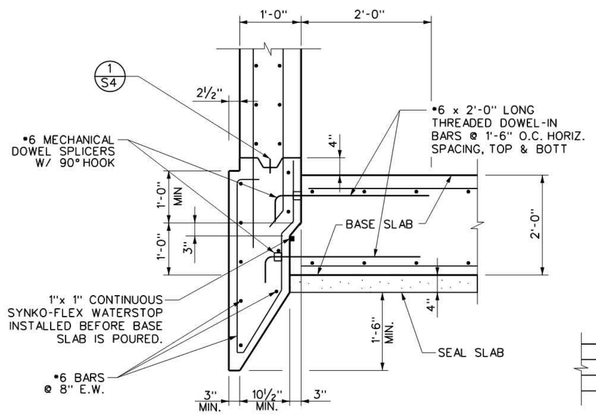
NOTES FOR DETAIL 7:

1. DETAILS SHOWN ON THIS DRAWING ARE TYPICAL DETAILS AND SHALL BE USED WHOLLY OR IN PART WHERE THEY APPLY EXCEPT WHERE MODIFIED BY DETAILED DRAWINGS & SPECIFICATIONS.
2. PROVIDE 2-#6 X (B+4'-0") ADDITIONAL REBARS @ TOP AND BOTTOM AND 2-#6 X (A+4'-0") ADDITIONAL REBARS AT EACH SIDE OF OPENING IN WALLS ONLY.
3. PROVIDE ADDL BARS EQUAL TO ONE-HALF OF BARS INTERRUPTED AT EACH SIDE OF OPENING AT 3" C/C. THESE BARS SHALL BE ORIGINAL SIZES AND LENGTHS AS THOSE OF THE INTERRUPTED BARS. (TYPICAL FOR OPENINGS IN SLABS AND PRESSURE WALLS.)

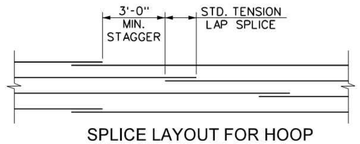
7. ADDITIONAL REINFORCING STEEL AT OPENINGS IN WALLS AND SLABS
N.T.S.



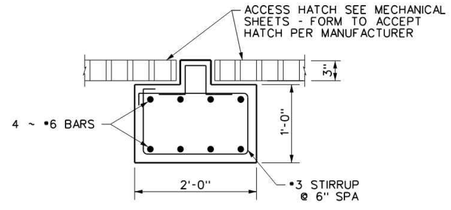
4. HANDHOLE/HATCH FRAME SECTION
N.T.S.



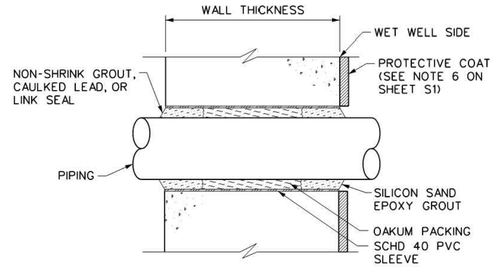
5. CAISSON METHOD TYP BASE DETAIL
N.T.S.



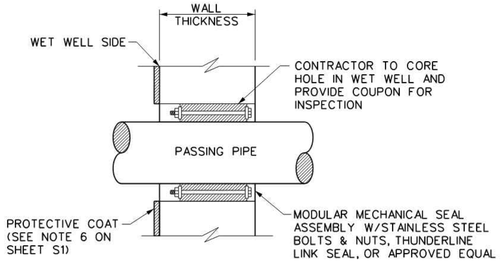
6. SPLICE LAYOUT FOR HOOP BARS (WET WELL WALL)
N.T.S.



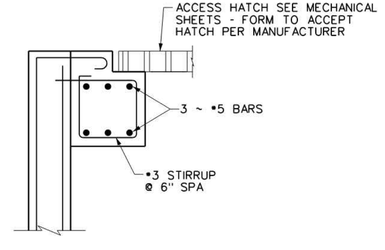
11. TYP. ACCESS HATCH SUPPORT AT CENTER OPENING
N.T.S.



8. SLEEVED WET WELL PENETRATION FOR PIPING 4" DIA. & SMALLER
N.T.S.



9. PENETRATION SEAL DETAIL FOR PIPING 6" DIA. & LARGER
N.T.S.



10. ACCESS HATCH SUPPORT FRAMING END CONNECTION DETAILS
N.T.S.

NO. REVISION | DATE

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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM # 10193974

CLARA VISTA
LIFT STATION & FORCE MAIN
MISCELLANEOUS
STRUCTURAL DETAILS

PLAT NO. CP-22-0144
JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER JCK
CHECKED - DRAWN LNV
SHEET 39 OF 48

LS S4

9/27/2024 11:33:58 AM
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CP-22-0144

ELECTRICAL PLAN LEGEND

SYMBOL	DESCRIPTION
	ABOVE GROUND CONDUIT
	UNDERGROUND CONDUIT
GND	GROUND CONDUCTOR
	GROUND WELL
	FLOODLIGHT
$	20A, LIGHT SWITCH IN WEATHER-PROOF FS BOX
PE	PHOTO ELECTRIC SWITCH
PS	PRESSURE SWITCH
FIT	FLOW INDICATING TRANSMITTER
TIT	TEMPERATURE INDICATING TRANSMITTER
WP GFCI	20A, 125V, GFI RECEPTACLE IN METAL-CLAD WEATHER PROOF WHILE-IN-USE COVER
J	JUNCTION BOX
R	ALARM BEACON
	WEATHERHEAD

ONE-LINE DIAGRAM LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
100AF 2P 50AT	MOLDED CASE CIRCUIT BREAKER		OILER HEATER WITH THERMOSTAT
	STARTER (SIZE NOTED)	MTS	MOTOR WINDING THERMOSTAT
HP	THREE-PHASE MOTOR (HORSEPOWER NOTED)		POWER FACTOR CORRECTION CAPACITOR
	ELECTRICAL GROUND	M	POWER QUALITY MONITOR
PFR	PHASE FAILURE RELAY	N/G	NEUTRAL/GROUND BOND
PS	PRESSURE SWITCH	ETM	ELAPSED TIME METER
OS	OILER SOLENOID	G	INDICATING LIGHT (COLOR AS SHOWN: G=GREEN, R=RED, A=AMBER, B=BLUE, W=WHITE
TIT	TEMPERATURE INDICATING TRANSMITTER	HOA	HAND-OFF-AUTO SWITCH
LS	LOCAL LOCK STOP	OA	OFF-AUTO SWITCH
TS	TEMPERATURE SWITCH	TD	TIME DELAY RELAY
VS	VIBRATION SWITCH	▲	ITEM LOCATED ON CONTROL PANEL SWING-OUT PANEL
	FLOW METER		
SPD	SURGE PROTECTIVE DEVICE		
	MOTOR SPACE HEATER		
A	SPECIAL DEVICE (SEE SCHEDULE THIS SHEET)		
SSOL	SOLID STATE OVERLOAD		

CONTROL DIAGRAM LEGEND

SYMBOL	DESCRIPTION
100AF 2P 50AT	MOLDED CASE CIRCUIT BREAKER
	SELECTOR SWITCH
	PUSH BUTTON
CR/TD	CONTROL/ TIME-DELAY RELAY - PLUG IN
CR CR	RELAY CONTACT (NORMALLY OPEN - NORMALLY CLOSED)
TD	TIME-DELAY RELAY CONTACT
M	MOTOR STARTER COIL
OL	MOTOR OVERLOAD
ETM	ELAPSED TIME METER
G	INDICATING LIGHT - LED TYPE - PUSH-TO-TEST (COLOR AS SHOWN: G=GREEN, R=RED, A=AMBER, B=BLUE, W=WHITE
	MOTOR SPACE HEATER
TS	TEMPERATURE SWITCH
FS F	FLOAT SWITCH
A	SPECIAL DEVICE (SEE SCHEDULE THIS SHEET)
▲	ITEM LOCATED ON CONTROL PANEL SWING-OUT PANEL

PROP PANEL LV

AMPS: 40A PRIMARY MCB/80A SECONDARY MCB
VOLTAGE: 240/120A
LOCATION: LIFT STATION
FED FROM: 15KVA XFMR
PHASE: 1
WIRE: 3
MOUNTING: SURFACE
MINIMUM AIC RATING: 10KAIC
BUSSING: COPPER
NEMA: 4XSS 316 STAINLESS STEEL

CKT	SERVICE DESCRIPTION	WIRE	BRKR	POLES	KVA	A	B	KVA	POLES	BRKR	WIRE	SERVICE DESCRIPTION	CKT
1	LIGHTS	12	20	1	0.5	0.7		0.2	1	20	12	POLE LIGHT	2
3	BLOCK HEATER	12	20	1	1.5		2.0	0.5	1	20	12	RTU	4
5	RECEPTACLE	12	20	1	0.5	1.0		0.5	1	20	12	AUTODIALER	6
7	BATTERY CHARGER	12	20	1	1.0		0.0	0.5	2	30	10	SPD	8
9	JIB CRANE	10	30	2	1.0	1.0		0.0				SPD	10
11	JIB CRANE				1.0		1.0	0.0	1	20	12	POWER QUALITY METER	12
13	TEMP PUMP	12	20	1	1.0	1.5		0.5	2	20	12	ODOR CONTROL	14
15	SPARE		20	1	0.0		2.0	0.5				ODOR CONTROL	16
17	SPARE		20	1	0.0	0.0		0.5	1	20		SPARE	18
19	SPARE		20	1	0.0		3.0	0.0	1	20		SPARE	20
21	SPARE		20	1	0.0	0.0		0.0	1	20		SPARE	22
23	SPARE		20	1	0.0		4.0	0.0	1	20		SPARE	24
					PHASE LOAD IN KVA:	4.2	12.0						
					PHASE LOAD IN AMPS:	35	100						

NOTE: SQUARE D MINI POWER-ZONE 15KVA/480V-120/240V

ABBREVIATIONS

#PDT - # POLE, DOUBLE THROW; WHERE # IS # OF POLES (S=SINGLE, D=DOUBLE)
A - AMPS OR AMPERES
ASP - AUTOSENSORY PANEL
BC - BARE COPPER
C - CONDUIT
CC - COPPER CLAD
CGB - CABLE GLAND BUSHING
CLR - CLEARANCE
CR - CONTROL RELAY
DTL - DETAIL
ETM - ELAPSED TIME METER
EW - EACH WAY
FG - FINISHED GRADE
FIN - FINISHED (AS IN FINISHED GRADE)
G; GND - GROUND
GSE - GROUNDING ELECTRODE SYSTEM
HDG - HOT DIPPED GALVANIZED
HTR - HEATER
M - MOTOR
MIN - MINIMUM
MLO - MAIN LUGS ONLY
MSH - MOTOR SPACE HEATER
NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N; NEU - NEUTRAL
NG - NEUTRAL/GROUND BOND
NTS - NOT TO SCALE
OC - OFF CENTER
OL - OVERLOAD
P - POLES
PFCC - POWER FACTOR CORRECTION CAPACITOR
PROP - PROPOSED
PVC - POLYVINYL CHLORIDE
RGS - RIGID GALVANIZED STEEL
SCH - SCHEDULE
SHT - SHEET
SPD - SURGE PROTECTIVE DEVICE
S.S.; STN STL - STAINLESS STEEL
TD - TIME DELAY RELAY
TYP - TYPICAL
V - VOLT/VOLTAGE
W/ - WITH
WIU - WHILE IN USE
WP - WEATHERPROOF OR WEATHER PROTECTED
GFCI - GROUND FAULT CIRCUIT INTERRUPTER

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL COMPLY WITH LOCAL AND NATIONAL CODES AND REQUIREMENTS.
2. CONDUITS SHALL NOT BE ROUTED ACROSS WALKWAYS, PATHS OF ACCESS, TRAVEL, OR EGRESS. ROUTE BENEATH GRATINGS, IN CONCRETE STRUCTURES, OR AROUND EQUIPMENT. DO NOT ROUTE IN CONFLICT WITH OTHER PIPING, CONDUITS, EQUIPMENT, OR STRUCTURES.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY AND ALL PERMITS ASSOCIATED WITH THE WORK. THE COSTS OR THE PERMITS, IF ANY, SHALL BE BORNE BY THE CONTRACTOR.
4. ALL POWER AND INSTRUMENTATION CONDUCTORS SHALL BE INSTALLED IN SEPARATE CONDUITS.
5. ALL EXTERIOR ABOVE GRADE CONDUIT SHALL BE PVC-COATED RIGID GALVANIZED STEEL CONDUIT. ALL MOUNTING HARDWARE SHALL BE STAINLESS STEEL.

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Richmond, TX 77407
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www.bgdeng.com
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Job No. 128-0051

NO.	REVISION	DATE

STATE OF TEXAS
GREGORY S. BAIRD
100260
LICENSED PROFESSIONAL ENGINEER
9/30/24

PAPE-DAWSON ENGINEERS
10350 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10193974

CLARA VISTA

LIFT STATION & FORCE MAIN
ELECTRICAL LEGENDS,
SCHEDULES, AND NOTES

PLAT NO. CP-22-0144
JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER LAF
CHECKED GSB DRAWN LAF

LS E1

9/30/2024 8:28 AM
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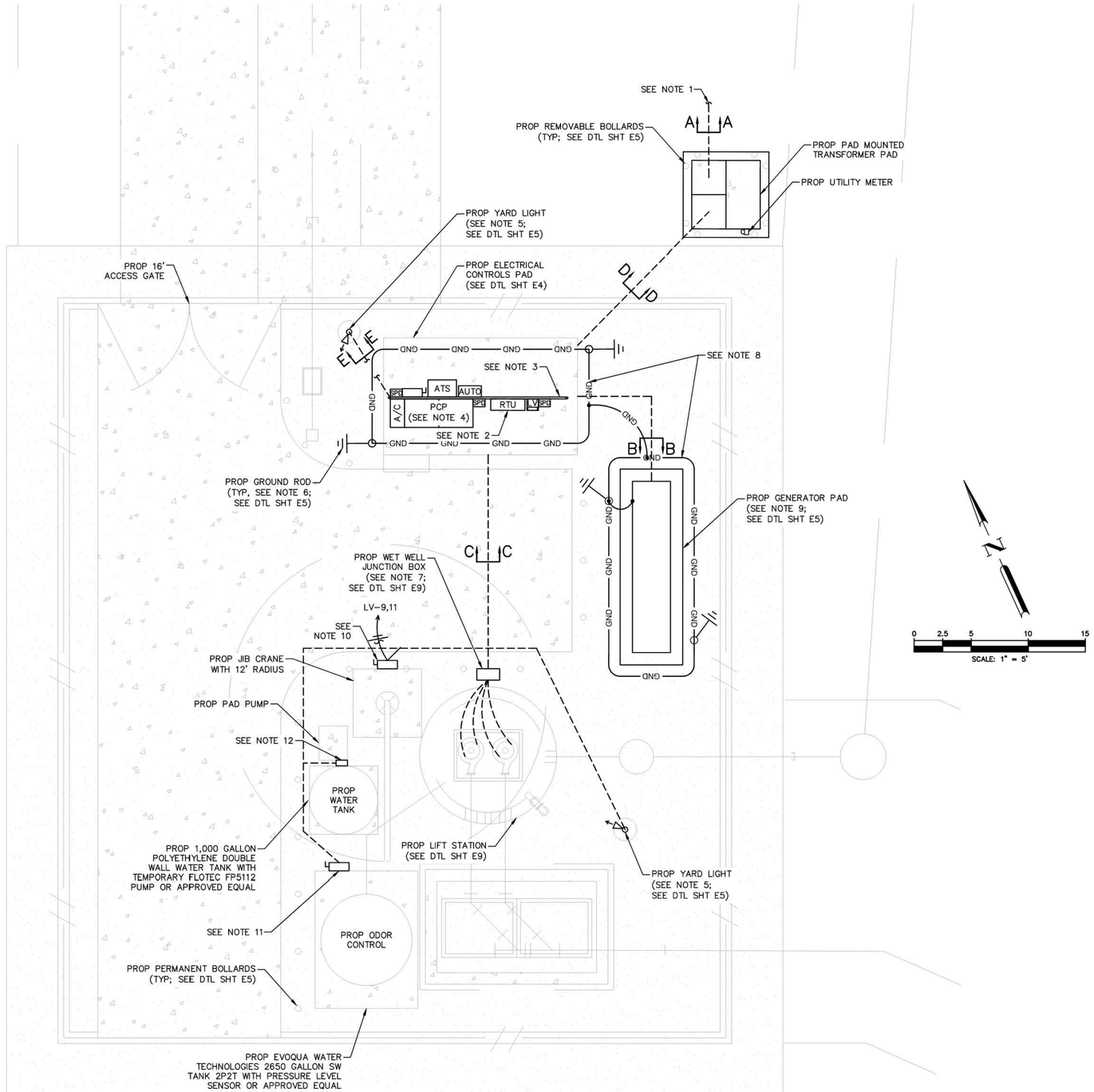

NOTES:

1. INSTALL NEW 400A, 277/480V, 3 PHASE 4 WIRE ELECTRIC SERVICE. CONTRACTOR TO COORDINATE WITH PEC. ELECTRICAL CONTRACTOR SHALL STUBOUT PRIMARY CONDUITS 10' FROM TRANSFORMER PAD.
2. RTU CABINET TO BE PROVIDED BY PRIME CONTROLS [CHAD KUNKEL–(214–475–4029)] OR TMT SOLUTIONS [TERRANCE SULLIVAN–512–392–9211].
3. PROVIDE AND INSTALL EQUIPMENT RACK. REFER TO SHEET E4.
4. PROVIDE AND INSTALL PUMP CONTROL PANEL. REFER TO SHEET E6 AND E4.
5. PROVIDE AND INSTALL LIGHT POLE. LIGHT FIXTURE SHALL BE CONTROLLED BY PHOTOCELL WITH BYPASS LIGHT SWITCH LOCATED ON SHELTER.
6. PROVIDE AND INSTALL GROUND RODS. REFER TO SHEET E5.
7. PROVIDE AND INSTALL WET WELL JUNCTION BOX. REFER TO SHEET E9.
8. PROVIDE AND INSTALL #3/0 BARE COPPER GROUNDING RING. BOND, EQUIPMENT RACKS AND GENERATOR SKID TO GROUNDING ELECTRODE SYSTEM VIA EXOTHERMIC WELD.
9. CONCRETE PAD FOR GENERATOR. ACTUAL SIZE MAY VARY PENDING SELECTION OF MANUFACTURE. CONTRACTOR TO SIZE ACCORDINGLY. REFER TO CIVIL PLANS. VERIFY AND COORDINATE EXACT LOCATION WITH CIVIL ENGINEER PRIOR TO INSTALLATION. REFER TO SHEET E5.
10. PROVIDE AND INSTALL 30A/2P/NF/N4XSS/600V DISCONNECT SWITCH FOR JIB CRANE.
11. PROVIDE AND INSTALL 30A/2P/NF/N4XSS/600V DISCONNECT SWITCH FOR ODOR CONTROL, TYPE SQUARE D OR EQUAL.
12. PROVIDE AND INSTALL 30A/2P/20AF/SZ0/N4XSS/250V COMBINATION STARTER TYPE SQUARE D OR EQUAL FOR TEMPORARY PUMP.

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CLARA VISTA
LIFT STATION & FORCE MAIN
ELECTRICAL SITE LAYOUT

PLAT NO. CP-22-0144
JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER LAF
CHECKED GSB DRAWN LAF
SHEET 41 OF 48

LS E2

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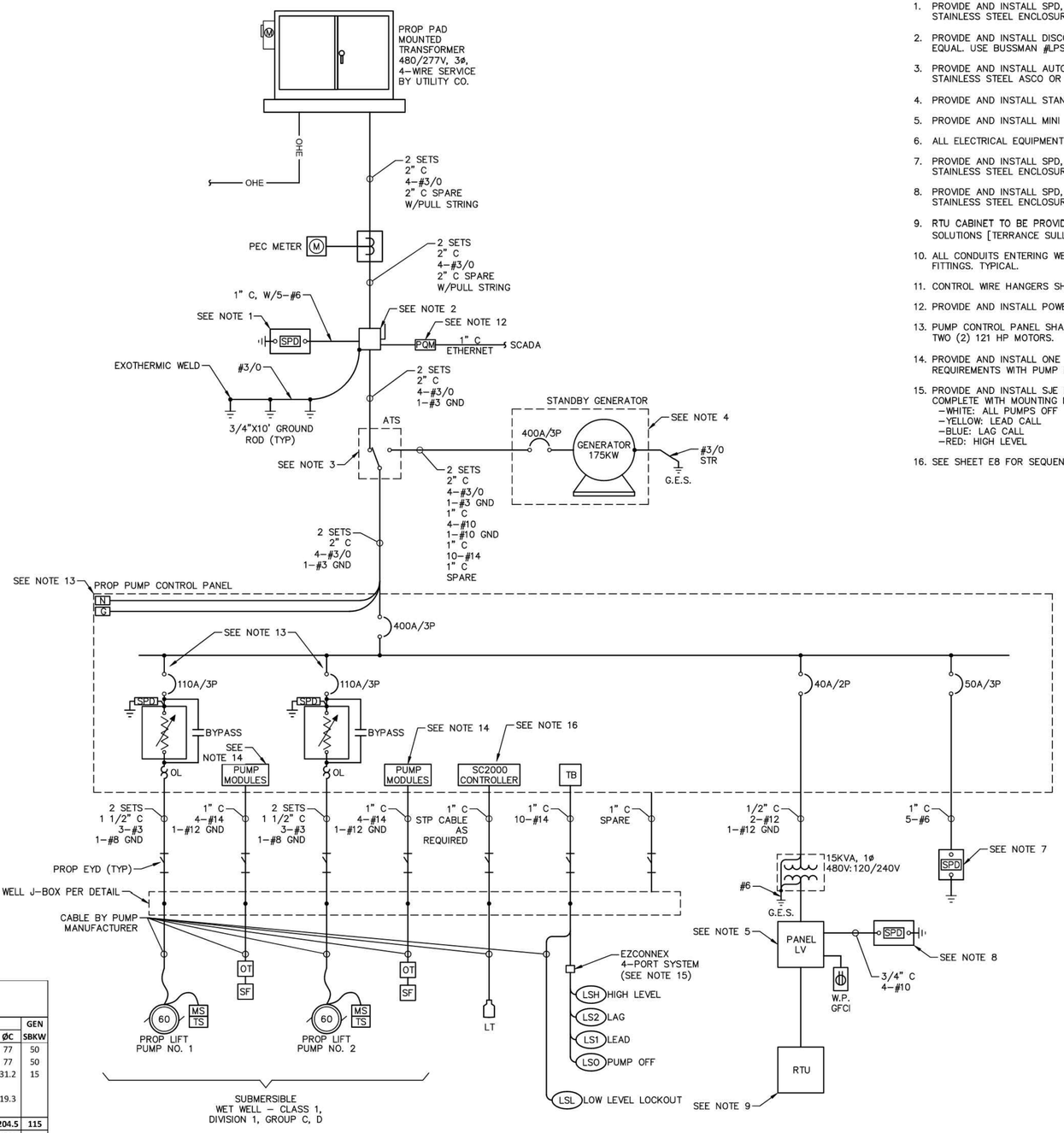
CP-22-0144



NOTES:

1. PROVIDE AND INSTALL SPD, EATON SPD-200-480Y-3-P OR EQUAL IN NEMA 4XSS 316 STAINLESS STEEL ENCLOSURE. CONNECT TO LOAD SIDE.
2. PROVIDE AND INSTALL DISCONNECT SWITCH, 400A/3P/400AF/N4XSS/600V/SN/SE SQUARE D OR EQUAL. USE BUSSMAN #LPS-RK-400 OR EQUAL.
3. PROVIDE AND INSTALL AUTOMATIC TRANSFER SWITCH, 600 AMP, 4 POLE, NEMA 4XSS 316 STAINLESS STEEL ASCO OR EQUAL.
4. PROVIDE AND INSTALL STANDBY DIESEL GENERATOR 275 KW, 277/480V, 3 PHASE, 4 WIRE.
5. PROVIDE AND INSTALL MINI POWER ZONE, SQUARE D OR EQUAL.
6. ALL ELECTRICAL EQUIPMENT ENCLOSURES SHALL BE NEMA 4XSS 316 STAINLESS STEEL.
7. PROVIDE AND INSTALL SPD, EATON SPD-100-480Y-3-P OR EQUAL IN NEMA 4XSS 316 STAINLESS STEEL ENCLOSURE. CONNECT TO LOAD SIDE.
8. PROVIDE AND INSTALL SPD, EATON SPD-050-240S-3-P OR EQUAL IN NEMA 4XSS 316 STAINLESS STEEL ENCLOSURE. CONNECT TO LOAD SIDE.
9. RTU CABINET TO BE PROVIDED BY PRIME CONTROLS [CHAD KUNKEL-(214-475-4029)] OR TMT SOLUTIONS [TERRANCE SULLIVAN-512-392-9211].
10. ALL CONDUITS ENTERING WET WELL JUNCTION BOX SHALL BE PROVIDED WITH SEAL-OFF FITTINGS. TYPICAL.
11. CONTROL WIRE HANGERS SHALL BE MOUNTED ON SIDE WALL, NOT NEXT TO PUMP RAILS.
12. PROVIDE AND INSTALL POWER QUALITY METER EATON 2280 OR EQUAL. REFER TO SHEET E4.
13. PUMP CONTROL PANEL SHALL BE SIZED LARGE ENOUGH FOR EXPANSION OF LIFT STATION TO TWO (2) 121 HP MOTORS.
14. PROVIDE AND INSTALL ONE (1) PUMP SAFE MODULE A AND D PER PUMP. COORDINATE EXACT REQUIREMENTS WITH PUMP MANUFACTURER AS REQUIRED. TYPICAL.
15. PROVIDE AND INSTALL SJE RHOMBUS EZCONNEX 4-PORT FLOAT QUICK CONNECT SYSTEM COMPLETE WITH MOUNTING BRACKET. COLOR CODE FLOATS AS FOLLOWS:
    - -WHITE: ALL PUMPS OFF
    - -YELLOW: LEAD CALL
    - -BLUE: LAG CALL
    - -RED: HIGH LEVEL
16. SEE SHEET E8 FOR SEQUENCE OF OPERATIONS.

ELECTRICAL LOAD ANALYSIS

LOAD NAME		AMPS ØA	AMPS ØB	AMPS ØC	GEN SBKW
LIFT PUMP NO. 1	60 HP	77	77	77	50
LIFT PUMP NO. 2	60 HP	77	77	77	50
LIGHTING & CONTROLS	15 KVA	31.2	-	31.2	15
25% LARGEST MOTOR		19.3	19.3	19.3	
TOTAL LOAD		**204.5**	**173.3**	**204.5**	**115**
RATED SERVICE AMPACITY @ 480 VOLT, 3Ø, 4-WIRE		**400**	**400**	**400**	
SPARE AMPACITY		**195.5**	**227**	**195.5**	
FAULT CURRENT				**< 42 K.A.I.C.**	

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CLARA VISTA
LIFT STATION & FORCE MAIN
ELECTRICAL ONE-LINE DIAGRAM

PLAT NO. CP-22-0144
JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER LAF
CHECKED GSB DRAWN LAF
SHEET 42 OF 48

LS E3

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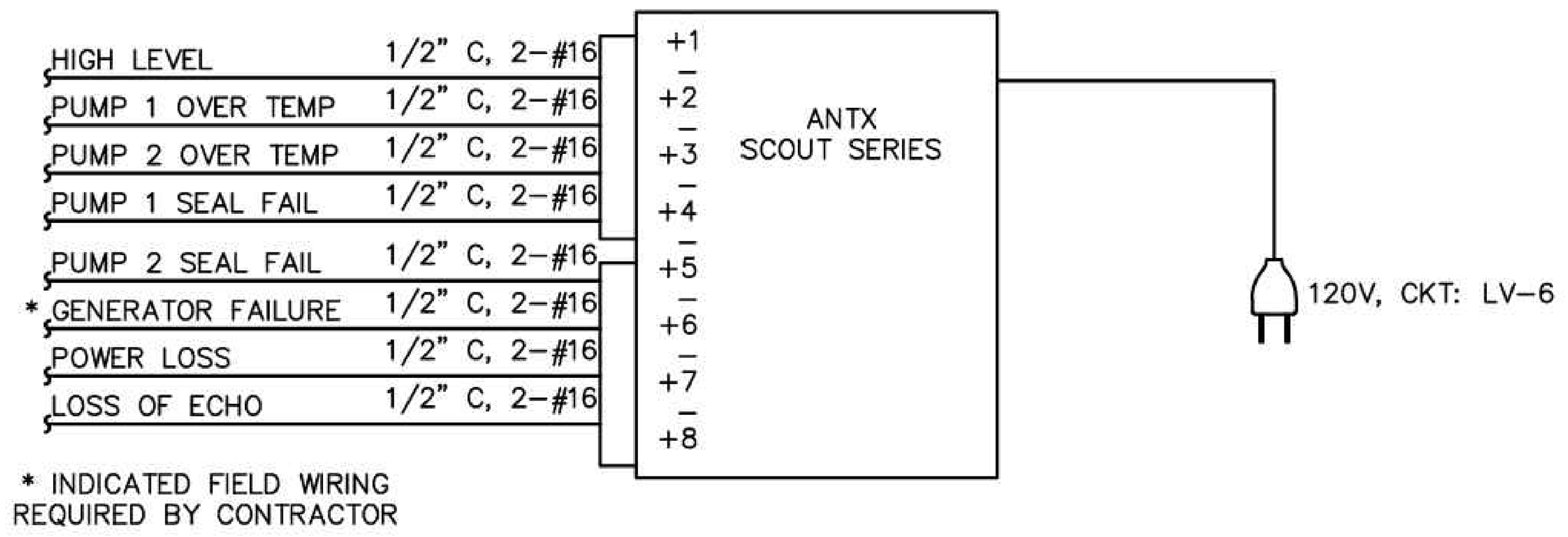

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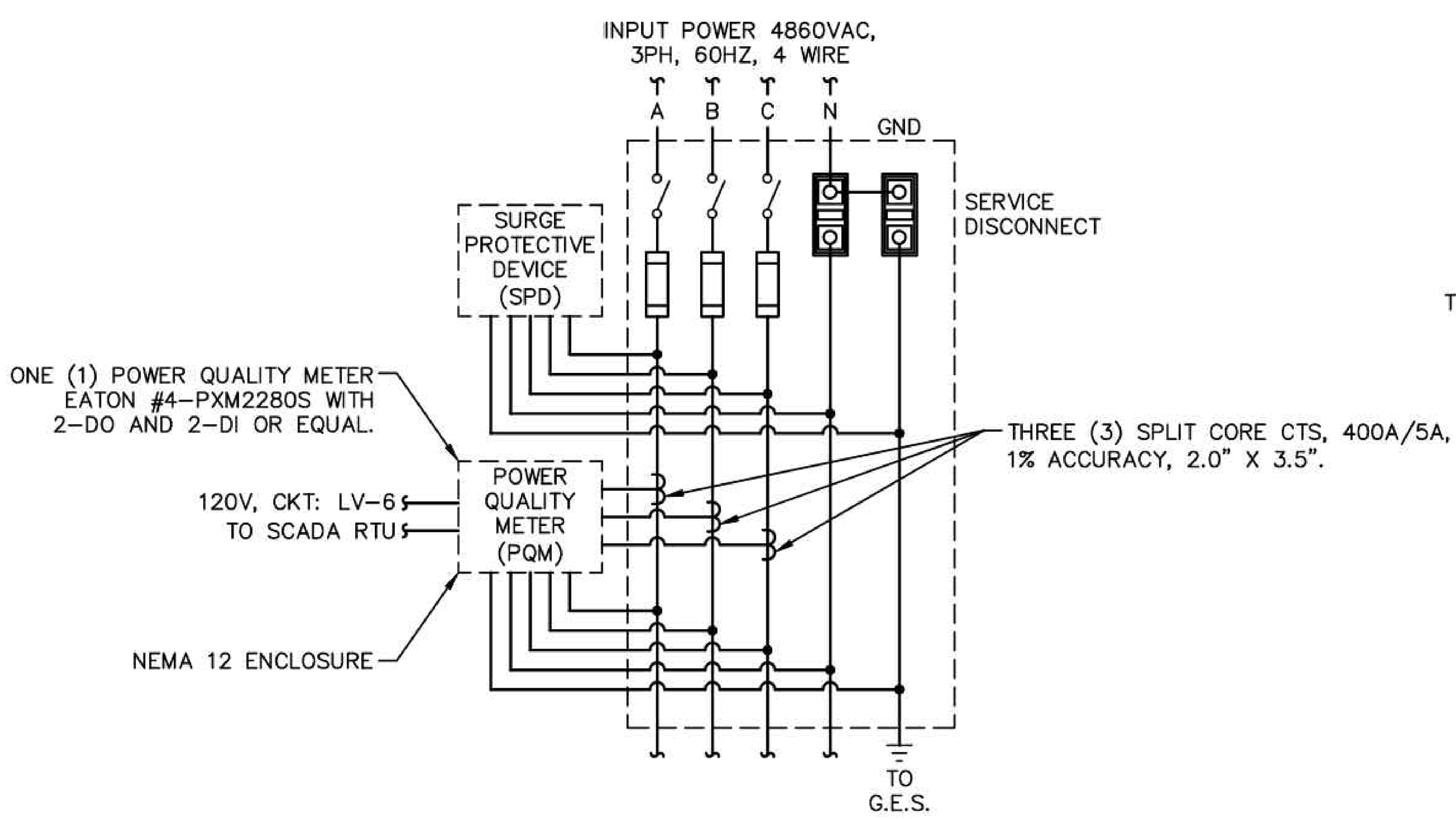
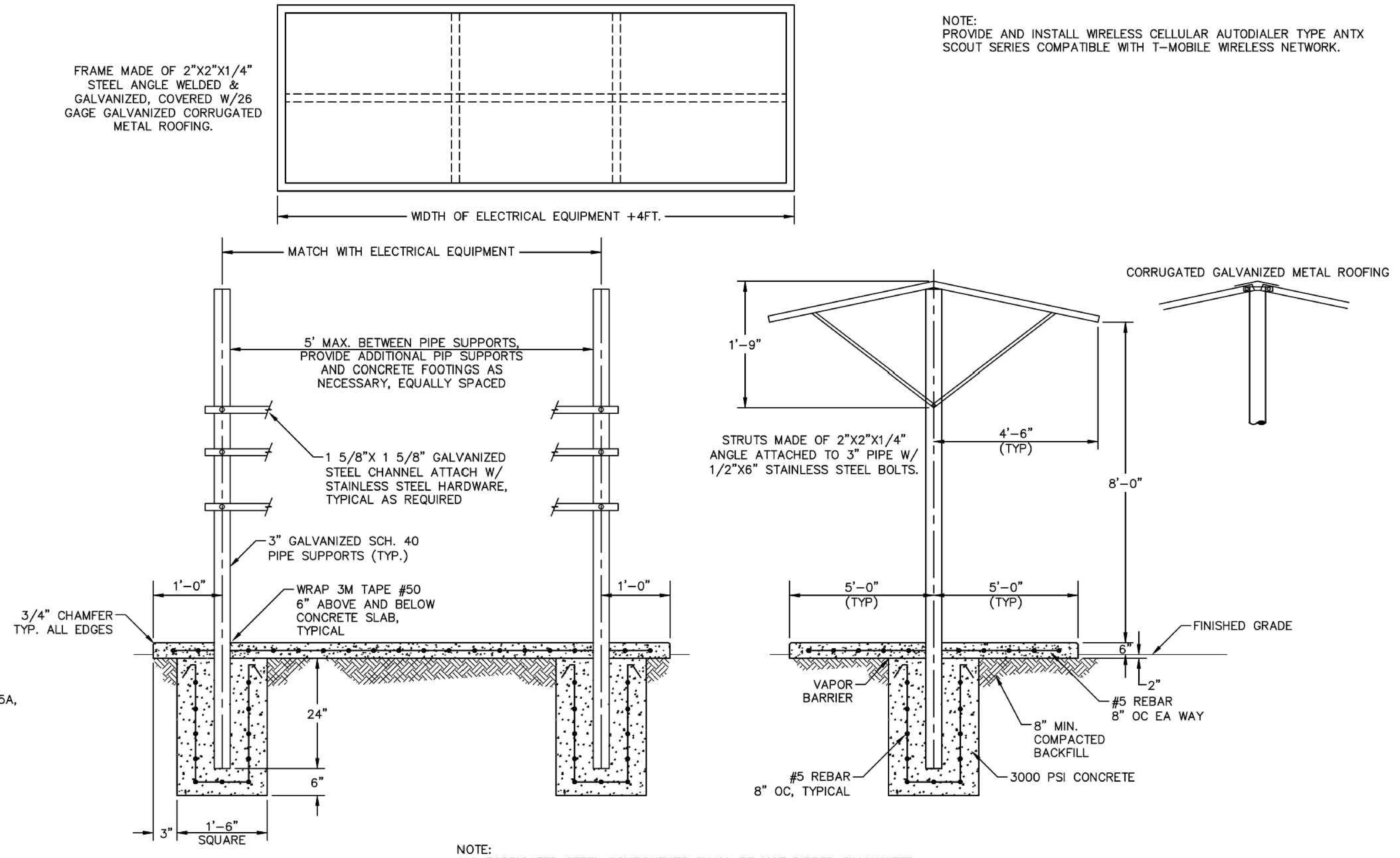
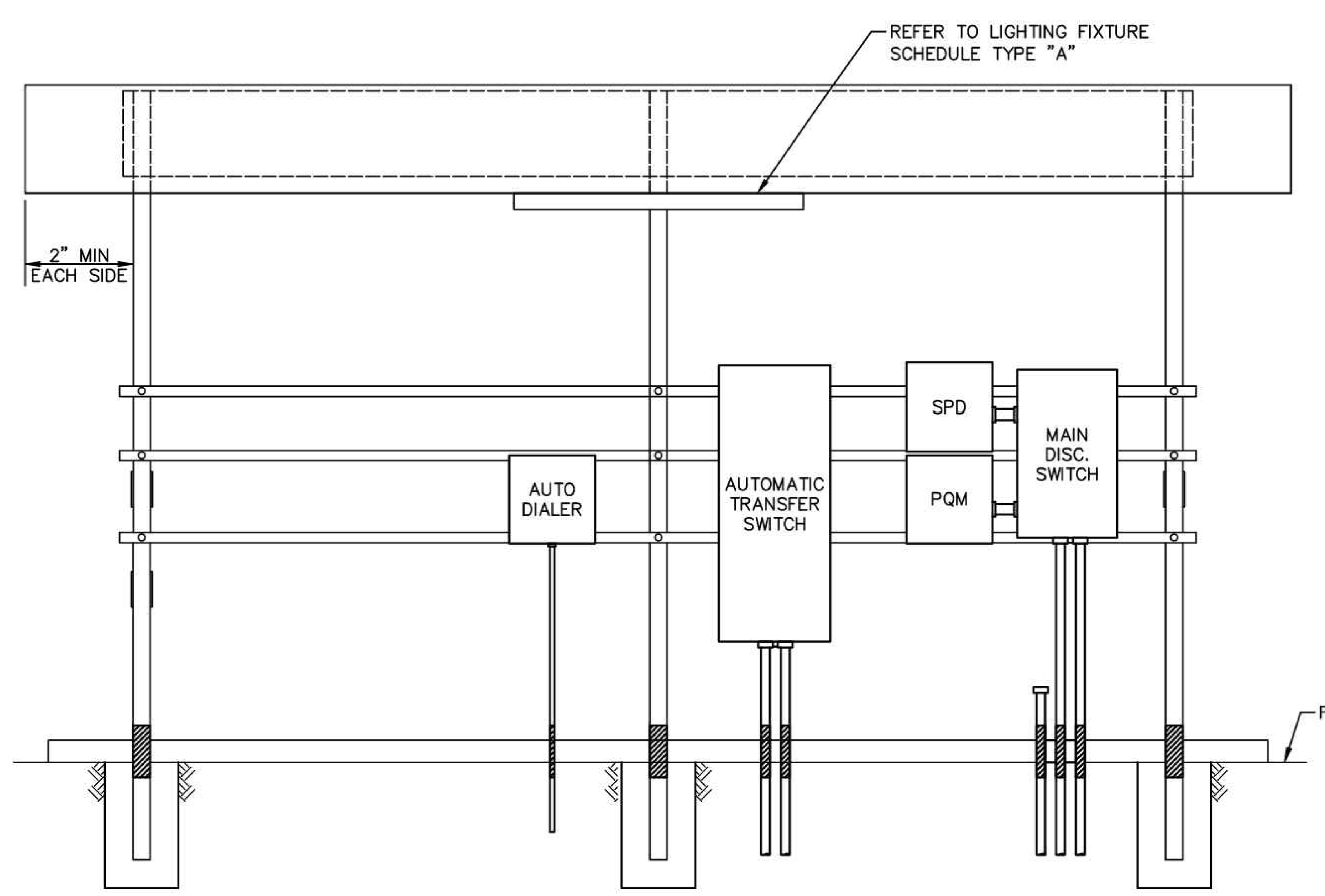


POWER QUALITY METER DETAIL
NOT TO SCALE

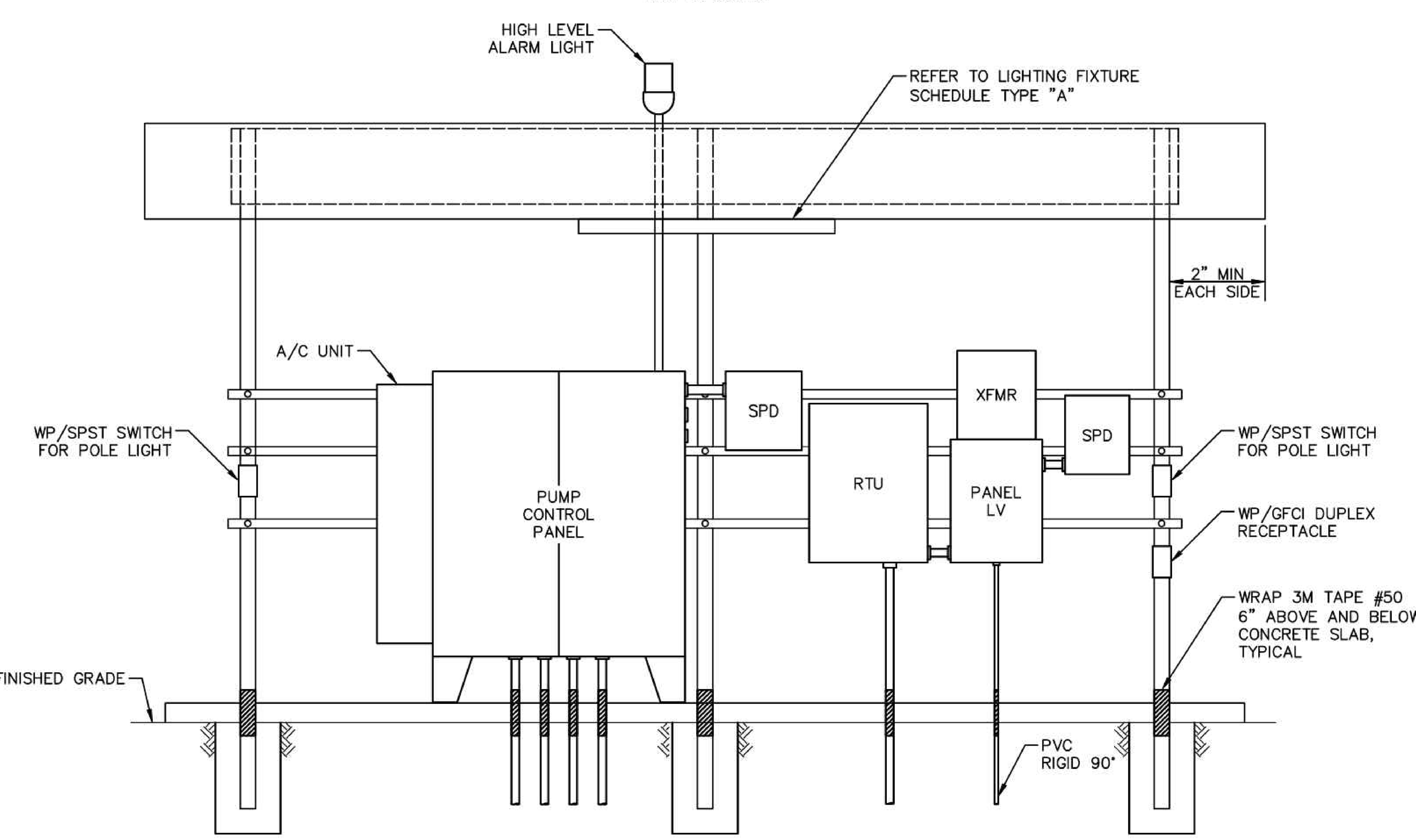


NOTE:
ALL FABRICATED STEEL COMPONENTS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION. ALL FASTENERS SHALL BE STAINLESS STEEL.

RACK SUPPORT AND ROOFING DETAIL
NOT TO SCALE



LIFT STATION EQUIPMENT RACK DETAIL (BACK)
NOT TO SCALE



LIFT STATION EQUIPMENT RACK DETAIL (FRONT)
NOT TO SCALE

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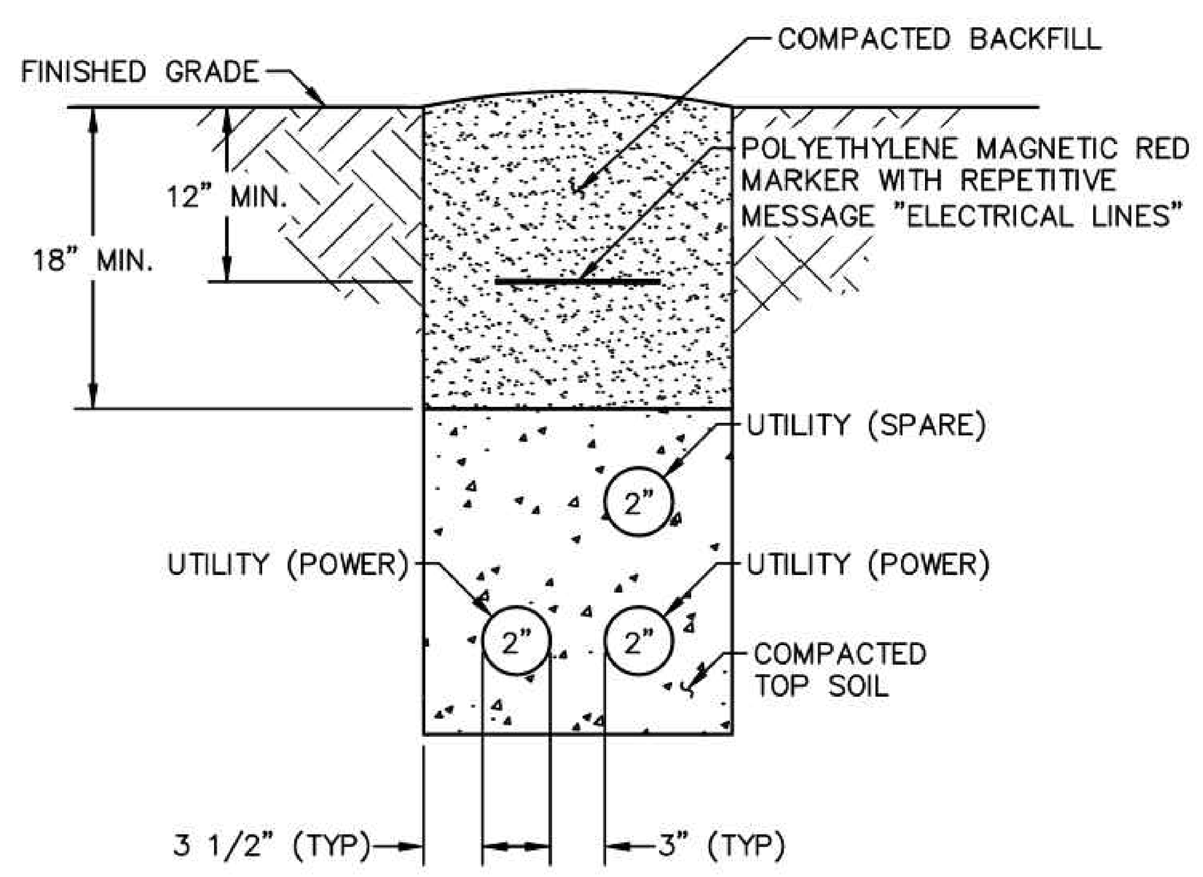
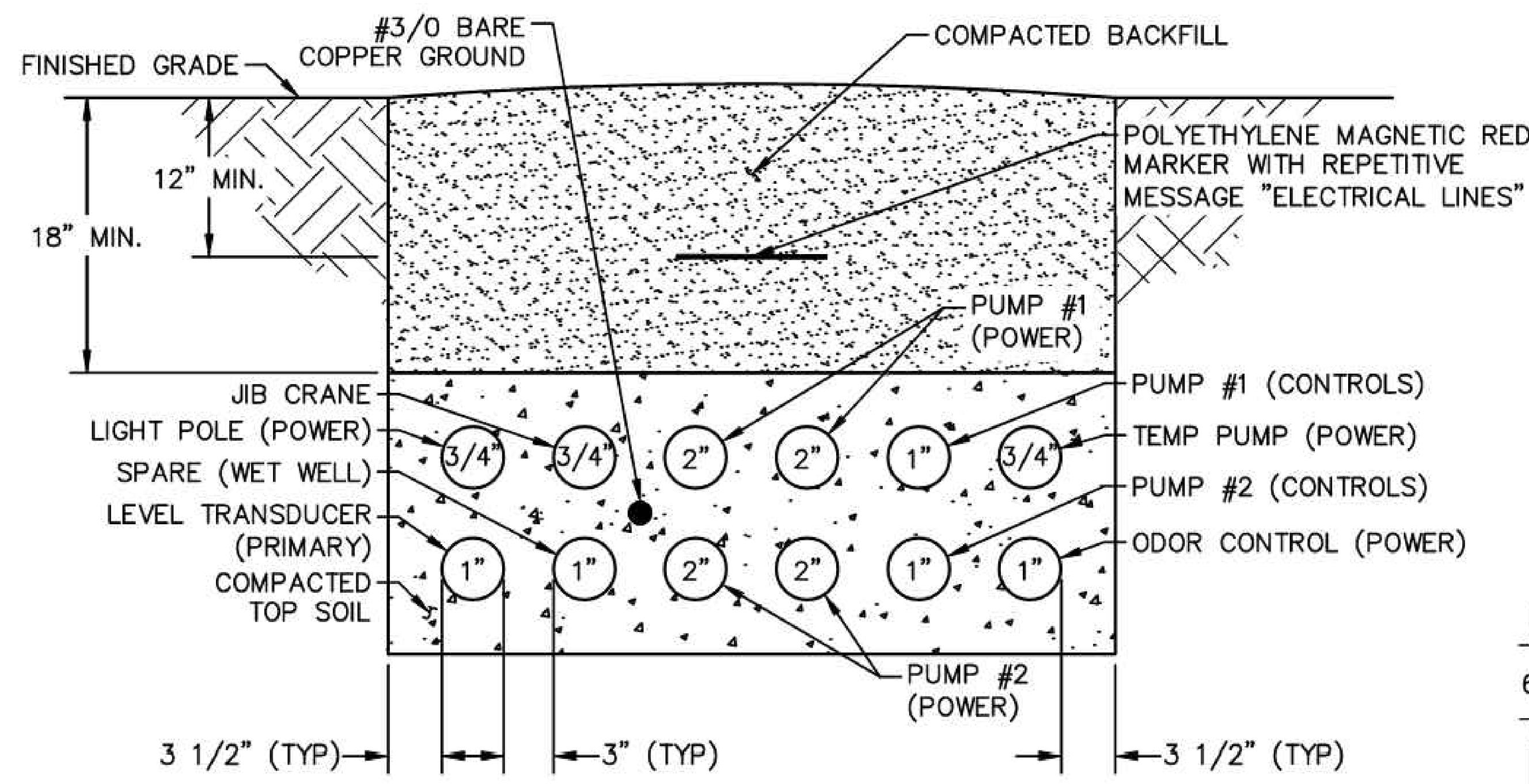
CLARA VISTA
LIFT STATION & FORCE MAIN
LIFT STATION ELECTRICAL DETAILS 1 OF 6

PLAT NO. CP-22-0144
JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER LAF
CHECKED GSB DRAWN LAF
SHEET 43 OF 48

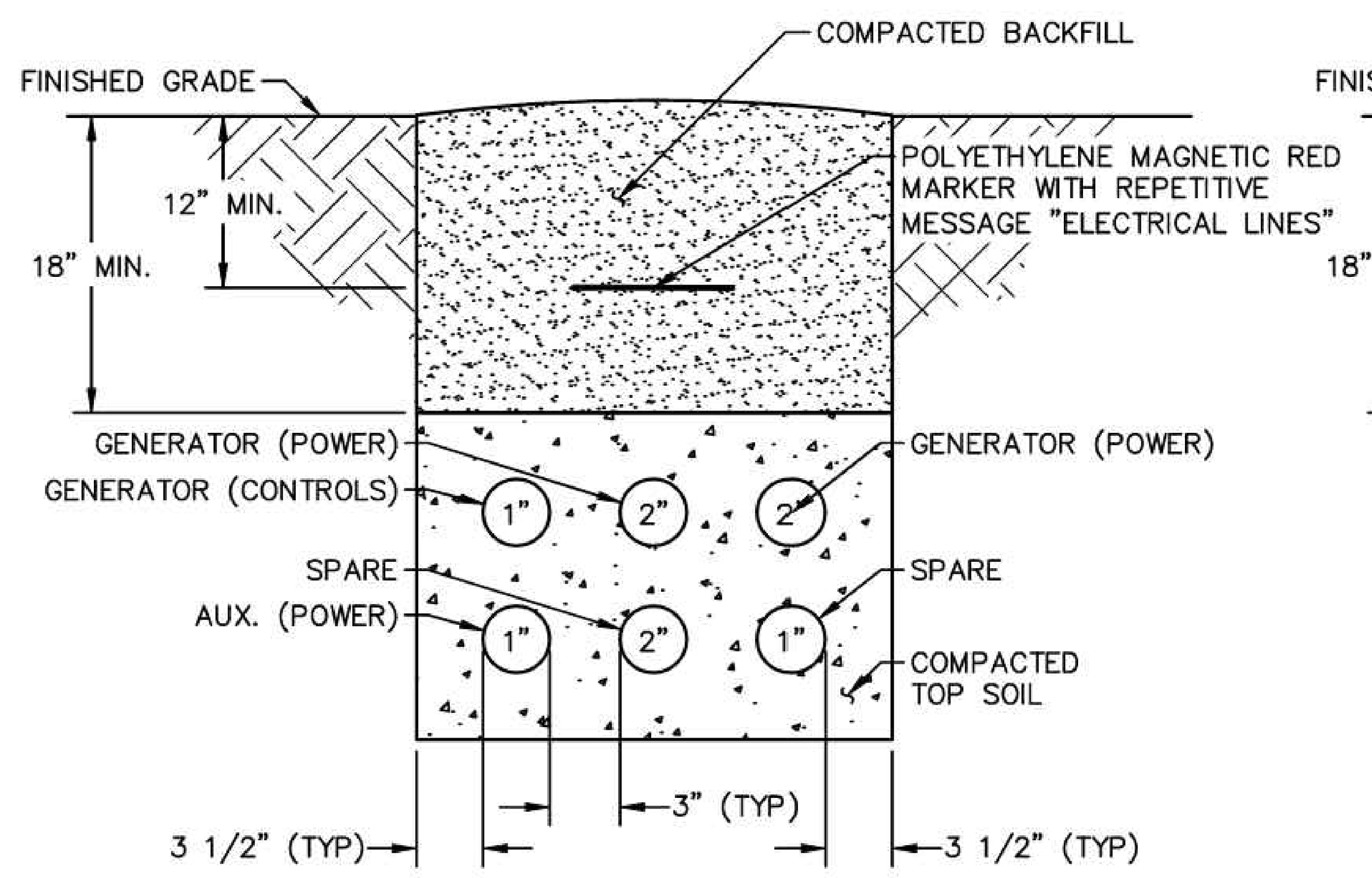
LS E4



TRENCH SECTION D–D
NOT TO SCALE



TRENCH SECTION C–C
NOT TO SCALE



TRENCH SECTION B–B
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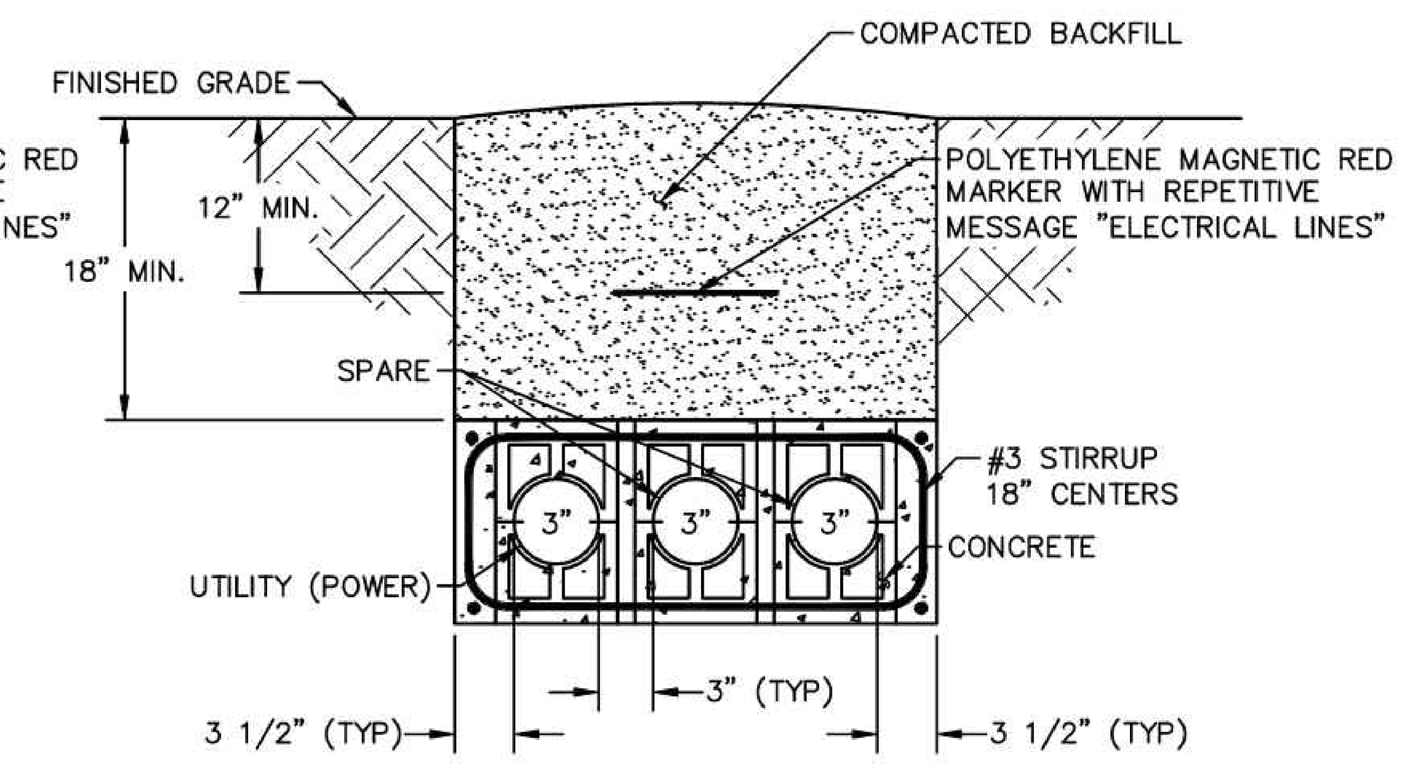
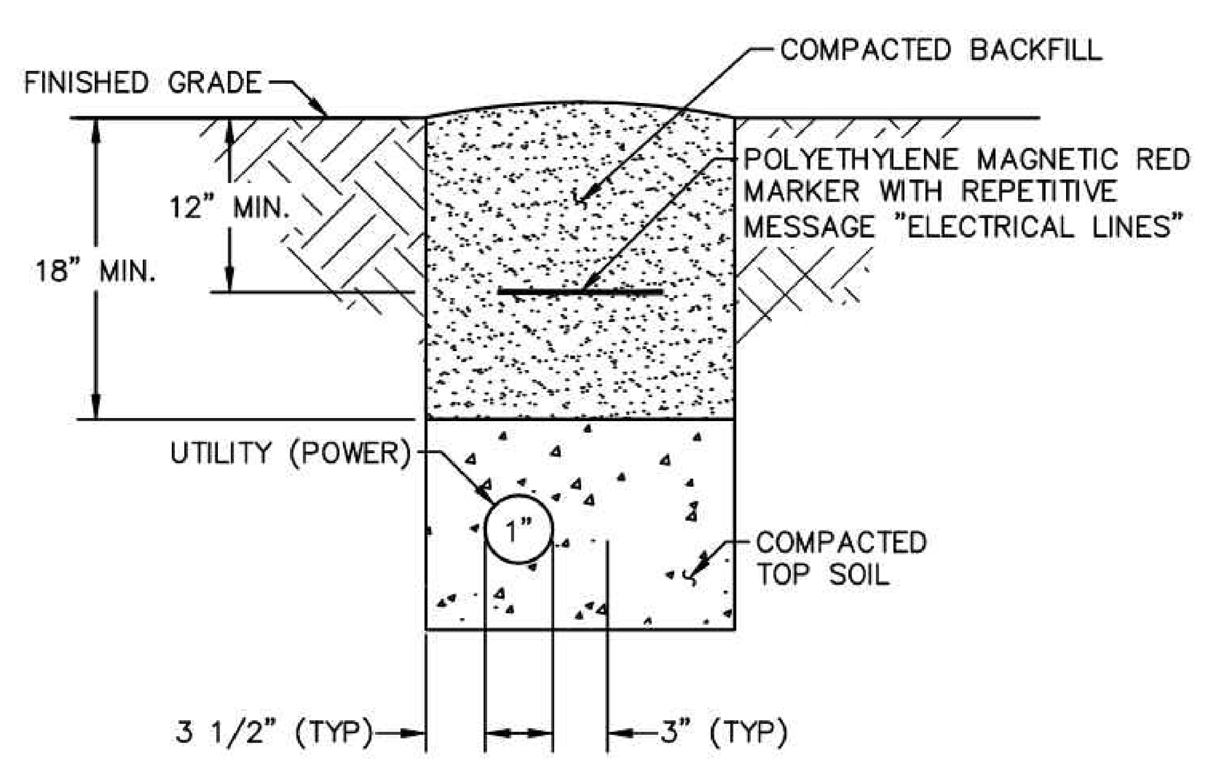
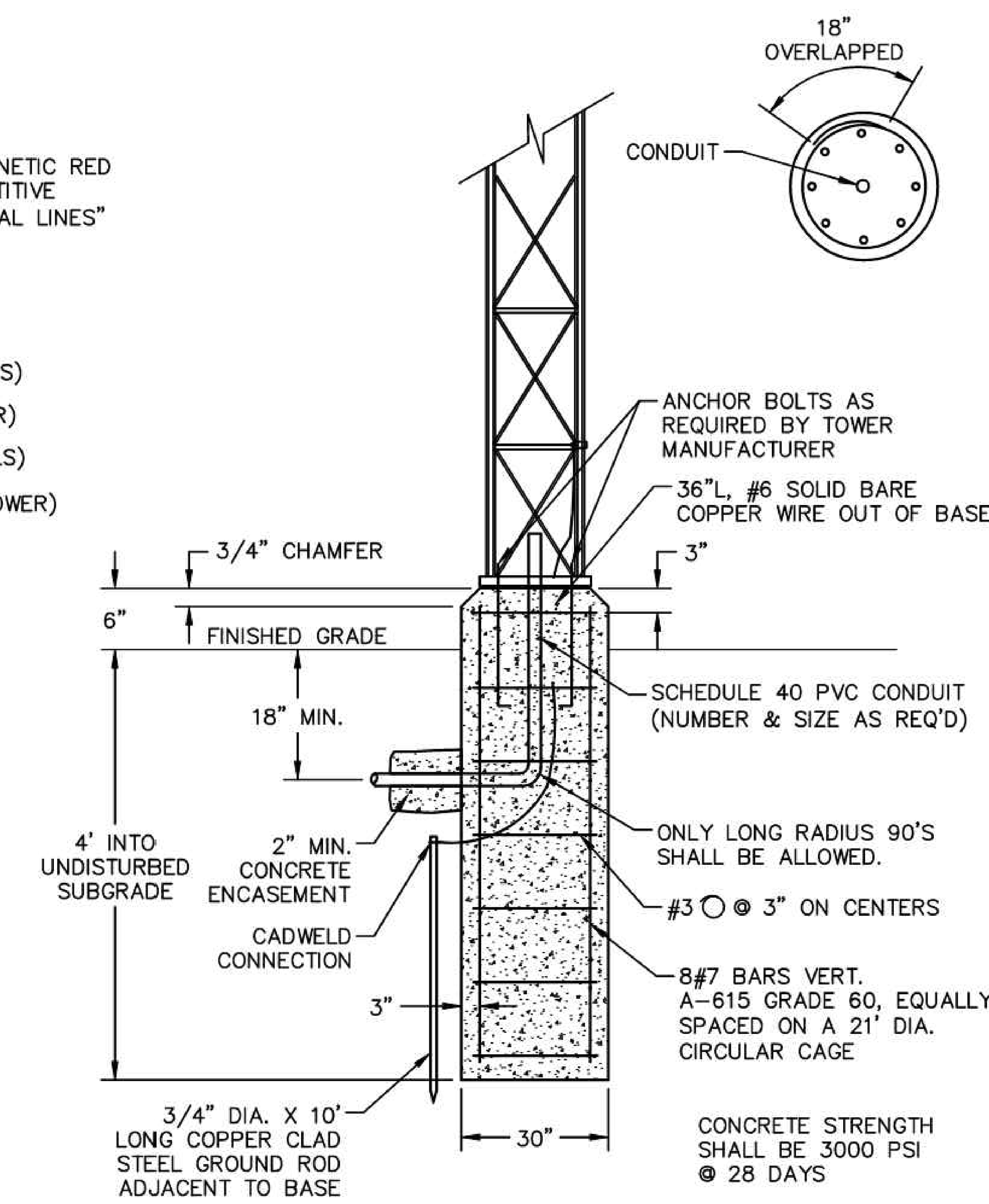


TRENCH SECTION A–A
NOT TO SCALE



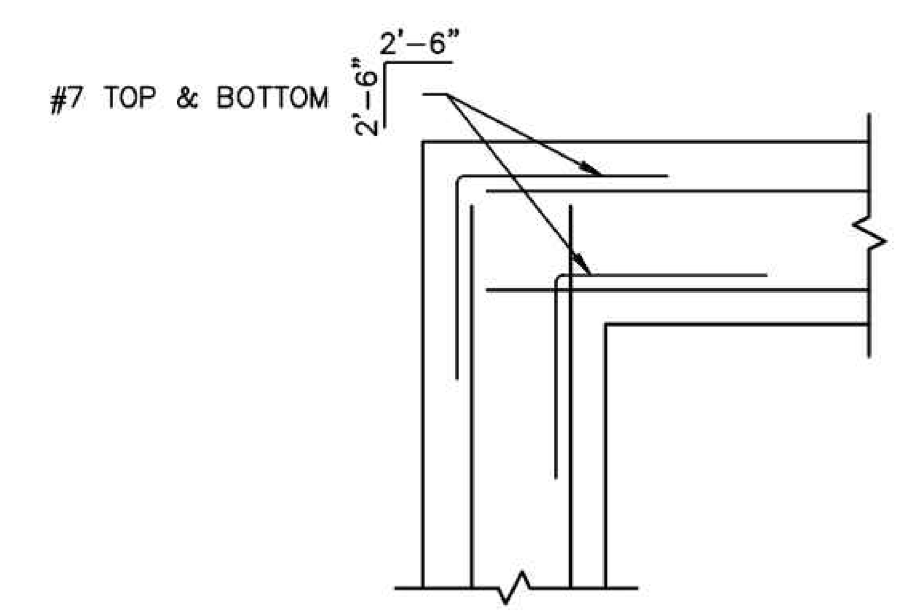
TRENCH SECTION E–E
NOT TO SCALE



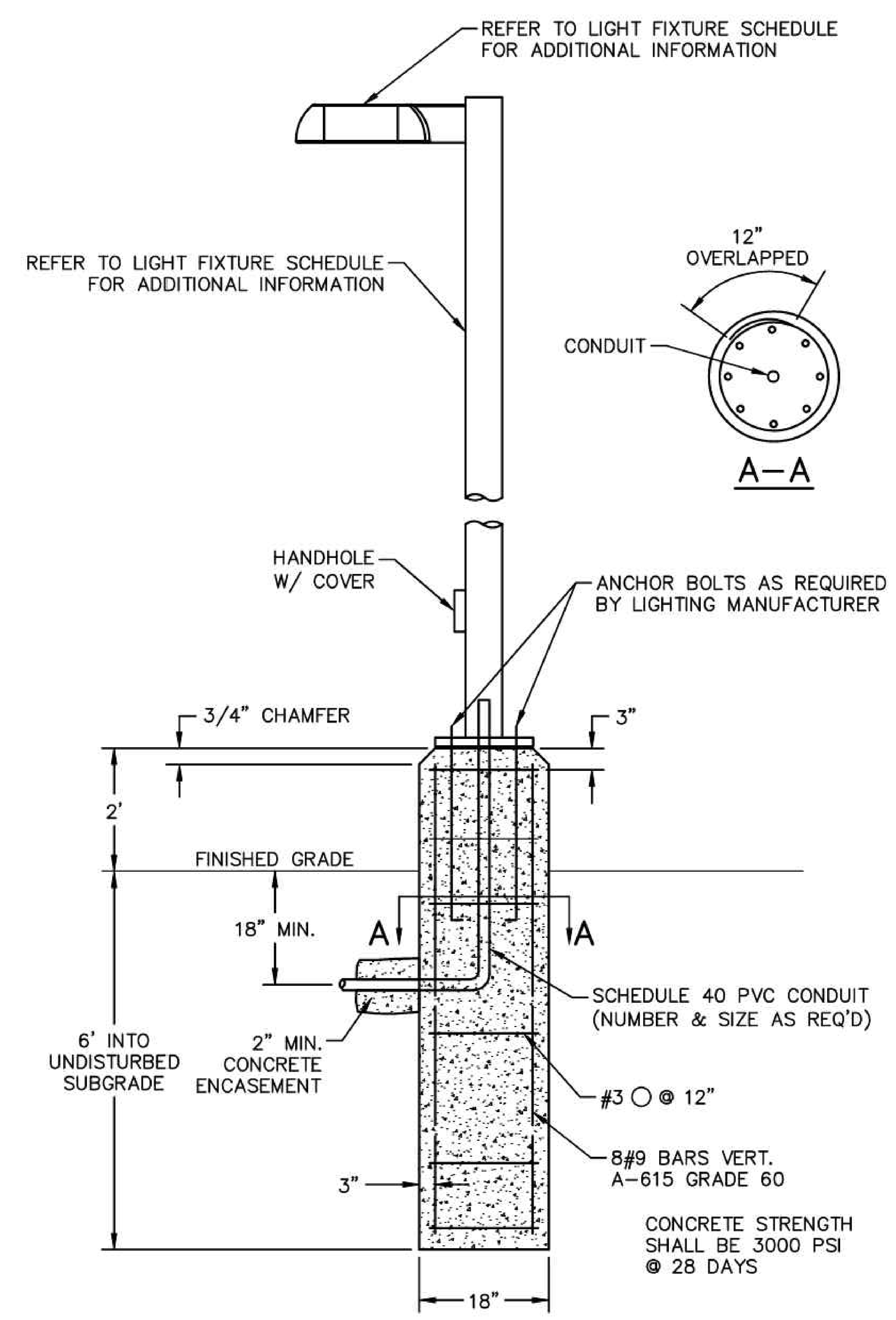
TOWER FOUNDATION DETAIL
NOT TO SCALE

CONCRETE CONSTRUCTION

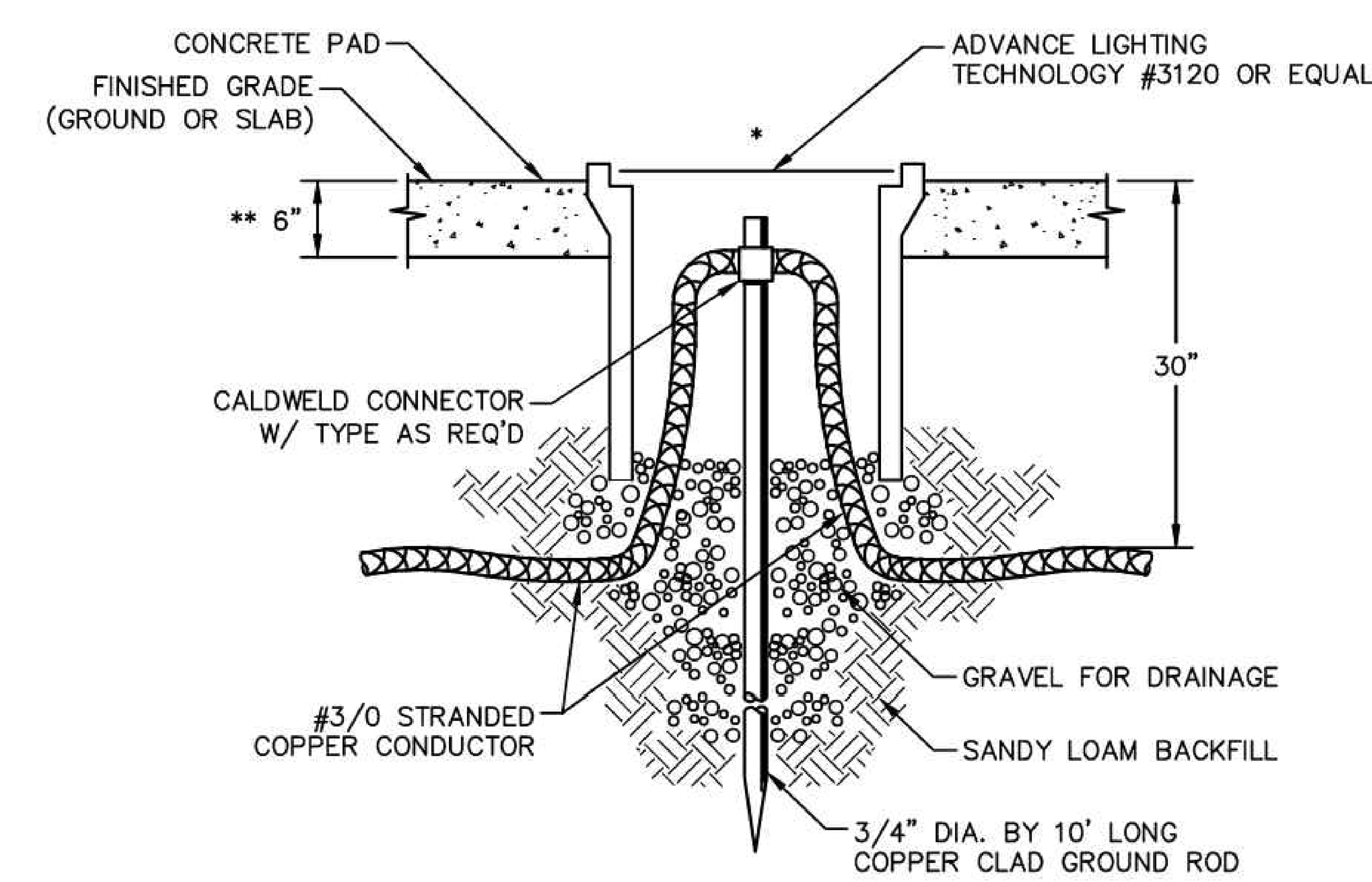
1. CONCRETE SHALL BE NORMAL WEIGHT WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI. CONCRETE SHALL BE MIXED AND PLACED IN ACCORDANCE WITH ASTM C94 "STANDARD SPECIFICATION FOR READY MIXED CONCRETE" AND ACI 304 "GUIDE FOR MEASURING, MIXING AND PLACING CONCRETE."
2. REINFORCED STEEL SHALL CONFORM TO THE REQUIREMENTS OF ANSI/ASTM A615 WITH SUPPLEMENTAL REQUIREMENTS S1, GRADE 60.
3. DETAILING, FABRICATION AND INSTALLATION OF REBAR SHALL COMPLY WITH THE REQUIREMENTS OF AMERICAN CONCRETE INSTITUTE 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES."
4. PROVIDE SUPPORTS OR CHAIRS TO SUPPORT THE REBAR AT THE POSITIONS SHOWN. MAXIMUM SPACING OF SUPPORTS FOR SLAB REBAR SHALL BE 3'-0" ON CENTERS EACH WAY. MAXIMUM SPACING OF REBAR FOR EDGE BEAMS SHALL BE 6'-0" MAXIMUM ON CENTERS.



GENERATOR PAD GRADE BEAM CORNER BARS DETAIL
NOT TO SCALE



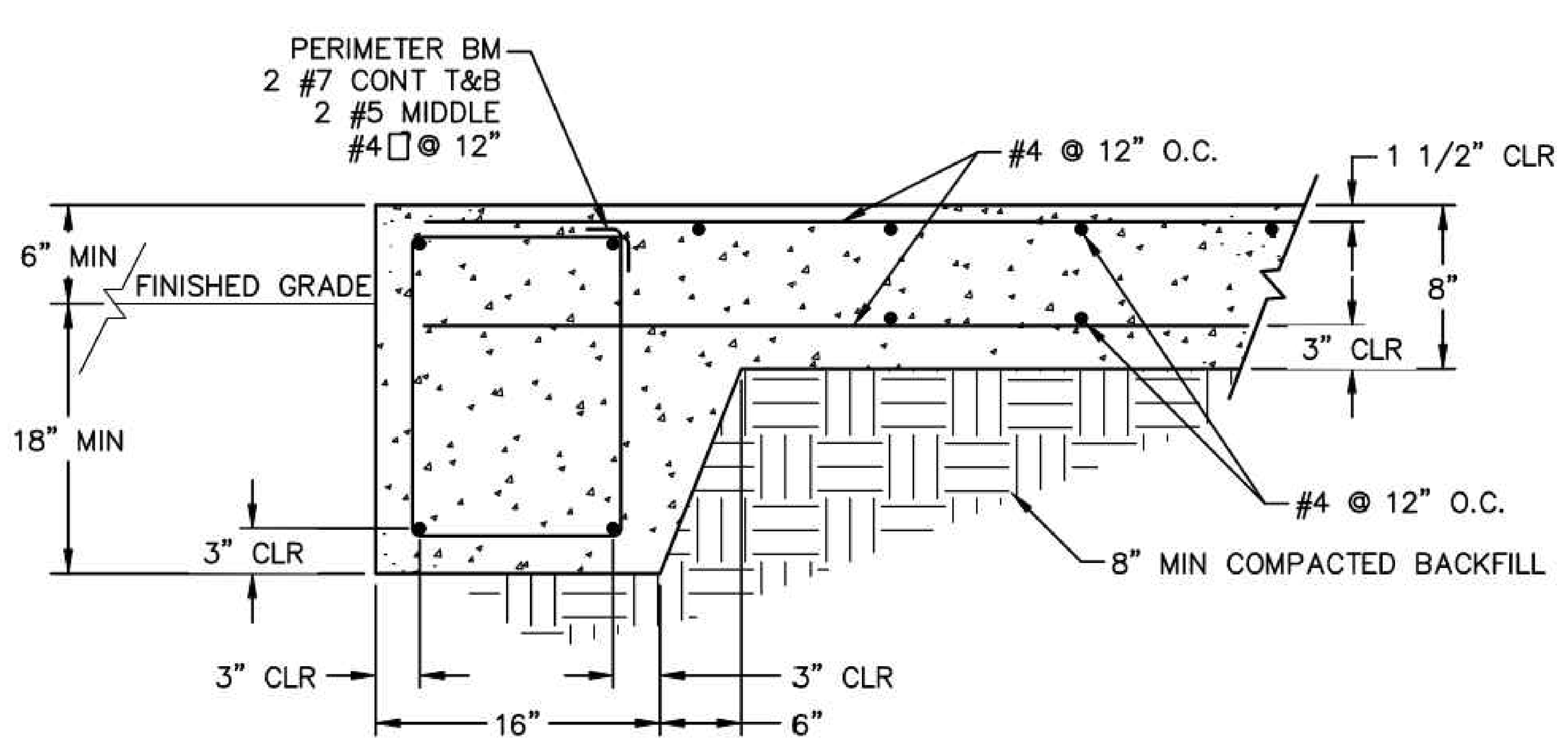
POLE MOUNTED LIGHTING FIXTURE DETAIL
NOT TO SCALE



* INSTALL GROUND ROD AWAY FROM HEAVY TRAFFIC AREAS AND SIDEWALKS. COORDINATE EXACT LOCATION WITH CIVIL DRAWINGS.

** INSTALL 2'X2'X6" CONCRETE PAD

3/4" X 10' GROUND ROD DETAIL
NOT TO SCALE



GENERATOR PAD DETAIL
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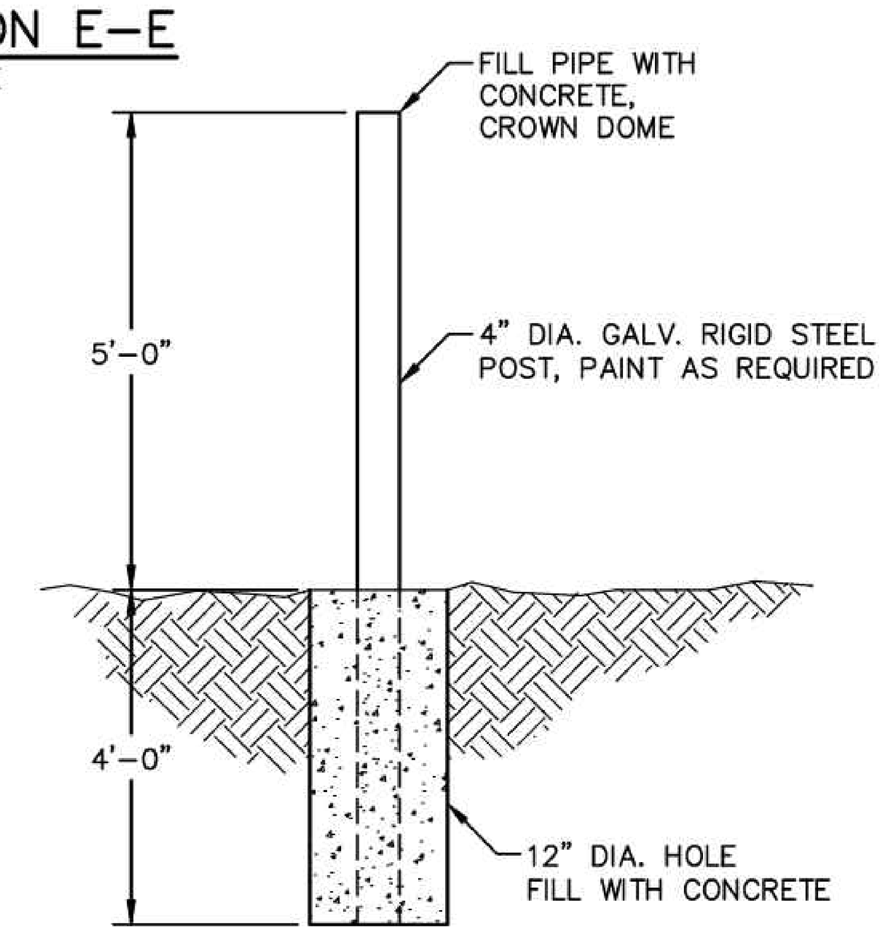

BOLLARD DETAIL
NOT TO SCALE

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NO.	REVISION	DATE

STATE OF TEXAS
GREGORY S. BAIRD
100260
LICENSED PROFESSIONAL ENGINEER
9/30/24

PAPE-DAWSON ENGINEERS
10350 RICHMOND AVE, STE. 200 | HOUSTON, TX 77042 | 713.428.2400
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10193974

CLARA VISTA
LIFT STATION & FORCE MAIN
LIFT STATION ELECTRICAL
DETAILS 2 OF 6

PLAT NO. CP-22-0144
JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER LAF
CHECKED GSB DRAWN LAF

LS E5

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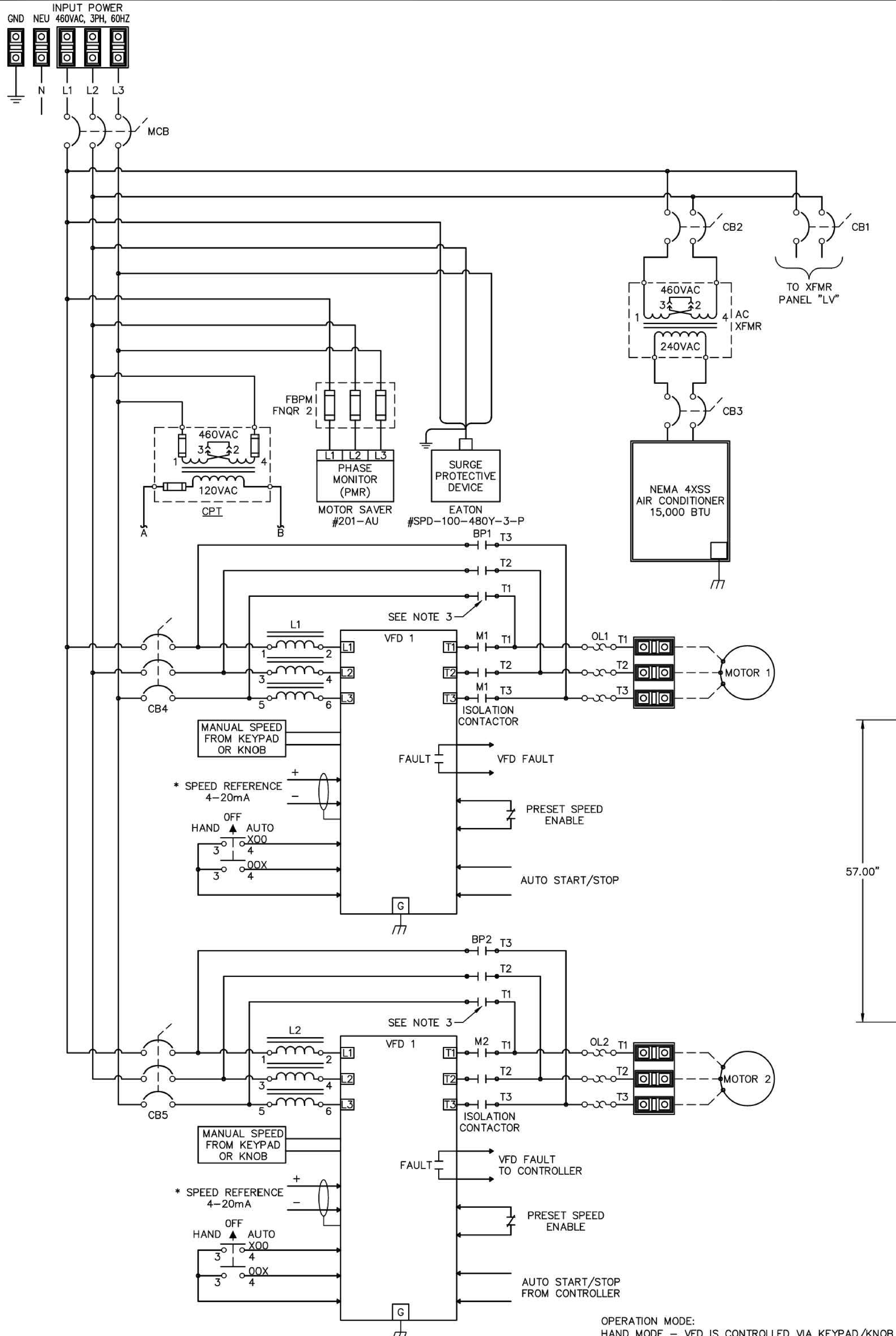


CONTROL PANEL WIRING DIAGRAM

SEE NOTE 1 & 2

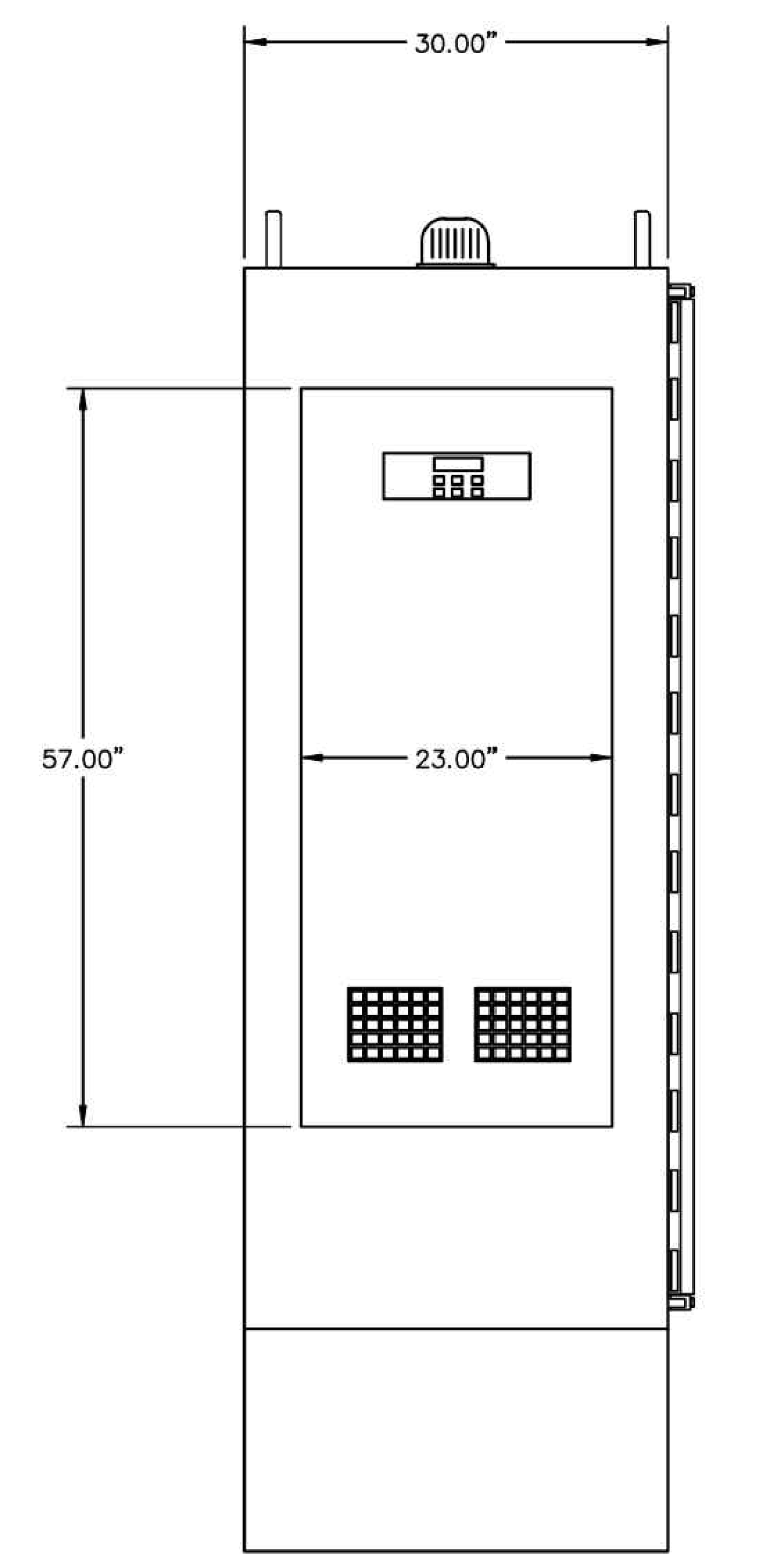
NOT TO SCALE

OPERATION MODE:

HAND MODE – VFD IS CONTROLLED VIA KEYPAD/KNOB

AUTO MODE – VFD IF CONTROLLED REMOTELY

* INDICATED FIELD WIRING REQUIRED BY CONTRACTOR

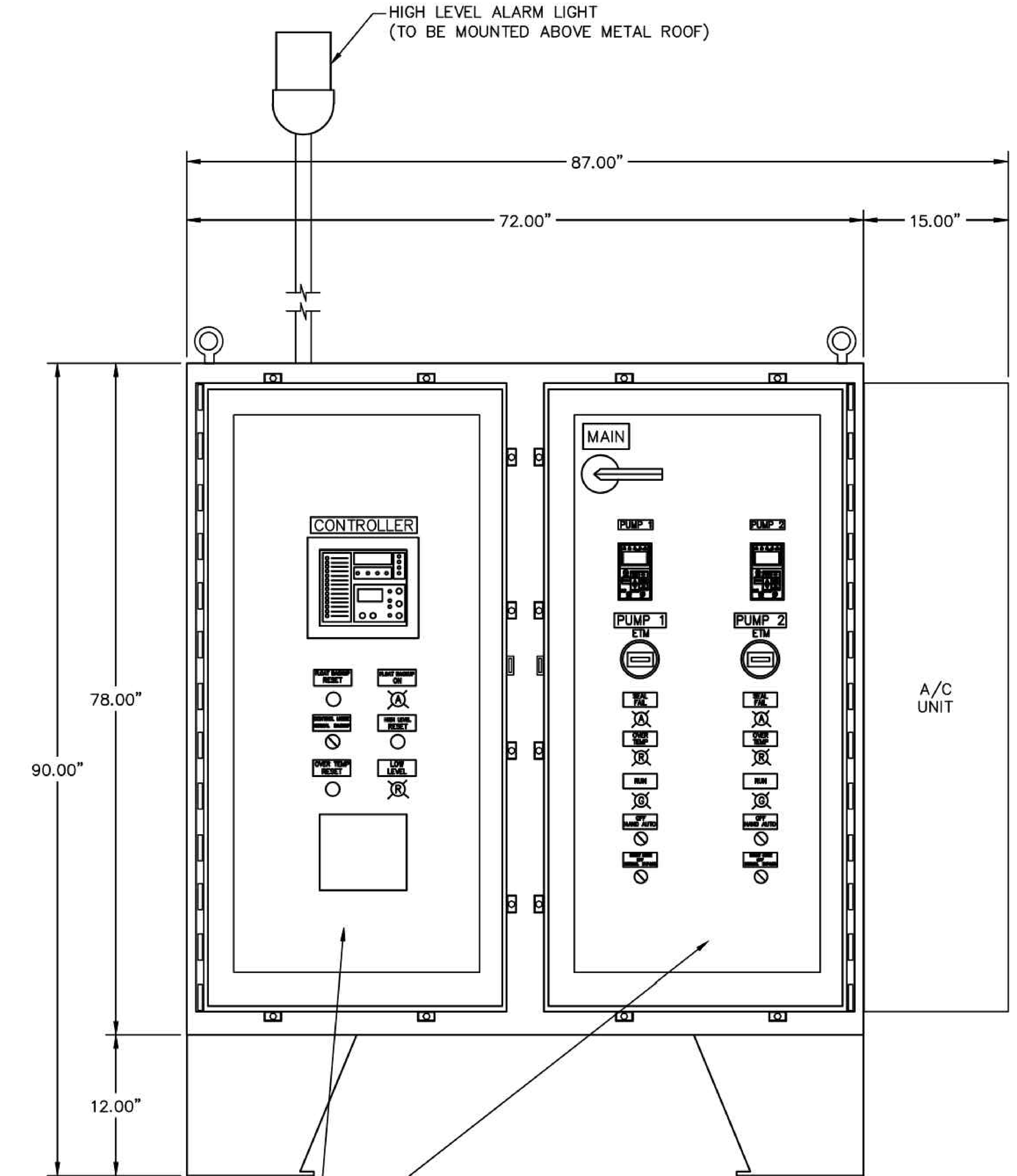


SIDE VIEW

NOT TO SCALE

NOTES:

1. ENCLOSURE SHALL BE NEMA TYPE 4X 316 STAINLESS STEEL DEAD FRONT WITH INNER DOORS AND AIR CONDITIONER



FRONT VIEW

NOT TO SCALE

PUMP CONTROL PANEL

SEE NOTE 4

NOT TO SCALE

INNER DOOR NOMENCLATURE:

1. VFD 1 KEYPAD
2. VFD 2 KEYPAD

NOTES:

1. PUMP CONTROL PANEL WIRING TYPICAL. FINAL HARDWARE CONFIGURATION WILL VARY ACCORDING TO PUMP CONTROL PANEL SPECIFICATIONS.
2. DUPLEX PUMP CONTROL PANEL, 480V, 3 PHASE, UL805A LABELED. VERIFY EXACT PUMP SIZES, CIRCUIT BREAKERS AND OVERLOADS ACCORDINGLY. THE PUMP CONTROL PANEL SHALL BE MANUFACTURED BY 5 STAR ELECTRIC, SAN ANTONIO, TEXAS 1(800) 299-8965 OR APPROVED EQUAL.
3. PROVIDE AND INSTALL NEMA RATED CLASS 8536 STARTERS.
4. PUMP CONTROL PANEL SHALL BE SIZED LARGE ENOUGH TO FACILITATE EXPANSION OF LIFT STATION TO TWO (2) 121 HP MOTORS.
5. SEE SHEET E8 FOR SEQUENCE OF OPERATIONS.

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CLARA VISTA

LIFT STATION & FORCE MAIN

LIFT STATION ELECTRICAL

DETAILS 3 OF 6

PLAT NO. CP-22-0144

JOB NO. 51456-10

DATE SEPTEMBER 2024

DESIGNER LAF

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SHEET 45 OF 48

LS E6

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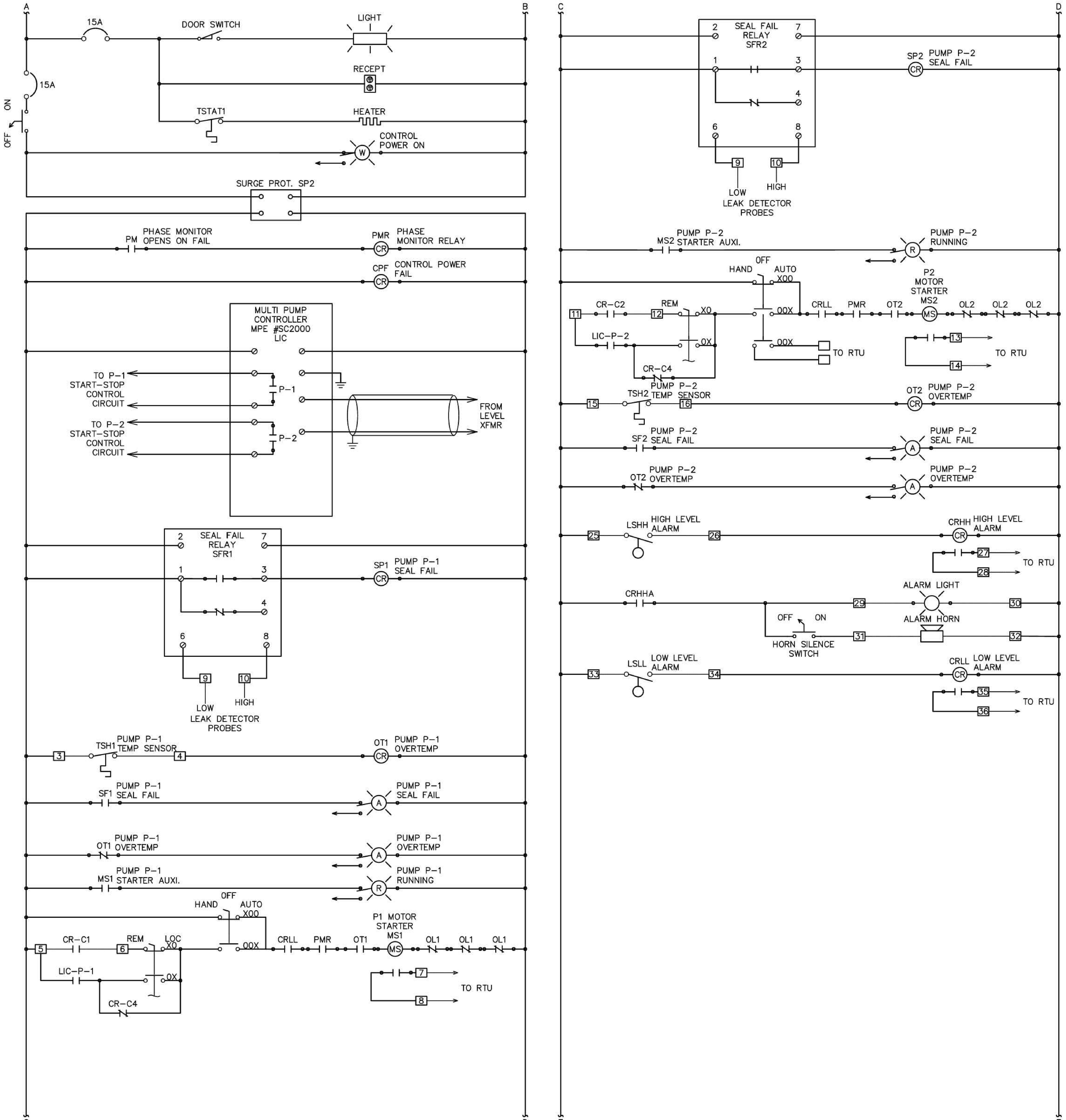

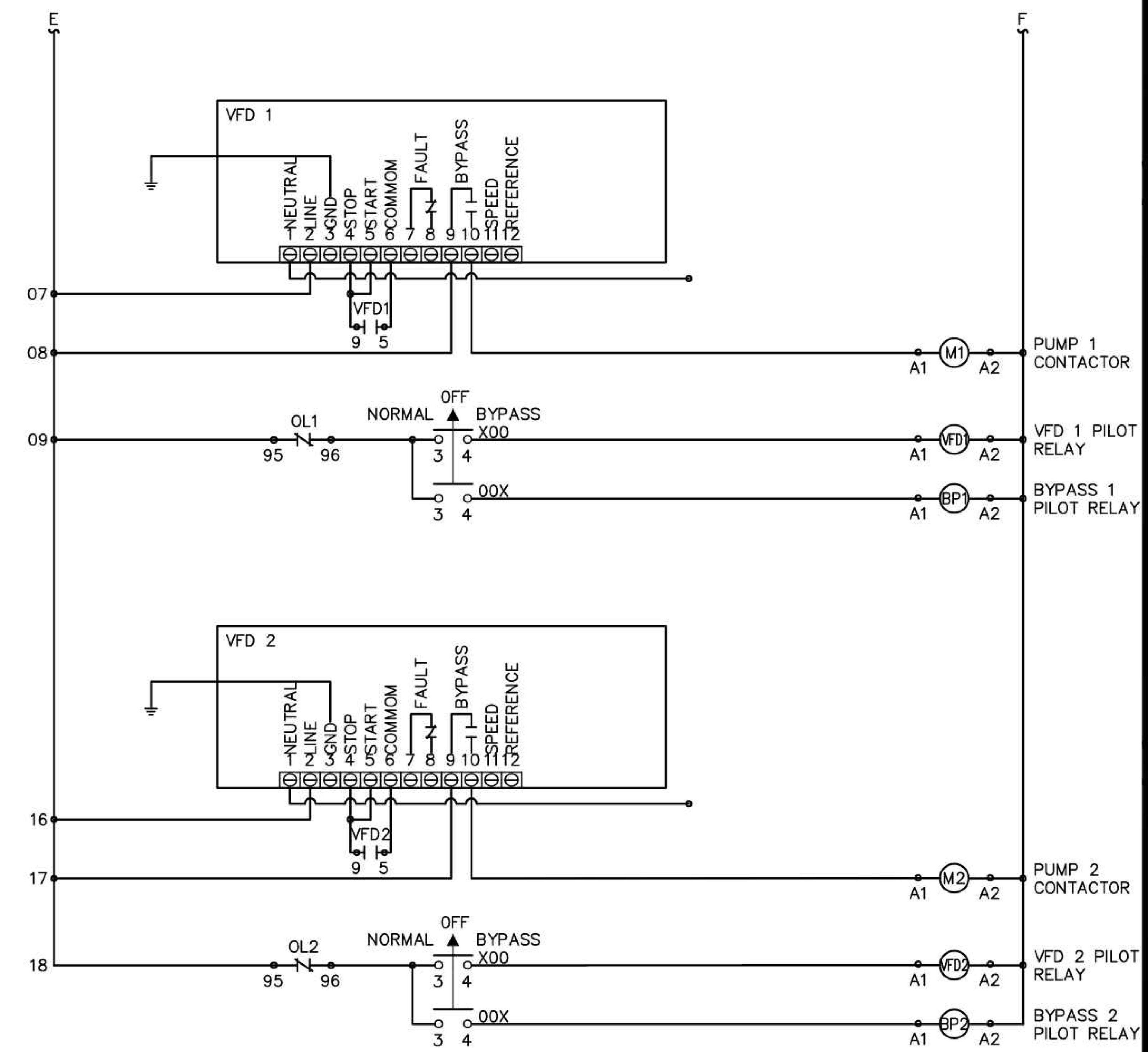

NOTES:

1. CONTROL PANEL WIRING DIAGRAM IS TYPICAL. FINAL HARDWARE CONFIGURATION WILL VARY ACCORDING TO SPECIFICATIONS.
2. PROVIDE STARTUP AND MINIMUM 4 HOURS TRAINING FOR OPERATOR PERSONNEL. SUBMIT STARTUP REPORT TO ENGINEER.
3. MOISTURE/OVER TEMPERATURE MONITOR RELAY SHALL BE INTEGRATED TO THE CONTROL LOGIC TO PROVIDE FAIL SAFE OPERATION. THUS, WHEN THE MOISTURE/OVER TEMPERATURE MONITOR IS REMOVED FROM THE CONTROL CIRCUIT OR FAILS, THE CORRESPONDING PUMP WILL BE LOCKED OUT.
4. ALL SEALED FLOAT SWITCHES SHALL BE CONNECTED TO THE CONTROL LOGIC VIA INTRINSICALLY SAFE RELAYS.
5. SEE SHEET E8 FOR SEQUENCE OF OPERATIONS.

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CLARA VISTA
LIFT STATION & FORCE MAIN
LIFT STATION ELECTRICAL DETAILS 4 OF 6

PLAT NO. CP-22-0144
JOB NO. 51456-10
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DESIGNER LAF
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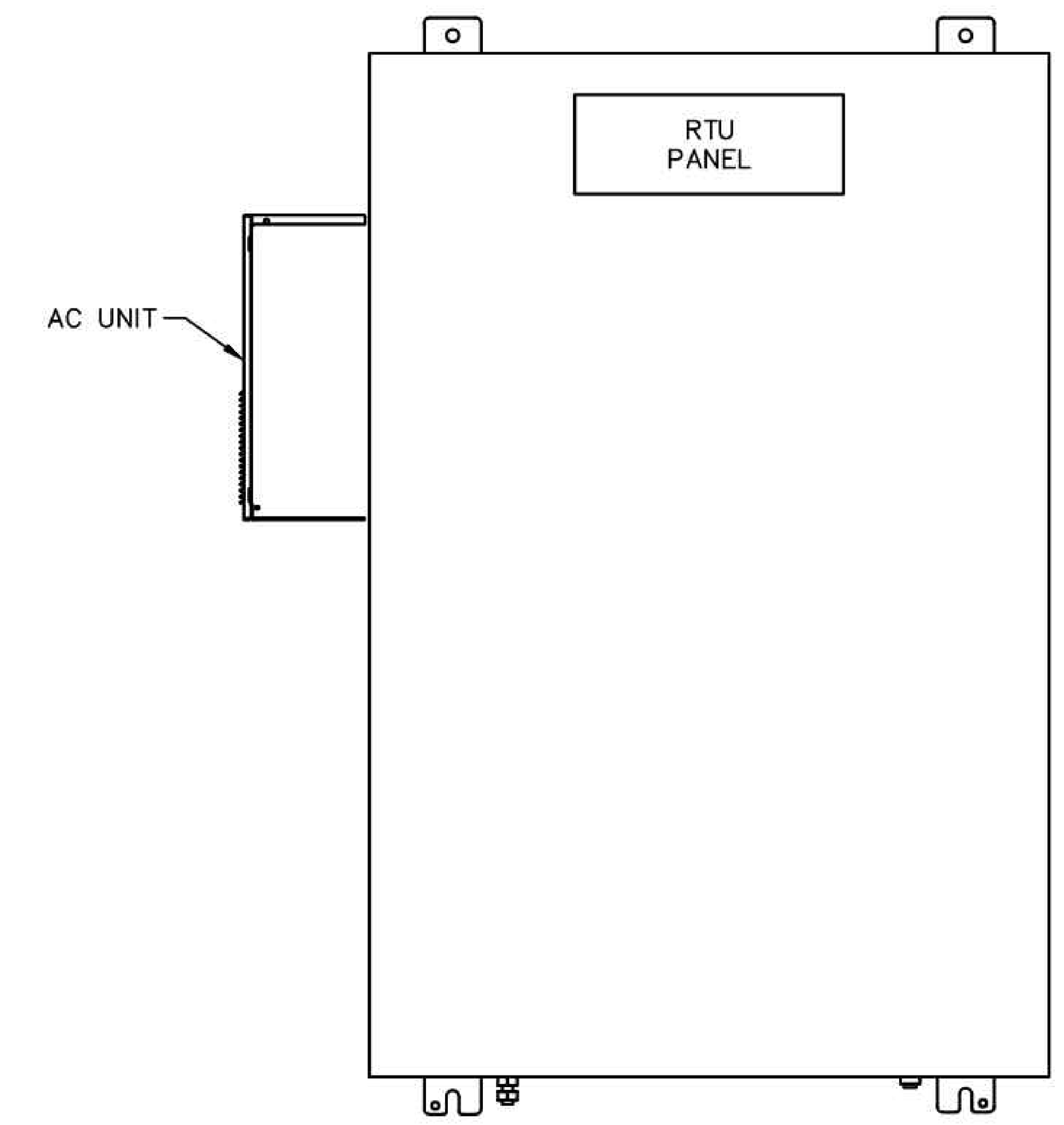
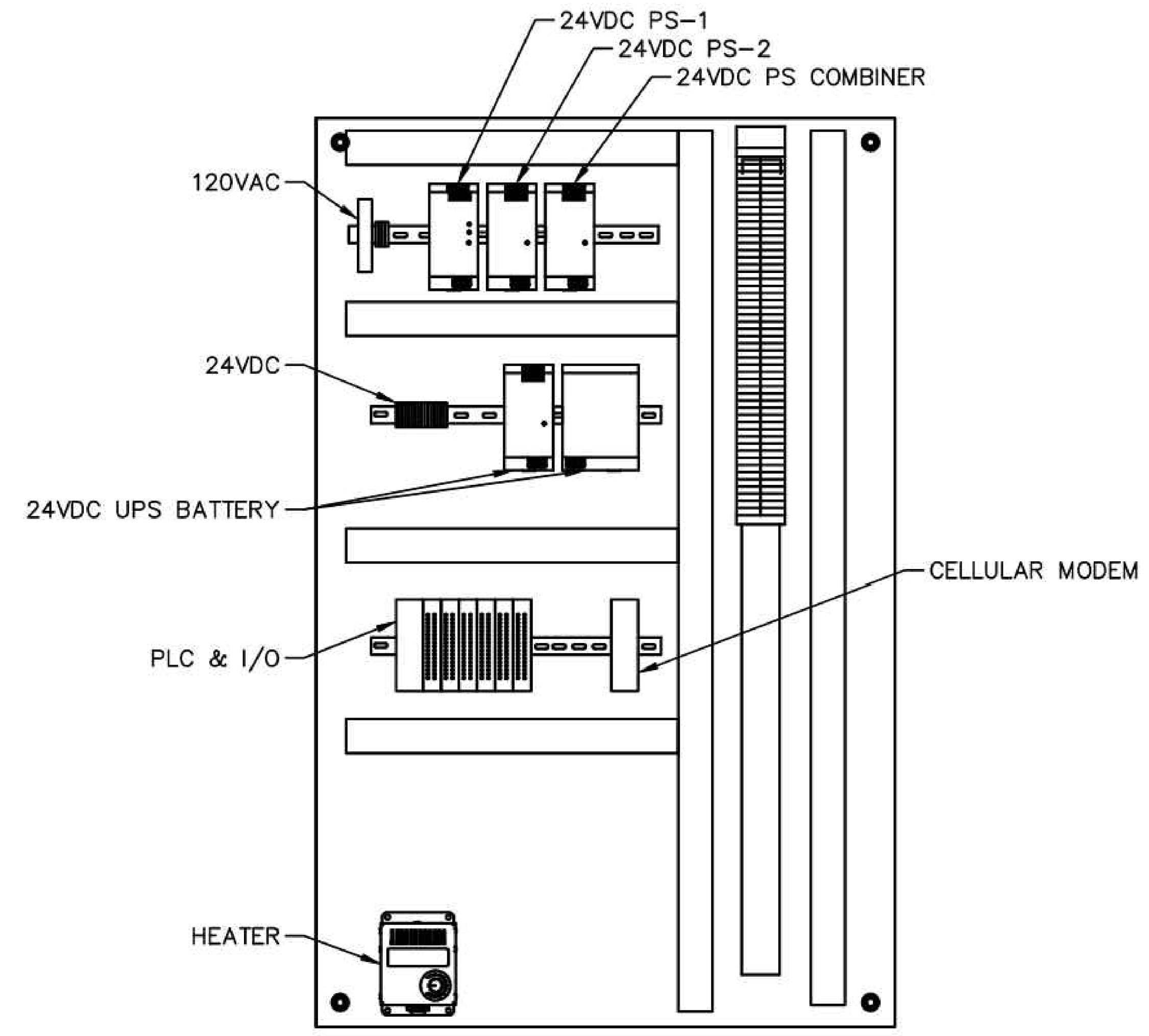
SHEET 46 OF 48

LS E7

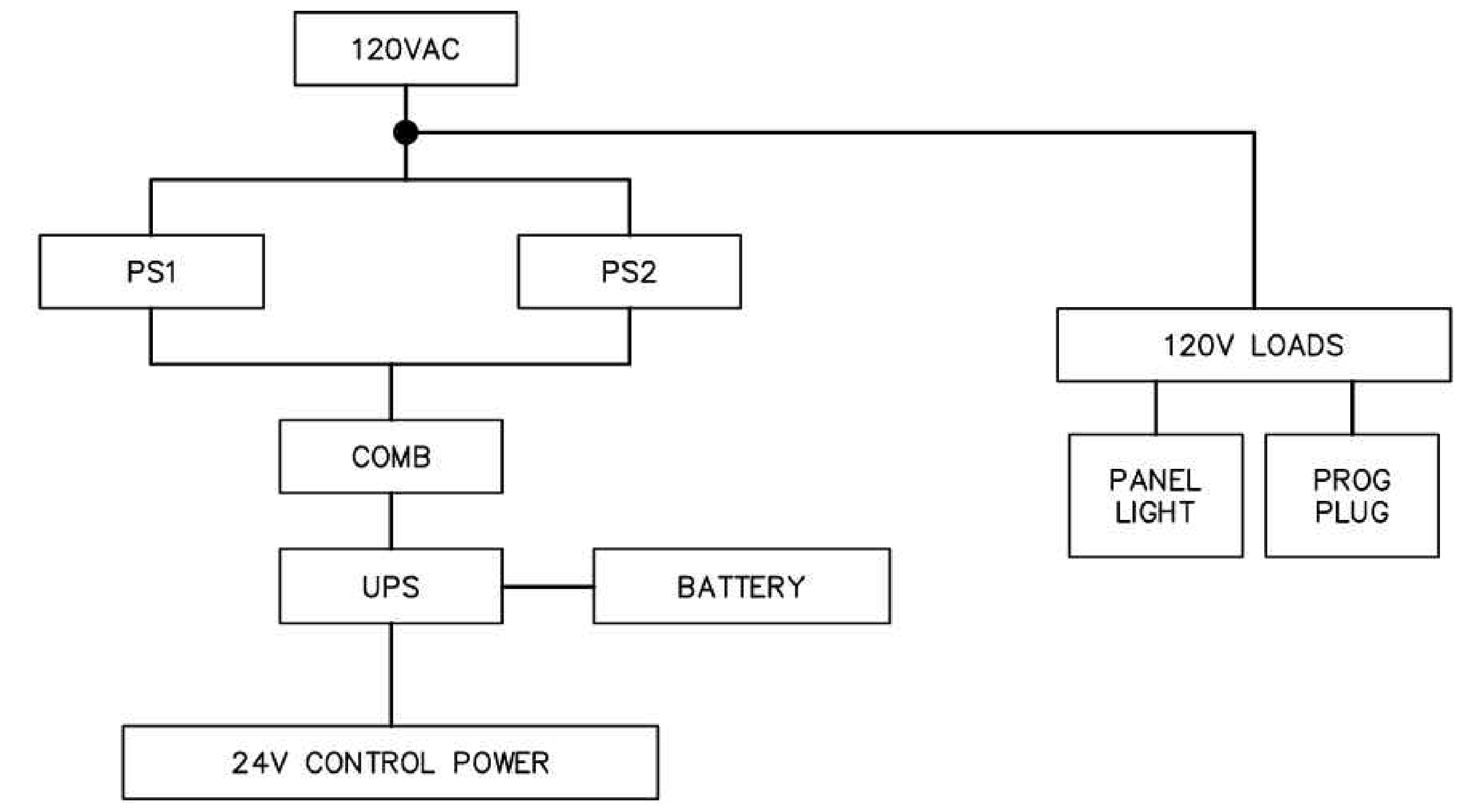


FRONT VIEW (EXTERIOR)
NOT TO SCALE

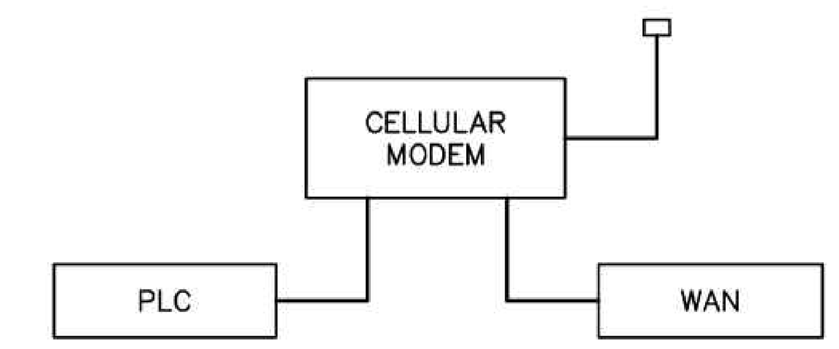


FRONT VIEW (DOOR REMOVED)
NOT TO SCALE

LIFT STATION SCADA RTU ENCLOSURE
NOT TO SCALE



CONTROL POWER
NOT TO SCALE



CELLULAR MODEM PART# TBD

MODEM SWITCHES BETWEEN CELL AND WAN.

NETWORK
NOT TO SCALE

LIFT STATION I/O LIST				
ITEM	DESCRIPTION	TYP.	CABLE/CONDUIT	REMARKS
1	P1 RUN STATUS	DI	1/2" C, W/2-#16	PHYSICAL I/O
2	P2 RUN STATUS	DI	1/2" C, W/2-#16	PHYSICAL I/O
3	P1 H-O-A STATUS	DI	1/2" C, W/2-#16	PHYSICAL I/O
4	P2 H-O-A STATUS	DI	1/2" C, W/2-#16	PHYSICAL I/O
5	HIGH WET WELL LEVEL	DI	1/2" C, W/2-#16	PHYSICAL I/O
6	LOW WET WELL LEVEL	DI	1/2" C, W/2-#16	PHYSICAL I/O
7	MAIN POWER FAULT	DI	1/2" C, W/2-#16	PHYSICAL I/O
8	CONTROL POWER FAULT	DI	1/2" C, W/2-#16	PHYSICAL I/O
9	GEN RUN	DI	1/2" C, W/2-#16	PHYSICAL I/O
10	GENERATOR FAULT	DI	1/2" C, W/2-#16	PHYSICAL I/O
11	PUMP ROTATION BINARY	DI	1/2" C, W/2-#16	PHYSICAL I/O
12	PUMP ROTATION BINARY	DI	1/2" C, W/2-#16	PHYSICAL I/O
13	AC POWER	DI	1/2" C, W/2-#16	RADIO I/O
14	PUMP 1 CALL	DO	1/2" C, W/2-#16	PHYSICAL I/O
15	PUMP 2 CALL	DO	1/2" C, W/2-#16	PHYSICAL I/O
16	PLC FAULT	DO	1/2" C, W/2-#16	PHYSICAL I/O
17	P1 STARTER FAULT	DO	1/2" C, W/2-#16	PHYSICAL I/O
18	P2 STARTER FAULT	DO	1/2" C, W/2-#16	PHYSICAL I/O
19	PUMP 1 OVERRIDE	DO	1/2" C, W/2-#16	PHYSICAL I/O
20	PUMP 2 OVERRIDE	DO	1/2" C, W/2-#16	PHYSICAL I/O
21	PUMP 1 OFF	DO	1/2" C, W/2-#16	PHYSICAL I/O
22	PUMP 2 OFF	DO	1/2" C, W/2-#16	PHYSICAL I/O
23	ANY PUMP OUT	DO	1/2" C, W/2-#16	PHYSICAL I/O
24	ANY ALARM	DO	1/2" C, W/2-#16	PHYSICAL I/O
25	BATTERY TEST	DO	1/2" C, W/2-#16	RADIO I/O
26	PUMP 1 VFD SPEED	AO	1/2" C, W/2-#18 STP	PHYSICAL I/O
27	PUMP 2 VFD SPEED	AO	1/2" C, W/2-#18 STP	PHYSICAL I/O
28	WET WELL LEVEL	AI	1/2" C, W/2-#18 STP	PHYSICAL I/O
29	P1 CURRENT	AI	1/2" C, W/2-#18 STP	PHYSICAL I/O
30	P1 CURRENT	AI	1/2" C, W/2-#18 STP	PHYSICAL I/O
31	FLOW METER STATUS	AI	1/2" C, W/2-#18 STP	PHYSICAL I/O
32	RADIO KEY CURRENT	AI	1/2" C, W/2-#18 STP	RADIO I/O
33	RADIO SIGNAL STRENGTH	AI	1/2" C, W/2-#18 STP	RADIO I/O

NOTES:

1. RTU PANEL SCHEMATIC AND WIRING DIAGRAM IS TYPICAL IN NATURE. FINAL HARDWARE CONFIGURATION MAY VARY.
2. PROVIDE FACTORY AUTHORIZED STARTUP AND MINIMUM 4 HOURS TRAINING FOR OPERATOR PERSONNEL.
3. THE LIFT STATION SCADA SYSTEM SHALL OPERATE PER THE SEQUENCE OF OPERATIONS.
4. ALL CONDUITS AND WIRING PROVIDED, INSTALLED BY THE ELECTRICAL CONTRACTOR AND TERMINATED BY THE SCADA CONTRACTOR.
5. ELECTRICAL CONTRACTOR MAY GROUP WIRES WITH SAME VOLTAGE FOR FIELD DEVICES IN CONDUIT AS HE DEEMS BEST APPROPRIATE.
6. ANALOG AND LOW VOLTAGE SIGNALS SHALL NOT BE RUN IN SAME CONDUIT AS 120VAC AND 480VAC CIRCUITS.
7. QUANTITY OF CONDUCTORS SHOWN ARE FOR REFERENCE ONLY. VERIFY EXACT WIRING REQUIREMENTS TO FIELD DEVICES ER INFORMATION PROVIDED BY THE EQUIPMENT VENDOR PRIOR TO INSTALLATION.
8. USE SHIELDED TWISTED PAIR (STP) CABLE BELDEN #5341FE OR EQUAL.
9. WET WELL LEVEL TRANSDUCER SCALING SHALL BE COORDINATED WITH CIVIL ENGINEER.

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STATE OF TEXAS
GREGORY S. BAIRD
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9/30/24

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CLARA VISTA
LIFT STATION & FORCE MAIN
LIFT STATION ELECTRICAL
DETAILS 5 OF 6

PLAT NO. CP-22-0144
JOB NO. 51456-10
DATE SEPTEMBER 2024
DESIGNER LAF
CHECKED GSB DRAWN LAF
SHEET 47 OF 48

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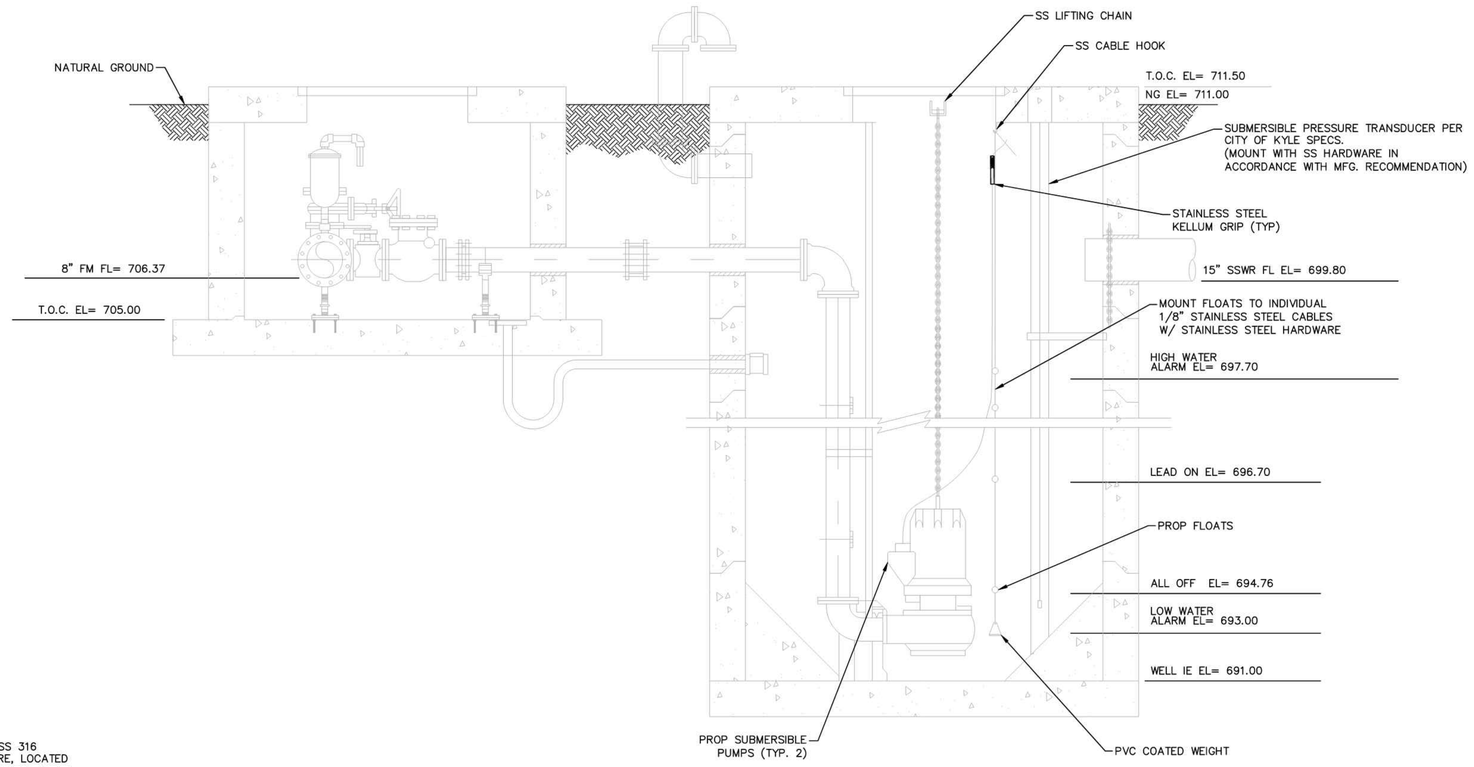
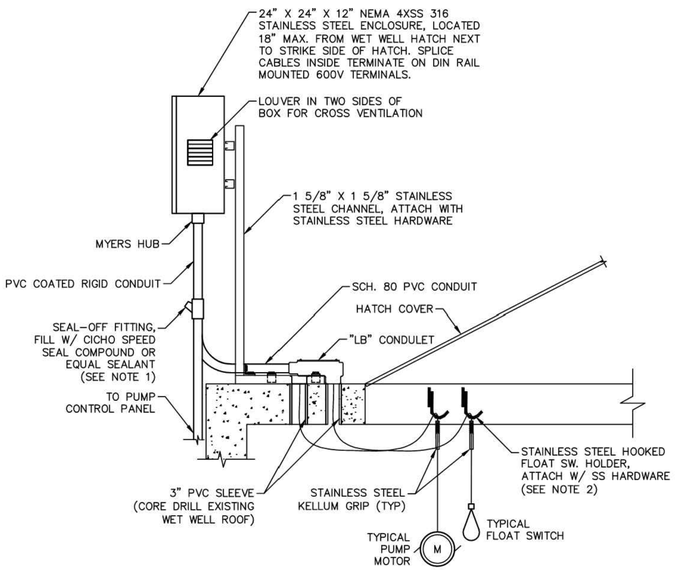


LIFT STATION SECTION VIEW
NOT TO SCALE



WET WELL JUNCTION BOX DETAIL
NOT TO SCALE

NOTES:

1. ALL CONDUITS ENTERING WET WELL JUNCTION BOX SHALL BE PROVIDED WITH SEAL-OFF FITTINGS. TYPICAL.
2. CONTROL WIRE HANGERS SHALL BE MOUNTED ON SIDE WALL, NOT NEXT TO PUMP RAILS.

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STATE OF TEXAS
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100260
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CLARA VISTA
LIFT STATION & FORCE MAIN
LIFT STATION ELECTRICAL
DETAILS 6 OF 6

PLAT NO. CP-22-0144
JOB NO. 51456-10
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CP-22-0144

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Clara Vista Lift Station & Force Main
Date Prepared: 11/6/2024

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

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

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

County =	Hays	
Total project area included in plan * =	25.68	acres
Predevelopment impervious area within the limits of the plan * =	0.01	acres
Total post-development impervious area within the limits of the plan* =	0.60	acres
Total post-development impervious cover fraction * =	0.02	
P =	33	inches
$L_{M\ TOTAL\ PROJECT}$ =	534	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. = VFS 1

Total drainage basin/outfall area =	0.26	acres
Predevelopment impervious area within drainage basin/outfall area =	0.01	acres
Post-development impervious area within drainage basin/outfall area =	0.09	acres
Post-development impervious fraction within drainage basin/outfall area =	0.33	
$L_{M\ THIS\ BASN}$ =	71	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 percent

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

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

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

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

A_C =	0.26	acres
A_I =	0.09	acres
A_P =	0.18	acres
L_R =	85	lbs

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

Desired $L_{M\ THIS\ BASN}$ = 71 lbs.

F = 0.83

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

Rainfall Depth =	1.20	inches
Post Development Runoff Coefficient =	0.27	
On-site Water Quality Volume =	309	cubic feet

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

Off-site area draining to BMP =	0.45	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0.00	
Off-site Runoff Coefficient =	0.02	
Off-site Water Quality Volume =	39	cubic feet
Storage for Sediment =	70	
Total Capture Volume (required water quality volume(s) x 1.20) =	417	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.

STATE OF TEXAS
AIMEE CHAVEZ
123240
LICENSED
PROFESSIONAL ENGINEER
aimee chavez
11/13/24

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Clara Vista Lift Station & Force Main
Date Prepared: 11/6/2024

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where:
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A_N = Net increase in impervious area for the project
P = Average annual precipitation, inches

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

County =	Hays	
Total project area included in plan * =	25.68	acres
Predevelopment impervious area within the limits of the plan * =	0.01	acres
Total post-development impervious area within the limits of the plan* =	0.60	acres
Total post-development impervious cover fraction * =	0.02	
P =	33	inches
$L_{M\ TOTAL\ PROJECT}$ =	534	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. = VFS 2

Total drainage basin/outfall area =	0.10	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.03	acres
Post-development impervious fraction within drainage basin/outfall area =	0.31	
$L_{M\ THIS\ BASIN}$ =	27	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 percent

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

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

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

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

A_C =	0.10	acres
A_I =	0.03	acres
A_P =	0.07	acres
L_R =	30	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 27 lbs.

F = 0.91

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 =	1.80	inches
Post Development Runoff Coefficient =	0.26	
On-site Water Quality Volume =	165	cubic feet

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

Off-site area draining to BMP =	0.45	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0.00	
Off-site Runoff Coefficient =	0.02	
Off-site Water Quality Volume =	59	cubic feet
Storage for Sediment =	45	
Total Capture Volume (required water quality volume(s) x 1.20) =	268	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.

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Clara Vista Lift Station & Force Main
Date Prepared: 11/6/2024

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

where:

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

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

County =	Hays	
Total project area included in plan * =	25.68	acres
Predevelopment impervious area within the limits of the plan * =	0.01	acres
Total post-development impervious area within the limits of the plan* =	0.60	acres
Total post-development impervious cover fraction * =	0.02	
P =	33	inches
$L_{M\ TOTAL\ PROJECT}$ =	534	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. = VFS 3

Total drainage basin/outfall area =	0.06	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.02	acres
Post-development impervious fraction within drainage basin/outfall area =	0.26	
$L_{M\ THIS\ BASIN}$ =	14	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 percent

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

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

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

where:

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

A_C =	0.06	acres
A_I =	0.02	acres
A_P =	0.04	acres
L_R =	15	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 14 lbs.

F = 0.91

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 =	1.80	inches
Post Development Runoff Coefficient =	0.24	
On-site Water Quality Volume =	91	cubic feet

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

Off-site area draining to BMP =	0.45	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0.00	
Off-site Runoff Coefficient =	0.02	
Off-site Water Quality Volume =	59	cubic feet
Storage for Sediment =	30	
Total Capture Volume (required water quality volume(s) x 1.20) =	179	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.

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Clara Vista Lift Station & Force Main
Date Prepared: 11/6/2024

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

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

where:

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

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

County =	Hays	
Total project area included in plan * =	25.68	acres
Predevelopment impervious area within the limits of the plan * =	0.01	acres
Total post-development impervious area within the limits of the plan* =	0.60	acres
Total post-development impervious cover fraction * =	0.02	
P =	33	inches
$L_{M\ TOTAL\ PROJECT}$ =	534	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. = VFS 4

Total drainage basin/outfall area =	1.45	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.39	acres
Post-development impervious fraction within drainage basin/outfall area =	0.27	
$L_{M\ THIS\ BASIN}$ =	355	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 percent

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

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

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

where:

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

A_C =	1.45	acres
A_I =	0.39	acres
A_P =	1.06	acres
L_R =	399	lbs

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

Desired $L_{M\ THIS\ BASIN}$ = 379 lbs.

F = 0.95

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 =	2.60	inches
Post Development Runoff Coefficient =	0.24	
On-site Water Quality Volume =	3335	cubic feet

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

Off-site area draining to BMP =	0.45	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0.00	
Off-site Runoff Coefficient =	0.02	
Off-site Water Quality Volume =	85	cubic feet
Storage for Sediment =	684	
Total Capture Volume (required water quality volume(s) x 1.20) =	4104	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.

Texas Commission on Environmental Quality

TSS Removal Calculations 04-20-2009

Project Name: Clara Vista Lift Station & Force Main
Date Prepared: 11/6/2024

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Text shown in blue indicate location of instructions in the Technical Guidance Manual - RG-348.
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1. The Required Load Reduction for the total project: Calculations from RG-348 Pages 3-27 to 3-30

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

where:

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

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

County =	Hays	
Total project area included in plan * =	25.68	acres
Predevelopment impervious area within the limits of the plan * =	0.01	acres
Total post-development impervious area within the limits of the plan* =	0.60	acres
Total post-development impervious cover fraction * =	0.02	
P =	33	inches
$L_{M\ TOTAL\ PROJECT}$ =	534	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. = VFS 5

Total drainage basin/outfall area =	0.23	acres
Predevelopment impervious area within drainage basin/outfall area =	0.00	acres
Post-development impervious area within drainage basin/outfall area =	0.05	acres
Post-development impervious fraction within drainage basin/outfall area =	0.21	
$L_{M\ THIS\ BASN}$ =	43	lbs.

3. Indicate the proposed BMP Code for this basin.

Proposed BMP = Vegetated Filter Strips
Removal efficiency = 85 percent

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

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

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

where:

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

A_C =	0.23	acres
A_I =	0.05	acres
A_P =	0.18	acres
L_R =	50	lbs

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

Desired $L_{M\ THIS\ BASN}$ = 43 lbs.

F = 0.86

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 =	1.38	inches
Post Development Runoff Coefficient =	0.21	
On-site Water Quality Volume =	240	cubic feet

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

Off-site area draining to BMP =	0.45	acres
Off-site Impervious cover draining to BMP =	0.00	acres
Impervious fraction of off-site area =	0.00	
Off-site Runoff Coefficient =	0.02	
Off-site Water Quality Volume =	45	cubic feet
Storage for Sediment =	57	
Total Capture Volume (required water quality volume(s) x 1.20) =	341	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.

ATTACHMENT N

MAINTENANCE PROCEDURES FOR PERMANENT BMPs

Note: Additional guidance can be obtained from TCEQ's Technical Guidance Manual (TGM) RG-348 (2005) Section 3.5.

A written record will be kept of inspection results and maintenance performed.

3.5.8 Vegetative Filter Strips

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

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

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

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

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

- *Sediment Removal.* Sediment removal is not normally required in filter strips, since the vegetation normally grows through it and binds it to the soil. However, sediment may accumulate along the upstream boundary of the strip preventing uniform overland flow. Excess sediment should be removed by hand or with flat-bottomed shovels. Inspections should be performed at least twice a year and after each rainfall event, with at least one biannual inspection to occur during or immediately after a rainfall event.

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

Other recommended maintenance guidelines include:

- *Inspections.* BPM facilities should be inspected at least twice a year (once during or immediately following wet weather) to evaluate facility operation. During each inspection, erosion areas inside and downstream of the BPM must be identified and repaired or revegetated immediately.

- *Sediment Removal.* Remove sediment from the facility when sediment depth reaches 3 inches or when the sediment interferes with the health of vegetation or ability of the facility to meet required drawdown times. Sediment removal should be performed at least every 2 years.

- *Drain Time.* When the drain time exceeds 72 hours as observed in the observation well, the filter media should be removed and replaced with more permeable material.

- *Vegetation.* All dead and diseased vegetation considered beyond treatment shall be removed and replaced during semi-annual inspections. Diseased trees and shrubs should be treated during inspections. Remulch any bare areas by hand whenever needed. Replace mulch annually in the spring, or more frequently if needed, in landscaped areas of the basin where grass or groundcover is not planted. Grass areas in and around bioretention facilities must be mowed at least twice annually to limit vegetation height to 18 inches. More frequent mowing to maintain aesthetic appeal may be necessary in landscaped areas.

- *Debris and Litter Removal.* Debris and litter will accumulate in the facility and should be removed during regular mowing operations and inspections.

- *Filter Undrain.* Clean underdrain piping network to remove any sediment buildup every 5 years, or as needed to maintain design drawdown time.

Toll Southwest LLC

Signature

9/9/2024

Date

David M. "Mike" Boswell
Vice President, Land Development

ATTACHMENT P

MEASURES FOR MINIMIZING SURFACE STREAM CONTAMINATION

At any points where discharge from the site is concentrated and erosive velocities exist, appropriately-sized energy dissipators will be provided to reduce velocities to non-erosive levels.

TEMPORARY STORMWATER SECTION

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: Aimee Chavez, P.E.

Date: 11/6/24

Signature of Customer/Agent:

Aimee Chavez

Regulated Entity Name: Clara Vista Lift Station & Force Main

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: Diesel Fuel, Gasoline, etc.

   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: Blanco River

Temporary Best Management Practices (TBMPs)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

☒ N/A

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

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

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

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

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

Soil Stabilization Practices

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

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

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

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

Administrative Information

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

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

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

ATTACHMENT A

Spill Response Actions

In the event of an accidental leak or spill:

- Spill must be contained and cleaned up immediately.
- Spills will not be merely buried or washed with water.
- Contractor shall take action to contain spill. Contractor may use sand or other absorbent material stockpiled on site to absorb spill. Absorbent material should be spread over the spill area to absorb the spilled product.
- In the event of an uncontained discharge the contractor shall utilize onsite equipment to construct berms downgradient of the spill with sand or other absorbent material to contain and absorb the spilled product.
- Spill containment/absorbent materials along with impacted media must be collected and stored in such a way so as not to continue to affect additional media (soil/water). Once the spill has been contained, collected material should be placed on poly or plastic sheeting until removed from the site. The impacted media and cleanup materials should be covered with plastic sheeting and the edges weighed down with paving bricks or other similarly dense objects as the material is being accumulated. This will prevent the impacted media and cleanup materials from becoming airborne in windy conditions or impacting runoff during a rain event. The stockpiled materials should not be located within an area of concentrated runoff such as along a curb line or within a swale.
- Contaminated soils and cleanup materials will be sampled for waste characterization. When the analysis results are known the contaminated soils and cleanup materials will be removed from the site and disposed in a permitted landfill in accordance with applicable regulations.
- The contractor will be required to notify the owner, who will in turn contact TCEQ to notify them in the event of a significant hazardous/reportable quantity spill. Additional notifications as required by the type and amount of spill will be conducted by owner or owner's representative.

In the event of an accidental significant or hazardous spill:

- Visit TCEQ's Reportable Quantities site: https://www.tceq.texas.gov/response/spills/spill_rq.html
- The contractor will be required to report significant or hazardous spills in reportable quantities as soon as possible and within 24 hours to:
  - the National Response Center at (800) 424-8802
  - the TCEQ Regional Office (512) 339-2929 (if during business hours: 8 AM to 5 PM) or
  - the State Emergency Response Center (800) 832-8224 (if after hours)

- Contaminated soils will be sampled for waste characterization. When the analysis results are known the contaminated soils will be removed from the site and disposed in a permitted landfill in accordance with applicable regulations.

Additional guidance can be obtained from TCEQ's Technical Guidance Manual (TGM) RG-348 (2005) Section 1.4.16. Contractor shall review this section.

ATTACHMENT B

POTENTIAL SOURCES OF CONTAMINATION

Potential Source
- Asphalt products used on this project.

Preventative Measure
- After placement of asphalt, emulsion or coatings, the contractor will be responsible for immediate cleanup should an unexpected rain occur. For the duration of the asphalt product curing time, the contractor will maintain standby personnel and equipment to contain any asphalt wash-off should an unexpected rain occur. The contractor will be instructed not to place asphalt products on the ground within 48 hours of a forecasted rain.

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

Preventative Measure
- Vehicle maintenance when possible will be performed within the construction staging area.
- Construction vehicles and equipment shall be checked regularly for leaks and repaired immediately.

Potential Source
- Accidental leaks or spills of oil, petroleum products and substances listed under 40 CFR parts 110, 117, and 302 used or stored temporarily on site.

Preventative Measure
- Contractor to incorporate into regular safety meetings, a discussion of spill prevention and appropriate disposal procedures.

- Contractor's superintendent or representative overseer shall enforce proper spill prevention and control measures.
- Hazardous materials and wastes shall be stored in covered containers and protected from vandalism.
- A stockpile of spill cleanup materials shall be stored on site where it will be readily accessible.

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

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

Potential Source
- Construction debris.

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

Potential Source
- Spills/Overflow of waste from portable toilets

Preventative Measure
- Portable toilets will be placed away from high traffic vehicular areas and storm drain inlets.
- Portable toilets will be placed on a level ground surface.
- Portable toilets will be inspected regularly for leaks and will be serviced and sanitized at time intervals that will maintain sanitary conditions.

ATTACHMENT C

SEQUENCE OF MAJOR ACTIVITIES

The sequence of major activities which disturb soil during construction on this site are listed below.

1) Set erosion controls – approximately 1,912 LF of silt fence
2) Clear and grub – approximately 2.72 acres
3) Rough grade roadway – approximately 0.82 acres
4) Rough grade lift station – approximately 0.23 acres
5) Trench utilities – approximately 1,461 LF
6) Install water, wastewater, and storm – approximately 1,461 LF
7) Install sub base/base for road/parking areas – approximately 0.59 acres
8) Pave roadway/parking areas – approximately 0.46 acres
9) Site cleanup – approximately 2.72 acres
10) Remove erosion controls – approximately 1,912 LF of silt fence

ATTACHMENT D

TEMPORARY BEST MANAGEMENT PRACTICES AND MEASURES

Please see the Erosion Control sheets included in the Construction Plans Section for TBMP layout and the responses below for more details.

Due to existing topography, upgradient stormwater from adjacent property north of the site enters the property and flows from north to south through the lift station project limits. As this upgradient area is currently undeveloped and undisturbed, sedimentation from off-site areas is not anticipated. All TBMPs utilized are adequate for the drainage areas served.

Site preparation, which is the initiation of all activity on the project, will disturb the largest amount of soil. Therefore, before any of this work can begin, the clearing and grading contractor will be responsible for the installation of all on-site control measures. The methodology for pollution prevention of on-site stormwater will include: (1) erection of silt fences along the downgradient boundary of construction activities for temporary erosion and sedimentation controls, (2) installation of rock berms downgradient from areas of concentrated stormwater flow for temporary erosion control, (3) installation of stabilized construction entrance/exit(s) to reduce the dispersion of sediment from the site, and (4) installation of construction staging area(s).

Prior to the initiation of construction, all previously installed control measures will be repaired or reestablished for their designed or intended purpose. This work, which is the remainder of all activities on the project, may also disturb additional soil. The construction contractor will be responsible for the installation of all remaining on-site control measures that includes installation of the concrete truck washout pit(s), as construction phasing warrants.

Temporary measures are intended to provide a method of slowing the flow of runoff from the construction site in order to allow sediment and suspended solids to settle out of the runoff. By containing the sediment and solids within the site, they will not enter the aquifer, surface streams and/or sensitive features that may exist downstream of the site.

Temporary measures are intended to provide a method of slowing the flow of runoff from the construction site in order to allow sediment and suspended solids to settle out of the runoff. By containing the sediment and solids within the site, they will not enter the aquifer, surface streams and/or sensitive features that may exist downstream of the site.

BMP measures utilized in this plan are intended to allow stormwater to continue downstream after passing through the BMPs. This will allow stormwater runoff to continue downgradient to streams or features that may exist downstream of the site. Features discovered during construction will be reported and assessed in accordance with applicable regulations.

ATTACHMENT F

STRUCTURAL PRACTICES

The following structural measures will be installed prior to the initiation of site preparation activities:

- Erection of silt fences along the downgradient boundary of construction activities and rock berms for secondary protection, as located on the Erosion Control sheets and illustrated on the Construction Details - Erosion Controls sheet.
- Installation of stabilized construction entrance/exit(s) and construction staging area(s), as located on the Erosion Control sheets and illustrated on the Construction Details - Erosion Controls sheet.

The following structural measures will be installed at the initiation of construction activities or as appropriate based on the construction sequencing:

- Installation of concrete truck washout pit(s), as required and located on the Erosion Control sheets and illustrated on the Construction Details - Erosion Controls sheet.
- Installation of rock berm, as required and located on the Erosion Control sheets and illustrated on the Construction Details – Erosion Controls sheet.

ATTACHMENT G

ATTACHMENT I

INSPECTIONS & MAINTENANCE

Designated and qualified person(s) shall inspect Pollution Control Measures weekly and within 24 hours after a storm event. An inspection report that summarizes the scope of the inspection, names and qualifications of personnel conducting the inspection, date of the inspection, major observations, and actions taken as a result of the inspection will be recorded and maintained as part of Storm Water TPDES data for a period of three years after the Notice of Termination (NOT) has been filed. A copy of the Inspection Report Form is provided in this Contributing Zone Plan.

As a minimum, the inspector shall observe: (1) significant disturbed areas for evidence of erosion, (2) storage areas for evidence of leakage from the exposed stored materials, (3) structural controls (rock berm outlets, silt fences, drainage swales, etc.) for evidence of failure or excess siltation (over 6 inches deep), (4) vehicle exit point for evidence of off-site sediment tracking, (5) vehicle storage areas for signs of leaking equipment or spills, (6) concrete truck rinse-out pit for signs of potential failure, (7) embankment, spillways, and outlet of sediment basin (where applicable) for erosion damage, and (8) sediment basins (where applicable) for evidence that basin has accumulated 50% of its volume in silt. Deficiencies noted during the inspection will be corrected and documented within seven calendar days following the inspection or before the next anticipated storm event if practicable. Temporary sediment basins and permanent basins will be inspected until final stabilization of 70% within the basin watershed is achieved.

BMP inspection and maintenance requirements from sections 1.3 and 1.4 of TCEQ's Technical Guidance Manual are detailed below.

Temporary Construction Entrance/Exit

- The entrance should be maintained in a condition, which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment.

- All sediment spilled, dropped, washed or tracked onto public rights-of-way should be removed immediately by contractor.
- When necessary, wheels should be cleaned to remove sediment prior to entrance onto public right-of-way.
- When washing is required, it should be done on an area stabilized with crushed stone that drains into an approved sediment trap or sediment basin.
- All sediment should be prevented from entering any storm drain, ditch or water course by using approved methods.

Silt Fence

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

Rock Berms

- Inspection should be made weekly and after each rainfall by the responsible party. For installations in streambeds, additional daily inspections should be made.
- Remove sediment and other debris when buildup reaches 6 inches and dispose of the accumulated silt in an approved manner that will not cause any additional siltation.
- Repair any loose wire sheathing.
- The berm should be reshaped as needed during inspection.

- The berm should be replaced when the structure ceases to function as intended due to silt accumulation among the rocks, washout, construction traffic damage, etc.
- The rock berm should be left in place until all upstream areas are stabilized and accumulated silt removed.

Pollution Prevention Measure	Inspected in Compliance	Corrective Action Required	
		Description (use additional sheet if necessary)	Date Completed
Best Management Practices			
Natural vegetation buffer strips			
Temporary vegetation			
Permanent vegetation			
Sediment control basin			
Silt fences			
Rock berms			
Gravel filter bags			
Drain inlet protection			
Other structural controls			
Vehicle exits (off-site tracking)			
Material storage areas (leakage)			
Equipment areas (leaks, spills)			
Concrete washout pit (leaks, failure)			
General site cleanliness			
Trash receptacles			
Evidence of Erosion			
Site preparation			
Roadway or parking lot construction			
Utility construction			
Drainage construction			
Building construction			
Major Observations			
Sediment discharges from site			
BMPs requiring maintenance			
BMPs requiring modification			
Additional BMPs required			

_____ A brief statement describing the qualifications of the inspector is included in this SWP3.

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

"I further certify I am an authorized signatory in accordance with the provisions of 30 TAC §305.128."

Inspector's Name _____ Inspector's Signature _____ Date _____

PROJECT MILESTONE DATES

Date when major site grading activities begin:

Construction Activity	*Date*
Installation of BMPs	

Dates when construction activities temporarily or permanently cease on all or a portion of the project:

Construction Activity	Date

Dates when stabilization measures are initiated:

Stabilization Activity	Date
Removal of BMPs	

ATTACHMENT J

SCHEDULE OF INTERIM AND PERMANENT SOIL STABILIZATION PRACTICES

Interim on-site stabilization measures, which are continuous, will include minimizing soil disturbances by exposing the smallest practical area of land required for the shortest period of time and maximizing use of natural vegetation. As soon as practical, all disturbed soil will be stabilized via permanent revegetation. Details, such as installation, irrigation, and maintenance are provided below.

Installation:

- Final grading must be completed prior to seeding, minimizing all steep slopes. In addition, all necessary erosion structures such as dikes, swales, diversions, should also be installed.
- Seedbed should be well pulverized, loose, and uniform.
- Fertilizer should be applied at the rate of 40 pounds of nitrogen and 40 pounds of phosphorus per acre, which is equivalent to about 1.0 pounds of nitrogen and phosphorus per 1000 square feet. Compost can be used instead of fertilizer and applied at the same time as the seed.

Irrigation:

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

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

Inspection and Maintenance Guidelines:

- Permanent vegetation should be inspected weekly and after each rain event to locate and

repair any erosion.

- Erosion from storms or other damage should be repaired as soon as practical by regrading the area and applying new seed.
- If the vegetated cover is less than 80%, the area should be reseeded.

Stabilization measures will be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, and except as provided below, will be initiated no more than fourteen (14) days after the construction activity in that portion of the site has temporarily or permanently ceased. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within twenty-one (21) days, temporary stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonably arid conditions, stabilization measures must be initiated as soon as practicable.

NOTICE OF INTENT

TCEQ Office Use Only
Permit No:
CN:
RN:

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

IMPORTANT INFORMATION

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

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

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

ePERMITS

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

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

APPLICATION FEE AND PAYMENT

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

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

Provide your payment information for verification of payment:

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

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

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

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

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

SECTION 1. OPERATOR (APPLICANT)

a) If the applicant is currently a customer with TCEQ, what is the Customer Number (CN) issued to this entity? CN 605682475

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

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

Toll Southwest LLC.

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

Prefix (Mr. Ms. Miss): Mr.

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

Title: Vice President Credentials: Click here to enter text.

Phone Number: (817) 329-7973 Fax Number: Click here to enter text.

E-mail: mboswell@tollbrothers.com

Mailing Address: 1320 Arrow Point Dr., Suite 401

City, State, and Zip Code: Cedar Park, TX 78613

Mailing Information if outside USA:

Territory: Click here to enter text.

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

d) Indicate the type of customer:

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

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

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

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

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

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

State Franchise Tax ID Number: 32050842304

Federal Tax ID: 472582910

Texas Secretary of State Charter (filing) Number: 0801775669

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

SECTION 2. APPLICATION CONTACT

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

☐ Yes, go to Section 3

☒ No, complete this section

Prefix (Mr. Ms. Miss):

First and Last Name: Aimee Chavez Suffix:

Title: Associate Vice President Credential: P.E.

Organization Name: Pape-Dawson Consulting Engineers, LLC.

Phone Number: (512) 454-8711 Fax Number: Click here to enter text.

E-mail: achavez@pape-dawson.com

Mailing Address: 10801 N Mopac Expy. #200

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

City, State, and Zip Code: Austin, TX, 78759

Mailing information if outside USA:

Territory: Click here to enter text.

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

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

a) If this is an existing permitted site, what is the Regulated Entity Number (RN) issued to this site? RN 111599916

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

b) Name of project or site (the name known by the community where it's located): Clara Vista Lift Station & Force Main

c) In your own words, briefly describe the type of construction occurring at the regulated site (residential, industrial, commercial, or other): Construction of a single-family residential development and associated civil infrastructure.

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

e) Latitude: 29.999333 Longitude: -97.916983

f) Site Address/Location

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

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

Section A:

Street Number and Name: Click here to enter text

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

Section B:

Location Description: Approximately 0.7 miles southwest of the intersection of 6 Creeks Blvd. and Falling River Rd.

City (or city nearest to) where the site is located: Kyle, Texas

Zip Code where the site is located: 78640

SECTION 4. GENERAL CHARACTERISTICS

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

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

☒ No

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

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

☒ No

c) What is the Primary Standard Industrial Classification (SIC) Code that best describes the construction activity being conducted at the site? **4952**

d) What is the Secondary SIC Code(s), if applicable? Click here to enter text

e) What is the total number of acres to be disturbed? 2.72

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

☐ Yes

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

g) What is the estimated start date of the project? March 2025

h) What is the estimated end date of the project? March 2026

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

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

k) What is the segment number(s) of the classified water body(ies) that the discharge will eventually reach? 1813

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

☐ Yes ☒ No

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

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

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

☒ Yes, complete the certification below.

☐ No, go to Section 5

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

SECTION 5. NOI CERTIFICATION

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

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

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

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

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

SECTION 6. APPLICANT CERTIFICATION SIGNATURE

Operator Signatory Name: Click here to enter text

Operator Signatory Title: Click here to enter text

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

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

Signature (use blue ink): _____Date: _____

NOTICE OF INTENT CHECKLIST (TXR150000)

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

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

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

APPLICATION FEE

If paying by check:

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

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

If using ePay:

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

RENEWAL

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

OPERATOR INFORMATION

☒ Customer Number (CN) issued by TCEQ Central Registry

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

☒ Name and title of responsible authority signing the application.

☒ Phone number and e-mail address

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

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

☒ Number of employees.

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

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

REGULATED ENTITY (RE) INFORMATION ON PROJECT OR SITE

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

☒ Site/project name and construction activity description

☒ County

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

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

GENERAL CHARACTERISTICS

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

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

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

☒ Estimated starting and ending dates of the project.

☒ Confirmation of concrete truck washout.

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

☒ Common plan of development or sale.

☒ Receiving water body or water bodies.

☒ Segment number or numbers.

☐ MS4 operator.

☒ Edwards Aquifer rule.

CERTIFICATION

☐ Certification statements have been checked indicating Yes.

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

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

GENERAL INFORMATION

Where to Send the Notice of Intent (NOI):

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

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

Application Fee:

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

Mailed Payments:

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

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

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

TCEQ Contact List:

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

Notice of Intent Process:

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

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

- **Notice of Deficiency:** If an item is incomplete or not verifiable as indicated above, a notice of deficiency (NOD) will be mailed to the operator. The operator will have 30 days to respond to the NOD. The response will be reviewed for completeness.
- **Acknowledgment of Coverage:** An Acknowledgment Certificate will be mailed to the operator. This certificate acknowledges coverage under the general permit.

  or

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

General Permit (Your Permit)

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

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

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

Change in Operator

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

TCEQ Central Registry Core Data Form

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

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

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

INSTRUCTIONS FOR FILLING OUT THE NOI FORM

Renewal of General Permit. Dischargers holding active authorizations under the expired General Permit are required to submit a NOI to continue coverage. The existing permit number is required. If the permit number is not provided or has been terminated, expired, or denied, a new permit number will be issued.

Section 1. OPERATOR (APPLICANT)

a) Customer Number (CN)

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

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

b) Legal Name of Applicant

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

c) Contact Information for the Applicant (Responsible Authority)

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

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

The phone number should provide contact to the applicant.

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

d) Type of Customer (Entity Type)

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

Individual

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

Partnership

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

Trust or Estate

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

Sole Proprietorship (DBA)

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

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

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

Corporation

A customer that meets all of these conditions:

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

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

Government

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

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

Other

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

e) Independent Entity

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

f) Number of Employees

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

g) Customer Business Tax and Filing Numbers

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

State Franchise Tax ID Number

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

Federal Tax ID

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

TX SOS Charter (filing) Number

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

DUNS Number

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

Section 2. APPLICATION CONTACT

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

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

a) Regulated Entity Number (RN)

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

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

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

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

b) Name of the Project or Site

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

c) Description of Activity Regulated

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

d) County

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

e) Latitude and Longitude

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

f) Site Address/Location

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

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

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

Section 4. GENERAL CHARACTERISTICS

a) Indian Country Lands

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

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

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

Construction activities associated with a facility related to oil, gas or geothermal resources may include the construction of a well site; treatment or storage facility; underground hydrocarbon or natural gas storage facility; reclamation plant; gas processing facility; compressor station; terminal facility where crude oil is stored prior to refining and at which refined products are stored solely for use at the facility; a

carbon dioxide geologic storage facility; and a gathering, transmission, or distribution pipeline that will transport crude oil or natural gas, including natural gas liquids, prior to refining of such oil or the use of the natural gas in any manufacturing process or as a residential or industrial fuel.

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

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

c) Primary Standard Industrial Classification (SIC) Code

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

Common SIC Codes related to construction activities include:

- 1521 - Construction of Single Family Homes
- 1522 - Construction of Residential Buildings Other than Single Family Homes
- 1541 - Construction of Industrial Buildings and Warehouses

- 1542 - Construction of Non-residential Buildings, other than Industrial Buildings and Warehouses
- 1611 - Highway and Street Construction, except Highway Construction
- 1622 - Bridge, Tunnel, and Elevated Highway Construction
- 1623 - Water, Sewer, Pipeline and Communications, and Power Line Construction

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

d) Secondary SIC Code

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

e) Total Number of Acres Disturbed

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

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

f) Common Plan of Development

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

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

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

g) Estimated Start Date of the Project

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

h) Estimated End Date of the Project

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

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

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

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

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

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

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

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

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

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

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

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

l) Discharge into MS4 – Identify the MS4 Operator

The discharge may initially be into a municipal separate storm sewer system (MS4). If the stormwater discharge is into an MS4, provide the name of the entity that operates the MS4 where the stormwater discharges. An MS4 operator is often a city, town, county, or utility district, but possibly can be another form of government. Please note that the Construction General Permit requires the Operator to supply the MS4 with a

copy of the NOI submitted to TCEQ. For assistance, you may call the technical staff at 512-239-4671.

m) Discharges to the Edwards Aquifer Recharge Zone and Certification

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

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

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

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

Section 5. NOI CERTIFICATION

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

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

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

b) Certification of Legal Name

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

c) Understanding of Notice of Termination

A permittee shall terminate coverage under the Construction General Permit through the submittal of a NOT when the operator of the facility changes, final stabilization has

been reached, the discharge becomes authorized under an individual permit, or the construction activity never began at this site.

d) Certification of Stormwater Pollution Prevention Plan

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

Section 6. APPLICANT CERTIFICATION SIGNATURE

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

If you are a corporation:

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

If you are a municipality or other government entity:

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

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

30 Texas Administrative Code

§305.44. Signatories to Applications

(a) All applications shall be signed as follows.

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

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

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

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

Texas Commission on Environmental Quality
General Permit Payment Submittal Form

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

Instructions:

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

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

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

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

Fee Code: GPA General Permit: TXR150000

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

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

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

   Project/Site (RE) Name: Clara Vista Lift Station & Force Main

   Project/Site (RE) Physical Address: Approximately 0.7 miles southwest of the intersection of 6 Creeks Blvd and Falling River Rd.

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

OWNER AUTHORIZATION FORM

Owner Authorization Form

Texas Commission on Environmental Quality
for Required Signature
Edwards Aquifer Protection Program
Relating to 30 TAC Chapter 213
Effective June 1, 1999

Land Owner Authorization

I, Gregg T. Reyes of Blanco River Ranch Properties, LP
Land Owner Signatory Name — Land Owner Name (Legal Entity or Individual)

am the owner of the property located at
WATERRIDGE 150 DISTRICT SEC 2, ACRES 2.47
Legal description of the property referenced in the application

and am duly authorized in accordance with §213.4(c)(2) and §213.4(d)(1) or §213.23(c)(2) and §213.23(d) relating to the right to submit an application, signatory authority, and proof of authorized signatory.

I do hereby authorize Toll Southwest, LLC
Applicant Name (Legal Entity or Individual)

to conduct the submittal of an application for TCEQ on its behalf
Description of the proposed regulated activities

at Cypress Road, Kyle, TX 78640.
Precise location of the authorized regulated activities

Land Owner Acknowledgement

I understand that Blanco River Ranch Properties, LP
Land Owner Name (Legal Entity or Individual)

Is ultimately responsible for compliance with the approved or conditionally approved Edwards Aquifer protection plan and any special conditions of the approved plan through all phases of plan implementation even if the responsibility for compliance and the right to possess and control the property referenced in the application has been contractually assumed by another legal entity. I further understand that any failure to comply with any condition of the executive director's approval is a violation is subject to administrative rule or orders and penalties as provided under §213.10 (relating to Enforcement). Such violation may also be subject to civil penalties and injunction.

Land Owner Signature

Gregg T. Reyes

Land Owner Signature

11/8/2024

Date

THE STATE OF § TEXAS

County of § HARRIS

BEFORE ME, the undersigned authority, on this day personally appeared Gregg T. Reyes 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 8th day of November 2024

NOTARY PUBLIC

EUNICE MORALES
Notary ID #131660479
My Commission Expires
July 27, 2026

Eunice Morales

Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 7/27/26

Attached: (Mark all that apply)

- ☐ Lease Agreement
- ☐ Signed Contract
- ☐ Deed Recorded Easement
- ☐ Other legally binding document

Applicant Acknowledgement

I, David M. "Mike" Boswell of Toll Southwest, LLC
Applicant Signatory Name — Applicant Name (Legal Entity or Individual)

acknowledge that Blanco River Ranch Properties, LP
Land Owner Name (Legal Entity or Individual)

has provided Toll Southwest, LLC
Applicant Name (Legal Entity or Individual)

with the right to possess and control the property referenced in the Edwards Aquifer protection plan.

I understand that Blanco River Ranch Properties, LP
Applicant Name (Legal Entity or Individual)

is contractually responsible for compliance with the approved or conditionally approved Edwards Aquifer protection plan and any special conditions of the approved plan through all phases of plan implementation. I further understand that failure to comply with any condition of the executive director's approval is a violation is subject to administrative rule or orders and penalties as provided under §213.10 (relating to Enforcement). Such violation may also be subject to civil penalties and injunction.

Applicant Signature

Applicant Signature

11/11/24
Date

THE STATE OF § Texas

County of § Tarrant

BEFORE ME, the undersigned authority, on this day personally appeared David M "Mike" Boswell 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 11th day of November 2024

NOTARY PUBLIC

LaVonda High
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 12-28-2024

LAVONDA HIGH
Notary Public, State of Texas
Comm. Expires 12-28-2024
Notary ID 12924615-4

AGENT AUTHORIZATION FORM

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

I David M. "Mike" Boswell,
Print Name

Vice President, Land Development,
Title - Owner/President/Other

of Toll Southwest LLC,
Corporation/Partnership/Entity Name

have authorized Aimee Chavez, P.E.
Print Name of Agent/Engineer

of Pape-Dawson Consulting Engineers, LLC.
Print Name of Firm

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

I also understand that:

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

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

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

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

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

SIGNATURE PAGE:

Applicant's Signature

9/9/2024
Date

THE STATE OF TEXAS §

County of TARRANT §

BEFORE ME, the undersigned authority, on this day personally appeared Mike Boswell 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 9th day of September.

LAVONDA HIGH
Notary Public, State of Texas
Comm. Expires 12-28-2024
Notary ID 12924615-4

NOTARY PUBLIC

LaVonda High
Typed or Printed Name of Notary

MY COMMISSION EXPIRES: 12/28/2024

APPLICATION FEE FORM

Application Fee Form

Texas Commission on Environmental Quality

Name of Proposed Regulated Entity: Clara Vista Lift Station & Force Main

Regulated Entity Location: Approximately 0.7 miles southweest of the intersection of Six Creeks Blvd. and Falling River Rd.

Name of Customer: Toll Southwest LLC.

Contact Person: Mike Boswell Phone: 817-329-7973

Customer Reference Number (if issued):CN 605682475

Regulated Entity Reference Number (if issued):RN N/A

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	1.79 Acres	$ 4,000
Sewage Collection System	L.F.	$
Lift Stations without sewer lines	Acres	$
Underground or Aboveground Storage Tank Facility	Tanks	$
Piping System(s)(only)	Each	$
Exception	Each	$
Extension of Time	Each	$

Signature: _____

Date: November 5, 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*

Project	***Fee***
Extension of Time Request	$150

CORE DATA FORM

TCEQ Use Only

TCEQ Core Data Form

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

SECTION I: General Information

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

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

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

2. Customer Reference Number *(if issued)*	Follow this link to search for CN or RN numbers in Central Registry**	**3. Regulated Entity Reference Number** *(if issued)*
CN 605682475		**RN**

SECTION II: Customer Information

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

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

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

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

Toll Southwest LLC.

7. TX SOS/CPA Filing Number	**8. TX State Tax ID** (11 digits)	**9. Federal Tax ID** (9 digits)	**10. DUNS Number** *(if applicable)*
0801775669	32050842304	472582910	

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

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

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

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

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

15. Mailing Address:

1320 Arrow Point Dr., Suite 401

City	Cedar Park	**State**	TX	**ZIP**	78613	**ZIP + 4**	

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

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

(412) 780-2312		( ) -

SECTION III: Regulated Entity Information

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

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

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

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

Clara Vista Lift Station & Force Main

23. Street Address of the Regulated Entity: ***(No PO Boxes)***							
	City		**State**		**ZIP**		**ZIP + 4**
24. County	Hays						

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

25. Description to Physical Location:	Approximately 0.7 miles southweest of the intersection of Six Creeks Blvd. and Falling River Rd.				
26. Nearest City			**State**	**Nearest ZIP Code**	
Kyle			TX	78640	

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

27. Latitude (N) In Decimal:	29.999333		**28. Longitude (W) In Decimal:**	-97.916983	
Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
29	59	57.6	97	55	1.1

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)
4952		237110	

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

Lift station

34. Mailing Address:	**1320 Arrow Point Dr., Suite 401**						
	City	**Cedar Park**	**State**	**TX**	**ZIP**	**78613**	**ZIP + 4**
35. E-Mail Address:							

36. Telephone Number	**37. Extension or Code**	**38. Fax Number** *(if applicable)*
(412) 780-2312		( ) -

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

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

SECTION IV: Preparer Information

40. Name:	Carson Krause, E.I.T.	**41. Title:**	Engineer in Training I

42. Telephone Number	**43. Ext./Code**	**44. Fax Number**	**45. E-Mail Address**
(512) 454-8711		( ) -	ckrause@pape-dawson.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:	Pape-Dawson Consulting Engineers, LLC.	**Job Title:**	Associate Vice President
Name *(In Print):*	Aimee Chavez, P.E.	**Phone:**	(512) 454- **8711**
Signature:	Aimee Chavez	**Date:**	11/6/24