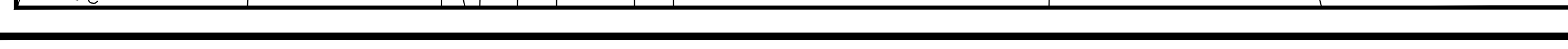


SHEET #	SHEET DESCRIPTION
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240V 1PH SINGLE PUMP 1.5 TO 10HP



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Frank Hibbard

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City Project No. 18-0058-IIT

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GENERAL NOTES

- All work performed shall comply with the regulations and ordinances of the various governmental agencies having jurisdiction over the work.
- All workmanship and materials used in the construction of this project shall conform to the latest City of Clearwater standards, contract documents and specifications unless otherwise noted.
- Specific requirements of the Florida Department of Transportation (FDOT) "Design Standards" and "Standard Specifications for Road and Bridge Construction", most current editions, are incorporated into the contract documents by reference.
- The Contractor shall obtain all required permits prior to construction.
- The Contractor shall notify all utility companies at least forty eight (48) hours prior to start of construction, demolition and/or excavation in accordance with Florida Statutes.
- The Contractor shall call Sunshine 811, previously known as Sunshine State One Call of Florida, at 1-800-432-4770 or 811, a minimum of two (2) days and a maximum of five (5) days prior to start of construction.
- Locations, elevations and dimensions of existing utilities, structures and other features are shown according to the best information available at the time of the preparation of these plans, but do not purport to be absolutely correct. The Contractor shall verify the location, elevations and dimensions of all existing utilities, structures and other features affecting the work prior to construction.
- The Contractor shall be responsible to review the site to determine existing conditions. Anything not shown on these plans shall be brought to the attention of the City's Engineering Representative and shall not constitute additional scope of work approved by the Engineer.
- The Contractor shall contact the City's Engineering Representative immediately concerning any conflicts arising during construction.
- All construction activities must conform to the local noise ordinance.
- Hours of work shall be in accordance with the local governmental agency.
- These drawings do not include necessary components for construction safety. The Contractor is solely responsible for construction safety. Special precautions may be required in the vicinity of power lines and other utilities.
- The Contractor shall furnish, erect and maintain all necessary traffic control and safety devices in accordance with the U.S. Department of Transportation, "Manual on Uniform Traffic Control Devices" and the latest Florida Department of Transportation "Design Standards".
- The Contractor shall provide, erect and maintain effective barricades, danger signals, signs and pedestrian detours in all areas where required for the protection of the work and the safety of the public.
- Maintenance of Traffic (MOT): if it becomes necessary for the Contractor to close any street to through traffic within the limits of construction, access for local traffic with destination within the project limits of construction shall be maintained. If during construction, access for local traffic is changed, the property owners affected shall be given at least three (3) days advance notice. The Contractor shall submit to the City's Engineering Representative the Traffic Control Plan for approval prior to implementation.
- A registered Land Surveyor, at the Contractor's expense, shall reset all section corners or property corners dislocated or disturbed by any construction related activities.
- Any National Geodetic Survey (NGS) Monument within the limits of construction is to be protected. If in danger of damage, contractor shall notify the city's field representative immediately and contact the National Geodetic Survey information center.
- Unless noted on the plans, final grade is to generally be the same as existing grade. Restore uniformly and for proper yard drainage grade toward roadway.
- All new utilities shall be installed with the minimum thirty six (36) inches of cover.
- Where utilities cross the lowest pipe shall be installed first.
- The Contractor shall be responsible for testing of all newly constructed utilities in accordance with current standards of local jurisdiction. The Contractor shall notify the local jurisdiction and the Owner or an authorized representative at least forty eight (48) hours in advance of performing tests.
- The Contractor shall provide all sheeting, shoring and bracing required to protect adjacent structures or to minimize trench width. Where a separate pay item is not provided, the cost of all sheeting and bracing required shall be included in the contract price for the item of work for which sheeting, shoring and bracing is anticipated to be required in accordance with local, state, or federal regulations for construction.
- All concrete shall have a minimum compressive strength of 3,000 psi (28-day strength), unless otherwise noted on drawings.
- No surfacing material is to be applied to any manhole covers, frames, valve boxes, gas drops, etc. All existing and proposed utility and storm sewer structures whose tops will be exposed within any paved area shall be adjusted so that the top surface of covers or frames shall be flush with the pavement surface.
- Materials interfering with construction shall be disposed of as directed by the City's Engineering Representative, unless otherwise noted on plans.
- All excess soil resulting from construction activities that is not claimed by the Owner shall become the property of the Contractor and disposed of by the Contractor.
- All disturbed landscaped and/or grassed areas shall be restored uniformly and be generally at the same elevation as existing grades.
- All disturbed areas shall be replaced within fifteen (15) days to a condition equal to or better than existing conditions.
- All voids after placement of sod shall be filled with prepared soil mix. The sod shall be rolled to meet the proposed grades. Sod placed on slopes 3:1 or steeper shall be pegged.
- Areas of exposed earth resulting from construction shall be sodded in kind as directed by the City's Engineering Representative unless otherwise noted on plans.
- The Contractor shall maintain an accurate set of marked-up drawings (As-Builts) at the construction site.
- A CCTV inspection of the new sewer system in digital format utilizing the industry standard Pipeline Assessment and Certification Program (PACP) coding system shall be provided to the City. The video shall be taken prior to placing the new sewer system into service. Data will be collected utilizing CUES Granite software.
- Installation of gravity sewer pipe shall be in conformance with recommended practices contained in Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications ASTM D2321. Connections to manholes with sanitary pipe shall use a joint two (2) feet in length and shall use an approved water stop around pipe joint entry.
- The bottom trench width in an unsupported trench shall be limited to the minimum practicable width allowing working space to place and compact the hunching material. The use of trench boxes and movable sheeting shall be performed in such a manner that removal, backfill and compaction will not disturb compacted haunching material or pipe alignment. Dewatering of the trench bottom shall be accomplished using adequate means to allow preparation of bedding, placement of the haunching material and pipe in the trench without standing water. Dewatering shall continue until sufficient backfill is placed above the pipe to prevent flotation or misalignment.
- The Contractor shall dispose of all unsuitable materials, construction debris, and other waste materials offsite in accordance with applicable regulatory agency requirements at the Contractor's expense. All backfill shall be free of unsuitable materials.

- The Contractor shall be responsible for providing a Hurricane Preparation Plan to the City's Engineering Representative for review and approval prior to commencing construction activities.
- Any damage to city, county, or state roads caused by the Contractor shall be repaired by the Contractor in a timely manner and to the satisfaction of the City's Engineering Representative. Payment shall not be made for this work.
- The Contractor shall protect private property.

SURVEY NOTES

- The City of Clearwater Control Network's Horizontal Datum is: North American Datum (N.A.D.), Florida State Plane Coordinates, Florida West Zone 83(1999).
- The City of Clearwater Control Network's Vertical Datum is: North American Vertical Datum (N.A.V.D.) 1988.
- The survey was provided by the City of Clearwater Land Survey Division. The last date of field survey is xx-xx-xxxx.
- The City Benchmark referenced is located xxxxx, having an elevation of xx.xxxx'.

TREE PROTECTION

- The Contractor will be responsible for adhering to all Tree Protection measures required by the City of Clearwater codes, ordinances and Standard Specifications. This will include all tree barricades, root pruning and tree trimming/pruning activities. These requirements will apply within the specified "limits of work" and will also be applicable in all areas where the Contractor and/or his subcontractors stage, store or park vehicles, equipment, materials and debris.
- All tree pruning and/or root pruning on existing trees to be preserved will only be performed by or under the direct supervision of an International Society of Arboriculture (ISA) Certified Arborist. Furthermore, all tree work shall conform to the American National Standards Institute (ANSI) 2001, American National Standard for Tree Care Operations – Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (Pruning) ANSI A-300.
- Where called for on the plans, install tree barricades, erosion control/silt fencing or other approved protective barriers around all trees to be preserved, per City Standard Detail. Where applicable, and specifically approved by the City's Engineering Representative protective barriers may be placed in root prune trenches.
- Prior to any field changes taking place, it will be the Contractor's responsibility to review the potential impacts to existing trees with his Certified Arborist, and include any and all recommended tree protection measures in his proposal to modify the approved design. The City's Engineering Representative must approve, in writing, any changes to the approved design prior to implementation of said change.
- The Contractor will avoid any open excavations, fill or other construction activities whenever possible within the "critical root zone" of any existing tree (i.e., under the drip line/canopy).
- No vehicles, equipment or materials shall be parked or stored under/within the drip line/protective barrier area of any tree.
- Where construction activities are anticipated to last for an extended period of time near existing trees, the Contractor shall install and maintain City approved tree barricades as shown in the Standard Details and as approved by the City's Engineering Representative.
- Woodchips, mulch or another cushioning surface material approved by the City's Engineering Representative shall be placed to a minimum depth of ten (10) inches over areas where roots are present and construction traffic occurs.
- All tree protection measures shall remain in place at all times during construction until the City's Engineering Representative authorizes removal.
- The Contractor will coordinate with the City's Engineering Representative, Tim Kurtz, at (727) 562-4737, to obtain approval in advance of any and all work within the critical root zone of any existing tree.

SEDIMENT & EROSION CONTROL

- It is the responsibility of the Contractor to control and prevent erosion and the transportation of sediment to surface drains and outfalls.
- The Contractor shall prepare and submit a Stormwater Pollution Prevention Plan (SWPPP) in accordance with Florida Department of Environmental Protection (FDEP) Criteria for a National Pollution Discharge Elimination System (NPDES) Activities Permit.
- The Contractor must obtain a FDEP Generic Permit for The Discharge of Produced Ground Water, if dewatering with offsite discharge will be required. The Contractor is responsible for all required preliminary water samples to satisfy the FDEP Generic Permit for the Discharge of Produced Ground Water. Sampling shall occur thirty (30) days prior to the start of dewatering.
- Construction operations shall be carried out in such a manner that erosion and pollution shall be minimized. The submitted SWPPP shall be complied with. All applicable federal, state, and local laws shall be complied with at all times. Please note that no hay bales are allowed on City of Clearwater projects.

ROOT PRUNING

- Root pruning shall only be performed by or under the direct supervision of an International Society of Arboriculture (ISA) Certified Arborist.
- Any proposed root pruning trenches shall be identified (i.e., staked or painted) on site, inspected and approved by the City's Engineering Representative prior to actual root pruning.
- Root pruning shall be performed as far in advance of other construction activities as is feasible, but at a minimum shall be performed prior to any impacts to the soil. Associated tree protection measures should be implemented upon completion of said root pruning.
- If there is a likelihood of excessive wind and/or rain, an exceptional care shall be taken on any root pruning activities.
- Root pruning shall be limited to a minimum of twelve inches per one inch trunk diameter from the tree base. Any exception must be approved by the City's Engineering Representative prior to said root pruning.
- Roots shall be cut cleanly, as far from the trunk of the tree as possible. Root pruning shall be done to a minimum depth of eighteen (18) inches from existing grade, or to the depth of the disturbance if less than eighteen (18) inches.
- Root pruning shall be performed using a root cutting machine designed specifically for this purpose. Alternate equipment or techniques must be approved by the City's Engineering Representative, prior to any work adjacent to trees to be preserved.
- Root pruning shall be completed, inspected and accepted prior to the commencement of any excavation or other impacts to the critical root zones of trees to be protected.
- Excavations in an area where root are present shall not cause the tearing or ripping of tree roots. Roots must first be cleanly severed prior to continuing with the excavation, or tunneled around to prevent damage to the root.
- Tree roots shall not be exposed to drying out. Root ends shall be covered with native soil or burlap and kept moist until final backfill or final grades have been established.
- When deemed appropriate (e.g. during periods of drought) the city representative may require a temporary irrigation system be utilized in the remaining critical root zones of root pruned trees.

UTILITY OWNERS

Spectrum  
Attention: Mr. Ted Bingham  
700 Carillon Parkway, Suite 6  
St. Petersburg, Florida 33716-1123  
Phone: (727) 329-2847

Frontier Communications, Inc.  
Attention: Mr. Chris Blauvelt  
MC: FLCW5033  
1280 Cleveland Street  
Clearwater, Florida 33782  
Phone: (727) 562-1130

Wide Open West (WOW!)  
FLSP2144  
Attention: Mr. Jay Young, Lead Field Support Tech  
3001 Gandy Boulevard North  
Pinellas Park, Florida 33782  
Phone: (727) 239-0156 Office

Duke Energy  
Attention: Mr. Rico Ashley  
2166 Palmetto Street, Bldg. F  
Clearwater, Florida 33765  
Phone: (727) 562-5767  
City of Clearwater

Clearwater Gas System  
Attention: Mr. Bobby Morig  
401 North Myrtle Avenue  
Clearwater, Florida 33755  
Phone: (727) 562-4900 Ext. 7423

City of Clearwater  
Engineering Department – Traffic Division  
Attention: Mr. Paul Bertels  
100 South Myrtle Avenue, Room 220  
Clearwater, Florida 33756-4748  
Phone: (727) 562-4794

City of Clearwater  
Engineering Department – Survey Division  
Attention: Mr. Tom Mahony  
100 South Myrtle Avenue, Room 220  
Clearwater, Florida 33756-4748  
Phone: (727) 562-4748

City of Clearwater  
Engineering Department – Public Utilities  
Attention: Mr. Glenn Daniel  
1650 North Arcturas Avenue  
Clearwater, Florida 33755  
Phone: (727) 562-4960

City of Clearwater  
Engineering Department – Construction Management  
Attention: Mr. Tim Kurtz  
100 South Myrtle Avenue, Room 220  
Clearwater, Florida 33756  
Phone: (727) 562-4737

CITY OF CLEARWATER, FLORIDA  
ENGINEERING DEPARTMENT  
100 S. MYRTLE AVE.  
CLEARWATER, FL 33756



GENERAL NOTES

RECORD DRAWINGS					
SURVEYED BY:	DRAWN BY:				
REVIEWED BY:					
PROJECT ENGINEER		DATE			
APPROVED BY:					
ENGINEER		DATE	REVISION	BY	DATE

DWG NAME: ###	FIELD BOOK: N/A	SURVEYED BY: CLEARWATER	SCALE: N/A
CONTRACT NO.: 18-0058-UT	DATE DRAWN: ###	DRAWN BY: JMS	VERT: N/A
JOB NO.: 22609.19	DESIGNED BY: MJM	CHECKED BY: SGM	HORIZ: N/A
			SHEET NO.: 2 OF 9
APPROVED BY:			

PUMP STATION DATA:

1. OWNER

2. OWNER PHONE NO.

3. ADDRESS

4. POWER CO. METER NO.

5. POWER CO. POLE/PAD NO.

6. SERVICE AREA

7. DESIGN CAPACITY (PEAK) GPM

8. WET WELL VOLUME GALLONS

9. CONTROL ELEVATIONS:

10. STATIC HEAD FT.

11. PUMP MODEL

12. PUMP SERIAL NO.

13. PUMP DESIGN POINT GPM

14. PUMP H.P. PHASE

15. PUMP IMP. NO./DIA.

16. PUMP VOLTS AMPS

17. PUMP SHUT-OFF HEAD FT.

18. PUMP SPEED RPM

TOP EL.

INVERT EL.

ALARM EL.

AUTO DIALER EL.

LAG 2 ON EL.

LAG 1 ON EL.

DROP INVERT EL. (IF REQUIRED)

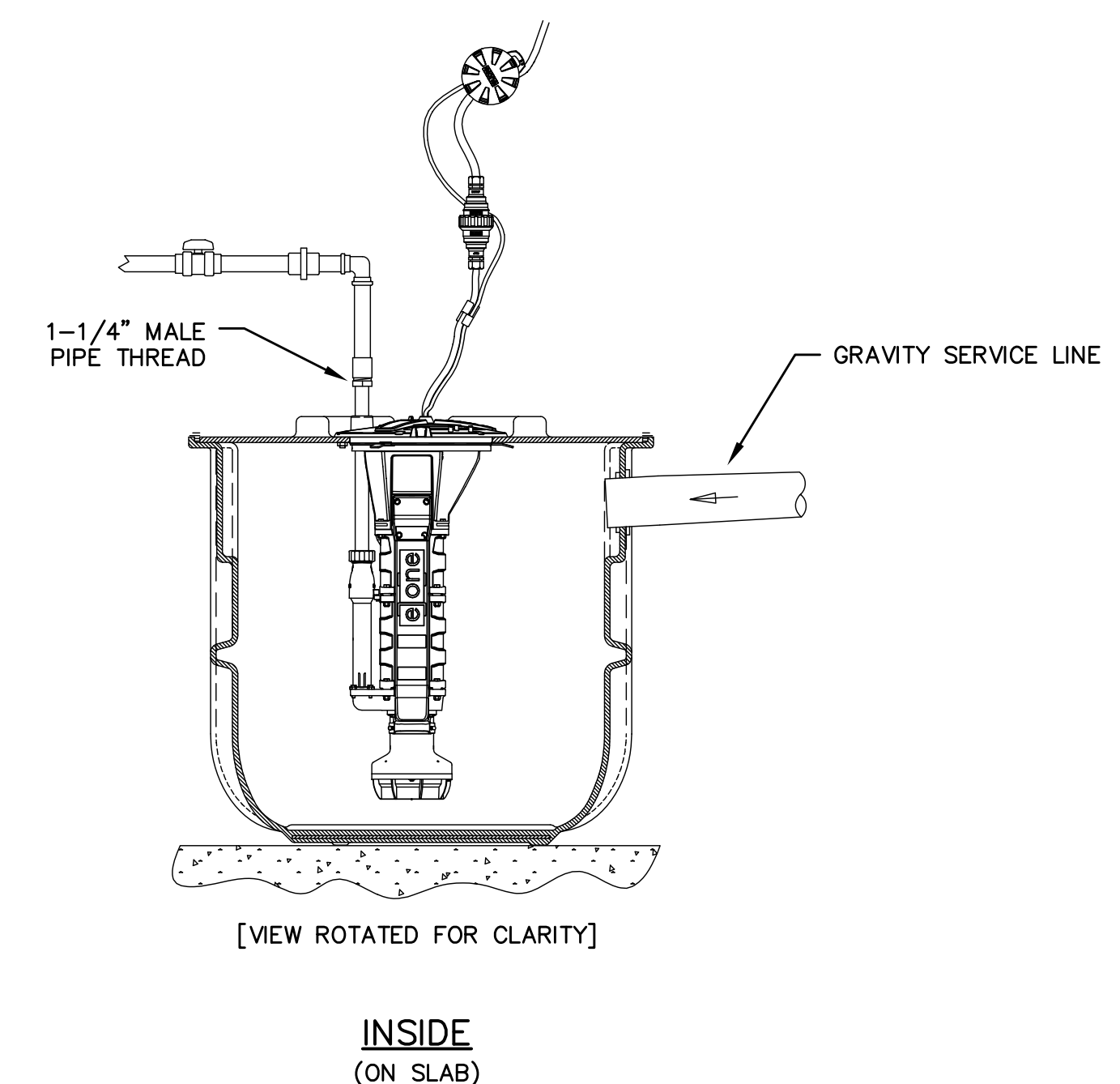
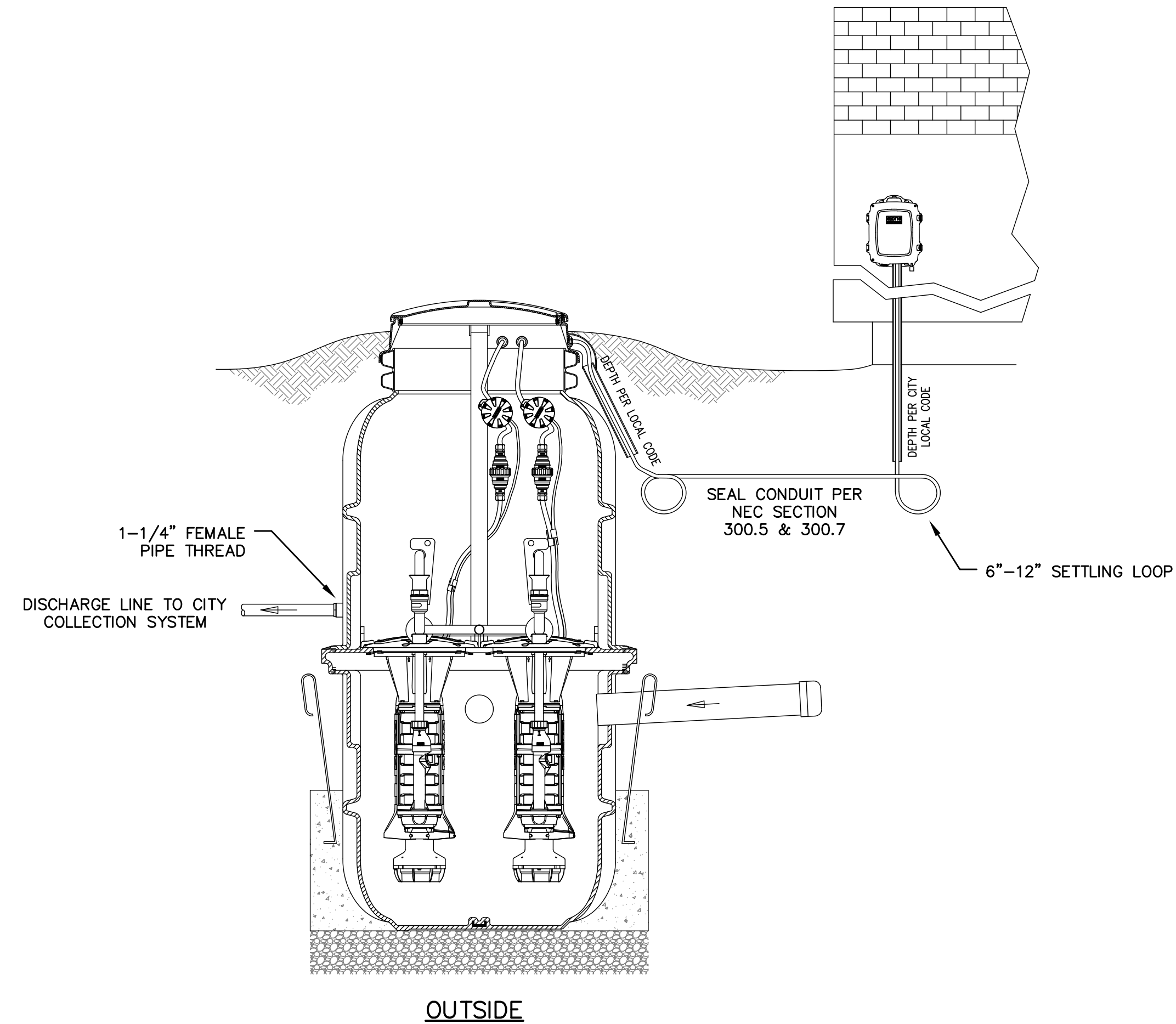
LEAD ON EL.

OVERRIDE OFF EL.

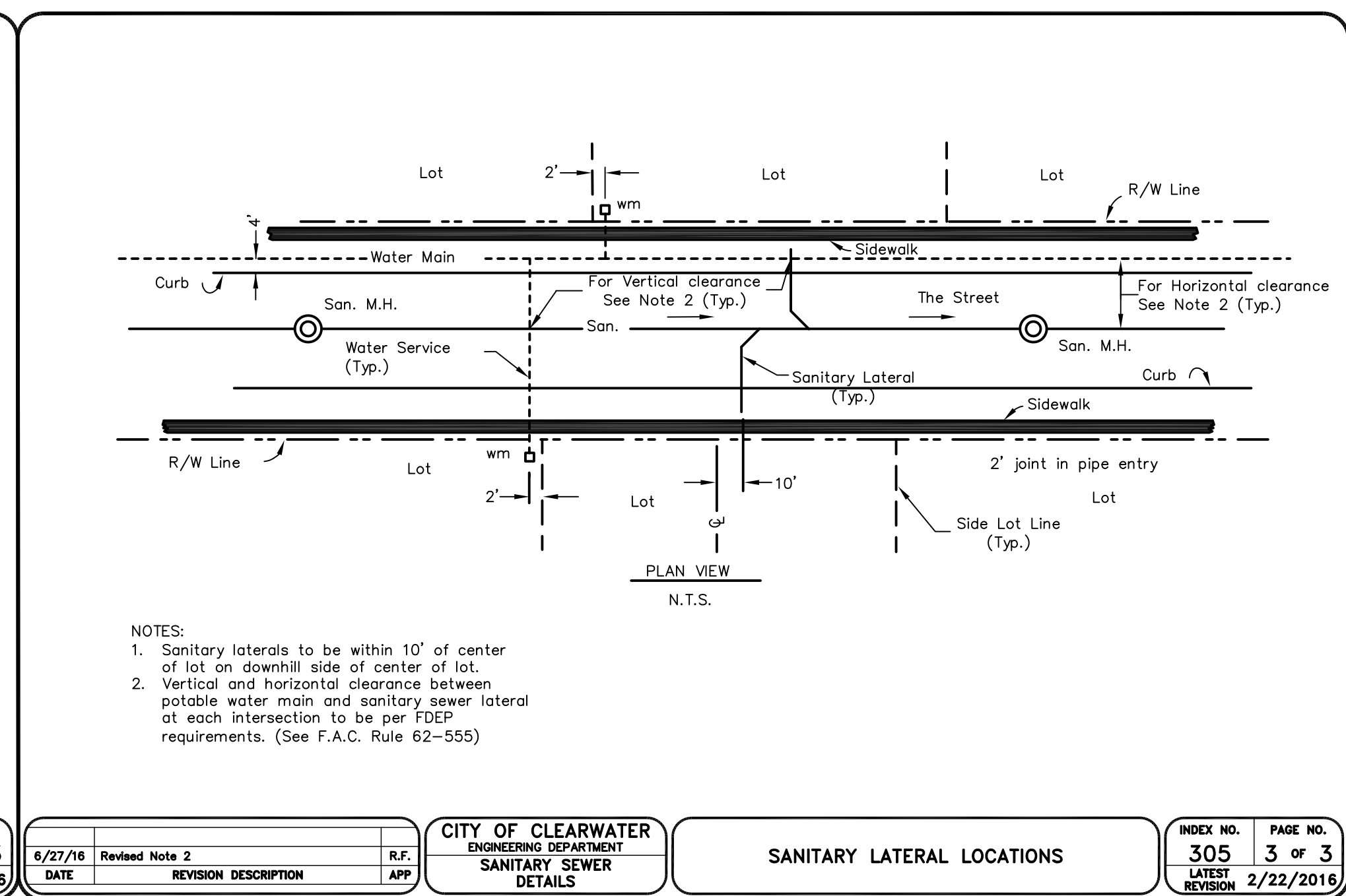
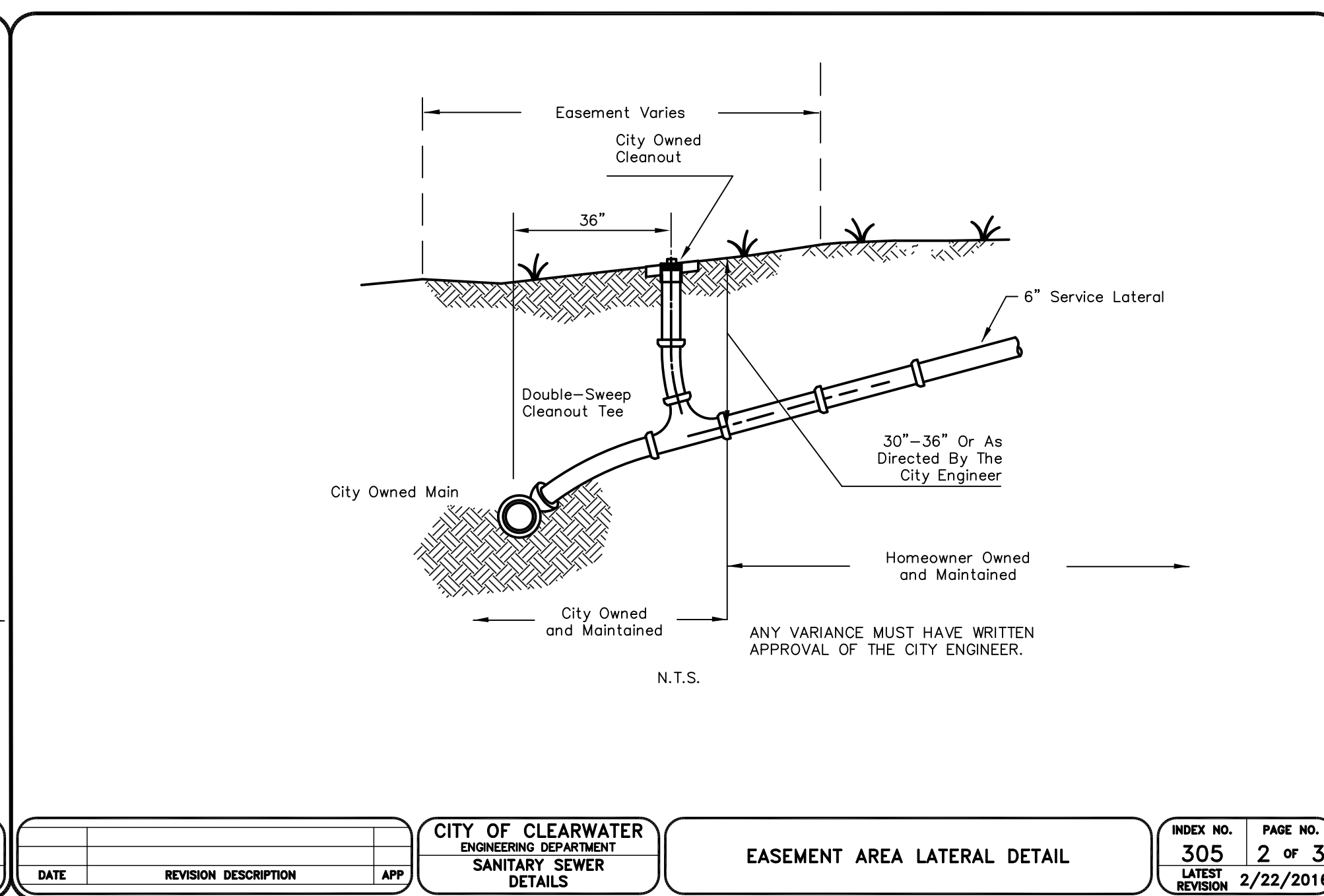
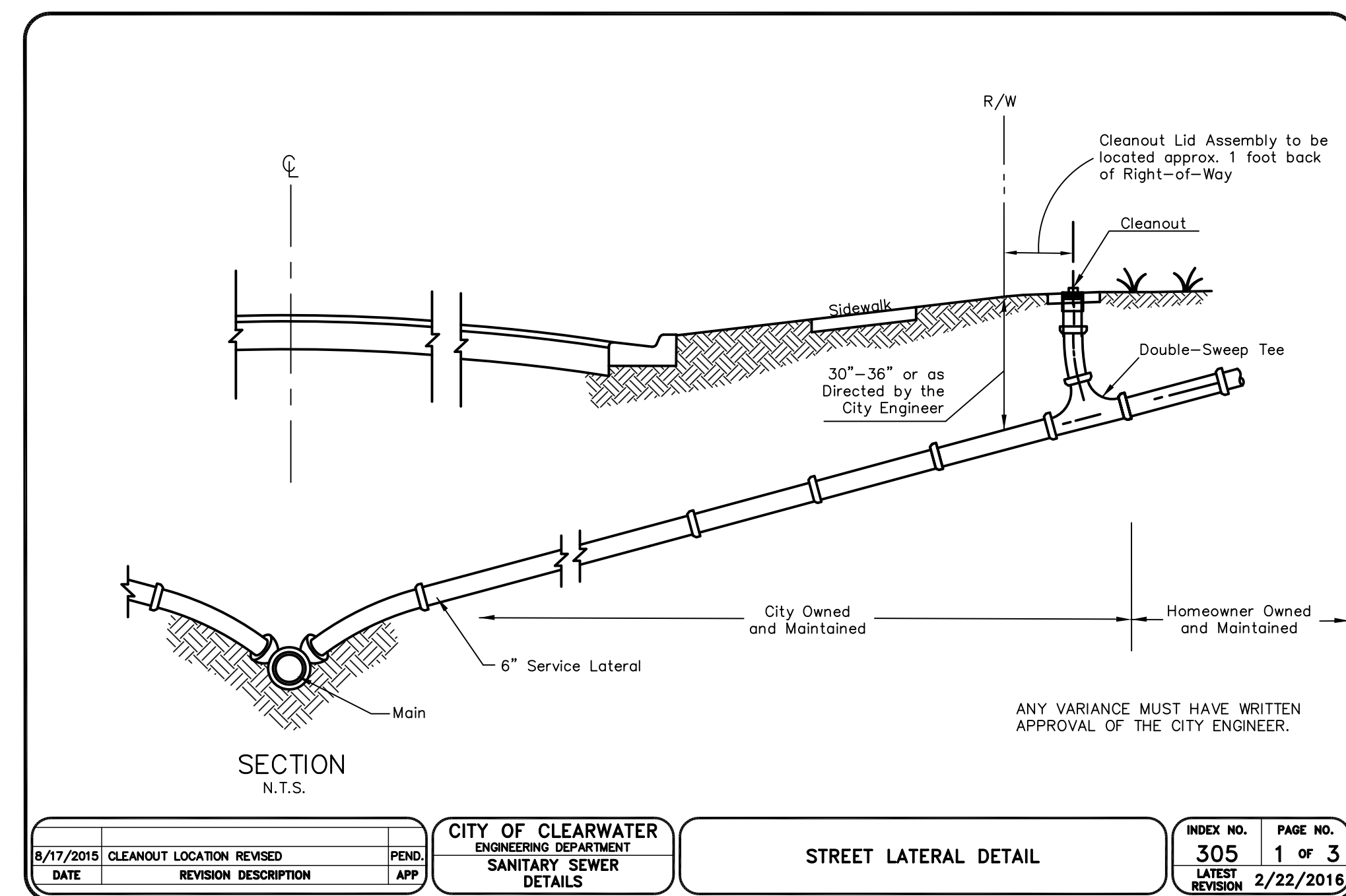
PUMPS OFF EL.

BOTTOM EL.

DESIGN PRESSURE OF RECEIVING FORCE MAIN



- NOTES:
- ONE PUMP STATION MAY PROVIDE SERVICE TO A SINGLE FAMILY RESIDENCE, DUPLEX RESIDENCE OR TRIPLEX RESIDENCE.
  - SINGLE FAMILY RESIDENTIAL UNITS MAY USE A SINGLE PUMP STATION.
  - PUMP STATIONS SERVICING DUPLEX OR TRIPLEX RESIDENTIAL UNITS AND COMMERCIAL PROPERTIES SHALL BE DUPLEX PUMP STATIONS.



RECORD DRAWINGS

SURVEYED BY:

REVIEWED BY:

APPROVED BY:

DRAWN BY:

PROJECT ENGINEER

ENGINEER

DATE

DATE

DATE

REVISION

BY

DATE

CITY OF CLEARWATER, FLORIDA

ENGINEERING DEPARTMENT

100 S. MYRTLE AVE.

CLEARWATER, FL 33756

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SUNSHINE STATE ONE CALL OF FLORIDA

www.call811.com

(800) 432-4770

MIN. 48 HOURS BEFORE YOU EXCAVATE

GRINDER AND CONNECTIONS

PROPOSED LAYOUT

DWG NAME: ###	FIELD BOOK: N/A	SURVEYED BY: CLEARWATER	SCALE: VERT. N/A
CONTRACT NO.: 18-0058-UT	DATE DRAWN: ###	DRAWN BY: JMS	HORIZ. N/A
JOB NO.: 22609.19	DESIGNED BY: MJM	CHECKED BY: SGM	SHEET NO.: 3 OF 9
APPROVED BY: _____			

M. JOSEPH MARTELLI, III P.E. No. 74038

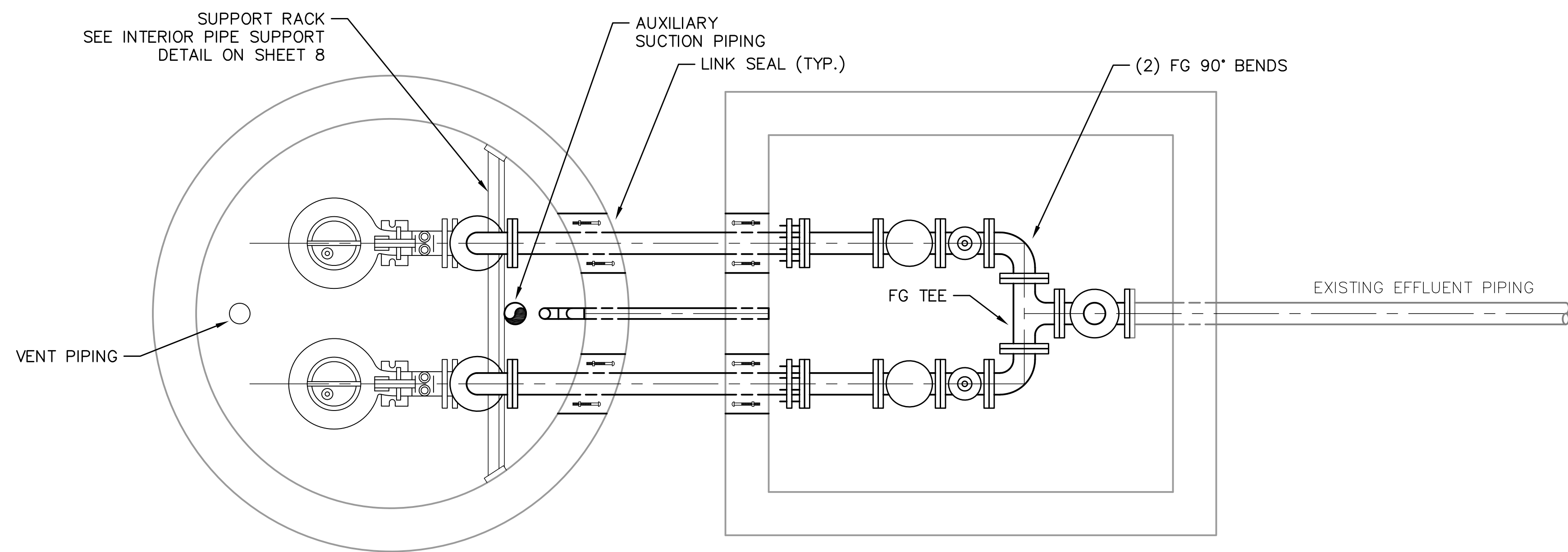
Metzger+Willard, Inc.

Civil+Environmental Engineers+Surveyors

8600 Hidden River Parkway, Suite 550

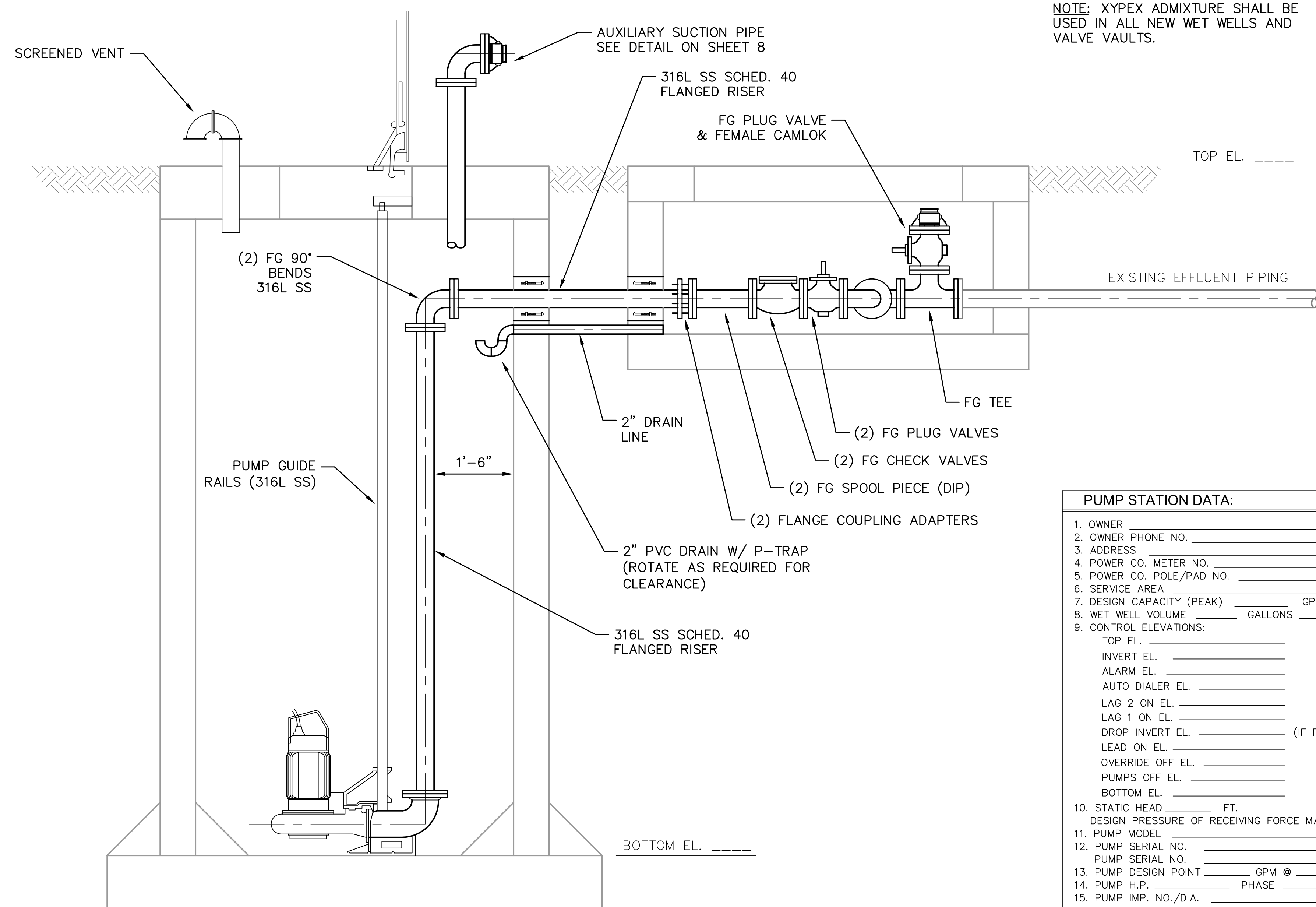
Tampa, Florida 33637 (813) 977-6005

Certificate of Authorization No. 2886 - L.B. #7302



PLAN BELOW GRADE

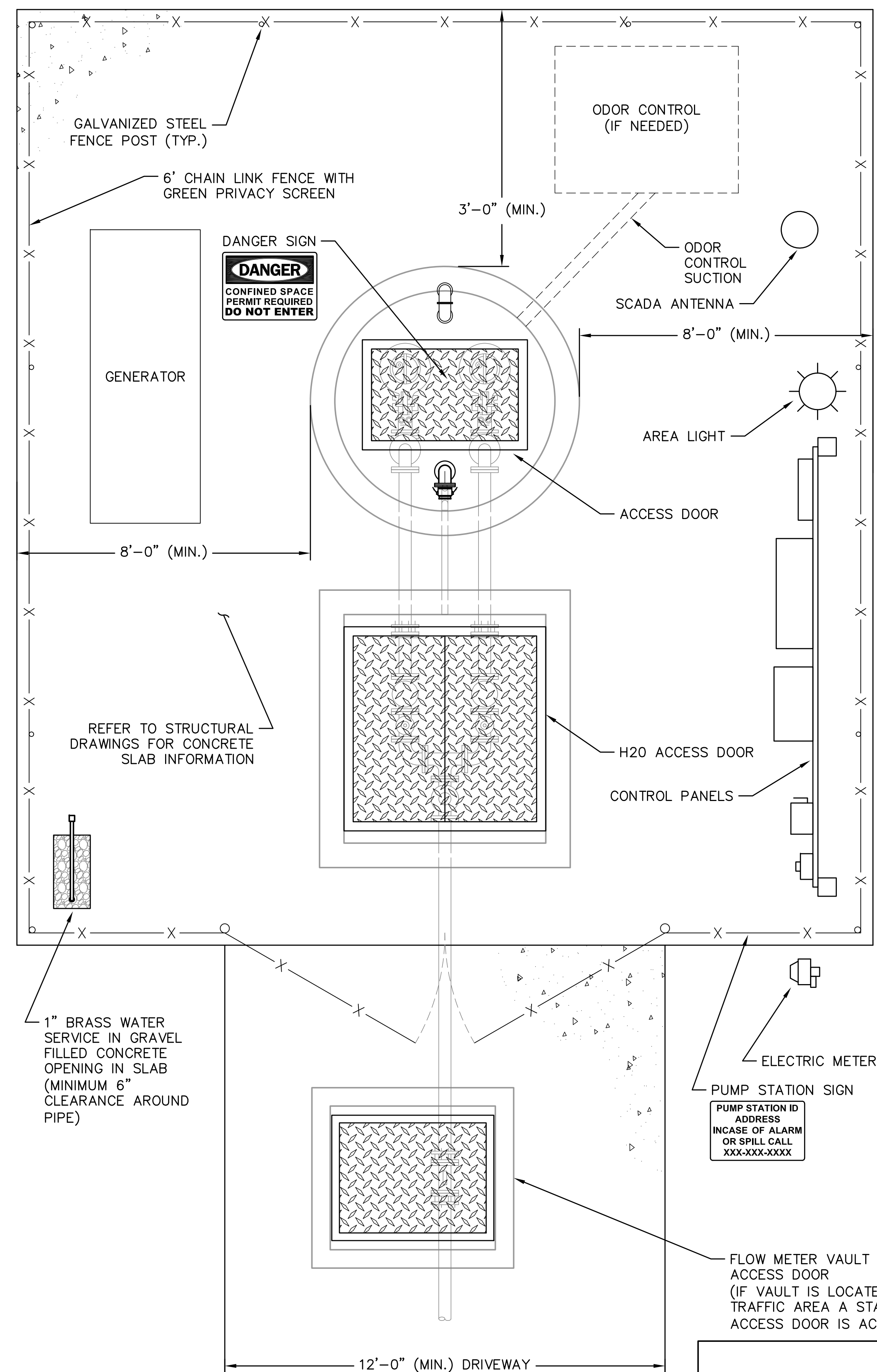
NOTE: XYPEX ADMIXTURE SHALL BE  
USED IN ALL NEW WET WELLS AND  
VALVE VAULTS.



ELEVATION VIEW

## PUMP STATION DATA:

- OWNER \_\_\_\_\_
- OWNER PHONE NO. \_\_\_\_\_
- ADDRESS \_\_\_\_\_
- POWER CO. METER NO. \_\_\_\_\_
- POWER CO. POLE/PAD NO. \_\_\_\_\_
- SERVICE AREA \_\_\_\_\_
- DESIGN CAPACITY (PEAK) \_\_\_\_\_ GPM
- WET WELL VOLUME \_\_\_\_\_ GALLONS \_\_\_\_\_ FT. DIA.
- CONTROL ELEVATIONS:  
TOP EL. \_\_\_\_\_  
INVERT EL. \_\_\_\_\_  
ALARM EL. \_\_\_\_\_  
AUTO DIALER EL. \_\_\_\_\_  
LAG 2 ON EL. \_\_\_\_\_  
LAG 1 ON EL. \_\_\_\_\_  
DROP INVERT EL. \_\_\_\_\_ (IF REQUIRED)  
LEAD ON EL. \_\_\_\_\_  
OVERRIDE OFF EL. \_\_\_\_\_  
PUMPS OFF EL. \_\_\_\_\_  
BOTTOM EL. \_\_\_\_\_
- STATIC HEAD \_\_\_\_\_ FT.  
DESIGN PRESSURE OF RECEIVING FORCE MAIN \_\_\_\_\_
- PUMP MODEL \_\_\_\_\_
- PUMP SERIAL NO. \_\_\_\_\_  
PUMP SERIAL NO. \_\_\_\_\_
- PUMP DESIGN POINT \_\_\_\_\_ GPM @ \_\_\_\_\_ TDH
- PUMP H.P. \_\_\_\_\_ PHASE \_\_\_\_\_
- PUMP IMP. NO./DIA. \_\_\_\_\_
- PUMP VOLTS \_\_\_\_\_ AMPS \_\_\_\_\_
- PUMP SHUT-OFF HEAD \_\_\_\_\_ FT.
- PUMP SPEED \_\_\_\_\_ RPM



TYPICAL SITE PLAN

RECORD DRAWINGS				
SURVEYED BY:	DRAWN BY:			
REVIEWED BY:				
PROJECT ENGINEER	DATE			
APPROVED BY:				
ENGINEER	DATE			
REVISION	BY	DATE		

CITY OF CLEARWATER, FLORIDA  
ENGINEERING DEPARTMENT  
100 S. MYRTLE AVE.  
CLEARWATER, FL 33756



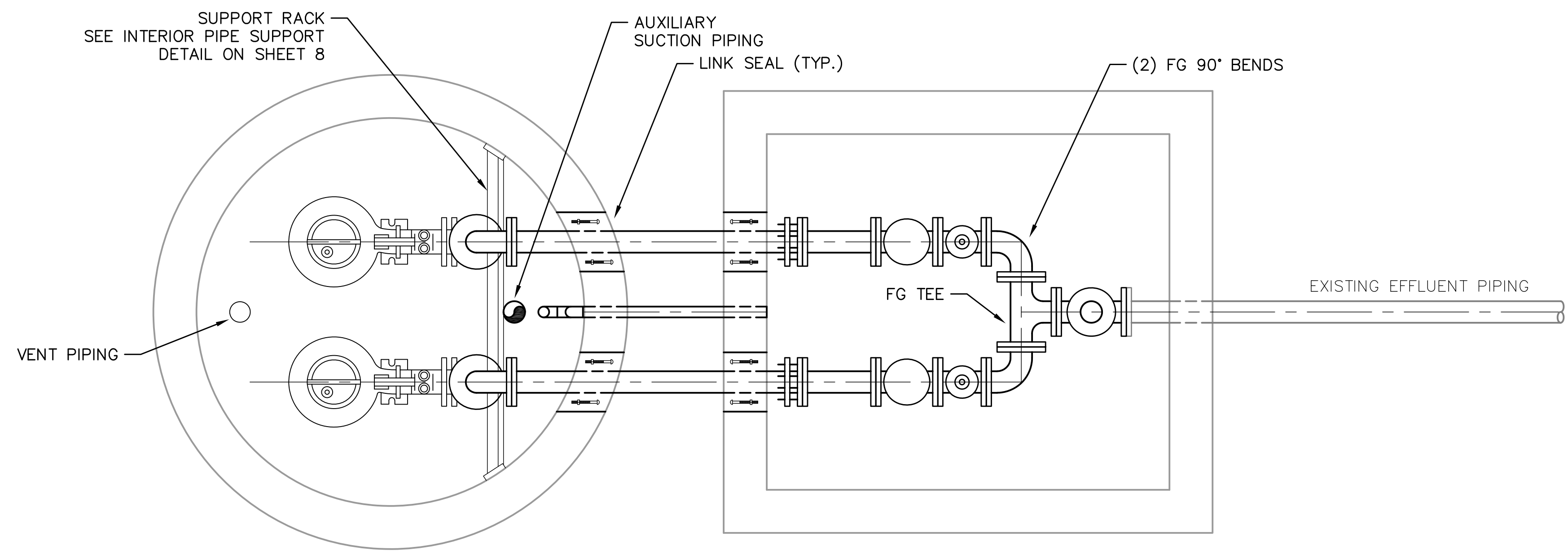
## DUPLEX PUMP STATION PROPOSED LAYOUT

DWG NAME: ###	FIELD BOOK: N/A	SURVEYED BY: JMS	SCALE: VERT. N/A
CONTRACT NO.: 18-0058-UT	DATE DRAWN: ###	DRAWN BY: JMS	HORIZ. N/A
JOB NO.: 22609.19	DESIGNED BY: MJM	CHECKED BY: SGM	SHEET NO.: 4 OF 9
APPROVED BY: _____			

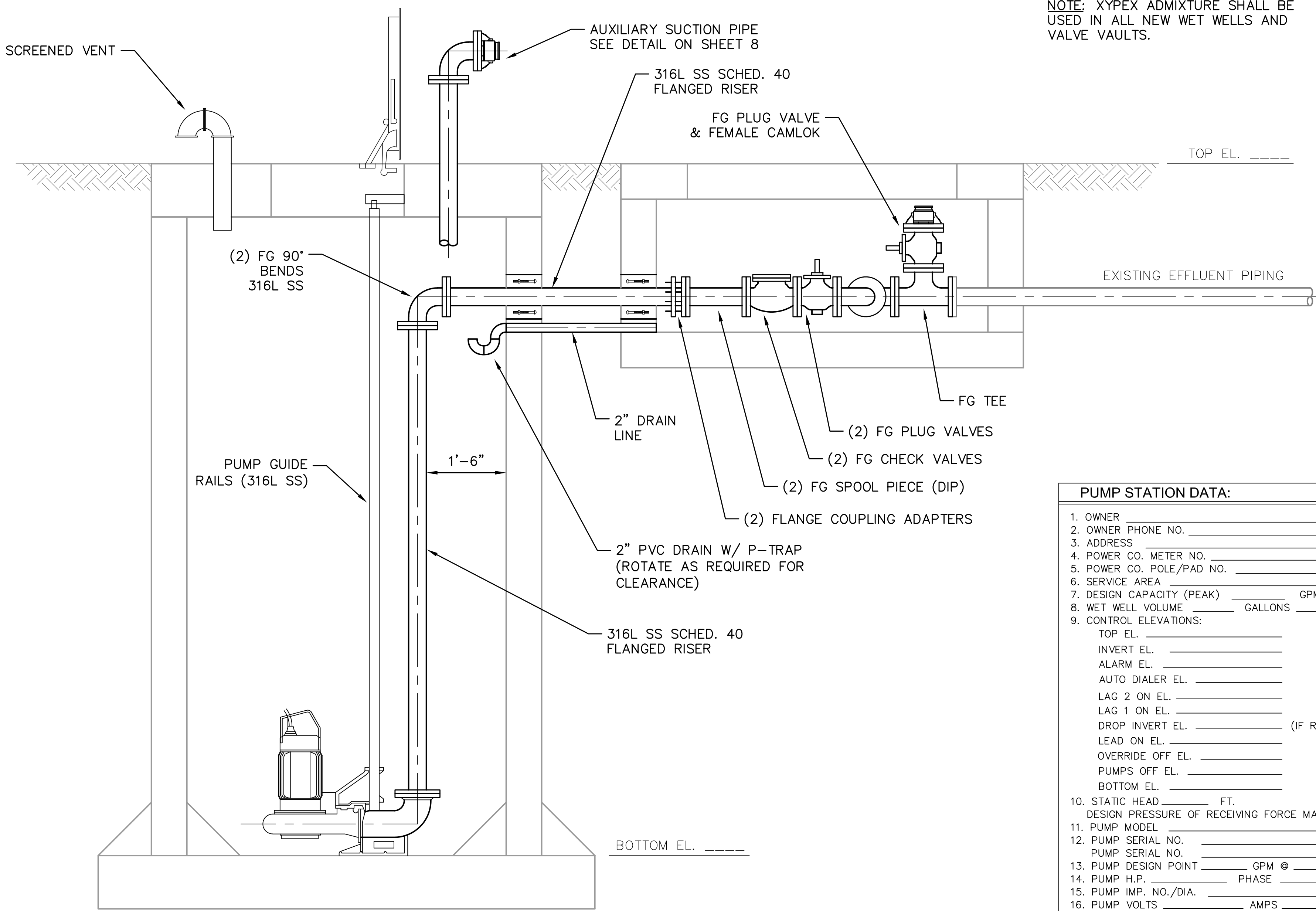
M. JOSEPH MARTELLI, III P.E. No. 74038

**MW** Metzger+Willard, Inc.  
Civil+Environmental  
Engineers+Surveyors  
8600 Hidden River Parkway, Suite 550  
Tampa, Florida 33637 (813) 977-6005  
Certificate of Authorization No. 2886 - L.B. #7302





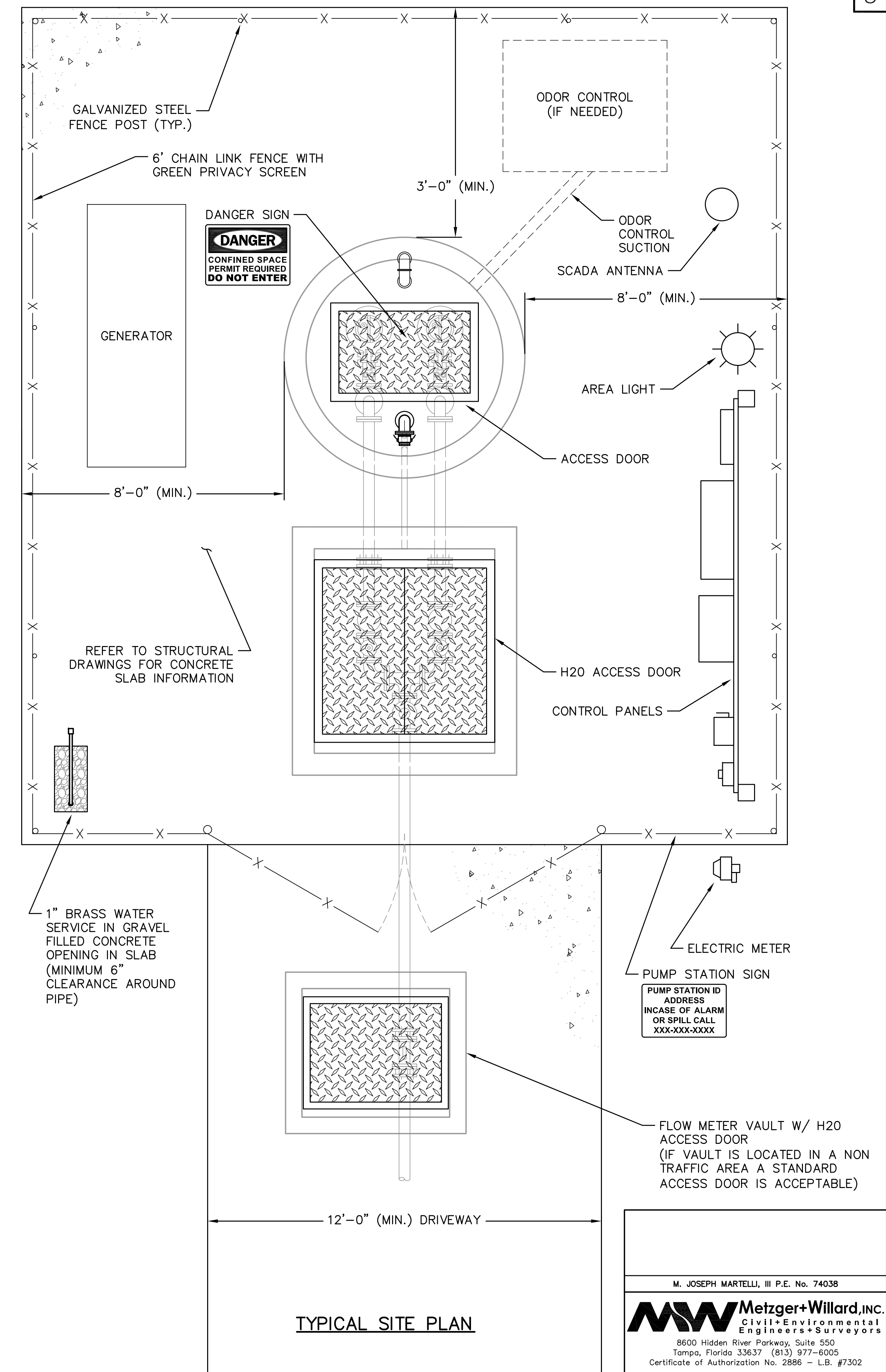
PLAN BELOW GRADE



ELEVATION VIEW

NOTE: XYPEX ADMIXTURE SHALL BE USED IN ALL NEW WET WELLS AND VALVE VAULTS.

PUMP STATION DATA:	
1. OWNER	_____
2. OWNER PHONE NO.	_____
3. ADDRESS	_____
4. POWER CO. METER NO.	_____
5. POWER CO. POLE/PAD NO.	_____
6. SERVICE AREA	_____
7. DESIGN CAPACITY (PEAK)	_____ GPM
8. WET WELL VOLUME	_____ GALLONS _____ FT. DIA.
9. CONTROL ELEVATIONS:	
TOP EL.	_____
INVERT EL.	_____
ALARM EL.	_____
AUTO DIALER EL.	_____
LAG 2 ON EL.	_____
LAG 1 ON EL.	_____
DROP INVERT EL.	_____ (IF REQUIRED)
LEAD ON EL.	_____
OVERRIDE OFF EL.	_____
PUMPS OFF EL.	_____
BOTTOM EL.	_____
10. STATIC HEAD	_____ FT.
DESIGN PRESSURE OF RECEIVING FORCE MAIN	_____
11. PUMP MODEL	_____
12. PUMP SERIAL NO.	_____
PUMP SERIAL NO.	_____
13. PUMP DESIGN POINT	_____ GPM @ _____ TDH
14. PUMP H.P.	_____ PHASE _____
15. PUMP IMP. NO./DIA.	_____
16. PUMP VOLTS	_____ AMPS _____
17. PUMP SHUT-OFF HEAD	_____ FT.
18. PUMP SPEED	_____ RPM



TYPICAL SITE PLAN

RECORD DRAWINGS				
SURVEYED BY:	DRAWN BY:			
REVIEWED BY:				
PROJECT ENGINEER	DATE			
APPROVED BY:				
ENGINEER	DATE			

CITY OF CLEARWATER, FLORIDA  
ENGINEERING DEPARTMENT  
100 S. MYRTLE AVE.  
CLEARWATER, FL 33756

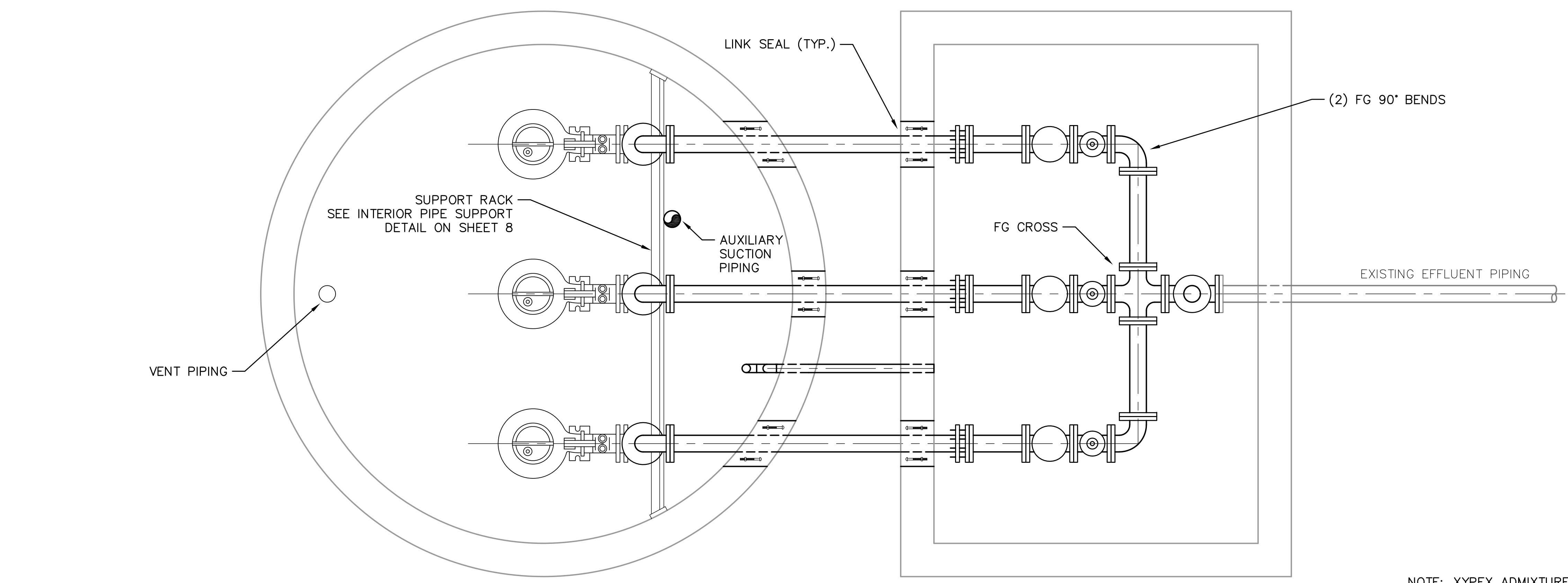
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OF FLORIDA  
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(800) 432-4770  
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BEFORE YOU EXCAVATE

DUPLEX W/ GRINDER PUMP STATION  
PROPOSED LAYOUT

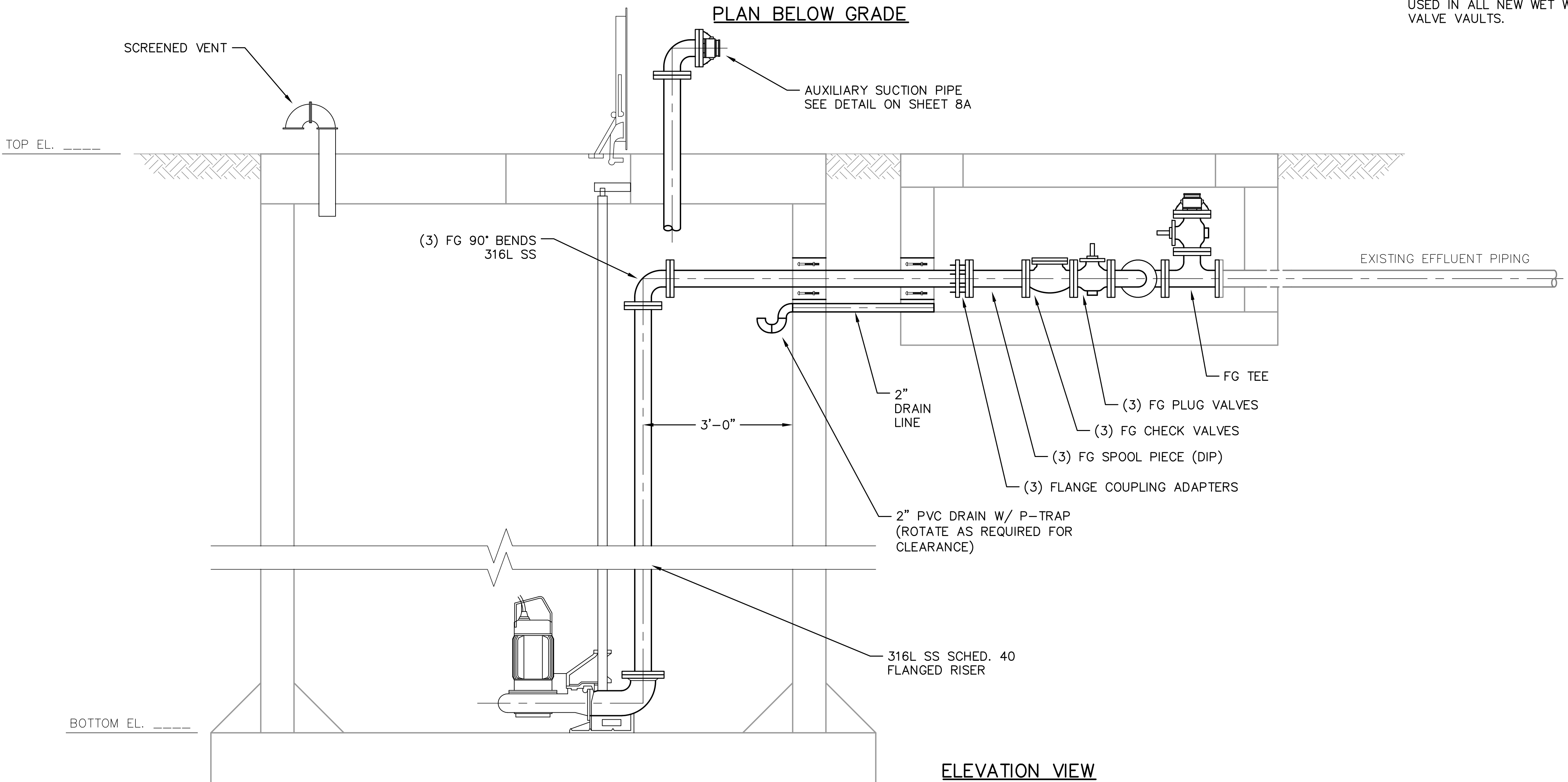
DWG NAME: ###	FIELD BOOK: N/A	SURVEYED BY: CLEARWATER	SCALE: VERT. N/A
CONTRACT NO.: 18-0058-UT	DATE DRAWN: ###	DRAWN BY: JMS	HORIZ. N/A
JOB NO.: 22609.19	DESIGNED BY: MJM	CHECKED BY: SGM	SHEET NO.: 5 OF 9
APPROVED BY: _____			

M. JOSEPH MARTELLI, III P.E. No. 74038

**MW** Metzger+Willard, Inc.  
Civil+Environmental  
Engineers+Surveyors  
8600 Hidden River Parkway, Suite 550  
Tampa, Florida 33637 (813) 977-6005  
Certificate of Authorization No. 2886 - L.B. #7302




NOTE: XYPEX ADMIXTURE SHALL BE USED IN ALL NEW WET WELLS AND VALVE VAULTS.



PUMP STATION DATA:	
1. OWNER	_____
2. OWNER PHONE NO.	_____
3. ADDRESS	_____
4. POWER CO. METER NO.	_____
5. POWER CO. POLE/PAD NO.	_____
6. SERVICE AREA	_____
7. DESIGN CAPACITY (PEAK)	_____ GPM
8. WET WELL VOLUME	_____ GALLONS _____ FT. DIA.
9. CONTROL ELEVATIONS:	
TOP EL.	_____
INVERT EL.	_____
ALARM EL.	_____
AUTO DIALER EL.	_____
LAG 2 ON EL.	_____
LAG 1 ON EL.	_____
DROP INVERT EL.	_____ (IF REQUIRED)
LEAD ON EL.	_____
VERRIDE OFF EL.	_____
PUMPS OFF EL.	_____
BOTTOM EL.	_____
10. STATIC HEAD	_____ FT.
DESIGN PRESSURE OF RECEIVING FORCE MAIN	_____
11. PUMP MODEL	_____
12. PUMP SERIAL NO.	_____
PUMP SERIAL NO.	_____
PUMP SERIAL NO.	_____
13. PUMP DESIGN POINT	_____ GPM @ _____ TDH
14. PUMP H.P.	_____ PHASE _____
15. PUMP IMP. NO./DIA.	_____
16. PUMP VOLTS	_____ AMPS _____
17. PUMP SHUT-OFF HEAD	_____ FT.
18. PUMP SPEED	_____ RPM

M. JOSEPH MARTELLI, III P.E. No. 74038

**Metzger+Willard, Inc.**  
Civil+Environmental  
Engineers+Surveyors  
8600 Hidden River Parkway, Suite 550  
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REVIEWED BY:				
PROJECT ENGINEER	DATE			
APPROVED BY:				
ENGINEER	DATE			

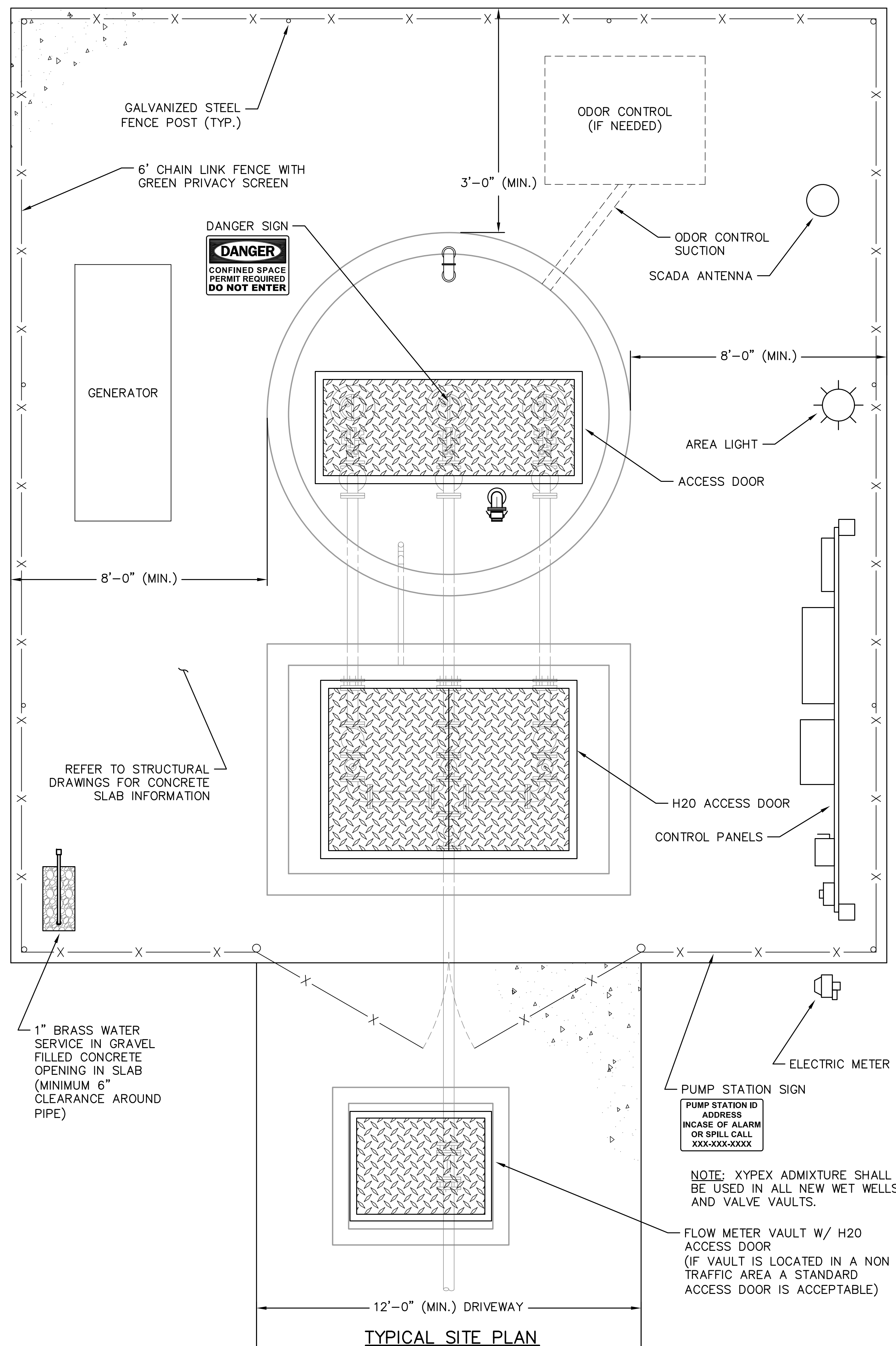
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TRIPLEX PUMP STATION  
PROPOSED LAYOUT

DWG NAME: ###	FIELD BOOK: N/A	SURVEYED BY: CLEARWATER	SCALE: VERT. N/A
CONTRACT NO.: 18-0058-UT	DATE DRAWN: ###	DRAWN BY: JMS	HORIZ. N/A
JOB NO.: 22609.19	DESIGNED BY: MJM	CHECKED BY: SGM	SHEET NO.: 6 OF 9

APPROVED BY: _____	
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RECORD DRAWINGS				
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REVIEWED BY:				
PROJECT ENGINEER	DATE			
APPROVED BY:				
ENGINEER	DATE			

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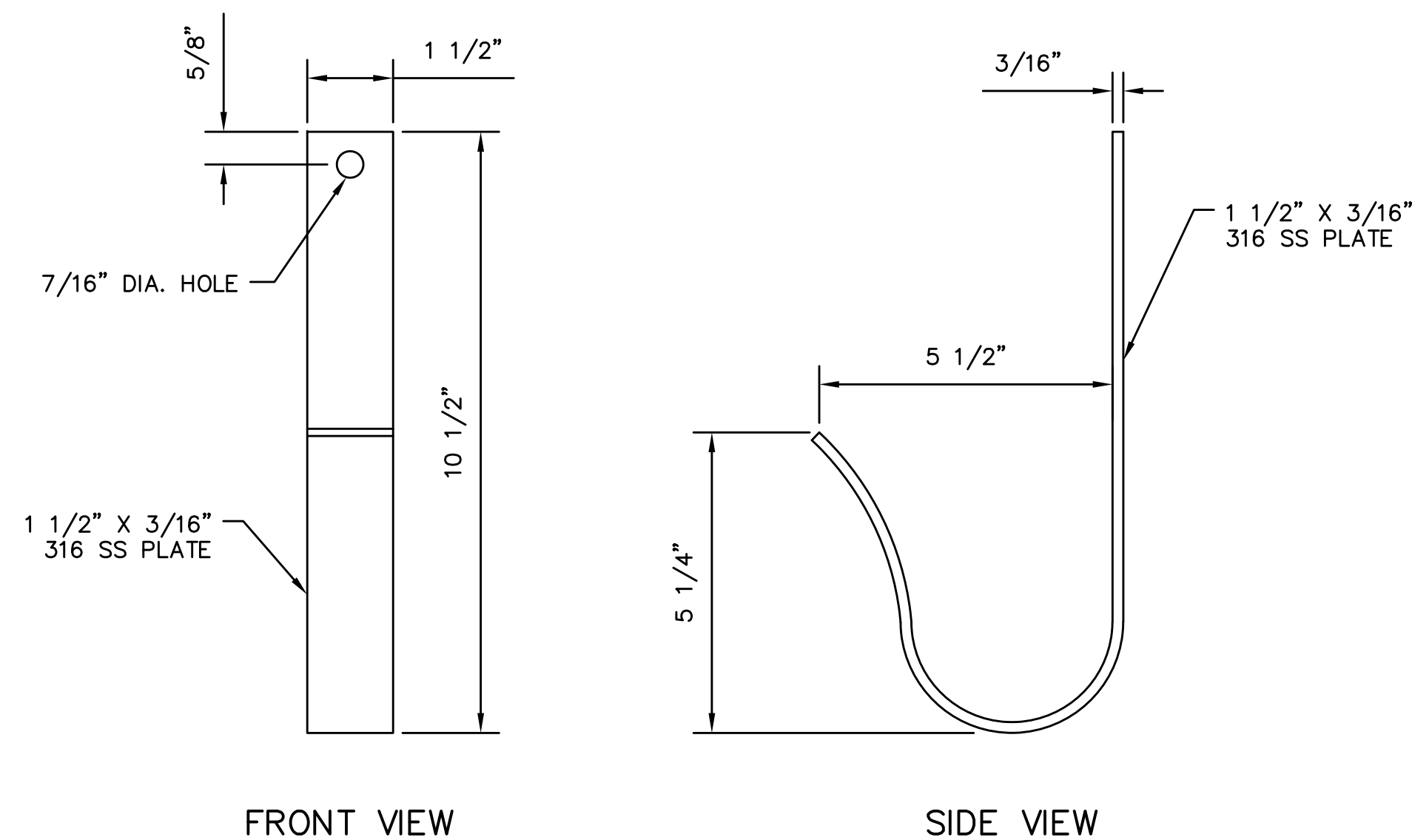


## TRIPLEX PUMP STATION TYPICAL SITE PLAN

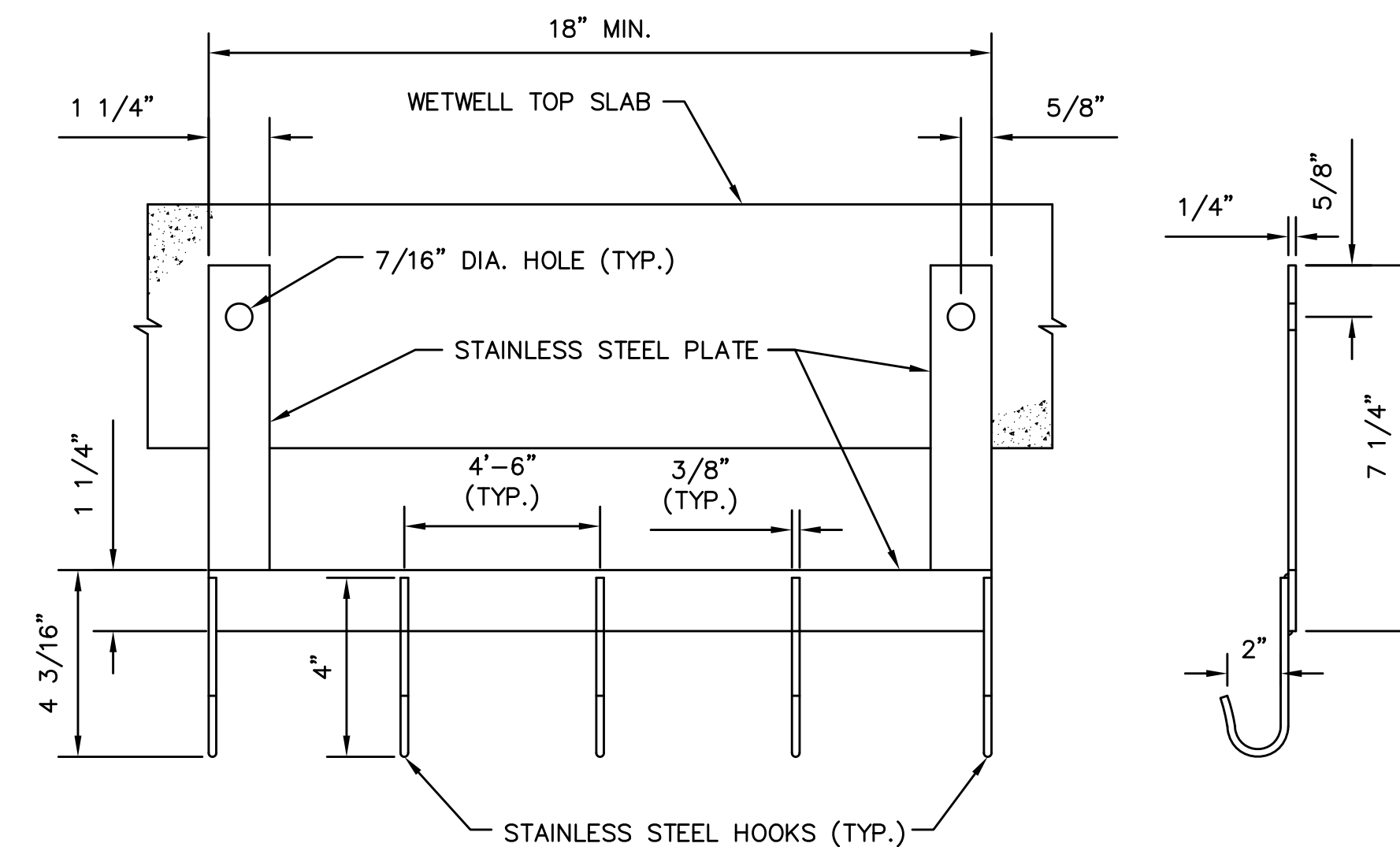
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CONTRACT NO.: 18-0058-UT	DATE DRAWN: ###	DRAWN BY: JMS	HORIZ. N/A
JOB NO.: 22609.19	DESIGNED BY: MJM	CHECKED BY: SGM	SHEET NO.: 7 OF 9
APPROVED BY: _____			

M. JOSEPH MARTELLI, III P.E. No. 74038

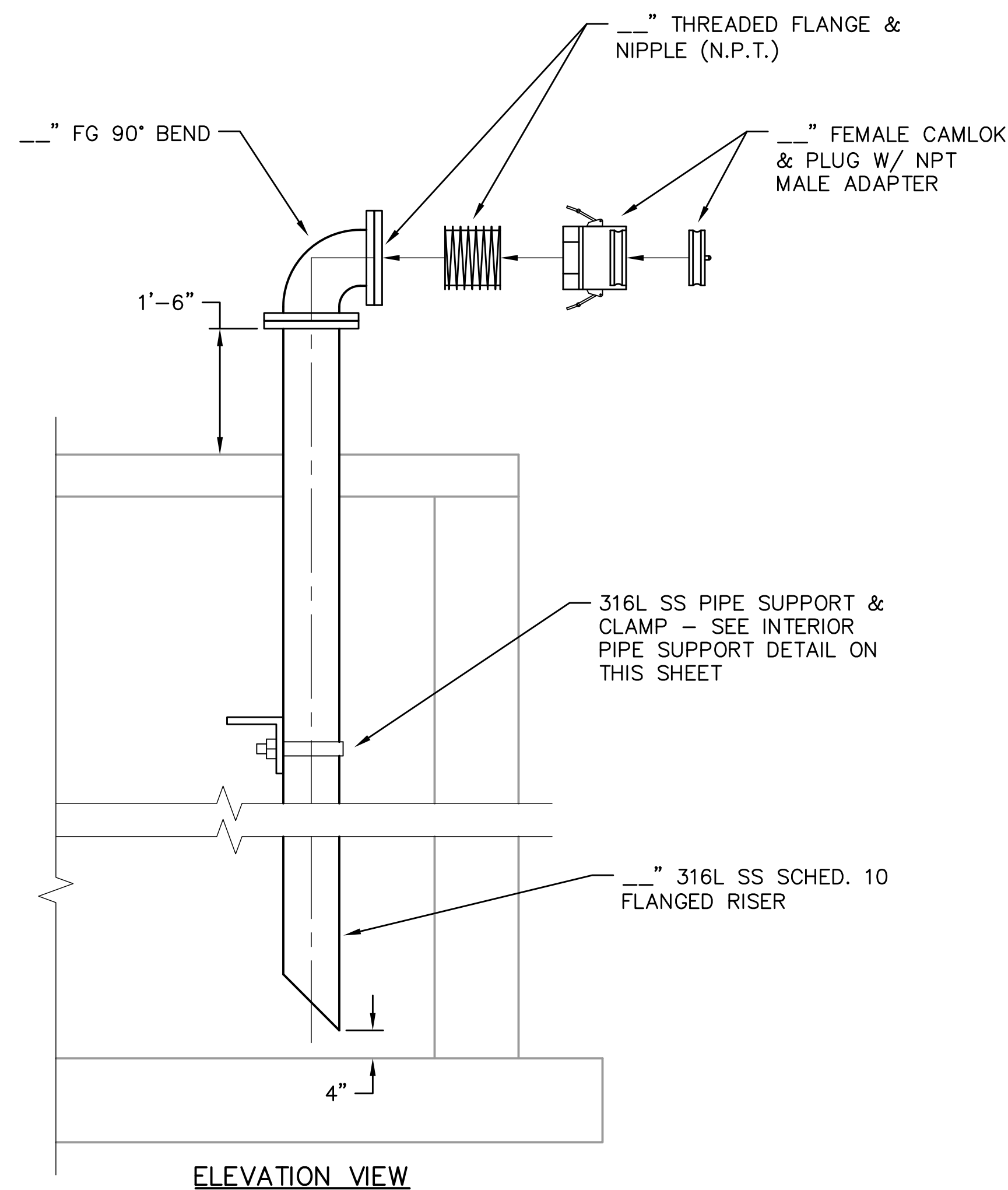
**MW Metzger+Willard, Inc.**  
Civil+Environmental  
Engineers+Surveyors  
8600 Hidden River Parkway, Suite 550  
Tampa, Florida 33637 (813) 977-6005  
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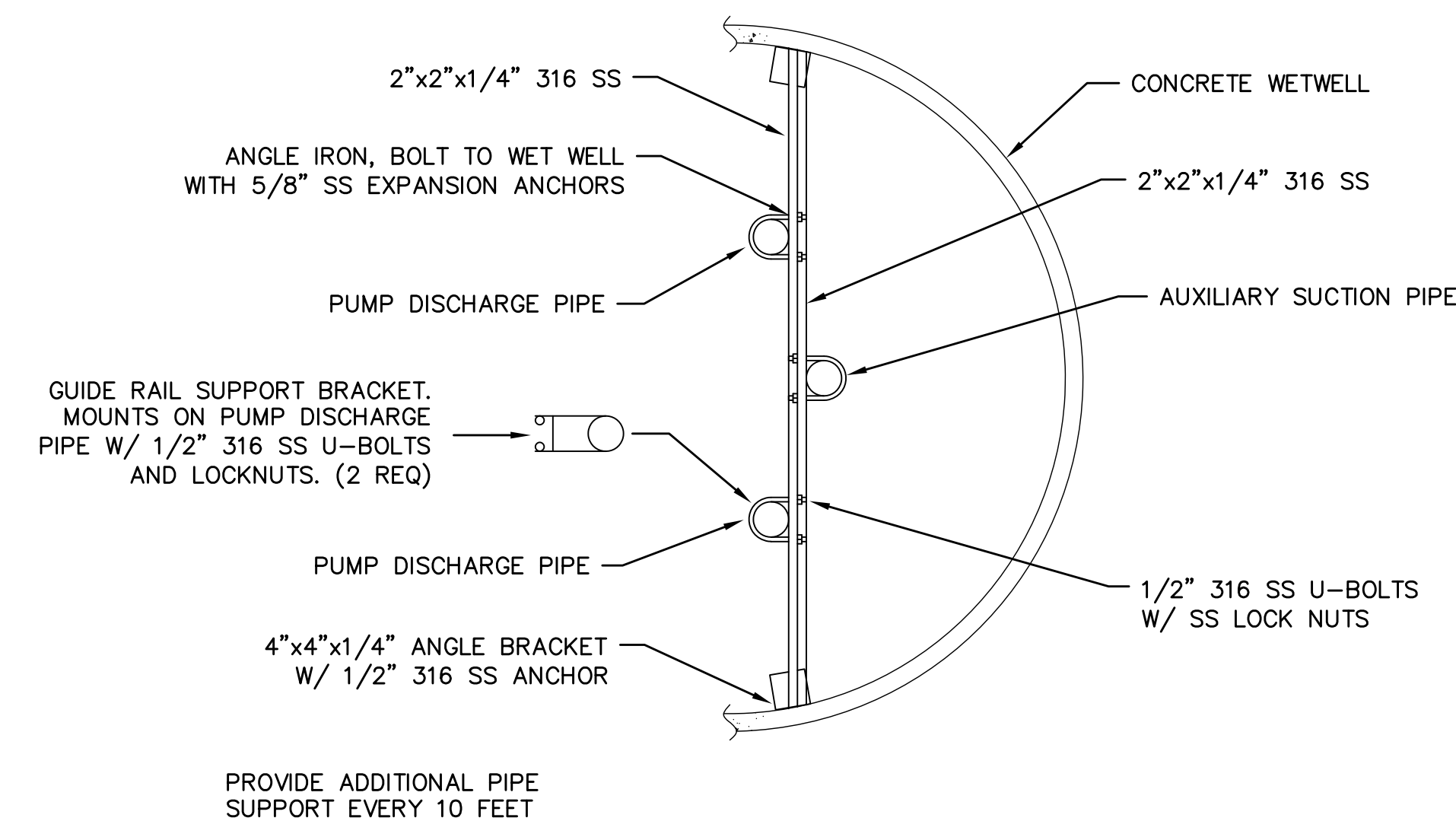
ELECTRICAL CABLE HANGER DETAIL



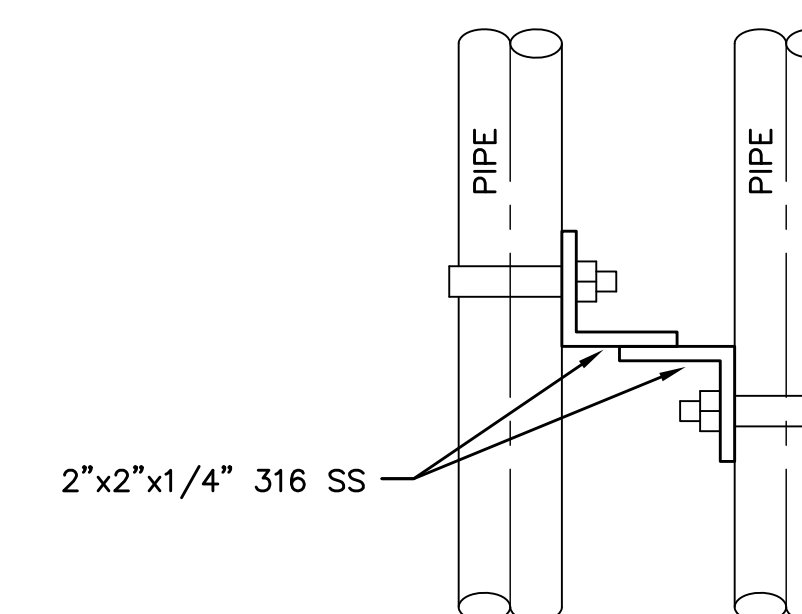
FLOAT CABLE HANGER DETAIL



TRANSDUCER STILLING WELL &amp; AUXILIARY SUCTION PIPE DETAIL



INTERIOR PIPE SUPPORT DETAIL - TOP VIEW



INTERIOR PIPE SUPPORT DETAIL ELEVATION VIEW

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ENGINEER	DATE			

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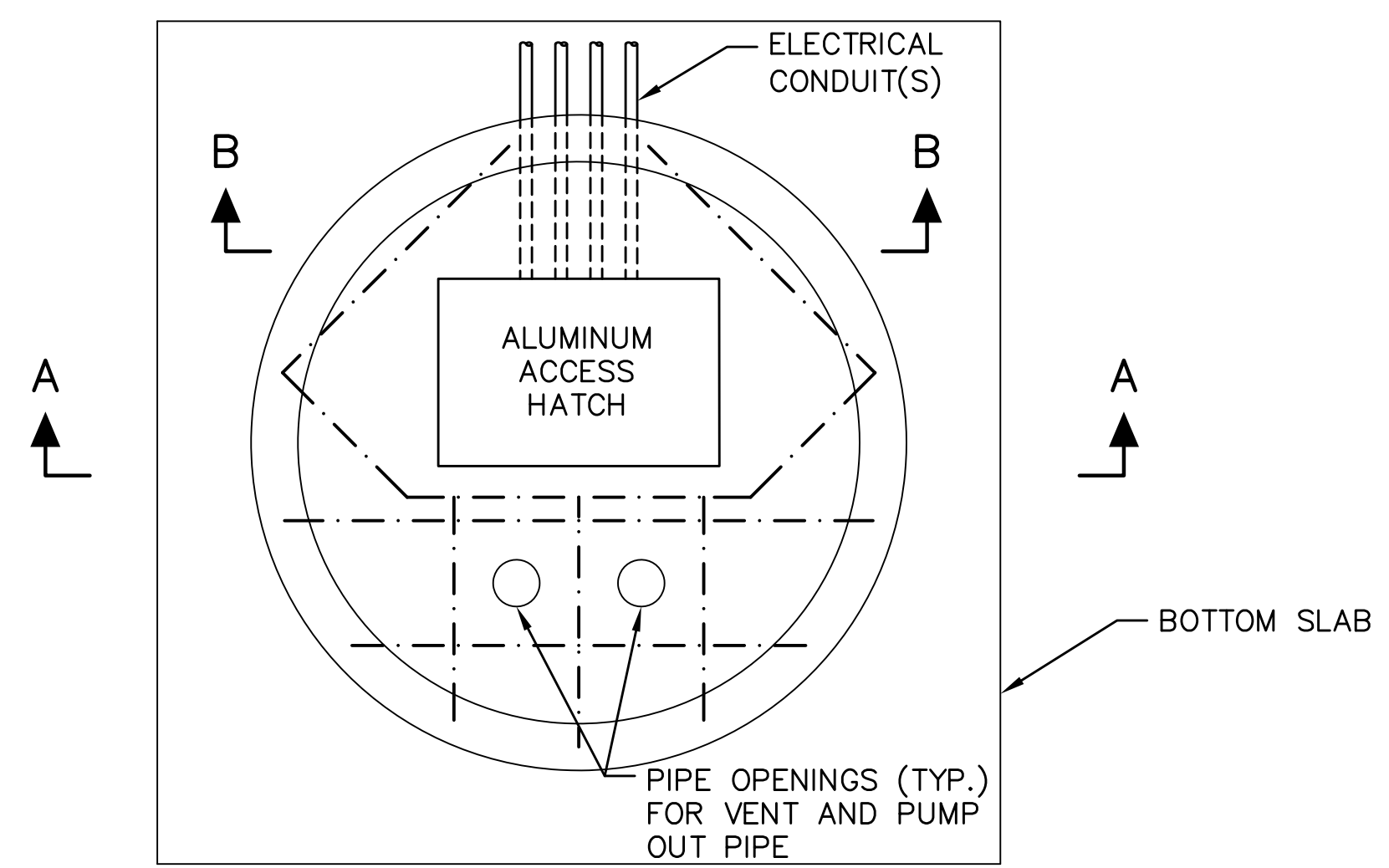
## LIFT STATION DETAILS

DWG NAME: ###	FIELD BOOK: N/A	SURVEYED BY: CLEARWATER	SCALE: VERT. N/A
CONTRACT NO.: 18-0058-UT	DATE DRAWN: ###	DRAWN BY: JMS	HORIZ. N/A
JOB NO.: 22609.19	DESIGNED BY: MJM	CHECKED BY: SGM	SHEET NO.: 8 OF 9
APPROVED BY: _____			

M. JOSEPH MARTELLI, III P.E. No. 74038

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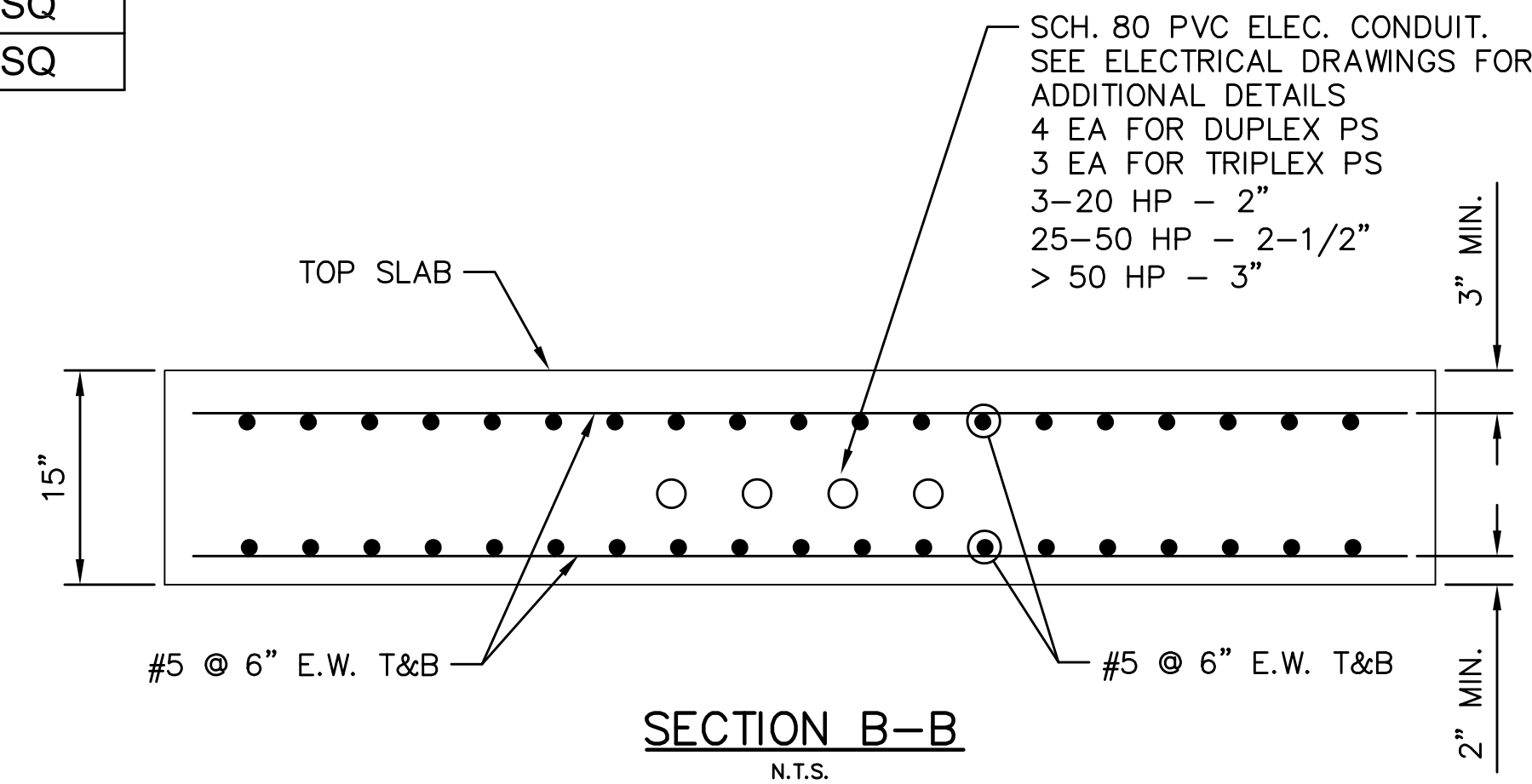




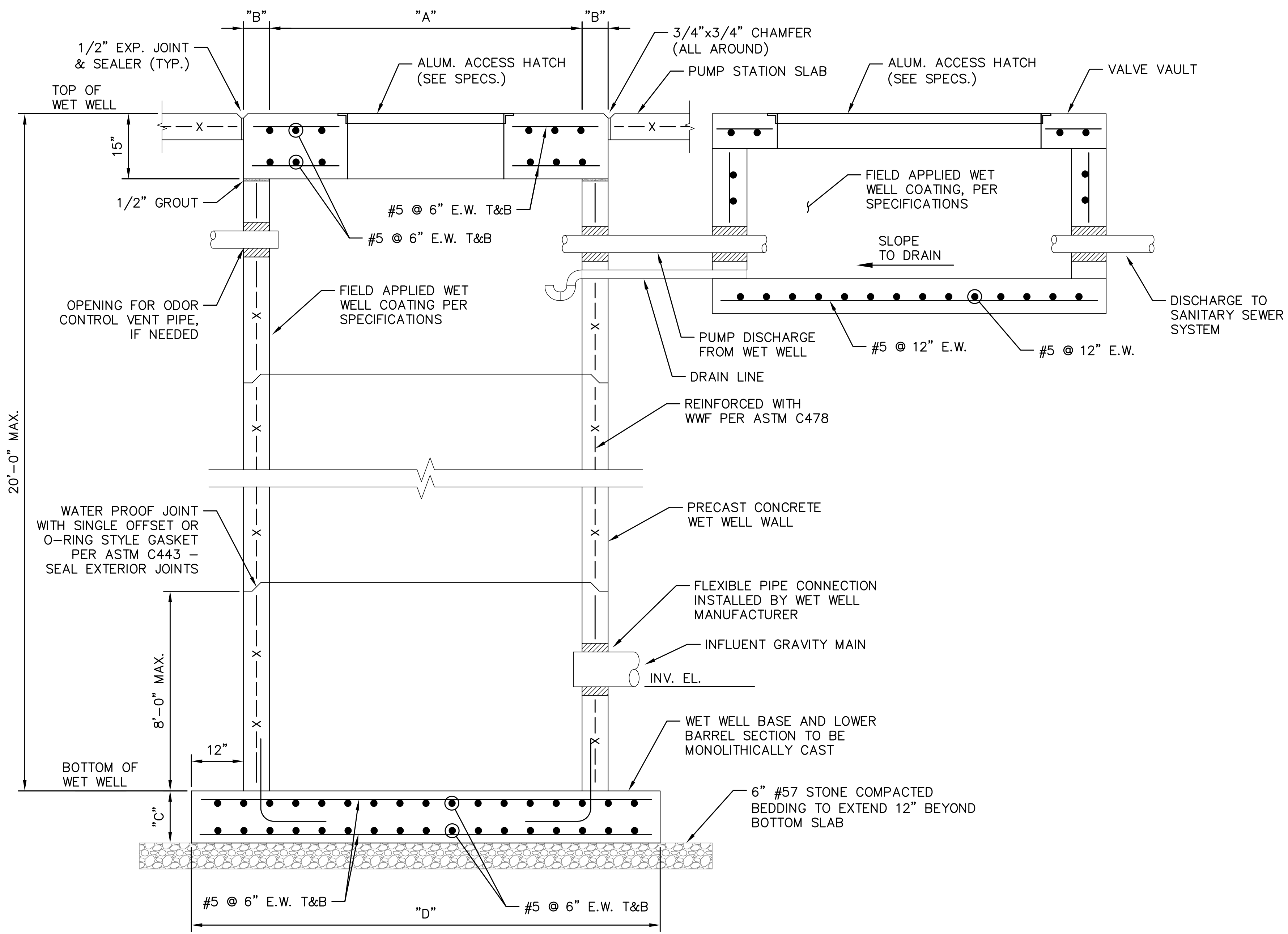
TYPICAL TOP SLAB REINFORCING PLAN  
N.T.S.

WET WELL DIMENSIONS			
A	B	C	D*
6'-0"	0'-8"	1'-0"	9'-4" SQ
8'-0"	0'-9"	1'-6"	11'-6" SQ
10'-0"	0'-10"	1'-6"	13'-8" SQ

\*BOTTOM SLAB DIMENSIONS ARE MINIMUMS. ADJUST AS REQUIRED PER BUOYANCY CALCULATIONS.



SECTION B-B  
N.T.S.



SECTION A-A  
N.T.S.

STRUCTURAL NOTES

- GENERAL  
THE WET WELL DESIGN WALL THICKNESS, BOTTOM SLAB THICKNESS AND DIMENSIONS, BOTTOM SLAB EXTENSION, TOP SLAB THICKNESS AND DIMENSIONS, AND FOUNDATION BASE COURSE ARE MINIMUM DIMENSIONS. THE STRUCTURAL DESIGN IS BASED ON THE LOADS AND CONDITIONS LISTED HERE. THE PROJECT ENGINEER SHALL VERIFY THAT THE SITE CONDITIONS MEET THE DESIGN CONDITIONS, INCLUDING THE GEOTECHNICAL CONDITIONS AND FLOTATION CALCULATIONS. IF THE SITE CONDITIONS VARY FROM THE DESIGN CONDITIONS, THE ENGINEER SHALL MODIFY THE DESIGN AS NEEDED.  
  
CONTRACTOR SHALL COORDINATE ALL PIPE AND CONDUIT LOCATIONS WITH MECHANICAL AND ELECTRICAL DRAWINGS PRIOR TO PLACING CONCRETE. STRUCTURAL DRAWINGS SHALL BE COORDINATED WITH MECHANICAL AND ELECTRICAL DRAWINGS TO PROPERLY LOCATE WALL PIPES, PIPE SLEEVES, ANCHOR BOLTS, BLOCKOUTS, ETC. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEERING DEPARTMENT BEFORE PROCEEDING WITH THE WORK.  
  
REFER TO THE SPECIFICATIONS FOR ITEMS NOT INCLUDED ON THE DRAWING.  
  
SHOP DRAWINGS AND CALCULATIONS SHALL BE PROVIDED PER CITY OF CLEARWATER AND PROJECT SPECIFICATION REQUIREMENTS.
- DESIGN CRITERIA AND LOADS  
ACI 350 CONCRETE SANITARY ENGINEERING STRUCTURES  
ACI 318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE  
ASTM C478 STANDARD SPECIFICATION FOR CIRCULAR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS  
ASTM C433 STANDARD SPECIFICATION FOR JOINTS FOR CONCRETE PIE AND MANHOLES USING RUBBER GASKETS  
  
WET WELL TOP SLAB LIVE LOAD AASHTO HS20-44  
ALLOWABLE SOIL BEARING CAPACITY 1,500 PSF (MINIMUM)
- CAST-IN-PLACE CONCRETE  
CAST-IN-PLACE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 4,000 PSI. CONCRETE AT WET WELLS AND VALVE VAULTS SHALL CONTAIN XYPEX B10-SAN C500 ADMIXTURE.
- PRECAST CONCRETE  
PRECAST WET WELL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 4,000 PSI.
- REINFORCING STEEL  
REINFORCING STEEL FOR ALL BARS SHALL CONFORM TO ASTM A615, GRADE 60.  
  
WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.

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PUMP STATION  
PROPOSED STRUCTURAL LAYOUT

DWG NAME: SHEET 08	FIELD BOOK: N/A	SURVEYED BY: CLEARWATER	SCALE: VERT. N/A
CONTRACT NO.: 18-0058-UT	DATE DRAWN: ###	DRAWN BY: JMS	HORIZ. N/A
JOB NO.: 22609.19	DESIGNED BY: MJM	CHECKED BY: SGM	SHEET NO.: 9 OF 9
APPROVED BY: _____			