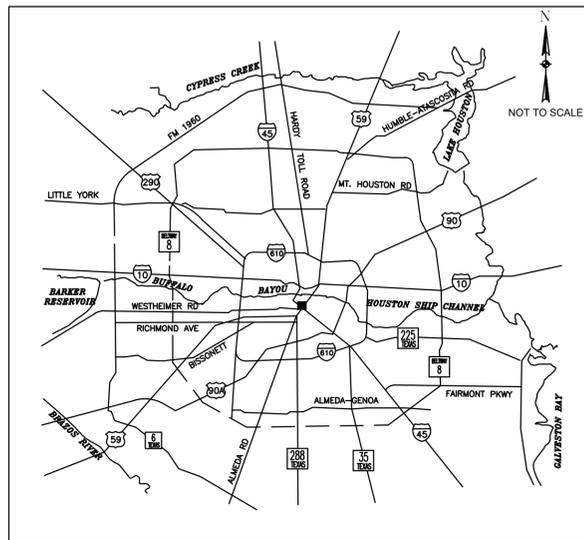


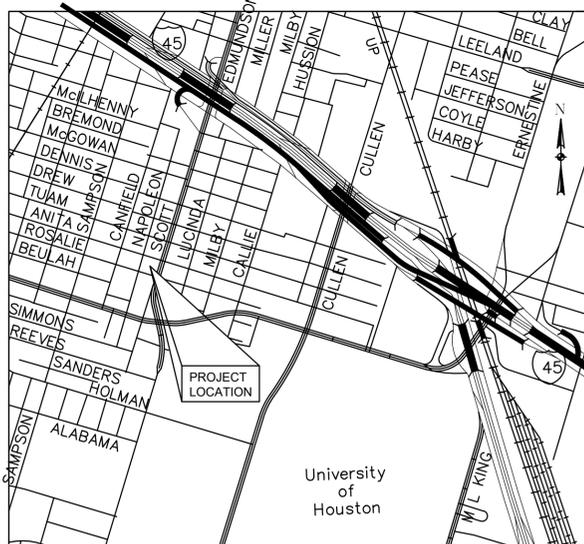
# CITY OF HOUSTON HOUSTON PUBLIC WORKS CAPITAL PROJECTS LIFT STATION REHABILITATION AND RECONSTRUCTION DESIGN - SCOTT ST. LIFT STATION No. 1

WBS NO. R-000267-127A-3



LOCATION MAP

KEY MAP NO 534-G & 494-X  
GIMS MAP NO 5559C & 5456B  
COUNCIL DISTRICT I



VICINITY MAP  
KEY MAP NO 493Z  
GIMS MAP NO 5456C



MAYOR  
JOHN WHITMIRE

CONTROLLER  
CHRIS HOLLINS

DISTRICT  
COUNCIL MEMBERS

AMY PECK DISTRICT A	TARSHA JACKSON DISTRICT B	ABBIE KAMIN DISTRICT C	CAROLYN EVANS-SHABAZZ DISTRICT D
FRED FLICKINGER DISTRICT E	TIFFANY D. THOMAS DISTRICT F	MARY NAN HUFFMAN DISTRICT G	MARIO CASTILLO DISTRICT H
JOAQUIN MARTINEZ DISTRICT I	EDWARD POLLARD DISTRICT J	MARTHA CASTEX-TATUM DISTRICT K	

COUNCIL MEMBERS  
AT-LARGE

JULIAN RAMIREZ POSITION 1	WILLIE DAVIS POSITION 2
TWILA CARTER POSITION 3	LETITIA PLUMMER POSITION 4
SALLIE ALCORN POSITION 5	

QUIDDITY ENGINEERING  
2322 W GRAND PARKWAY, SUITE  
150, KATY, TX 77449  
832-913-4000  
TX FIRM NUMBER: 23290

INTERIM REVIEW  
Not intended for construction,  
bidding or permit purposes.  
Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
Date: JANUARY 2026

SURVEYED BY:  
FB NO.

PARKS-FORESTRY DEPT.

METRO

HOUSTON WATER

TRANSPORTATION & DRAINAGE OPERATIONS

CAPITAL PROJECTS

SURVEY

CITY ENGINEER DATE

DIRECTOR OF DATE  
HOUSTON PUBLIC WORKS

SHEET NO XX OF XX SHEETS

FOR CITY OF HOUSTON USE ONLY

TDLR EABPR

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NO.	DATE	REVISIONS	APP.

INTERIM REVIEW  
 Not intended for construction,  
 bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: <u>JANUARY 2026</u>	DGN BY: <u>EMMARTINEZ</u>
JOB NO: <u>00050-0099-01</u>	DWG BY: <u>DTDODD</u>

NOTE: CITY SIGNATURES VALID FOR ONE  
 YEAR ONLY AFTER DATE OF SIGNATURES

**SCOTT STREET No. 1  
 LIFT STATION REHABILITATION**

**INDEX**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1'    HORIZ: XXX    VERT: XXX

CATEGORY NO. **0-G-2**    SHEET NO. XXX OF XXX  
 FOR CITY OF HOUSTON USE ONLY

**GENERAL CONSTRUCTION NOTES:**

1. Prior to bidding the project, the Contractor is required to visit the project sites. Contractor shall note any visible conflicts not shown in the drawings and bring to the attention of the Engineer prior to bidding the project. Should a construction conflict occur due to a visible conflict apparent at the time of bidding, all construction and engineering costs associated with the change shall be borne by the Contractor.
2. Final grade all areas of the site as shown on the paving and grading layout after completion of all other construction activities. Thoroughly clean the site to remove all construction debris such as concrete rubble, rebar, etc. Hydromulch all areas which are disturbed during construction that are not to be paved.
3. Provide isolation joints between all proposed sidewalks and all slabs, structures and pavements. Also provide isolation joints where pipes penetrate concrete slabs or pavement. Isolation joints shall be constructed as shown in the construction drawings.
4. Contractor shall comply with O.S.H.A regulations and Texas state law concerning trench safety systems.
5. Unless otherwise shown on the construction drawings, all pipe centered in walls shall have a wall flange. All wall flanges shall be cast-in-place with structural concrete or grouted in block-outs with non-shrink grout. All block-outs for through-wall piping shall be keyed, unless otherwise noted.
6. Sanitary facility clearances to potable water facilities shall follow the latest rules and regulations of the Texas Commission of Environmental Quality.
7. Contractor shall be responsible for obtaining all applicable city, county, state and federal permits.
8. The Contractor shall be fully responsible for any and all damage to the existing public or private utility lines, including but not limited to water lines, wastewater collection systems, storm sewers, gas line, telecommunication line, etc. during construction. All damages shall be repaired in accordance with City of Houston, Department of Public Works and Engineering's "Standard Construction Specifications" with latest addenda and amendments thereto, with no cost to the public and/or owner of the utility.
9. Contractor shall contact City of Houston, Department of Public Works and Engineering a minimum of 48 hours before starting work.
10. Contractor will be responsible for the coordination of power service to the lift station.
11. Contractor shall maintain site drainage during the course of construction at all times at no additional costs to the Owner whether by grading or pumping.
12. Contractor to obtain all permits required by regulation of Harris County, Texas for Flood Plain Management prior to starting construction.
13. All waste materials (hazardous and non-hazardous) shall be removed from the site and properly disposed of by the Contractor.
14. Contractor shall be responsible for protecting, maintaining, and restoring all existing facilities or any off-site areas affected by this construction project to existing or better condition, unless otherwise noted, at no additional cost to the Owner.
15. The Contractor is responsible for providing red line record drawings and O&M manuals acceptable to the Engineer at the completion of this project, as per the specifications, prior to final payment.
16. During construction, the Contractor shall maintain adequate drainage and safe access to adjacent properties, regardless of the weather conditions. Do not obstruct roadways, drainageways, sidewalks, or passageways adjacent to the construction area.
17. This project is inside the City of Houston Limits and Harris County, Texas.
18. The approximate location of existing utilities are given for reference only. Before commencing the work on this contract, the Contractor shall verify by field investigation the actual locations of all utility facilities within and adjacent to the limits of the work that may be affected by the work. Conflicts which result due to the negligence by the Contractor to locate, horizontally and vertically, existing utilities which are shown on the construction drawings, or which the Contractor has been given notice or has knowledge of, shall be the sole responsibility of the Contractor. The cost of remedial work, removal of portions of the work or extensive design changes occasioned by the failure of the Contractor to verify the location of existing utilities as described above shall be borne by the Contractor.
19. Electrical material and equipment listed approval. No electrical materials, apparatus, devices, appliances, fixtures, or equipment shall be sold or installed in the city unless they are in conformance with the provisions of this code, the laws of the State of Texas and any applicable rules and regulations issued under the authority of the stat statutes. The maker's name, trademark, or other identification symbol shall be placed on all electrical materials, apparatus, devices, appliances, fixtures, and equipment used or installed under the provisions of this code.
20. All electrical materials and equipment shall be listed and labeled for intended use and shall be included in a list published by an approved agency. Show compliance on Electrical Drawings.
21. Section 508 City of Houston Electrical Code.

**SANITARY SEWER NOTES:**

1. All sewers shall be constructed in accordance with the City of Houston "Standard Construction Specifications for Wastewater Collection Systems, water lines, storm drainage, street paving, and traffic" and all current amendments thereto and be subject to a standard Exfiltration test. Tests are to be performed on the total footage of sewer line included in the project. Requirements of Texas Administrative Code, Title 30 Chapter 317, "Design Criteria for Sewerage Systems" shall govern where conflicts exist except where city requirements are more stringent.
2. All manholes are to be per City of Houston standard details drawing numbers 02082-01, 02082-02, 02082N-02, 02082-03, and 02082N-03 unless otherwise noted. Use 2010 version as applicable.
3. Sanitary sewer manholes will have bedding and backfill per City of Houston standard details drawing No. 02317-08 unless otherwise noted.
4. Sanitary sewer pipe 6" and smaller shall be schedule 40 pvc. sanitary sewer pipe 8" and larger shall be SDR-26 PVC.
5. All SDR-26 PVC pipe shall meet ASTM specification D3034 and use "Full Bodied" SDR-26 PVC fittings with appropriate adapters and shall have a call classification of 12364-B as defined in ASTM D-1784 and shall have DIP size OD and rubber gasket bell-and-spigot type joint ends, unless otherwise noted.
6. AWWA C-900 DR-18 PVC pipe uses either AWWA C900 DR-18 PVC fittings or DIP fittings.
7. All sanitary sewer lines under proposed or future pavement and to a point one (1) foot back of all proposed or future curbs shall have bedding per City of Houston standard details drawing numbers 02317-01, 02317-02, or 02317-03 as applicable, with 1 1/2 sack cement/cy stabilized sand backfill up to the bottom of the pavement subgrade. 100 psi performance results are still required.
8. All sanitary sewers crossing water lines with a clearance between 12 inches and 9 feet shall have a minimum of one 18' joint of 150 psi ductile iron or (green) c900 PVC pipe meeting ASTM specification D2241 centered on water line. When water line is below sanitary sewer provide minimum 2 foot separation.
9. Contractor shall provide a minimum horizontal clearance of 9' feet between water lines and sanitary sewer manholes and lines.
10. Sanitary sewer manhole rims outside of proposed paving will be set 3" - 6" above the surrounding level finished grade after paving with sloped backfill added for storm water to drain away from manhole rim.
11. In wet stable trench areas use bedding per city of houston standard details drawing number 02317-02 (2002).
12. Deflection Test: Deflection tests shall be performed on all flexible and semi-rigid sewer pipe. the test shall be conducted after the final backfill has been in place at least 30 days. No pipe shall exceed a deflection of 5% if the deflection test is to be run using a rigid Mandrel, it shall have a diameter equal to 95% of the inside diameter of the pipe. The test shall be performed as per 30 TAC 317.2 latest amendment and without mechanical pulling devices. No ball-type Mandrel is allowed.
13. Infiltration, Exfiltration or Low-Pressure Air Test: Either of the following tests shall be performed as per TAC, Title 30 317.2 within the specified tolerances on all gravity sewers.
  - A. Onfiltration or exfiltration test: total leakage as determined by a hydrostatic head test shall not exceed 50 gallons per inch diameter per mile of pipe per 24 hours at a minimum test head of two (2) feet.
  - B. Low-pressure air test: perform test according to UNI-B-6-90 or other appropriate procedures. for sections of pipe less than 36" (inch) average inside diameter, the minimum allowable time for pressure drop from 3.5 p.s.i.g. to 2.5 p.s.i.g. shall be as follows:
    - 6" 340 seconds or 0.855(L) for test lengths greater than 398'
    - 8" 454 seconds or 1.520(L) for test lengths greater than 298'
    - 10" 567 seconds or 2.374(L) for test lengths greater than 239'
    - 15" 850 seconds or 5.342(L) for test lengths greater than 159'
    - 18" 1020 seconds or 7.693(L) for test lengths greater than 133'

Where L = length of line of same pipe size in feet.

14. "San. S. E." indicates "Sanitary Sewer Easement"
15. For sanitary manhole (MH) rims set inside of or @ curb & gutter pavement and/or below T.C., MH rims will be set flushed with an abutting paved surface. The (Valcun, Neenah or equal) heavy duty bolted solid MH cover shall be properly (and securely) attached and sealed to its compatible gasketed frame by using both a Neoprene Gasket and (at least) 4 counter-sunk hex-head coarse threaded 1/2"-13 UNC stainless steel bolts. The heavy duty frame MH cover shall be solid (no air holes). Said frame shall be both embedded into the MH's top also securely anchored to the underlying MH structure with either securely attached embedded anchor bolts or the concrete MH's exposed rebars welded to the frame or other equally secured methods to prevent MH cover/frame blow-offs/ejections.
16. Maintain 12-inch minimum clearance between all sanitary sewers, storm sewers and culverts unless otherwise noted.
17. Sanitary sewer manholes shall be sealed unless otherwise noted. Air-release manholes shall not be sealed.
18. Manhole rims are to be set at the elevations shown on the plans initially. After paving and grading is completed, rims are to be adjusted to four (4) to six (6) inches above final grade and back-dressed with dirt to provide drainage away from the manhole. Manholes located within proposed pavement shall have a rim elevation equal to the road elevation.
19. If wet sand is encountered in the field, use special bedding per City of Houston DWG 02317-01, 02317-02 and as directed by the Engineer.
20. Perform CCTV survey after post installation of all new sanitary sewer lines and submit the videos to the City of Houston according to City of Houston guidelines.
21. All sewer lines shall be tested in accordance with the contract specifications. Contractor to furnish test plugs and risers (no separate pay).
22. For all PVC or DIP pipe, use manhole waterstop gasket and clamp assembly at manhole connections to new manholes (no separate pay). Connection to existing manholes shall consist of breaking out an opening, installing a flexible connection (grout in place with a water stop around the perimeter) and use of a manhole waterstop gasket and clamp assembly of manhole connections.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026



**CITY OF HOUSTON**  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
**GENERAL CONSTRUCTION NOTES**  
 SHEET 1 OF 2

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE N/A HORIZ: XXX VERT: XXX

CATEGORY NO. **0-G-3** SHEET NO. 3 OF XXX

FOR CITY OF HOUSTON USE ONLY

**INSPECTION NOTES:**

1. A field demonstration of the system and equipment shall be verified by the City of Houston Wastewater group before the start of the seven (7) day pump test. Wastewater will also inspect duct banks before the concrete is poured.
2. The City of Houston Wastewater group shall be given 24 to 72 hours prior notice to needing any inspections.

**WATER LINES:**

1. Water lines shall be constructed in accordance with the latest City of Houston infrastructure design manual, standard specification, and construction details.
2. All water lines under proposed or future paving and to a point of one (1) foot back of all proposed or future curbs shall be encased in bank sand to 12" over pipe and backfilled with cement stabilized sand to within one (1) foot of subgrade.
3. All water line and sewer line crossings shall be constructed per City of Houston and TECQ regulations.
4. All water valves shall be supplied and INS talled in accordance with the latest edition of AWWA C-500 and shall be of the resilient seat type.
5. All water lines to be disinfected in conformance with AWWA C-651 and the Texas State Department of Health. At least one bacteriological sample shall be collected for every 1,000 linear feet of water line and shall be repeated if contamination persists.
6. All below grade valves shall be gasketed, hub-end gate valves with a cast iron box, except where flanges are called out on the plans.
7. Hydrostatic Testing: All water pipe shall be tested for leakage in accordance with the latest City of Houston standard construction specifications. Tests are to be performed on the entire footage of water pipe line included in the project.
8. All water lines to have 4' minimum cover to finished grade and minimum 12" clearance to other utilities at crossing unless otherwise noted on plans. All water line installed over 8' deep shall utilize restrained joint fittings.
9. Contractor shall keep water pipe clean and capped (or otherwise effectively covered) open pipe ends to exclude insects, animals or other sources of contamination from unfinished pipe lines at times when construction is not in progress.

**GRADING NOTES:**

1. General Contractor and all Subcontractors shall verify the suitability of all existing and proposed site conditions including grades and dimensions before starting construction. The Engineer shall be notified immediately of any discrepancies.
2. Before starting construction, Contractor shall verify benchmark elevation and notify engineer if any discrepancy and/or conflict is found.
3. Contractor shall ensure there is positive drainage from the proposed buildings and no ponding in paved areas, and shall notify engineer if any grading discrepancies are found in the existing and proposed grades prior to placement of pavement or utilities.
4. Contractor shall protect all manhole covers, valve covers, vault lids, fire hydrants, power poles, guy wires, and telephone boxes that are to remain in place and undisturbed during construction.
5. All existing concrete paving, sidewalk, and curb demolition shall be removed and disposed of by Contractor. Disposal shall be at an approved off-site, lawful location, unless directed otherwise by the Owner.
6. Contractor to provide any additional select fill for final grading of site.
7. Areas that are to receive fill will be stripped to a depth of three-inches (3"). Strippings shall be stock piled and then spread evenly on surface of fill areas.
8. Fill shall be placed in maximum loose lifts of eight-inches (8") or less and compacted to 95% of maximum density at optimum to +3% moisture content as determined by AASHTO Test Method T-99.

**SIGNAGE NOTES:**

1. Provide identification numbers for each pump within the Lift Station sites which correspond to the identification numbers in the motor control center, PLC, and control panel. These numbers shall be located on the vertical discharge pipes of the pumps or on the concrete top slab. The numbers shall consist of one coat of black polyurethane paint applied with a stencil. Number height shall be at least four-inches (4"). This applies to all proposed equipment and existing equipment at both Lift Station sites.
2. Label and coat with proper color code all lines including an arrow indicating flow direction. Labels shall consist of one coat of black polyurethane paint applied with a stencil. Letter height shall be a minimum of four inches (4"). Apply labels in a prominent location as directed by the Engineer. As a general rule, labels shall be provided for each pipe where it enters or exits a structure or pump. This shall be done for all proposed and existing pipes at both Lift Station sites.

**MANHOLE / INLET PROTECTION NOTES:**

1. Inlets and manholes that are not complete and/or are subject to conveying storm water flows are to be protected to prevent sediment from entering the proposed or existing storm sewer system.
2. Protection shall consist of one layer of 3x12-inch oak timbers, one (1) inch apart, covered with one layer of woven polypropylene or polyester filter fabric (Exxon GTF 100S, Phillips SUPAC 4WS[U] or approved equal) held in place with 1/2" staples. Timbers shall be held in place with two (2) 2x4's nailed securely to each timber over the filter fabric. The filter fabric shall extend beyond the perimeter of the oak timbers as to ensure one (1) foot of bury between the manhole or inlet and the surrounding soil as shown.
3. Filter fabric to be cleaned or replaced when it ceases to function properly or as directed by the Engineer.
4. Contractor may submit plans for alternate methods of protection. These alternate methods must be approved prior to use in the field.
5. No separate payment shall be made for inlet and manhole protection. Include the cost in the unit price for the inlets and manholes.

**UTILITY CONSTRUCTION NOTES:**

1. During construction, the Contractor shall maintain adequate drainage and safe access to adjacent properties, regardless of the weather conditions. Do not obstruct roadways, drainageways, sidewalks, or passageways adjacent to the construction area.
2. When trench condition warrants the use of dewatering systems, their use shall be requested by the Contractor and approved by the Engineer.
3. Contractor shall remove all mud, dirt and debris deposited or dropped on existing pavement due to his construction activity daily. Material that is hazardous to traffic shall be removed immediately.
4. Contractor shall protect all trees adjacent to work area. No trees shall be removed without permission of the City.
5. The Contractor shall be responsible for safeguarding and protecting all material and equipment stored on the job site. The Contractor shall be responsible for the storage of materials in a safe and workmanlike manner to prevent injuries, during and after working hours, until project acceptance.
6. The Contractor shall provide sheeting, shoring and bracing necessary to protect workmen and existing utilities during all phases of construction, as may be required by O.S.H.A., federal, state and local laws, codes and ordinances.
7. The Contractor shall be fully responsible for any and all damage to the existing public or private utility lines, including, but not limited to, water lines, wastewater collection systems, storm sewers, backslope interceptors, irrigation lines, electrical lines, and material and property damages during construction. All damages, relocation, or replacement of existing utilities shall be repaired in accordance with the specifications, details, and requirements of the utility's Owner.
8. Project staking and establishment of control points will be provided by the Owner or their representative. Alignment, centerline curve data, and stationing to be determined from approved, recorded subdivision plat or road right-of-way. The Contractor will be responsible for coordinating this work with the field project representative.
9. The Contractor shall return all existing paving and driveways to original or better condition at no additional cost to the owner unless otherwise noted or specifically called out as a pay item.

**DRY WEATHER LIFT STATION SHUT-DOWNS, PHASING, BYPASS, AND COORDINATION NOTES:**

1. Lift Station shut-downs shall be pre-approved by the Engineer and Operator, and shall be scheduled with both at least 72 hours in advance. Bypass pumping and piping shall be provided by the Contractor, and shall be considered incidental to the work. Submit bypass pumping plan to Engineer for approval a minimum of thirty (30) calendar days prior to installation.
2. The Contractor shall notify the Engineer of, and be present for, the start-up of all new equipment, and shall be responsible for proper start-up procedures as recommended by the Manufacturer, and called for in the specifications. A Manufacturer Representative shall be present for start-up or pre-start-up inspection as required by the specifications, and as recommended by the Manufacturer for each equipment item. No equipment will qualify for substantial completion until Contractor meets all conditions listed in the Special Conditions, including submitting start-up reports to the Engineer. Within 24 hours of completion of grit removal from the lift station, Contractor shall contact the Engineer to inspect the Lift Station.
3. Upon initial shut down of the Lift Station, the Operator shall be responsible for removal of bulk liquid, grit, rags, solid and semi-solid material to within six-feet (6') of the wet well floor. All subsequent dewatering operations (including removal of last two-feet (2') of material, and removal of rainwater) shall be the responsibility of the Contractor at no additional cost to the Owner.
4. The Contractor shall perform all start-up and shut-down operations of all proposed lift station equipment. The Operator shall perform all start-up and shut down operations of all existing Lift Station equipment.
5. The Contractor shall provide and install all the plugs, blocks, restraints, pumps, controls, monitoring, piping and labor required for controlling and diverting all the wastewater that flows into the Lift Station as necessary for the work and preventing interruption of service, surcharging the system and/or overflowing the system. The existing force main may be utilized for bypass pumping purposes. A minimum of one (1) duty pump and one (1) spare pump shall be used. All equipment for bypass pumping shall be located as shown on the plans.
6. The Contractor shall coordinate the duration of the bypass pumping system with all Subcontractors to ensure the appropriate length of bypass pumping is supplied. The Owner will not be responsible for any extended bypass pumping required due to lack of Contractor / Subcontractor coordination for all electrical, civil, and mechanical improvements.
7. Lift station shall not be out of service unless bypass pumping is provided and installed as specified.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
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SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
**GENERAL CONSTRUCTION NOTES**  
 SHEET 2 OF 2

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE N/A HORIZ: XXX VERT: XXX

CATEGORY NO. **0-G-4** SHEET NO. 4 OF XXX  
 FOR CITY OF HOUSTON USE ONLY

**EQUIPMENT ABBREVIATIONS:**

ABWF	AUTOMATIC BACKWASH SAND FILTER
AF	AIR INLET FILTER
AL	AIR LIFT
ASV	AUTOMATIC SWITCHOVER VALVE
BC	BELT CONVEYOR
BP	BELT PRESS
CC	CALIBRATION COLUMN
CFP	CENTRIFUGAL PUMP
CLR	CHLORINATOR
CP	CHOPPER PUMP
CRB	CARBON SCRUBBER
DA	DECANT ARM
DDP	DOUBLE DISC PUMP
DF	DISK FILTER
DP	DIAPHRAGM PUMP
DWT	DOUBLE WALL STORAGE TANK
EFAN	EXHAUST FAN
EWS	EMERGENCY EYEWASH & SHOWER
FBD	FINE BUBBLE DIFFUSER
FLT	FLOATS
GEN	GENERATOR
GIP	GAS INDUCTION PUMP
GLS	GAS LEAK SENSOR
GR	GRINDER
HEP	HORIZONTAL END-SUCTION PUMP
HST	HOIST
INJ	INJECTOR
JIB	JIBB CRANE
LC	LOAD CELL
LCP	LOCAL CONTROL PANEL
LVR	LOUVER
MCS	MECHANICAL COARSE SCREEN
MFS	MECHANICAL FINE SCREEN
MR	MONORAIL
MS	MANUAL SCREEN
MSB	MULTI-STAGE CENTRIFUGAL BLOWER
MXR	MIXER
PBU	POLYMER BLENDING UNIT
PCP	PROGRESSIVE CAVITY PUMP
PD	PULSATION DAMPENNER
PSP	PERISTALTIC PUMP
RCTW	RECTANGULAR WEIR
RDT	ROTARY DRUM THICKENER
RLB	ROTARY LOBE BLOWER
RLP	ROTARY LOBE PUMP
RSB	ROTARY SCREW BLOWER
RTB	REGENERATIVE TURBINE BLOWER
RTM	ROTAMETER
RTV	ROTAMETER WITH INTEGRAL MANUAL VALVE
SC	SECONDARY CLARIFIER
SCC	SCREW CONVEYOR
SCP	SUBMERSIBLE CHOPPER PUMP
SDD	COARSE BUBBLE SINGLE DROP DIFFUSER
SFAN	SUPPLY FAN
SFR	SULFONATOR
SHTR	SPACE HEATER
SM	SUBMERSIBLE MIXER
SNP	SOLENOID PUMP
SP	NON-CLOG SUBMERSIBLE PUMP
SPP	SELF-PRIMING CENTRIFUGAL PUMP
STMX	STATIC MIXER
SWT	SINGLE WALL STORAGE TANK
TB	TRAVELING BRIDGE
TBB	TURBO BLOWER
TEFC	TOTALLY ENCLOSED, FAN-COOLED MOTOR
TLY	TROLLEY
VLF	VACUUM LIQUID FEEDER
VNW	V-NOTCH WEIR
VR	VACUUM REGULATOR
WBD	COARSE BUBBLE WIDE BAND DIFFUSER
WC	WASHER COMPACTOR
WCH	WINCH

**FLUID ABBREVIATIONS:**

AIR	AIR
ALUM	ALUM
BW	BACKWASH WASTE
CAKE	DEWATERED SLUDGE
CE	CLARIFIED EFFLUENT
CLG	CHLORINE GAS
CLS	CHLORINE SOLUTION
DR	DRAIN LINE
DS	DIGESTED SLUDGE
FA	FOUL AIR
FE	FINAL EFFLUENT
FRA	FRESH AIR
FTE	FILTERED EFFLUENT
FTR	FILTRATE
IR	INTERNAL RECYCLE
ML	MIXED LIQUOR
NPW	NON-POTABLE WATER
OF	OVERFLOW
POLY	POLYMER
PRM	PERMEATE
PS	POLYMER SOLUTION
PW	POTABLE WATER
RAS	RETURN ACTIVATED SLUDGE
RCW	RECLAIMED WATER
RS	RAW SEWAGE
SB	SODIUM BISULFITE
SCUM	SCUM
SDS	SULFUR DIOXIDE SOLUTION
SH	SODIUM HYPOCHLORITE (BLEACH)
SI	SCREENED INFLUENT
SN	SUPERNATE
SDG	SULFUR DIOXIDE GAS
STM	STORM SEWER
TS	THICKENED SLUDGE
WAS	WASTE ACTIVATED SLUDGE

**GENERAL ABBREVIATIONS:**

AC	ACRES
CL	CENTERLINE
CFM	CUBIC FEET PER MINUTE
EL	ELEVATION
FF	FINISHED FLOOR
FM	FORCE MAIN
FPS	FEET PER SECOND
FT	FEET
GAL	GALLONS
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HOA	HAND OFF AUTO
HP	HORSE POWER
HR	HOUR
LF	LINEAR FEET
mA	MILLIAMPERE
MH	MANHOLE
OFB	OVERFLOW BAFFLE
PP	POWER POLE
ROW	RIGHT-OF-WAY
SMC	SAMPLE COCK
SAN	SANITARY SEWER
SCH	SCHEDULE
SF	SQUARE FEET
TDH	TOTAL DYNAMIC HEAD
TOB	TOP OF BANK
TOC	TOP OF CONCRETE
TOE	TOE OF SLOPE
TOS	TOP OF SLAB
TOW	TOP OF WALL
TPD	TELEPHONE PEDESTAL
TSP	TELEPHONE SERVICE POLE
TSS	TOTAL SUSPENDED SOLIDS
UFB	UNDERFLOW BAFFLE
UGE	UNDERGROUND ELECTRIC
V	VOLTS
VOL	VOLUME
WM	WATER METER

**GATES, VALVES & FITTINGS ABBREVIATIONS:**

3WV	THREE WAY VALVE
ARV	AIR RELEASE VALVE
AVV	AIR & VACUUM VALVE
BCV	BALL CHECK VALVE
BF	BLIND FLANGE
BFV	BUTTERFLY VALVE
BPV	BACKPRESSURE VALVE
BS	BASKET STRAINER
BV	BALL VALVE
CCV	CUSHION CHECK VALVE
DAE	DOUBLE ARCH EXPANSION JOINT
DBS	DUPLIX BASKET STRAINER
DBV	DUCKBILL VALVE
DCV	DOUBLE DISC CHECK VALVE
DDC	DOUBLE DETECTOR CHECK
DGV	DEGASSING VALVE
DJ	DISMANTLING JOINT
DV	DIAPHRAGM VALVE
EC	EXPANSION COUPLING
FAC	FLANGED ADAPTER COUPLING
FPG	FLAP GATE
RAS	FLAP VALVE
FTV	FOOT VALVE
GLB	GLOBE VALVE
GV	GATE VALVE
HB	HOSE BIBB
KGV	KNIFE GATE VALVE
MC	MECHANICAL COUPLING
MQC	MALE CAM & GROOVE QUICK COUPLING
MV	MUD VALVE
NRS	NON-RISING STEM
NV	NEEDLE VALVE
OCV	ODOR CONTROL VALVE
OSY	OUTSIDE STEM & YOKE
PG	PULL GATE
PNV	PINCH VALVE
PR	PRESSURE REDUCING VALVE
PRV	PRESSURE RELIEF VALVE
PSV	PRESSURE SUSTAINING VALVE
PV	PLUG VALVE
RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
SCK	SILENT CHECK VALVE
SCV	SWING CHECK VALVE
SG	SLIDE GATE
SLC	SLEEVE COUPLING
SRV	SURGE RELIEF VALVE
SV	SOLENOID VALVE
TBA	TUBING ADAPTER
TV	TELESCOPIC VALVE
UN	UNION
VB	VACUUM BREAKER
WG	WEIR GATE
WYS	WYE STRAINER

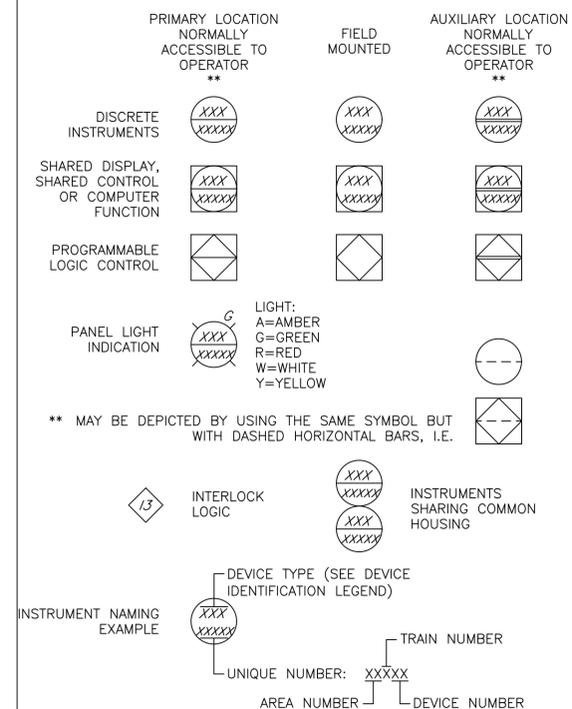
**MATERIAL ABBREVIATIONS:**

AL	ALUMINUM
CFRP	CENTRIFUGALLY CAST FIBER REINFORCED PIPE
CMP	CORRUGATED METAL PIPE
DI	DUCTILE IRON
FRP	FIBERGLASS REINFORCED PLASTIC
GS	GALVANIZED STEEL
HDG	HOT DIP GALVANIZED
HDPE	HIGH DENSITY POLYETHYLENE
PE	POLYETHYLENE
PVC	POLYVINYL CHLORIDE
RC	REINFORCED CONCRETE
SS	STAINLESS STEEL
ST	STEEL
WS	WELDED STEEL

**INSTRUMENTATION ABBREVIATIONS:**

A/H	AUTO/HAND
DC	FULL VOLTAGE DISCONNECT
DOP	DOPPLER FLOW METER
ES	EMERGENCY STOP
H/O/A	HAND/OFF/AUTO
H/O/R	HAND/OFF/REMOTE
L/A	LOCAL/AUTO
L/C	LOCAL/COMPUTER
L/O/C	LOCAL/OFF/COMPUTER
L/O/R	LOCAL/OFF/REMOTE
L/R	LOCAL/REMOTE
LS	LOCK STOP
LSR	LASER LEVEL TRANSDUCER
MAG	ELECTROMAGNETIC FLOWMETER
N/B	NORMAL/BYPASS
O/O	ON/OFF
O/C	OPEN/CLOSE
O/C/LOS	OPEN/CLOSE/LOCK-OUT-STOP
O/C/S	OPEN/CLOSE/STOP
O/C/S/C	OPEN/CLOSE/STOP/COMPUTER
O/H/C	OPEN/HOLD/CLOSE
O/O/A	ON/OFF/AUTO
O/O/C	ON/OFF/COMPUTER
PRP	PROPELLER OR TURBINE FLOWMETER
RAD	RADAR LEVEL TRANSDUCER
R/S/L	RAISE/STOP/LOWER
S/S	STOP/START
SUB	SUBMERSIBLE LEVEL TRANSDUCER
TRM	THERMAL MASS FLOWMETER
TRT	TRANSIT TIME FLOWMETER
ULT	ULTRASONIC LEVEL TRANSDUCER

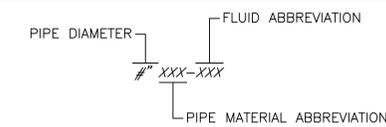
**GENERAL INSTRUMENT & FUNCTION SYMBOLS:**



**ANALYZER ABBREVIATIONS:**

DO	DISSOLVED OXYGEN
NO3	NITRATE
OP	ORTHOPHOSPHATE
ORP	OXIDATION REDUCTION POTENTIAL
TSS	TOTAL SUSPENDED SOLIDS
TURB	TURBIDITY

**PIPING LABELS:**



**PROCESS AREAS:**

0	GENERAL
1	DRY WEATHER LIFT STATION
2	WET WEATHER LIFT STATION
3	FES CHEMICAL FEED FACILITY
4	FLOW CONTROL STATION
5	ODOR CONTROL STATION
6	ELECTRICAL BUILDING NO. 1

**DEVICE IDENTIFICATION LEGEND:**

FIRST LETTER		SUCCEEDING LETTERS		
MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS	ALARM		
B	BURNER, COMBUSTION			
C	CONDUCTIVITY		CONTROL	CLOSED
D	DENSITY	DIFFERENTIAL		
E	VOLTAGE	PRIMARY ELEMENT		
F	FLOW RATE	RATIO (FRACTION)		
G	GAUGE	GLASS, VIEWING DEVICE		
H	HAND (MANUAL)			HIGH
I	CURRENT (ELECTRICAL)	INDICATE		
J	POWER	SCAN		
K	TIME, TIME SCHED.	TIME RATE OF CHANGE	CONTROL STATION	
L	LEVEL	LIGHT		LOW
M	MOTION	MOMENTARY		MIDDLE
N	INTRUSION			NORMAL
O	TORQUE	ORIFICE, RESTRICTION		OPENED
P	PRESSURE, VACUUM	POINT CONNECTION		
Q	QUANTITY	INTEGRATE, TOTALIZE		
R	RADIATION	RECORD OR PRINT		
S	SPEED, FREQUENCY	SAFETY	SWITCH	
T	TEMPERATURE		TRANSMIT	
U	MULTIVARIABLE	MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION		VALVE, LOUVER	
W	WEIGHT, FORCE	WELL		
X	UNCLASSIFIED	X-AXIS	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OF PRESENCE	Y-AXIS	RELAY, COMPUTE CONVERT	
Z	POSITION	Z-AXIS	DRIVER, ACTUATOR, FINAL CONTROL ELEMENT	

NO.	DATE	REVISIONS	APP.
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**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
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CITY OF HOUSTON  
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SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
**GENERAL SYMBOLS & ABBREVIATIONS**  
SHEET 1 OF 2

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE N/A	HORIZ: XXX	VERT: XXX
CATEGORY NO. 0-6-5	SHEET NO. 5	OF XXX
FOR CITY OF HOUSTON USE ONLY		

MISCELLANEOUS SYMBOLS:

ELECTRICAL / INSTRUMENTATION SYMBOLS:

	TYPICAL NORMALLY CLOSED VALVE		AUTOMATIC SWITCHOVER VALVE		TUBING ADAPTER		EXHAUST FAN		GRINDER
	PLUG VALVE		VACUUM REGULATOR		BLIND FLANGE		LOUVER		GENERAL BLOWER
	BALL VALVE		DRAIN LINE		UNION		GENERAL FAN		GENERAL PUMP
	BUTTERFLY VALVE		DRAIN INLET (SCREENED)		SLEEVE COUPLING		GENERAL CRANE		HEAT TRACING
	SILENT CHECK VALVE		DRAIN INLET (OPEN)		FLANGED ADAPTER COUPLING		WINCH		CALIBRATION TUBE/COLUMN
	SWING CHECK VALVE		VENT		DISMANTLING JOINT		TRAVELING BRIDGE CRANE		GAS INDUCTION PUMP
	CUSHION CHECK VALVE		AIR INLET FILTER		DOUBLE ARCH EXPANSION JOINT		TROLLEY		ROTAMETER
	BALL CHECK VALVE		SLIDE GATE (NORMALLY OPEN)		AIR LIFT		HOIST		ROTAMETER WITH INTEGRAL MANUAL VALVE
	MUD VALVE		SLIDE GATE (NORMALLY CLOSED)		MALE CAM & GROOVE QUICK COUPLING		GENERAL SCREEN		PULSATION DAMPENERS
	DUCKBILL VALVE		PULL GATE (NORMALLY OPEN)		DIAPHRAGM SEAL		WASHER COMPACTOR		CHEMICAL DOSAGE CONTROLLER (SEE FLUID ABBREVIATIONS)
	DIAPHRAGM VALVE		PULL GATE (NORMALLY CLOSED)		INLINE ANNULAR DIAPHRAGM		SCREW CONVEYOR		
	GATE VALVE		WEIR GATE		SAMPLE COCK		BELT CONVEYOR		
	DOUBLE DISC CHECK VALVE		OVERFLOW BAFFLE		HOSE BIBB		COARSE BUBBLE SINGLE DROP DIFFUSER (PROFILE)		
	GLOBE VALVE		UNDERFLOW BAFFLE		VACUUM BREAKER		SINGLE DROP COARSE AIR DIFFUSER (PLAN)		
	ODOR CONTROL VALVE		V-NOTCH WEIR		WYE STRAINER		FINE BUBBLE DIFFUSERS		
	PINCH VALVE		RECTANGULAR WEIR		CORPORATION STOP		COARSE BUBBLE WIDE BAND AIR DIFFUSERS (PLAN)		
	NEEDLE VALVE				GENERAL BACKFLOW PREVENTER		COARSE BUBBLE AIR		
	THREE-WAY VALVE				BASKET STRAINER		FINE BUBBLE AIR		
	FLAP VALVE				DUPLEX BASKET STRAINER		MANHOLE		
	TELESCOPIC VALVE				EMERGENCY EYE WASH & SHOWER				
	FOOT VALVE				BLADDER TANK				
	AIR & VACUUM VALVE				MIXER				
	AIR RELEASE VALVE				STATIC MIXER				
	DEGASSING VALVE				SINGLE WALL STORAGE TANK				
	SOLENOID VALVE				DOUBLE WALL STORAGE TANK				
	PRESSURE RELIEF VALVE				STORAGE CONTAINER				
	SURGE RELIEF VALVE								
	PRESSURE REDUCING VALVE								
	PRESSURE SUSTAINING VALVE								
	BACKPRESSURE VALVE								

	120 VAC ELECTRICAL SUPPLY
	LEVEL TRANSDUCER (SEE INSTRUMENTATION ABBREVIATIONS FOR TYPE)
	FLOAT WITH PVC COATED WEIGHT
	FLOW METER (SEE INSTRUMENTATION ABBREVIATIONS FOR TYPE)
	ONLINE ANALYZER (SEE ANALYZER ABBREVIATIONS FOR TYPE)
	PROBE ANALYZER (SEE ANALYZER ABBREVIATIONS FOR TYPE)
	LOAD CELL/SCALE
	SPACE HEATER
	MOTOR
	VARIABLE SPEED MOTOR
	MOTOR WITH LOCAL LOCKOUT (SEE INSTRUMENTATION ABBREVIATIONS FOR TYPE)
	ELECTRICAL SIGNAL
	3-PHASE POWER
	DATA COMMUNICATION
	HEAT TRACING
	ANALOG INPUT
	ANALOG OUTPUT
	DISCRETE INPUT
	DISCRETE OUTPUT

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026	DGN BY: MBMITCHELL
JOB NO: 00050-0099-01	DWG BY: JMMUSSO

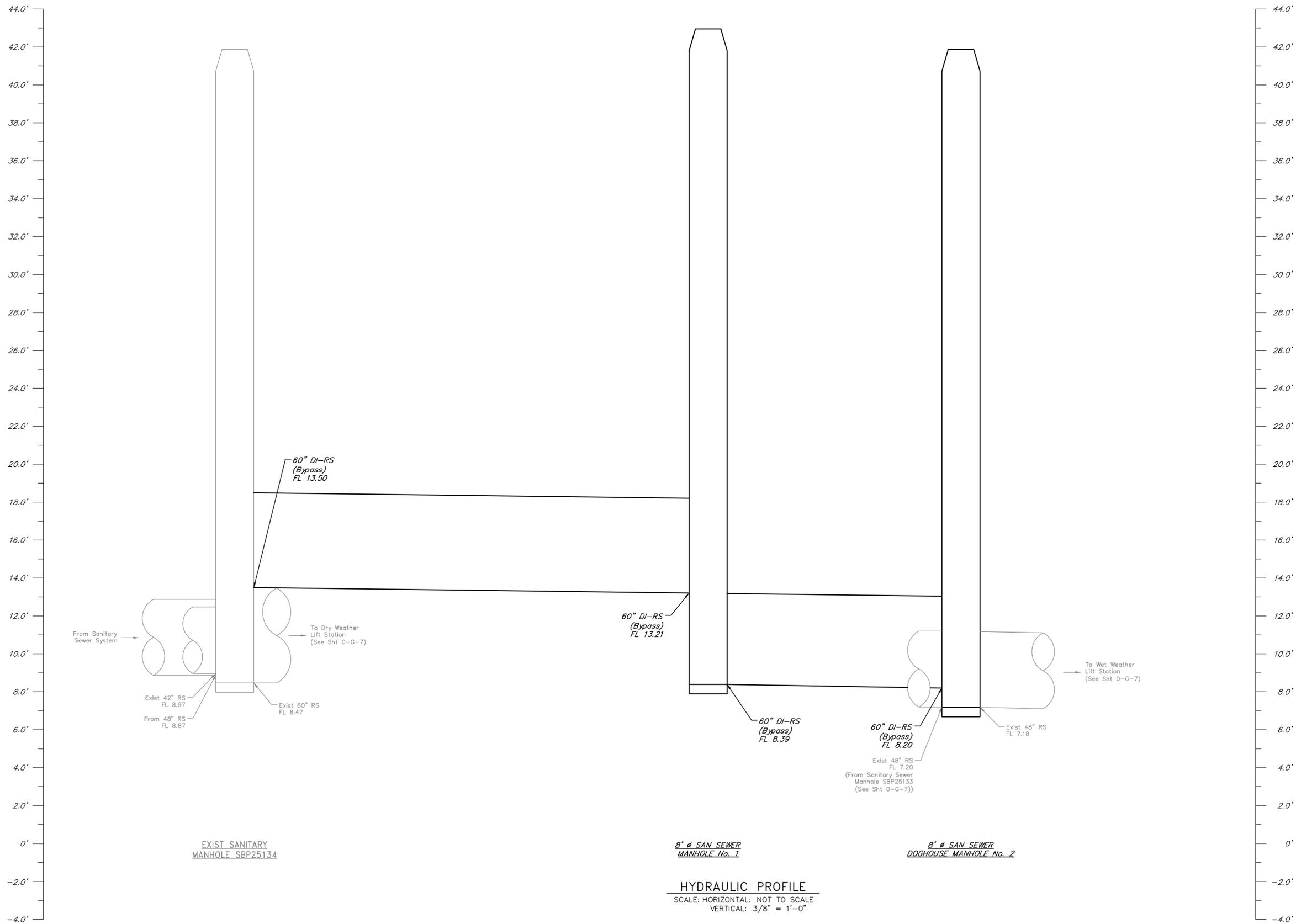
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
 GENERAL SYMBOLS &  
 ABBREVIATIONS  
 SHEET 2 OF 2

CITY OF HOUSTON  
 HOUSTON PUBLIC WORKS

DRAWING SCALE N/A	HORIZ: XXX	VERT: XXX
CATEGORY NO. 0-G-6	SHEET NO. 6	OF XXX
FOR CITY OF HOUSTON USE ONLY		





**NOTES:**

1. All existing structures, dimensions, locations, elevations, and materials shown are based on City of Houston's record drawings. Contractor shall field verify existing dimensions, locations, elevations, and materials as required to complete the work and as directed by the Engineer. Field verification shall be incidental to the work.
2. Refer to Civil sheets for all Manhole Rim elevations.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026



Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026      DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01      DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

HYDRAULIC PROFILE  
 SHEET 2 OF 2

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1'      HORIZ: XXX      VERT: XXX

CATEGORY NO. **0-G-8**      SHEET NO. 8 OF XXX  
 FOR CITY OF HOUSTON USE ONLY

**8' Ø SAN SEWER MANHOLE No. 1**      **8' Ø SAN SEWER DOGHOUSE MANHOLE No. 2**

**HYDRAULIC PROFILE**  
 SCALE: HORIZONTAL: NOT TO SCALE  
 VERTICAL: 3/8" = 1'-0"

**STORM STRUCTURES:**

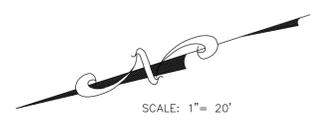
- (A) STM. M.H.  
TG=37.65'  
FL=24.65' (36" N)  
FL=25.95' (24" E)  
FL=24.55' (36" S)
- (B) STM. M.H.  
TG=39.23'  
FL=31.73' (15" NE)  
FL=34.53' (12" S)
- (C) STM. M.H.  
TG=37.96'  
FL=31.73' (24" W)  
FILLED W/ TRASH

**SANITARY STRUCTURES:**

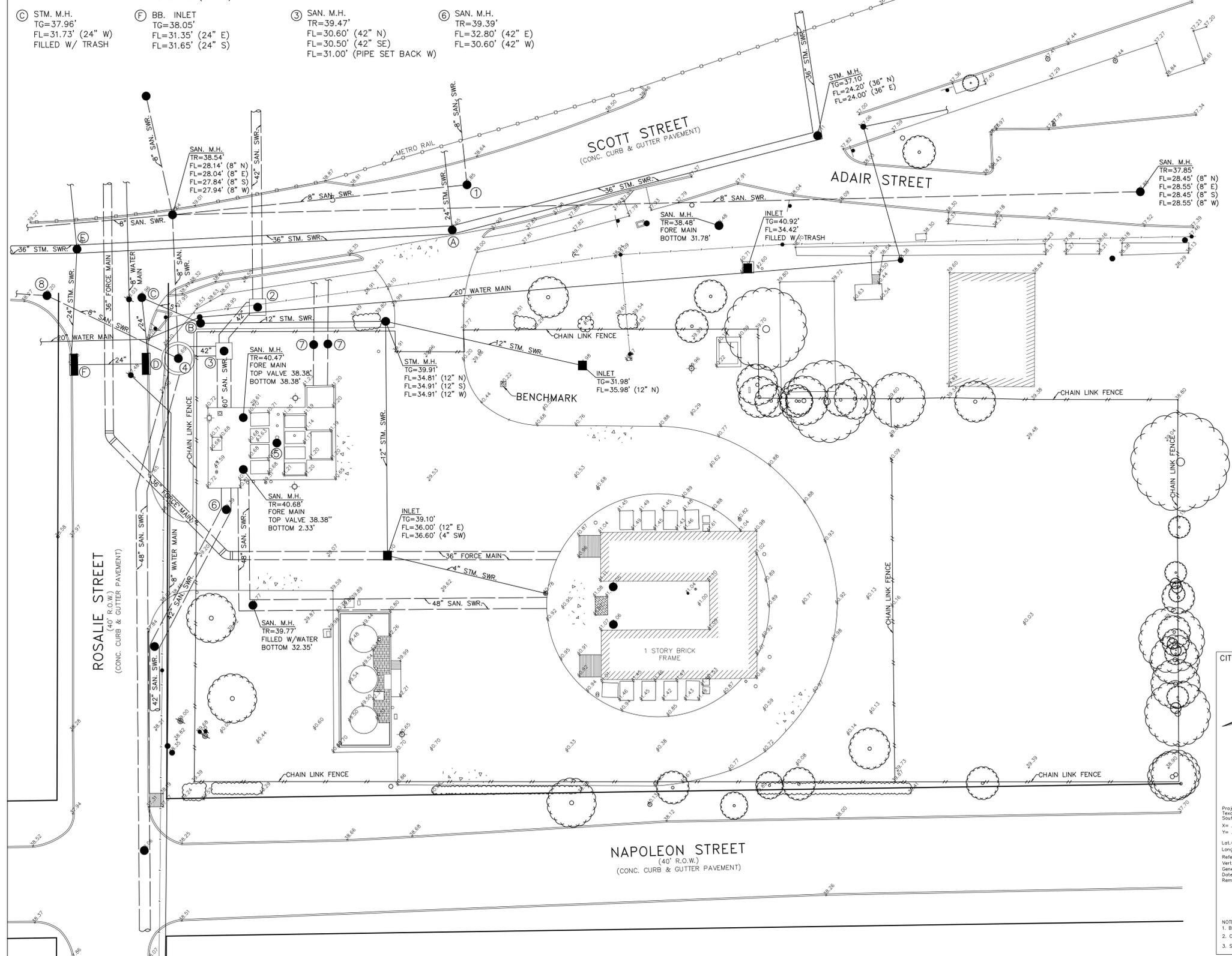
- (D) BB. INLET  
TG=37.88'  
FL=31.43' (24" N)  
FL=31.43' (24" E)
- (E) STM. M.H.  
TG=38.50'  
FL=25.00' (36" N)  
FL=28.80' (24" E)  
FL=25.00' (36" S)  
FL=29.40' (24" W)
- (F) BB. INLET  
TG=38.05'  
FL=31.35' (24" E)  
FL=31.65' (24" S)

**SANITARY STRUCTURES:**

- (1) SAN. M.H.  
TR=37.85'  
FL=28.80' (8" N)  
FL=28.90' (8" E)
- (2) SAN. M.H.  
TR=39.22'  
FL=28.14' (42" SE)  
FL=28.04' (42" NW)
- (3) SAN. M.H.  
TR=39.47'  
FL=30.60' (42" N)  
FL=30.50' (42" SE)  
FL=31.00' (PIPE SET BACK W)
- (4) SAN. M.H.  
TR=38.69'  
FL=17.19' (8" N)  
FL=27.29' (8" E)  
FL=8.79' (42" S)  
FL=9.19' (42" W)
- (5) SAN. M.H.  
TR=40.69'  
BOTTOM 40.05'
- (6) SAN. M.H.  
TR=39.39'  
FL=32.80' (42" E)  
FL=30.60' (42" W)
- (7) SAN. M.H.  
TR=39.78'  
CLOSED  
24" PIPE RUNS THROUGH  
BOTTOM =32.23'
- (8) SAN. M.H.  
TR=38.20'  
FL=21.60' (8" N)  
FL=18.50' (8" N)  
FL=17.40' (8" SW)



SCALE: 1" = 20'



**BENCH MARK**  
SET BRASS DISC IN CONCRETE FOR CITY OF HOUSTON MARKER NO. 1  
LOCATED INSIDE CITY OF HOUSTON LIFT STATION NO. 1  
AT THE INTERSECTION OF SCOTT STREET AND ROSALIE STREET.

**NOTICE:**  
FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811

VERIFICATION OF PRIVATE UTILITY LINES

Date: \_\_\_\_\_

CenterPoint Energy natural gas utilities shown.  
(Gas services lines are not shown). This signature not to be used for conflict verification.  
Signature Valid for six months.

Date: \_\_\_\_\_

CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY.  
(Gas services lines are not shown). This signature not to be used for conflict verification.  
Signature Valid for six months.

Date: \_\_\_\_\_

Approved for AT&T Texas / SVBT underground conduit facilities only.  
Signature valid for one year.

NO.	DATE	REVISIONS	APP.



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

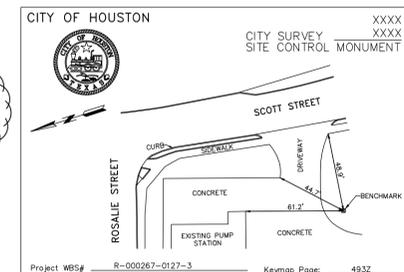
DATE: MARCH 2025 DGN BY: \_\_\_\_\_  
JOB NO: 00050-0099-01 DWG BY: \_\_\_\_\_

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION  
REHABILITATION

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE HORIZ: XXX VERT: XXX  
CATEGORY NO. 0-C-1 SHEET NO. OF XXX  
FOR CITY OF HOUSTON USE ONLY



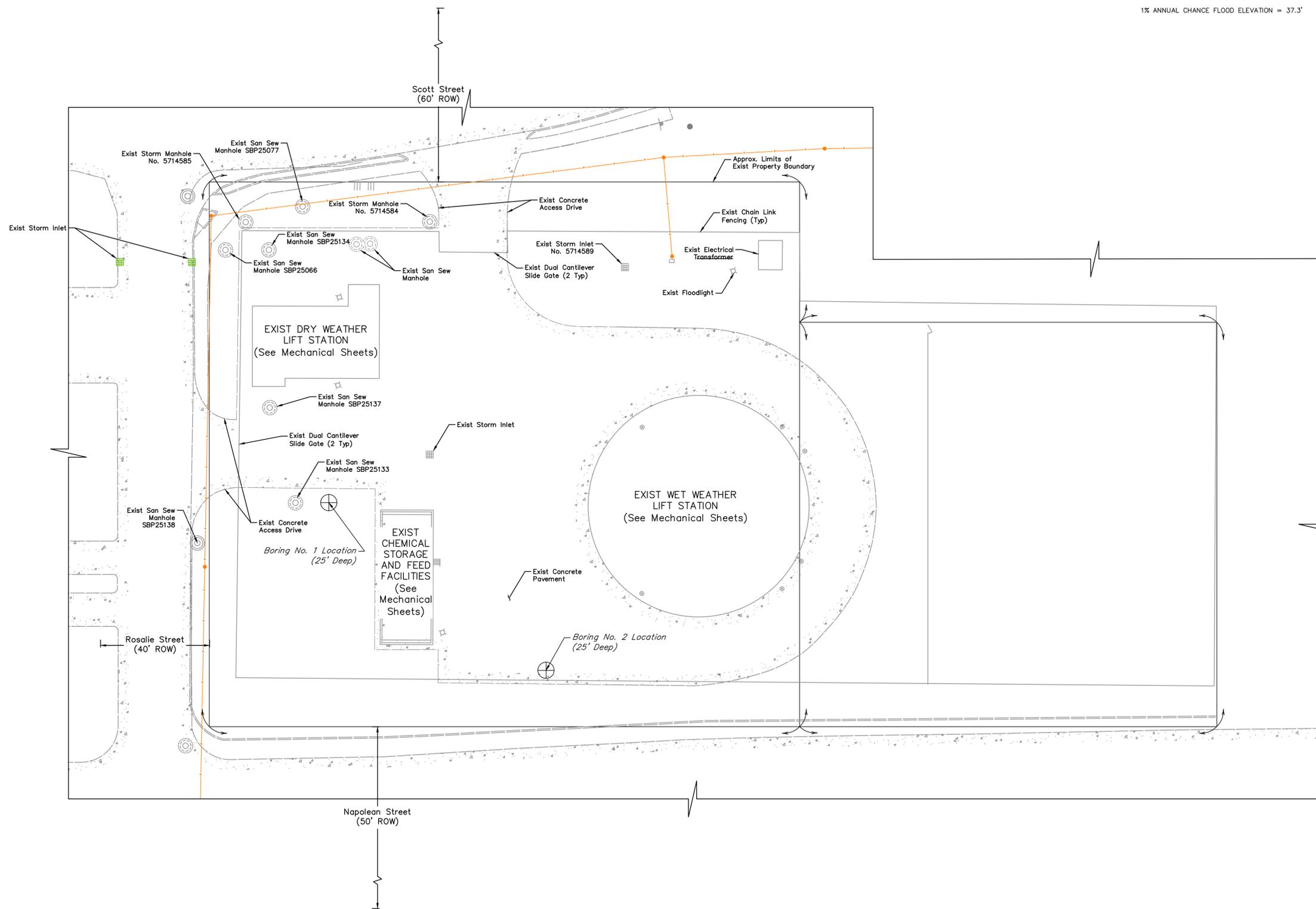
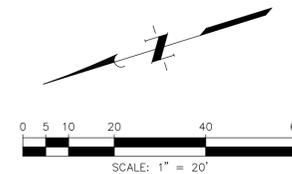
CITY OF HOUSTON CITY SURVEY XXXX  
SITE CONTROL MONUMENT

Project: WBS# S-000207-0127-3  
Texas Coordinate System of 1983  
South Central Zone, U. S. Survey Feet  
X = 3,126,627.11  
Y = 13,830,710.75  
Z = 40.21  
Eipsoid Height = 40.21  
Geoid: GEOID '18  
Datum Source & Adjustment:  
NAD 83 (2011)  
Keymap Page: 4932  
Orthometric Elevation = 40.21'  
Reference Frame Used: EPOCH 2010  
Vertical Adjustment Used: NAD 83 (COGS '98)  
General Location: LOCATED INSIDE SCOTT No. 1 LIFT STATION SITE  
Date Set: N/A Type of Mark: 48  
Remarks: Established on March 12, 2025

NOTE:  
1. Bearings are grid bearings.  
2. Combined Scale Factor = (0.99988818).  
3. Surface = Grid.

Western Group Consultants  
1111 Katy Freeway  
Suite 500  
Houston, TX 77079  
(713) 465-6655

**FLOODPLAIN INFORMATION:**  
 THIS TRACT LIES WITHIN UNSHADED ZONE "X" OF THE FLOOD INSURANCE RATE MAP, COMMUNITY OF CITY OF HOUSTON, MAP No. 48201C0880M, PANEL 0880 OF 1150, SUFFIX "M" DATED JANUARY 6, 2017, FOR HARRIS COUNTY TEXAS AND INCORPORATED AREAS. UNSHADED ZONE "X" IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.  
 0.2% ANNUAL CHANCE FLOOD ELEVATION = 39.7'  
 1% ANNUAL CHANCE FLOOD ELEVATION = 37.3'



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: CHUDSON

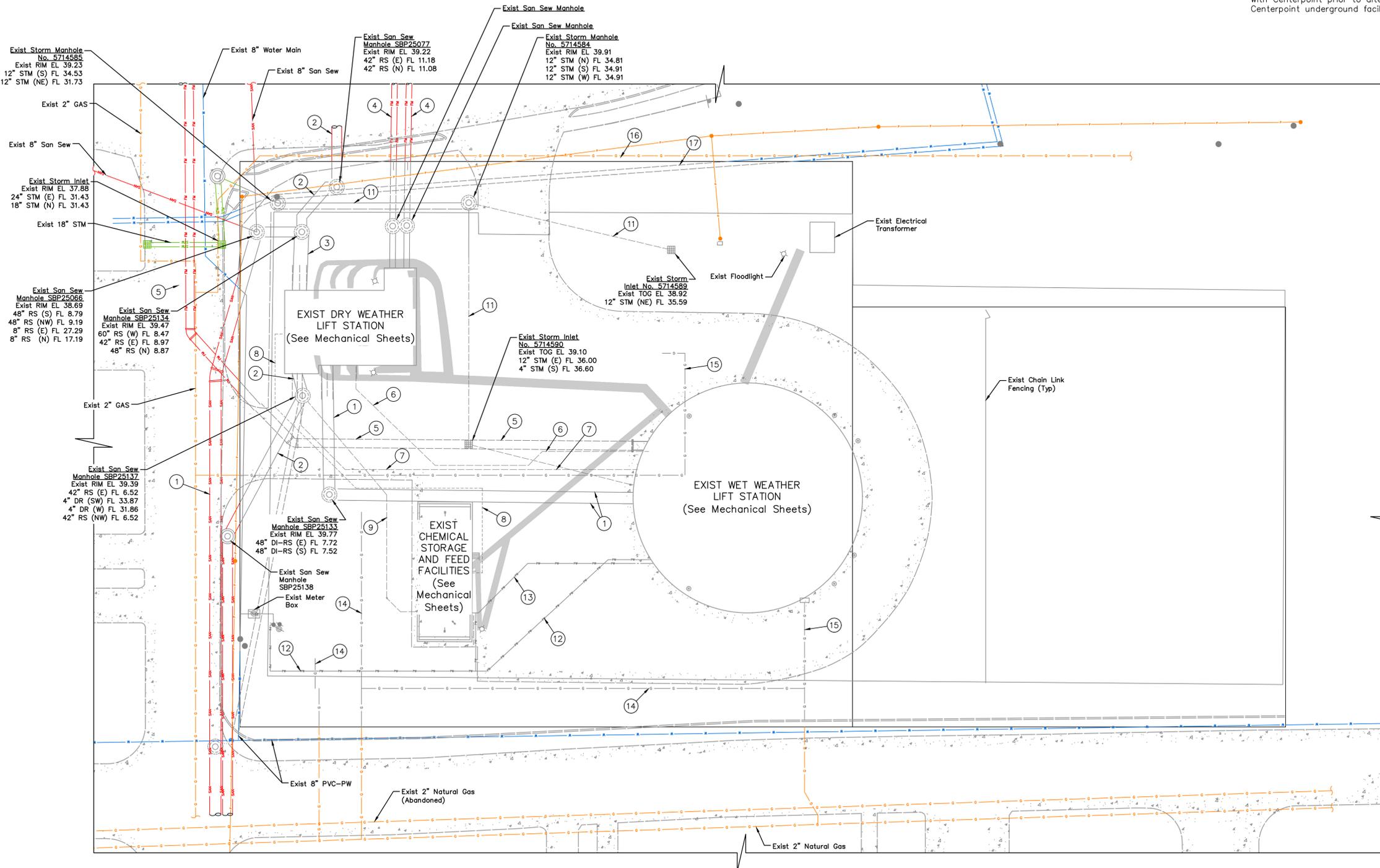
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

EXISTING SITE PLAN

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 20' HORIZ: XXX VERT: XXX  
 CATEGORY NO. 0-C-2 SHEET NO. 8 OF XXX  
 FOR CITY OF HOUSTON USE ONLY

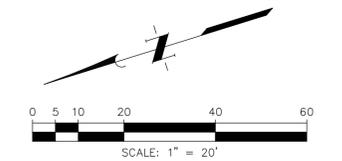


**BENCHMARK:**  
xxx

**TEMPORARY BENCHMARK:**  
xxx

**NOTES:**

- Locations of underground facilities are per record drawings. Contractor shall field verify location, size, and depth as necessary to complete the work. Contractor shall notify Engineer of any conflicts between existing and proposed facilities. Adjustments to location and depth of proposed facilities shall be as directed by Engineer and shall be at no additional cost to owner.
- Existing underground Centerpoint facilities are per map request data. Contractor shall field verify the line sizes, use, and location prior to removal. Contractor shall coordinate with Centerpoint prior to alteration of Centerpoint underground facilities.



**KEYED NOTES BY SYMBOL "#":**

KEY	DESCRIPTION
①	Exist 48" RS
②	Exist 42" RS
③	Exist 60" RS
④	Exist 24" DI-RS (Force Main)
⑤	Exist 36" DI-RS (Force Main)
⑥	Exist 6" DI-DR (Force Main)
⑦	Exist 4" RS
⑧	Exist 1/2" PE-FES in 3" PVC-CCP
⑨	Exist 4" DR
⑩	Exist 4" PVC-STM
⑪	Exist 12" STM
⑫	Exist 1-1/2" PVC-PW
⑬	Exist 1-1/4" PVC-PW
⑭	Exist 1-1/2" NAT GAS
⑮	Exist 3" NAT GAS
⑯	Exist 2" NAT GAS
⑰	20" DI-PW

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION

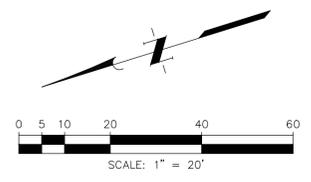
**EXISTING YARD PIPING PLAN**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 20' HORIZ: XXX VERT: XXX

CATEGORY NO. 0-C-3 SHEET NO. 9 OF XXX  
FOR CITY OF HOUSTON USE ONLY

**FLOODPLAIN INFORMATION:**  
 THIS TRACT LIES WITHIN UNSHADED ZONE "X" OF THE FLOOD INSURANCE RATE MAP, COMMUNITY OF CITY OF HOUSTON, MAP No. 48201C0880M, PANEL 0880 OF 1150, SUFFIX "M" DATED JANUARY 6, 2017, FOR HARRIS COUNTY TEXAS AND INCORPORATED AREAS. UNSHADED ZONE "X" IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.  
 0.2% ANNUAL CHANCE FLOOD ELEVATION = 39.7'  
 1% ANNUAL CHANCE FLOOD ELEVATION = 37.3'



**LEGEND:**

- EJ Expansion Joint
- Demolish

**NOTES:**

1. Contractor shall walk the site with a City representative prior to demolition to determine any items to be salvaged and returned by the City. Contractor shall not begin demolition on site without giving the City first right of refusal.
2. The sound was produced by the erection, excavation, construction, or demolition of any building or structure, including the use of any necessary tools or equipment, conducted between the hours of 7 a.m. and 8 p.m., which activity did not produce a sound exceeding 85 dB (A) when measured from the property line of the residential property where the sound being received.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026      DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01      DWG BY: CHUDSON

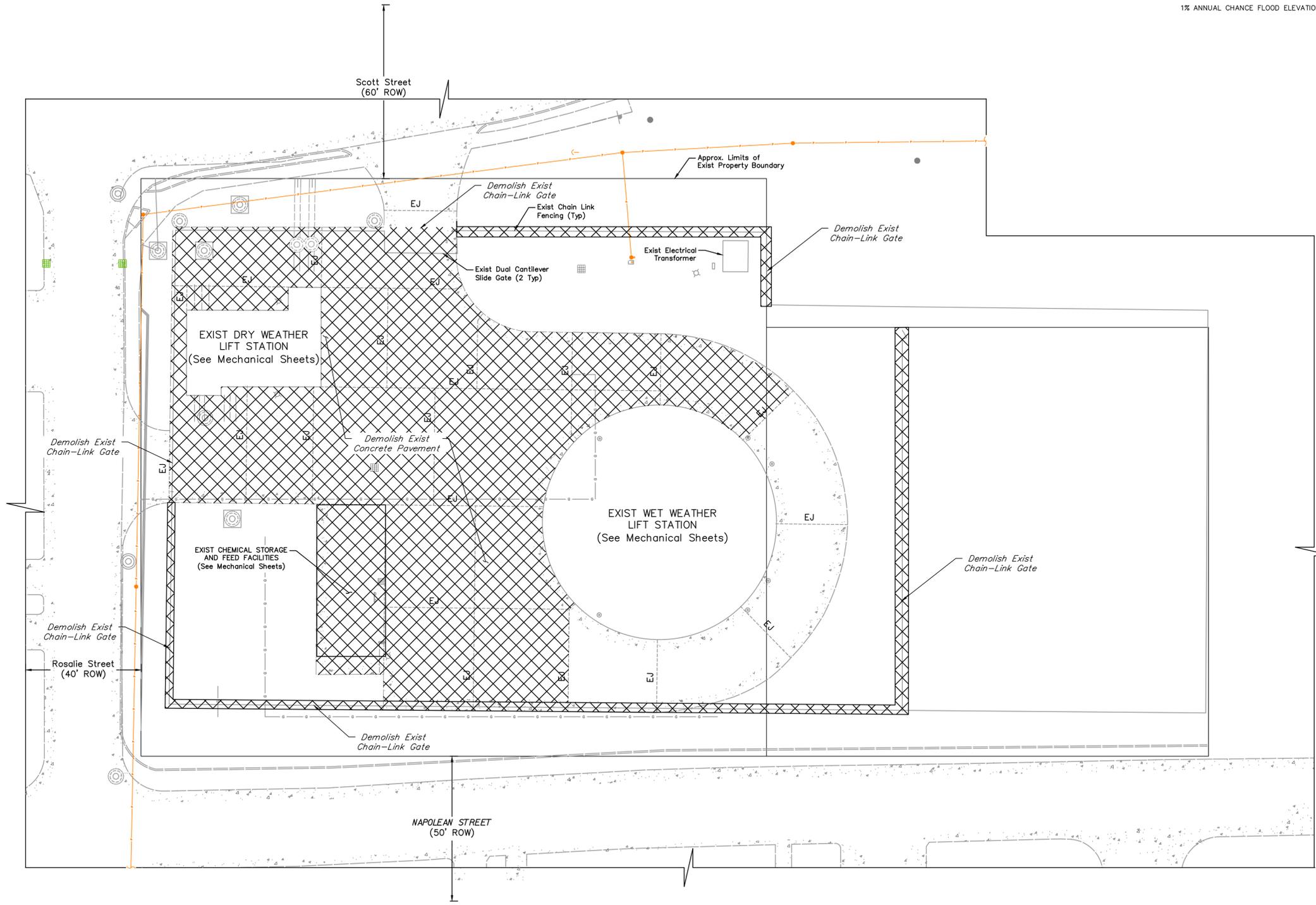
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

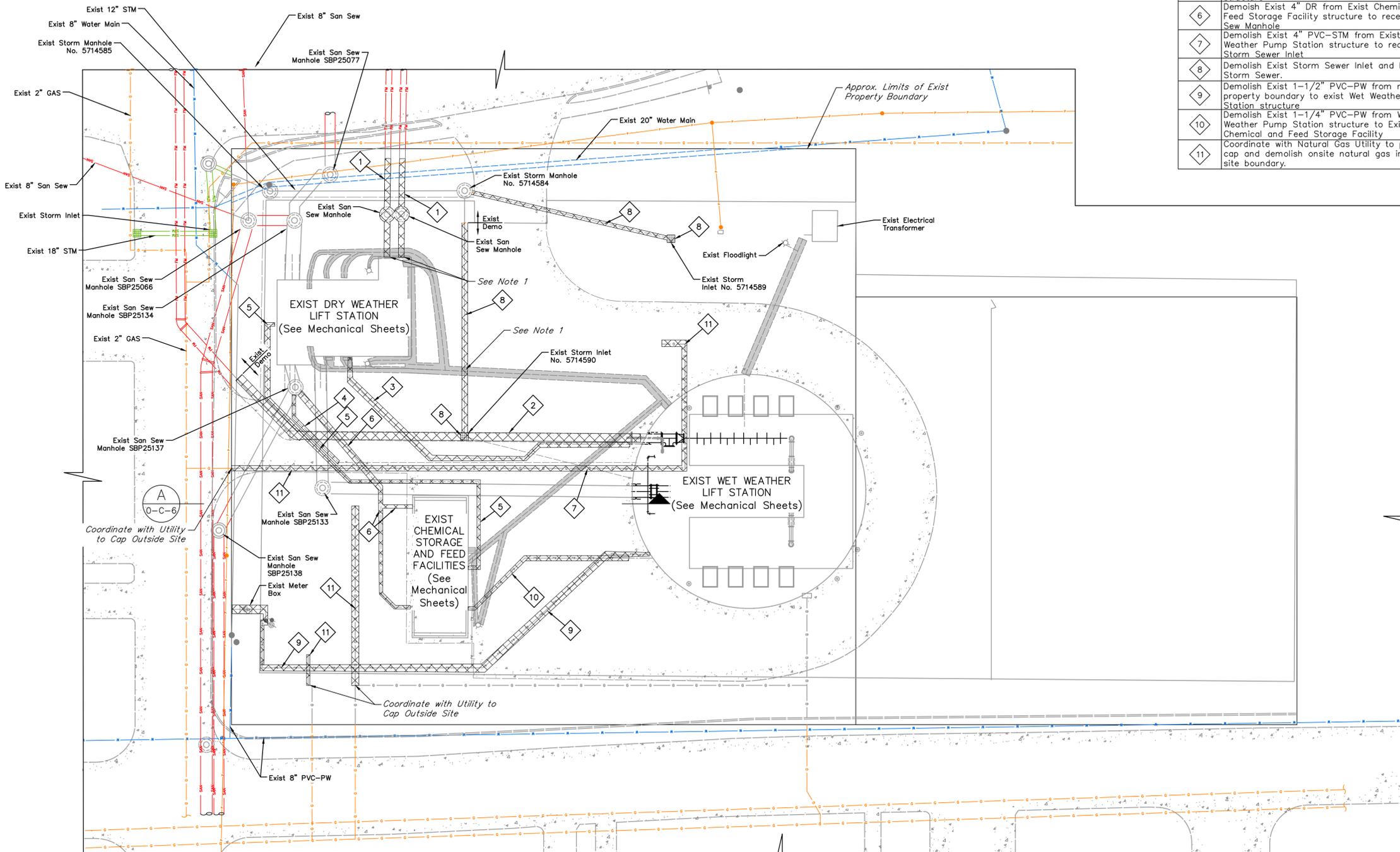
SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

**SITE DEMOLITION PLAN**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 20'      HORIZ: XXX      VERT: XXX  
 CATEGORY NO. 0-C-4      SHEET NO. 4 OF XXX  
 FOR CITY OF HOUSTON USE ONLY



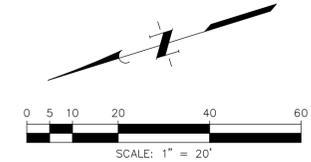


BENCHMARK:  
xxx

TEMPORARY BENCHMARK:  
xxx

ITEMS OF WORK

No.	DESCRIPTION
1	Demolish Exist 24" DI-RS (Force Main) and San Sew MH from Dry Weather Pump Station up to 4' from east property boundary
2	Demolish Exist 36" DI-RS (Force Main)
3	Demolish Exist 6" DI-DR (Force Main) from Wet Weather Pump Station structure to Dry Weather Pump Station
4	Demolish Exist 4" San Sew from Wet Weather Pump Station structure to receiving San Sew Manhole
5	Demolish Exist 1/2" PE-FES in 3" PVC-CCP from Exist Chemical and Feed Storage Facility structure to Exist Dry Weather Pump Station structure
6	Demolish Exist 4" DR from Exist Chemical and Feed Storage Facility structure to receiving San Sew Manhole
7	Demolish Exist 4" PVC-STM from Exist Wet Weather Pump Station structure to receiving Storm Sewer Inlet
8	Demolish Exist Storm Sewer Inlet and Exist 12" Storm Sewer
9	Demolish Exist 1-1/2" PVC-PW from north property boundary to exist Wet Weather Pump Station structure
10	Demolish Exist 1-1/4" PVC-PW from Wet Weather Pump Station structure to Exist Chemical and Feed Storage Facility
11	Coordinate with Natural Gas Utility to plug and cap and demolish onsite natural gas inside the site boundary.



NOTES:

- Locations of underground facilities are per record drawings. Contractor shall field verify line sizes, use, and location of underground facilities prior to removal. Engineer to approve of all deviations.
- Existing underground Centerpoint facilities are per map request data. Contractor shall field verify the line sizes, use, and location prior to removal. Contractor shall coordinate with Centerpoint prior to removal of Centerpoint underground facilities.
- Contractor shall walk the site with a City representative prior to demolition to determine any items to be salvaged and returned by the City. Contractor shall not begin demolition on site without giving the City first right of refusal.
- The sound was produced by the erection, excavation, construction, or demolition of any building or structure, including the use of any necessary tools or equipment, conducted between the hours of 7 a.m. and 8 p.m., which activity did not produce a sound exceeding 85 dB (A) when measured from the property line of the residential property where the sound being received.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

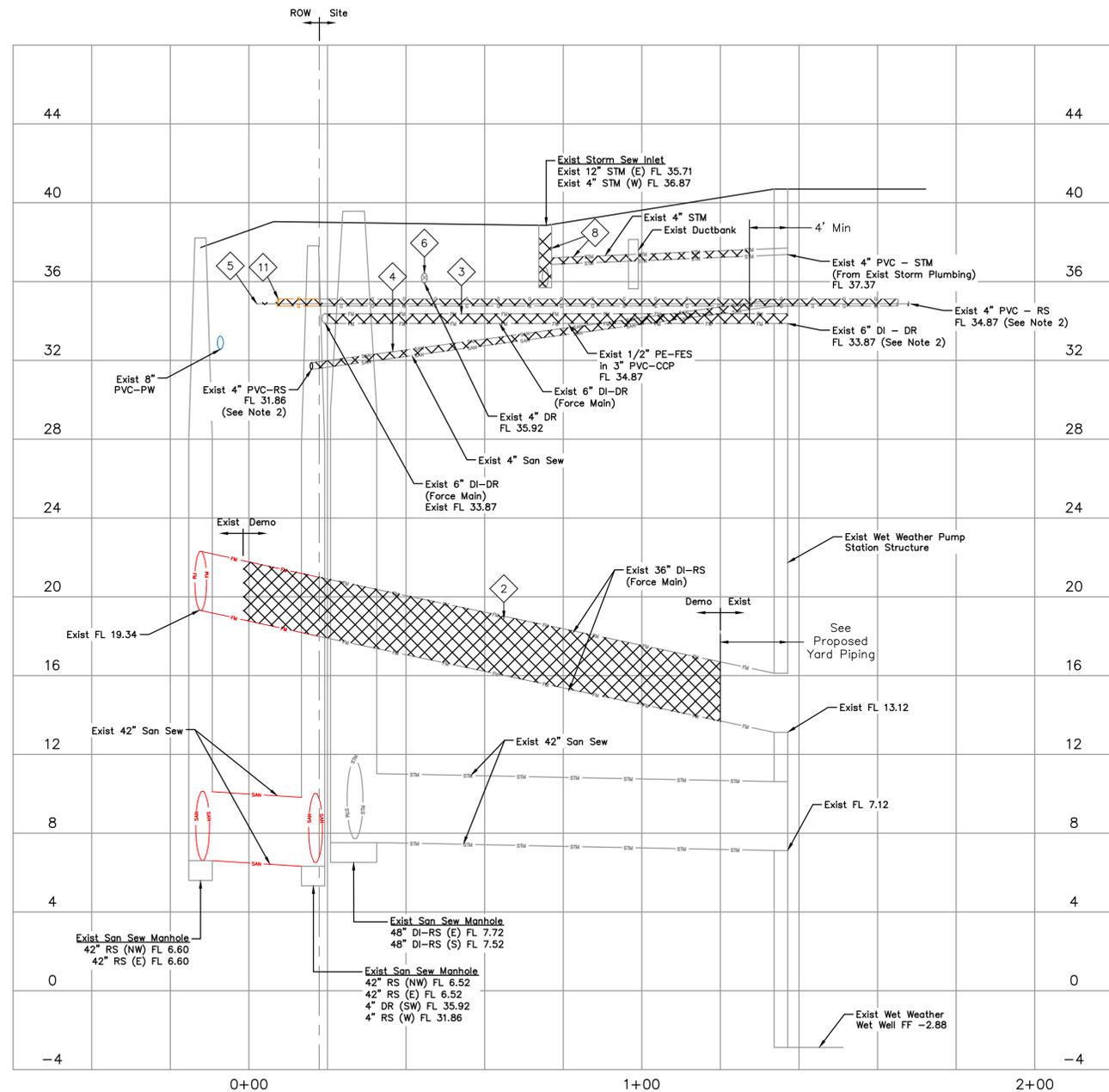
DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
YARD PIPING DEMOLITION  
PLAN

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 20' HORIZ: XXX VERT: XXX  
CATEGORY NO. 0-C-5 SHEET NO. 11 OF XXX  
FOR CITY OF HOUSTON USE ONLY



**A**  
SECTION  
0-C-5  
SCALE: Horizontal 1" = 20'  
SCALE: Vertical 1" = 4'

**ITEMS OF WORK**

No.	DESCRIPTION
1	Demolish Exist 24" DI-RS (Force Main) and San Sew MH from Dry Weather Pump Station up to 4' from east property boundary
2	Demolish Exist 36" DI-RS (Force Main)
3	Demolish Exist 6" DI-DR (Force Main) from Wet Weather Pump Station structure to Dry Weather Pump Station
4	Demolish Exist 4" San Sew from Wet Weather Pump Station structure to receiving San Sew Manhole
5	Demolish Exist 1/2" PE-FES in 3" PVC-CCP from Exist Chemical and Feed Storage Facility structure to Exist Dry Weather Pump Station structure
6	Demolish Exist 4" DR from Exist Chemical and Feed Storage Facility structure to receiving San Sew Manhole
7	Demolish Exist 4" PVC-STM from Exist Wet Weather Pump Station structure to receiving Storm Sewer Inlet
8	Demolish Exist Storm Sewer Inlet, Exist 12" Storm Sewer, and Exist Storm Sewer Manhole
9	Demolish Exist 1-1/2" PVC-PW from north property boundary to exist Wet Weather Pump Station structure
10	Demolish Exist 1-1/4" PVC-PW from Wet Weather Pump Station structure to Exist Chemical and Feed Storage Facility
11	Coordinate with Natural Gas Utility to plug and cap and demolish onsite natural gas inside the site boundary.

**BENCHMARK:**

xxx

**TEMPORARY BENCHMARK:**

xxx

**NOTES:**

- Locations of underground facilities are per record drawings. Contractor shall field verify line sizes, use, and location of underground facilities prior to removal. Engineers to approve of all deviations.
- Existing underground Centerpoint facilities are per map request data. Contractor shall field verify the line sizes, use, and location prior to removal. Contractor shall coordinate with Centerpoint prior to removal of Centerpoint underground facilities.
- Contractor shall walk the site with a City representative prior to demolition to determine items to be salvaged and returned by the City. Contractor shall not begin demolition on site without giving the City first right of refusal.
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NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: JANUARY 2026



Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: CHUDSON

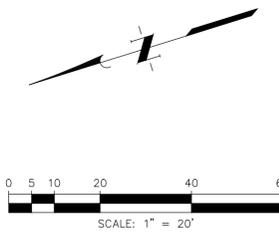
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION

**YARD PIPING DEMOLITION SECTION**

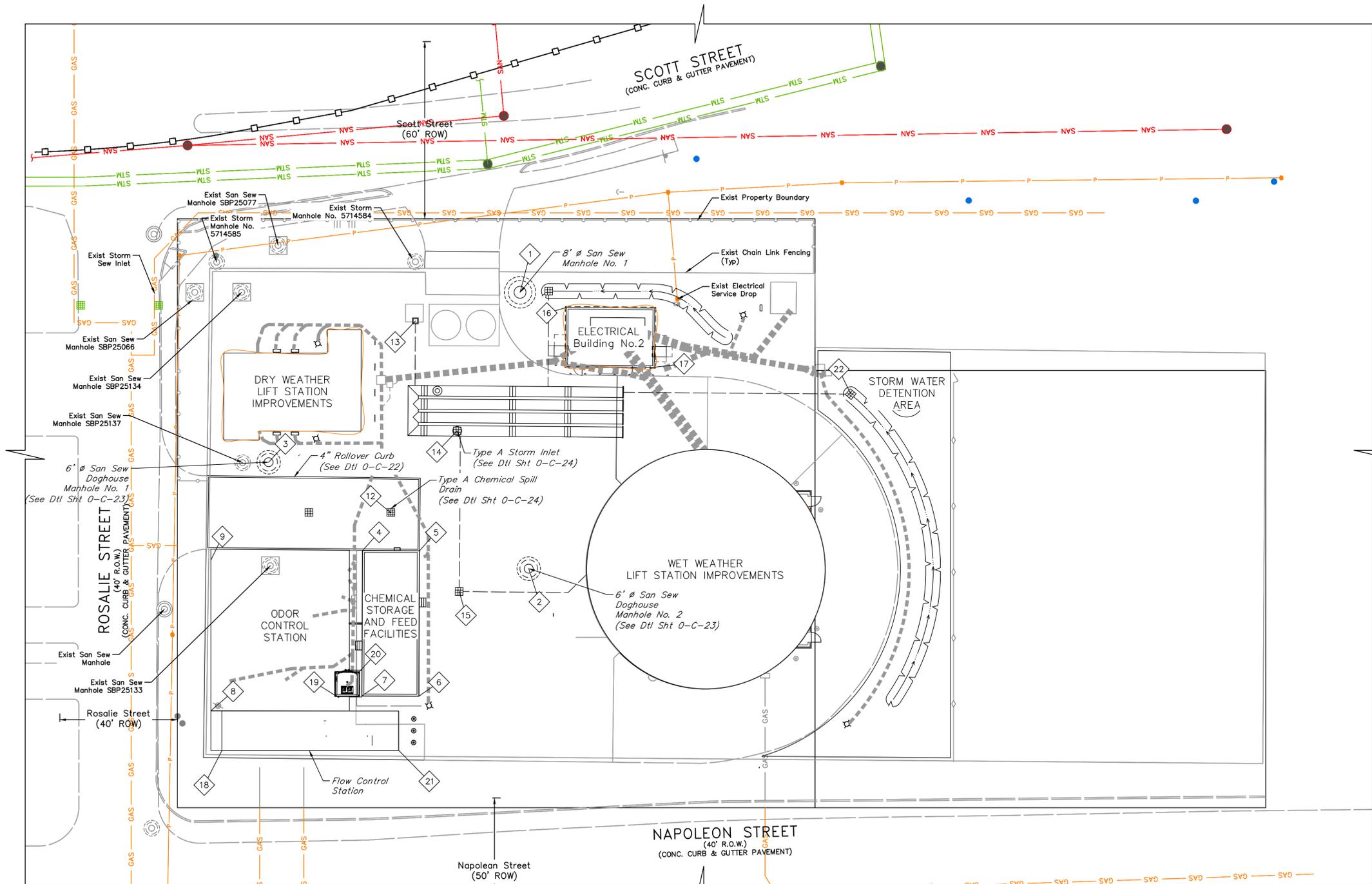
**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE HORIZ: XXX' VERT: XXX'  
CATEGORY NO. 0-C-6 SHEET NO. 12 OF XXX  
FOR CITY OF HOUSTON USE ONLY



4.11  
4c.

COORDINATES LOCATIONS TABLE		
No.	NORTHING	EASTING
1	13830710.81	3126680.57
2	13830738.62	3126591.24
3	13830812.24	3126651.84
4	13830790.71	3126613.84
5	13830772.27	3126608.04
6	13830787.05	3126561.07
7	13830805.49	3126566.87
8	13830855.92	3126577.32
9	13830840.79	3126626.03
10	13830806.57	3126593.99
11	13830834.98	3126587.97
12	13830777.71	3126623.17
13	13830744.53	3126701.84
14	13830727.17	3126696.52
15	13830685.19	3126683.48
16	13830744.88	3126641.07
17	13830692.98	3126659.41
18	13830876.53	3126549.34
19	13830813.96	3126569.54
20	13830804.04	3126574.98



NO.	DATE	REVISIONS	APP.

INTERIM REVIEW  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: JMMUSSO

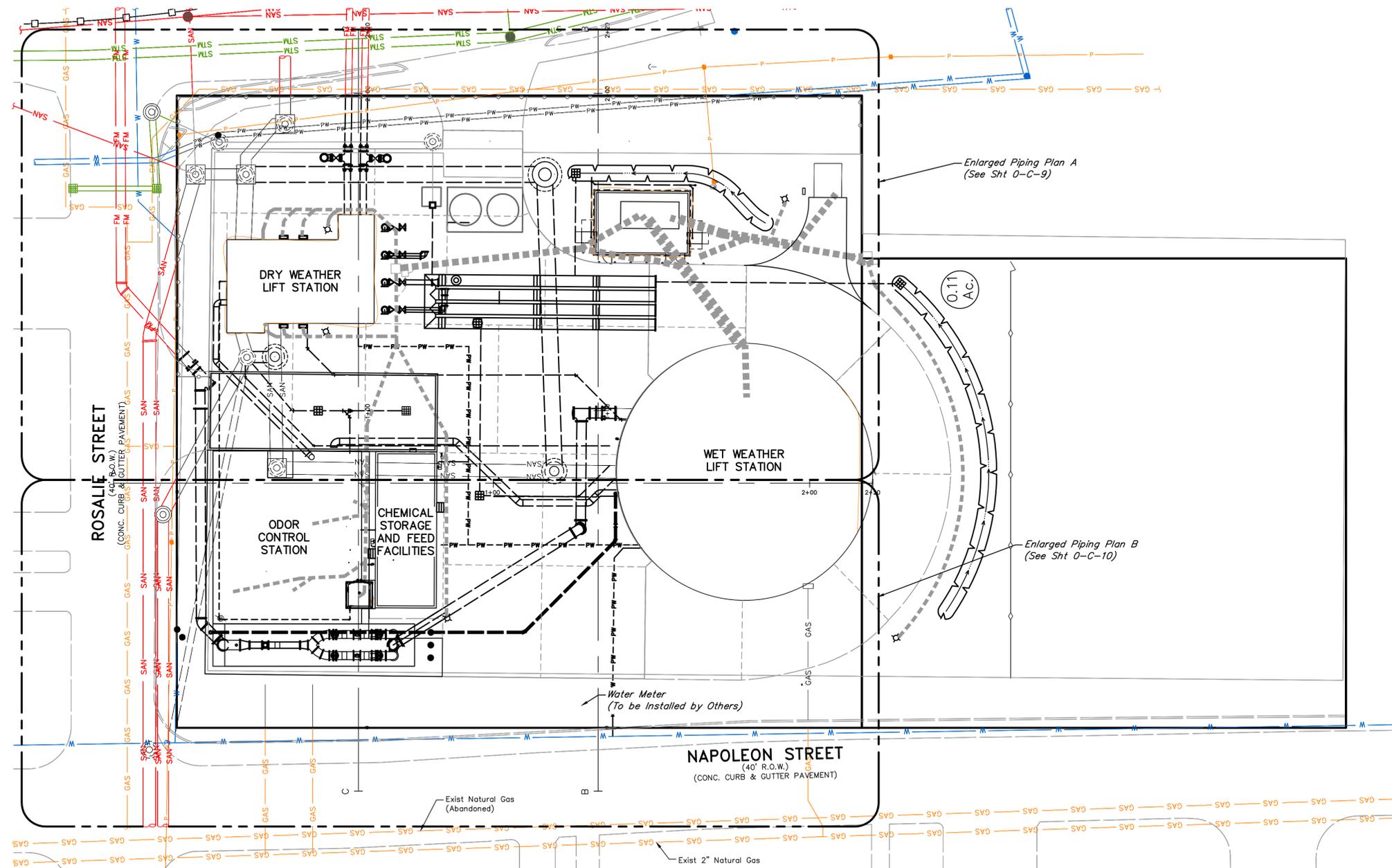
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION

PROPOSED SITE PLAN

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 20' HORIZ: XXX VERT: XXX  
CATEGORY NO. 0-C-7 SHEET NO. 13 OF XXX  
FOR CITY OF HOUSTON USE ONLY



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction,  
 bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

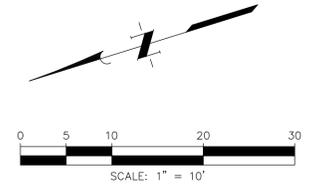
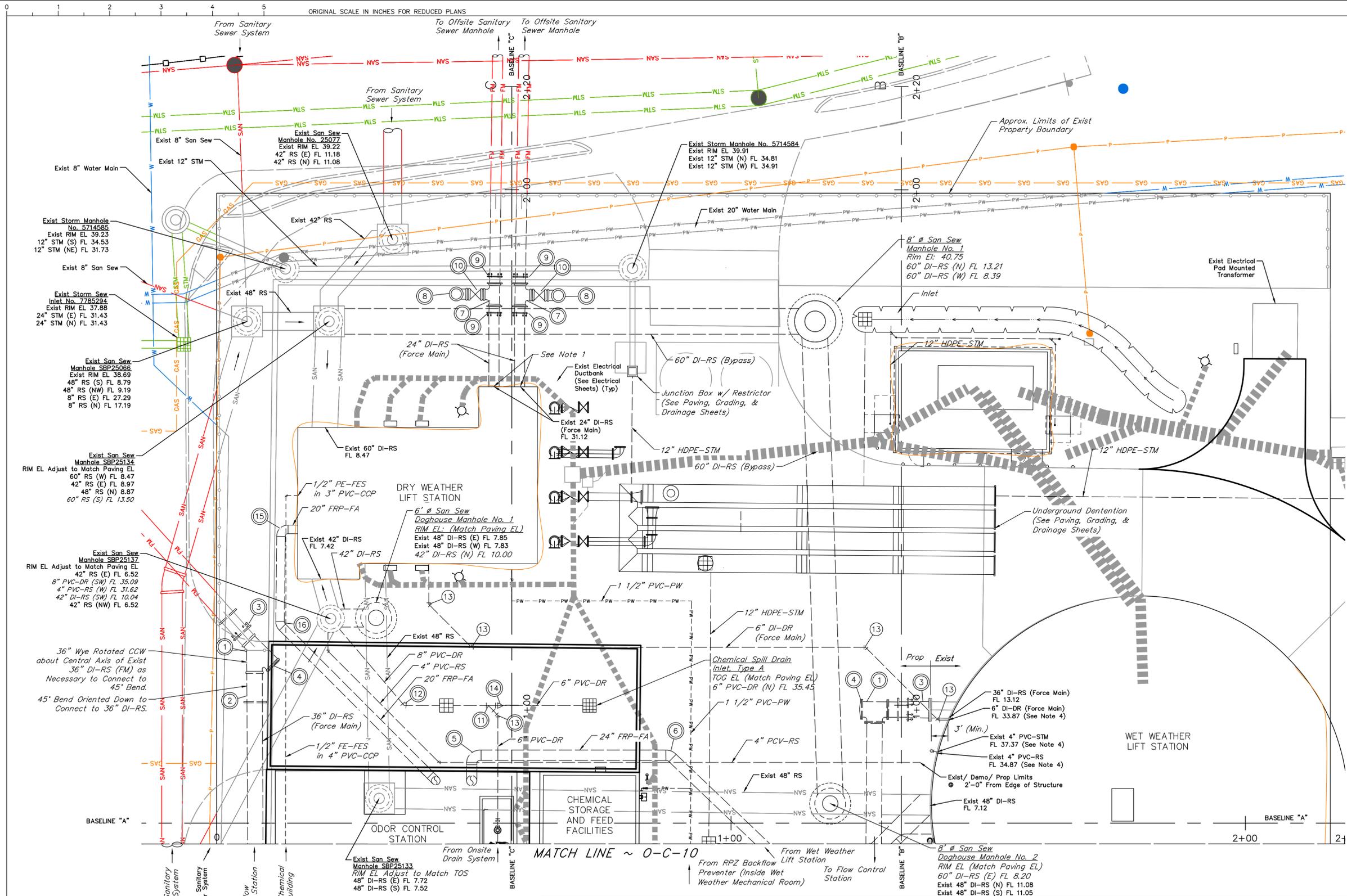
DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

**SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
 PROPOSED YARD PIPING  
 PLAN**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 20' HORIZ: XXX VERT: XXX  
 CATEGORY NO. **0-C-8** SHEET NO. 14 OF XXX  
 FOR CITY OF HOUSTON USE ONLY



**NOTES:**

1. Locations of underground facilities are per record drawings. Contractor shall field verify line sizes, use, and location of underground facilities prior to removal. Engineer to approve of all deviations.
2. Existing underground Centerpoint facilities are per record drawings. Contractor shall field verify the line sizes, use, and location prior to removal. Contractor shall coordinate with Centerpoint prior to removal of Centerpoint underground facilities.
3. Waterline joints shall be a minimum of 9'-0" from centerline of sanitary crossings.
4. The designated existing pipe shall extend a minimum of 2'-0" from the edge of the structure. Contractor shall provide and install restrained couplings to transition and connect to proposed piping.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

**PROPOSED YARD PIPING  
 ENLARGED PLAN A**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 10' HORIZ: XXX VERT: XXX

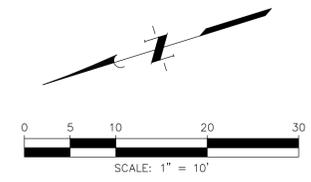
CATEGORY NO. 0-C-9 SHEET NO. 15 OF XXX  
 FOR CITY OF HOUSTON USE ONLY

**VALVES, FITTINGS, AND ACCESSORIES SCHEDULE**

No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION
①	36"x36"x36" Tee Bend, MJ	⑥	24" 45° Bend, PE	⑪	8" x 8" x 6" Lateral Wye, PO	⑱	20" 45° Bend, PE
②	36" 45° Bend, MJ	⑦	24" Tee, FJ	⑫	8" 45° Bend, PO	⑲	6" x 6" x 4" Lateral Wye, PO
③	36" Sleeve Coupling	⑧	24" 90° Bend, FJ	⑬	6" 45° Bend, PO	⑳	4" 45° Bend, PO
④	36" Plug	⑨	24" Flange Coupling Adapter	⑭	8" x 6" Concentric Reducer, PO		6" 45° Bend, MJ
⑤	24" 90° Bend, PE	⑩	24" Gate Valve, MJ	⑮	20" 90° Bend, PE		6" Wye, MJ

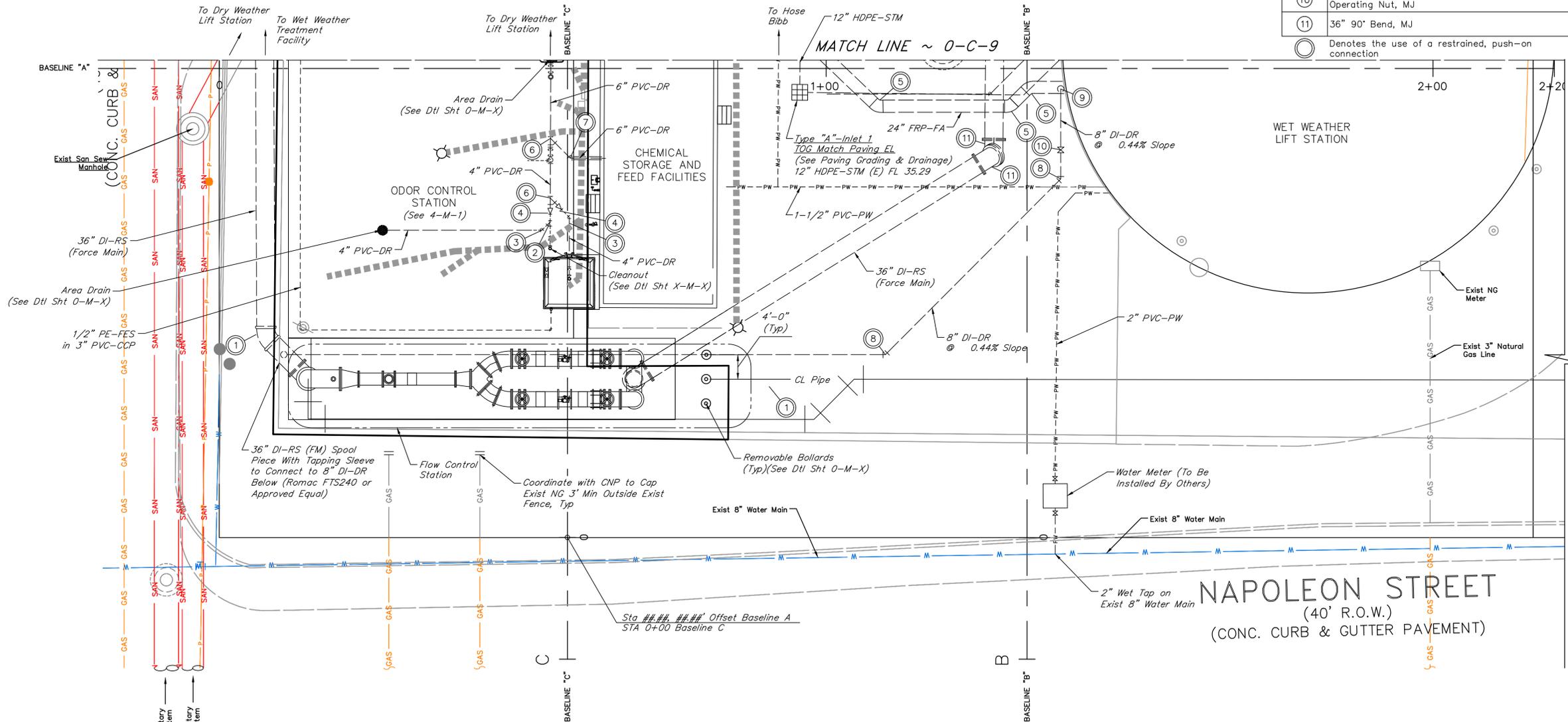
⊙ Denotes the use of a restrained, push-on connection

VALVES, FITTINGS, AND ACCESSORIES SCHEDULE	
No.	DESCRIPTION
①	36" 45° Bend, MJ
②	4" x 4" x 4" Lateral Wye, PO
③	4" 45° Bend, PO
④	6" x 4" Concentric Reducer, PO
⑤	24" 45° Bend, PE
⑥	6" x 6" x 6" Lateral Wye, PO
⑦	6" 45° Bend, PO
⑧	8" 45° Bend, MJ
⑨	8" 90° Bend, MJ
⑩	8" Eccentric Plug Valve w/ Stem Extensions & Operating Nut, MJ
⑪	36" 90° Bend, MJ
⊙	Denotes the use of a restrained, push-on connection



**NOTES:**

- All Pipe and Fittings shall be hot-dip galvanized steel, unless otherwise directed by the Engineer.
- A Tapping Saddle may be used as approved by the Engineer.
- All components shall be hot-dip galvanized. Apply galvanizing paint to all welds, threads and areas scraped or damaged during construction.



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
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 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

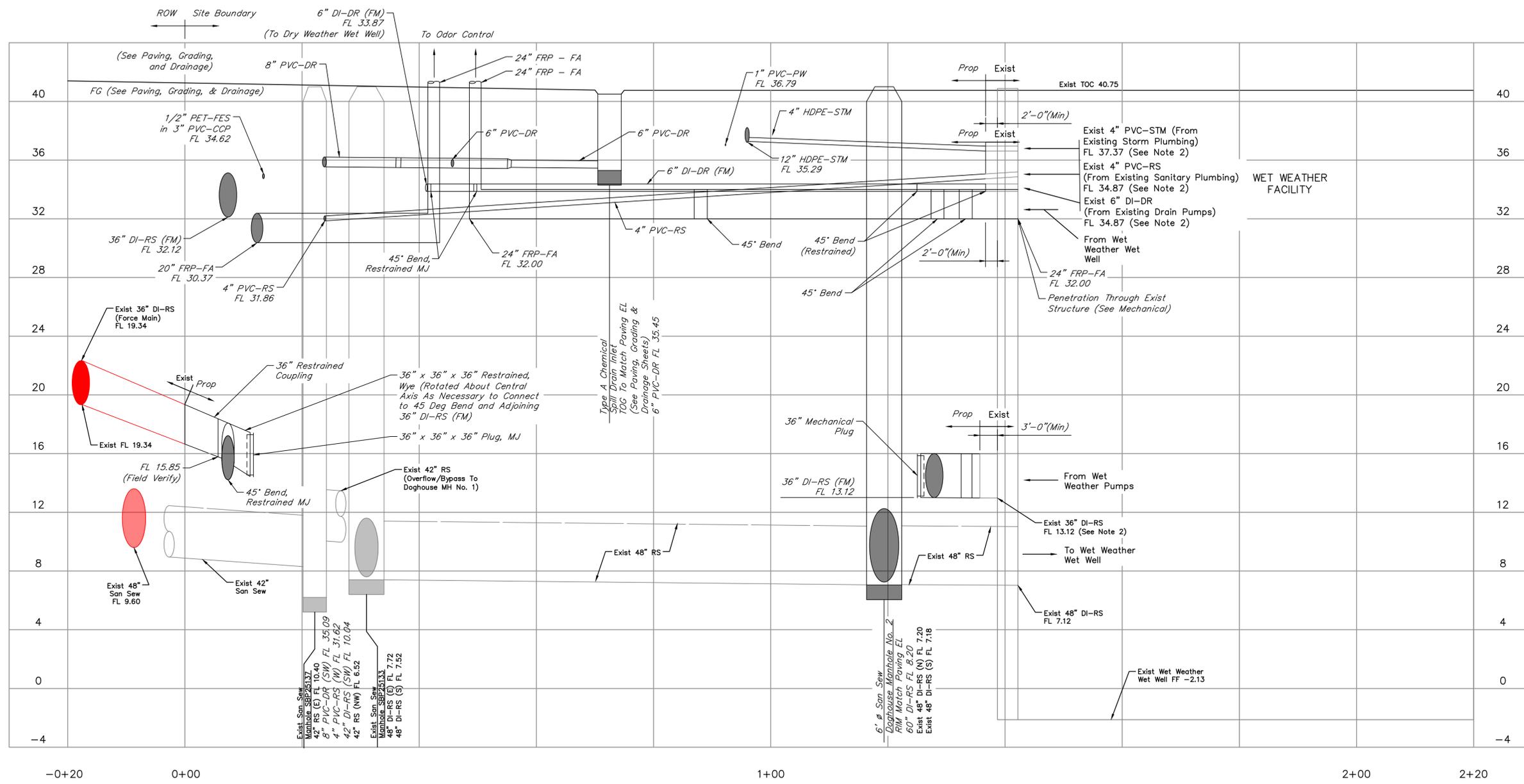
SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

PROPOSED YARD PIPING  
 ENLARGED PLAN B

CITY OF HOUSTON  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 10' HORIZ: XXX VERT: XXX

CATEGORY NO. 0-C-10 SHEET NO. 16 OF XXX  
 FOR CITY OF HOUSTON USE ONLY



**NOTES:**

1. Locations of underground facilities are per record drawings. Contractor shall field verify line sizes, use, and location of underground facilities prior to removal. Engineer to approve of all deviations.
2. The designated existing pipe shall extend a minimum of 2'-0" from the edge of the structure. Contractor shall provide and install restrained couplings to transition and connect to proposed piping.
3. Contractor shall coordinate flowlines of pipe and fittings based on the existing FL of 36" DI-RS (FM) at the tie-in location and required orientation of pipe and fittings to make connection. Contractor shall field verify the existing 36" DI-RS pipe elevation and location at the proposed tie-in location and report findings to Engineer prior to submitting shop drawings.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: SSOMERS

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

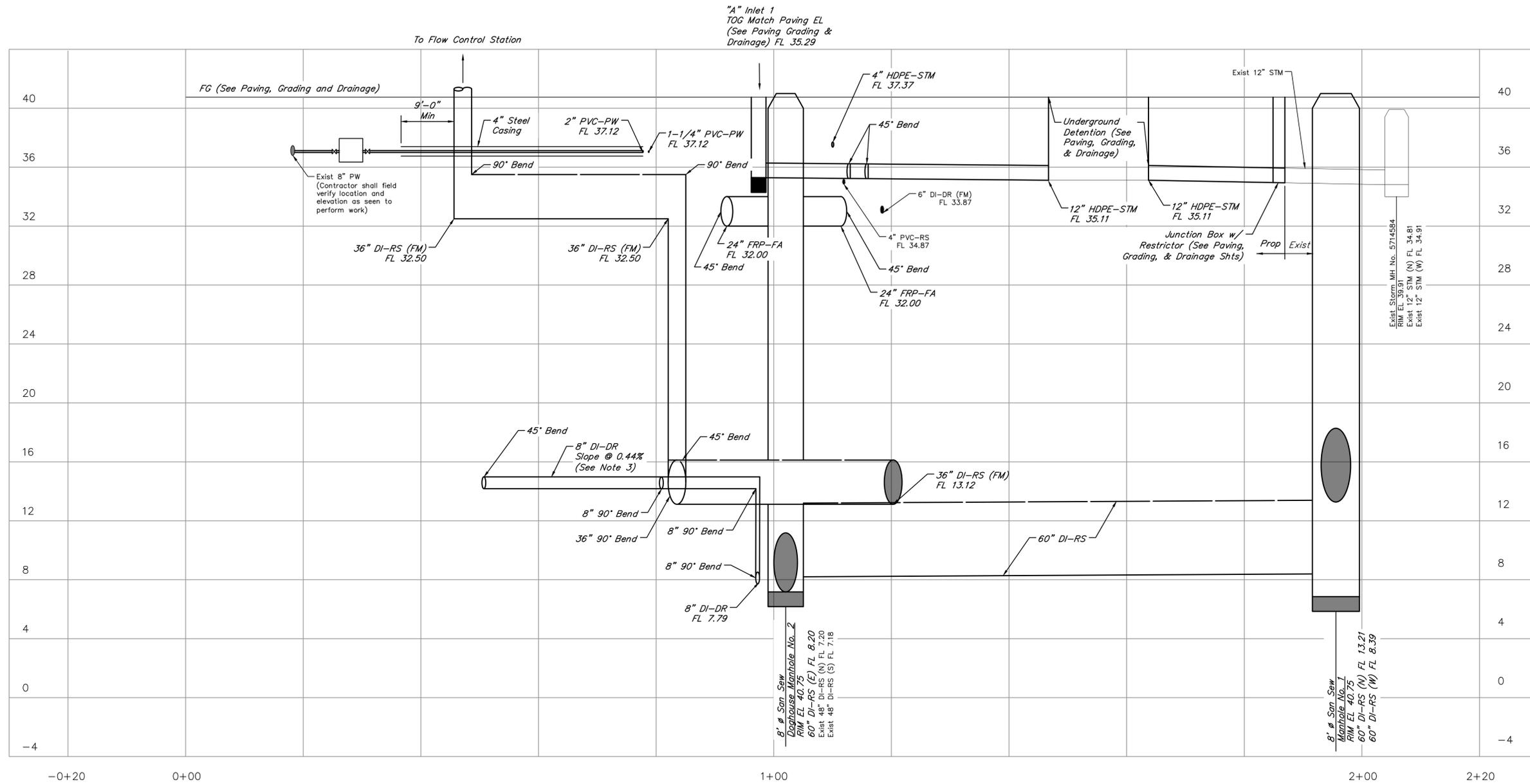
PROPOSED YARD PIPING  
 BASELINE A

CITY OF HOUSTON  
 HOUSTON PUBLIC WORKS

DRAWING SCALE HORIZ: XXX'0" VERT: XXX'1"  
 CATEGORY NO. 0-C-11 SHEET NO. 17 OF XXX  
 FOR CITY OF HOUSTON USE ONLY

**BASELINE A**

SCALE: Horizontal 1" = 10'  
 SCALE: Vertical 1" = 4'



"A" Inlet 1  
TOG Match Paving EL  
(See Paving Grading & Drainage) FL 35.29

To Flow Control Station

FG (See Paving, Grading and Drainage)

Underground Detention (See Paving, Grading, & Drainage)

Junction Box w/ Restrictor (See Paving, Grading, & Drainage Shts)

**BASELINE B**

SCALE: Horizontal 1" = 10'  
SCALE: Vertical 1" = 4'

**NOTES:**

- Locations of underground facilities are per record drawings. Contractor shall field verify line sizes, use, and location of underground facilities prior to removal. Engineer to approve of all deviations.
- Electrical ductbanks shall maintain a minimum horizontal distance of 3'-0" between proposed pipes.
- Contractor shall coordinate flowlines of pipe and fittings based on the existing FL of 36" DI-RS (FM) at the tie-in location and required orientation of pipe and fittings to make connection. Contractor shall field verify the existing 36" DI-RS pipe elevation and location at the proposed tie-in location and report findings to Engineer prior to submitting shop drawings.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

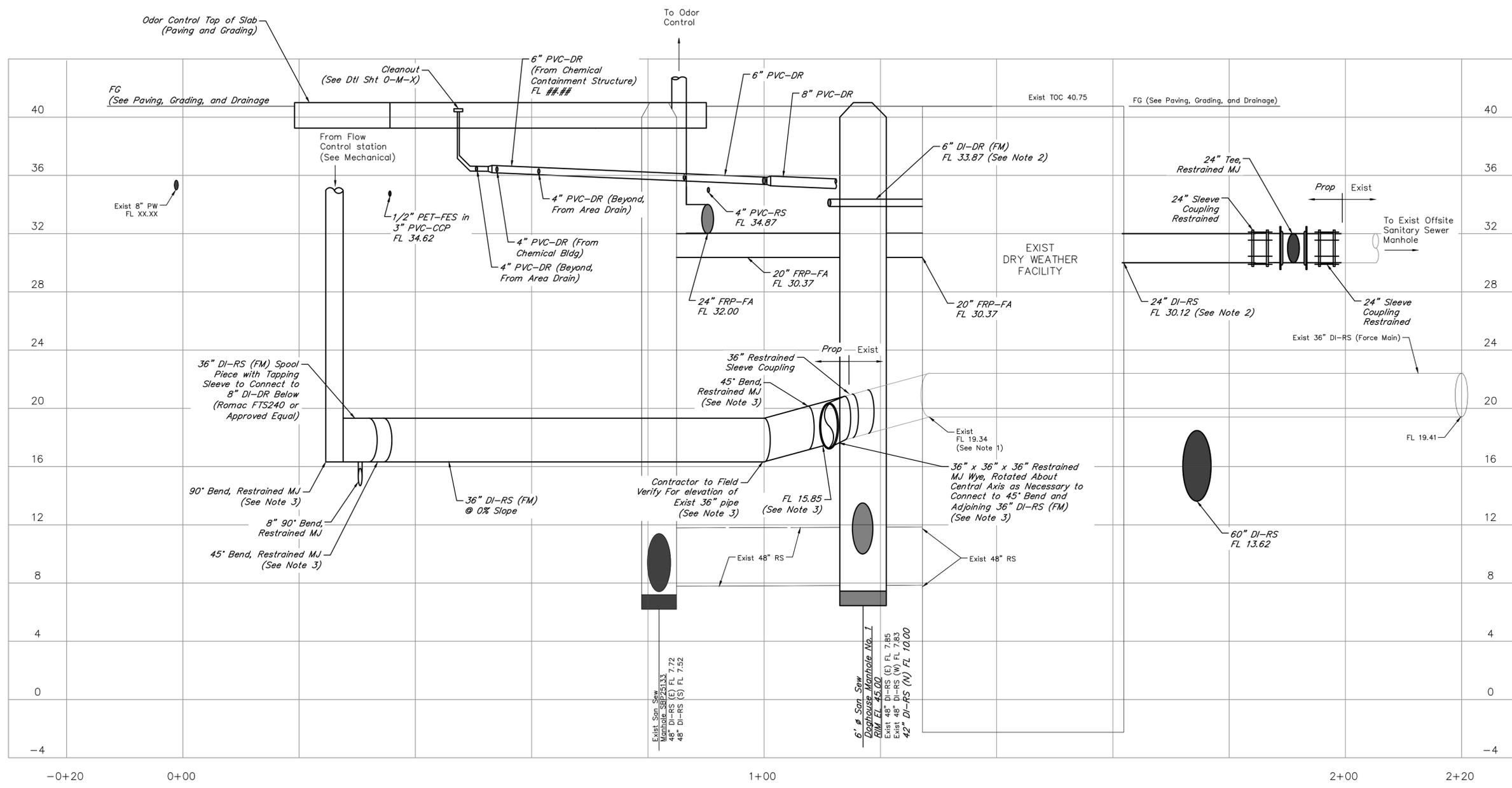
DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: SSOMERS

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
**PROPOSED YARD PIPING  
BASELINE B**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 10' HORIZ: XXX VERT: XXX  
CATEGORY NO. **0-C-12** SHEET NO. 18 OF XXX  
FOR CITY OF HOUSTON USE ONLY



**NOTES:**

1. Locations of underground facilities are per record drawings. Contractor shall field verify line sizes, use, and location of underground facilities prior to removal. Engineer to approve of all deviations.
2. The designated existing pipe shall extend a minimum of 2'-0" from the edge of the structure. Contractor shall provide and install restrained couplings to transition and connect to proposed piping.
3. Contractor shall coordinate flowlines of pipe and fittings based on the existing FL of 36" DI-RS (FM) at the tie-in location and required orientation of pipe and fittings to make connection. Contractor shall field verify the existing 36" DI-RS pipe elevation and location at the proposed tie-in location and report findings to Engineer prior to submitting shop drawings.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: SSOMERS

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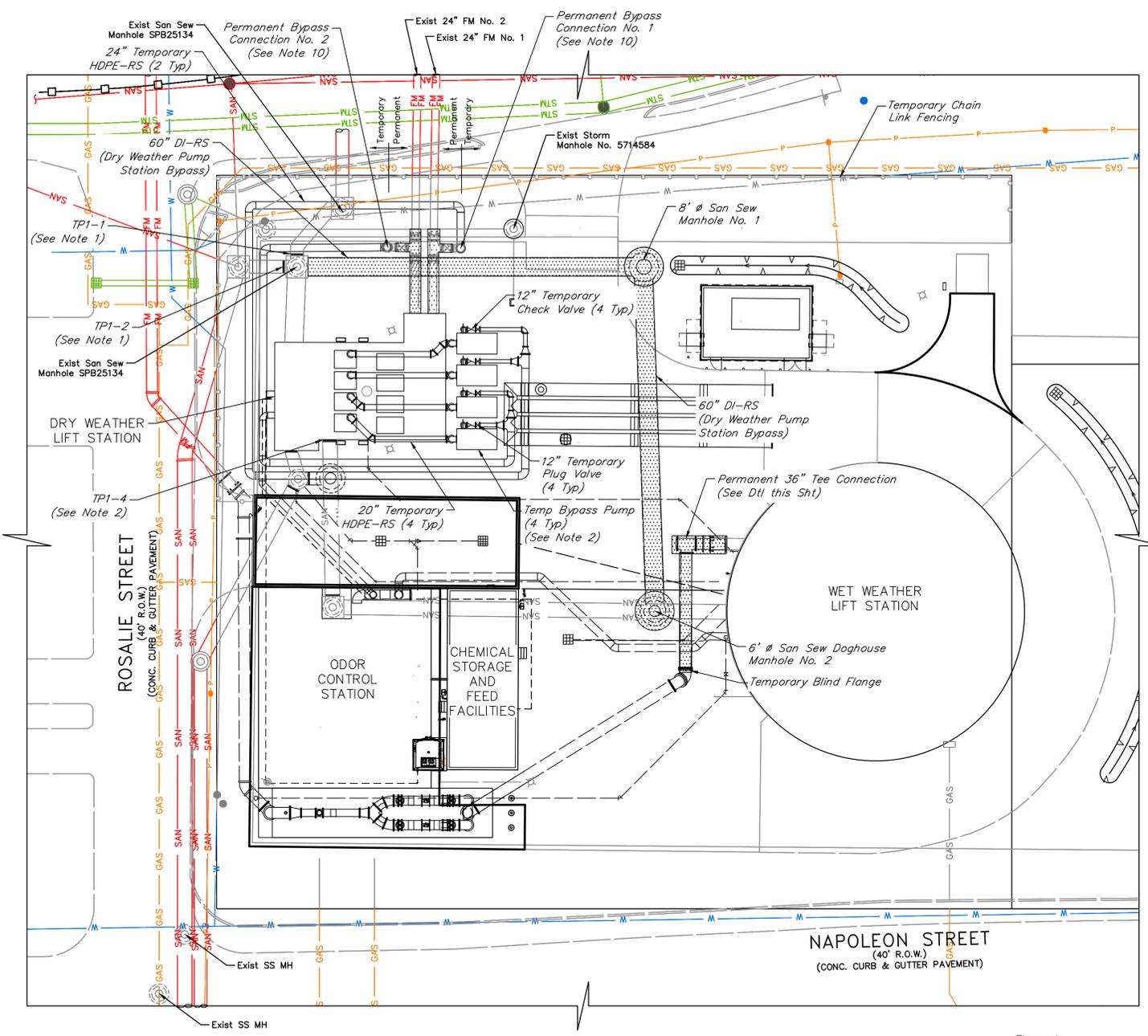
SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
 PROPOSED YARD PIPING  
 BASELINE C

CITY OF HOUSTON  
 HOUSTON PUBLIC WORKS

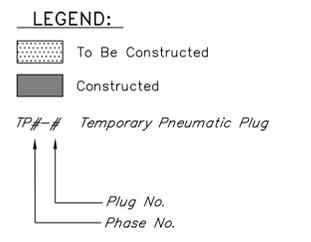
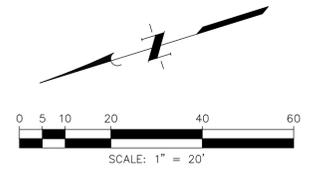
DRAWING SCALE 1" = 10' HORIZ: XXX VERT: XXX  
 CATEGORY NO. 0-C-13 SHEET NO. 19 OF XXX  
 FOR CITY OF HOUSTON USE ONLY

**BASELINE C**

SCALE: Horizontal 1" = 10'  
 SCALE: Vertical 1" = 4'



PHASE 1:	
OBJECTIVE:	Install Permanent Bypass Connection Nos. 1 & 2 and set up and operate phase 1 bypass pump system to install 60" DI-RS, San Sew MH No. 1 and San Sew Doghouse MH No. 2. Phase 1 Bypass shall be performed and completed during dry weather flow.
1	Contractor shall coordinate with Operator to isolate exist 24" FM No. 1 and temporarily route all dry weather pump station flow through exist 24" FM No. 2 to install Permanent Bypass Connection No. 1.
2	Contractor shall coordinate with Operator to isolate exist 24" FM No. 2 and temporarily route all dry weather pump station flow through exist 24" FM No. 1 to install Permanent Bypass Connection No. 2.
3	Contractor shall set up and put bypass pump system into service. Influent raw sewage shall flow into the exist Dry Weather Lift Station wet well. Contractor shall coordinate with Operator to remove existing Dry Weather Lift Station pumps and controls from service. Bypass pump system shall suction lift from wet well and pump flow into and through the existing force mains via Permanent Bypass Connection Nos. 1 & 2.
4	Perform all work necessary to install proposed 60" DI-RS, 8' $\phi$ San Sew MH No. 1 and 6' $\phi$ San Sew Doghouse MH No. 1.
5	Contractor shall construct proposed Permanent 36" Tee Connection and install temporary blind flange a minimum 10' west of San Sew Doghouse MH No. 2.
6	Construct Storm Sewer Nos. 1, 2, and 2, and Storm Sewer Inlet No. 1 and associated connected underground pipes. Contractor shall make temporary connection from Exist 18" Storm Sewer to Storm Sewer MH No. 1. Contractor shall not make proposed 18" Storm Sewer connection to Storm Sew No. 2 until exist storm sewer inlet can be removed from service and proposed Storm Sew Inlet No. 2 can be constructed and put into service. Contractor shall maintain storm sewer service and positive drainage for throughout all construction.



- BYPASS NOTES:**
- Contractor may install temporary pneumatic plugs as necessary to make proposed 60" DI-RS connection to Exist San Sew MH. Contractor shall take all measures to limit duration of temporary plug operation. Contractor shall monitor water surface upstream of temporary plugs. Contractor shall provide and install additional bypass pumps as required to pump from Exist San Sew MH SPB25134 to Dry Weather Wet Well as required and as directed by the Engineer. Include cost in base bid.
  - Water surface upstream of temporary plugs shall not exceed # water depth.
  - Water Depth during the Phase 1 Bypass shall not exceed # in the Dry Weather Lift Station wet well at any time during the bypass operation.
  - Contractor shall assume all responsibility for providing adequate system monitoring including cellular autodialer, floats and controls, bypass set-up, operation, and spills (no separate pay). Bypass pumping shall include delivery, set-up, means of power, and removal for the duration of the required bypass. The duty condition for the Phase 1 Bypass System A is 10,185 gpm at # TDH (2 pumps pumping through 1 Force Main). The duty condition for the Phase 1 Bypass System B is 25 gpm at # TDH (1 pump pumping through 1 Force Main). Contractor shall provide 3 duty pump (min.) and 1 spare.
  - Contractor shall secure all bypass pumping equipment at all times.
  - Contractor shall be responsible for leaks or cleanup related to bypass system at no additional cost to Owner. Contractor shall alert the Owner of any leaks or spills immediately.
  - Contractor shall provide and install all the plugs, valves, fittings, blocks, restrains, supports, pumps, controls, monitoring, piping, and labor required for controlling and diverting necessary for the work and preventing interruption of service, surcharging the system and/or overflowing the system.
  - All temporary piping shall be PVC or fusion welded HDPE.
  - Bypass shall remain in place until demonstration period has been completed.
  - Contractor shall coordinate with the Operator and Engineer prior to shutting down the lift station for bypass pumping.
  - Contractor shall install blind flange on the first above ground flange on permanent bypass connection Nos. 1 & 2 after all bypass work is complete.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

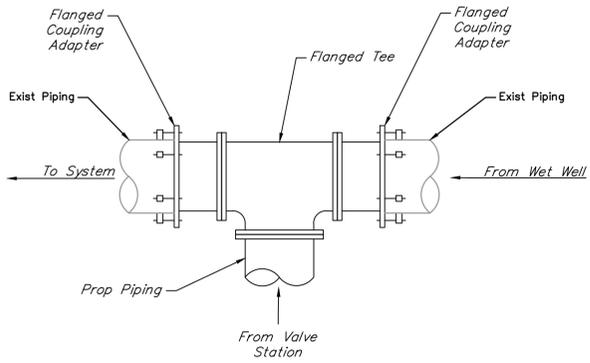
DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: JMMUSSO

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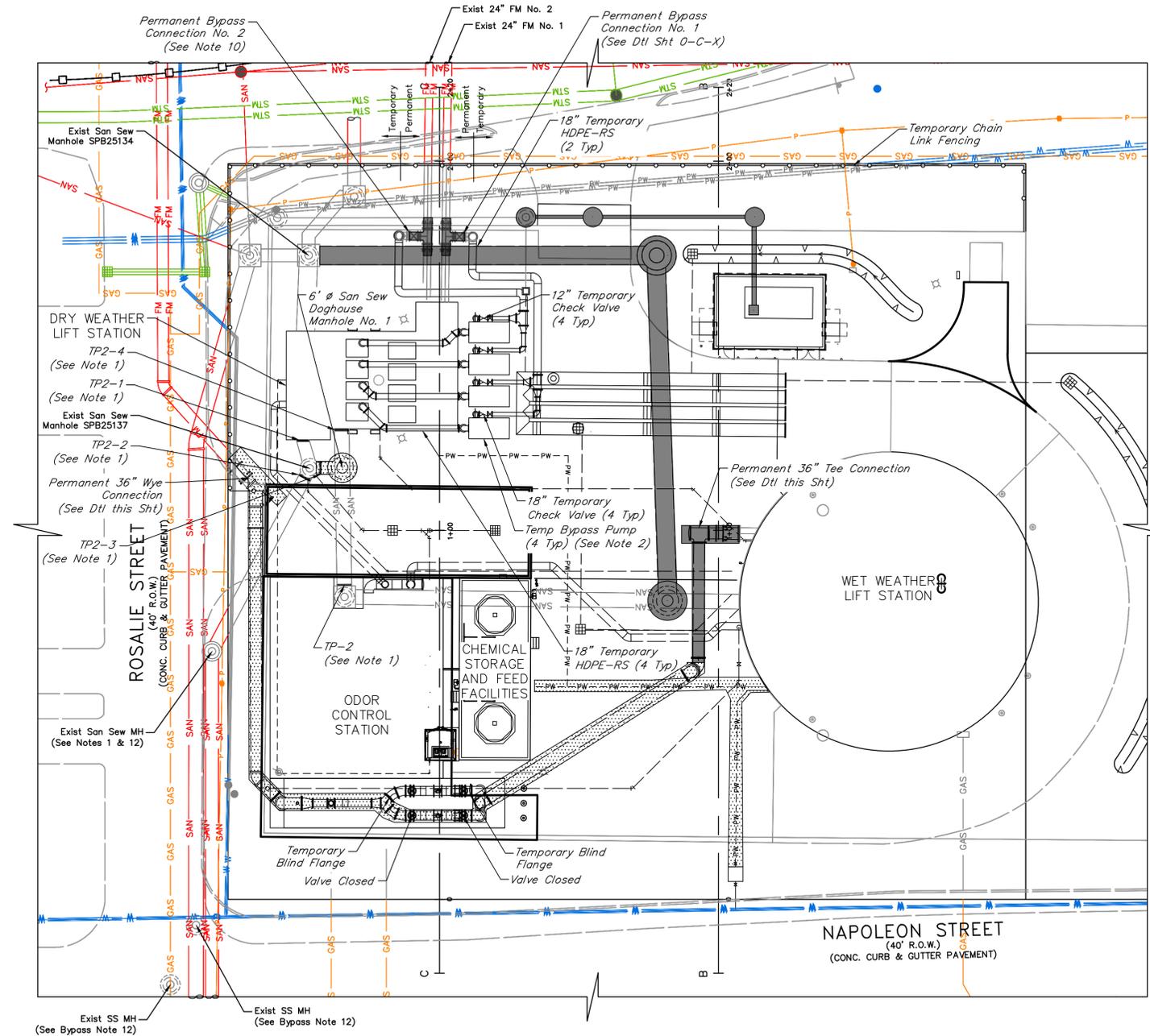
SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
**CONSTRUCTION SEQUENCING AND PHASE 1 BYPASS**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 20' HORIZ: XXX VERT: XXX  
 CATEGORY NO. 0-C-14 SHEET NO. 20 OF XXX  
 FOR CITY OF HOUSTON USE ONLY



**PERMANENT 36" TEE DETAIL**  
 SCALE - 1/4"=1'



**PHASE 2:**

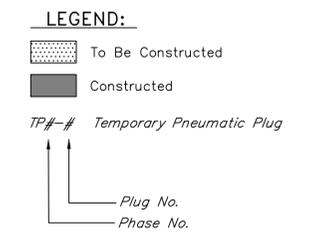
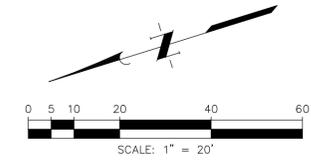
**OBJECTIVE:** Set up and operate Phase 2 Bypass Pump System. Construct proposed 42" DI-RS connection to Exist San Sew MH. Complete Permanent 36" Tee Connection, construct Permanent 36" Permanent Wye Connection, and 8" drain line from 36" tap up to Phase 1 Bypass shall be performed and completed during dry weather flow and through exterior wall of wet weather facility.

**NOTES:**

- Contractor may install temporary pneumatic plugs as necessary to make proposed 42" DI-RS connection to Exist San Sew MH. Contractor shall take all measures to limit duration of temporary plug operation. Contractor shall monitor water surface upstream of temporary plugs. Water surface upstream of temporary plugs shall not exceed 1' water depth. Contractor shall coordinate with Operator to temporarily suspend flow from Wet Weather restroom facilities to sanitary.

**BYPASS NOTES:**

- Contractor shall install temporary pneumatic plugs as necessary to make proposed connection to Exist San Sew MH. Contractor shall take all measures to limit duration of temporary plug operation. Contractor shall monitor water surface upstream manhole. Contractor shall provide and install additional bypass pumps as required to pump from Exist San Sew MH SPB25137 to Dry Weather Wet Well as required and as directed by the Engineer. Include cost in base bid.
- For the duration of bypass phase 2, water surface in Dry Weather Wet Well and upstream sanitary sewer manholes shall not exceed 22.0' at any time during bypass operation.
- Contractor shall assume all responsibility for providing adequate system monitoring including cellular autodialer, floats and controls, bypass set-up, operation, and spills (no separate pay). Bypass pumping shall include delivery, set-up, and removal for the duration of the required bypass. The bypass system shall provide a total flow of 15,278 gpm with 4 pumps (3 duty, and 1 spare) at Duty Point 2A and Duty Point 2B (Specification 01652).
- Contractor shall secure all bypass pumping equipment at all times.
- Contractor shall be responsible for leaks on cleanup related to bypass system at no additional cost to Owner. Contractor shall alert the Owner of any leaks or spills immediately.
- Contractor shall provide and install all the plugs, valves, fittings, blocks, restraints, supports, pumps, controls, monitoring, piping, and labor required for controlling and diverting necessary for the work and preventing interruption of service, surcharging the system and/or overflowing the system.
- All temporary piping shall be PVC or fusion welded HDPE or flanged composite pipe (Midwest Hose & Specialty or approved equal).
- Bypass shall remain in place until work completed under Phase 2 has been inspected and approved for temporary construction service.
- Contractor shall coordinate with the Operator and Engineer prior to shutting down the Dry Weather Lift Station for bypass pumping.
- Contractor shall provide and additional bypass pump system to convey wet weather flow for duration that overflow to wet weather facility is out of service as required by Engineer. Include in base bid.
- Exist manhole location upstream of San Sew MH SPB25137 shown per record drawings. Contractor shall field verify location of Exist MH upstream of San Sew MH SPB25137 prior to commencing Bypass Phase 2 and report findings to Engineer unless directed otherwise. Contractor shall monitor water surface elevation.
- Contractor shall coordinate with Operator to adjust the Wet Weather pump calls above Dry weather pump system pump calls.



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
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 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

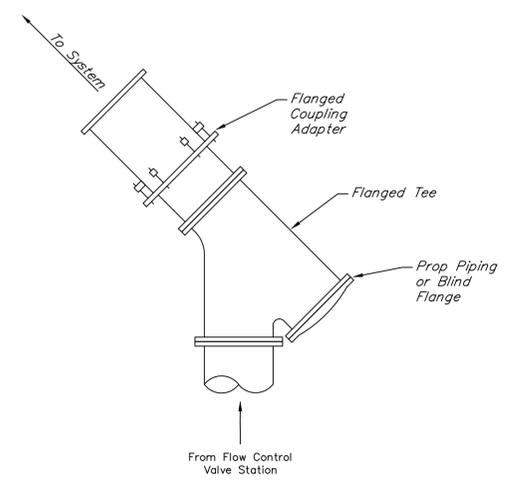
DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

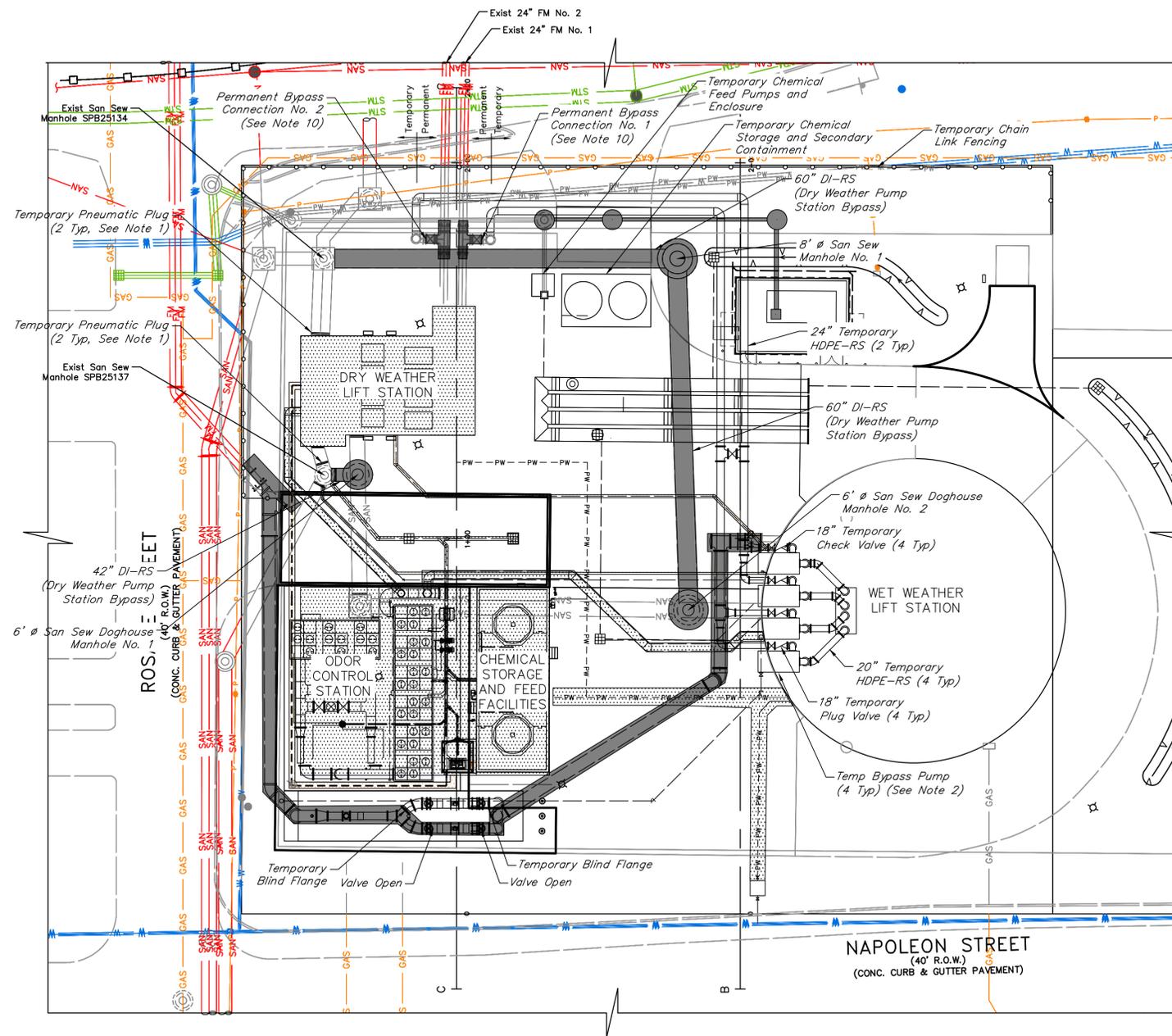
SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
**CONSTRUCTION SEQUENCING  
 AND  
 PHASE 2 BYPASS**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 20' HORIZ: XXX VERT: XXX  
 CATEGORY NO. 0-C-15 SHEET NO. 21 OF XXX  
 FOR CITY OF HOUSTON USE ONLY



**PERMANENT 36" WYE DETAIL**  
 SCALE - 1/4"=1'



**PHASE 3:**

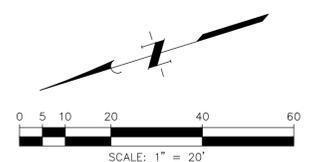
- |            |   |
|------------|---|
| OBJECTIVE: | Set up and operate Phase 3 Bypass Pump System. Set up and operate Temporary Chemical Storage and Chemical Feed System. Construct Dry Weather Lift Station Improvements. Construct proposed Chemical Storage and Feed Facility Replacement. Construct Odor Control Station.  |
| 1          | Contractor shall set up and operate Phase 3 Bypass Pump System. Contractor shall install and maintain temporary plugs to isolate the Dry Weather Lift Station from influent raw sewage. Influent raw sewage shall be diverted to the Wet Weather Wet Well via the bypass lines installed in Phases 1 & 2. Contractor shall coordinate with Operator to adjust Wet Weather Pump settings. Contractor shall coordinate with Operator to lock out Wet Weather Drain Pump Nos. 1 & 2 from service for the duration that Dry Weather Lift Station is out of service. 6\"/>   |
| 2          | Contractor shall provide, install, operate, and maintain temporary chemical storage tanks and temporary chemical feed equipment. Minimum required temporary chemical storage capacity shall be 18,750 gallons. Chemical storage tanks shall have secondary containment instrumentation to detect leak. Temporary chemical metering pumps and controls shall be provided as described in Specification Section 11.161 (1 duty, 1 spare). Contractor shall provide temporary power for duration of temporary chemical system operation and until proposed chemical facilities demonstration period has concluded and the facilities are approved for temporary construction service. Contractor shall make temporary chemical storage tanks accessible to the Operator for chemical delivery at all times. Chemical shall be supplied by the Owner. Contractor shall monitor the chemical level and coordinate with the Operator for chemical deliveries. |
| 3          | Transfer Wet Weather Lift Station service to proposed 36\"/>  |
| 4          | Construct proposed Chemical Storage and Feed Facility Replacement.  |
| 5          | Construct proposed Odor Control Station   |
| 6          | Construct 20\"/>  |

**NOTES:**

- Contractor may install temporary pneumatic plugs as necessary to make proposed 42\"/>

**BYPASS NOTES:**

- Contractor shall install temporary pneumatic plug TPP3-1, TPP3-2 and TPP3-3 as necessary to isolate the Dry Weather Lift Station Wet Well from service and direct all influent raw sewage to the Wet Weather Wet Well.
- For duration of Bypass Phase 3, water surface elevation in the Wet Weather Wet Well shall not exceed 22.0' at any time.
- Contractor shall assume all responsibility for providing adequate system monitoring including cellular autodialer, floats and controls, bypass set-up, operation, and spills (no separate pay). Bypass pumping shall include delivery, set-up, means of power, and removal for the duration of the required bypass. The bypass system shall provide a total flow of 34,722 gpm with 8 pumps (7 duty, 1 spare), at 4,960 gpm per pump at 85' TDH.
- Contractor shall secure bypass pumping equipment at all times.
- Contractor shall be responsible for leaks and cleanup related to bypass system at no additional cost to Owner. Contractor shall alert Owner of any leaks or spills immediately.
- Contractor shall provide and install all plugs, valves, fittings, blocks, restraints, supports, pumps, controls, monitoring, piping, and labor required for controlling and diverting flow as necessary to perform work and preventing interruption of service, surcharging the system and/or overflowing the system.
- All temporary piping shall be PVC or fusion welded HDPE or flanged composite pipe (Midwest Hose & Specialty or approved equal).
- Bypass shall remain in place until work completed under Phase 3 has been inspected and approved for temporary construction service.
- Contractor shall coordinate with the Operator and Engineer prior to removing the Dry Weather Lift Station for service for bypass pumping.
- Contractor shall coordinate with the Operator and Engineer prior to operate Wet Weather Lift Station during a wet weather event.
- Operator shall dewater the dry weather lift station down to the existing all pumps off elevation (~5.5' above FF). Contractor shall remove all remaining bulk liquid, grit, solid, and semi-solid materials and dispose at a TCEQ permitted facility.



**LEGEND:**

- To Be Constructed
- Constructed
- TP#-# Temporary Pneumatic Plug
- Plug No.
- Phase No.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026      DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01      DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
**CONSTRUCTION SEQUENCING  
 AND  
 PHASE 3 BYPASS**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 1" = 20'      HORIZ: XXX      VERT: XXX  
 CATEGORY NO. 0-C-16      SHEET NO. 22 OF XXX  
 FOR CITY OF HOUSTON USE ONLY

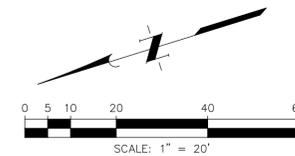
PHASE 4	
OBJECTIVE	Contractor shall Set-up Bypass Systems and Perform Construction at the Odor Control System, and Wet Weather Facility.
1	Contractor shall Set-up Bypass System for Wet Weather Facility, See Notes this Sheet.
2	Contractor shall Set-Up Dry Weather Phase 3 Bypass System. Dry Weather Phase 4 Bypass System shall match Dry Weather Phase 2 Bypass System.
3	Prior to Placing Bypass System Online Contractor shall install Blind Flanges on Tees.
4	Contractor to Perform Rehabilitation work at the Wet Weather Facility. Contractor shall provide Temporary power to Dry Weather Pump Station while work at the Wet Weather Station is being Completion.
5	Contractor shall provide temporary power and equipment to wet weather facility as necessary to complete the work. (i.e. lighting, ventilation, tools, etc)
6	Contractor shall provide temporary power to the chemical storage and feed facility.
7	Odor Control System shall not be put into operation until all wet weather facility improvements are complete and the wet weather facility has been started up and demonstration period as been completed and the system approved for service.
8	Flow control station header 2 shall be constructed. Spool pieces shall be temporarily installed in place of flow control valves and flow control valves shall not be installed until all wet weather facility improvements are complete and are ready for start up testing and demonstration.

**WET WEATHER BYPASS NOTES:**

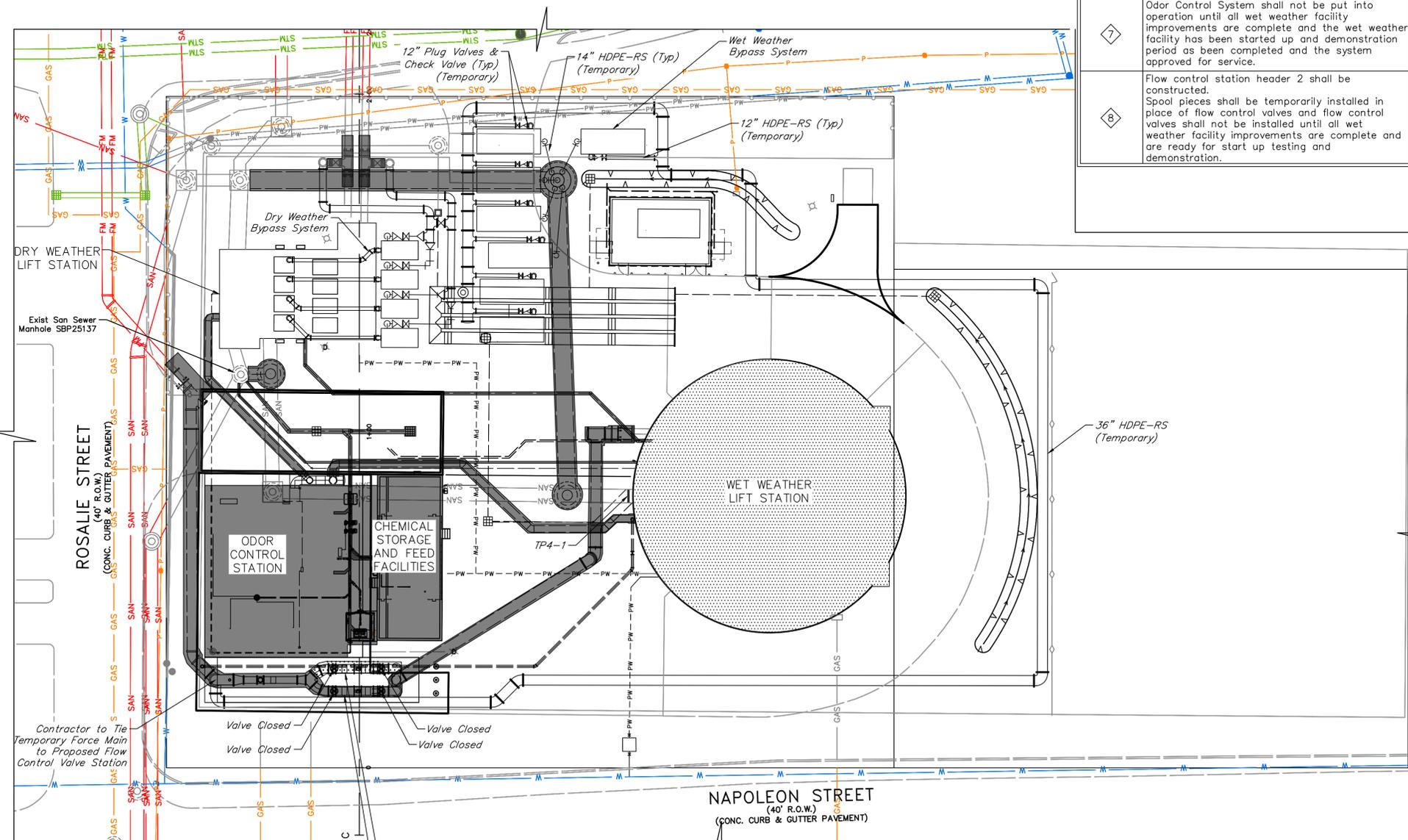
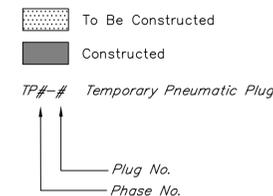
- Contractor shall install temporary pneumatic plug TPP4-1 as necessary to isolate the Wet Weather Lift Station Wet Well from service. Wet Weather Bypass pumps shall pull suction lift from San Sew MH No.1.
- Contractor shall assume all responsibility for providing adequate system monitoring including cellular autodialer, floats and controls, bypass set-up, operation, and spills (no separate pay). Bypass pumping shall include delivery, set-up, means of power, and removal for the duration of the required bypass. The bypass system shall provide a total flow of 34,722 gpm with 8 pumps (7 duty, 1 spare), at 4,960 gpm per pump at 85' TDH.
- Water surface elevation in the bypass manhole shall not exceed 30.25 feet at any time during wet weather flow event while the wet weather facility is out of service.
- Contractor shall coordinate with the operator and install floats inside the bypass manhole at elevations necessary to maintain an operational system. During bypass, the contractor shall cover the manhole with a wooden lid.
- Contractor shall secure all bypass pumping equipment at all times.
- Contractor shall be responsible for leaks and cleanup related to bypass system at no additional cost to Owner. Contractor shall alert the Owner of any leaks or spills immediately.
- Contractor shall provide and install all plugs, valves, fittings, blocks, restraints, supports, pumps, controls, monitoring, piping, and labor required for controlling and diverting necessary for the work and preventing interruption of service, surcharging the system and/or overflowing the system.
- All temporary piping shall be PVC or fusion welded HDPE.
- Bypass shall remain in place until the demonstration period has been completed.
- Contractor shall coordinate with the Operator and Engineer prior to removing the wet weather lift station out of service for bypass pumping.
- Contractor shall field verify the piping diameter at the bypass manhole prior to providing and installing temporary plugs.
- Contractor is responsible for removing the manhole ring (if necessary) to allow proper installation and operation of the bypass plan. Contractor shall re-install remove manhole ring and repair the manhole to like new condition, complete with grouting, upon completion of bypass operation.

**DRY WEATHER BYPASS NOTES:**

- For duration of Bypass Phase 4, water surface elevation in Dry Weather Wet Well shall not exceed 22.0' at any time during dry weather flow.
- Contractor shall assume all responsibility for providing adequate system monitoring including cellular autodialer, floats and controls, bypass set-up, operation, and spills (no separate pay). Bypass pumping shall include delivery, set-up, means and methods, and removal for the duration of the required bypass. The bypass system shall provide a total flow of 15,278 gpm with 4 pumps (3 duty, 1 spare), at Duty Point 4A and Duty Point 4B (Specification 01652).
- Contractor shall secure all bypass pumping equipment at all times.
- Contractor shall be responsible for leaks and cleanup related to bypass system at no additional cost to Owner. Contractor shall alert the Owner of any leaks or spills immediately.
- Contractor shall provide and install all plugs, valves, fittings, blocks, restraints, supports, pumps, controls, monitoring, piping, and labor required for controlling and diverting necessary for the work and preventing interruption of service, surcharging the system and/or overflowing the system. A minimum of one pump and one spare shall be.
- All temporary piping shall be PVC or fusion welded HDPE.
- Bypass shall remain in place until the demonstration period has been completed.
- Contractor shall coordinate with the Operator and Engineer prior to shutting down the lift station for bypass pumping.
- Contractor shall field verify the piping diameter at bypass manhole prior to providing and installing the temporary plugs.



**LEGEND:**



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: JMMUSSO

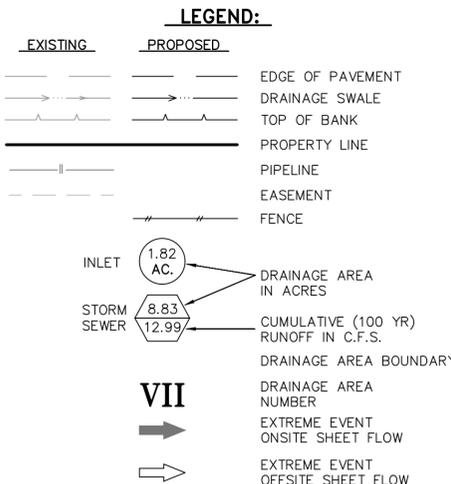
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
**CONSTRUCTION SEQUENCING  
 AND  
 PHASE 4 BYPASS**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 1"=20' HORIZ: XXX VERT: XXX  
 CATEGORY NO. 0-C-17 SHEET NO. 23 OF XXX  
 FOR CITY OF HOUSTON USE ONLY



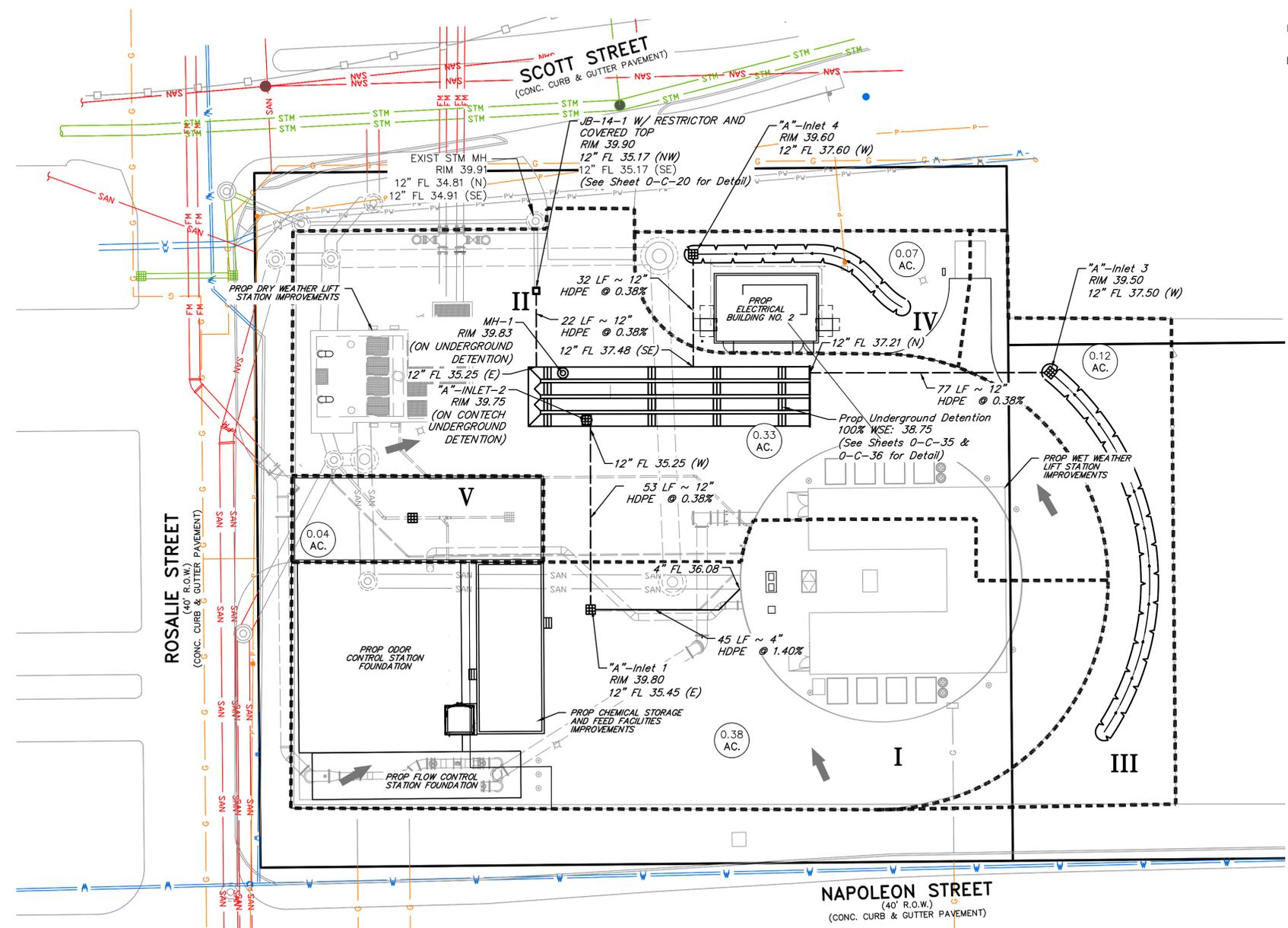


**BENCH MARK**  
 A BRASS DISC STAMPED "RM 070215" LOCATED AT THE END OF YAUPON HOLLY LANE AT ITS INTERSECTION WITH EASTERN REDBUD LANE, ON TOP OF A "B-B" INLET AT THE NORTHWEST CORNER OF THE INTERSECTION. ELEVATION = 64.76 FEET NAVD 88 (2001 ADJUSTMENT)

**I.B.M. "A"**  
 A CHISELED SQUARE ON THE BULL NOSE OF THE ESPLANADE LOCATED ON WEST LAKE HOUSTON PARKWAY APPROXIMATELY 970 FEET NORTH OF THE CENTERLINE INTERSECTION OF SUMMER LAKE RANCH DRIVE AND WEST LAKE HOUSTON PARKWAY. ELEVATION = 55.34 FEET NAVD 88 (2001 ADJUSTMENT)

**I.B.M. "B"**  
 A CHISELED SQUARE ON TOP OF A "B-B" INLET AT THE SOUTHWEST CORNER OF THE INTERSECTION OF SUMMER LAKE RANCH DRIVE AND WEST LAKE HOUSTON PARKWAY. ELEVATION = 53.67 FEET NAVD 88 (2001 ADJUSTMENT)

**100-YEAR FLOOD PLAIN**  
 THIS TRACT LIES WITHIN UNSHADED ZONE "X" OF THE FLOOD INSURANCE RATE MAP, COMMUNITY OF CITY OF HOUSTON, MAP NO. 48201C08B0M, PANEL 0880 OF 1150, SUFFIX "M" DATED JANUARY 6, 2017, FOR HARRIS COUNTY TEXAS AND INCORPORATED AREAS. UNSHADED ZONE "X" IS DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.



- NOTES:**
- THE ATLAS 14 500-YEAR BASE FLOOD ELEVATION IS 37.50' PER FEMA FIS REPORT NO. 48201CV004C EFFECTIVE MAY 2, 2019.
  - MINIMUM FINISHED FLOOR FOR SCOTT STREET NO. 1 LIFT STATION REHABILITATION IS 40.50'.

**NOTICE:**  
 FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811

VERIFICATION OF PRIVATE UTILITY LINES		
CenterPoint Energy natural gas utilities shown. (See various lines are not shown). This signature not to be used for conflict verification. Signature valid for six months.	Date:	
CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY. (This Signature verifies existing underground facilities - not to be used for conflict verification.) Signature valid for six months.	Date:	
Approved for AT&T Texas / SWBT underground conduit facilities only. Signature valid for six months.	Date:	
NO.	DATE	REVISIONS
		APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: LAUREN J. MUDD, P.E.  
 P.E. Serial No.: 153971  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 26 DGN BY: JK  
 JOB NO: 00050-0099-01 DWG BY: JLG

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
 SITE DRAINAGE PLAN

CITY OF HOUSTON  
 HOUSTON PUBLIC WORKS

DRAWING SCALE: HORIZ: VERT:  
 CATEGORY NO. 0-C-19 SHEET NO. --- OF XX  
 FOR CITY OF HOUSTON USE ONLY

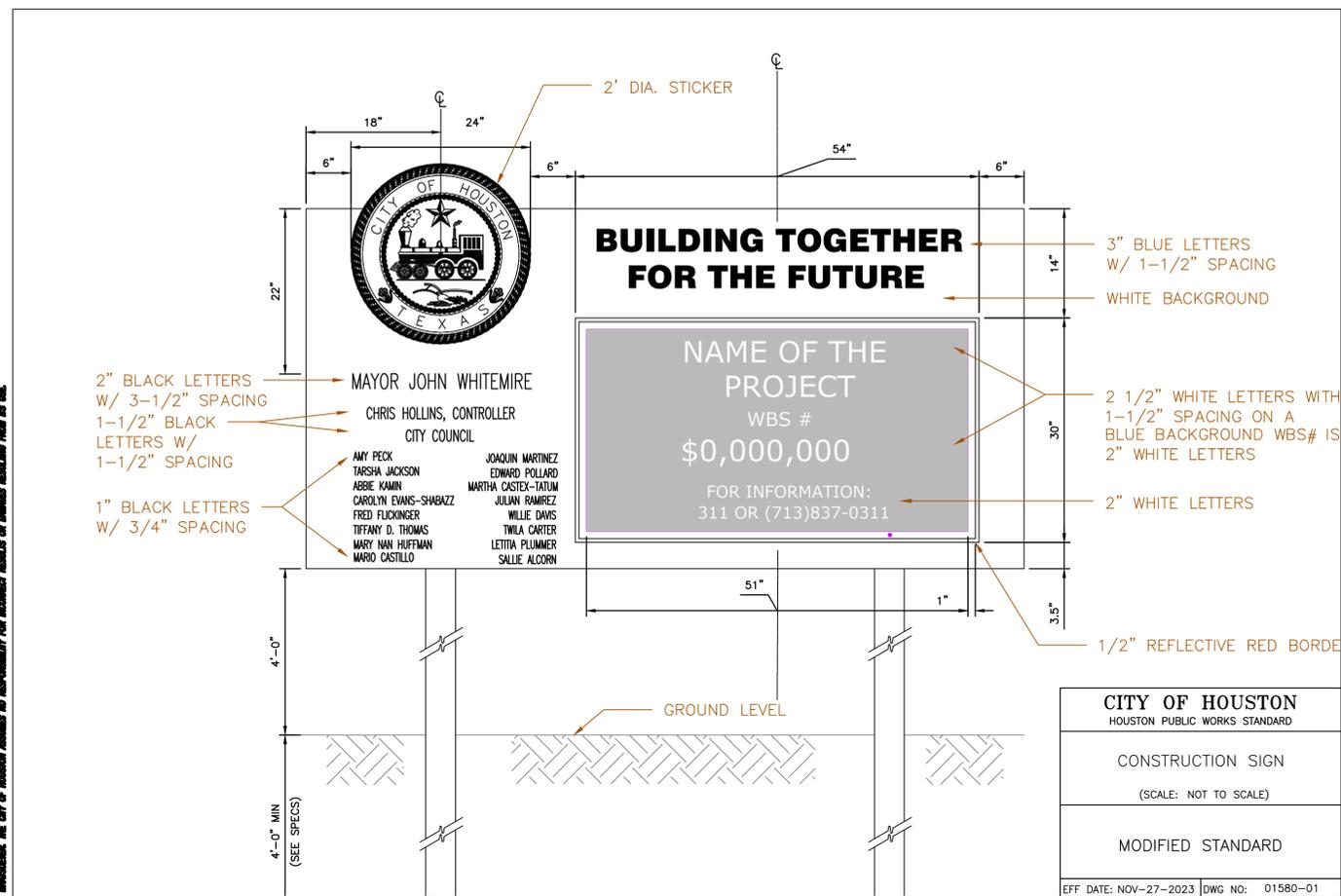
DETENTION SUMMARY					
Impervious Cover Calculation			Detention Calculation		
Area of Property [ac.]	Area of Existing Impervious Cover [ac.]	Area of Proposed Impervious Cover [ac.]	COH Detention Rate [ac-ft/ac]	Required Detention Storage [ac-ft]	Provided Detention Storage [ac-ft]
0.95	0.66	0.114	0.8	0.092 (4004 CF)	0.094 (4096 CF)

- NOTES:**
- THE EXISTING FENCE ON SITE WILL SERVE AS THE PROJECT BOUNDARY.
  - THE EXISTING IMPERVIOUS COVER IS TO BE REMOVED AND REPLACED FOR MAINTENANCE PURPOSES ONLY.
  - NO EXISTING IMPERVIOUS COVER IS TO BE REMOVED FOR THIS PROJECT.





THE CITY OF HOUSTON IS PROVIDING THIS DRAWING AS A SERVICE TO THE PUBLIC. IT IS NOT TO BE USED FOR ANY OTHER PURPOSES. THE CITY OF HOUSTON DOES NOT WARRANT THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE USER OF THIS DRAWING IS ADVISED THAT THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND REGULATIONS FROM THE CITY OF HOUSTON AND ALL APPLICABLE AGENCIES. THE CITY OF HOUSTON SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES, INCLUDING CONSEQUENTIAL DAMAGES, ARISING FROM THE USE OF THIS DRAWING.



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

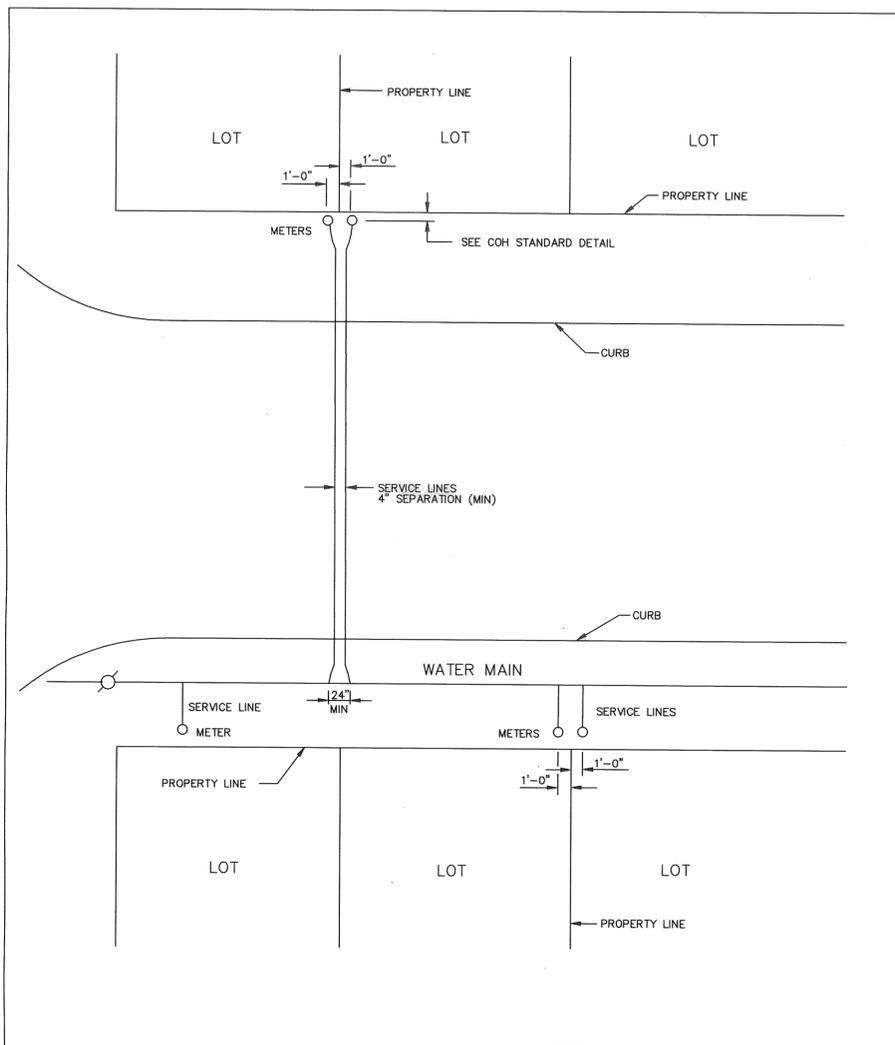
SCOTT STREET No. 1  
LIFT STATION REHABILITATION

CIVIL DETAILS  
SHEET 1 OF 16

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE NOT TO SCALE HORIZ: XXX VERT: XXX

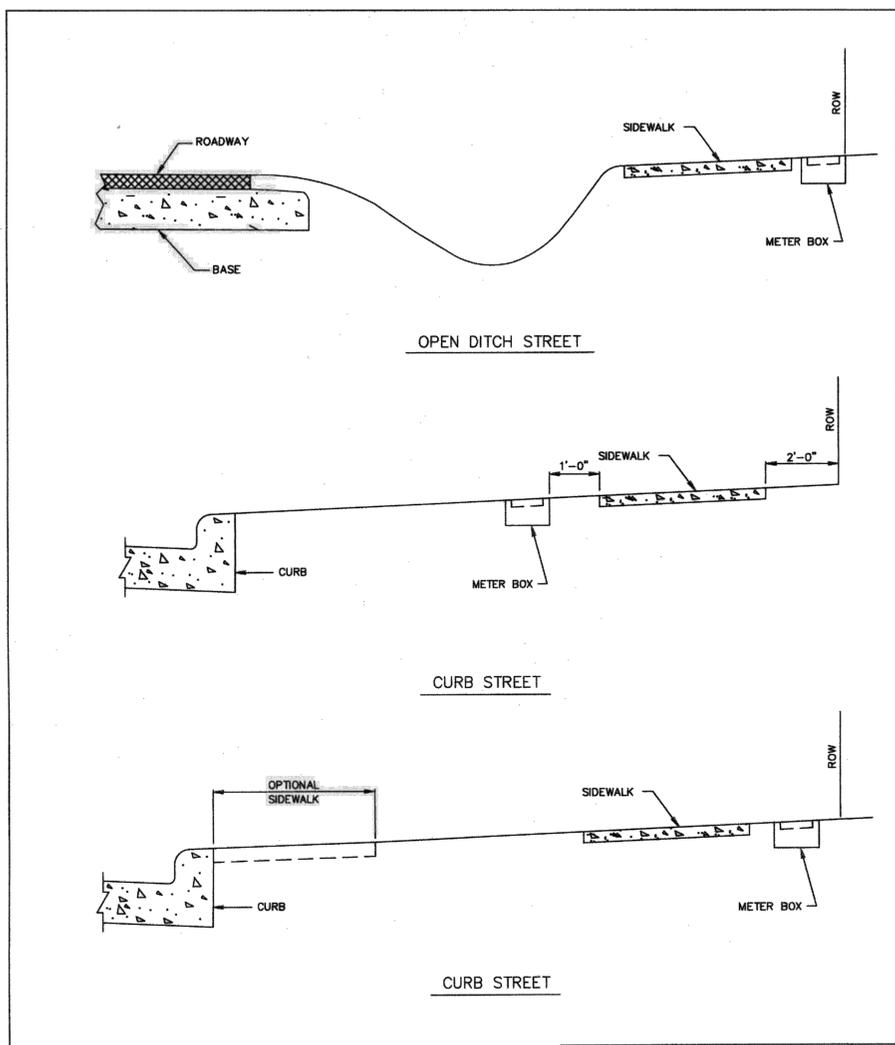
CATEGORY NO. **0-C-22** SHEET NO. 24 OF XXX  
FOR CITY OF HOUSTON USE ONLY



**GENERAL NOTES:**

1. TWO SERVICE LINES MAY BE INSTALLED IN SAME TRENCH PROVIDING 4" CLEARANCE IS MAINTAINED.
2. ONE METER PER SERVICE LINE

<b>CITY OF HOUSTON</b> DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
TYPICAL 3/4" THROUGH 2" SERVICE ARRANGEMENTS (NOT TO SCALE)	
APPROVED BY:  CITY ENGINEER	APPROVED BY:  DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2016	DWG NO: 02512-01



<b>CITY OF HOUSTON</b> DEPARTMENT OF PUBLIC WORKS AND ENGINEERING	
LOCATION OF WATER METER BOX FOR 2" DIAMETER AND LESS (NOT TO SCALE)	
APPROVED BY:  CITY ENGINEER	APPROVED BY:  DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2010	DWG NO: 02085-02

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction,  
 bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026      DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01      DWG BY: JMMUSSO

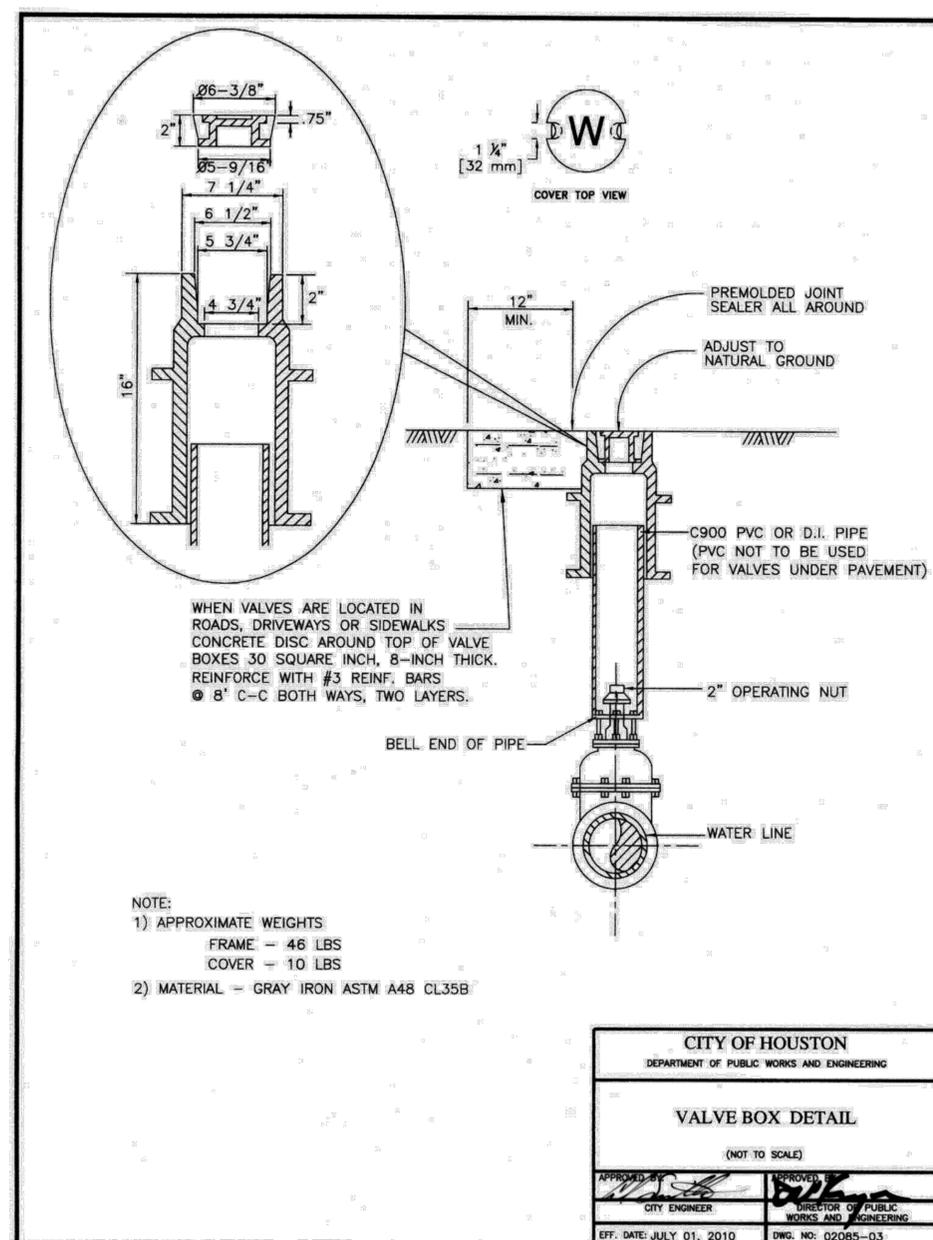
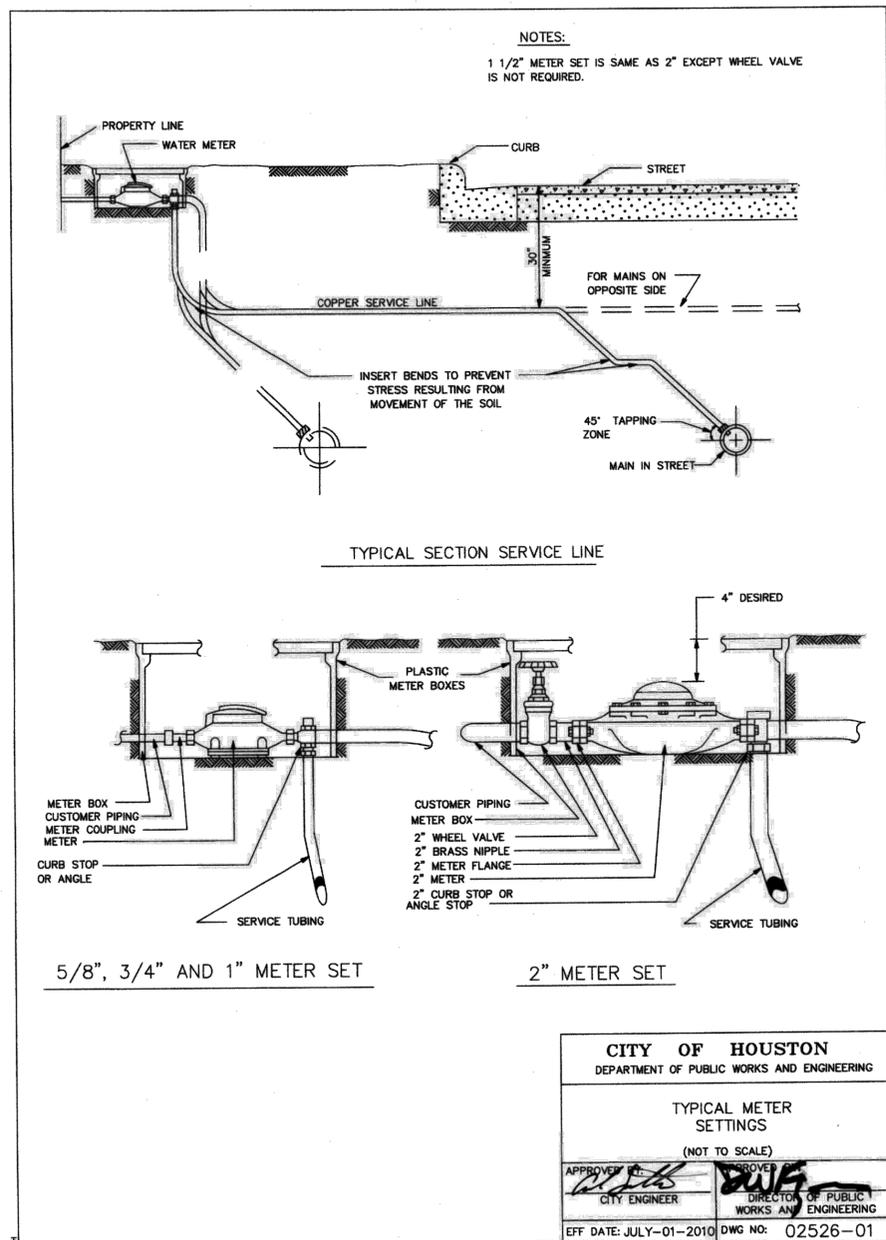
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 YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

CIVIL DETAILS  
 SHEET 2 OF 16

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE NO SCALE    HORIZ: XXX    VERT: XXX  
 CATEGORY NO. **0-C-23**    SHEET NO. 25 OF XXX  
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**INTERIM REVIEW**  
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 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026      DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01      DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

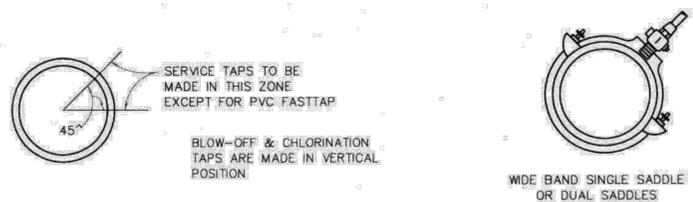
CIVIL DETAILS  
 SHEET 3 OF 16

CITY OF HOUSTON  
 HOUSTON PUBLIC WORKS

DRAWING SCALE NO SCALE    HORIZ: XXX    VERT: XXX  
 CATEGORY NO. 0-C-24    SHEET NO. 26 OF XXX  
 FOR CITY OF HOUSTON USE ONLY

PIPE TAPPING SCHEDULE				
WATER MAIN TYPE AND DIAMETER	SERVICE SIZE			
	3/4"	1"	1 1/2"	2"
4" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
4" ASBESTOS (EXISTING) CEMENT	WBSS	WBSS	DSS, WBSS	DSS, WBSS
4" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" ASBESTOS (EXISTING) CEMENT	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" ASBESTOS (EXISTING) CEMENT	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
16" AND UP CAST IRON OR DUCTILE IRON	DWBSS	DWBSS	DWBSS	DWBSS
16" AND UP ASBESTOS (EXISTING) CEMENT	DWBSS	DWBSS	DWBSS	DWBSS
16" AND UP PVC (AWWA C900)	DWBSS	DWBSS	DWBSS	DWBSS

DSS - DUAL STRAP SADDLES  
 WBSS - WIDE BAND STRAP SADDLES  
 DWBSS - DUAL WIDE BAND STRAP SADDLES



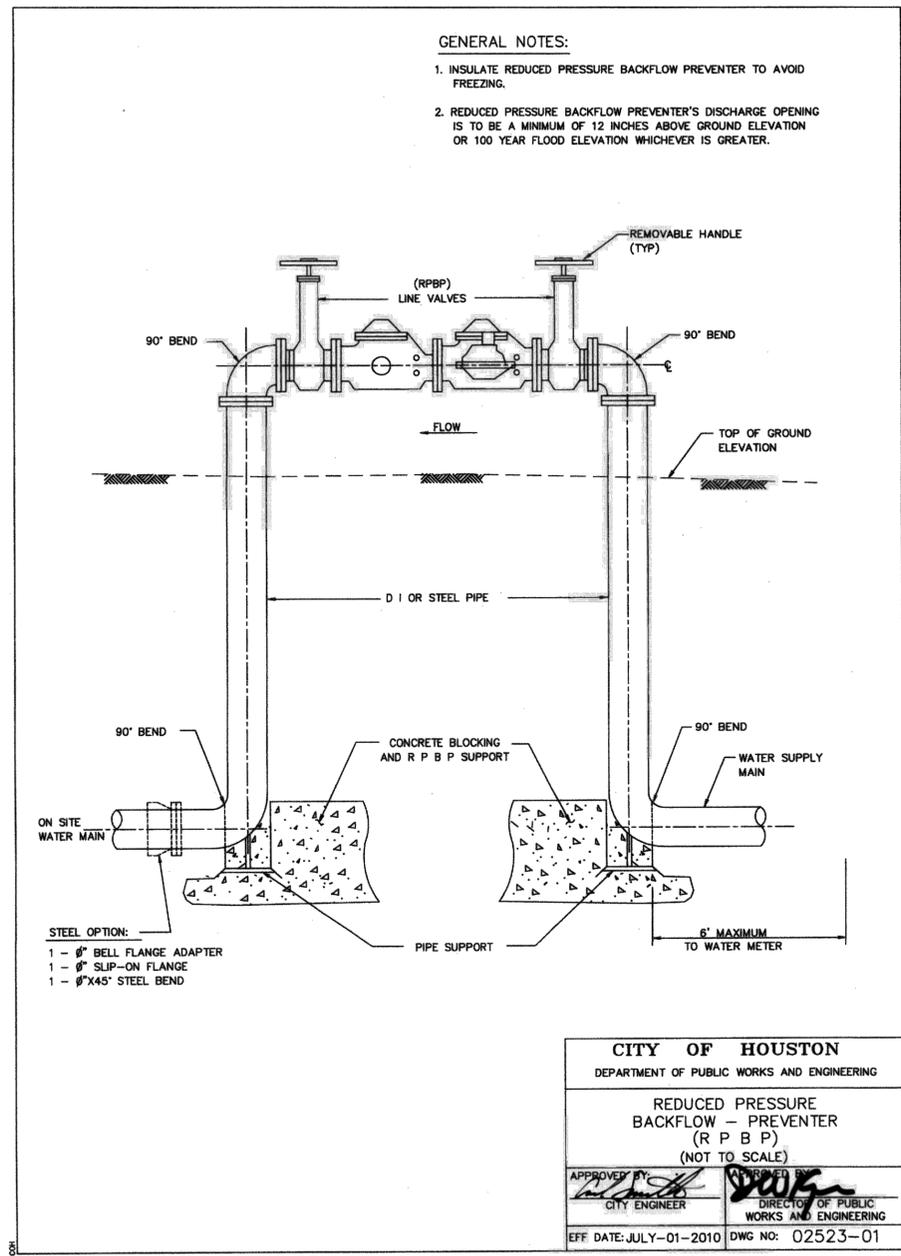
**CITY OF HOUSTON**  
 DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

**SERVICE TAPS**  
 (NOT TO SCALE)

APPROVED BY: *[Signature]*  
 CITY ENGINEER

APPROVED BY: *[Signature]*  
 DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JUL-01-2010 DWG NO: 02512-02



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: JMMUSSO

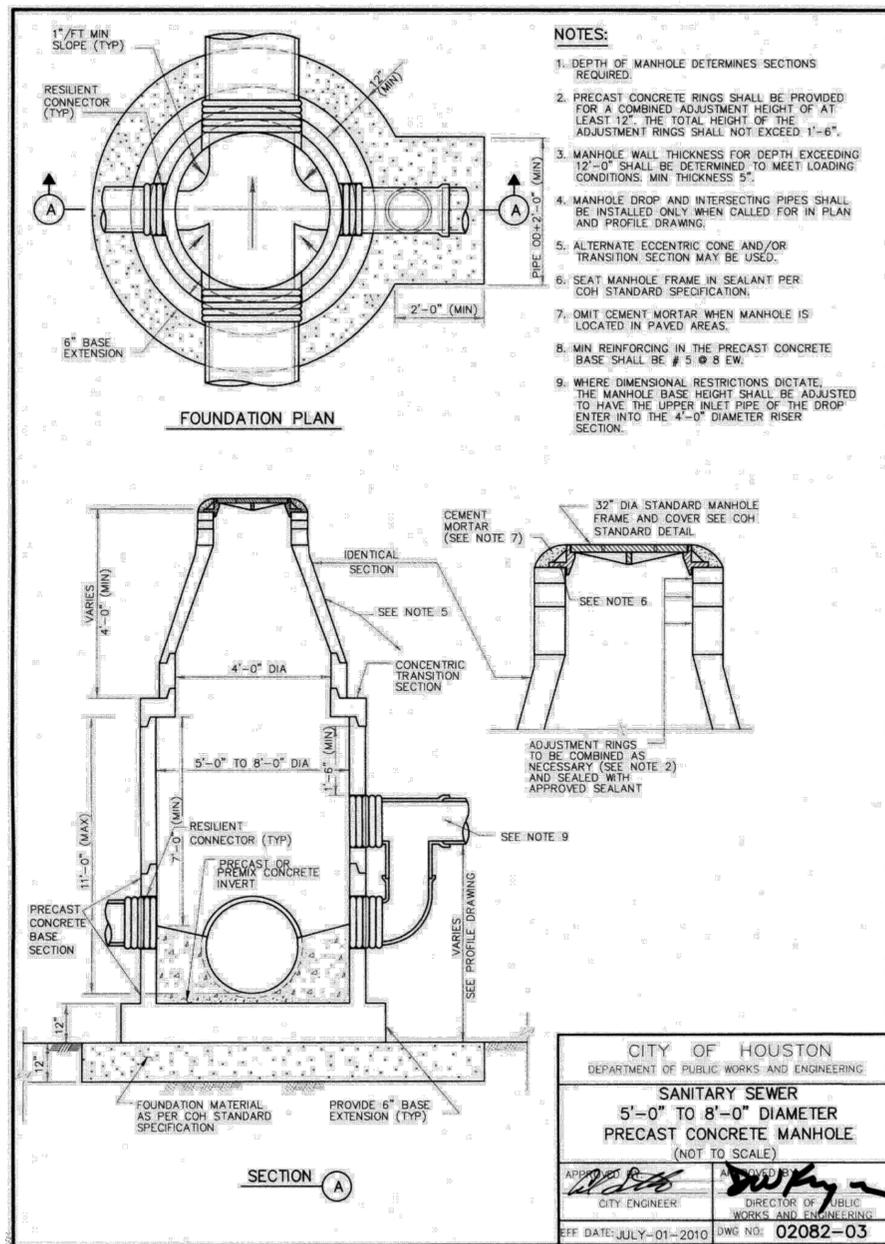
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

CIVIL DETAILS  
 SHEET 4 OF 16

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX  
 CATEGORY NO. 0-C-25 SHEET NO. 27 OF XXX  
 FOR CITY OF HOUSTON USE ONLY



- NOTES:**
- DEPTH OF MANHOLE DETERMINES SECTIONS REQUIRED.
  - PRECAST CONCRETE RINGS SHALL BE PROVIDED FOR A COMBINED ADJUSTMENT HEIGHT OF AT LEAST 12". THE TOTAL HEIGHT OF THE ADJUSTMENT RINGS SHALL NOT EXCEED 1'-6".
  - MANHOLE WALL THICKNESS FOR DEPTH EXCEEDING 12'-0" SHALL BE DETERMINED TO MEET LOADING CONDITIONS. MIN THICKNESS 5".
  - MANHOLE DROP AND INTERSECTING PIPES SHALL BE INSTALLED ONLY WHEN CALLED FOR IN PLAN AND PROFILE DRAWING.
  - ALTERNATE ECCENTRIC CONE AND/OR TRANSITION SECTION MAY BE USED.
  - SEAT MANHOLE FRAME IN SEALANT PER COH STANDARD SPECIFICATION.
  - OMIT CEMENT MORTAR WHEN MANHOLE IS LOCATED IN PAVED AREAS.
  - MIN REINFORCING IN THE PRECAST CONCRETE BASE SHALL BE # 5 @ 8 EW.
  - WHERE DIMENSIONAL RESTRICTIONS DICTATE, THE MANHOLE BASE HEIGHT SHALL BE ADJUSTED TO HAVE THE UPPER INLET PIPE OF THE DROP ENTER INTO THE 4'-0" DIAMETER RISER SECTION.

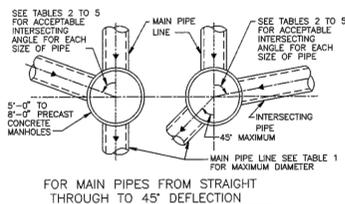
CITY OF HOUSTON  
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

**SANITARY SEWER  
5'-0" TO 8'-0" DIAMETER  
PRECAST CONCRETE MANHOLE  
(NOT TO SCALE)**

APPROVED BY: *[Signature]*  
CITY ENGINEER

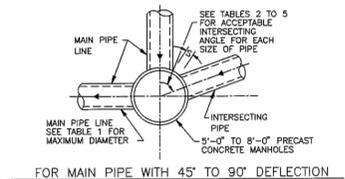
APPROVED BY: *[Signature]*  
DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2010 DWG NO: 02082-03



**TABLE 3**  
MINIMUM ANGLE AND INTERSECTING PIPE ID SIZES FOR 6'-0" DIA MANHOLE

INTERSECTING PIPE ID SIZES (INCHES)	MINIMUM INTERSECTING ANGLE IN DEGREES FOR VARIOUS MAIN PIPE ID SIZES IN INCHES												
	8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"	42"	
8	40	42	45	49	51	54	57	61	63	67	70	78	
10		44	47	50	53	56	59	62	65	69	72	79	
12			50	54	56	60	62	66	68	72	75	83	
15				57	59	62	65	69	71	75	78	85	
18					62	65	68	71	74	78	81	88	
21						68	71	74	77	81	84	—	
24							74	77	80	84	87	—	
27								83	85	89	—	—	
30									—	—	—	—	
33										—	—	—	
36											—	—	
42												—	



**TABLE 4**  
MINIMUM ANGLE AND INTERSECTING PIPE ID SIZES FOR 7'-0" DIA MANHOLE

INTERSECTING PIPE ID SIZES (INCHES)	MINIMUM INTERSECTING ANGLE IN DEGREES FOR VARIOUS MAIN PIPE ID SIZES IN INCHES												
	8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"	42"	48"
8	35	36	39	42	44	47	49	52	54	57	59	65	71
10		38	40	43	45	48	50	53	55	59	61	67	73
12			43	46	48	51	53	56	58	61	64	70	76
15				48	50	53	55	58	61	64	66	72	78
18					58	58	61	63	66	69	71	77	81
21						58	60	63	66	69	71	77	83
24							63	66	68	71	74	79	86
27								70	72	76	78	84	—
30									78	81	83	89	—
33										86	88	—	—
36											—	—	—
42												—	—
48													—

**TABLE 1**  
MAXIMUM MAIN PIPE DIAMETER (D) IN INCHES

MANHOLE DIAMETER (FT)	STRAIGHT THROUGH TO 45° DEFLECTION	WITH 90° DEFLECTION	TABLE TO BE USED
5	36	27	2
6	42	33	3
7	48	36	4
8	60	42	5

**TABLE 2**  
MINIMUM ANGLE AND INTERSECTING PIPE ID SIZES FOR 5'-0" DIA MANHOLE

INTERSECTING PIPE ID SIZES (INCHES)	MINIMUM INTERSECTING ANGLE IN DEGREES FOR VARIOUS MAIN PIPE ID SIZES IN INCHES												
	8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"		
8	49	50	54	58	61	66	69	73	77	82	86		
10		53	57	61	64	68	71	76	79	84	88		
12			61	65	68	72	75	80	83	88	—		
15				68	71	75	79	83	87	—	—		
18					75	79	82	87	90	—	—		
21						83	86	90	—	—	—		
24							90	—	—	—	—		
27								—	—	—	—		
30									—	—	—		
33										—	—		
36											—		

**TABLE 5**  
MINIMUM ANGLE AND INTERSECTING PIPE ID SIZES FOR 8'-0" DIA MANHOLE

INTERSECTING PIPE ID SIZES (INCHES)	MINIMUM INTERSECTING ANGLE IN DEGREES FOR VARIOUS MAIN PIPE ID SIZES IN INCHES														
	8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"	42"	48"	54"	60"
8	30	32	34	36	38	41	43	45	47	50	52	56	61	67	74
10		33	35	38	40	42	44	46	48	51	53	58	63	68	77
12			38	40	42	44	46	49	51	53	56	62	67	73	81
15				42	44	47	48	51	53	56	58	64	70	75	83
18					46	49	51	53	56	58	61	67	73	78	86
21						51	53	56	57	60	62	67	72	77	85
24							55	57	59	62	64	69	74	79	89
27								61	63	66	68	73	78	83	—
30									67	70	72	77	82	87	—
33										74	76	81	86	—	—
36											81	86	—	—	—
42												—	—	—	—
48													—	—	—
54														—	—
60															—

**NOTES TO SPECIFIER:**

- "—" INDICATES THAT A SPECIAL DESIGN OR THE NEXT LARGER MANHOLE SIZE SHALL BE USED.
- TABLES 3 TO 5 ARE BASED ON A MIN SEPARATION DISTANCE OF 15.0" OR INTERSECTION PIPE OD/2, WHICHEVER IS GREATER, BETWEEN MAIN AND INTERSECTING PIPES ALONG THE MANHOLE INSIDE WALL ARC.
- PIPE WALL THICKNESS USED IN TABLES 2 TO 5 ARE BASED ON RCP. THE DESIGN ENGINEER MAY CALCULATE TO SEE IF THINNER WALL PIPES CAN MEET THE SEPARATION CRITERIA FOR ANGLES SMALLER THAN THE TABLES ALLOW.
- LIMITATIONS TO BASE HEIGHT ARE BASED ON RESISTING BUOYANT UPLIFT FORCES BASED ON WATER AT GROUND SURFACE AND A SAFETY FACTOR OF 1.20.
- A SPECIAL DESIGN IS REQUIRED IF MANHOLE ID IS GREATER THAN 8 FT.

**NOTES ON USE OF STANDARD DETAIL 02082-03**

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: JANUARY 2026

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
ENGINEERING, CONSTRUCTION AND REAL ESTATE GROUP

**SANITARY SEWER  
5'-0" TO 8'-0" DIAMETER  
PRECAST CONCRETE MANHOLE NOTES  
(NOT TO SCALE)**

APPROVED BY: *[Signature]*  
CITY ENGINEER

APPROVED BY: *[Signature]*  
DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: OCT-01-2002 DWG NO: 02082N-03

CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: JMMUSSO

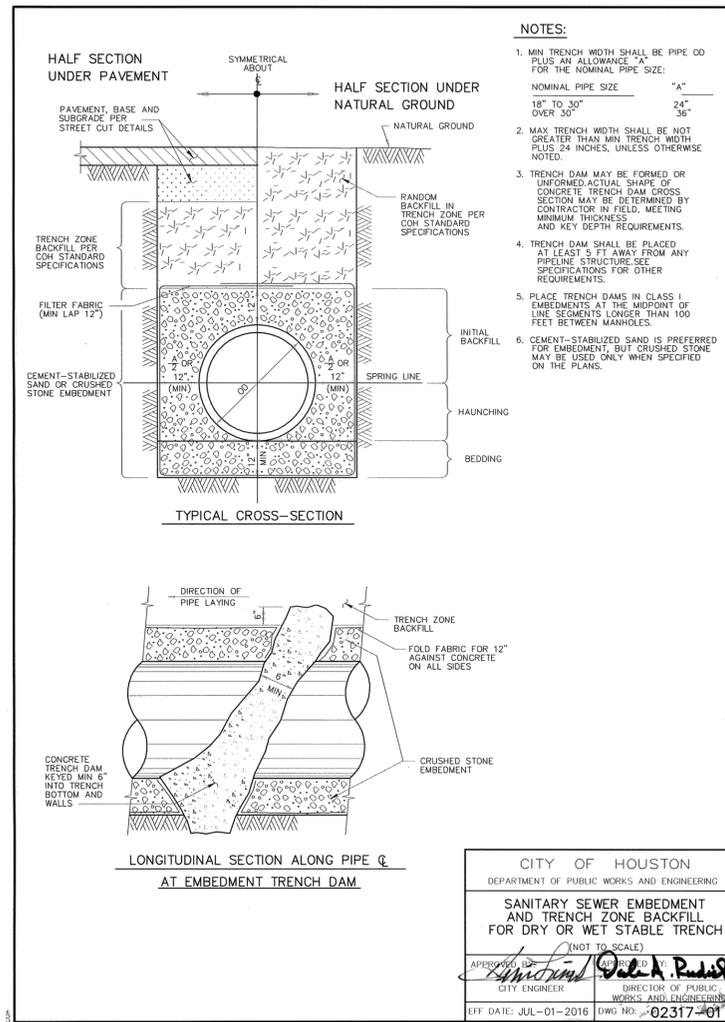
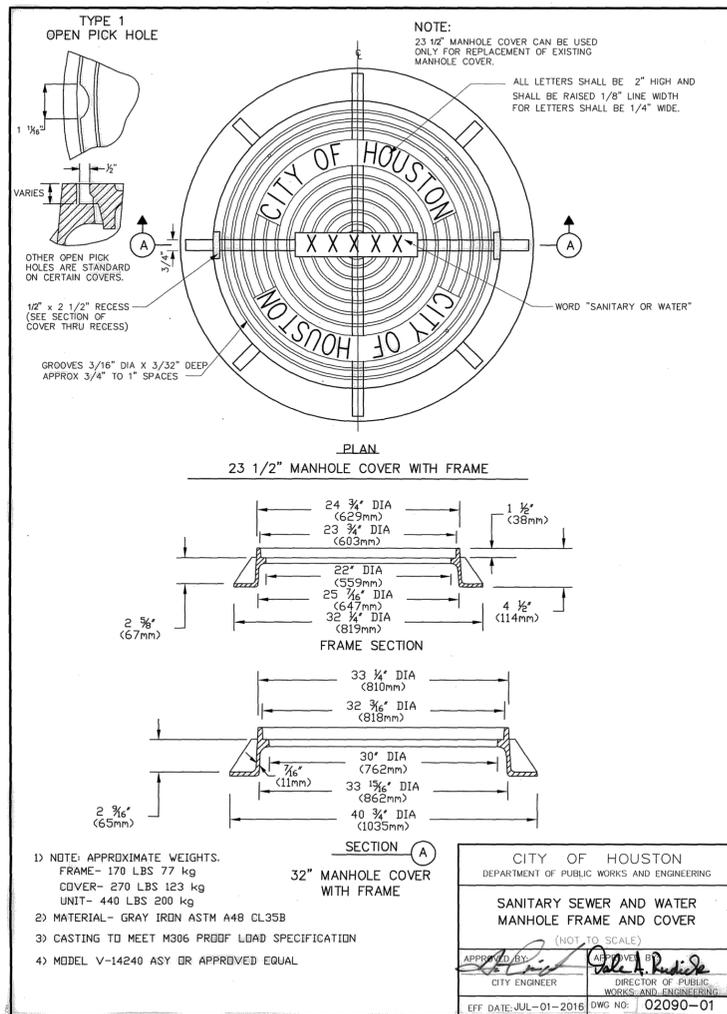
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION

CIVIL DETAILS  
SHEET 5 OF 16

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX  
CATEGORY NO. 0-C-26 SHEET NO. 28 OF XXX  
FOR CITY OF HOUSTON USE ONLY



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: JANUARY 2026



**CITY OF HOUSTON**  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

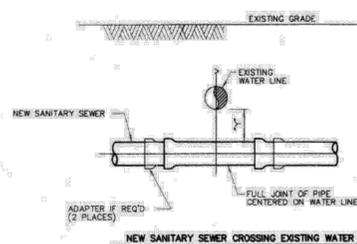
**SCOTT STREET No. 1**  
**LIFT STATION REHABILITATION**

**CIVIL DETAILS**  
**SHEET 6 OF 16**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

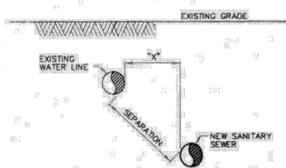
DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. **0-C-27** SHEET NO. 26 OF XXX  
FOR CITY OF HOUSTON USE ONLY



**INSTALLATION REQUIREMENTS**

1. IF "Y" IS GREATER THAN 1' AND "Y" IS LESS THAN 2', USE MINIMUM 18" FT. JOINT OF PRESSURE-RATED PIPE PER COH STANDARD DRAWING.
2. IF "Y" IS GREATER THAN 2' AND "Y" IS LESS THAN 9', USE GRAVITY SEWER PIPE IN CEMENT-STABILIZED SAND EMBEDMENT.
3. IF "Y" IS GREATER THAN 9', USE STANDARD EMBEDMENT AND NORMAL JOINT SPACING.



**INSTALLATION REQUIREMENTS**

1. IF SEPARATION IS LESS THAN 9', USE PRESSURE-RATED PIPE WH. TO WH. "Y" MUST BE AT LEAST 4 FT. VERTICAL SEPARATION MUST BE AT LEAST 2 FT.
2. IF SEPARATION IS 9' OR GREATER, USE STANDARD PIPE AND EMBEDMENT.

INSTALLING SANITARY SEWERS CROSSING OR PARALLEL TO WATER LINES

**NOTES:**

1. SANITARY SEWER MUST BE BELOW WATER LINE, WHEREVER POSSIBLE. WHEN WATERLINE IS BELOW THE SANITARY SEWER, PROVIDE MINIMUM 2 FT. SEPARATION AND INSTALL PIPE IN ACCORDANCE TO CHAPTER 7 TABLE 7.3 OF COH DESIGN MANUAL.
2. WHEN PRESSURE-RATED PIPE IS REQUIRED, PROVIDE PIPE WITH MINIMUM 150 psi PRESSURE RATING.
3. ADAPTERS MUST BE FACTORY MOLDED OR FABRICATED WITH RING STRIPES AT LEAST EQUAL TO THE ADJOINING SANITARY SEWER PIPE, AND USING RESILIENT GASKET OR SEAL MATERIAL. FLEXIBLE RUBBER "BOOT" TYPE ADAPTERS WILL NOT BE ACCEPTED.
4. INSTALL FORCE MAINS SAME AS FOR GRAVITY SEWER, USING SPECIFIED PRESSURE PIPE.
5. "Y" MUST ALWAYS BE GREATER THAN OR EQUAL TO 1 FT. FOR PRESSURE RATED SS AND 2 FT. FOR NON-PRESSURE RATED SS.
6. "X" MUST BE GREATER THAN OR EQUAL TO 4 FT.
7. ALTERNATIVES MAY BE SHOWN ON THE DRAWINGS OR DESCRIBED IN THE SPECIFICATIONS.
8. SEPARATION REQUIREMENTS SHOWN HERE DO NOT APPLY TO SERVICE CONNECTIONS - REFER TO PLUMBING CODE FOR APPLICABLE REQUIREMENTS.

CITY OF HOUSTON  
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

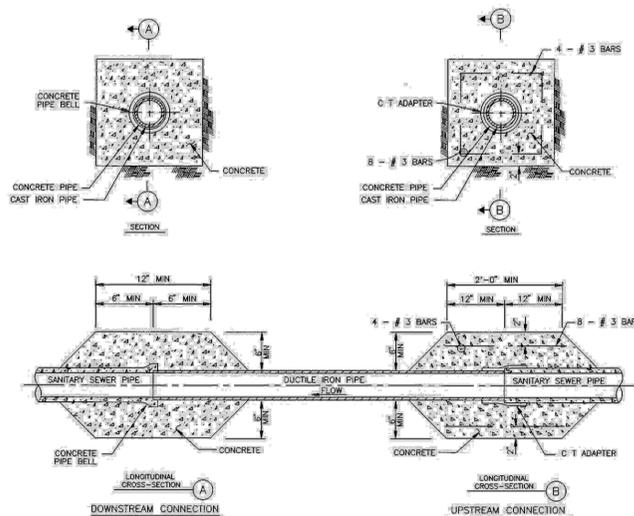
**SANITARY SEWER  
INSTALLING SANITARY SEWERS  
CROSSING OR PARALLEL TO WATER LINES  
(NOT TO SCALE)**

APPROVED BY: [Signature] CITY ENGINEER  
APPROVED BY: [Signature] DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF. DATE: JUL-01-2010 DWG. NO.: 02531-05

**NOTE:**

1. THE CONTRACTOR SHALL CENTER A MINIMUM OF 18 FOOT JOINT OF DUCTILE IRON PIPE OR 3000 PVC PIPE ACROSS THE CENTER OF THE PROPOSED STORM SEWER.



CITY OF HOUSTON  
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

**SANITARY SEWER  
DUCTILE IRON PIPE  
STORM SEWER CROSSING  
(NOT TO SCALE)**

APPROVED BY: [Signature] CITY ENGINEER  
APPROVED BY: [Signature] DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF. DATE: OCT-01-2002 DWG. NO.: 02531-Q3

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: JANUARY 2026

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: JMMUSSO

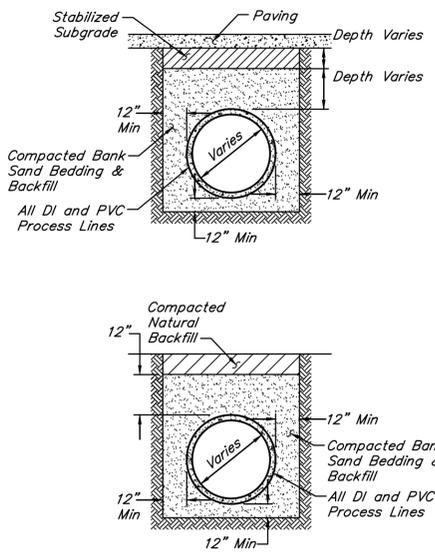
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION

CIVIL DETAILS  
SHEET 7 OF 16

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

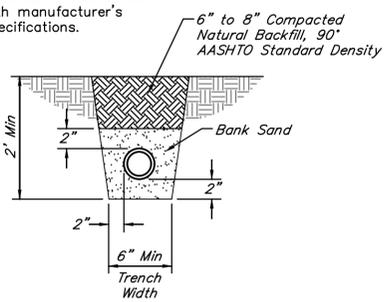
DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX  
CATEGORY NO. 0-C-28 SHEET NO. XX OF XXX  
FOR CITY OF HOUSTON USE ONLY



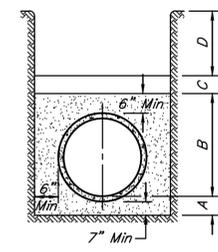
**CLASS "C" BEDDING  
FOR PLANT PROCESS PIPING DETAIL**  
NOT TO SCALE

**NOTE:**

All PVC piping to be installed in accordance with manufacturer's specifications.



**BEDDING FOR SMALL  
DIAMETER (<3") PIPING DETAIL**  
NOT TO SCALE



**LEGEND:**

- A - Cement stabilized sand placed before pipe is laid up to flowline of pipe or above (minimum depth 7").
- B - Cement stabilized sand, thoroughly rodded, placed after pipe is laid.
- C - Earth fill placed same day pipe is laid.
- D - Earth fill placed next day (or later) after pipe is laid.

**1502 - CLASS "AA"  
BEDDING FOR PIPE SEWERS DETAIL**  
36" DIAMETER AND SMALLER  
NOT TO SCALE

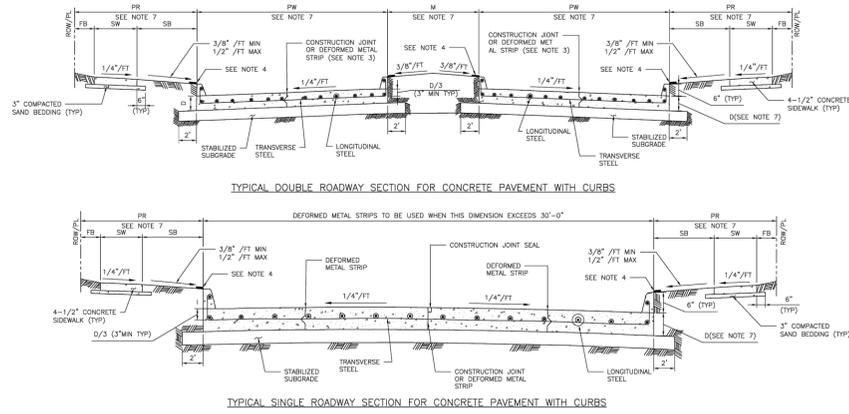


TABLE 1  
REINFORCING STEEL BAR SIZES AND SPACINGS FOR VARIOUS PAVEMENT THICKNESSES (D) WITH MAXIMUM TRANSVERSE CONTROL JOINT SPACING = 20'-0"  
MAXIMUM EXPANSION JOINT SPACING = 80'-0"  
AC = 4,000 PSI/28 DAYS AND Fy = 60,000 PSI

PAVEMENT THICKNESS 'D' (IN)	PAVEMENT WIDTH 'W' (FT)	LONGITUDINAL STEEL						TRAVERSE STEEL					
		#4 BARS		#5 BARS		#6 BARS		#4 BARS		#5 BARS		#6 BARS	
		NUMBER OF BARS	SPACING (IN)	NUMBER OF BARS	SPACING (IN)	NUMBER OF BARS	SPACING (IN)	SPACING (IN)	SPACING (IN)	SPACING (IN)	SPACING (IN)	SPACING (IN)	SPACING (IN)
6	28	17	20.50	4.00	-	-	-	-	-	-	-	-	-
7	25	17	18.25	4.00	-	-	-	-	-	-	-	-	-
7	35	24	18.00	3.00	-	-	-	-	-	-	-	-	-
7	37	25	17.75	3.00	-	-	-	-	-	-	-	-	-
7	41	28	18.00	3.00	-	-	-	-	-	-	-	-	-
7	45	31	17.75	3.75	-	-	-	-	-	-	-	-	-
8	25	20	15.00	2.75	13	24.50	3.0	-	-	-	-	-	-
8	34	27	15.50	2.50	17	25.00	4.0	-	-	-	-	-	-
8	35	27	16.00	2.00	18	24.25	4.0	-	-	-	-	-	-
8	38	28	15.75	3.25	18	25.00	3.0	-	-	-	-	-	-
8	44	24	15.75	4.00	22	24.75	4.0	-	-	-	-	-	-
8	48	25	15.75	2.25	23	24.25	3.0	-	-	-	-	-	-
9	25	22	14.00	3.00	14	22.50	4.0	-	-	-	-	-	-
9	34	31	13.50	2.00	19	22.25	3.5	-	-	-	-	-	-
9	35	31	13.75	3.75	20	21.75	3.5	-	-	-	-	-	-
9	38	32	13.75	3.00	21	21.25	3.5	-	-	-	-	-	-
9	44	39	13.75	2.75	25	21.75	3.0	-	-	-	-	-	-
9	45	39	14.00	4.00	26	21.25	4.5	-	-	-	-	-	-
10	25	24	12.75	3.50	17	18.25	4.0	-	-	-	-	-	-
10	34	33	12.50	4.00	21	20.00	4.0	-	-	-	-	-	-
10	35	34	12.50	3.75	23	18.75	4.0	-	-	-	-	-	-
10	38	35	12.50	3.50	24	18.50	3.0	-	-	-	-	-	-
10	44	44	12.00	4.00	29	18.50	4.5	-	-	-	-	-	-
10	45	44	12.50	3.00	29	19.00	3.0	-	-	-	-	-	-
11	25	27	11.25	3.00	17	18.25	4.0	12	26.75	3	36	36	36
11	34	36	11.50	2.75	24	17.50	2.5	17	25.00	4	24	36	36
11	35	37	11.50	3.00	24	18.00	3.0	17	25.75	4	24	36	36
11	38	40	11.00	2.00	25	17.75	3.0	17	26.50	4	24	36	36
11	44	48	11.25	2.50	30	18.00	3.0	21	26.00	4	24	36	36
11	45	49	11.25	3.00	31	17.75	4.0	22	25.50	3	24	36	36
12	25	-	-	-	19	16.25	4.0	12	24.50	3	36	36	36
12	34	-	-	-	26	16.00	4.0	18	23.50	4	24	36	36
12	35	-	-	-	26	16.50	4.0	19	23.00	3	24	36	36
12	38	-	-	-	27	16.25	4.5	20	22.25	4.5	24	36	36
12	44	-	-	-	33	16.25	4.0	24	22.50	5	24	30	36
12	45	-	-	-	35	15.75	3.0	25	22.25	3	24	30	36

MINIMUM LAP LENGTH (L)  
A. # 4 BARS : L = 22 INCHES  
B. # 5 BARS : L = 27 INCHES  
C. # 6 BARS : L = 32 INCHES

- NOTES:
1. THE MAXIMUM WIDTH BETWEEN LONGITUDINAL JOINTS SHALL NOT EXCEED 10'-0".
  2. ALL EARTHEN AREAS ARE TO BE HYDROMULCHED UNLESS SHOWN OTHERWISE ON DRAWINGS.
  3. CONTRACTOR MAY SAW CUT IN LIEU OF DEFORMED METAL STRIP.
  4. USE STRIP OF 500 GRASS TO PREVENT EROSION UNTIL STAND OF GRASS IS ESTABLISHED.
  5. AN EQUAL OR LARGER AREA OF WELDED REINFORCEMENT BAR CONFORMING TO ASTM A497, MAY BE SUBSTITUTED FOR REBAR LISTED IN TABLE 1.
  6. IF AVAILABLE ROW IS NOT SUFFICIENT TO ACCOMMODATE SIDEWALK WIDTH (SW) ACCORDING TO LDM REQUIREMENTS, ENGINEER SHALL OBTAIN A VARIANCE FROM THE CITY ENGINEER.
  7. REFER TO CONTRACT DRAWINGS FOR PAVEMENT WIDTH (PW) AND PAVEMENT THICKNESS (D), MEDIAN (M), PEDESTRIAN WALK (PW), SIDEWALK (SW), FRONTAGE BUFFER (FB), AND SAFETY BUFFER (SB) WIDTHS.

APPROVED BY: *Sulal Banwar* CITY ENGINEER  
APPROVED BY: *LEAHNG NGUYEN* CITY TRAFFIC ENGINEER

APPROVED BY: *Carla Hallock* DIRECTOR OF HOUSTON PUBLIC WORKS

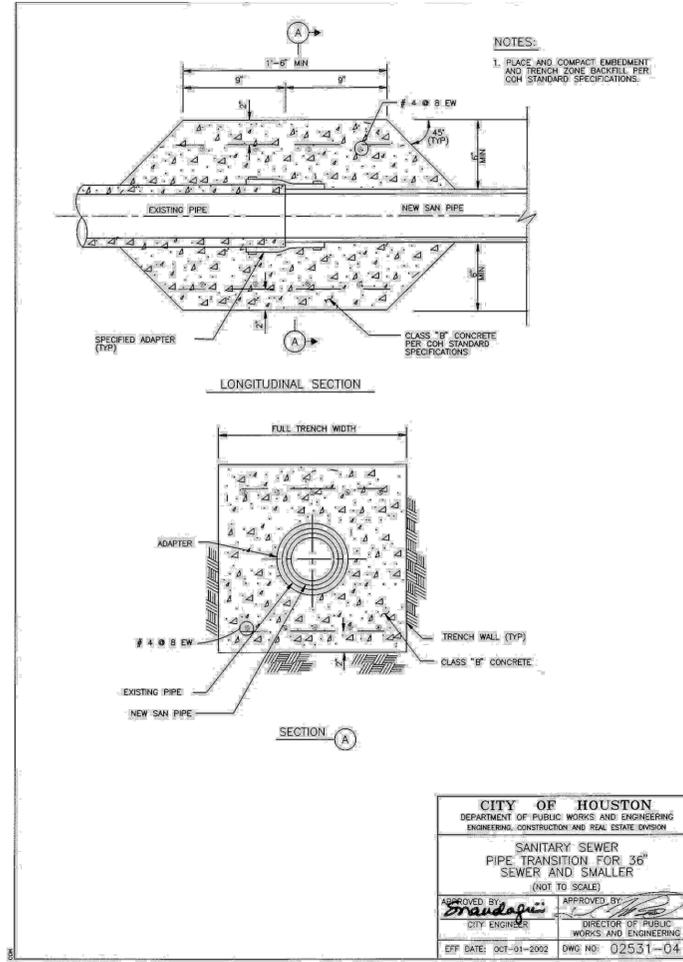
EFF DATE: NOV-27-2023 DWG NO: 02751-01

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS STANDARD

CONCRETE PAVEMENT DETAILS

FOR CITY OF HOUSTON USE ONLY

DRAWING SCALE: NOT TO SCALE



**CITY OF HOUSTON**  
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING  
ENGINEERING, CONSTRUCTION AND REAL ESTATE DIVISION

**SANITARY SEWER**  
PIPE TRANSITION FOR 36" SEWER AND SMALLER  
(NOT TO SCALE)

APPROVED BY: *Brandee* CITY ENGINEER  
APPROVED BY: *Carla Hallock* DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: OCT-01-2022 DWG NO: 02531-04

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: JANUARY 2026

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

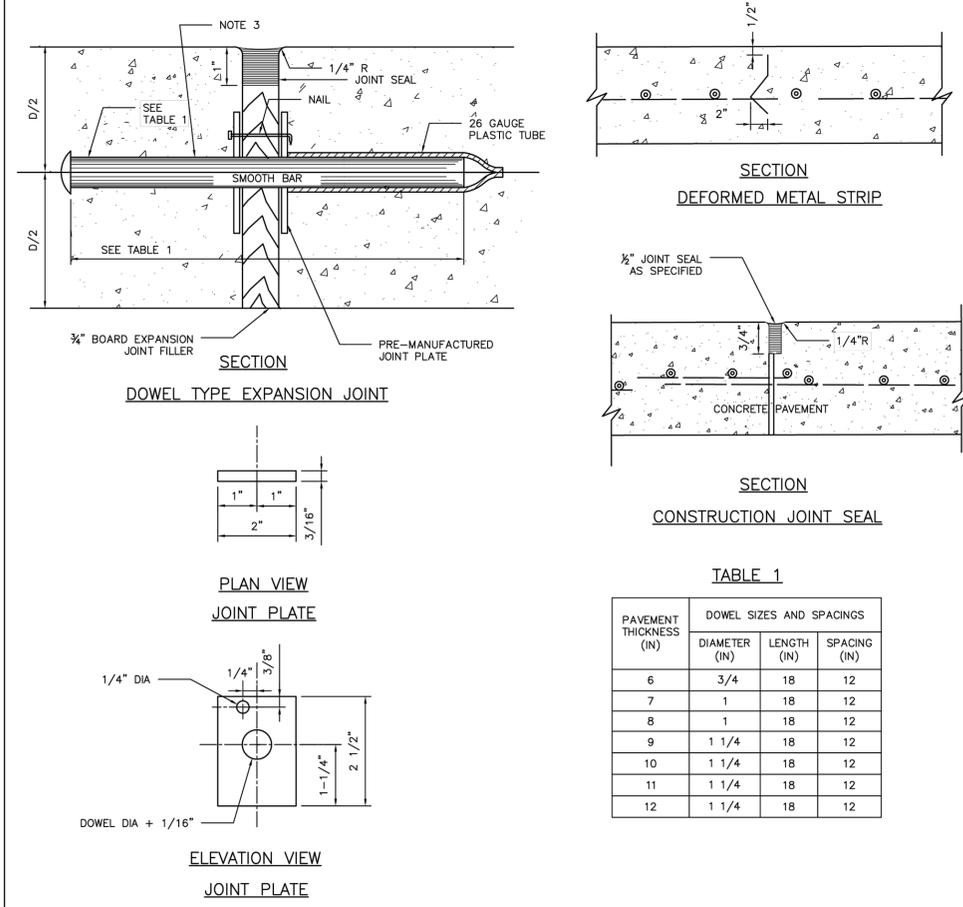
SCOTT STREET No. 1  
LIFT STATION REHABILITATION

CIVIL DETAILS  
SHEET 8 OF 16

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 0-C-29 SHEET NO. XX OF XXX  
FOR CITY OF HOUSTON USE ONLY



- NOTES:
1. STEEL TO MEET ASTM STANDARD SPECIFICATIONS FOR CONCRETE REINFORCING BARS. UNITS TO BE SPACED 12" CENTER ON CENTER.
  2. EXPANSION JOINT TO BE PLACED AT THE END OF EACH CURB RADIUS.
  3. CENTER DOWEL HORIZONTALLY ON JOINT.
  4. CENTER DOWEL VERTICALLY IN CONCRETE BASE. EXTEND THICKENED CONCRETE AS NEEDED TO MAINTAIN 3" MIN COVER.
  5. CITY OF HOUSTON APPROVED PRODUCTS MAY BE USED AS JOINT PLATE ALTERNATIVE.

TABLE 1

PAVEMENT THICKNESS (IN)	DOWEL SIZES AND SPACINGS	DIAMETER (IN)	LENGTH (IN)	SPACING (IN)
6	3/4	18	12	
7	1	18	12	
8	1	18	12	
9	1 1/4	18	12	
10	1 1/4	18	12	
11	1 1/4	18	12	
12	1 1/4	18	12	

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS STANDARD

PAVEMENT EXPANSION AND CONSTRUCTION JOINT DETAILS  
(SCALE: NOT TO SCALE)

APPROVED BY:

Designed by: *Sulal Banwar* CITY ENGINEER  
Designed by: *LEAHNG NGUYEN* CITY TRAFFIC ENGINEER

Designed by: *Carla Hallock* DIRECTOR OF HPW

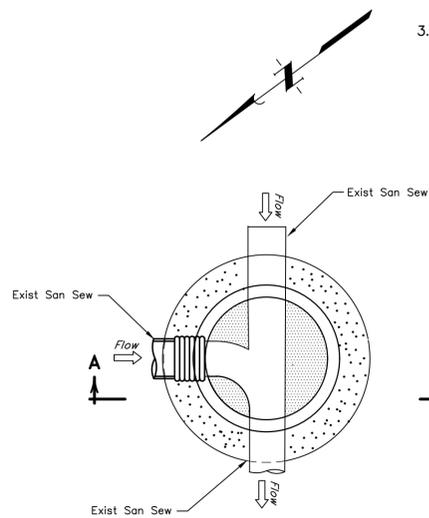
EFF DATE: NOV-27-2023 DWG NO: 02752-01

NOTE: THIS STANDARD IS GOVERNED BY THE TEXAS ENGINEERING PRACTICE ACT. THE DESIGN REQUIREMENTS ON THIS STANDARD DO NOT PURPORT TO ADDRESS ALL OF THE SAFETY CONCERNS ASSOCIATED WITH THE USE OF THE SAFETY CONCERNS ASSOCIATED WITH THEIR USE. THE ENGINEER OF RECORD (EOR) IS TO REVIEW THESE DESIGN REQUIREMENTS AND BY AUTHORIZING THEIR USE, ACCEPTS RESPONSIBILITY FOR THEIR APPLICABILITY, ADEQUACY AND SAFETY. NO WARRANTY OF ANY KIND IS MADE BY THE CITY OF HOUSTON FOR ANY PURPOSES WHATSOEVER. THE CITY OF HOUSTON ASSUMES NO RESPONSIBILITY FOR INADEQUATE RESULTS OF DAMAGES RESULTING FROM ITS USE.



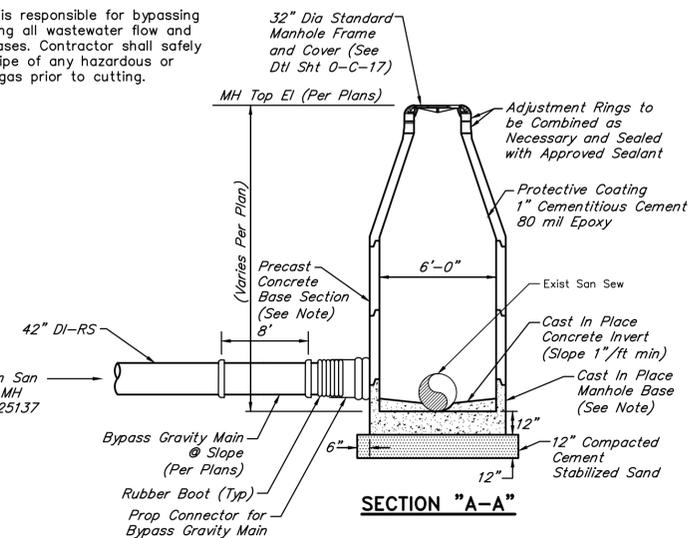
**NOTES:**

1. Contractor to manufacture portion of precast manhole walls to accommodate existing San Sew line. Pour base under existing line and place pre-cast manhole into the wet cement. Fill in around existing line with grout.
2. Contractor to cut through exist San Sew line to accommodate doghouse man hole and allow flow to pass through.
3. Contractor is responsible for bypassing and removing all wastewater flow and potential gases. Contractor shall safely clear the pipe of any hazardous or flammable gas prior to cutting.

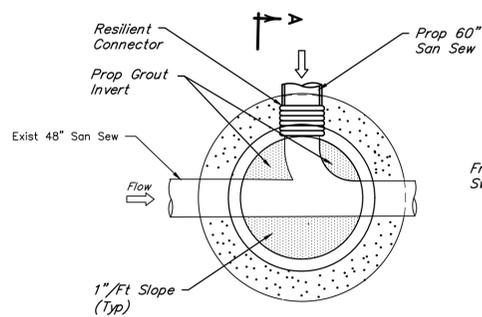


**FOUNDATION PLAN**

**DOGHOUSE MANHOLE No. 1 DETAIL**  
NOT TO SCALE

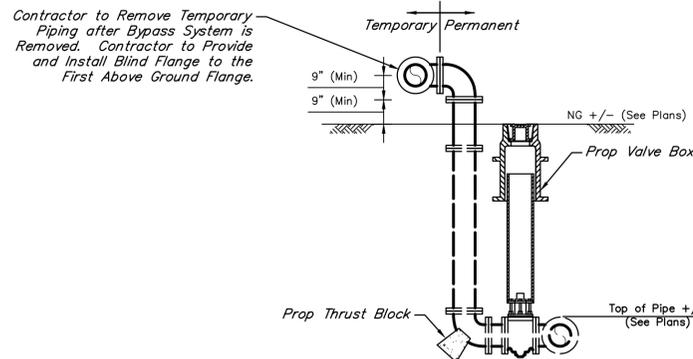
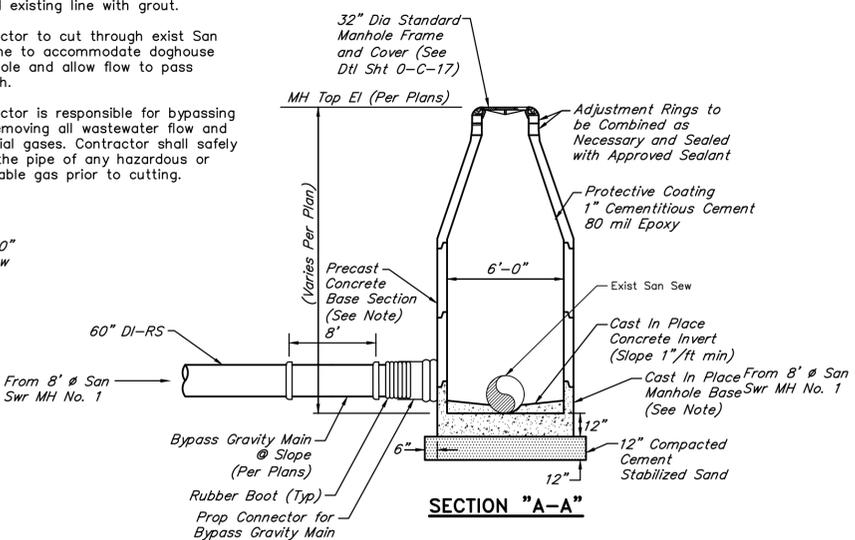


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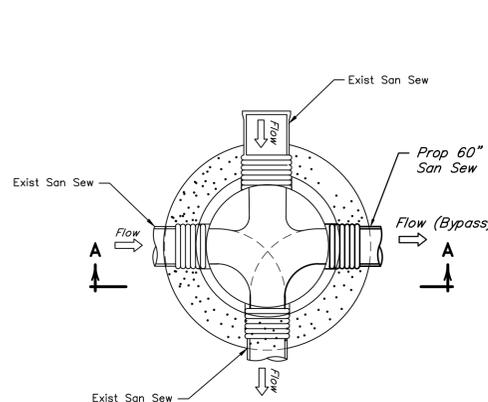


**FOUNDATION PLAN**

**DOGHOUSE MANHOLE No. 2 DETAIL**  
NOT TO SCALE



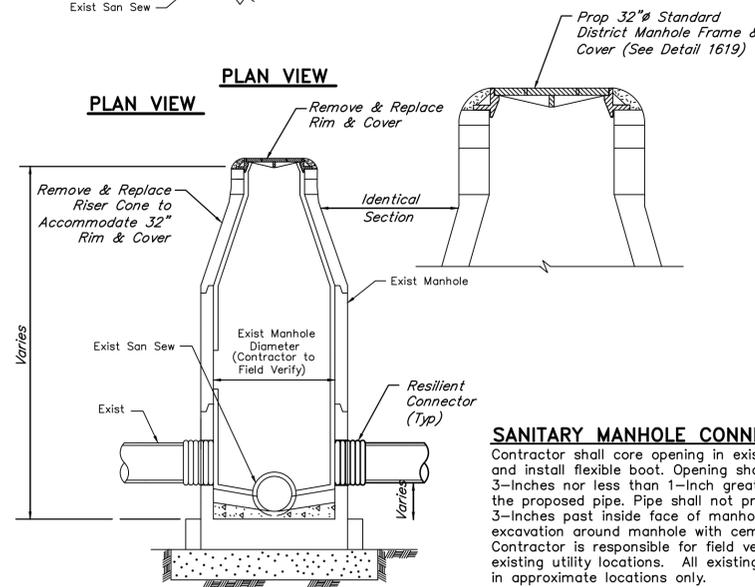
**UNDERGROUND PIPING PROFILE**  
**PERMANENT BYPASS CONNECTION JUNCTION**  
NOT TO SCALE



**PLAN VIEW**

**NOTES:**

1. Any damage to existing manhole is responsibility of Contractor. Contractor to perform repairs or manhole replacement at no additional cost.
2. Provide backfill to match adjacent pipe trench backfill per standard specification.



**SECTION "A-A"**  
**CONNECTION TO EXISTING MANHOLE**  
NOT TO SCALE

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: JANUARY 2026



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CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

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JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

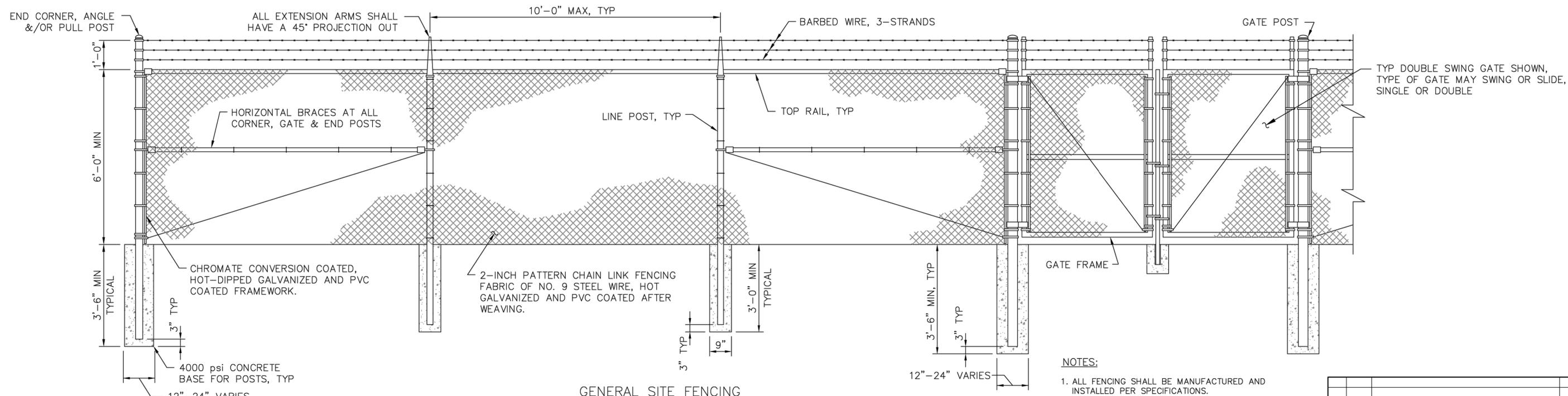
SCOTT STREET No. 1  
LIFT STATION REHABILITATION

CIVIL DETAILS  
SHEET 10 OF 16

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 0-C-31 SHEET NO. XX OF XXX  
FOR CITY OF HOUSTON USE ONLY



- NOTES:**
1. ALL FENCING SHALL BE MANUFACTURED AND INSTALLED PER SPECIFICATIONS.
  2. PROVIDE **DARK GREEN** PVC COATED FENCE FABRIC, POSTS AND HARDWARE. PROVIDE **DARK GREEN** PVC FENCE SLATS.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: JANUARY 2026



Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

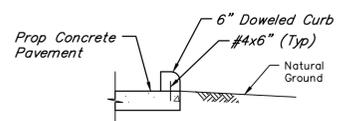
SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

CIVIL DETAILS  
 SHEET 11 OF 16

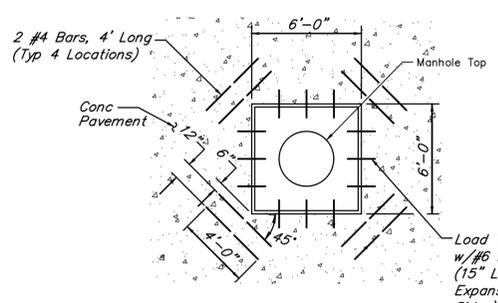
CITY OF HOUSTON  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX  
 CATEGORY NO. 0-C-32 SHEET NO. XX OF XXX  
 FOR CITY OF HOUSTON USE ONLY

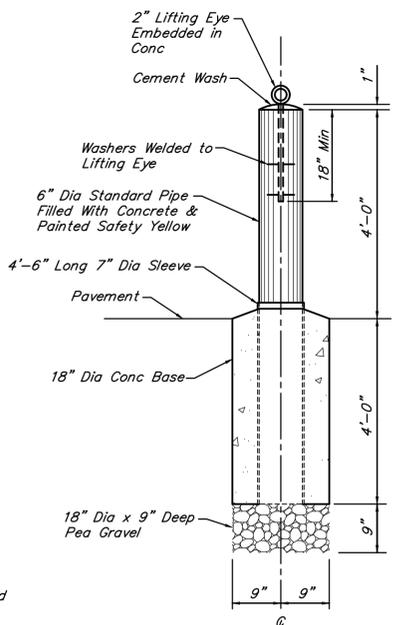
**DETAIL 17**  
 ZOC08



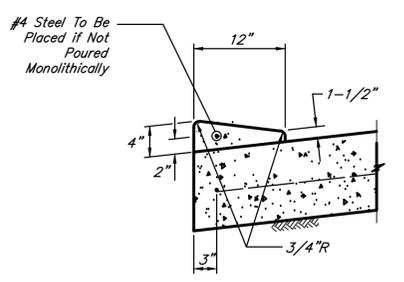
**CONCRETE CURB DETAIL**  
 NOT TO SCALE



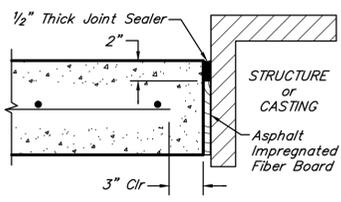
**PAVEMENT BLOCK OUT DETAIL**  
 NOT TO SCALE



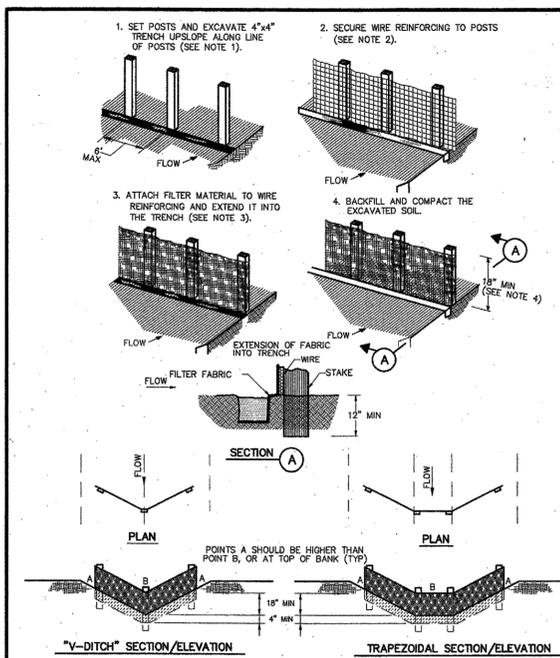
**REMOVABLE BOLLARD DETAIL**  
 NOT TO SCALE



**TYPICAL 4"x12" CONCRETE ROLLOVER CURB DETAIL**  
 NOT TO SCALE



**ISOLATION JOINT DETAIL**  
 NOT TO SCALE

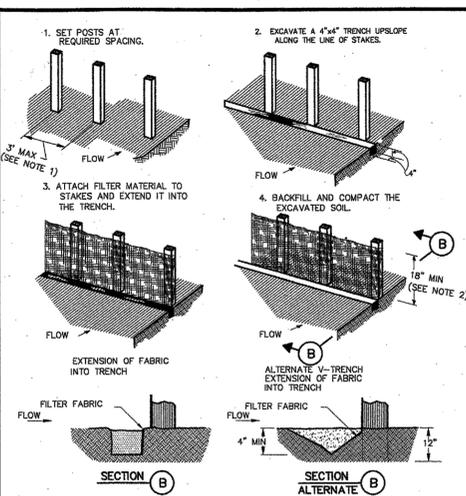


**CONSTRUCTION NOTES:**

- SET 2 INCH BY 2 INCH WOODEN STAKES SPACED A MAX OF 6 FEET APART AND EMBEDDED A MIN OF 12 INCHES.
- WOVEN WIRE REINFORCING TO BE FASTENED SECURELY TO BARRIER POSTS WITH STAPLES.
- FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE REINFORCING WITH TIES SPACED EVERY 24 INCHES AT TOP AND MIDSECTION.
- MINIMUM HEIGHT OF FILTER SHOULD BE 18 INCHES AND A MAXIMUM OF 36 INCHES ABOVE NATURAL GROUND.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
- SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

**REINFORCED FILTER FABRIC BARRIER**

SYMBOL:

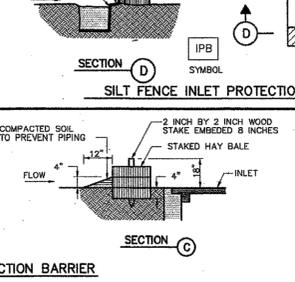
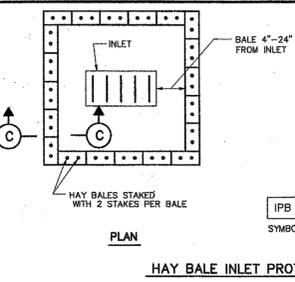
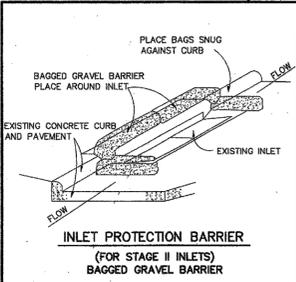


**CONSTRUCTION NOTES:**

- 2 INCH THICK BY 2 INCH WOODEN STAKES TO BE SET AT MAX SPACING OF 3 FEET AND EMBEDDED A MIN OF 8 INCHES. IF PREASSEMBLED BARRIER WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAX.
- ATTACH FILTER FABRIC TO WOODEN STAKES. FILTER FABRIC BARRIER SHALL HAVE A MIN HEIGHT OF 18 INCHES AND MAX HEIGHT OF 36 INCHES ABOVE NATURAL GROUND.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
- SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

**FILTER FABRIC BARRIER**

SYMBOL:



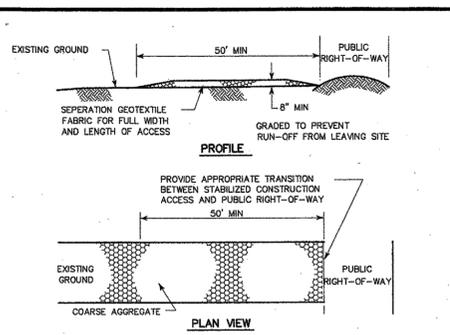
CITY OF HOUSTON  
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

**STORM WATER POLLUTION PREVENTION PLAN DETAILS**  
(NOT TO SCALE)

APPROVED: CITY ENGINEER

DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2010 DWG NO: 01571-01



**CONSTRUCTION NOTES:**

- LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN 50 FEET.
- THICKNESS SHALL BE NOT LESS THAN 8 INCHES.
- WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
- STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION ACCESS, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
- STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMMODATE A WASHING AREA. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE WASHING AREA.
- COH STANDARD SPECIFICATION FOR STABILIZED CONSTRUCTION ACCESS.
- STABILIZED CONSTRUCTION ACCESS SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.

**STABILIZED CONSTRUCTION ACCESS**

SYMBOL:

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: JANUARY 2026

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: JMMUSSO

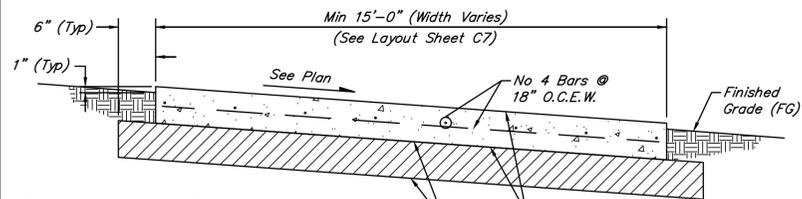
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION

CIVIL DETAILS  
SHEET 12 OF 16

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX  
CATEGORY NO. 0-C-33 SHEET NO. --- OF XXX  
FOR CITY OF HOUSTON USE ONLY



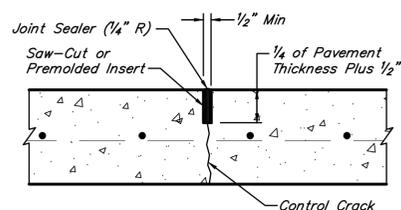
6" Subgrade Chemically Treated w/ 6% Lime. Compact Treated Subgrade to 95% Standard Proctor (ASTM D 698). The Compacted Moisture Shall be ±2% of the Optimum Moisture Content.

**NOTES:**

1. Driveway adjacent to proposed plant structures shall have isolation joints (See detail this sheet).
2. Subgrade shall be prepared in accordance with applicable sections of the geotechnical investigation ALPHA Report No. H221795 by ALPHA Testing dated July 21, 2022.

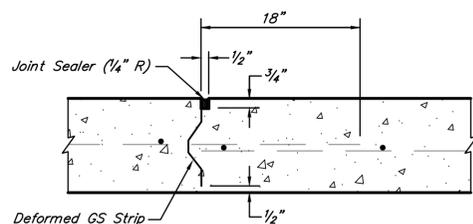
**TYPICAL CONCRETE PAVEMENT SECTION**

NOT TO SCALE



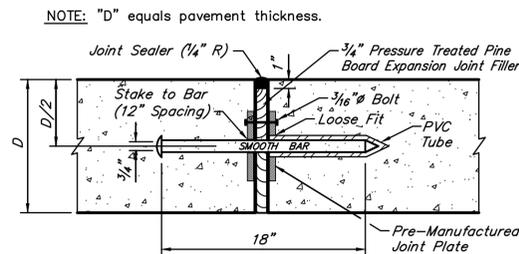
**SAW-CUT CONTROL JOINT**

NOT TO SCALE



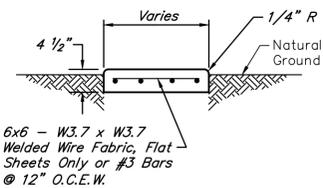
**KEYED CONSTRUCTION JOINT**

NOT TO SCALE



**EXPANSION JOINT**

NOT TO SCALE

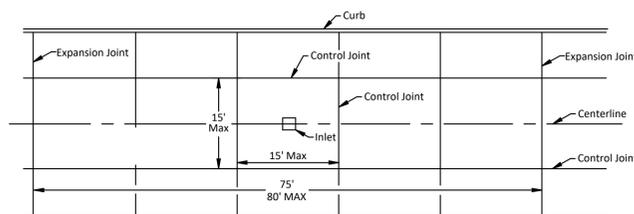


**SIDEWALK NOTES:**

1. Provide tooled or saw-cut control or keyed construction joints at every 4' and expansion joints at every 20'. (See details this sheet).
2. Slope concrete sidewalks 1/4" per foot to drain away from concrete slabs and foundations toward the proposed drainage system.

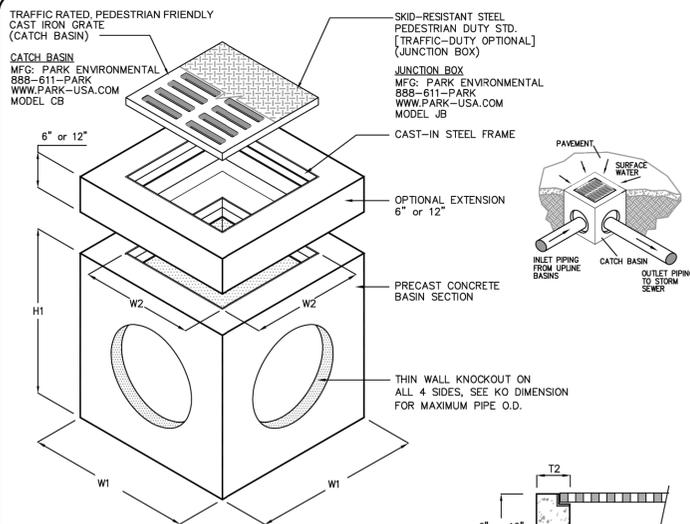
**TYPICAL CONCRETE PAD AND SIDEWALK DETAIL**

NOT TO SCALE



**JOINT SPACING AND LAYOUT DETAIL FOR CONCRETE PAVEMENT**

NOT TO SCALE



MODEL #	DIMENSIONS										GRATE SIZE	WEIGHT LBS
CATCH BASIN BOX #	W1	W2	H1	H2	T1	T2	KO	T1	T2	KO		
CB-12	15"	10"	21"	18"	3"	2 1/2"	10"	12"x12"x1"			180	
CB-14	20"	14"	28"	24"	4"	3"	12"	14"x14"x1 1/2"			600	
CB-18	24"	18"	34"	30"	4"	4"	15"	18"x18"x1 1/2"			1,000	
CB-20	26"	18"	34"	30"	4"	4"	17"	20"x20"x1 1/2"			1,335	
CB-24	32"	22"	41"	36"	5"	5"	22"	24"x24"x2"			2,245	
CB-27	37"	25"	42"	36"	6"	6"	24"	27"x27"x2"			2,875	
CB-30	42"	30"	42"	36"	6"	6"	30"	32"x32"x2"			3,675	
CB-36	48"	36"	42"	36"	6"	6"	32"	38"x38"x2"			4,585	
CB-48	60"	48"	48"	36"	6"	6"	44"	38"x38"x2"			7,395	

1. CB12 CATCHBASIN IS RATED FOR PEDESTRIAN LOADING. ALL OTHERS ARE TRAFFIC DUTY.
2. ALL JUNCTION BOXES ARE STANDARD PEDESTRIAN DUTY OR OPTIONAL TRAFFIC DUTY.



**SPECIFICATIONS**

**CONCRETE:** Class II concrete with design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth.

**REINFORCEMENT:** Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.

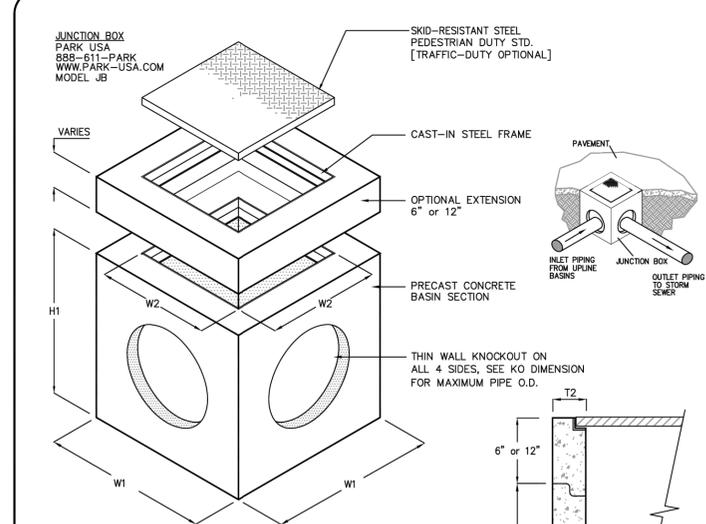
**C.I. CASTINGS:** Cast iron frames and grates are manufactured of grey cast iron conforming to ASTM A48-76 Class 35.



**"Expect the Best"**

**CATCH BASIN MODEL CB - 12" THRU 36"**  
**JUNCTION BOX MODEL JB - 12" THRU 36"**

SCALE: NONE      DWG. NO.: CBJB36  
DATE: 2010      REV.: A



MODEL #	DIMENSIONS										GRATE SIZE	WEIGHT LBS
JUNCTION BOX #	W1	W2	H1	H2	T1	T2	KO	T1	T2	KO		
JB-12	15"	10"	21"	18"	3"	2 1/2"	10"	12"x12"x1"			180	
JB-14	20"	14"	28"	24"	4"	3"	12"	14"x14"x1 1/2"			600	
JB-18	24"	18"	34"	30"	4"	4"	15"	18"x18"x1 1/2"			1,000	
JB-20	26"	18"	34"	30"	4"	4"	17"	20"x20"x1 1/2"			1,335	
JB-24	32"	22"	41"	36"	5"	5"	22"	24"x24"x2"			2,245	
JB-27	37"	25"	42"	36"	6"	6"	24"	27"x27"x2"			2,875	
JB-30	42"	30"	42"	36"	6"	6"	30"	32"x32"x2"			3,675	
JB-36	48"	36"	42"	36"	6"	6"	32"	38"x38"x2"			4,585	
JB-48	60"	48"	48"	36"	6"	6"	44"	38"x38"x2"			7,395	

1. ALL JUNCTION BOXES ARE STANDARD PEDESTRIAN DUTY OR OPTIONAL TRAFFIC DUTY.



**SPECIFICATIONS**

**CONCRETE:** Class I/II concrete with design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth.

**REINFORCEMENT:** Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.

**COVER & FRAME:** All steel fabrication shall be in accordance to AWA D1.1. Steel shall be ASTM A36 carbon steel, and hot-dipped galvanized after fabrication in accordance to ASTM A123.

PROJECT: \_\_\_\_\_  
CUSTOMER: \_\_\_\_\_  
ENGINEER: \_\_\_\_\_  
ORDER #: \_\_\_\_\_  
PROJ #: \_\_\_\_\_  
DATE: \_\_\_\_\_

888.611.PARK  
www.park-usa.com

**PARK USA**  
DESIGN FOR WATER

JUNCTION BOX  
MODEL JB - 12" THRU 48"

PM: \_\_\_\_\_      DRN: \_\_\_\_\_      ENG: \_\_\_\_\_      DWG. NO.: \_\_\_\_\_      REV.: \_\_\_\_\_  
DATE: 06/16      JB-01      A

**NOTICE:**  
FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811

**VERIFICATION OF PRIVATE UTILITY LINES**

Date: \_\_\_\_\_  
CenterPoint Energy natural gas utilities shown. (Gas services lines are not shown). This signature not to be used for conflict verification. Signature valid for six months.

Date: \_\_\_\_\_  
CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY. (This Signature verifies existing underground facilities - not to be used for conflict verification.) Signature valid for six months.

Date: \_\_\_\_\_  
Approved for AT&T Telecom / SWBT underground conduit facilities only. Signature valid for one year.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: LAUREN J. MUDD, P.E.  
P.E. Serial No.: 153971  
Date: JANUARY 2026

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

**CITY OF HOUSTON**  
HARRIS COUNTY, TEXAS

DATE: JANUARY 26      DGN BY: JK  
JOB NO: 00050-0099-01      DWG BY: JLG

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

**SCOTT STREET No. 1**  
**LIFT STATION REHABILITATION**

**CIVIL DETAILS 13 OF 16**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE: \_\_\_\_\_      HORIZ: \_\_\_\_\_      VERT: \_\_\_\_\_  
CATEGORY NO. **0-C-34**      SHEET NO. --- OF XX  
FOR CITY OF HOUSTON USE ONLY

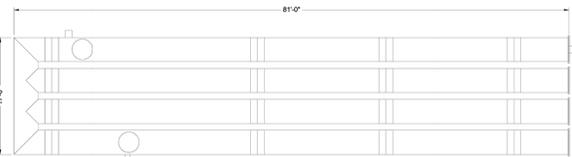
**PROJECT SUMMARY**

**CALCULATION DETAILS**  
 •LOADING = HSDHS25  
 •APPROX. LINEAR FOOTAGE = 327 LF

**STORAGE SUMMARY**  
 •STORAGE VOLUME REQUIRED = 4,048 CF  
 •PIPE STORAGE VOLUME = 3,146 CF  
 •BACKFILL STORAGE VOLUME = 88 CF  
 •TOTAL STORAGE PROVIDED = 4,086 CF  
 •STONE VOID = 42%

**PIPE DETAILS**  
 •DIAMETER = 42"  
 •CORRUGATION = 2.25x12  
 •GAGE = 16  
 •COATING = ALZ  
 •WALL TYPE = XFILTRATION  
 •BARREL SPACING = 12"

**BACKFILL DETAILS**  
 •WIDTH AT ENDS = 12"  
 •ABOVE PIPE = 12"  
 •WIDTH AT SIDES = 12"  
 •BELOW PIPE = 0"



**NOTES**

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE. ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A886.
- ALL RISERS AND STUBS ARE 2 1/2" x 1/2" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAIL PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- BAND TYPE TO BE DETERMINED UPON FINAL DESIGN.
- THE PROJECT SUMMARY IS REFLECTIVE OF THE DYODS DESIGN. QUANTITIES ARE APPROX. AND SHOULD BE VERIFIED UPON FINAL DESIGN AND APPROVAL. FOR EXAMPLE, TOTAL EXCAVATION DOES NOT CONSIDER ALL VARIABLES SUCH AS SHORING AND ONLY ACCOUNTS FOR MATERIAL WITHIN THE ESTIMATED EXCAVATION FOOTPRINT.
- THESE DRAWINGS ARE FOR CONCEPTUAL PURPOSES AND DO NOT REFLECT ANY LOCAL PREFERENCES OR REGULATIONS. PLEASE CONTACT YOUR LOCAL CONTECH REP FOR MODIFICATIONS.

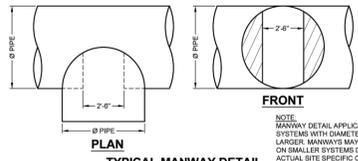
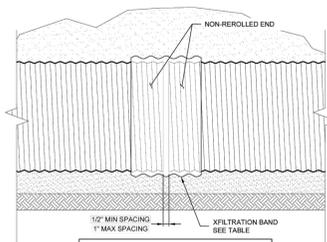
**CONTECH**  
 ENGINEERED SOLUTIONS LLC  
 8025 Centra Pointe Dr., Suite 400, West Chester, OH 45380  
 800-338-1122 513-645-7000 513-645-7993 FAX

**CONTECH**  
 CMP DETENTION SYSTEMS  
 CONTECH  
 DYODS  
 CONTECH

ASSEMBLY  
 SCALE: 1" = 10'

DYO92748 Scott Street Lift Station  
 42" Diameter Solid 1-14-25  
 Houston, TX  
 DETENTION SYSTEM

PROJ. NO.	REV. NO.	DATE
114208	01	01/26/25
DESIGNED BY	DRAWN BY	DATE
010	010	01/26/25
CHECKED BY	APPROVED BY	DATE
010	010	01/26/25
SHEET NO.	1	



DIAMETER	BAND	FASTENER
UP TO 64"	5-C OR H-12	STD. PLANT FASTENER WITH NO GASKET
64" >	10-C	STD. PLANT FASTENER WITH NO GASKET

DIAMETER	BAND	FASTENER
UP TO 64"	5-C OR H-12	STD. PLANT FASTENER WITH NO GASKET
64" >	10-C	STD. PLANT FASTENER WITH NO GASKET

DIAMETER	BAND	FASTENER
UP TO 64"	5-C OR H-12	STD. PLANT FASTENER WITH NO GASKET
64" >	10-C	STD. PLANT FASTENER WITH NO GASKET

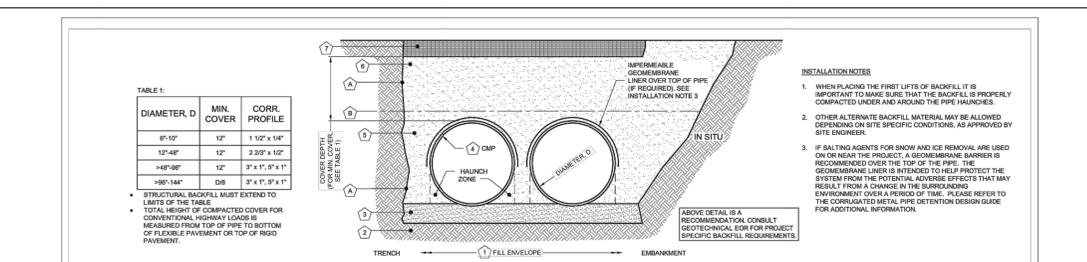
DIAMETER	BAND	FASTENER
UP TO 64"	5-C OR H-12	STD. PLANT FASTENER WITH NO GASKET
64" >	10-C	STD. PLANT FASTENER WITH NO GASKET

**CONTECH**  
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**CONTECH**  
 CMP DETENTION SYSTEMS  
 CONTECH  
 DYODS  
 CONTECH

PROJ. NO.	REV. NO.	DATE
114208	01	01/26/25
DESIGNED BY	DRAWN BY	DATE
010	010	01/26/25
CHECKED BY	APPROVED BY	DATE
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SHEET NO.	1	

PROJ. NO.	REV. NO.	DATE
114208	01	01/26/25
DESIGNED BY	DRAWN BY	DATE
010	010	01/26/25
CHECKED BY	APPROVED BY	DATE
010	010	01/26/25
SHEET NO.	1	



MATERIAL LOCATION	MATERIAL SPECIFICATION	DESCRIPTION
1 FILL ENVELOPE WIDTH	PER ENGINEER OF RECORD	MINIMUM TRENCH WIDTH MUST ALLOW ROOM FOR PROPER COMPACTION OF HAUNCH MATERIALS UNDER THE PIPE. THE SUGGESTED MINIMUM TRENCH WIDTH, OR EOR RECOMMENDATION: PIPE ≤ 12" 1.5D + 12" PIPE > 12" 1.5D + 12"
2 FOUNDATION	AASHTO 2B.5.2 - PER ENGINEER OF RECORD	PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND FOUNDATION RECONSTRUCTED BACK TO GRADE WITH A FILL MATERIAL APPROVED BY THE ENGINEER OF RECORD.
3 BEDDING	AASHTO M 43, 3, 397, 4, 407, 5, 96, 57	ENGINEER OF RECORD TO DETERMINE IF BEDDING IS REQUIRED. PIPE MAY BE PLACED ON A RELATIVELY LOOSE, NATIVE SUTABLE, WELL GRADED GRANULAR MATERIAL THAT IS ROUGHLY SHAPED TO FIT THE BOTTOM OF THE PIPE. 2" MIN. DEPTH. THE BEDDING MATERIAL MAY BE SUITABLE OPEN GRADED GRANULAR BEDDING CONFORMING TO AASHTO SOIL CLASSIFICATIONS A1, A2, OR A3 WITH MAXIMUM PARTICLE SIZE OF 3/8" PER AASHTO 2B.5.1
4 BACKFILL	FREE DRAINING, ANGULAR WASHED STONE PER AASHTO M 43, 3, 397, 4, 407, 5, 96, 57 WITH 1/2" - 2 1/2" PARTICLE SIZE OR APPROVED EQUIVALENT REGIONAL EQUIVALENTS INCLUDE MIDDY 5A, 5B, OR 5C.	HAUNCH ZONE MATERIAL SHALL BE HAND SHOVELED OR SHOVEL SLICED INTO PLACE TO ALLOW FOR PROPER COMPACTION WITHOUT SOFT SPOTS. BACKFILL SHALL BE PLACED IN 6" ±, LOOSE LIFTS AND COMPACTED TO 90% STANDARD PROCTOR PER AASHTO T 99. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO (2) 18" DIFFERENTIAL BETWEEN ANY OF THE PIPES AT ANY TIME DURING THE BACKFILL PROCESS. THE BACKFILL SHOULD BE ADVANCED ALONG THE LENGTH OF THE SYSTEM TO AVOID DIFFERENTIAL LOADING, WHERE CONVENTIONAL COVER TRENCHING IS NOT PRACTICAL, THE MATERIAL SHALL BE MECHANICALLY COMPACTED UNTIL NO FURTHER RELEASE OF MATERIAL IS OBSERVED UNDER THE COMPACTOR.
5 COVER MATERIAL	UP TO MIN. COVER - AASHTO M 146 A.1, A.2, A.3 ABOVE MIN. COVER - PER ENGINEER OF RECORD	COVER MATERIAL MAY INCLUDE NON-BITUMINOUS, GRANULAR ROADBASE MATERIAL WITHIN MIN. COVER LIMITS
6 ROAD OR FLEXIBLE PAVEMENT (IF APPLICABLE)	PER ENGINEER OF RECORD	FLEXIBLE PAVEMENT SHOULD NOT BE COUNTED AS PART OF THE FILL HEIGHT OVER THE CMP. FINAL BACKFILL MATERIAL SELECTION AND COMPACTION REQUIREMENTS SHALL FOLLOW THE PROJECT PLAN AND SPECIFICATIONS PER THE ENGINEER OF RECORD.
7 OPTIONAL SIDE GEOTEXTILE	NONE	GEOTEXTILE LAYER IS RECOMMENDED ON SIDES OF EXCAVATION TO PREVENT SOIL MIGRATION.
8 OPTIONAL GEOTEXTILE BETWEEN LAYERS	NONE	IF SOIL TYPES DIFFER AT ANY POINT ABOVE PIPE INVERT, A GEOTEXTILE LAYER IS RECOMMENDED TO BE PLACED BETWEEN THE LAYERS TO PREVENT SOIL MIGRATION.

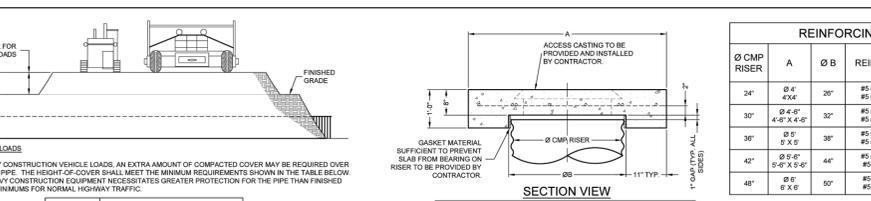
**CONTECH**  
 ENGINEERED SOLUTIONS LLC  
 8025 Centra Pointe Dr., Suite 400, West Chester, OH 45380  
 800-338-1122 513-645-7000 513-645-7993 FAX

**CONTECH**  
 CMP DETENTION SYSTEMS  
 CONTECH  
 DYODS  
 CONTECH

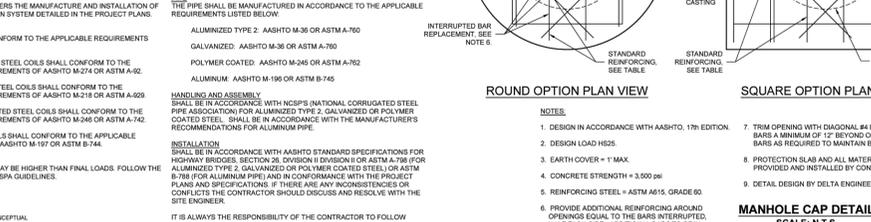
ASSEMBLY  
 SCALE: 1" = 10'

XFILTRATION RETENTION SYSTEM DETAILS

PROJ. NO.	REV. NO.	DATE
114208	01	01/26/25
DESIGNED BY	DRAWN BY	DATE
010	010	01/26/25
CHECKED BY	APPROVED BY	DATE
010	010	01/26/25
SHEET NO.	1	



PIPE SPAN, INCHES	AXLE LOADS (kips)
18-50	50.75
75-110	110-150
MINIMUM COVER (FT)	
12-42	2.0
48-72	3.0
78-120	3.5
126-144	4.5



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VERIFICATION OF PRIVATE UTILITY LINES			
DATE:	BY:	APP.	
CenterPoint Energy natural gas utilities shown. (See notes lines are not shown). This signature not to be used for conflict verification. Signature valid for six months.			
CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY. (This Signature verifies existing underground facilities - not to be used for conflict verification.) Signature valid for six months.			
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**INTERIM REVIEW**  
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 Engineer: LAUREN J. MUDD, P.E.  
 P.E. Serial No.: 153971  
 Date: JANUARY 2026

**QUIDDITY**  
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CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 26 DGN BY: JK  
 JOB NO: 00050-0099-01 DWG BY: JLG

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

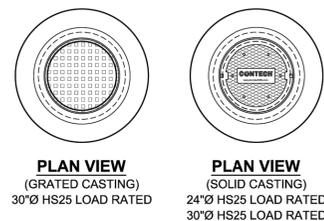
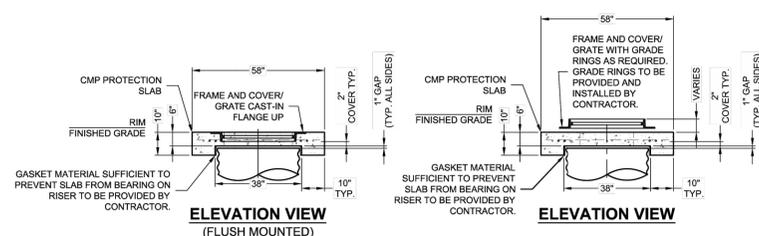
SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

CIVIL DETAILS 14 OF 16

**CITY OF HOUSTON**  
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DRAWING SCALE HORIZ: VERT:  
 CATEGORY NO. 0-C-35 SHEET NO. --- OF XX  
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\\SQUARKETE\NET\CONTECH\COMMON\CAD\DRAWINGS\002 CMP DETENTION\REFERENCE\SEALY CMP MANHOLE CAP DETAIL.DWG 98 92 00 CMP RISER CAPS - SEALY, TX.DWG 2/23/2022 11:49 AM



**FABRICATION NOTES:**

1. CONCRETE STRENGTH = 4,000 PSI
2. REINFORCING STEEL - ASTM A615, GRADE 60, OR EQUIVALENT WELDED WIRE FABRIC.
3. NICE LIGHT BROOM FINISH FOR UNITS W/ CAST-IN FRAME AND COVER
4. LIFTERS IN SIDE FOR UNITS W/ CAST-IN FRAME AND COVER AND LIFTERS IN TOP SLAB FOR UNITS W/ SEPARATE COVER

**GENERAL NOTES:**

1. DESIGN LOAD HS20/HS25
2. EARTH COVER = 1' MAX
3. RISER CAP MUST BE ADEQUATELY SUPPORTED WITH PROPER BEDDING AND BEARING PRESSURE OF 3350 PSF AS TO NOT TRANSFER LOADS ONTO RISER.
4. HEAVY PICK WEIGHT = 1,900 LBS

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58" OD CMP RISER CAP  
UP TO 36" RISERS  
PRECASTER: SEALY, TX

**CONTECH**  
CMP DETENTION SYSTEMS

DATE: 04/07/2021	SCALE: NONE	PROJECT No.:	SEQUENCE No.:	DRAWN: TJS	CHECKED: KMR
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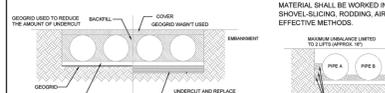
**CMP DETENTION INSTALLATION GUIDE**

PROPER INSTALLATION OF A FLEXIBLE UNDERGROUND DETENTION SYSTEM WILL ENSURE LONG TERM PERFORMANCE. THE CONFIGURATION OF THESE SYSTEMS OFTEN REQUIRES SPECIAL CONSTRUCTION PRACTICES THAT DIFFER FROM CONVENTIONAL FLEXIBLE PIPE CONSTRUCTION. CONTECH ENGINEERED SOLUTIONS STRONGLY SUGGESTS SCHEDULING A PRE-CONSTRUCTION MEETING WITH YOUR LOCAL SALES ENGINEER TO DETERMINE IF ADDITIONAL MEASURES, NOT COVERED IN THIS GUIDE, ARE APPROPRIATE FOR YOUR SITE.

**FOUNDATION**

CONSTRUCT A FOUNDATION THAT CAN SUPPORT THE DESIGN LOADING APPLIED BY THE PIPE AND ADJACENT BACKFILL WEIGHT AS WELL AS MAINTAIN ITS INTEGRITY DURING CONSTRUCTION.

IF SOFT OR UNSUITABLE SOILS ARE ENCOUNTERED, REMOVE THE POOR SOILS DOWN TO A SUITABLE DEPTH AND THEN BUILD UP TO THE APPROPRIATE ELEVATION WITH A COMPETENT BACKFILL MATERIAL. THE STRUCTURAL FILL MATERIAL GRADATION SHOULD NOT ALLOW THE MIGRATION OF FINES, WHICH CAN CAUSE SETTLEMENT OF THE DETENTION SYSTEM OR PAVEMENT ABOVE. IF THE STRUCTURAL FILL MATERIAL IS NOT COMPATIBLE WITH THE UNDERLYING SOILS AN ENGINEERING FABRIC SHOULD BE USED AS A SEPARATOR. IN SOME CASES, USING A STIFF REINFORCING GEGRID REDUCES OVER EXCAVATION AND REPLACEMENT FILL QUANTITIES.

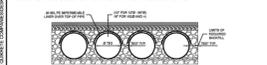


GRADE THE FOUNDATION SUBGRADE TO A UNIFORM OR SLIGHTLY SLOPING GRADE. IF THE SUBGRADE IS CLAY OR RELATIVELY NON-POROUS AND THE CONSTRUCTION SEQUENCE WILL LAST FOR AN EXTENDED PERIOD OF TIME, IT IS BEST TO SLOPE THE GRADE TO ONE END OF THE SYSTEM. THIS WILL ALLOW EXCESS WATER TO DRAIN QUICKLY, PREVENTING SATURATION OF THE SUBGRADE.

**GEOMEMBRANE BARRIER**

A SITE'S RESISTIVITY MAY CHANGE OVER TIME WHEN VARIOUS TYPES OF SALTING AGENTS ARE USED, SUCH AS ROAD SALTS FOR DEICERS. IF SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE, A GEOMEMBRANE BARRIER IS RECOMMENDED WITH THE SYSTEM. THE GEOMEMBRANE LINER IS INTENDED TO HELP PROTECT THE SYSTEM FROM THE POTENTIAL ADVERSE EFFECTS THAT MAY RESULT FROM THE USE OF SUCH AGENTS INCLUDING PREMATURE CORROSION AND REDUCED ACTUAL SERVICE LIFE.

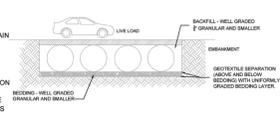
THE PROJECT'S ENGINEER OF RECORD IS TO EVALUATE WHETHER SALTING AGENTS WILL BE USED ON OR NEAR THE PROJECT SITE, AND USE HIS/HER BEST JUDGEMENT TO DETERMINE IF AN ADDITIONAL PROTECTIVE MEASURE IS REQUIRED. BELOW IS A TYPICAL DETAIL SHOWING THE PLACEMENT OF A GEOMEMBRANE BARRIER FOR PROJECTS WHERE SALTING AGENTS ARE USED ON OR NEAR THE PROJECT SITE.



**IN-SITU TRENCH WALL**

IF EXCAVATION IS REQUIRED, THE TRENCH WALL NEEDS TO BE CAPABLE OF SUPPORTING THE LOAD THAT THE PIPE BEARS AS THE SYSTEM IS LOADED. IF SOILS ARE NOT CAPABLE OF SUPPORTING THESE LOADS, THE PIPE CAN DEFLECT. PERFORM A SIMPLE SOIL PRESSURE CHECK USING THE APPLIED LOADS TO DETERMINE THE LIMITS OF EXCAVATION BEYOND THE SPRING LINE OF THE OUTER MOST PIPES.

IN MOST CASES THE REQUIREMENTS FOR A SAFE WORK ENVIRONMENT AND PROPER BACKFILL PLACEMENT AND COMPACTION TAKE CARE OF THIS CONCERN.



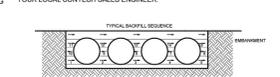
**CONSTRUCTION LOADING**

TYPICALLY, THE MINIMUM COVER SPECIFIED FOR A PROJECT ASSUMES H-20 LIVE LOAD. BECAUSE CONSTRUCTION LOADS OFTEN EXCEED DESIGN LIVE LOADS, INCREASED TEMPORARY MINIMUM COVER REQUIREMENTS ARE NECESSARY. SINCE CONSTRUCTION EQUIPMENT VARIES FROM JOB TO JOB, IT IS BEST TO ADDRESS EQUIPMENT SPECIFIC MINIMUM COVER REQUIREMENTS WITH YOUR LOCAL CONTECH SALES ENGINEER DURING YOUR PRE-CONSTRUCTION MEETING.

**ADDITIONAL CONSIDERATIONS**

BECAUSE MOST SYSTEMS ARE CONSTRUCTED BELOW GRADE, RAINFALL CAN RAPIDLY FILL THE EXCAVATION, POTENTIALLY CAUSING FLOATION AND MOVEMENT OF THE PREVIOUSLY PLACED PIPES. TO HELP MITIGATE POTENTIAL PROBLEMS, IT IS BEST TO START THE INSTALLATION AT THE DOWNSTREAM END WITH THE OUTLET ALREADY CONSTRUCTED TO ALLOW A ROUTE FOR THE WATER TO ESCAPE. TEMPORARY OVERSPRINK MEASURES MAY BE REQUIRED FOR HIGH FLOWS DUE TO THE RESTRICTED NATURE OF THE OUTLET PIPE.

FOR LARGE SYSTEMS, CONVEYOR SYSTEMS, BACKHOES WITH LONG REACHERS OR DRAGLINES WITH STONE BUCKETS MAY BE USED TO PLACE BACKFILL. ONCE MINIMUM COVER FOR CONSTRUCTION LOADING ACROSS THE ENTIRE WIDTH OF THE SYSTEM IS REACHED, ADVANCE THE EQUIPMENT TO THE END OF THE RECENTLY PLACED FILL, AND BEGIN THE SEQUENCE AGAIN UNTIL THE SYSTEM IS COMPLETELY BACKFILLED. THIS TYPE OF CONSTRUCTION SEQUENCE PROVIDES ROOM FOR STOCKPILED BACKFILL DIRECTLY BEHIND THE BACKHOSE, AS WELL AS THE MOVEMENT OF CONSTRUCTION TRAFFIC. MATERIAL STOCKPILES ON TOP OF THE BACKFILLED DETENTION SYSTEM SHOULD BE LIMITED TO 4 TO 14 FEET HIGH AND MUST PROVIDE BALANCED LOADING ACROSS ALL BARRELS. TO DETERMINE THE PROPER COVER OVER THE PIPES TO ALLOW THE MOVEMENT OF CONSTRUCTION EQUIPMENT SEE TABLE 1, OR CONTACT YOUR LOCAL CONTECH SALES ENGINEER.



**CMP DETENTION SYSTEM INSPECTION AND MAINTENANCE**

UNDERGROUND STORAGE TANK DETENTION AND INFILTRATION SYSTEMS MUST BE INSPECTED AND MAINTAINED AT REGULAR INTERVALS FOR PURPOSES OF PERFORMANCE AND LONGEVITY.

**INSPECTION**

INSPECTION IS THE KEY TO EFFECTIVE MAINTENANCE OF CMP DETENTION SYSTEMS AND IS EASILY PERFORMED. CONTECH RECOMMENDS ONGOING, ANNUAL INSPECTIONS. SITES WITH HIGH TRAFFIC LOAD OR SMALL OUTLET CONTROL ORIFICES MAY NEED MORE FREQUENT INSPECTIONS. THE RATE AT WHICH THE SYSTEM COLLECTS POLLUTANTS WILL DEFEND MORE ON SITE SPECIFIC ACTIVITIES RATHER THAN THE SIZE OR CONFIGURATION OF THE SYSTEM.

INSPECTIONS SHOULD BE PERFORMED MORE OFTEN IN EQUIPMENT WASHDOWN AREAS IN CLIMATES WHERE SANDING AND/OR SANDING OPERATIONS TAKE PLACE, AND IN OTHER VARIOUS INSTANCES IN WHICH ONE WOULD EXPECT HIGHER ACCUMULATION OF SEDIMENT OR ABRASIVE/ CORROSIVE CONDITIONS. A RECORD OF EACH INSPECTION IS TO BE MAINTAINED FOR THE LIFE OF THE SYSTEM.

**MAINTENANCE**

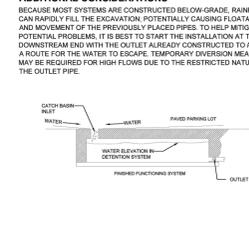
CMP DETENTION SYSTEMS SHOULD BE CLEANED WHEN AN INSPECTION REVEALS ACCUMULATED SEDIMENT OR TRASH IS CLOGGING THE DISCHARGE ORIFICE.

ACCUMULATED SEDIMENT AND TRASH CAN TYPICALLY BE EVACUATED THROUGH THE MANHOLE OVER THE OUTLET ORIFICE. IF MAINTENANCE IS NOT PERFORMED AS RECOMMENDED, SEDIMENT AND TRASH MAY ACCUMULATE IN FRONT OF THE OUTLET ORIFICE. MANHOLE COVERS SHOULD BE SECURELY SEATED FOLLOWING CLEANING ACTIVITIES. CONTECH SUGGESTS THAT ALL SYSTEMS BE DESIGNED WITH AN ACCESS/INSPECTION MANHOLE SITUATED AT OR NEAR THE INLET AND THE OUTLET ORIFICE. SHOULD IT BE NECESSARY TO GET INSIDE THE SYSTEM TO PERFORM MAINTENANCE ACTIVITIES, ALL APPROPRIATE PRECAUTIONS REGARDING CONFINED SPACE ENTRY AND OSHA REGULATIONS SHOULD BE FOLLOWED.

**ANNUAL INSPECTIONS ARE BEST PRACTICE FOR ALL UNDERGROUND SYSTEMS. DURING THIS INSPECTION, IF EVIDENCE OF SALTING/DEICING AGENTS IS OBSERVED WITHIN THE SYSTEM, IT IS BEST PRACTICE FOR THE SYSTEM TO BE RINSED, INCLUDING ABOVE THE SPRING LINE SOON AFTER THE SPRING THAW AS PART OF THE MAINTENANCE PROGRAM FOR THE SYSTEM.**

**MAINTAINING AN UNDERGROUND DETENTION OR INFILTRATION SYSTEM IS EASIER WHEN THERE IS NO FLOW ENTERING THE SYSTEM. FOR THIS REASON, IT IS A GOOD IDEA TO SCHEDULE THE CLEANOUT DURING DRY WEATHER.**

**THE FOREGOING INSPECTION AND MAINTENANCE EFFORTS HELP ENSURE UNDERGROUND PIPE SYSTEMS USED FOR STORMWATER STORAGE CONTINUE TO FUNCTION AS INTENDED BY IDENTIFYING RECOMMENDED REGULAR INSPECTION AND MAINTENANCE PRACTICES. INSPECTION AND MAINTENANCE RELATED TO THE STRUCTURAL INTEGRITY OF THE PIPE OR THE SOUNDNESS OF PIPE JOINT CONNECTIONS IS BEYOND THE SCOPE OF THIS GUIDE.**



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**CONTECH**  
CMP DETENTION SYSTEMS

PROJECT No.:	REV. No.:	DATE:
DESIGNED: [Signature]	CHECKED: [Signature]	DATE: [Signature]
DRAWN: [Signature]	DATE: [Signature]	DATE: [Signature]
DATE: [Signature]	DATE: [Signature]	DATE: [Signature]

CONTECH ENGINEERED SOLUTIONS LLC  
CONTECH CMP DETENTION SYSTEMS  
CONTECH DYNOS DRAWING

XFILTRATION RETENTION SYSTEM DETAILS

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**VERIFICATION OF PRIVATE UTILITY LINES**

Date: \_\_\_\_\_  
CenterPoint Energy natural gas utilities shown. (One verifies lines are not shown). This signature not to be used for conflict verification. Signature valid for six months.

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CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY. (This Signature verifies existing underground facilities - not to be used for conflict verification.) Signature valid for six months.

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Approved for AT&T Texas / SNTB underground conduit facilities only. Signature valid for one year.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: LAUREN J. MUDD, P.E.  
P.E. Serial No.: 153971  
Date: JANUARY 2026

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 26 DGN BY: JK  
JOB NO: 00050-0099-01 DWG BY: JLG

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION

CIVIL DETAILS 15 OF 16

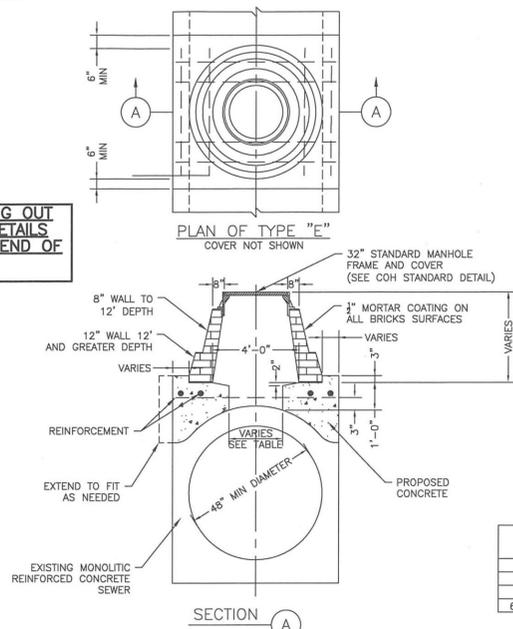
CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE \_\_\_\_\_ HORIZ: \_\_\_\_\_ VERT: \_\_\_\_\_  
CATEGORY NO. 0-C-36 SHEET NO. --- OF XX

FOR CITY OF HOUSTON USE ONLY

02081-05

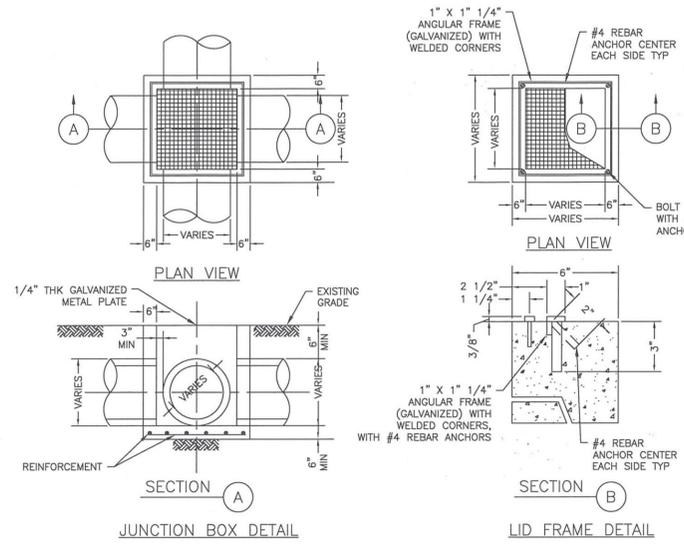
COH IS PHASING OUT BRICK. NEW DETAILS TO BE POSTED END OF 2019



SEWER SIZE (INCHES)	MANHOLE BASE DIAMETER
48"	36"
54"	36"
60"	42"
66" OR GREATER	48"

STORM SEWER MANHOLE TYPE 'E' FOR EXISTING MONOLITHIC REINFORCED CONCRETE 48" DIAMETER AND GREATER  
NTS

02081-06



NOTES:

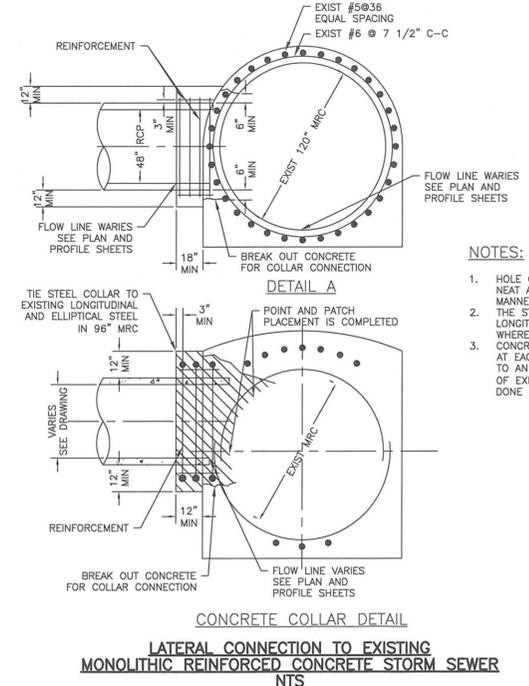
1. DETAIL TO BE USED WHERE STORM SEWER SIZE IS 24" DIA OR LESS. FOR SEWER GREATER 24" DIA USE TYPE 'C' MANHOLE.

NOTES TO SPECIFIER:

1. WALL TO BE 6" CONCRETE. NOT TO BE USED IN STREET. FOR AREA BETWEEN CURB AND PROPERTY LINE ONLY.

STORM SEWER JUNCTION BOX WITH LID OR GRATE TOP FOR MAXIMUM OF 24" DIAMETER STORM SEWER  
NTS

02081-07

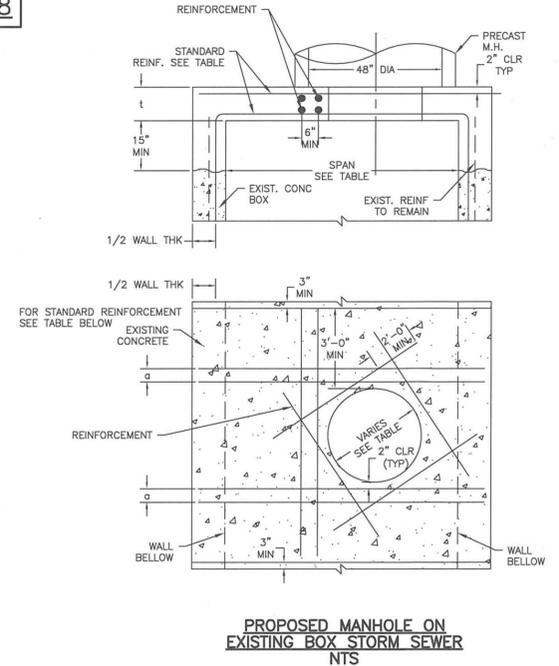


NOTES:

1. HOLE CUT IN WALL OF 120" MRC TO BE NEAT AND DONE IN WORKMAN LIKE MANNER.
2. THE STEEL COLLAR TO EXIST LONGITUDINAL AND ELLIPTICAL STEEL WHERE APPLICABLE.
3. CONCRETE COLLAR SHALL BE CONSTRUCTED AT EACH CONNECTION OF A PROPOSED RCP TO AN EXISTING MRC. HOLE CUT IN WALL OF EXISTING 96" MRC TO BE NEAT AND DONE IN WORKMAN LIKE MANNER.

CONCRETE COLLAR DETAIL  
LATERAL CONNECTION TO EXISTING MONOLITHIC REINFORCED CONCRETE STORM SEWER  
NTS

02081-08



PROPOSED MANHOLE ON EXISTING BOX STORM SEWER  
NTS

FIRM INFORMATION  
CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

ENGINEER'S SEAL  
STORM SEWER  
02081-05 THROUGH 08

APPROVED BY: [Signature]  
CITY ENGINEER

APPROVED BY: [Signature]  
DEPUTY DIRECTOR

APPROVED BY: [Signature]  
DIRECTOR

EFFECTIVE DATE: JUL-01-2019  
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SHEET NO.

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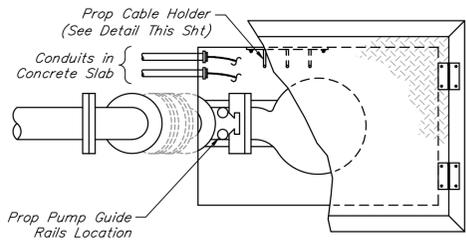
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CIVIL DETAILS 16 OF 16

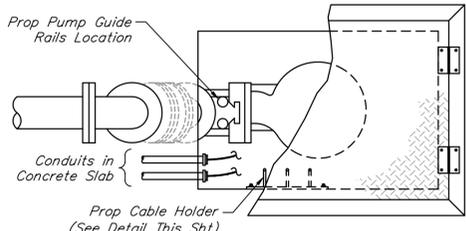
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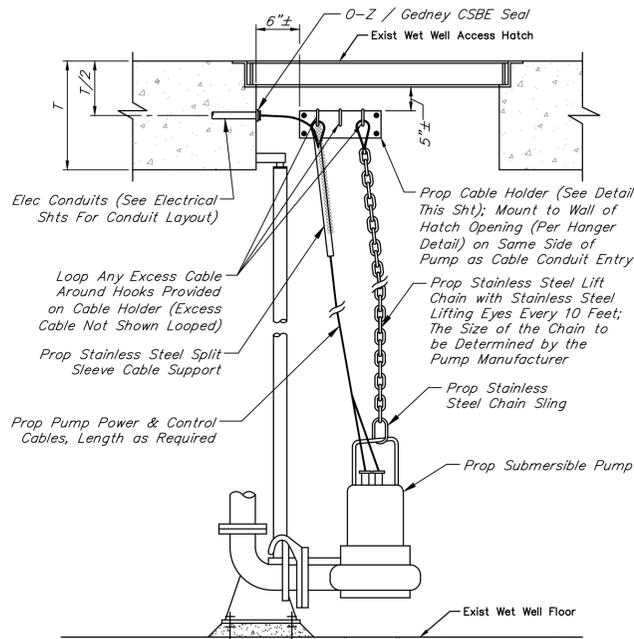




PLAN VIEW ~ LEFT ORIENTATION



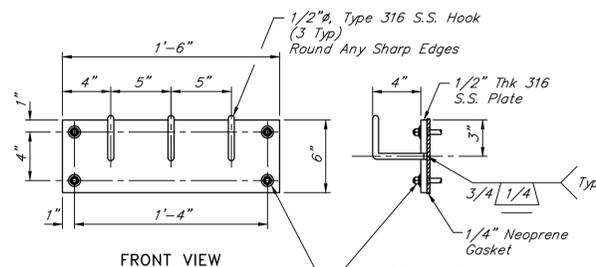
PLAN VIEW ~ RIGHT ORIENTATION



ELEVATION VIEW

TYPICAL PUMP LIFTING AND CABLING FOR NEW PUMP AND PIPING IN EXISTING WET WELL DETAIL

NOT TO SCALE



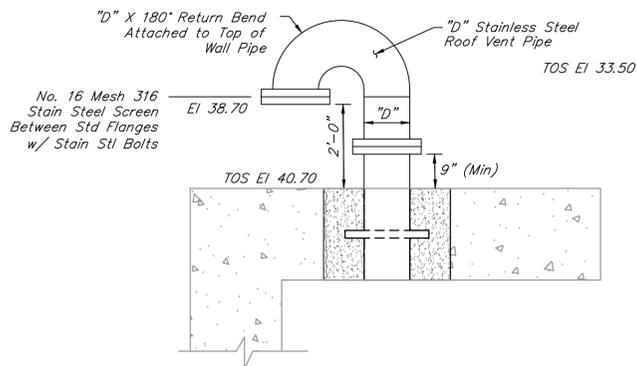
FRONT VIEW

SIDE VIEW

3/8" Type 316 S.S. Conc Anchor Bolts & Hardware w/ Min 6" Embedment. Set 1/4" Neoprene Gasket on Wall Surface in SIKA 1A (or Approved Equal) Sealant

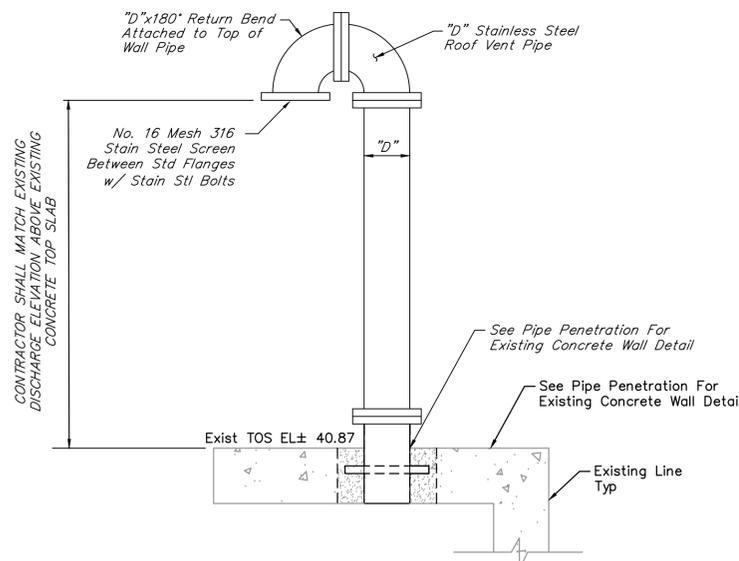
TYPICAL CABLE HOLDER ASSEMBLY DETAIL

NOT TO SCALE



DRY WEATHER WET WELL VENT DETAIL

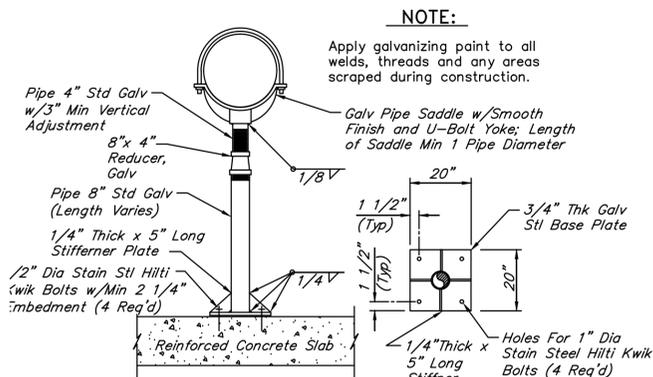
NOT TO SCALE



WET WEATHER WELL VENT DETAIL

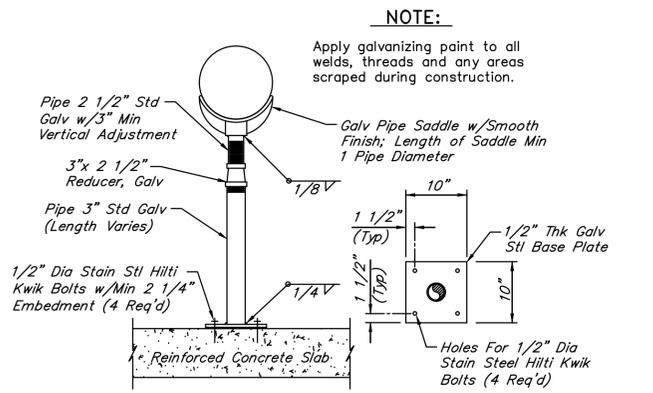
NOT TO SCALE

NOTE:  
1. "D" is nominal pipe diameter shown on plans.



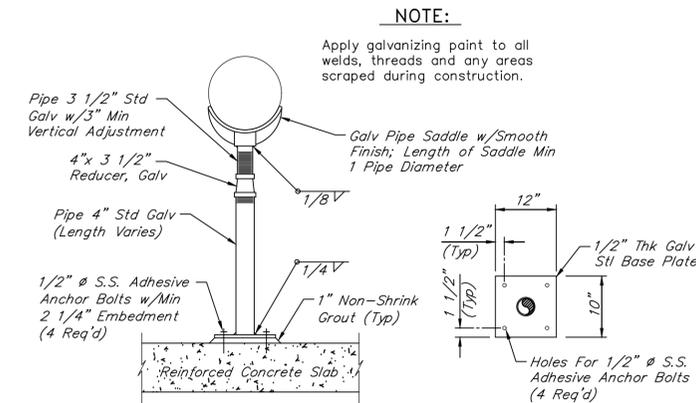
8" ADJUSTABLE STEEL PIPE SUPPORT WITH U-BOLT YOKE AND 20" BASE

NOT TO SCALE



3" ADJUSTABLE STEEL PIPE SUPPORT

NOT TO SCALE



ADJUSTABLE STEEL PIPE SUPPORT

NOT TO SCALE

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW  
Not intended for construction, bidding or permit purposes.  
Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
Date: JANUARY 2026



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CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

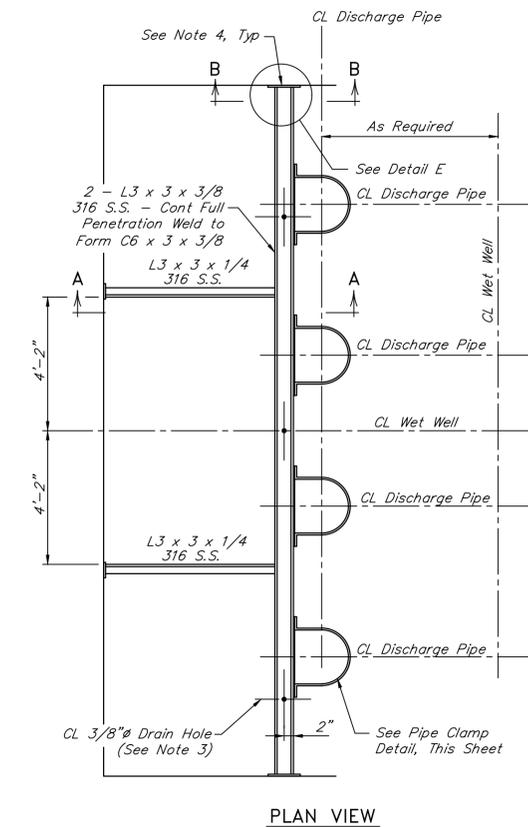
DATE: JANUARY 2026 DGN BY: DWIGGS  
JOB NO: 00050-0099-01 DWG BY: DWIGGS

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
LIFT STATION  
MECHANICAL DETAILS  
SHEET 1 OF 2

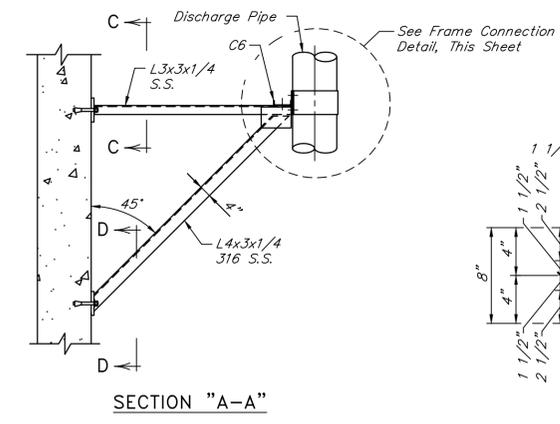
CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE NO SCALE HORIZ: XXX VERT: XXX  
CATEGORY NO. 0-M-1 SHEET NO. 30 OF XXX  
FOR CITY OF HOUSTON USE ONLY

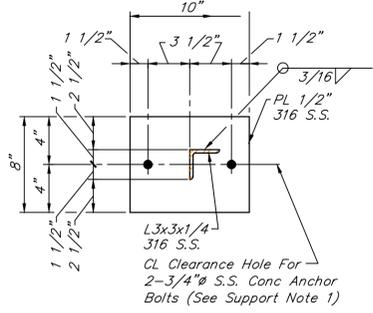


PLAN VIEW

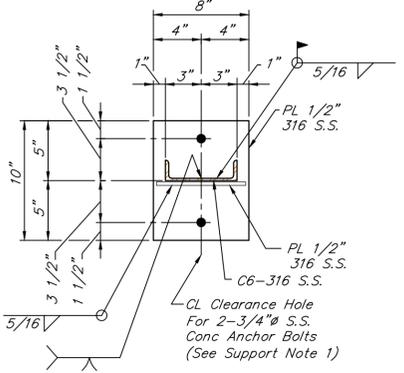
TYPICAL DISCHARGE PIPING SUPPORT DETAIL FOR 4 PUMPS  
NOT TO SCALE



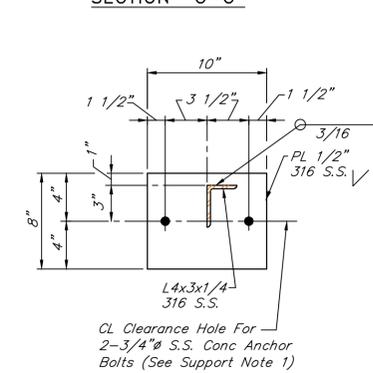
SECTION "A-A"



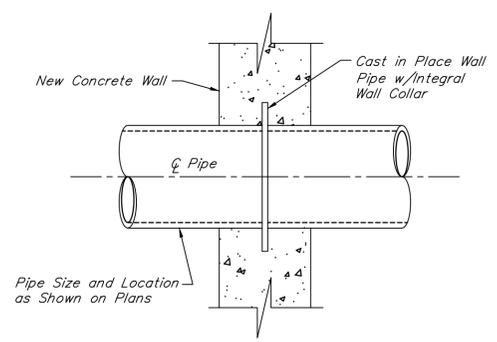
SECTION "C-C"



SECTION "B-B"

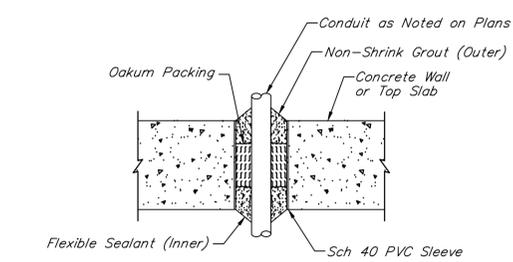


SECTION "D-D"



PIPE PENETRATION DETAIL

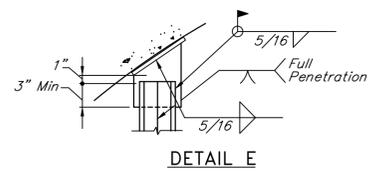
NOT TO SCALE



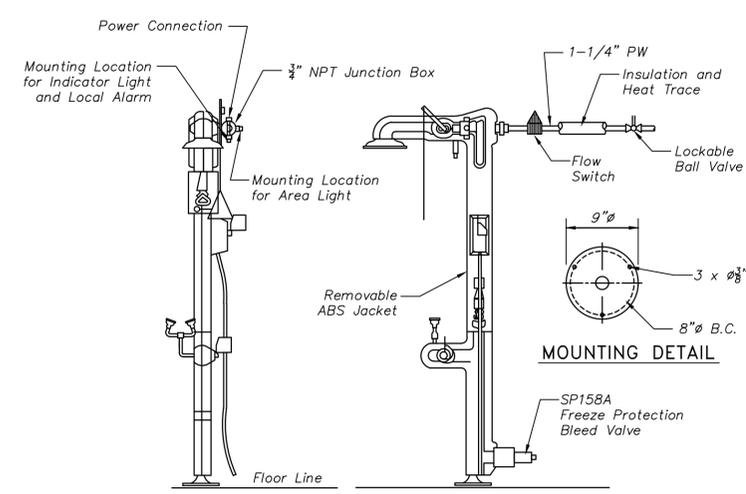
NOTE:

Sleeved wet well penetration is not to be used for conduit installation. See electrical detail sheets for conduit penetrations.

SLEEVED WET WELL PENETRATION DETAIL  
NOT TO SCALE



DETAIL E



NOTE:

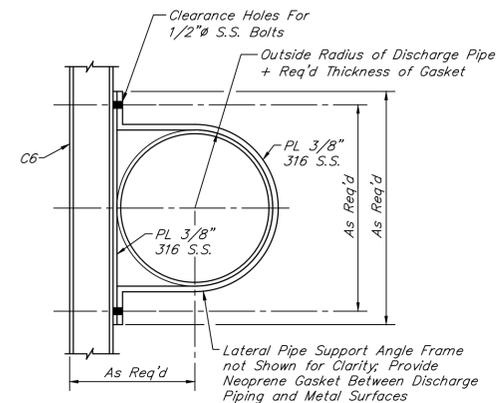
1. At the Contractor's option and depending on location of water supply location, the water supply can be connected at either manufacturer provided supply connection, top or bottom.

**IMPORTANT:**  
POTABLE WATER SUPPLY  
MUST BE HEAT TRACED  
AND INSULATED

EMERGENCY SHOWER/EYEWASH DETAIL  
NOT TO SCALE

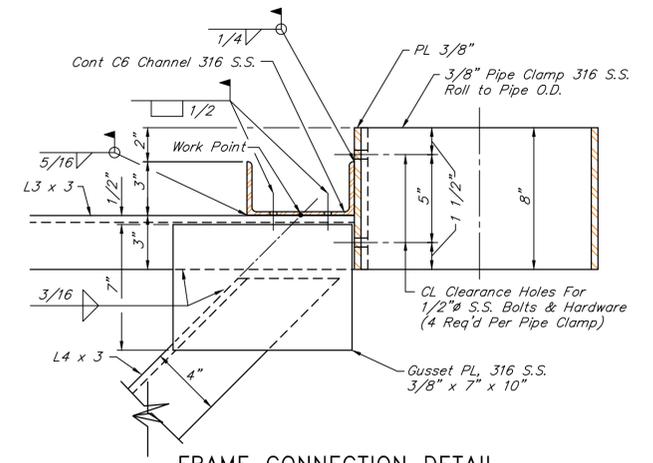
NOTES:

- Concrete anchor bolts shall have 6" minimum embedment and shall be type 316 stainless steel.
- See station and structural drawings for dimensions and information not shown.
- Drill 3/8" holes 1" off CL of C6 at midspan between lateral pipe supports to allow for drainage. Three (3) holes per channel where two (2) lateral supports required; Two (2) holes per channel where one (1) lateral support required.
- Set 1/4" neoprene gasket on wall surface in Sika 1A (or equal) sealant.



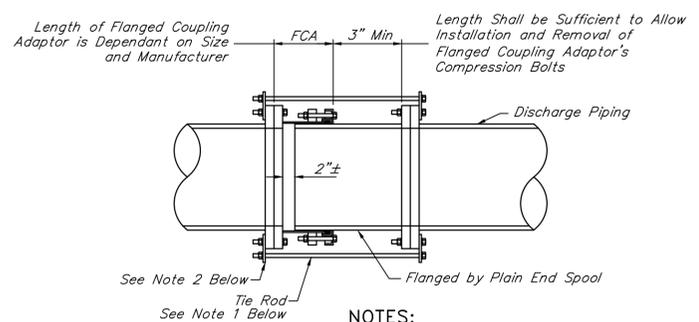
PIPE CLAMP DETAIL

NOT TO SCALE



FRAME CONNECTION DETAIL

NOT TO SCALE



NOTES:

- Provide a number of tie rods equal to 1/2 the number of flange bolts. Evenly space installation of tie rods. Diameter of tie rods to be equal to the diameter of flange bolts. Length of tie rods to be determined by Contractor based on size and manufacturer of flanged coupling adaptor and final length of spool piece.
- Provide 316 S.S. tab for attachment of tie rods. Size to be determined by Contractor.
- Contractor to submit details during shop drawing submission.
- All hardware shall be 316 stainless steel. Tie rods should be threaded.
- This restraint does not replace thrust blocks to be provided at other locations.

TYP FLANGED COUPLING  
ADAPTOR RESTRAINT DETAIL  
NOT TO SCALE

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW  
Not intended for construction, bidding or permit purposes.  
Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
Date: JANUARY 2026



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6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: ~~XXXXXXXXXX~~  
JOB NO: 00050-0099-01 DWG BY: ~~XXXXXXXXXX~~

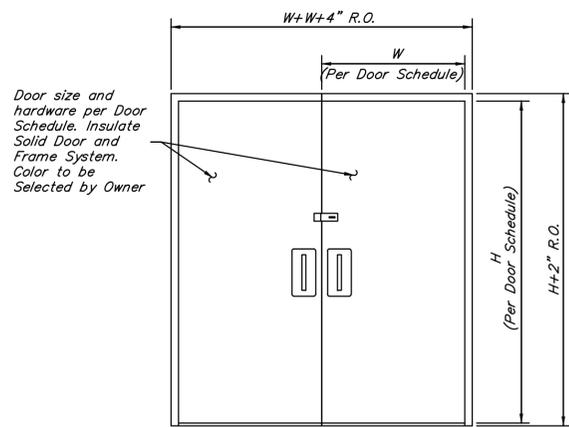
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
LIFT STATION  
MECHANICAL DETAILS  
SHEET 2 OF 2

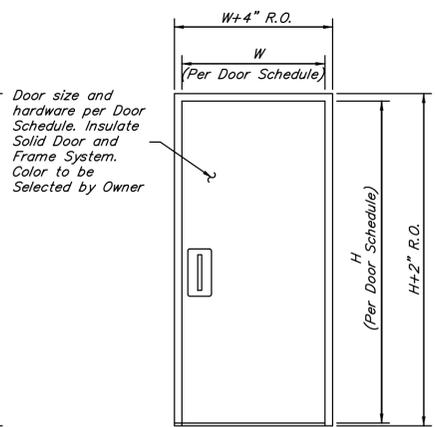
CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE NO SCALE HORIZ: XXX VERT: XXX

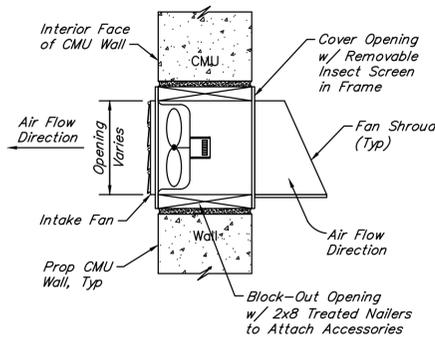
CATEGORY NO. 0-M-2 SHEET NO. XXX OF XXX  
FOR CITY OF HOUSTON USE ONLY



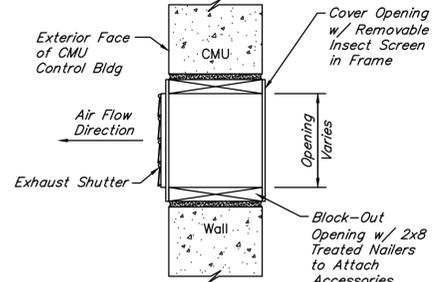
**TYPICAL DUAL DOOR DETAIL**  
NOT TO SCALE



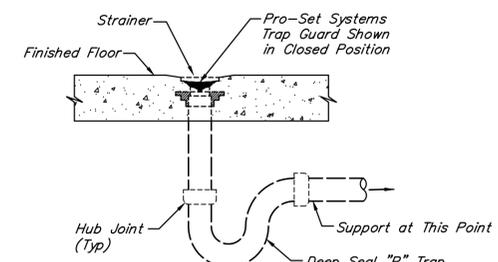
**TYPICAL SINGLE DOOR DETAIL**  
NOT TO SCALE



**INTAKE/SUPPLY FAN DETAIL**  
NOT TO SCALE



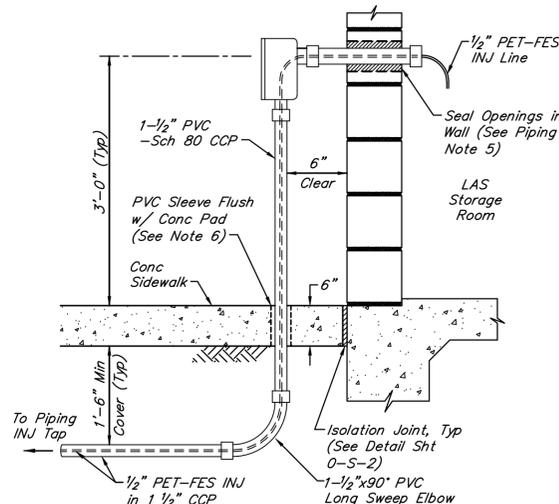
**EXHAUST SHUTTER DETAIL**  
NOT TO SCALE



**FLOOR DRAIN WITH TRAP SEAL DETAIL**  
NOT TO SCALE

**NOTES:**

1. Trap guard shall be factory fitted to match each floor drain (and floor sink) by size, model, and manufacturer.
2. Floor sink trap guard installation is similar.
3. Installation of trap guard to be in accordance with manufacturer's recommendations.
4. Insert trap guard only after final rodding of drains. Install trap guard with clear silicone caulk for gas tight seal. For drain rodding after installation, insert sewer tape through lightly greased 1-1/2" PVC pipe to protect trap guard.



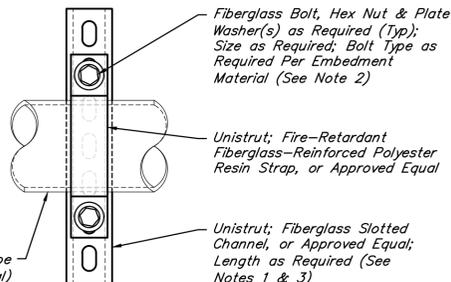
**FES INJ LINE WALL PENETRATION DETAIL**  
NOT TO SCALE

**PIPING NOTES:**

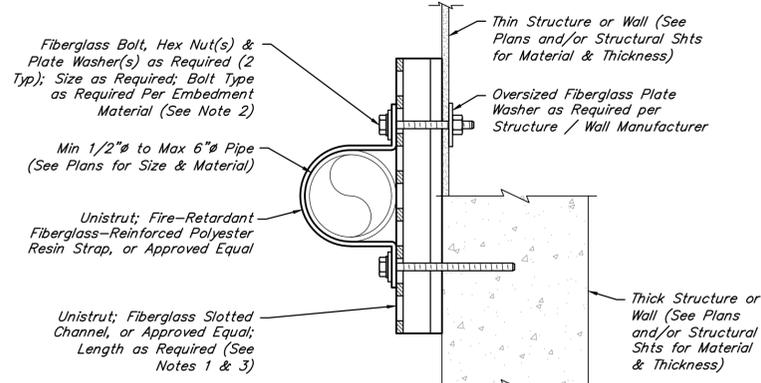
1. Contractor shall construct all PE solution lines encased in Sch 80 PVC conduit and use only long sweep elbows and bends to allow tubing to be easily repaired and/or replaced in the future.
2. All chemical injection lines and taps shall be constructed as per the referenced detail drawings unless approved otherwise by the Engineer prior to making any changes.
3. The aboveground eye wash/shower safety station and water supply line shall be secured to the sidewalk and adjacent CMU wall with approved SS struts and Type 316 SS hardware as required.
4. All PVC piping shall be installed in accordance with the piping manufacturer's specifications.
5. All wall penetrations through CMU building walls shall be tightly sealed with an approved chemical resistant non-shrink grout.
6. All PVC sleeves shall be sized to minimize the void between the main pipe and the sleeve to a maximum 1/4-inch (1/4") gap.

**NOTES:**

1. Light Duty Unistrut shall be used for 1/2" through 3" pipes. Heavy Duty Unistruts shall be used for 4" and 6" pipes.
2. Fiberglass bolts and nuts shall be tightened by hand ONLY.
3. For multiple pipes, extend length of fiberglass support channel as needed. Provide a minimum of clearance of 6" between pipes.



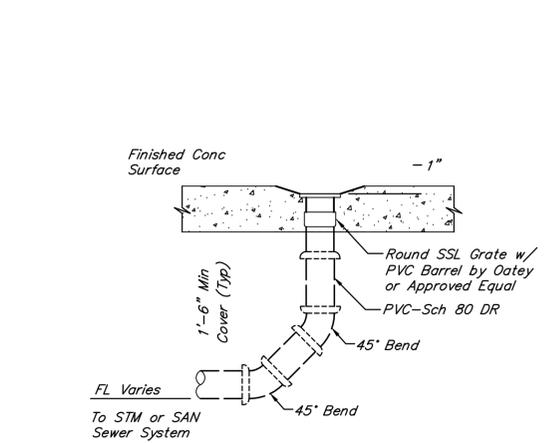
**END VIEW**



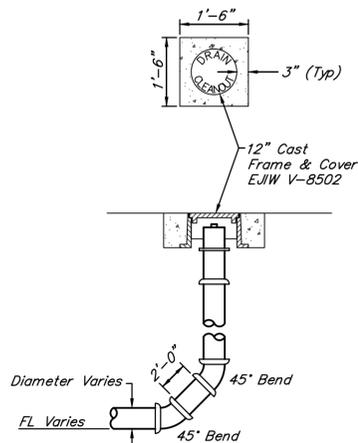
**SECTION VIEW**

**UNISTRUT WALL SUPPORT DETAIL FOR PIPING 1/2" THROUGH 6" DIAMETER**

NOT TO SCALE



**TYPICAL DRAIN GRADE DETAIL**  
NOT TO SCALE



**CLEANOUT DETAIL**  
NOT TO SCALE

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
Date: JANUARY 2026

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

**CITY OF HOUSTON**  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: **DVIDORRERA**  
JOB NO: 00050-0099-01 DWG BY: **DVIDORRERA**

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

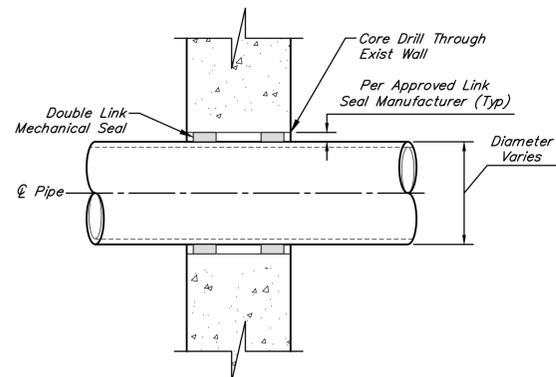
**SCOTT STREET No. 1**  
LIFT STATION REHABILITATION

**MECHANICAL DETAILS**  
SHEET 3 OF 5

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

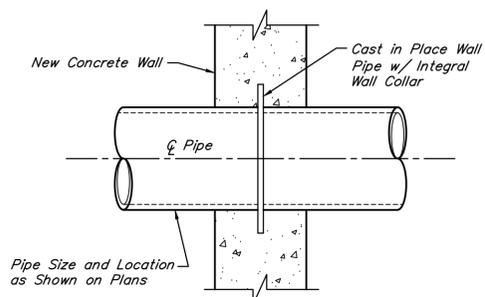
DRAWING SCALE NO SCALE HORIZ: XXX VERT: XXX

CATEGORY NO. **0-M-3** SHEET NO. XXX OF XXX  
FOR CITY OF HOUSTON USE ONLY



**EXIST CONC CORE DRILL PIPE PENETRATION DETAIL**

NOT TO SCALE

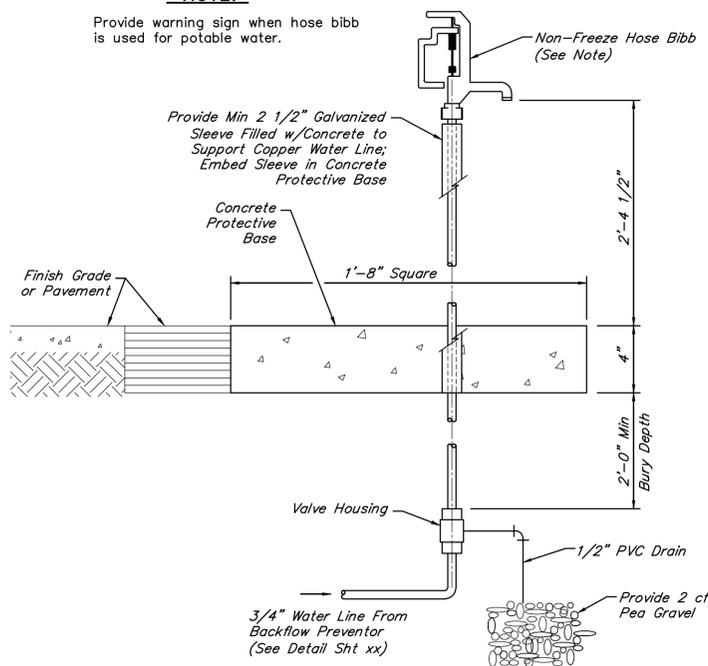


**PIPE PENETRATION FOR PROPOSED CONCRETE WALL DETAIL**

NOT TO SCALE

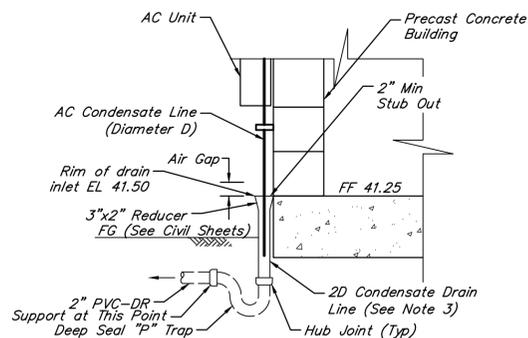
**NOTE:**

Provide warning sign when hose bibb is used for potable water.



**TYP NON-FREEZE HOSE BIBB DETAIL**

NOT TO SCALE

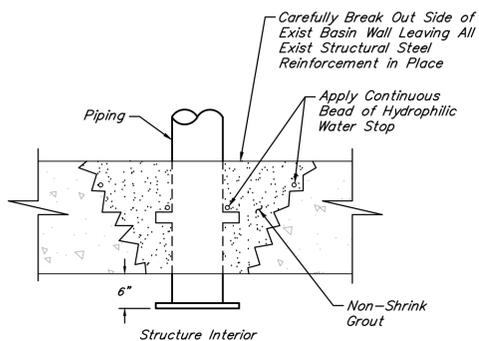


**AC CONDENSATE DRAIN DETAIL**

NOT TO SCALE

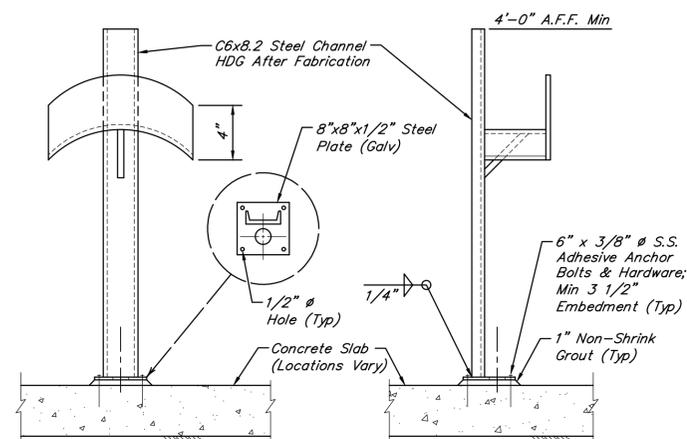
**AC CONDENSATE DRAIN NOTES:**

1. AC Waste line shall be at least 1 pipe diameter larger than the condensate line and shall be coordinated with the AC Manufacturer.
2. Support AC Condensate line to CMU w/ strut and SS hardware.
3. Provide air gap between A/C condensate line and A/C waste line in accordance with local code.
4. Detail shown for illustrative purposes only. Contractor shall route A/C Condensate line in accordance with submitted A/C manufacturer.



**PIPE PENETRATION FOR EXISTING CONCRETE WALL DETAIL**

NOT TO SCALE

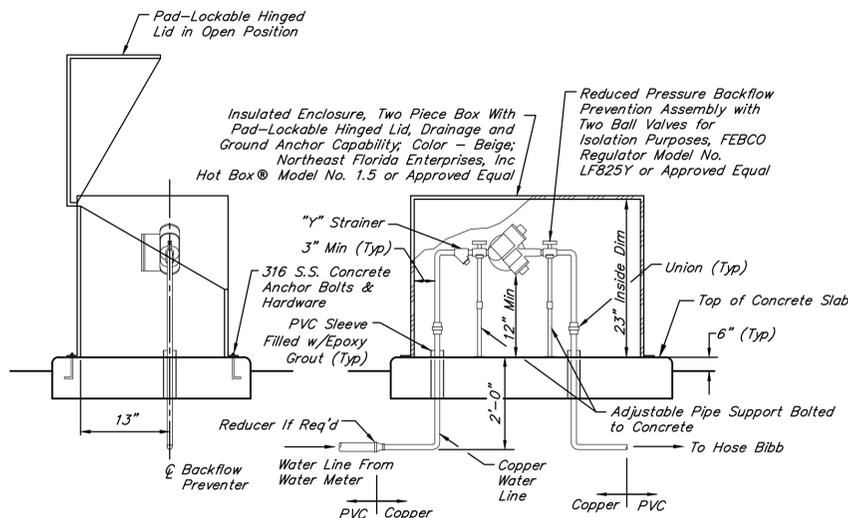


**FRONT VIEW**

**SIDE VIEW**

**HOSE RACK DETAIL - SLAB-MOUNTED**

NOT TO SCALE

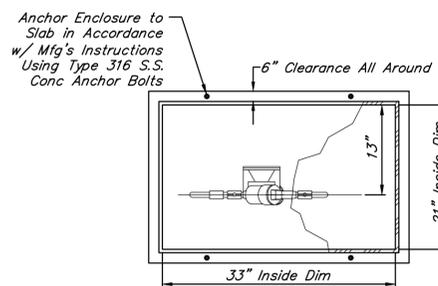


**SIDE VIEW**

**FRONT VIEW**

**REDUCED PRESSURE ZONE BACKFLOW PREVENTER INSTALLATION DETAIL**

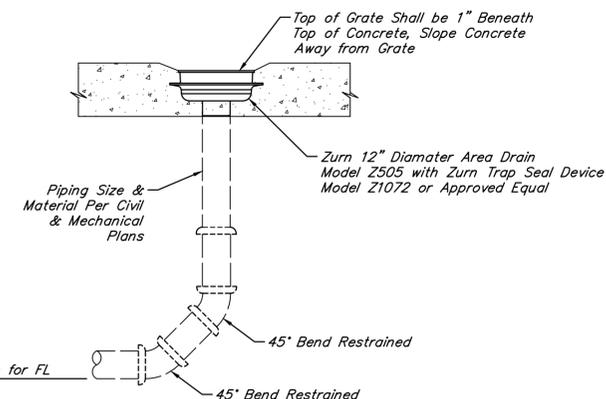
NOT TO SCALE



**PLAN VIEW**

**NOTES:**

1. Contractor shall provide and install appropriate fittings and accessories to make designated underground connection.
2. Fittings under the structure shall be restrained as per specifications.



**AREA DRAIN DETAIL**

NOT TO SCALE

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
Date: JANUARY 2026



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6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

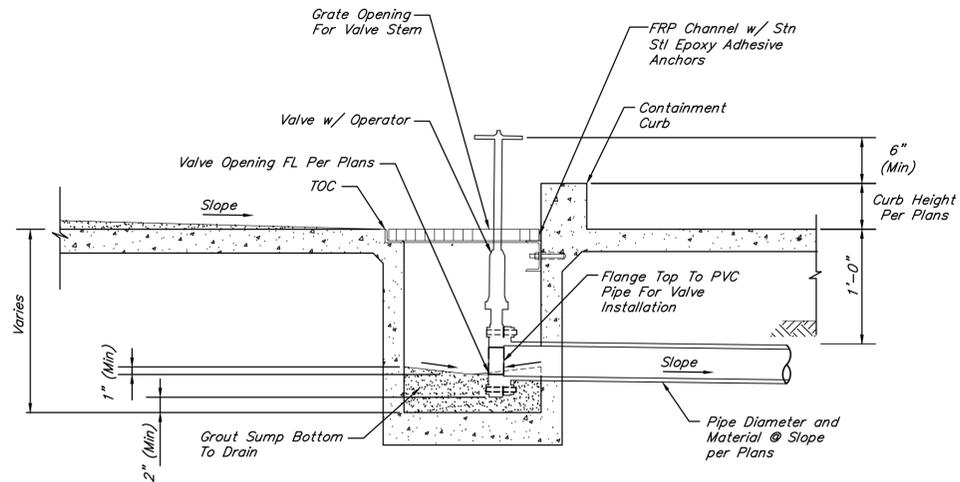
SCOTT STREET No. 1  
LIFT STATION REHABILITATION

MECHANICAL DETAILS  
SHEET 4 OF 5

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

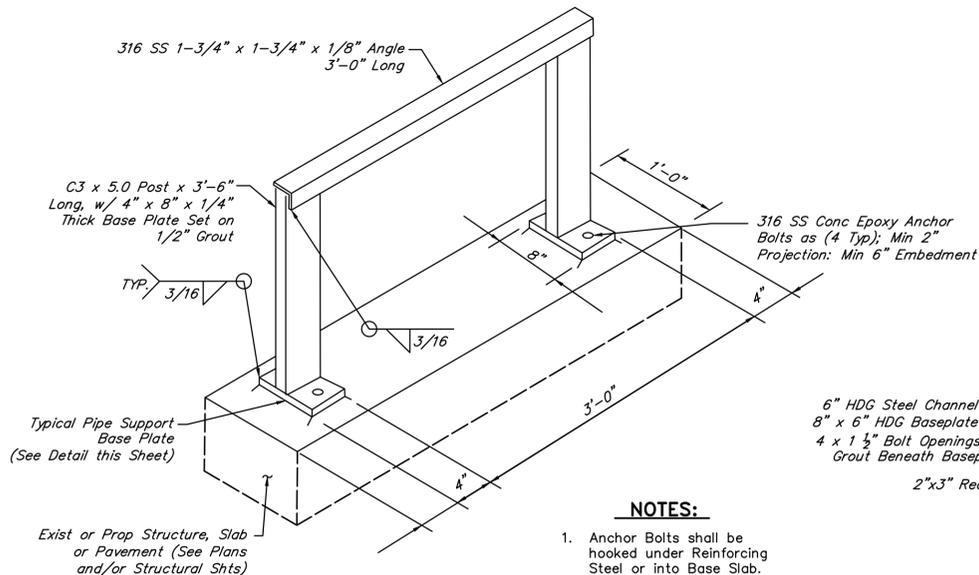
DRAWING SCALE NO SCALE HORIZ: XXX VERT: XXX

CATEGORY NO. 0-M-4 SHEET NO. XXX OF XXX  
FOR CITY OF HOUSTON USE ONLY



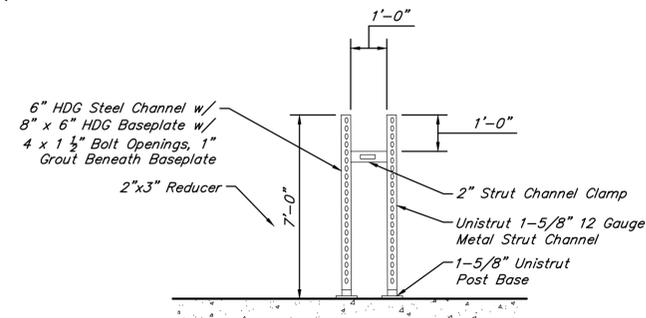
**CHEMICAL CONTAINMENT AREA SUMP DETAIL**

NOT TO SCALE



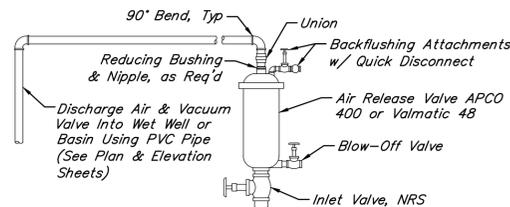
**TANK FILL PIPE SUPPORT DETAIL**

NOT TO SCALE



**UNISTRUT H-FRAME PIPE SUPPORT DETAIL**

NOT TO SCALE

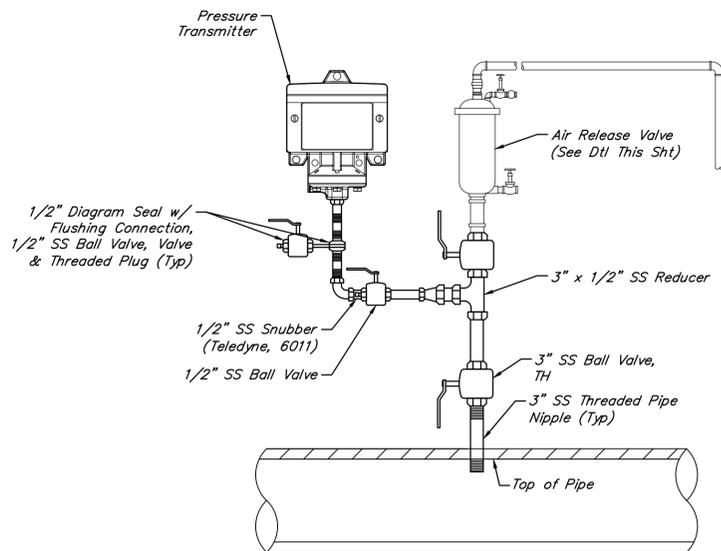


**TYPICAL AIR RELEASE VALVE ASSEMBLY**

NOT TO SCALE

**NOTES:**

1. All pipe and fittings shall be 304 SST.

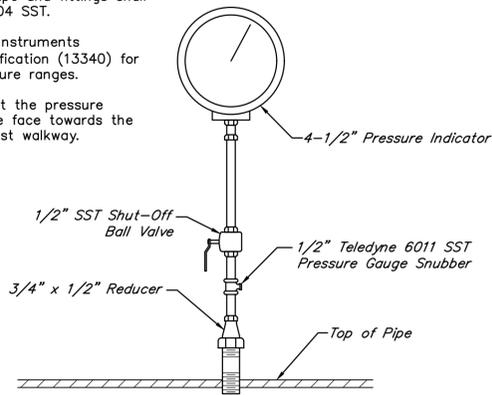


**PRESSURE INDICATING TRANSMITTER & AIR RELEASE/ AIR ASSEMBLY WITH DIAPHRAGM SEAL DETAIL**

NOT TO SCALE

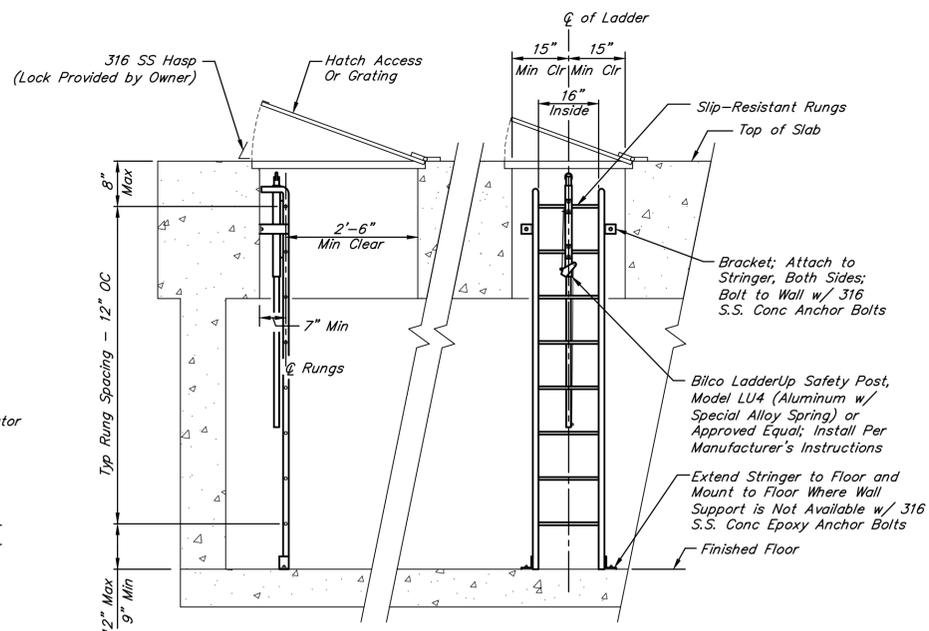
**PRESSURE GAUGE NOTES:**

1. All pipe and fittings shall be 304 SST.
2. See Instruments Specification (13340) for pressure ranges.
3. Orient the pressure gauge face towards the nearest walkway.



**PRESSURE INDICATOR DETAIL**

NOT TO SCALE



**TYPICAL ENTRY ACCESS LADDER INSTALLATION DETAIL**

NOT TO SCALE

**NOTE:**

Contractor to provide detail drawings of ladder during shop drawing submission.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
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P.E. Serial No.: 125999  
Date: JANUARY 2026



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SCOTT STREET No. 1  
LIFT STATION REHABILITATION

MECHANICAL DETAILS  
SHEET 5 OF 5

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

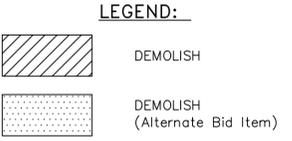
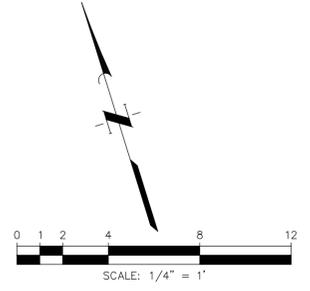
DRAWING SCALE NO SCALE HORIZ: XXX VERT: XXX

CATEGORY NO. 0-M-5 SHEET NO. XXX OF XXX

FOR CITY OF HOUSTON USE ONLY

ITEMS OF WORK			
No.	DESCRIPTION	No.	DESCRIPTION
1	Chip out and demolish existing 12" GS vents.	8	Demolish existing submersible pumps, base elbows, lifting chain, guiderails, power cables, and electrical junction boxes.
2	Chip out and demolish existing 4'-0" x 3'-0" access hatch.	9	Demolish existing 6" DI - DR up to flange at wall pipe penetration.
3	Demolish existing slide gate operator and slide gate.	10	Demolish existing level instruments, floats, and cables.
4	Chip out and demolish pump access hatch.	11	Demolish existing valve vault access ladder.
5	Demolish existing FRP grating, grating framing, embeds, and concrete curb.	12	Chip out and demolish existing 20" riser piping wall collars.
6	Chip out and demolish existing 3/4" FES in 3" PVC pipe	13	Chip out and demolish existing 24" force main piping wall collars.
7	Demolish existing riser and header piping, valves, fittings, and pipe supports in the wet well and valve vault.	14	Demolish existing baffle wall and underflow baffles.

ITEMS OF WORK (ALTERNATE BID ITEMS)	
No.	DESCRIPTION
A1	Chip out and demolish existing 4" drain line piping wall collars. (Alternate Bid Item No. 1)
A2	Chip out and demolish existing 6" drain line piping wall collars. (Alternate Bid Item No. 2)



- NOTES:**
- All existing structures, dimensions, locations, and materials shown are based on City of Houston's record drawings. Contractor shall field verify existing dimensions, locations, and materials as required to complete the work and as directed by the Engineer. Field verification shall be incidental to the work.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: NOVEMBER 2025



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

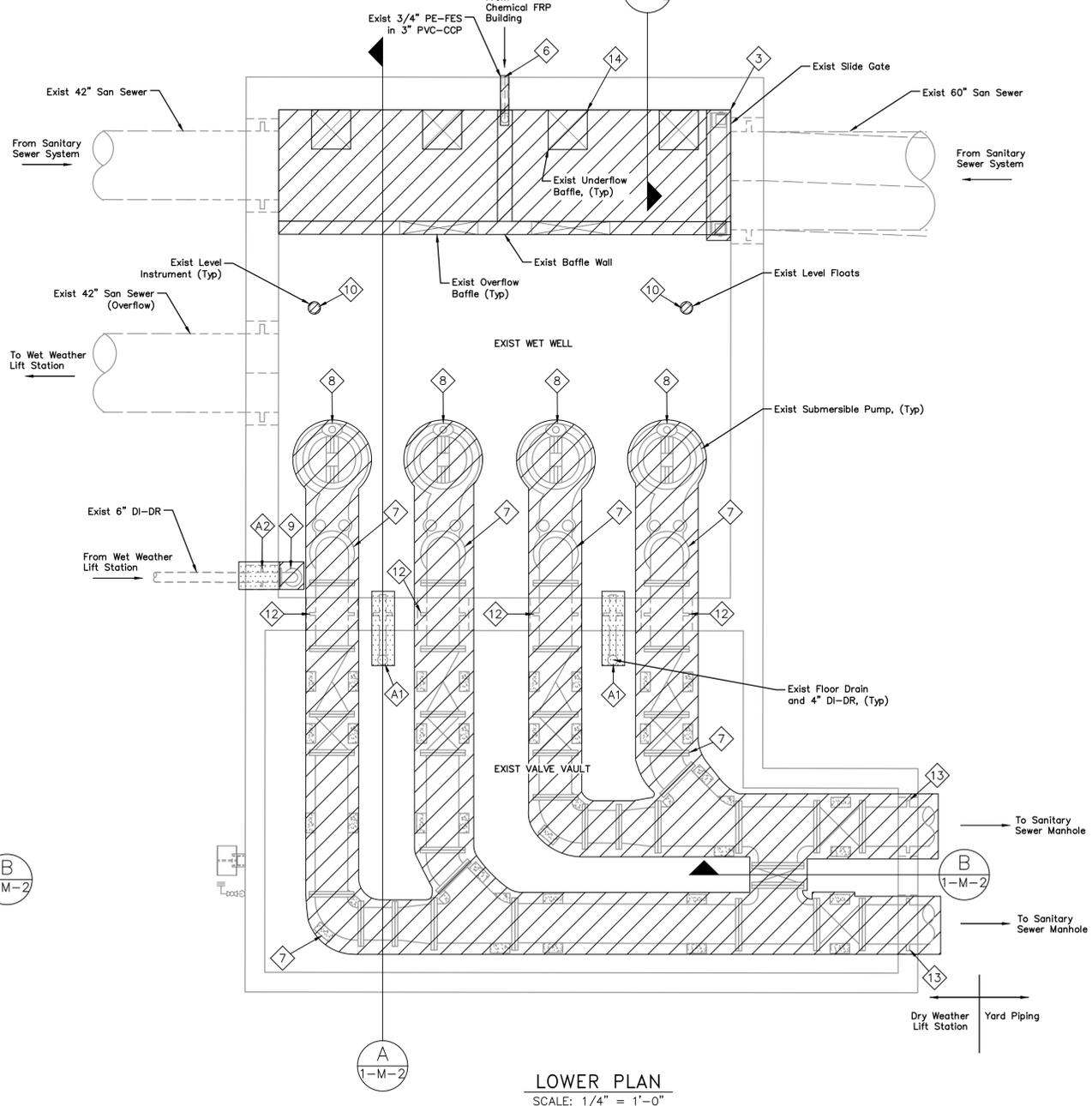
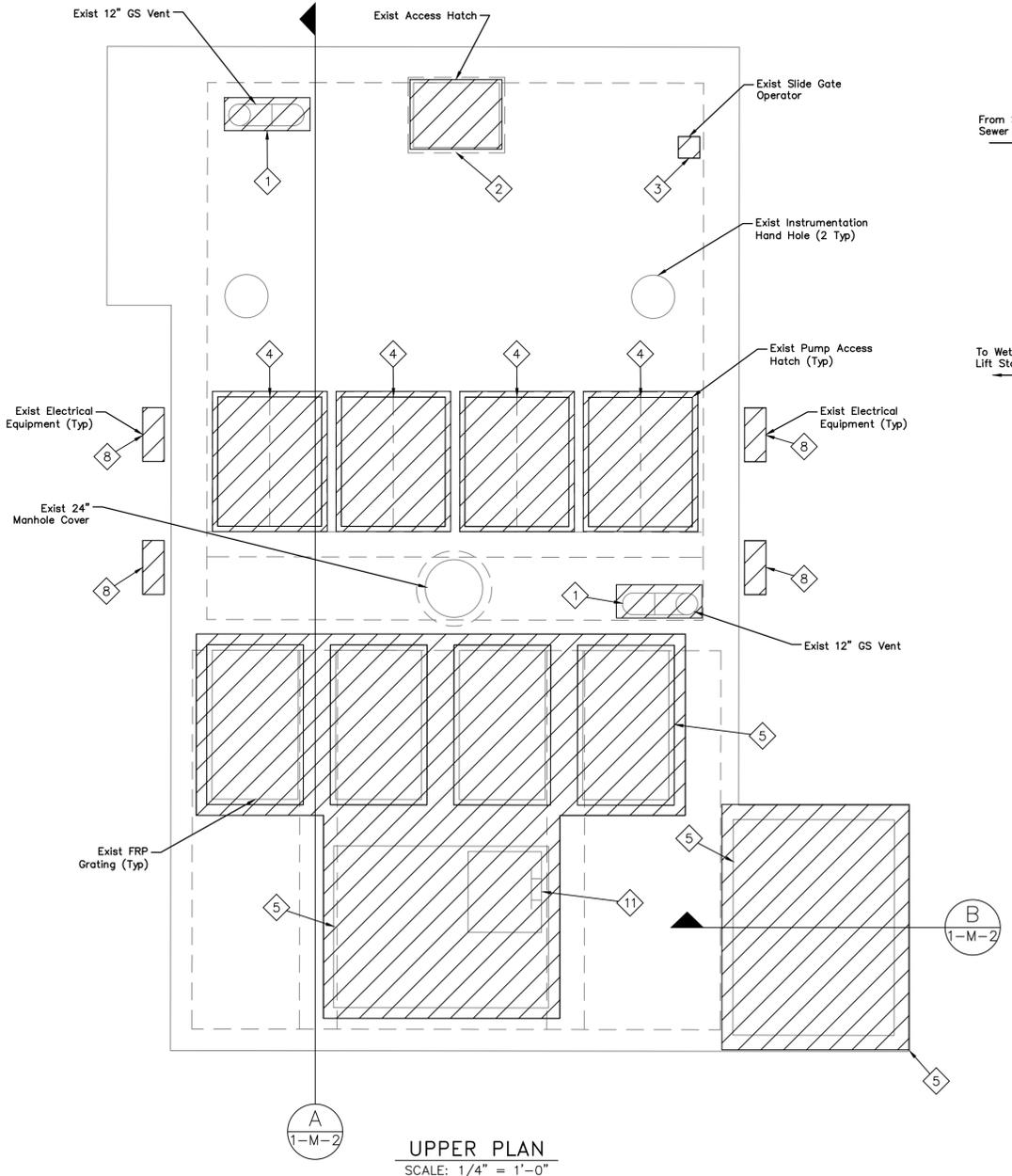
DATE: JULY 2025 DGN BY: CTOMAS  
 JOB NO: 00050-0099-01 DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
**DRY WEATHER PUMP STATION  
 DEMOLITION PLAN**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1'-0" HORIZ: XXX VERT: XXX  
 CATEGORY NO. 1-M-1 SHEET NO. 32 OF XXX  
 FOR CITY OF HOUSTON USE ONLY



ITEMS OF WORK	
No.	DESCRIPTION
1	Chip out and demolish existing 12" GS vents.
2	Chip out and demolish existing pump access hatch.
3	Demolish existing FRP grating, grating framing, embeds, and concrete curb.
4	Demolish existing 20" riser piping, valves, fittings, and pipe supports.
5	Demolish existing 6" DI - DR up to flange at wall pipe penetration.
6	Demolish existing submersible pumps, base elbows, lifting chain, guiderails, and power cables.
7	Demolish existing pump shelf.

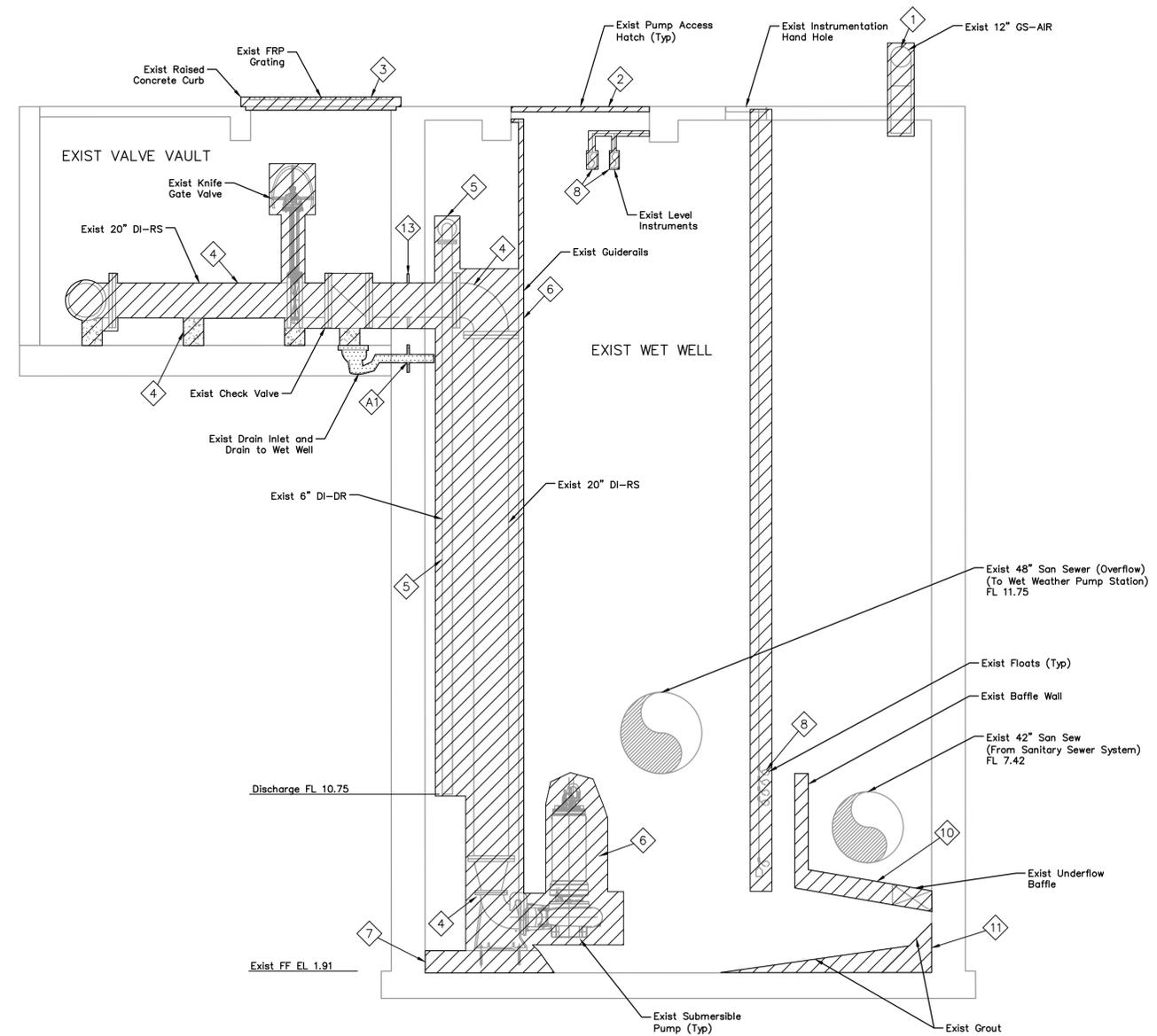
ITEMS OF WORK (ALTERNATE BID ITEMS)	
No.	DESCRIPTION
8	Demolish existing level instruments, floats, and cables.
9	Demolish existing 24" force main piping, valves, fittings, instruments and pipe supports.
10	Demolish existing baffle wall.
11	Demolish existing grouting.
12	Demolish existing slide gate frame and extended intermediate stem.
13	Chip out and demolish exist 20" riser piping wall collars.
14	Chip out and demolish exist 24" force main piping wall collars.

**LEGEND:**

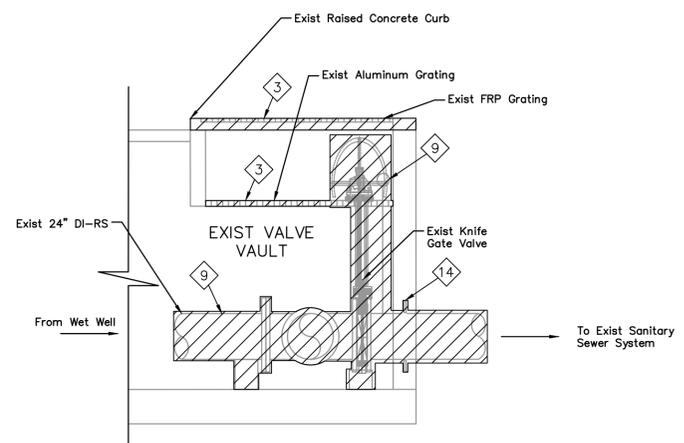
 DEMOLISH

 DEMOLISH (Alternate Bid Item)

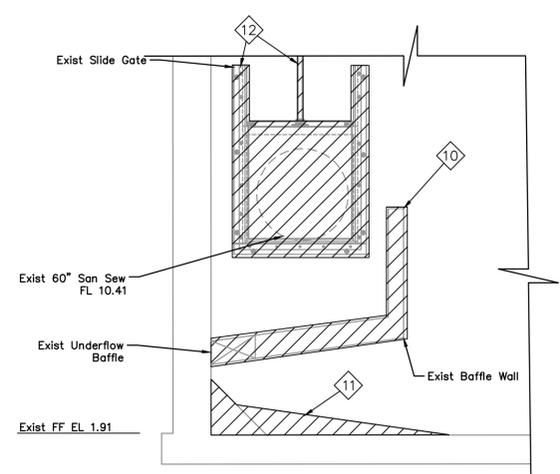
- NOTES:**
- All existing structures, dimensions, locations, elevations, and materials shown are based on City of Houston's record drawings. Contractor shall field verify existing dimensions, locations, elevations, and materials as required to complete the work and as directed by Engineer. Field verification shall be incidental to the work.



**SECTION A-A**  
SCALE: 1/4" = 1'-0"



**SECTION B-B**  
SCALE: 1/4" = 1'-0"



**SECTION C-C**  
SCALE: 1/4" = 1'-0"

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: NOVEMBER 2025

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: CTHOMAS  
JOB NO: 00050-0099-01 DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
**DRY WEATHER PUMP STATION  
DEMOLITION SECTION**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1'-0" HORIZ: XXX VERT: XXX  
CATEGORY NO. 1-M-2 SHEET NO. 33 OF XXX  
FOR CITY OF HOUSTON USE ONLY

**VALVES, FITTINGS AND ACCESSORIES SCHEDULE**

No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION	No.	DESCRIPTION
1	24" x 24" x 20" Tee, FJ	11	20" x 20" x 20" Tee, FJ	21	20" Dismantling Joint (DJ-01-301)	31	3" Air & Vacuum Valve (AVV-01-201) and 3" Ball Valve (BV-01-201)
2	24" Dismantling Joint (DJ-01-001)	12	20" 45° Bend, FJ	22	20" Swing Check Valve (SCV-01-401)	32	1/2" Pressure Indicator (PI-01-301) and 1/2" Ball Valve (BV-01-302)
3	24" Knife Gate Valve (KGV-01-001)	13	20" Swing Check Valve (SCV-01-101)	23	20" Knife Gate Valve (KGV-01-401)	33	3" Air & Vacuum Valve (AVV-01-301) and 3" Ball Valve (BV-01-301)
4	24" Dismantling Joint (DJ-01-003)	14	20" Knife Gate Valve (KGV-01-101)	24	20" Dismantling Joint (DJ-01-401)	34	1/2" Pressure Indicator (PI-01-401) and 1/2" Ball Valve (BV-01-402)
5	24" Knife Gate Valve (KGV-01-002)	15	20" Dismantling Joint (DJ-01-101)	25	6" 90° Bend, FJ	35	3" Air & Vacuum Valve (AVV-01-401) and 3" Ball Valve (BV-01-401)
6	24" Dismantling Joint (DJ-01-002)	16	20" Swing Check Valve (SCV-01-201)	26	4" Duckbill Check Valve (DBV-01-001)	36	3" Air Release Valve (ARV-01-001) and 3" Ball Valve (BV-01-001)
7	24" Knife Gate Valve (KGV-01-003)	17	20" Knife Gate Valve (KGV-01-201)	27	4" Duckbill Valve (DBV-01-002)	37	Pressure Indicator Transmitter (PIT-01-001) and 1/2" Ball Valve (BV-01-002)
8	24" x 20" Concentric Reducer, FJ	18	20" Dismantling Joint (DJ-01-201)	28	1/2" Pressure Indicator (PI-01-101) and 1/2" Ball Valve (BV-01-102)	38	3" Air Release Valve (ARV-01-002) and 3" Ball Valve (BV-01-003)
9	24" x 24" x 20" Lateral Wye, FJ	19	20" Swing Check Valve (SCV-01-301)	29	3" Air & Vacuum Valve (AVV-01-101) and 3" Ball Valve (BV-01-101)	39	Pressure Indicator Transmitter (PIT-01-002) and 1/2" Ball Valve (BV-01-004)
10	20" 90° Bend, FJ	20	20" Knife Gate Valve (KGV-01-301)	30	1/2" Pressure Indicator (PI-01-201) and 1/2" Ball Valve (BV-01-202)	40	24"x24"x24" Tee, FJ

**ITEMS OF WORK (ALTERNATE BID ITEMS)**

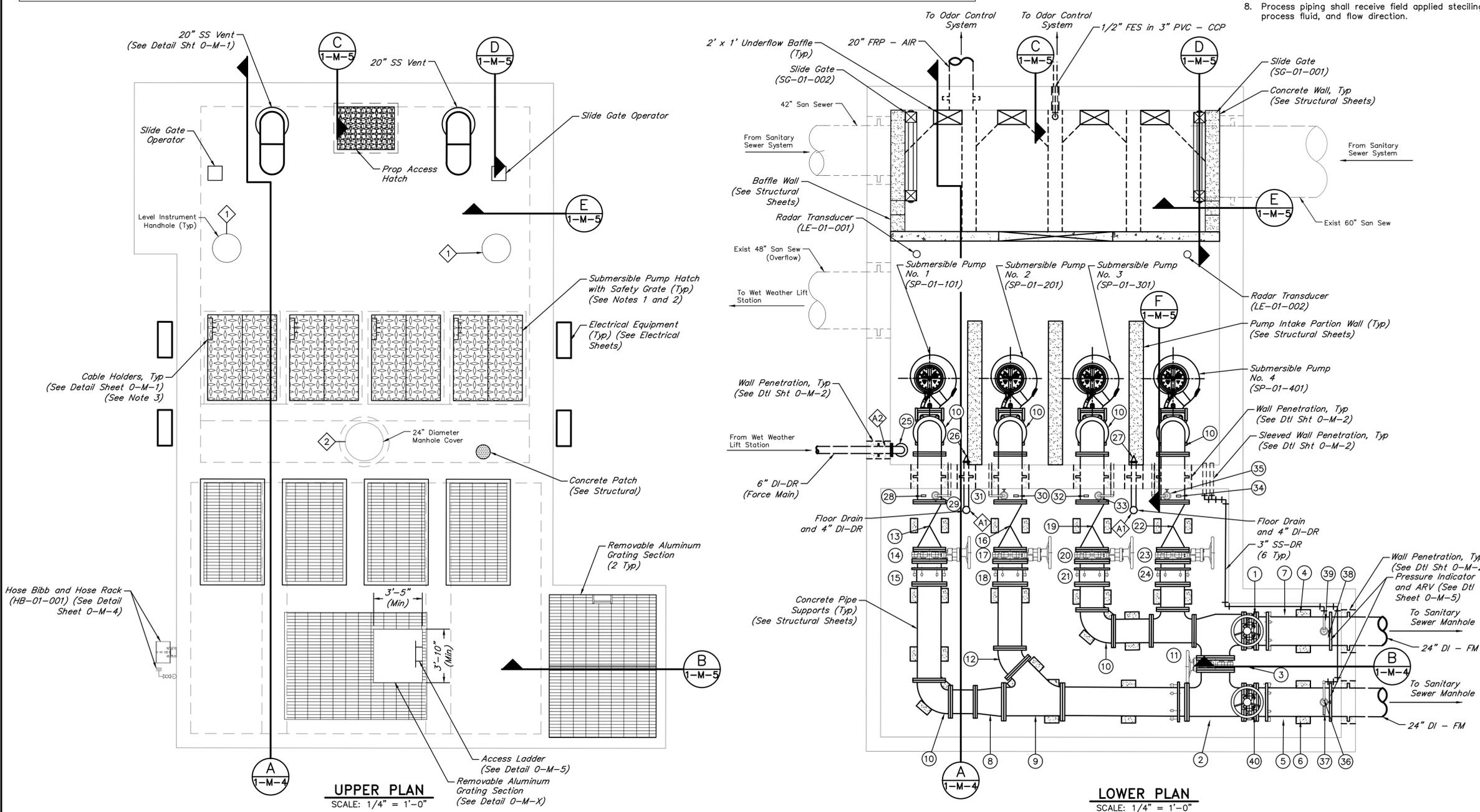
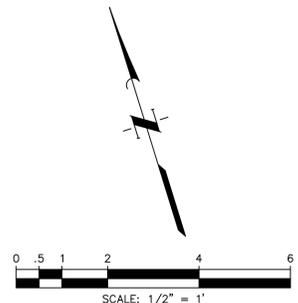
No.	DESCRIPTION
A1	Install 6" Drain Inlet w/P-Trap and 4" DI Drain Line w/ wall collars.
A2	Install 6" DI-Drain (Force Main) w/ Wall Penetration.

**ITEMS OF WORK**

No.	DESCRIPTION
1	Hand clean and apply a cold galvanizing spray on the instrument handhole cover.
2	Hand clean and apply a cold galvanizing spray on the manhole cover.

**NOTES:**

- The access hatch requires a rigid safety grate fall prevention system with less than three inch (3") openings between the grate and any edge of the hatch opening.
- Contractor shall verify the minimum required pump access hatch size with the Pump Manufacturer. The minimum size is shown.
- Contractor to field locate the location of existing cable holders so as to confirm unimpeded installation of pumps and safety grating.
- Contractor shall apply protective coating to all proposed above ground and below ground piping. Riser and hatches shall be labeled to correspond to the respective pump number.
- All existing structures, dimensions, locations, elevations, and materials shown are based on City of Houston's record drawings. Contractor shall field verify existing dimensions, locations, elevations, and materials as required to complete the work and as directed by the Engineer. Field verification shall be incidental to the work.
- All aluminum grating and access hatches shall receive shop applied power coating, color COH forest green.
- Access hatch covers shall receive field applied stenciling for equipment identification.
- Process piping shall receive field applied steeling for process fluid, and flow direction.



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: NOVEMBER 2025



**CITY OF HOUSTON**  
 HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: CTHOMAS  
 JOB NO: 00050-0099-01 DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

**SCOTT STREET No. 1**  
**LIFT STATION REHABILITATION**

**DRY WEATHER PUMP SECTION**  
**IMPROVEMENT PLAN**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

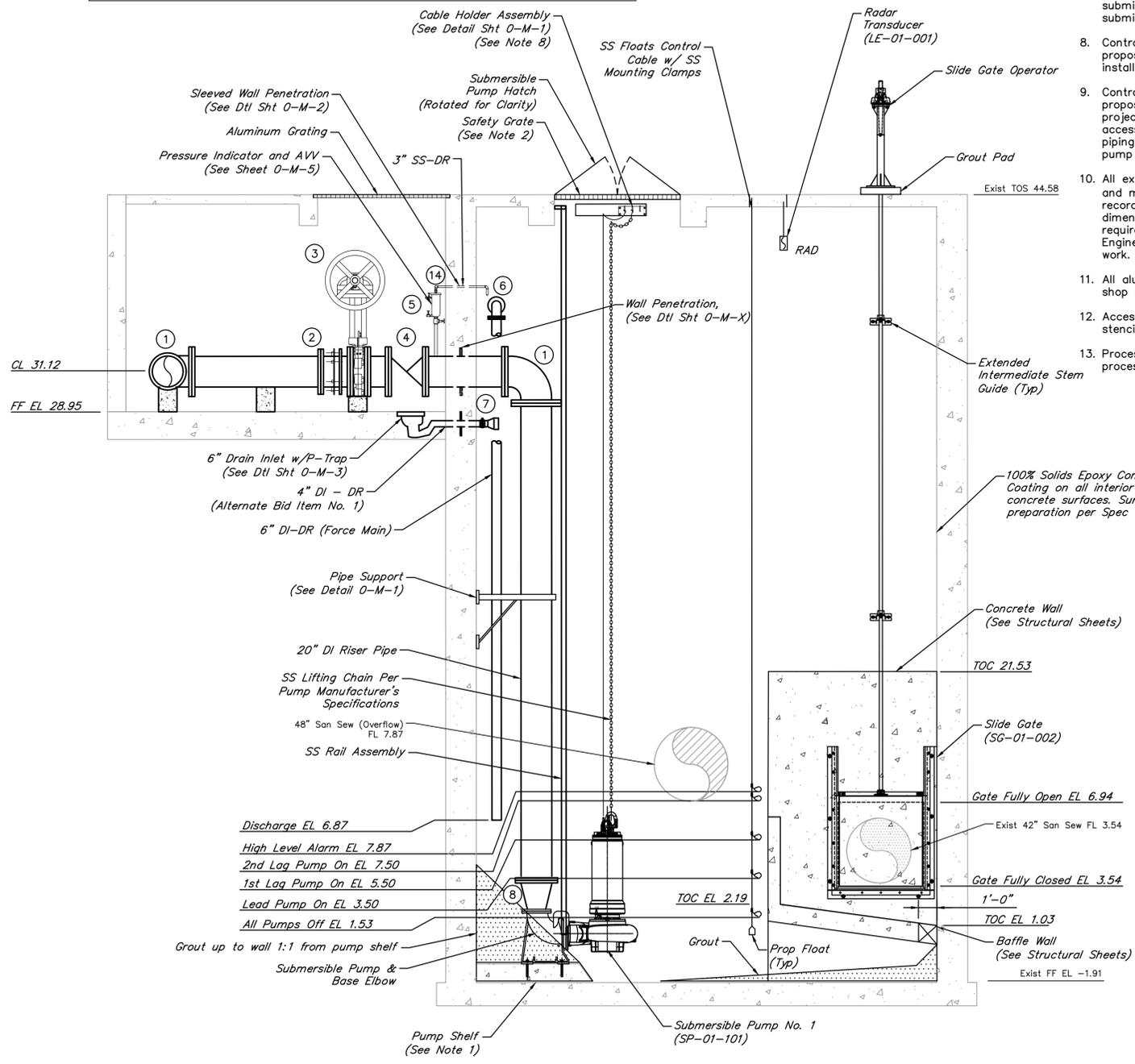
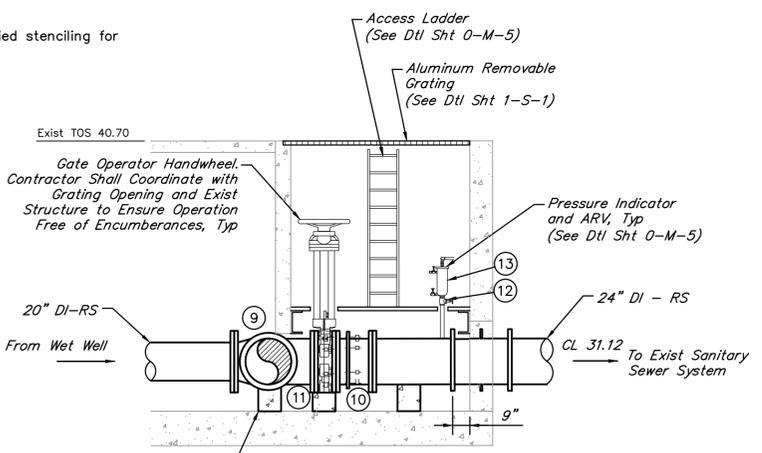
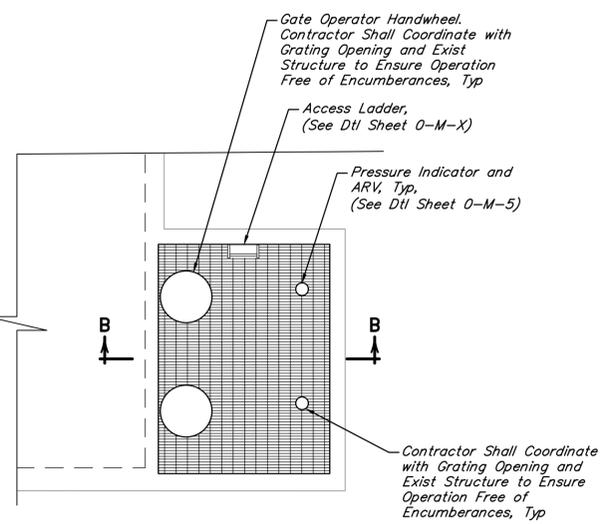
DRAWING SCALE 1/4"=1'-0" HORIZ: XXX VERT: XXX  
 CATEGORY NO. **1-M-3** SHEET NO. 34 OF XXX  
 FOR CITY OF HOUSTON USE ONLY

VALVES, FITTINGS AND ACCESSORIES SCHEDULE			
No.	DESCRIPTION	No.	DESCRIPTION
1	20" 90° Bend, FJ	8	20" Concentric Reducer, FJ (See Note 6)
2	20" Dismantling Joint (DJ-01-101)	9	24" x 24" x 20" Tee, FJ
3	20" Knife Gate Valve (KGV-01-101)	10	24" Dismantling Joint (DJ-01-003)
4	20" Swing Check Valve (SCV-01-101)	11	24" Knife Gate Valve (KGV-01-003)
5	3" Air & Vacuum Valve (AVV-01-101) and 3" Ball Valve (BV-01-101)	12	1/2" Ball Valve (BV-01-004) and Pressure Indicator Transmitter (PIT-01-002)
6	6" 90° Bend, FJ	13	3" Air Release Valve (ARV-01-002) and 3" Ball Valve (BV-01-003)
7	4" Duckbill Check Valve (DBV-01-001)	14	Pressure Indicator (PI-01-101) and 1/2" Ball Valve (BV-01-102)

ITEMS OF WORK (ALTERNATE BID ITEMS)	
No.	DESCRIPTION
A1	Install 6" Drain Inlet w/ P-Trap and 4" DI Drain Line w/ wall collars.
A2	Install 6" DI-Drain (Force Main) w/ Wall Penetration.

**NOTES:**

- Pump shelf shall be required as per pump manufacturer.
- The access hatch requires a rigid safety grate fall prevention system with less than three inch (3") openings between the grate and any edge of the hatch opening.
- Contractor shall verify the minimum required pump access hatch size with the Pump manufacturer. The minimum size is shown.
- Provide a PVC coated weight at the end of the stainless steel float controls cable.
- Contractor shall coordinate with supplied Pump Manufacturer to ensure grout in wet well is outside the minimum required clearance area for the pumps.
- Coordinate reducer with approved pump manufacturer submittal and base elbows.
- Contractor shall field verify horizontal and vertical location of exist 42" and 60" wall penetrations and submit field findings for review by Engineer prior to submittal and fabrication of proposed gates.
- Contractor shall field locate the location of the proposed cable holders so as to ensure unimpeded installation of pumps and operation of safety grating.
- Contractor shall apply protective coating to all proposed above ground and below ground piping per project specifications. Contractor shall label pump access hatches, riser piping and force main header piping in the valve vault correspond to the respective pump number as applicable.
- All existing structures, dimensions, locations, elevations, and materials shown are based on City of Houston's record drawings. Contractor shall field verify existing dimensions, locations, elevations, and materials as required to complete the work and as directed by the Engineer. Field verification shall be incidental to the work.
- All aluminum grating and access hatches shall receive shop applied power coating, color COH forest green.
- Access hatch covers shall receive field applied stenciling for equipment identification.
- Process piping shall receive field applied stenciling for process fluid, and flow direction.



**LIFT STATION OPERATION TABLE**

RISING LEVEL CYCLE		
ELEVATION	ACTION	PUMP(S) IN OPERATION
3.50	LEAD PUMP TURNS ON	LEAD PUMP TURNS ON
5.50	1st LAG PUMP TURNS ON	LEAD AND 1st LAG PUMP TURNS ON
7.50	2nd LAG PUMP TURNS ON	LEAD AND TWO LAG PUMPS TURNS ON
7.87	HIGH LEVEL ALARM	LEAD AND TWO LAG PUMPS RUNNING
FALLING LEVEL CYCLE		
ELEVATION	ACTION	PUMP(S) IN OPERATION
7.87	HIGH LEVEL ALARM TURNS OFF	LEAD AND TWO LAG PUMPS ON
1.53	ALL PUMPS TURN OFF	NONE

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: NOVEMBER 2025

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

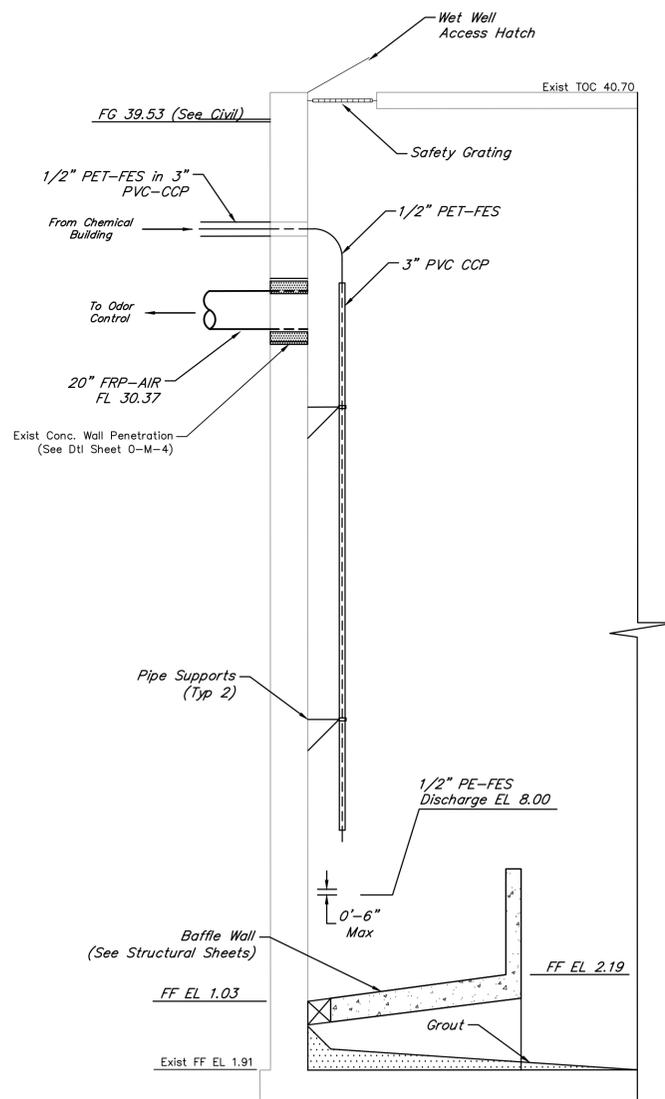
DATE: JULY 2025 DGN BY: CTHOMAS  
JOB NO: 00050-0099-01 DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

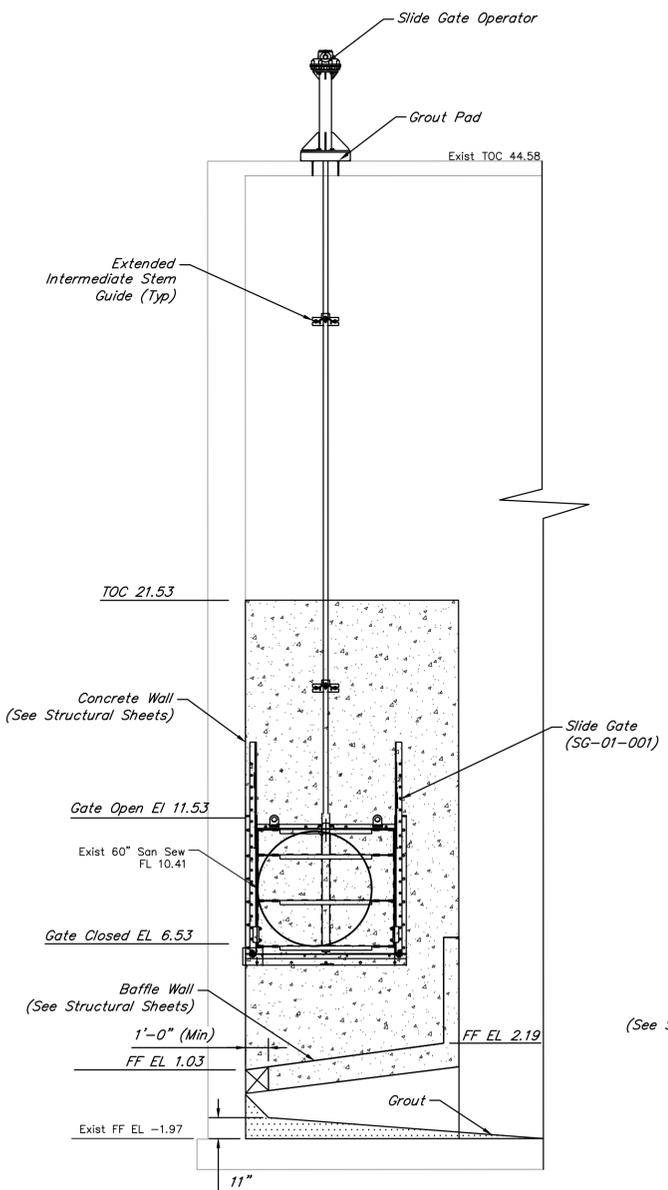
SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
DRY WEATHER PUMP  
STATION IMPROVEMENTS  
SECTION 1 OF 2

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

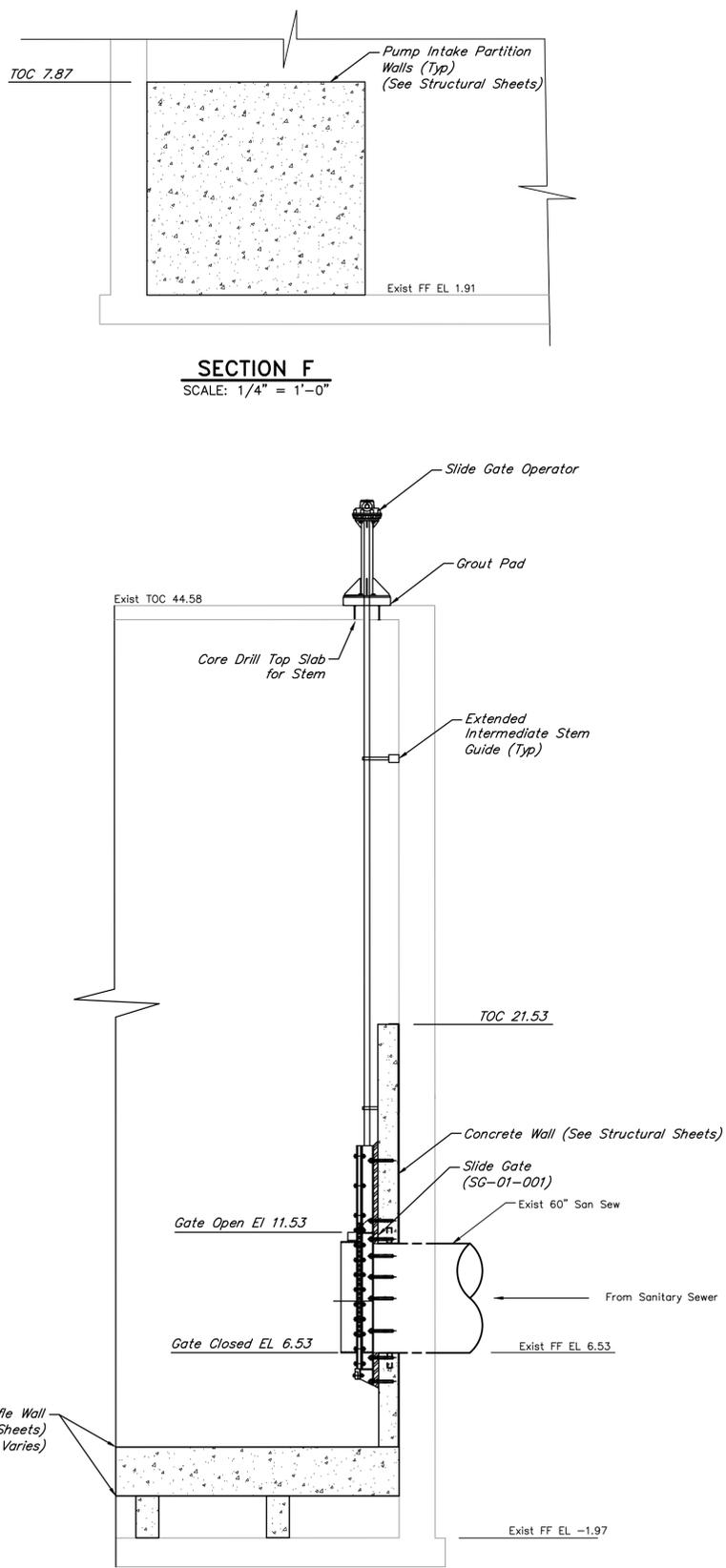
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CATEGORY NO. 1-M-4 SHEET NO. 35 OF XXX  
FOR CITY OF HOUSTON USE ONLY



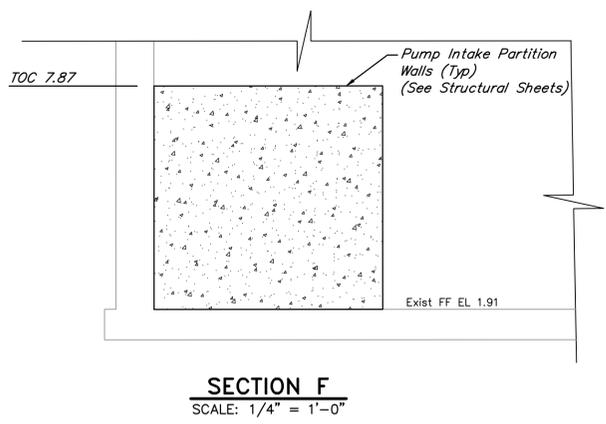
**SECTION C**  
SCALE: 1/4" = 1'-0"



**SECTION D**  
SCALE: 1/4" = 1'-0"



**SECTION E**  
SCALE: 1/4" = 1'-0"



**SECTION F**  
SCALE: 1/4" = 1'-0"

**NOTES:**

1. Contractor shall field verify horizontal and vertical location of exist 42" and 60" wall penetrations and submit field findings for review by Engineer prior to submittal and fabrication of proposed gates.
2. All existing structures, dimensions, locations, elevations, and materials shown are based on City of Houston's record drawings. Contractor shall field verify existing dimensions, locations, elevations, and materials as required to complete the work and as directed by the Engineer. Field verification shall be incidental to the work.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: NOVEMBER 2025



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: CTHOMAS  
JOB NO: 00050-0099-01 DWG BY: CHUDSON

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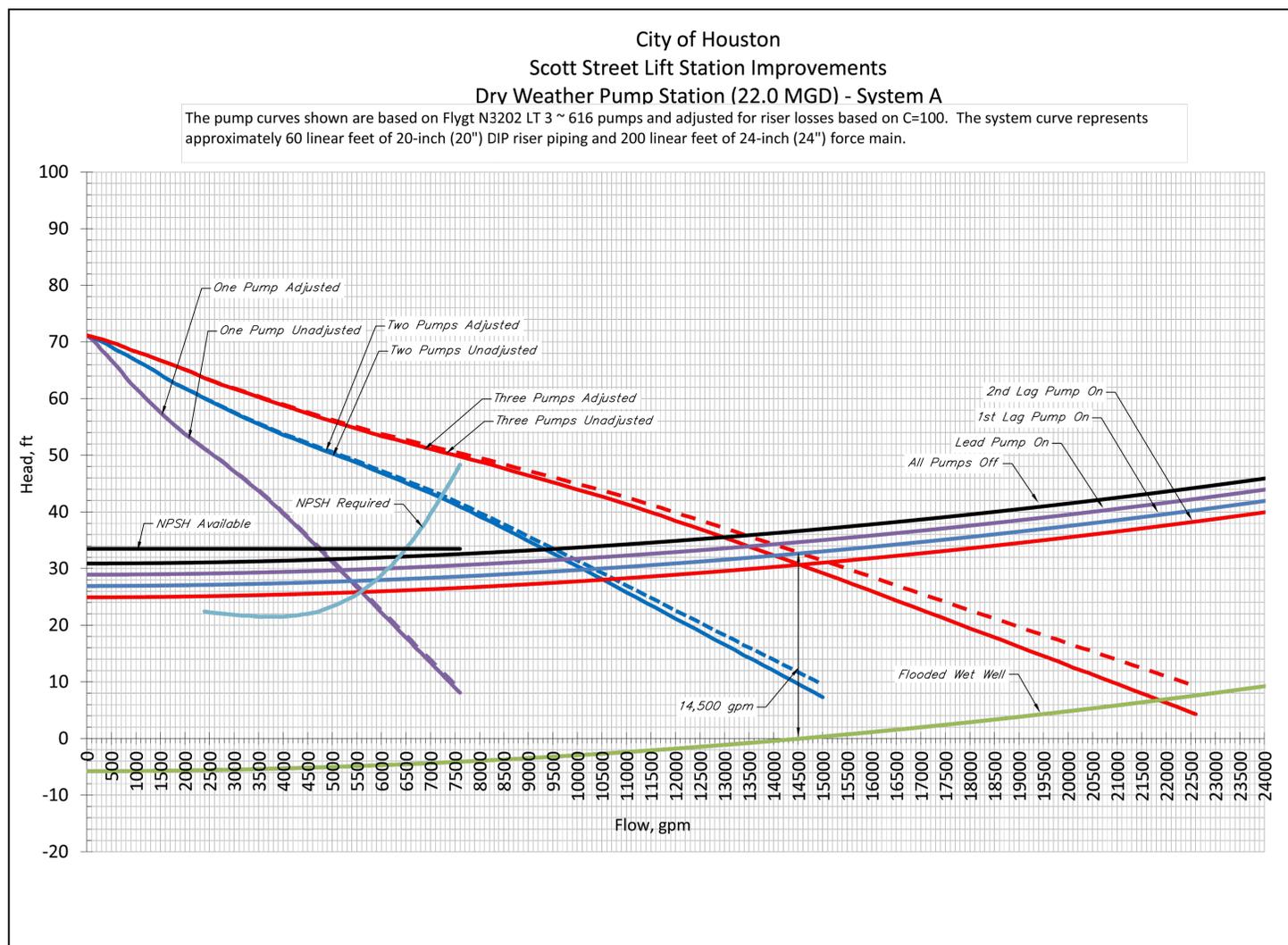
SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
DRY WEATHER PUMP  
STATION IMPROVEMENTS  
SECTION 2 OF 2

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/2"=1'-0" HORIZ: XXX VERT: XXX

CATEGORY NO. 1-M-5 SHEET NO. 36 OF XXX  
FOR CITY OF HOUSTON USE ONLY

SYSTEM A			
PUMP DATA	1 PUMP OPERATING IN OLD DUCTILE IRON PIPE (C=100)	2 PUMP OPERATING IN OLD DUCTILE IRON PIPE (C=100)	3 PUMP OPERATING IN OLD DUCTILE IRON PIPE (C=100)
FLOW (GPM)	5,093	10,186	15,278
TDH (FT.)	31.4	32.1	33.5
MIN. OVERALL EFF. (%)	70	70	70
STATIC HEAD (FT.)	28.92	26.92	24.92
SHAFT HP (MAX.)	50	100	150
RPM (MAX.)	1,175	1,175	1,175



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
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Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: NOVEMBER 2025



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

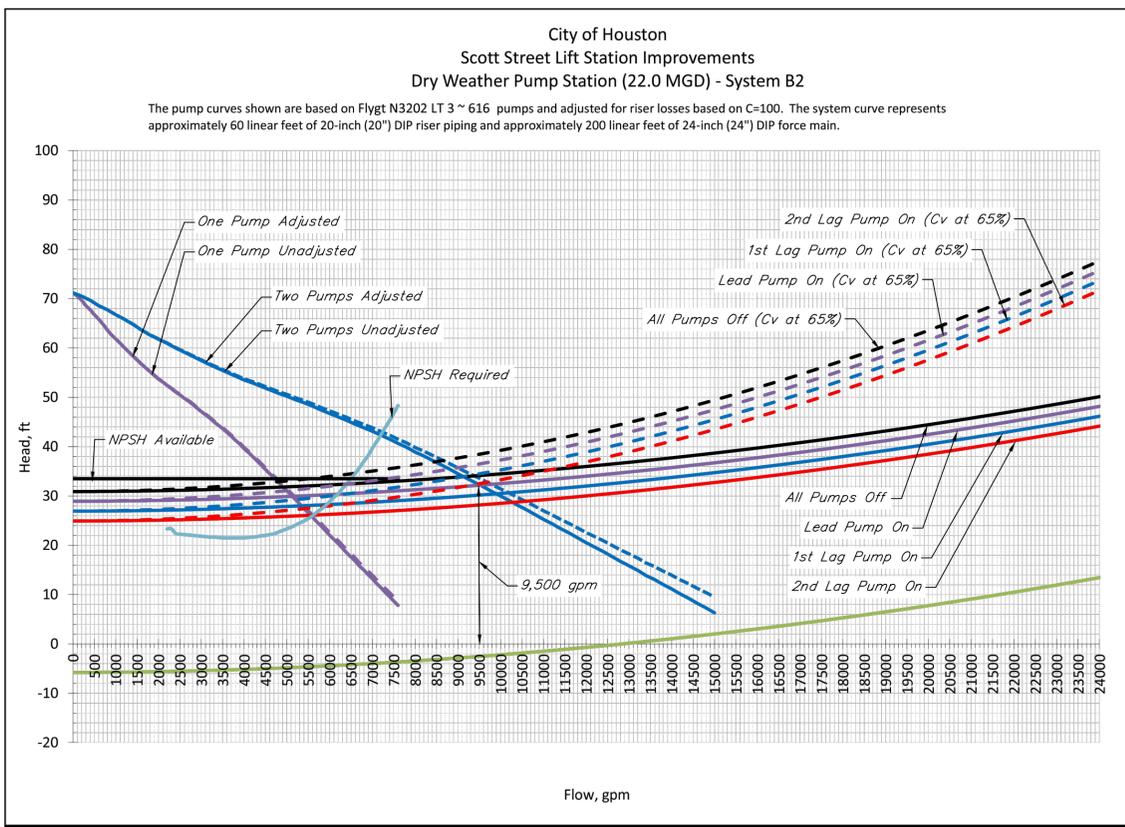
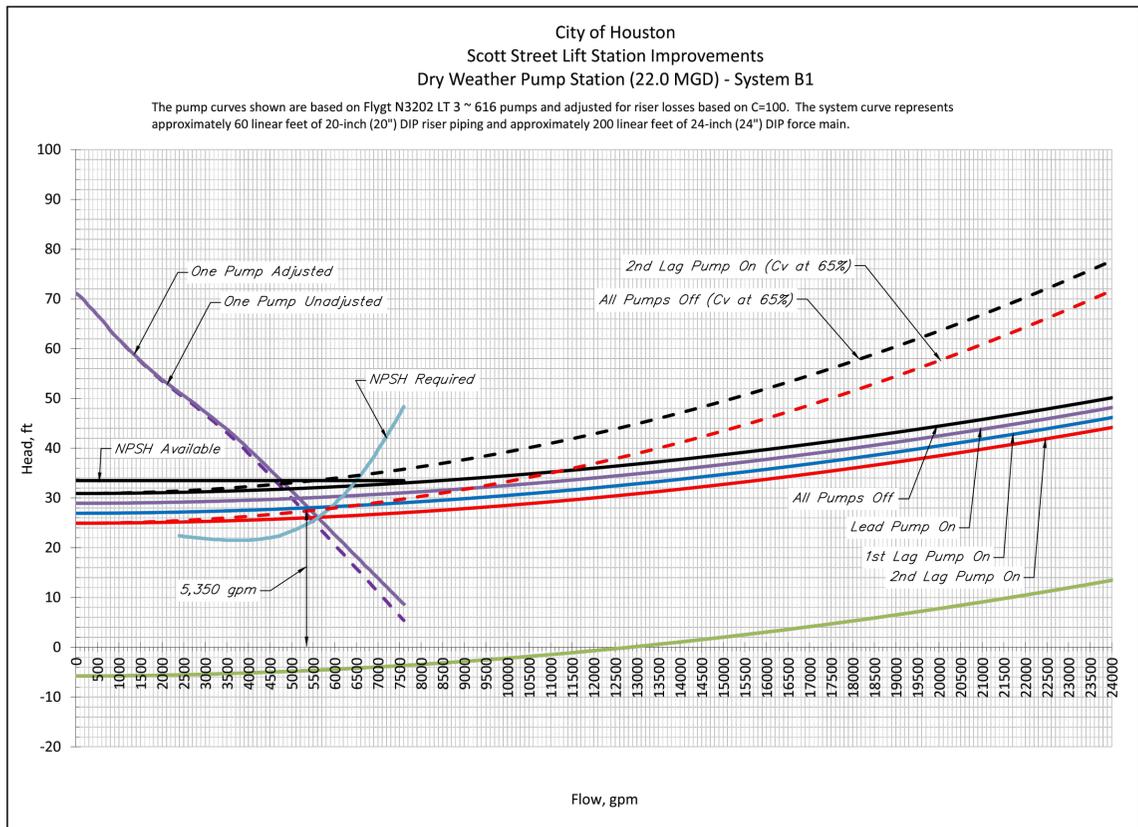
DATE: JANUARY 2026      DGN BY: CTHOMAS  
JOB NO: 00050-0099-01      DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
**DRY WEATEHR PUMP STATION  
PUMP DATA AND CURVES**  
SHEET 1 OF 1

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE NONE      HORIZ: XXX      VERT: XXX  
CATEGORY NO. **1-M-6**      SHEET NO. 37 OF XXX  
FOR CITY OF HOUSTON USE ONLY



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: NOVEMBER 2025



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026      DGN BY: CTHOMAS  
JOB NO: 00050-0099-01      DWG BY: CHUDSON

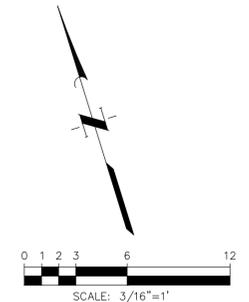
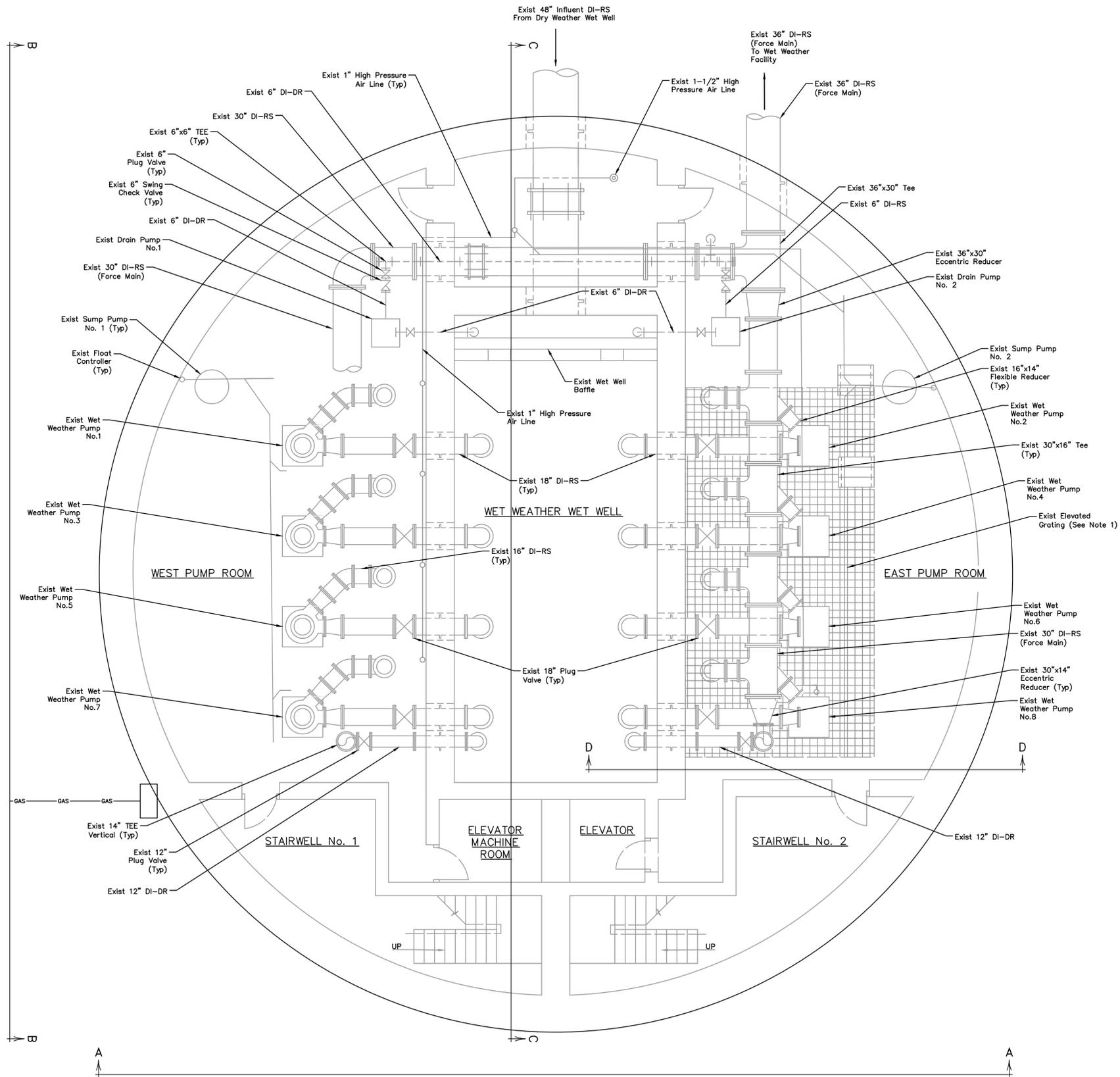
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
**DRY WEATHER PUMP STATION  
PUMP DATA AND CURVES**  
SHEET 2 OF 2

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/2"=1'-0"    HORIZ: XXX    VERT: XXX

CATEGORY NO. **1-M-7**    SHEET NO. XXX OF XXX  
FOR CITY OF HOUSTON USE ONLY



**NOTES:**

1. Grating not shown on West Pump Room only for Clarification. West Room Grating is a Mirrored Set--Up from East Pump Room.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: WILLIAM R. SAGASTIZADO, P.E.  
 P.E. Serial No.: 125999  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026      DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01      DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

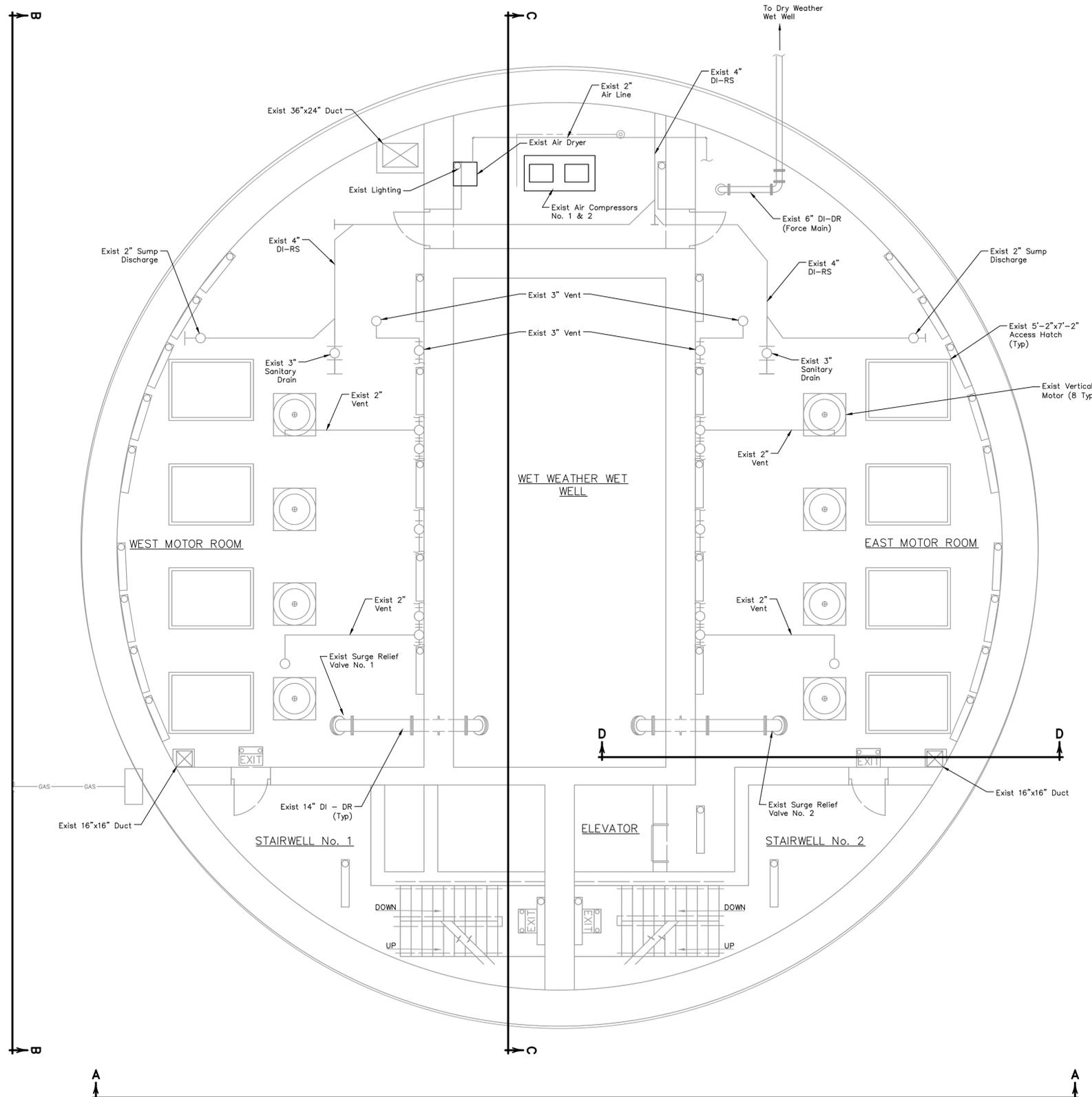
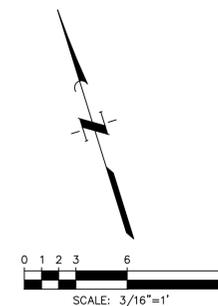
SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

**WET WEATHER LIFT STATION  
 LOWER LEVEL-EXISTING**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1'      HORIZ: XXX      VERT: XXX

CATEGORY NO. **2-M-1**      SHEET NO. 38 OF XXX  
 FOR CITY OF HOUSTON USE ONLY



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: WILLIAM R. SAGASTIZADO, P.E.  
 P.E. Serial No.: 125999  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

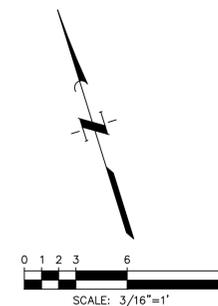
DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: JMMUSSO

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SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
**WET WEATHER LIFT STATION  
 MEZZANINE LEVEL-EXISTING**

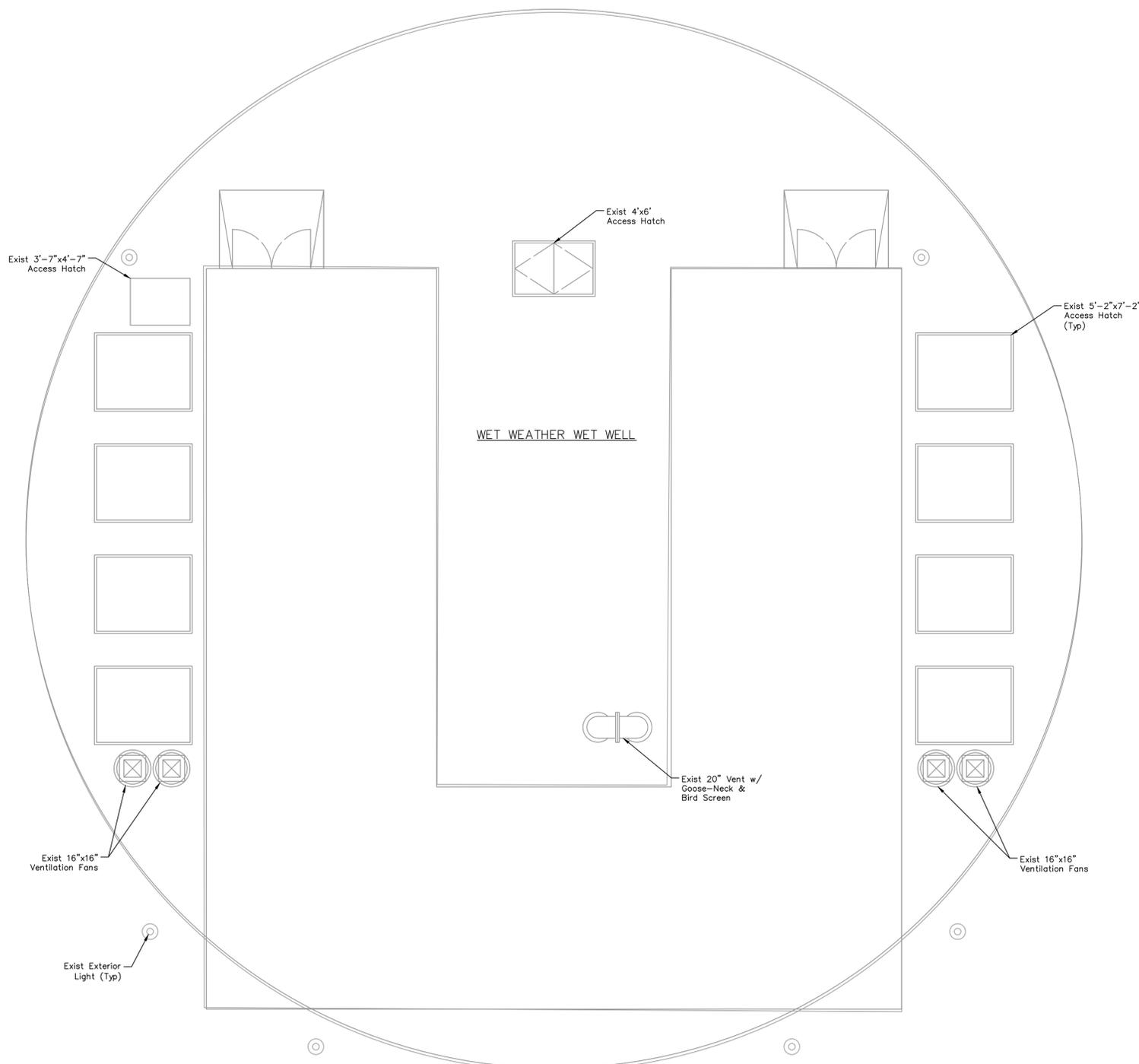
**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX  
 CATEGORY NO. **2-M-2** SHEET NO. 39 OF XXX  
 FOR CITY OF HOUSTON USE ONLY



**NOTES:**

1. Interior Excluded for Clarity.



NO.	DATE	REVISIONS	APP.

INTERIM REVIEW  
 Not intended for construction,  
 bidding or permit purposes.  
 Engineer: WILLIAM R. SAGASTIZADO, P.E.  
 P.E. Serial No.: 125999  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: JMMUSSO

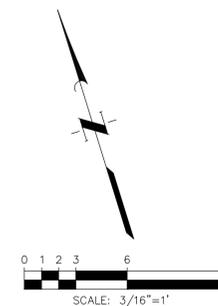
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
 WET WEATHER LIFT STATION  
 GROUND LEVEL EXTERIOR -  
 EXISTING

CITY OF HOUSTON  
 HOUSTON PUBLIC WORKS

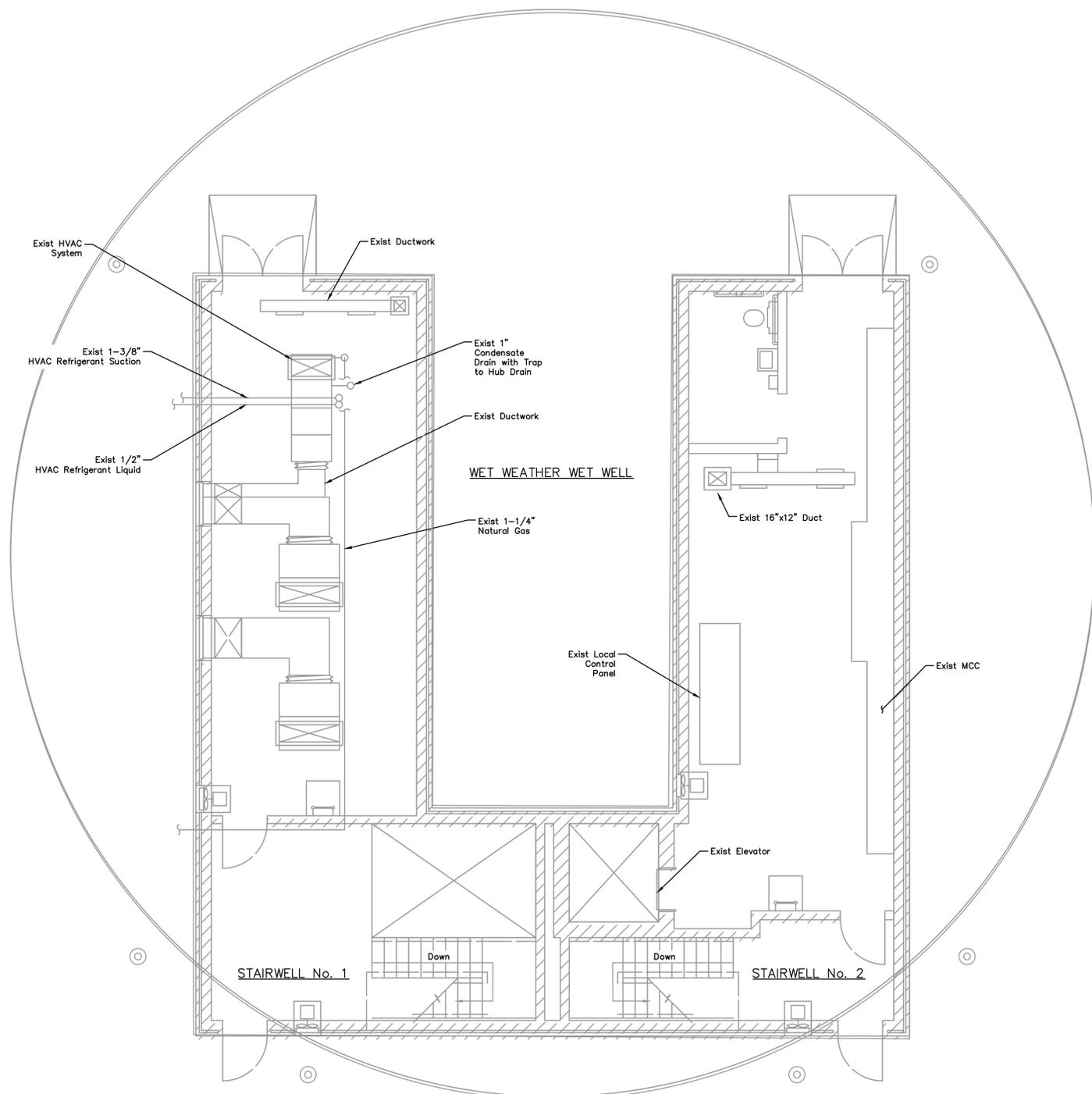
DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 2-M-3 SHEET NO. XXX OF XXX  
 FOR CITY OF HOUSTON USE ONLY



**NOTES:**

1. Exterior Excluded for Clarity.



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: WILLIAM R. SAGASTIZADO, P.E.  
 P.E. Serial No.: 125999  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: JMMUSSO

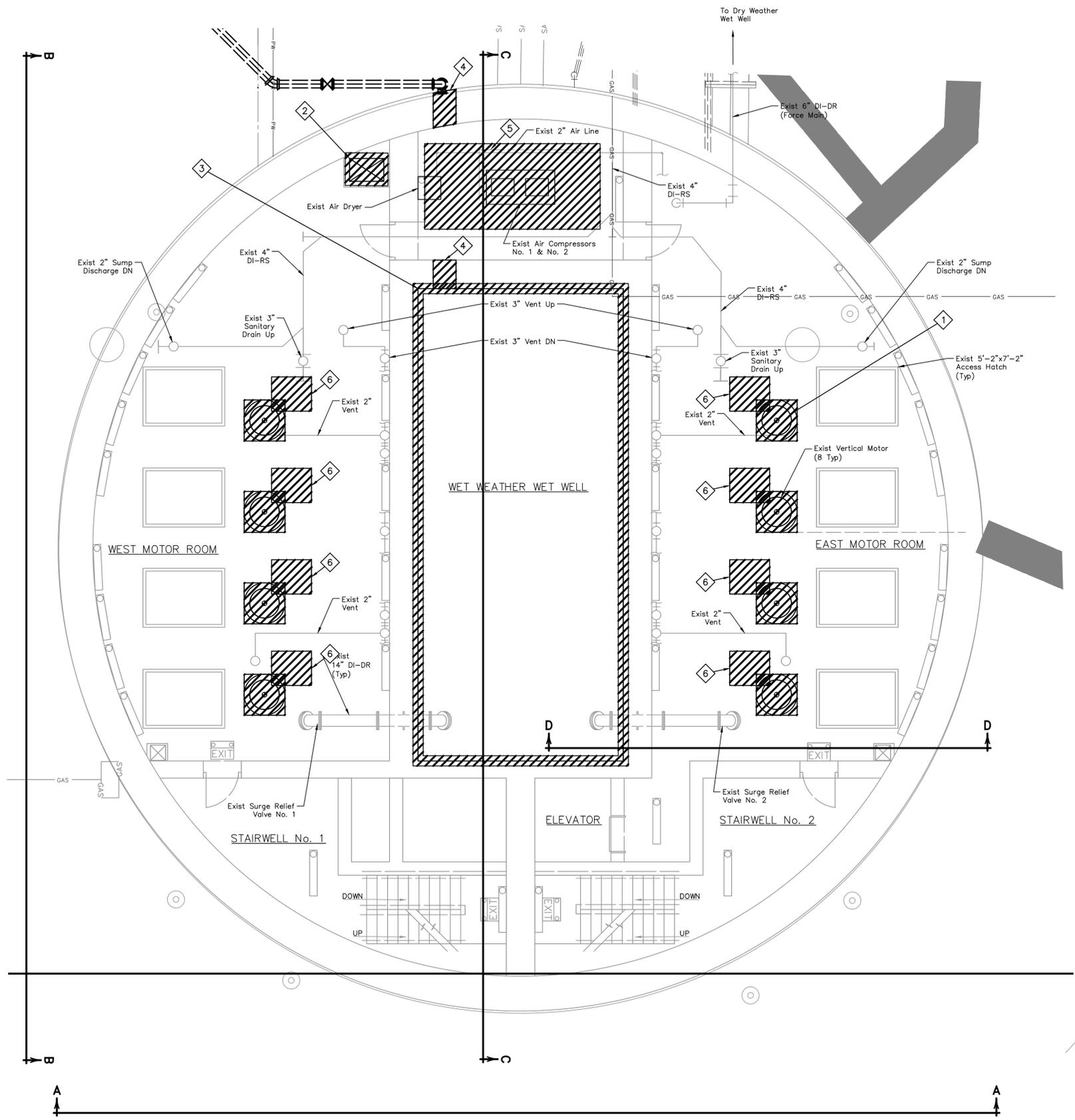
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
**WET WEATHER LIFT STATION**  
 GROUND LEVEL  
 INTERIOR-EXISTING

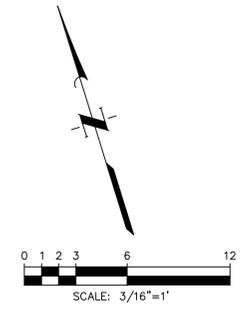
**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX  
 CATEGORY NO. **2-M-4** SHEET NO. XXX OF XXX  
 FOR CITY OF HOUSTON USE ONLY





ITEMS OF WORK	
No.	DESCRIPTION
1	Demolish the Existing Motors from the Wet Weather Pumps, Conduit, Wire Associated with the Motor.
2	Demolish Existing Air Ducts, Supports, and Hardware.
3	Demolish T-LOK Liner Inside Wet Well.
4	Contractor to Core through the Existing Walls to Allow for Construction of the FRP Duct Works.
5	Demolish Existing Air Compressor, High Pressure Air Piping, and Electrical Controls.
6	Contractor to install Access Hole with Removable Grating.



**LEGEND:**



NO.	DATE	REVISIONS	APP.

INTERIM REVIEW  
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 Engineer: WILLIAM R. SAGASTIZADO, P.E.  
 P.E. Serial No.: 125999  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
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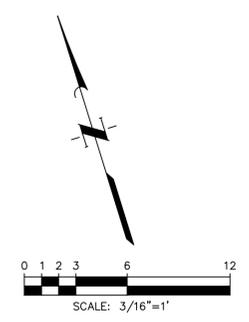
SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
 WET WEATHER LIFT STATION  
 MEZZANINE LEVEL-DEMOLITION

CITY OF HOUSTON  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 2-M-6 SHEET NO. 43 OF XXX  
 FOR CITY OF HOUSTON USE ONLY

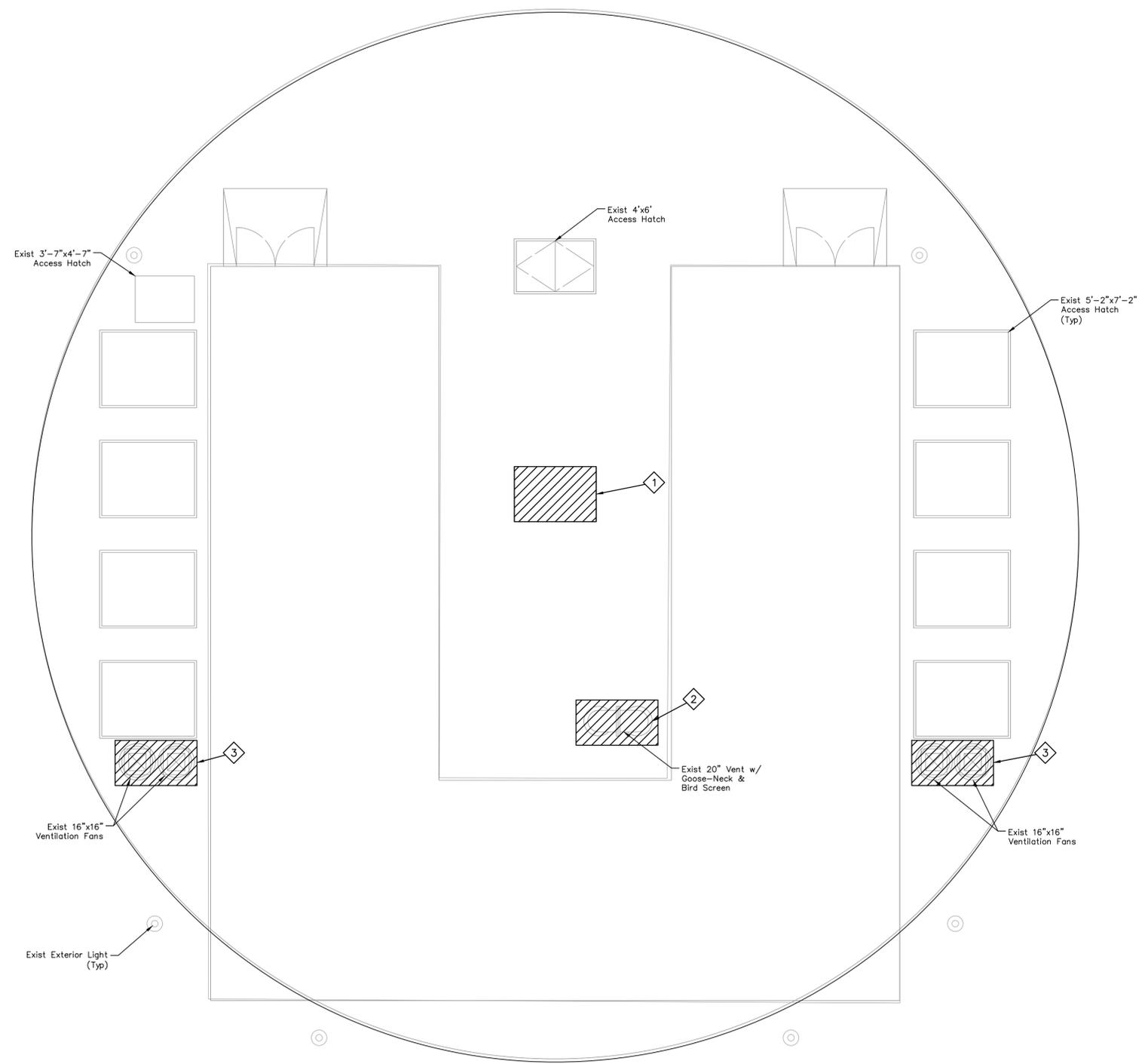
ITEMS OF WORK	
No.	DESCRIPTION
1	Contractor Shall Saw Cut the Existing Top Slab. See Structural Sheets.
2	Disconnect and Demolish Existing Exterior Ventilation Fans.
3	Demolish Existing 20" Vent with Goose-neck & Bird Screen.



**NOTES:**

- Interior Excluded for Clarity.

**LEGEND:**



NO.	DATE	REVISIONS	APP.

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 Engineer: WILLIAM R. SAGASTIZADO, P.E.  
 P.E. Serial No.: 125999  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: JMMUSSO

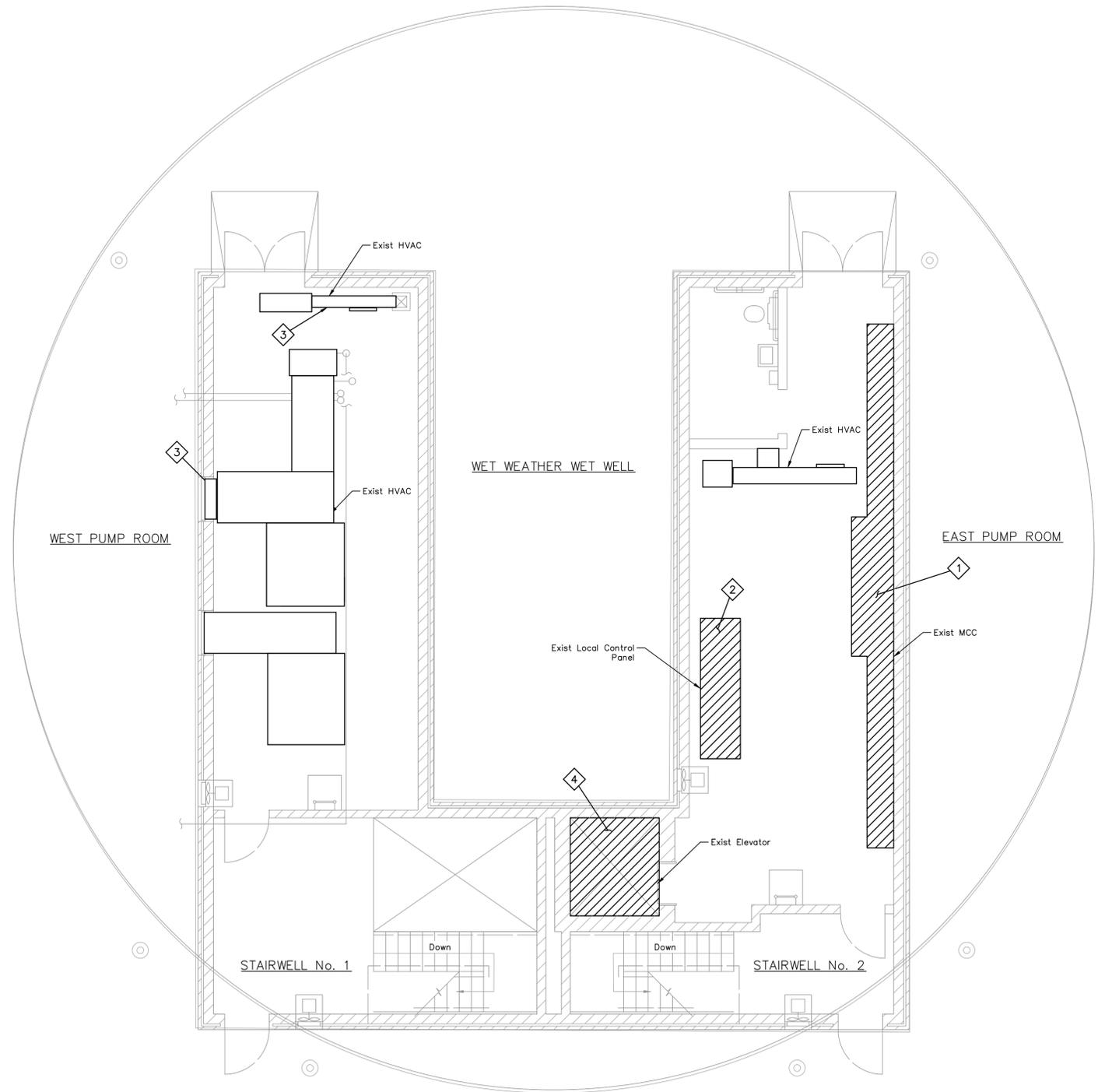
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
 WET WEATHER LIFT STATION  
 GROUND LEVEL EXTERIOR -  
 DEMOLITION

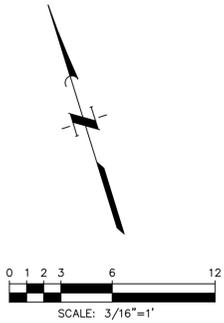
CITY OF HOUSTON  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 2-M-7 SHEET NO. 44 OF XXX  
 FOR CITY OF HOUSTON USE ONLY



ITEMS OF WORK	
No.	DESCRIPTION
1	Demolish Existing MCC Conduit and Wiring Related to the MCC.
2	Demolish Existing Local Control Conduit and Wiring Related to the Local Control Panel.
3	See HVAC Sheets
4	Decommission and Dismantle Existing Elevator.



**NOTES:**  
1. Exterior Excluded for Clarity.

**LEGEND:**  
 DEMOLISH

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW  
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Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
Date: JANUARY 2026

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CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

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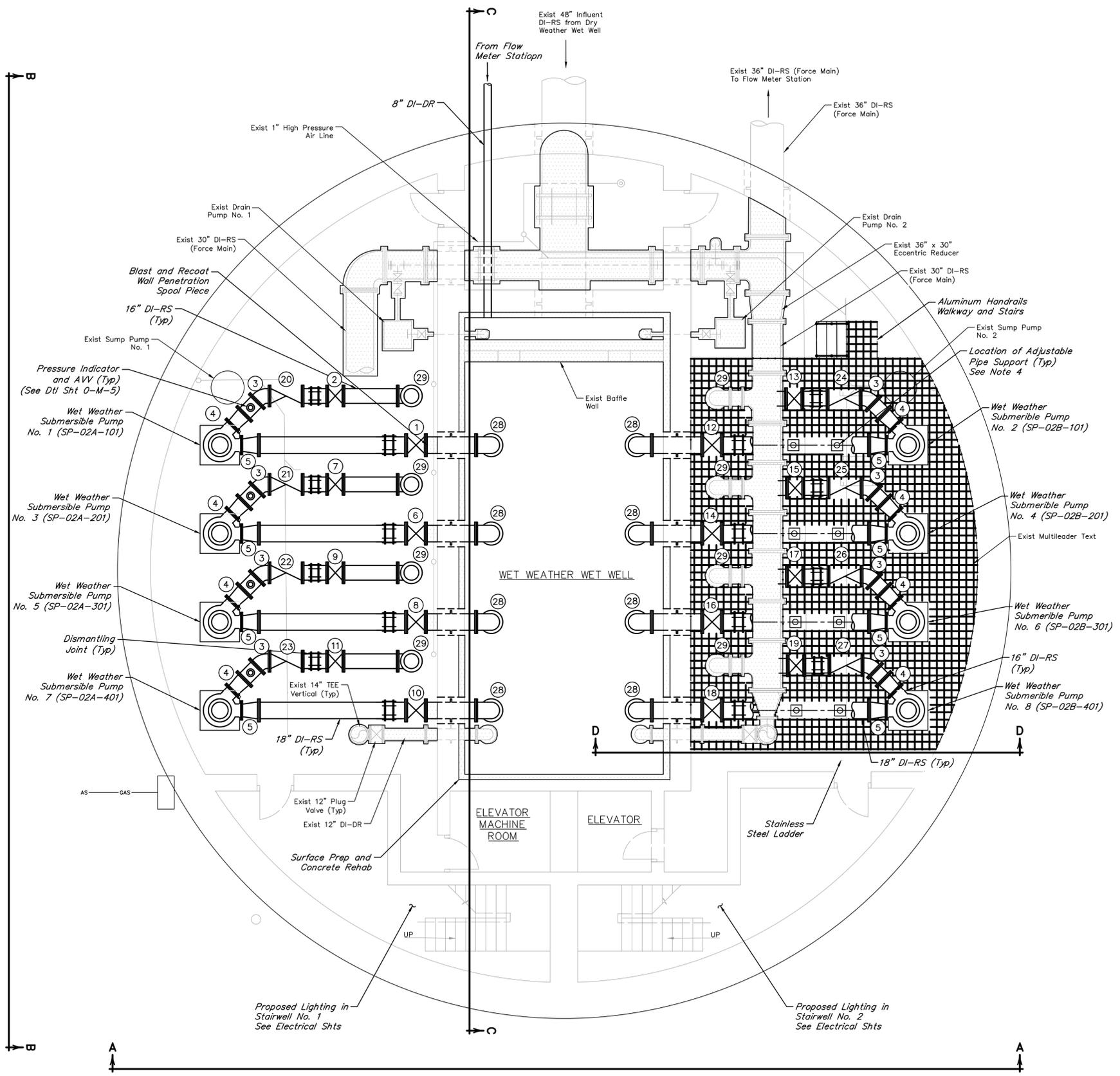
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**SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
WET WEATHER LIFT STATION  
GROUND LEVEL  
INTERIOR-DEMOLITION**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

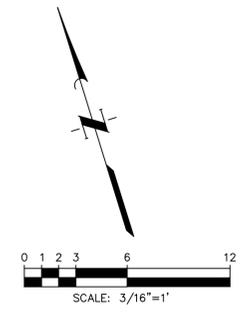
DRAWING SCALE 3/16"=1'      HORIZ: XXX      VERT: XXX

CATEGORY NO. **2-M-8**      SHEET NO. 45 OF XXX  
FOR CITY OF HOUSTON USE ONLY



**VALVE AND ACCESSORIES SCHEDULES**

No.	DESCRIPTION
①	18" Actuated Plug Valve, FJ (PV-02A-101)
②	16" Actuated Plug Valve, FJ (PV-02A-102)
③	16" 45° Bend, FJ
④	14"x16" Reducer, FJ
⑤	14"x18" Reducer, FJ
⑥	18" Actuated Plug Valve, FJ (PV-02A-201)
⑦	16" Actuated Plug Valve, FJ (PV-02A-202)
⑧	18" Actuated Plug Valve, FJ (PV-02A-301)
⑨	16" Actuated Plug Valve, FJ (PV-02A-302)
⑩	18" Actuated Plug Valve, FJ (PV-02A-401)
⑪	16" Actuated Plug Valve, FJ (PV-02A-402)
⑫	18" Actuated Plug Valve, FJ (PV-02B-101)
⑬	16" Actuated Plug Valve, FJ (PV-02B-102)
⑭	18" Actuated Plug Valve, FJ (PV-02B-201)
⑮	16" Actuated Plug Valve, FJ (PV-02B-202)
⑯	18" Actuated Plug Valve, FJ (PV-02B-301)
⑰	16" Actuated Plug Valve, FJ (PV-02B-302)
⑱	18" Actuated Plug Valve, FJ (PV-02B-401)
⑲	16" Actuated Plug Valve, FJ (PV-02B-402)
⑳	16" Swing Check Valve, FJ (SCV-02A-101)
㉑	16" Swing Check Valve, FJ (SCV-02A-201)
㉒	16" Swing Check Valve, FJ (SCV-02A-301)
㉓	16" Swing Check Valve, FJ (SCV-02A-401)
㉔	16" Swing Check Valve, FJ (SCV-02B-101)
㉕	16" Swing Check Valve, FJ (SCV-02B-201)
㉖	16" Swing Check Valve, FJ (SCV-02B-301)
㉗	16" Swing Check Valve, FJ (SCV-02B-401)
㉘	18" Straight Flared End, FJ
㉙	16" 90° Bend, FJ



**LEGEND:**



**NOTES:**

1. All proposed grating and handrails shall be made of aluminum and powder-coated dark green.
2. Stairway shall have non-slip steps.
3. Contractor shall apply protective coating to all proposed above ground piping. Riser and hatches shall be labeled to correspond to the respective pump number.
4. Contractor to create hole in proposed grating at the location of adjustable pipe supports.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW  
 Not intended for construction, bidding or permit purposes.  
 Engineer: WILLIAM R. SAGASTIZADO, P.E.  
 P.E. Serial No.: 125999  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

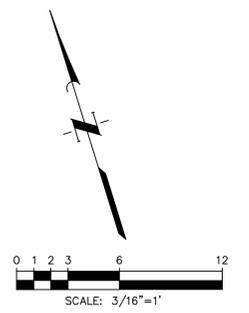
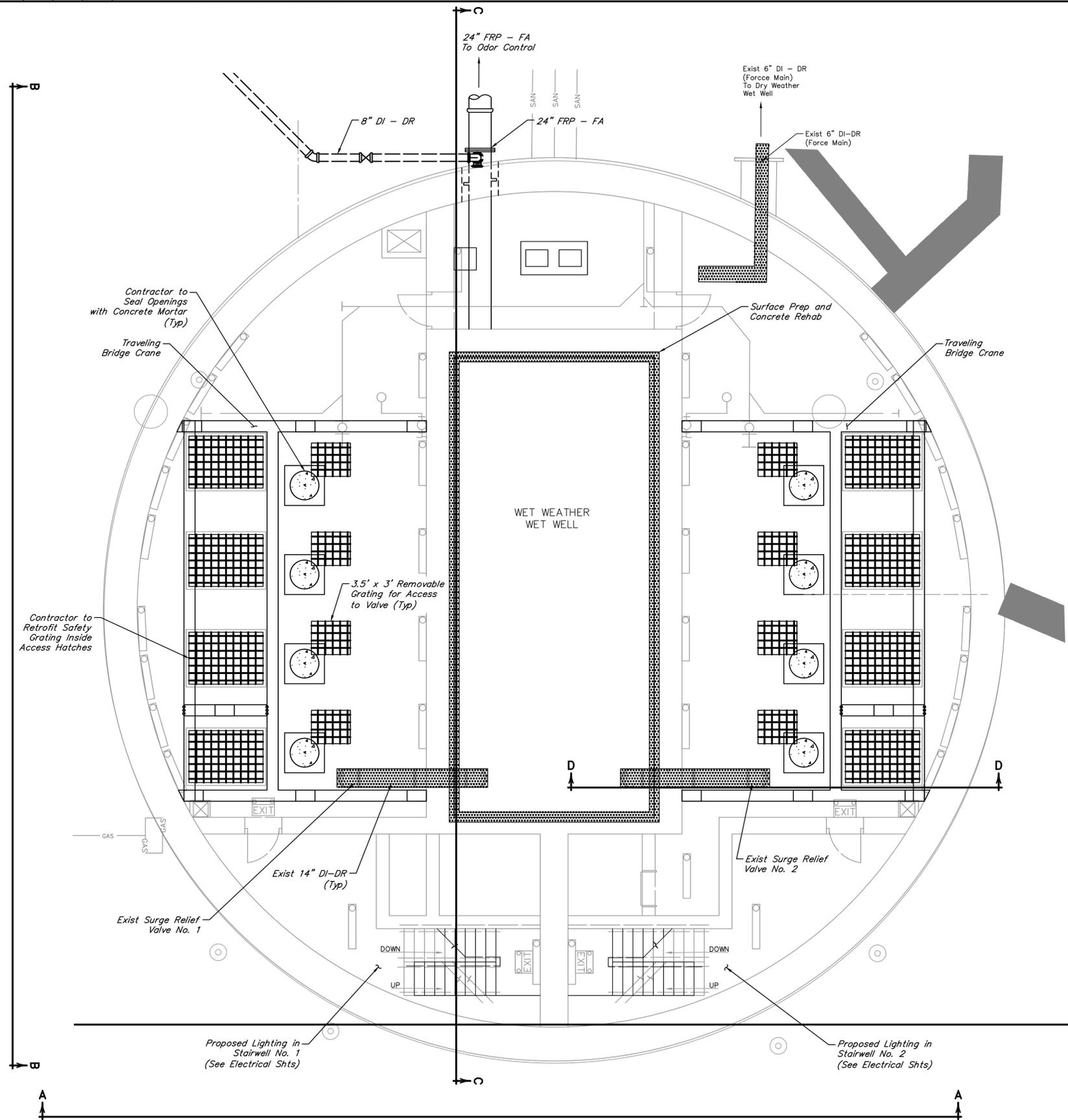
DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
**WET WEATHER LIFT STATION  
 LOWER LEVEL-PROPOSED**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1' HORIZ: XXX VERT: XXX  
 CATEGORY NO. **2-M-9** SHEET NO. 46 OF XXX  
 FOR CITY OF HOUSTON USE ONLY



**LEGEND:**



**NOTES:**

1. All proposed grating and handrails shall be made of aluminum and power-coated dark green.
2. All hatch covers shall be powder-coated dark green and labeled.
3. Contractor shall apply protective coating to all proposed above ground piping. Riser and hatches shall be labeled to correspond to the respective pump number.
4. Stairway shall have non-slip steps.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: WILLIAM R. SAGASTIZADO, P.E.  
 P.E. Serial No.: 125999  
 Date: JANUARY 2026

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CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

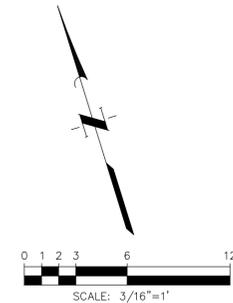
DATE: JANUARY 2026      DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01      DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

**SCOTT STREET No. 1**  
**LIFT STATION REHABILITATION**  
**WET WEATHER WET WELL**  
**MEZZANINE LEVEL-PROPOSED**

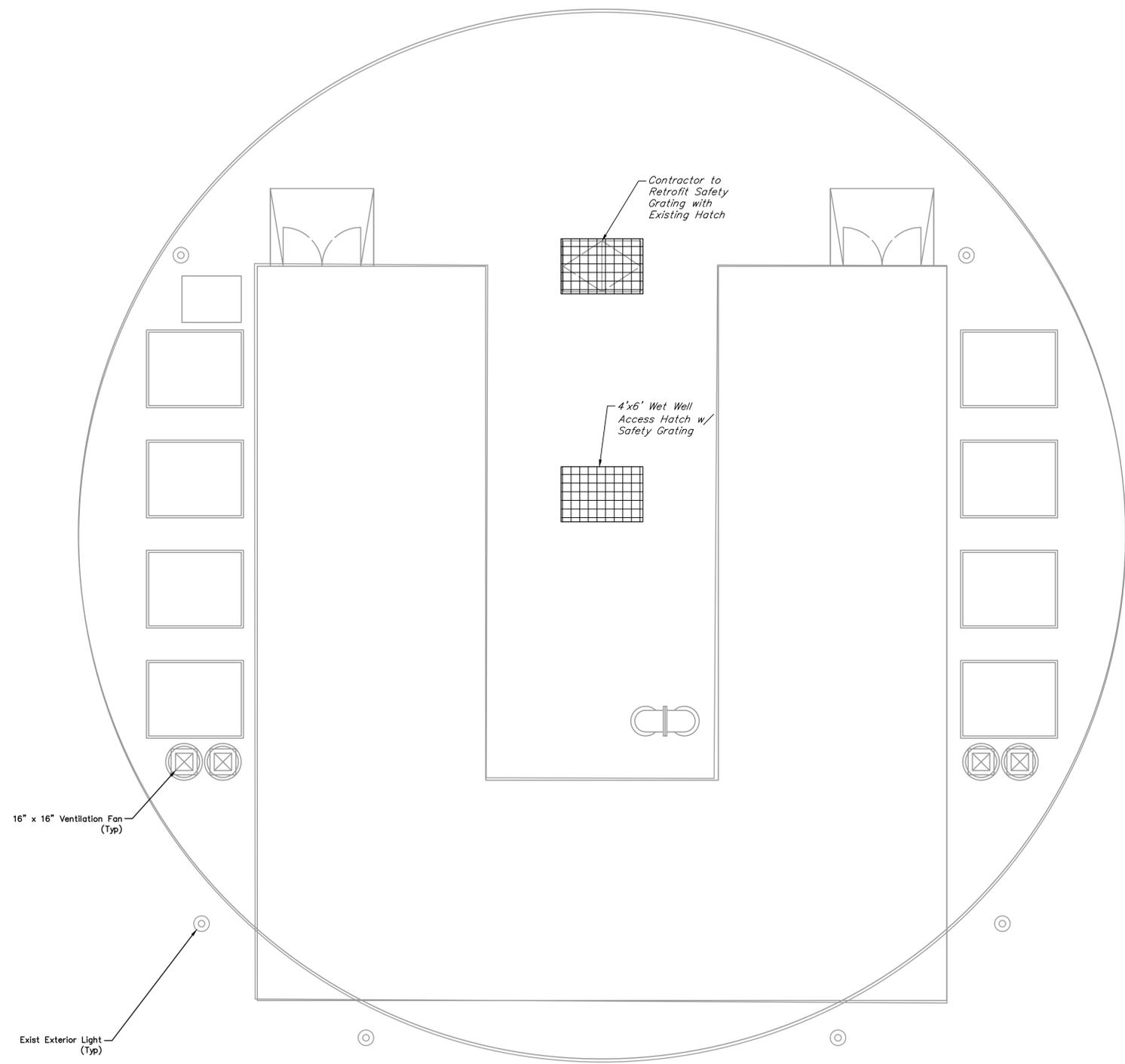
**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1'    HORIZ: XXX    VERT: XXX  
 CATEGORY NO. **2-M-10**    SHEET NO. 47 OF XXX  
 FOR CITY OF HOUSTON USE ONLY



**NOTES:**

1. Interior Excluded for Clarity.
2. All proposed hatch covers shall be coated in forest green and labeled.
3. Contractor shall apply protective coating to all proposed above ground piping. Riser and hatches shall be labeled to correspond to the respective pump number.
4. All proposed grating and handrails shall be made of aluminum and powder-coated dark green.



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
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 P.E. Serial No.: 125999  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026      DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01      DWG BY: JMMUSSO

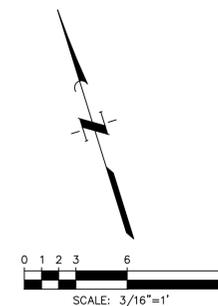
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
**WET WEATHER LIFT STATION**  
 GROUND LEVEL  
 EXTERIOR-PROPOSED

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

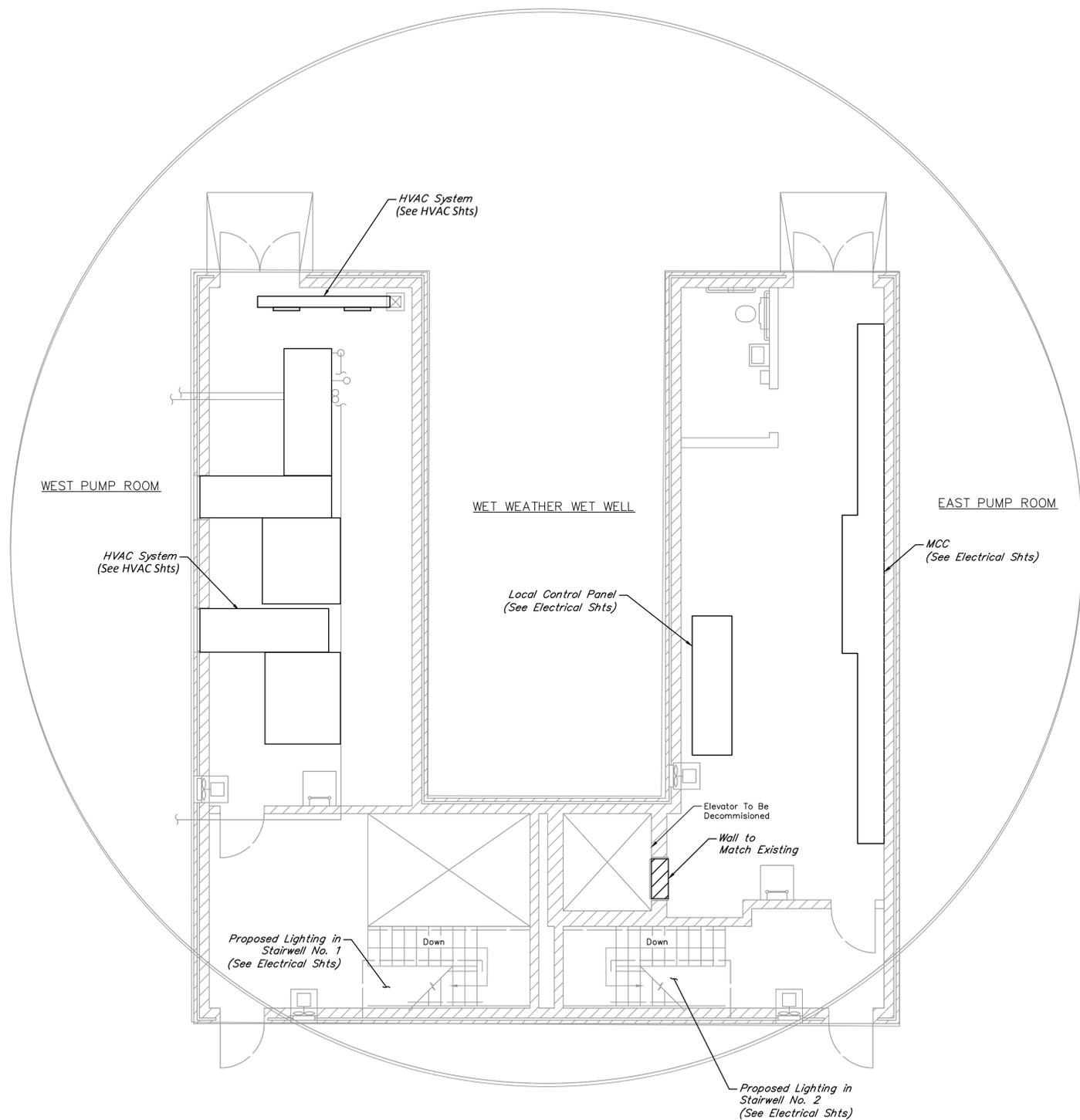
DRAWING SCALE 3/16"=1'      HORIZ: XXX      VERT: XXX

CATEGORY NO. **2-M-11**      SHEET NO. 48 OF XXX  
 FOR CITY OF HOUSTON USE ONLY



**NOTES:**

1. Exterior Excluded for Clarity.
2. Stairway shall have non-slip steps.



NO.	DATE	REVISIONS	APP.

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 P.E. Serial No.: 125999  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026      DGN BY: MBMITCHELL  
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SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
**WET WEATHER LIFT STATION**  
 GROUND LEVEL  
 INTERIOR-PROPOSED

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 3/16"=1'      HORIZ: XXX      VERT: XXX  
 CATEGORY NO. **2-M-12**      SHEET NO. 49 OF XXX  
 FOR CITY OF HOUSTON USE ONLY



**NOTES:**

1. West Pump Room is a Mirrored Set-Up from East Pump Room.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW  
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 Engineer: WILLIAM R. SAGASTIZADO, P.E.  
 P.E. Serial No.: 125999  
 Date: JANUARY 2026



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CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

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 JOB NO: 00050-0099-01 DWG BY: JMMUSSO

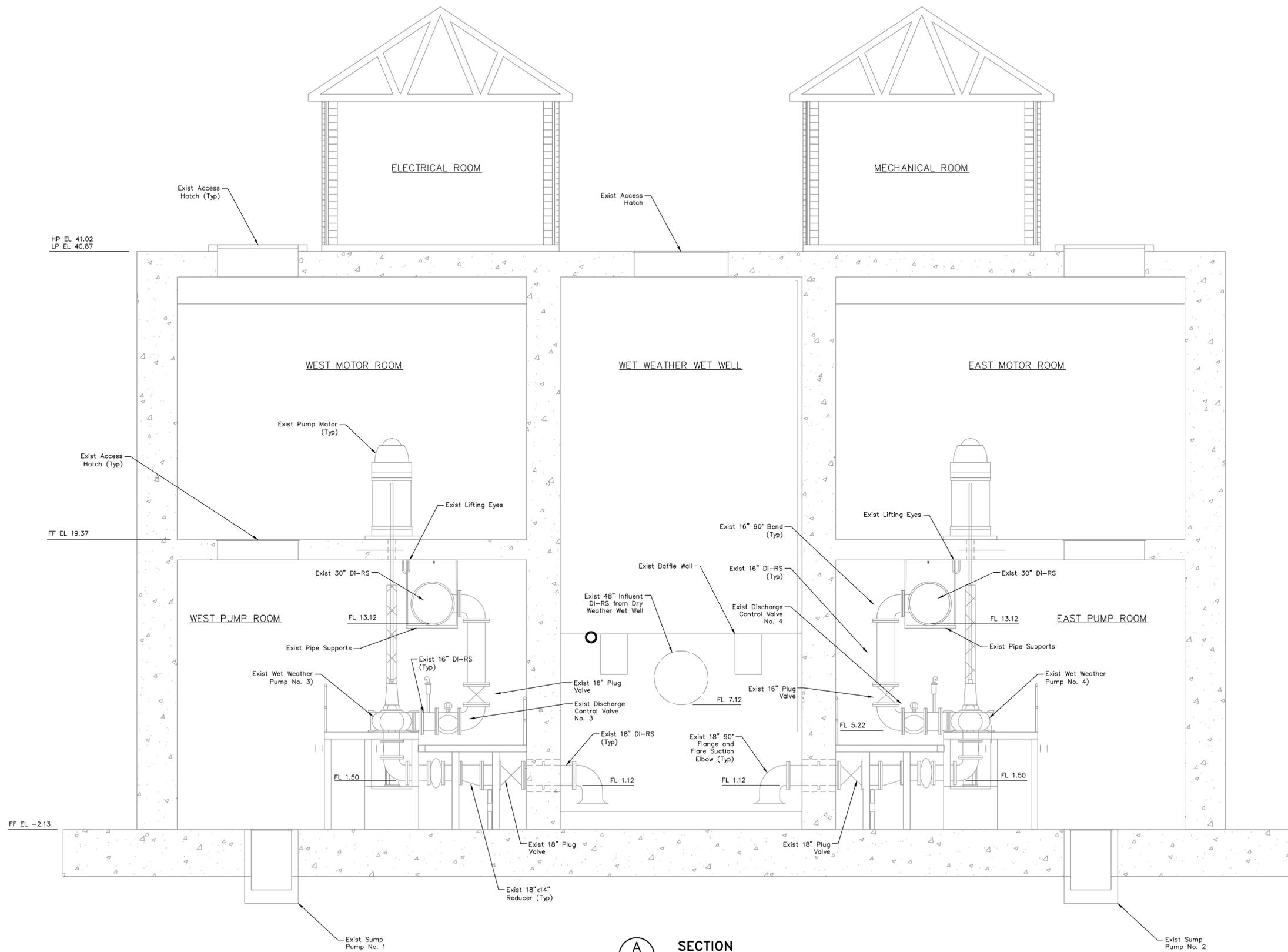
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SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

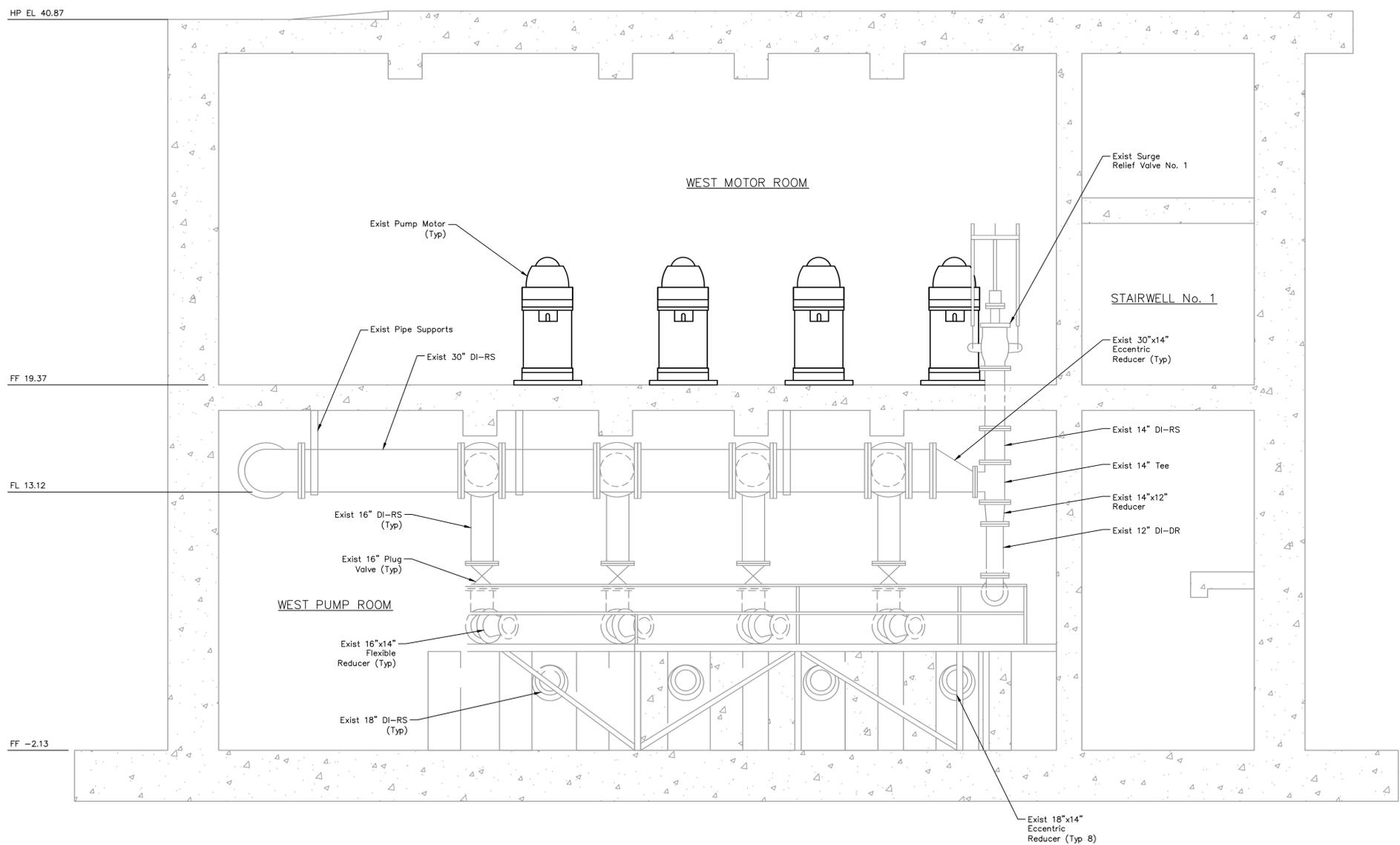
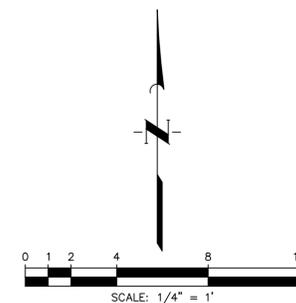
WET WEATHER LIFT STATION  
 LOWER LEVEL-EXISTING

CITY OF HOUSTON  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX  
 CATEGORY NO. 2-M-13 SHEET NO. 50 OF XXX  
 FOR CITY OF HOUSTON USE ONLY



**A SECTION**  
 SCALE: 1/4"=1'-0"



**NOTES:**

1. West Pump Room is a Mirrored Set-Up from East Pump Room.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: WILLIAM R. SAGASTIZADO, P.E.  
 P.E. Serial No.: 125999  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
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NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

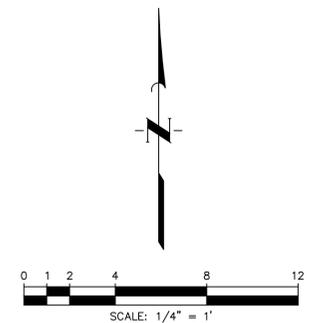
**WET WEATHER LIFT STATION  
 MEZZANINE LEVEL-EXISTING**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX

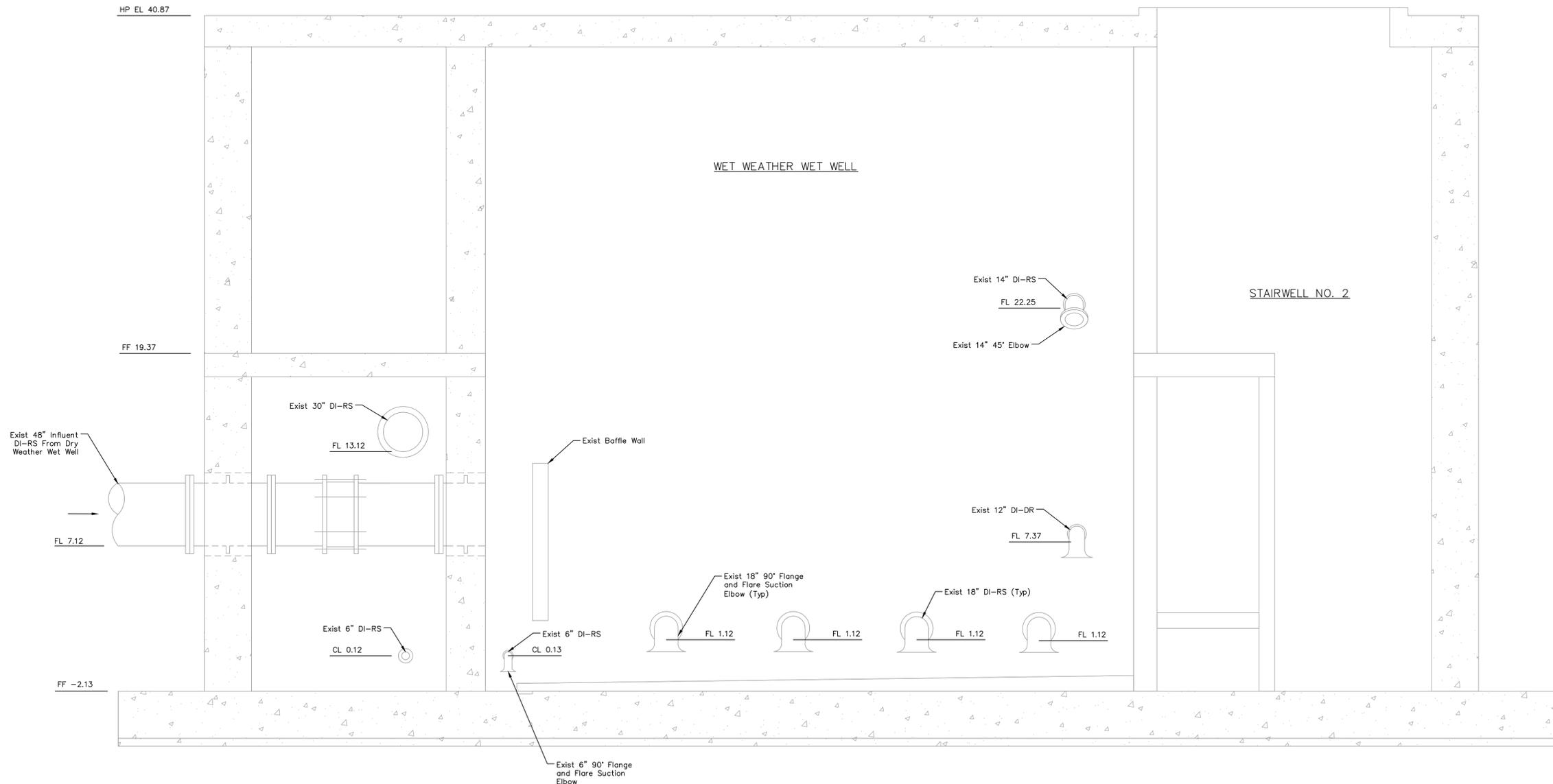
CATEGORY NO. **2-M-14** SHEET NO. 51 OF XXX  
 FOR CITY OF HOUSTON USE ONLY

**B SECTION**  
 SCALE: 1/4"=1'-0"



**NOTES:**

1. Interior Excluded for Clarity.



**C SECTION**  
SCALE: 1/4"=1'-0"

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
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Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

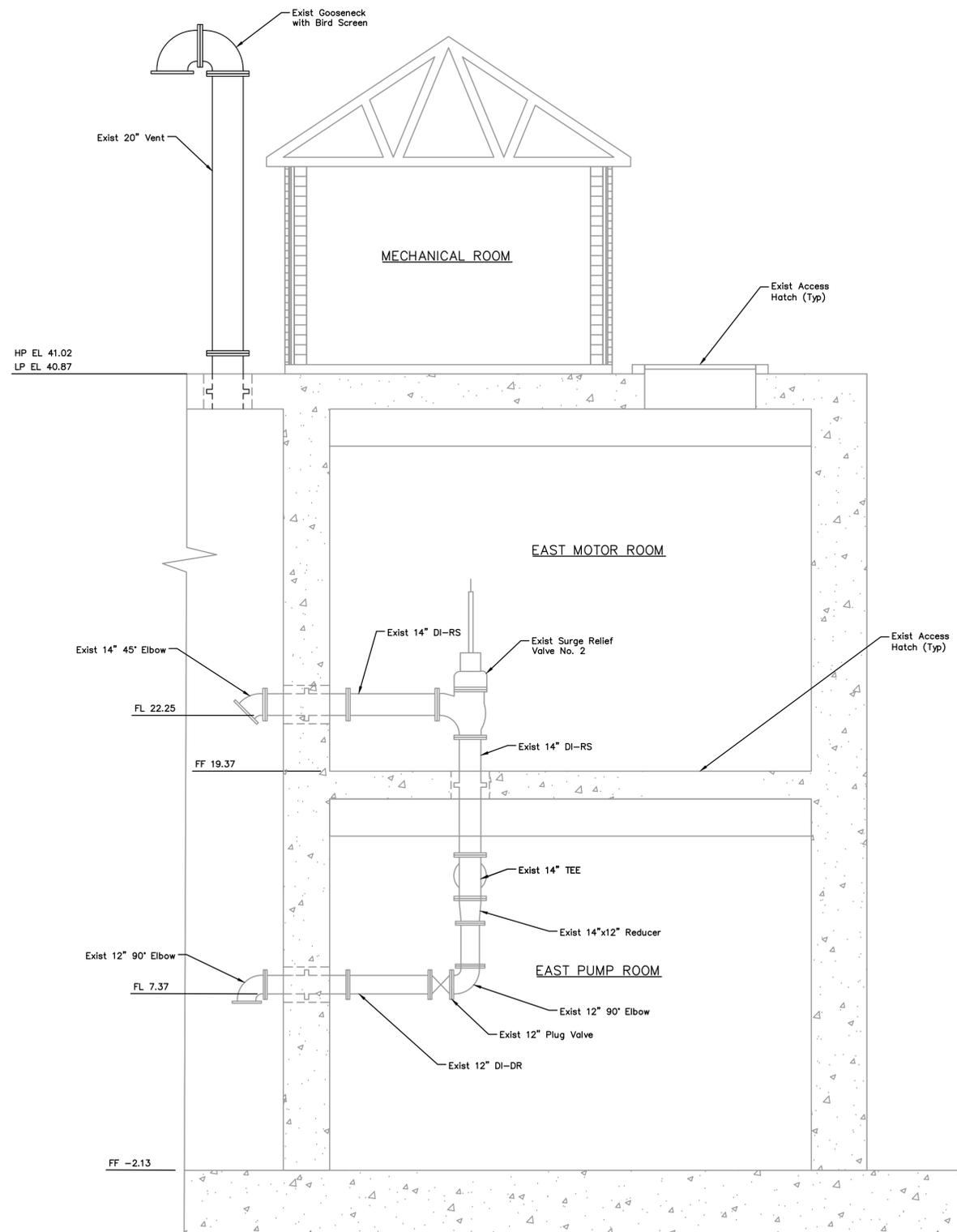
DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: JMMUSSO

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SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
**WET WEATHER LIFT STATION EXISTING**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX  
CATEGORY NO. **2-M-15** SHEET NO. 52 OF XXX  
FOR CITY OF HOUSTON USE ONLY



**NOTES:**

1. Exterior Excluded for Clarity.
2. West Pump Room is a Mirrored Set-Up from East Pump Room.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction,  
 bidding or permit purposes.  
 Engineer: WILLIAM R. SAGASTIZADO, P.E.  
 P.E. Serial No.: 125999  
 Date: JANUARY 2026



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SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

**WET WEATHER LIFT STATION  
 EAST SECTION EXISTING**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1'      HORIZ: XXX      VERT: XXX

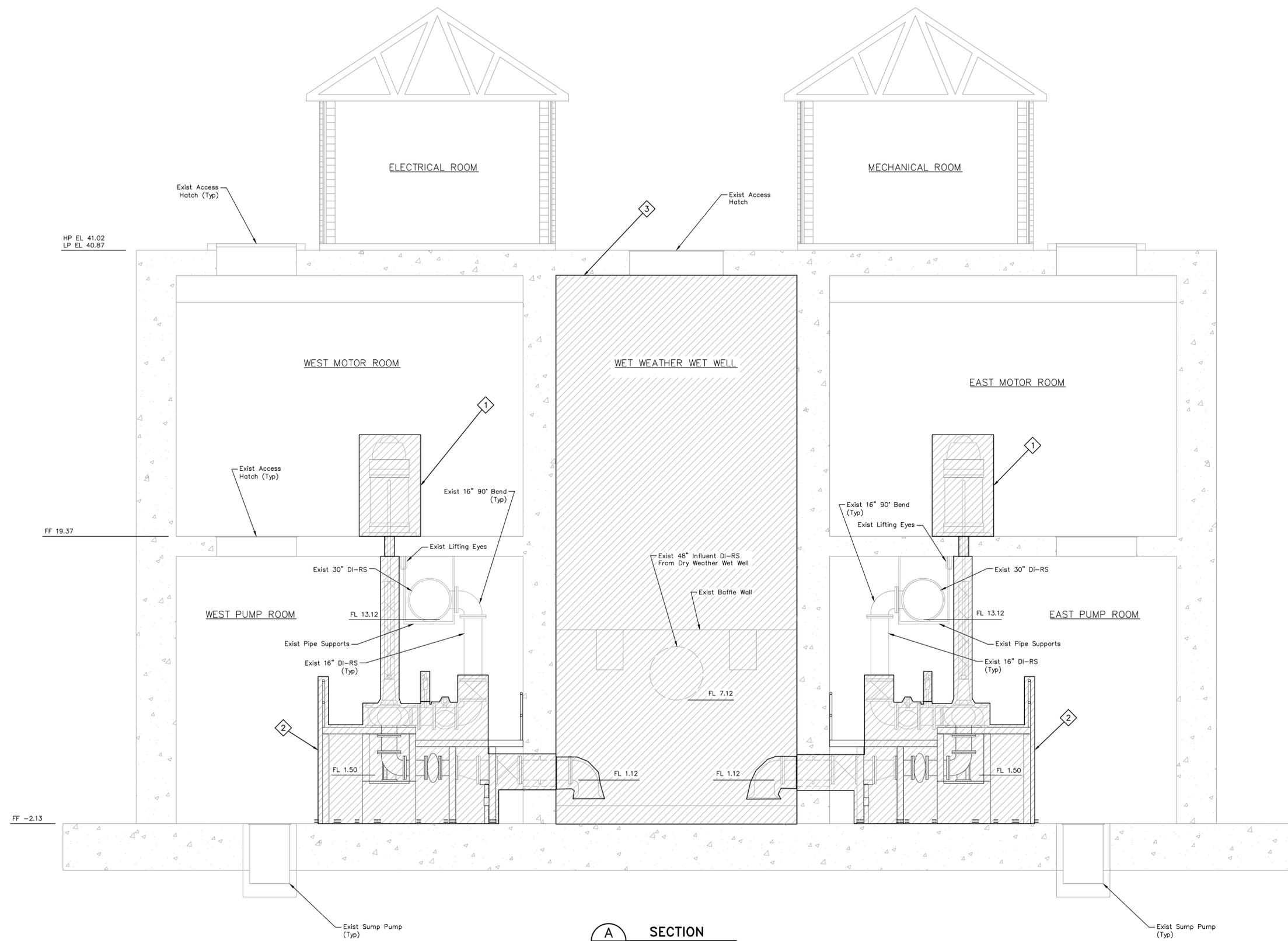
CATEGORY NO. **2-M-16**      SHEET NO. 53 OF XXX  
 FOR CITY OF HOUSTON USE ONLY

D      **SECTION**  
 SCALE: 1/4"=1'-0"

ITEMS OF WORK	
No.	DESCRIPTION
1	Demolish the Existing Motors from the Wet Weather Pumps, Conduit, Wire Associated with Motor.
2	Demolish Existing Wet Weather Pumps Associated Concrete Supports, Small Diameter Piping, Shaft, Controls, Conduit, Wire and Related Accessories.
3	Demolish T-LOK Liner Inside Wet Well including bottom face of top slab.



**LEGEND:**



**A SECTION**  
SCALE: 1/4"=1'-0"

NO.	DATE	REVISIONS	APP.

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Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

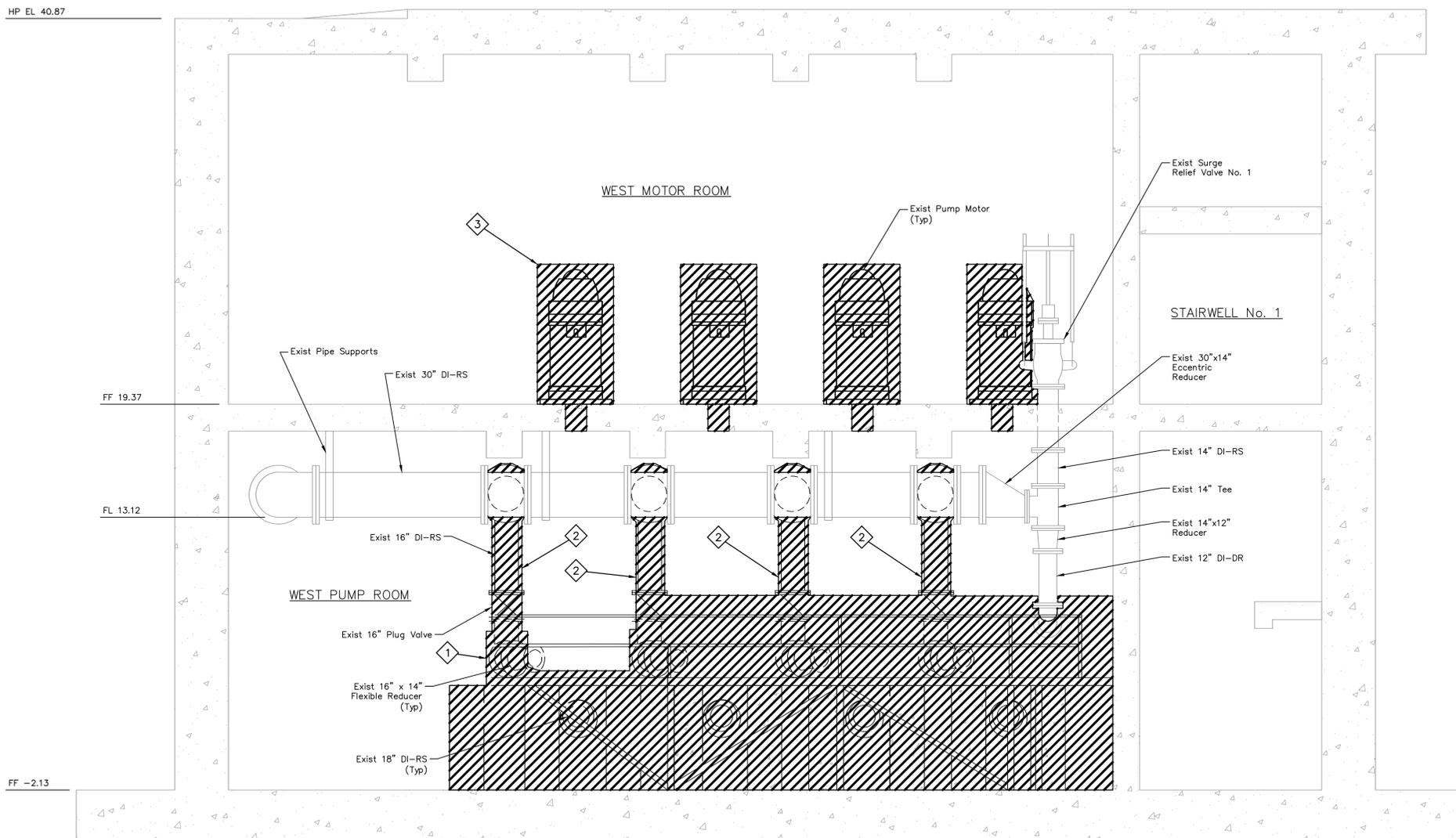
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JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
**WET WEATHER LIFT STATION  
LOWER LEVEL-DEMOLITION**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX  
CATEGORY NO. **2-M-17** SHEET NO. 54 OF XXX  
FOR CITY OF HOUSTON USE ONLY



**B** SECTION  
SCALE: 1/4"=1'-0"

**ITEMS OF WORK**

No.	DESCRIPTION
1	Demolish all Grating, Supports, Handrails and Miscellaneous Metals Related to the elevated Platform. Contractor Shall Grind down Anchors and Cover with Grout.
2	Demolish Existing Discharge Piping to the Vertical Portion of the Pipe, Valves, Supports and Miscellaneous Metals.
3	Demolish the Existing Motors from the Wet Weather Pumps, Conduit, Wire Associated with Motor.

**LEGEND:**



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
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Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
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SCOTT STREET No. 1  
LIFT STATION REHABILITATION

**WET WEATHER LIFT STATION  
MEZZANINE LEVEL-DEMOLITION**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX  
CATEGORY NO. **2-M-18** SHEET NO. 55 OF XXX  
FOR CITY OF HOUSTON USE ONLY

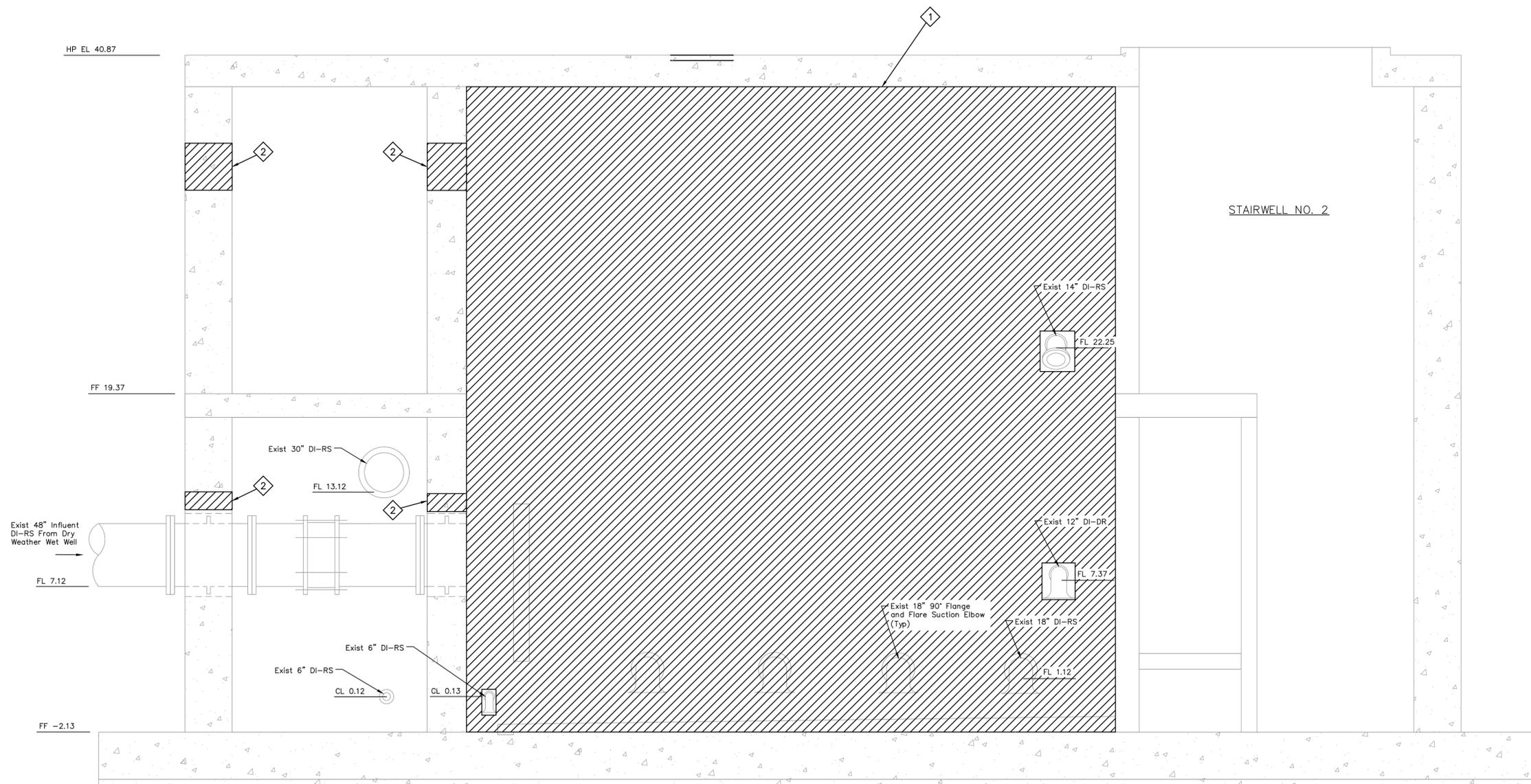
ITEMS OF WORK	
No.	DESCRIPTION
1	Demolish T-LOK Liner Inside Wet Well including bottom face of top slab.
2	Contractor to Core Through the Existing Walls to Allow for Construction of the FRP Duct Works and 8-inch Force Main Drain Line.

**LEGEND:**



**NOTES:**

- Interior Excluded for Clarity.



**C** SECTION  
SCALE: 1/4"=1'-0"

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

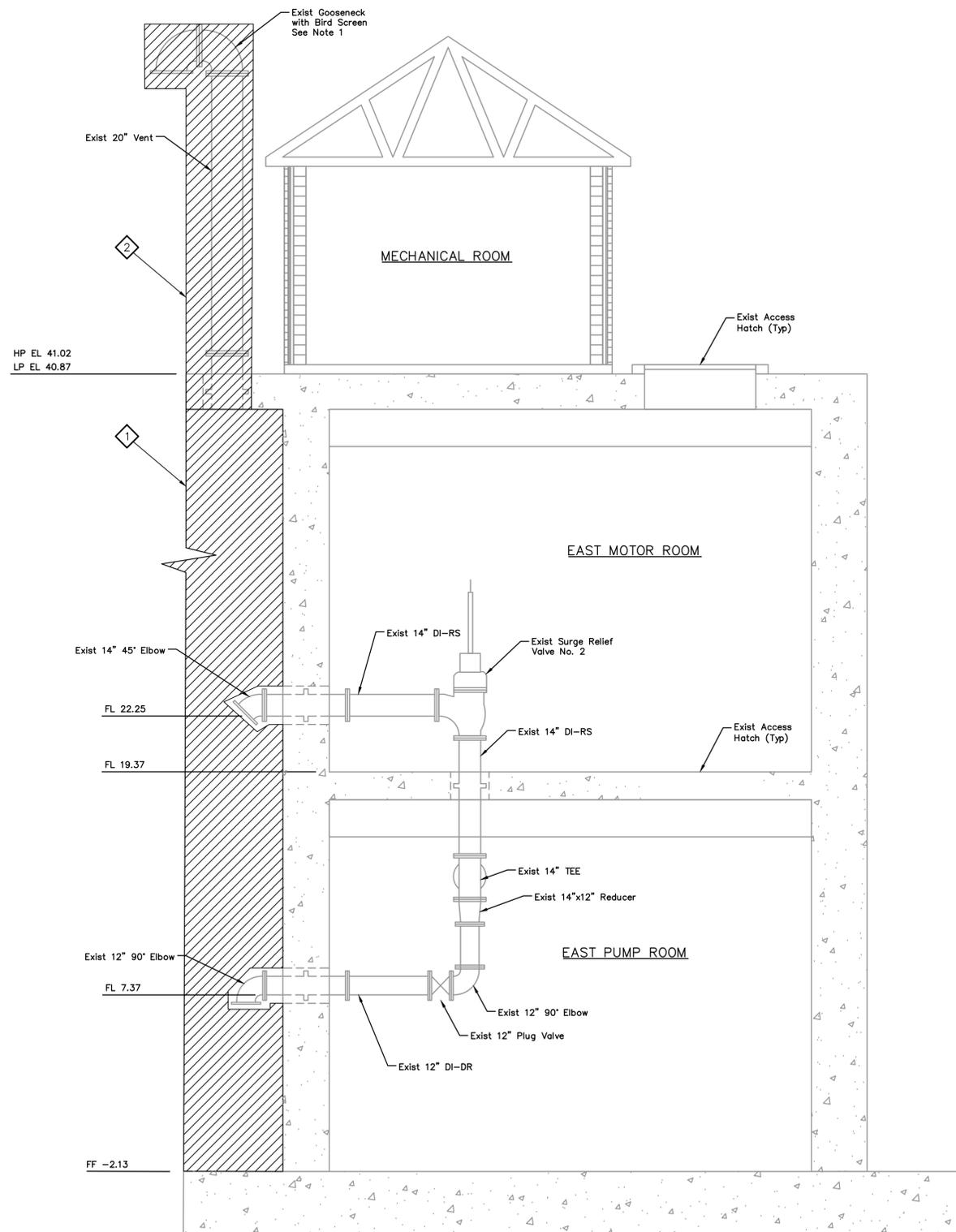
DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
**WET WEATHER LIFT STATION  
DEMOLITION**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX  
CATEGORY NO. **2-M-19** SHEET NO. 56 OF XXX  
FOR CITY OF HOUSTON USE ONLY



**D SECTION**  
SCALE: 1/4"=1'-0"

ITEMS OF WORK	
No.	DESCRIPTION
1	Demolish T-LOK Liner Inside Wet Well including bottom face of top slab.
2	Demolish 20" vent and goose-neck with bird screen.

**NOTES:**

1. Exterior Excluded for Clarity.
2. Contractor to field verify height of vent.

**LEGEND:**



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION

**WET WEATHER LIFT STATION  
EAST SECTION-DEMOLITION**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

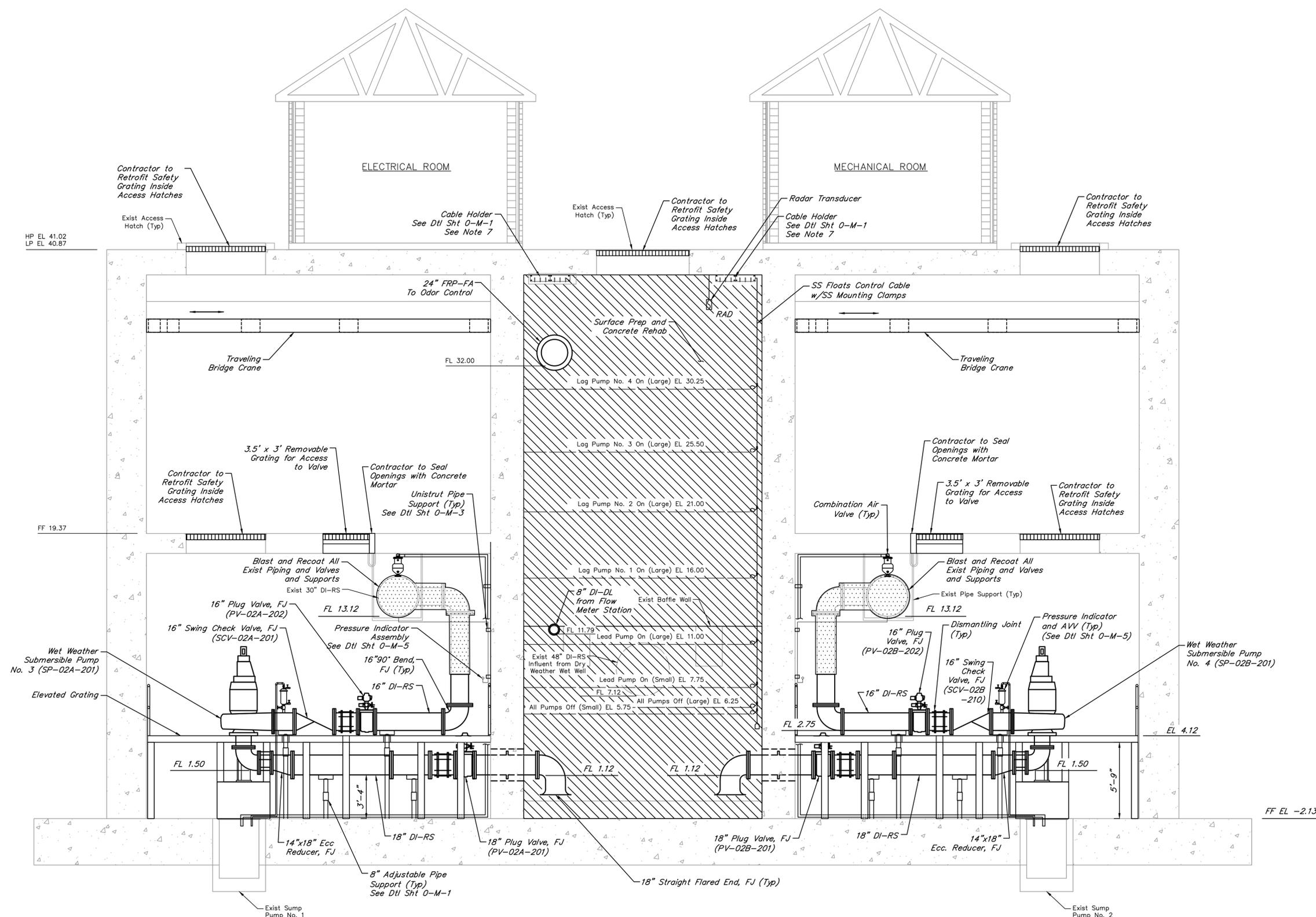
DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX  
CATEGORY NO. **2-M-20** SHEET NO. 57 OF XXX  
FOR CITY OF HOUSTON USE ONLY

**LEGEND:**

-  RECOAT
-  HYDROBLAST

**NOTES:**

1. All proposed valves shall be installed with position indicator.
2. Contractor shall apply protective coating to all proposed wet well piping.
3. All proposed grating and handrails shall be made of aluminum powder-coated dark green.
4. Contractor shall apply protective coating to all proposed above ground piping. Riser and hatches shall be labeled to correspond to the respective pump number.
5. All hatch covers shall be powder-coated dark green and labeled.
6. Surface prep and concrete rehab to include underside of top slab.



**A SECTION**  
SCALE: 1/4"=1'-0"

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: JMMUSSO

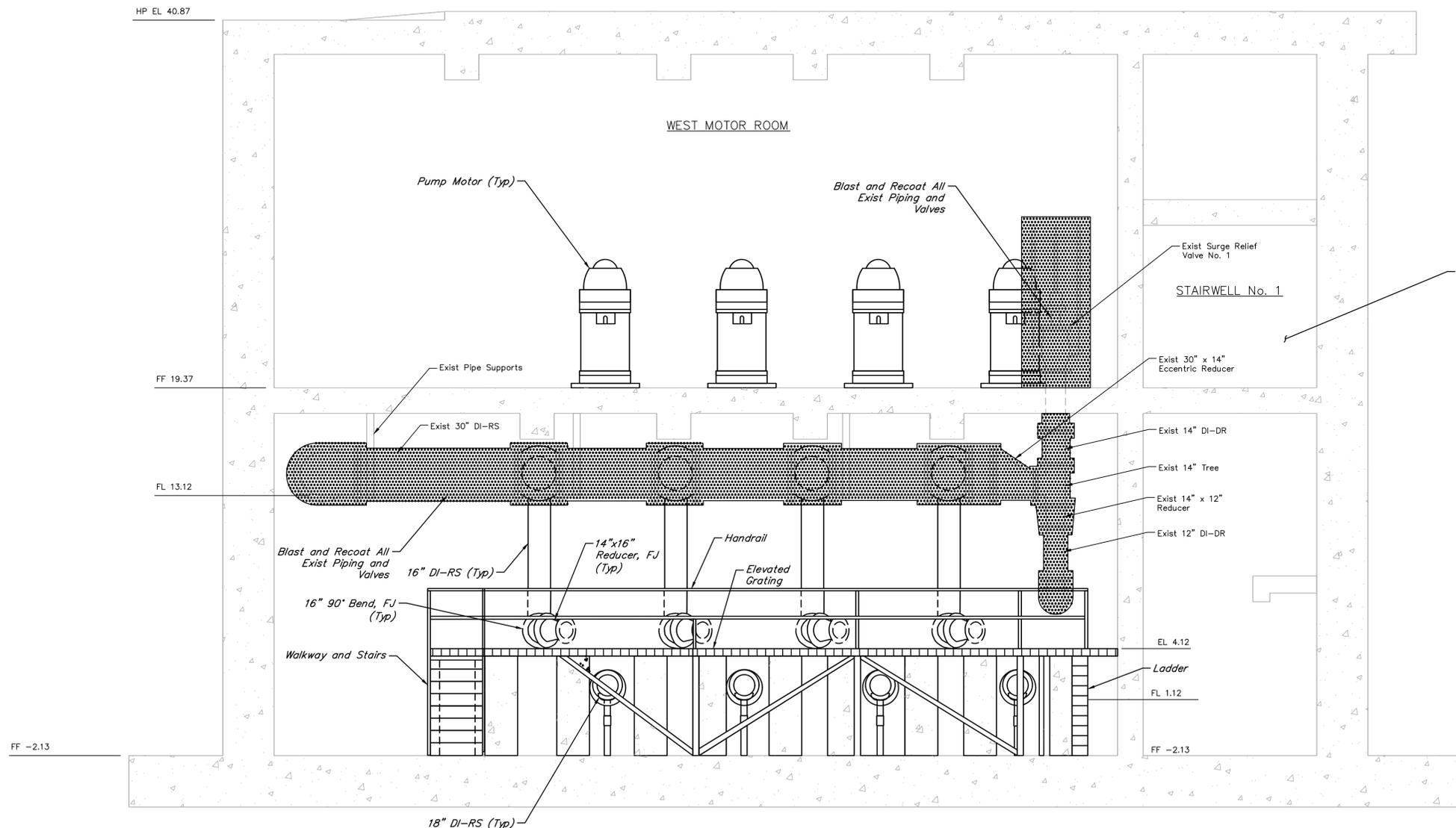
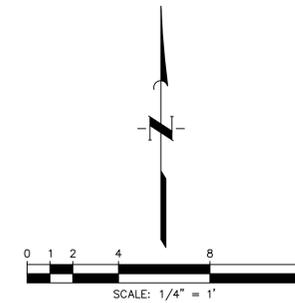
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION

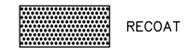
**WET WEATHER LIFT STATION  
LOWER LEVEL-PROPOSED**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX  
CATEGORY NO. **2-M-21** SHEET NO. 58 OF XXX  
FOR CITY OF HOUSTON USE ONLY



**LEGEND:**



**NOTES:**

1. All proposed valves shall be installed with position indicator.
2. Contractor shall apply protective coating to all proposed above ground piping. Riser and hatches shall be labeled to correspond to the respective pump number.
3. All proposed grating, handrails, and ladders shall be made of aluminum powder-coated dark green.

Lighting in Stairwell No. 1  
See Electrical Sheets

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026      DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01      DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
**WET WEATHER LIFT STATION  
MEZZANINE LEVEL-PROPOSED**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1'      HORIZ: XXX      VERT: XXX  
CATEGORY NO. **2-M-22**      SHEET NO. 59 OF XXX  
FOR CITY OF HOUSTON USE ONLY

**B** SECTION  
SCALE: 1/4"=1'-0"

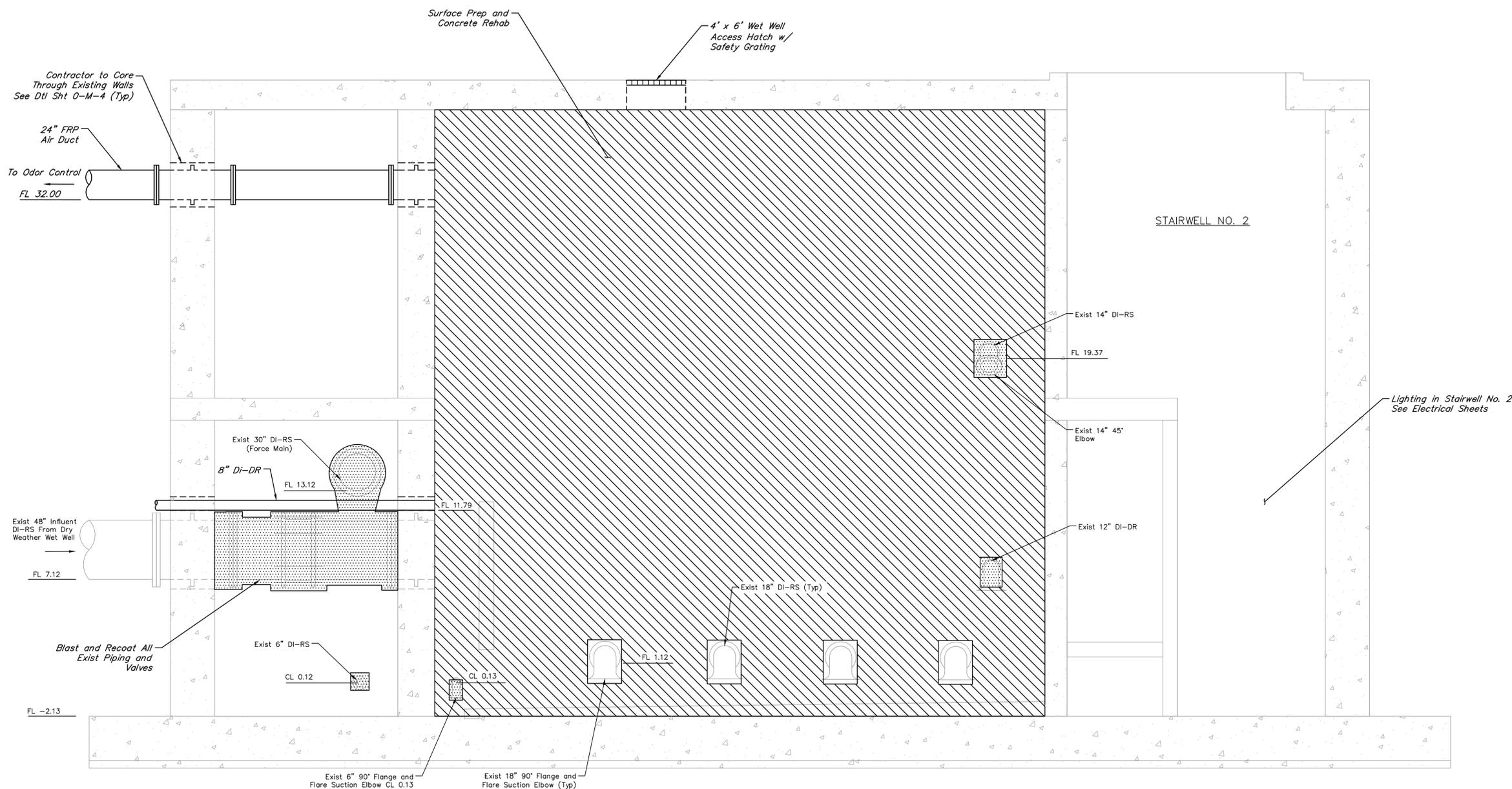


**NOTES:**

1. Interior Excluded for Clarity.
2. Contractor shall apply protective coating to all proposed above ground piping. Riser and hatches shall be labeled to correspond to the respective pump number.
3. Surface prep and concrete rehab to include underside of top slab.
4. All proposed grating and handrails shall be made of aluminum powder-coated dark green.
5. All hatch covers shall be powder-coated dark green and labeled.

**LEGEND:**

- RECOAT
- HYDROBLAST



**C** SECTION  
SCALE: 1/4"=1'-0"

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026      DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01      DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

**SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
WET WEATHER LIFT STATION  
PROPOSED**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1'      HORIZ: XXX      VERT: XXX  
CATEGORY NO. **2-M-23**      SHEET NO. 60 OF XXX  
FOR CITY OF HOUSTON USE ONLY

20" Vent w/ Goose-Neck & Bird Screen  
See Note 3  
See Dtl Sht 0-M-1

HP EL 41.04  
LP EL 40.87

Surface Prep and Concrete Rehab  
See Note 7

MECHANICAL ROOM

Exist 5'-2"x7'-2" Access Hatch (Typ)

Mount Ventilator Base on 6"Hx4"W Concrete Curb

EAST MOTOR ROOM

Exist 14" DI-RS

Exist Surge Relief Valve No. 2

FL 22.25

Exist 14" DI-RS

Contractor to Retrofit Safety Grating Inside Access Hatches

FF 19.37

Exist 14" Tee

Exist 14" to 12" Reducer

EAST PUMP ROOM

Exist 12" 90° Elbow

Exist 12" 90° Elbow

FF 7.37

Exist 12" Plug Valve

Blast and Recoat All Exist Piping and Valves

Exist 12" DI-DR

FF -2.13

**LEGEND:**



RECOAT



HYDROBLAST

**NOTES:**

1. Exterior Excluded for Clarity.
2. All proposed valves shall be installed with position indicator.
3. Contractor to field verify height of vent.
4. Contractor shall apply protective coating to all proposed above ground piping. Riser and hatches shall be labeled to correspond to the respective pump number.
5. All proposed grating and handrails shall be made of aluminum powder-coated dark green.
6. All hatch covers shall be powder-coated dark green and labeled.
7. Surface prep and concrete rehab to include underside of top slab.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
Date: JANUARY 2026



Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION

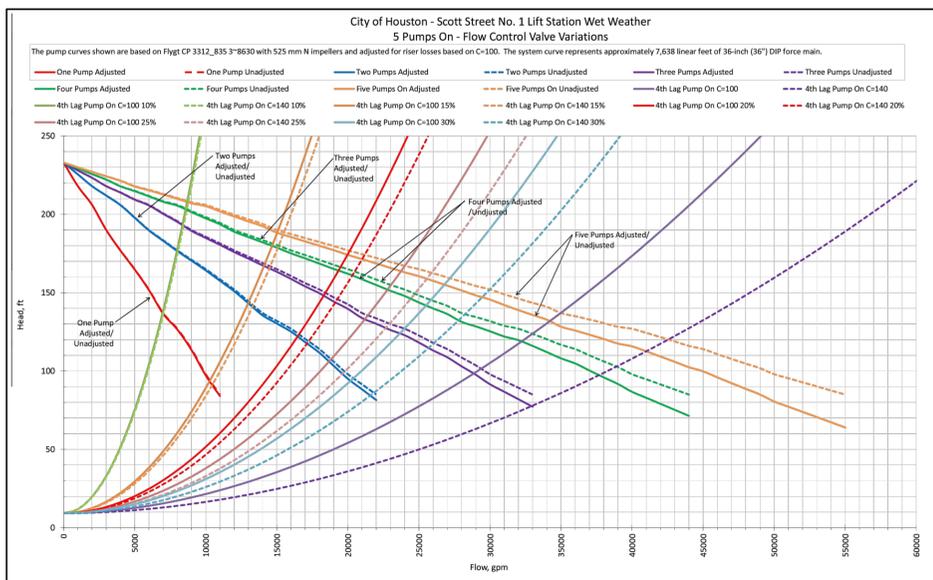
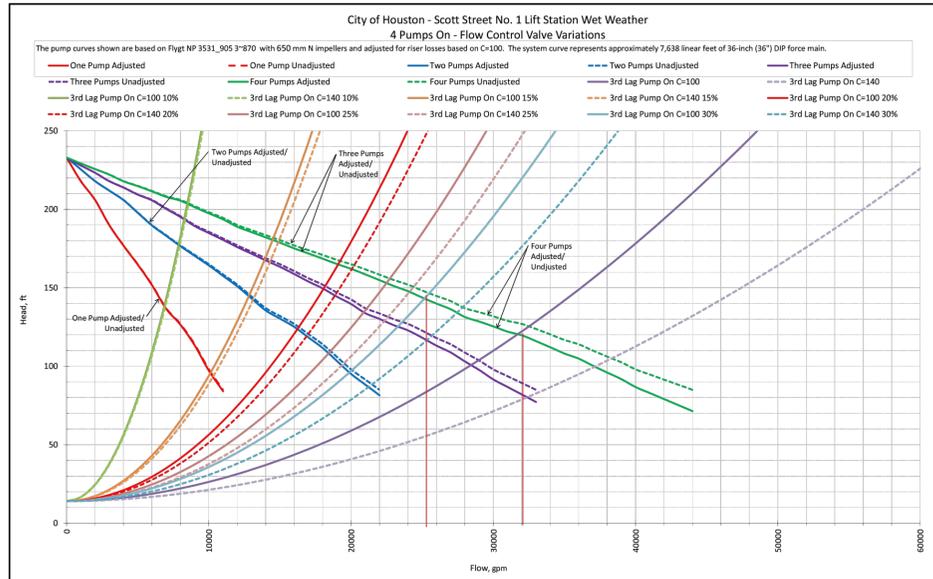
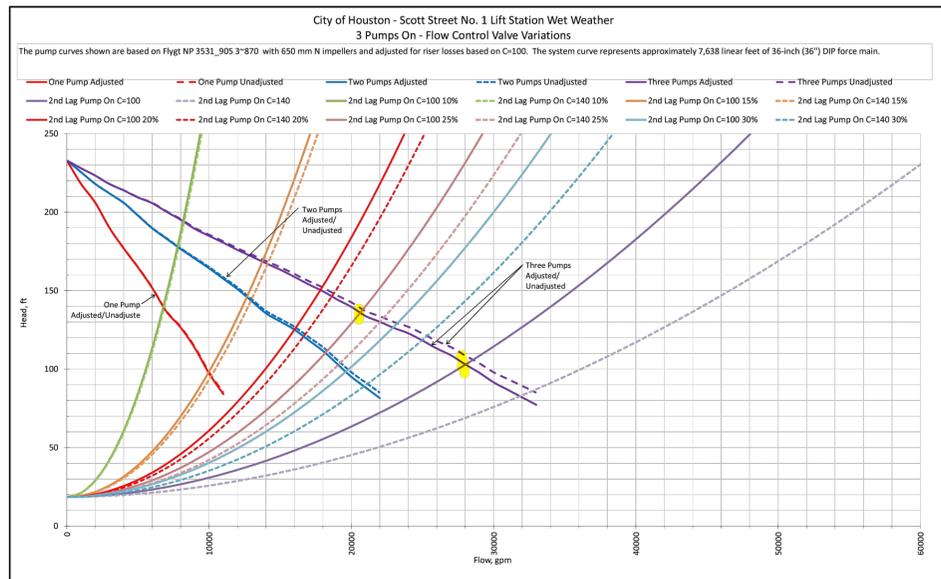
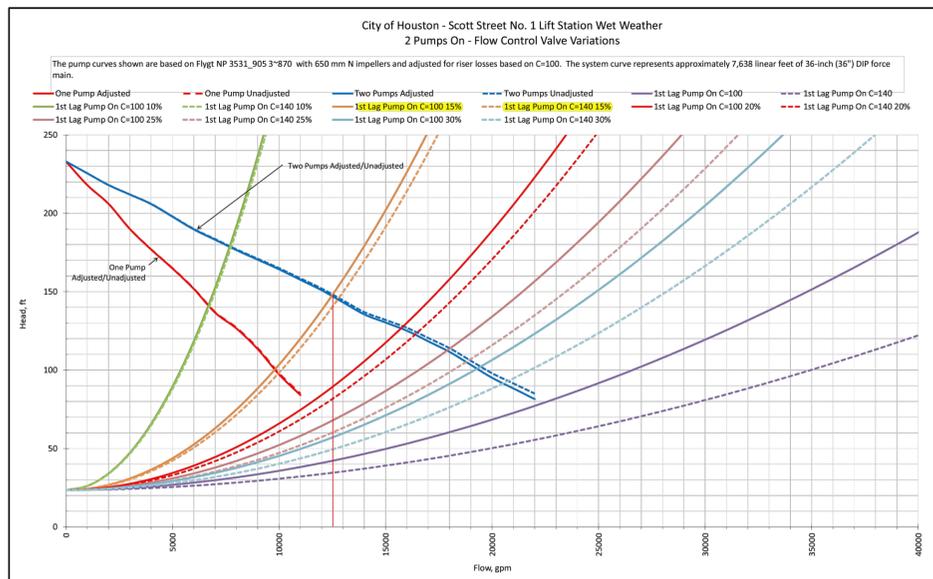
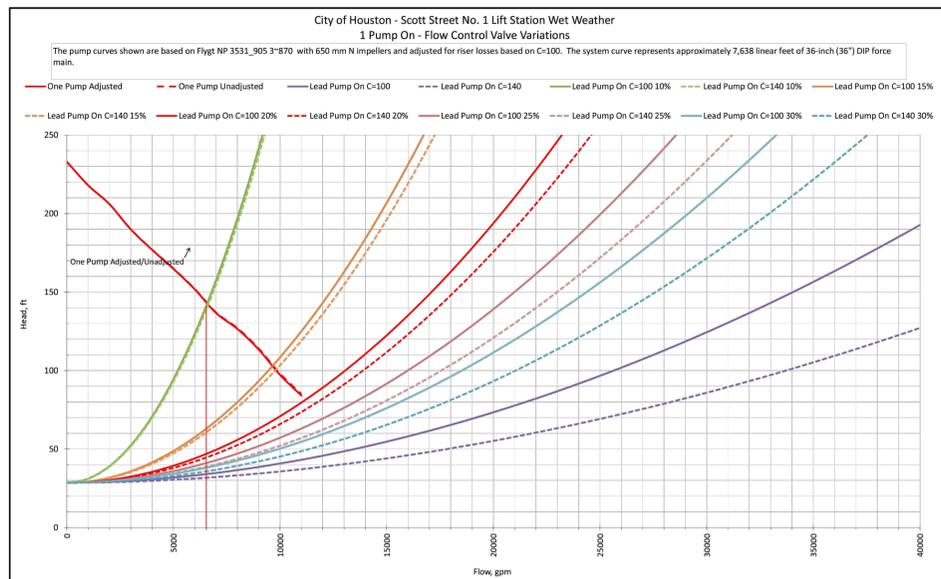
WET WEATHER LIFT STATION  
EAST SECTION-PROPOSED

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 2-M-24 SHEET NO. 61 OF XXX  
FOR CITY OF HOUSTON USE ONLY

**D SECTION**  
SCALE: 1/4"=1'-0"



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: WILLIAM R. SAGASTIZADO, P.E.  
 P.E. Serial No.: 125999  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

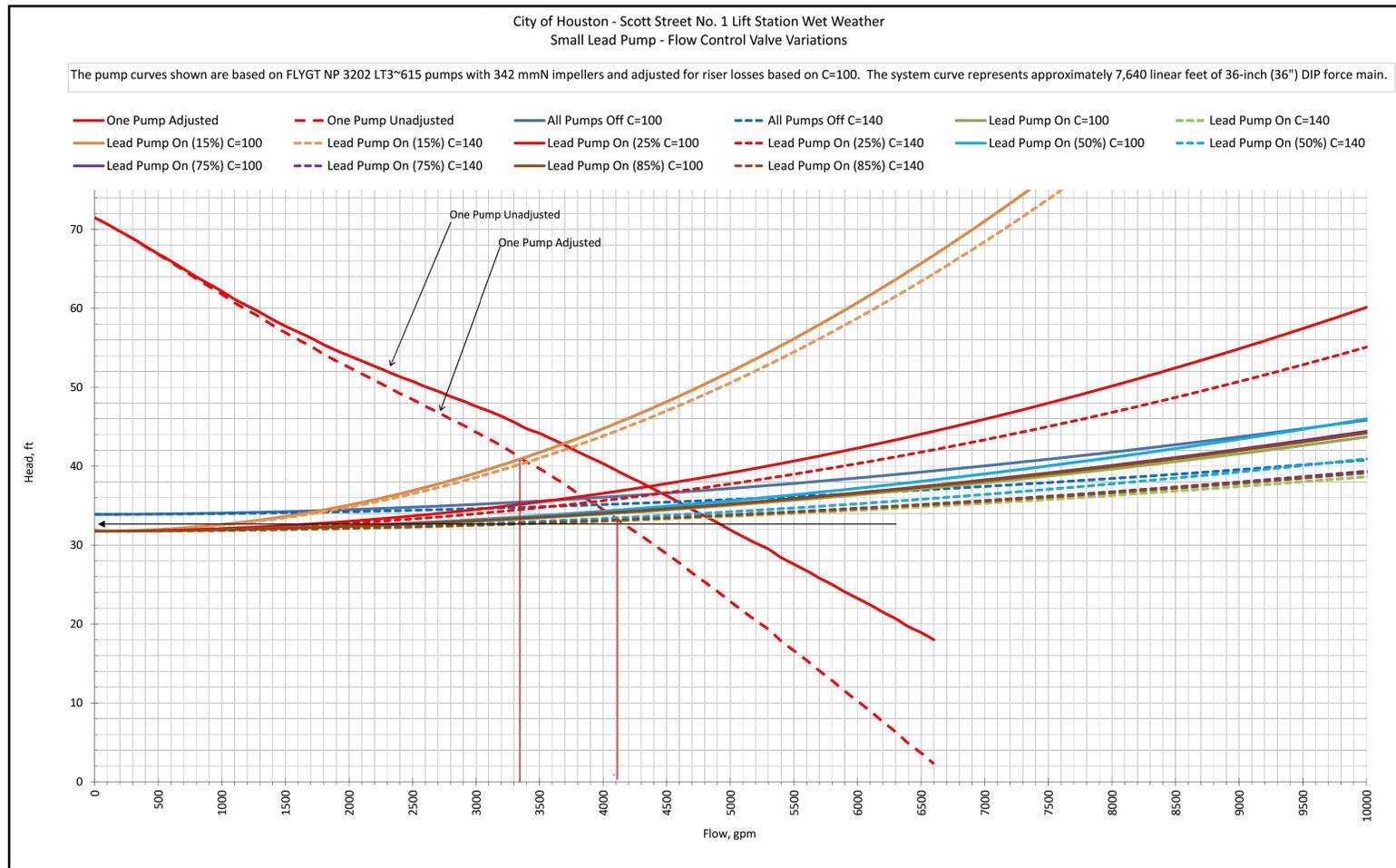
DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
**WET WEATHER PUMP STATION  
 PUMP DATA AND CURVES**  
 SHEET 1 OF 3

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE NO SCALE HORIZ: XXX VERT: XXX  
 CATEGORY NO. **2-M-25** SHEET NO. 63 OF XXX  
 FOR CITY OF HOUSTON USE ONLY



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction,  
 bidding or permit purposes.  
 Engineer: WILLIAM R. SAGASTIZADO, P.E.  
 P.E. Serial No.: 125999  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026      DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01      DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
**WET WEATHER PUMP STATION  
 PUMP DATA AND CURVES SHEET**  
 2 OF 3

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE NO SCALE    HORIZ: XXX    VERT: XXX  
 CATEGORY NO. **2-M-26**    SHEET NO. 64 OF XXX  
 FOR CITY OF HOUSTON USE ONLY

**PUMP DATA TABLE**

PUMP DATA	PUMP No. 7	PUMP No. 8	PUMP No. 3	PUMP No. 4	PUMP No. 5	PUMP No. 6	PUMP No. 1	PUMP No. 2
FLOW (GPM)	6,944	6,944	6,944	6,944	6,944	6,944	4,167	4,167
TDH (FT.)	138.41	138.41	138.41	138.41	138.41	138.41	39.55	39.55
MIN. OVERALL EFF. (%)	60%	60%	60%	60%	60%	60%	60%	60%
STATIC HEAD (FT.)	14.52	14.52	14.52	14.52	14.52	14.52	31.77	31.77
SHAFT HP (MAX.)	525	525	525	525	525	525	50	50
RPM (MAX.)	905	905	905	905	905	905	1,175	1,175

**LIFT STATION OPERATION TABLE LARGE PUMPS**

RISING LEVEL CYCLE		
ELEVATION	ACTION	PUMP(S) IN OPERATION
11.00	LEAD PUMP TURNS ON	LEAD PUMP TURNS ON
16.00	1ST LAG PUMP TURNS ON	LEAD AND 1ST LAG PUMP TURNS ON
21.00	2ND LAG PUMP TURNS ON	LEAD AND TWO LAG PUMPS TURN ON
25.50	3RD LAG PUMP TURNS ON	LEAD AND THREE LAG PUMPS TURN ON
30.25	4TH LAG PUMP TURNS ON	ALL PUMPS ON
FALLING LEVEL CYCLE		
ELEVATION	ACTION	PUMP(S) IN OPERATION
30.00	4TH LAG PUMP TURNS OFF	
25.25	3RD LAG PUMP TURNS OFF	
20.75	2ND LAG PUMP TURNS OFF	
17.75	1ST LAG PUMP TURNS OFF	LEAD AND 1ST LAG PUMP TURNS ON
10.75	LEAD PUMP TURNS OFF	ALL PUMPS OFF

**LIFT STATION OPERATION TABLE SMALL PUMPS**

RISING LEVEL CYCLE		
ELEVATION	ACTION	PUMP(S) IN OPERATION
7.75	LEAD PUMP TURNS ON	ALL PUMPS ON
FALLING LEVEL CYCLE		
ELEVATION	ACTION	PUMP(S) IN OPERATION
7.50	LEAD PUMP TURNS OFF	ALL PUMPS OFF

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW  
 Not intended for construction, bidding or permit purposes.  
 Engineer: WILLIAM R. SAGASTIZADO, P.E.  
 P.E. Serial No.: 125999  
 Date: DECEMBER 2025



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

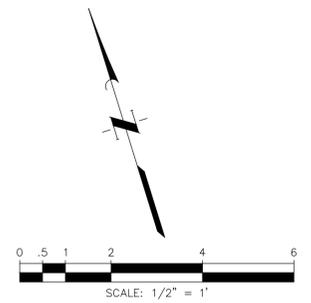
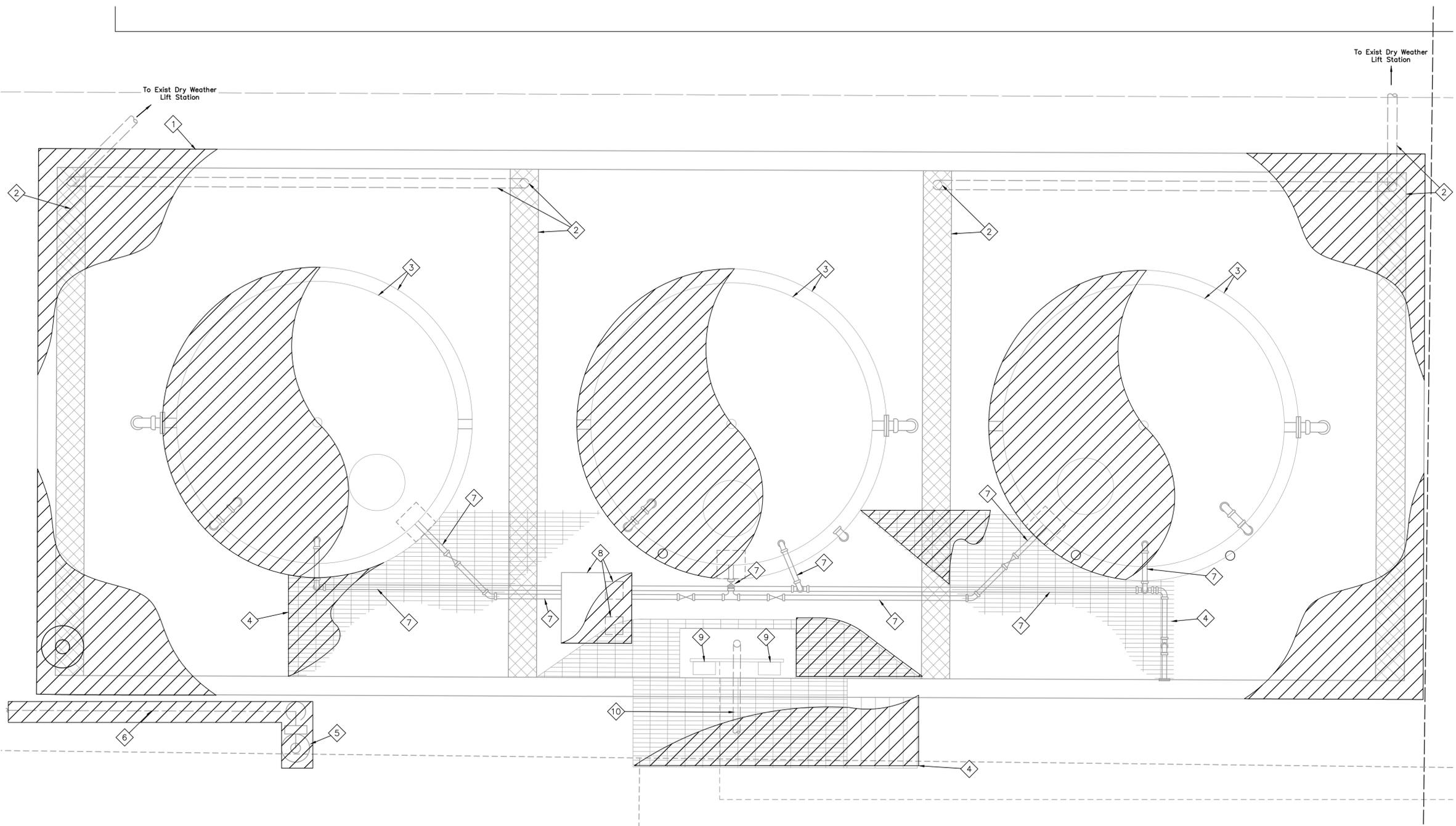
DATE: JULY 2025 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
 WET WEATHER PUMP STATION  
 PUMP DATA AND CURVES  
 SHEET 3 OF 3

CITY OF HOUSTON  
 HOUSTON PUBLIC WORKS

DRAWING SCALE NO SCALE HORIZ: XXX VERT: XXX  
 CATEGORY NO. 2-M-27 SHEET NO. XXX OF XXX  
 FOR CITY OF HOUSTON USE ONLY



**LEGEND:**



**NOTES:**

1. Demolition and disposal of the existing chemical system must be done in accordance to local, state, and federal regulations.
2. The existing demolition plans are based from the City of Houston's record drawings. Actual existing conditions may differ than what is on the field. Contractor shall field verify the existing conditions and dimensions as necessary to perform the work.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: NOVEMBER 2025

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JULY 2025      DGN BY: CTHOMAS  
 JOB NO: 00050-0099-01      DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

**CHEMICAL FEED SYSTEM  
 DEMOLITION PLAN**

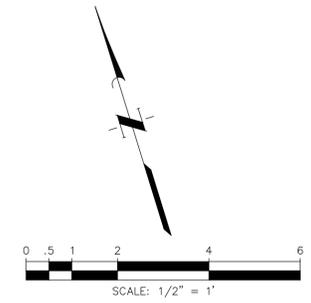
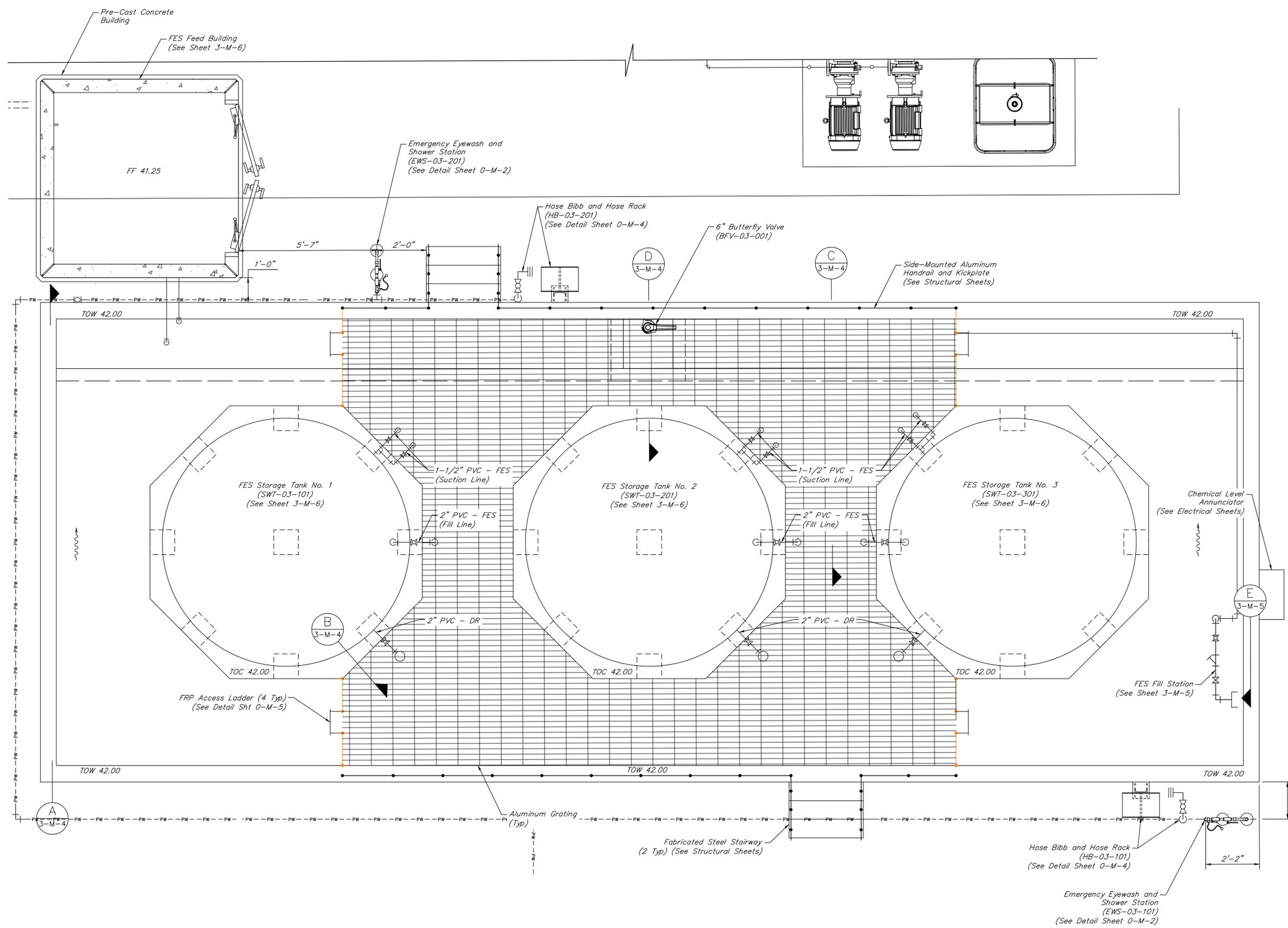
**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 1/2"=1'-0"    HORIZ: XXX    VERT: XXX  
 CATEGORY NO. **3-M-1**    SHEET NO. 66 OF XXX  
 FOR CITY OF HOUSTON USE ONLY

**ITEMS OF WORK**

No.	DESCRIPTION	No.	DESCRIPTION
1	Demolish the existing concrete containment walls and foundation.	6	Demolish the existing 1-1/4" PW-PVC line.
2	Demolish the existing floor trench, grating, and drain lines.	7	Demolish all above ground piping, fittings, valves, supports, and miscellaneous items within the chemical containment area.
3	Demolish the existing ferrous sulfate chemical storage tanks and tank pedestals.	8	Demolish the existing chemical feed pumps, piping, fittings, and valves within the FRP Building and the FRP building.
4	Demolish the existing fabricated steel grating, stairs, and framing.	9	Demolish the existing chemical system control panels and electrical conduits.
5	Demolish the existing emergency eye wash and shower station.	10	Pull out and demolish the existing chemical tubing within chemical carrier pipe (from Process Area 3 to Process Area 1) and demolish the existing chemical carrier pipe.

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



**NOTES:**

1. Pipes with diameter less than 3" do not have all valves and fittings shown and are not labeled with valve and accessories schedule. Refer to P&ID.
2. Chemical piping running along the inside wall of the chemical containment pad shall be mounted with FRP unistrut & SS hardware. The maximum distance between supports shall be 4'-0".
3. Chemical piping running to and from the chemical tanks and not supported along the inside wall of the chemical containment pad shall be mounted with pipe hangers & SS hardware. The maximum distance between supports shall be 4'-0".
4. All aluminum grating, handrails, and access hatches shall receive shop applied powder coating, color COH forest green.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: NOVEMBER 2025



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: CTHOMAS  
 JOB NO: 00050-0099-01 DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

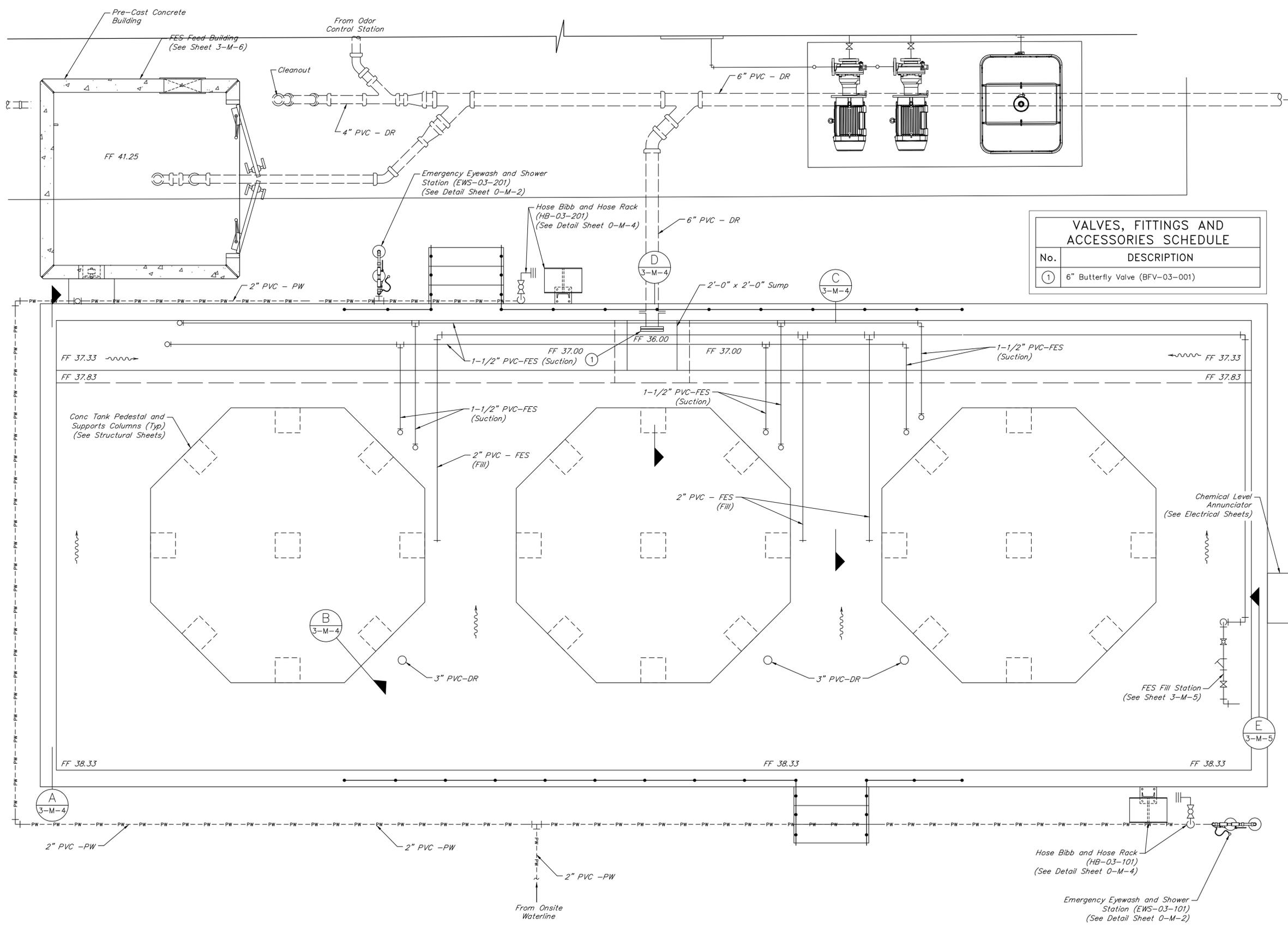
CHEMICAL STORAGE AND  
 CONTAINMENT UPPER PLAN

CITY OF HOUSTON  
 HOUSTON PUBLIC WORKS

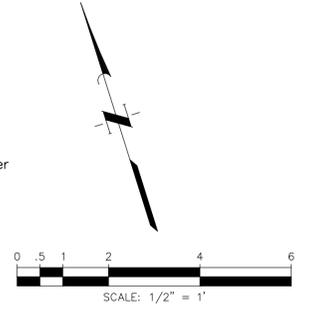
DRAWING SCALE 1/2"=1'-0" HORIZ: XXX VERT: XXX

CATEGORY NO. 3-M-2 SHEET NO. 67 OF XXX  
 FOR CITY OF HOUSTON USE ONLY

**CHEMICAL SYSTEM PROPOSED UPPER PLAN EL 42.00**  
 SCALE: 1/2" = 1'-0"



VALVES, FITTINGS AND ACCESSORIES SCHEDULE	
No.	DESCRIPTION
①	6" Butterfly Valve (BFV-03-001)



**NOTES:**

1. Pipes with diameter less than 3" do not have all valves and fittings shown and are not labeled with valve and accessories schedule. Refer to P&ID.
2. Chemical piping running along the inside wall of the chemical containment pad shall be mounted with FRP unistrut & SS hardware. The maximum distance between supports shall be 4'-0".
3. Chemical piping running to and from the chemical tanks and not supported along the inside wall of the chemical containment pad shall be mounted with pipe hangers & SS hardware. The maximum distance between supports shall be 4'-0".

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: HARRY W. ISENSEE III, P.E.  
 P.E. Serial No.: 144401  
 Date: NOVEMBER 2025



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: CTHOMAS  
 JOB NO: 00050-0099-01 DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

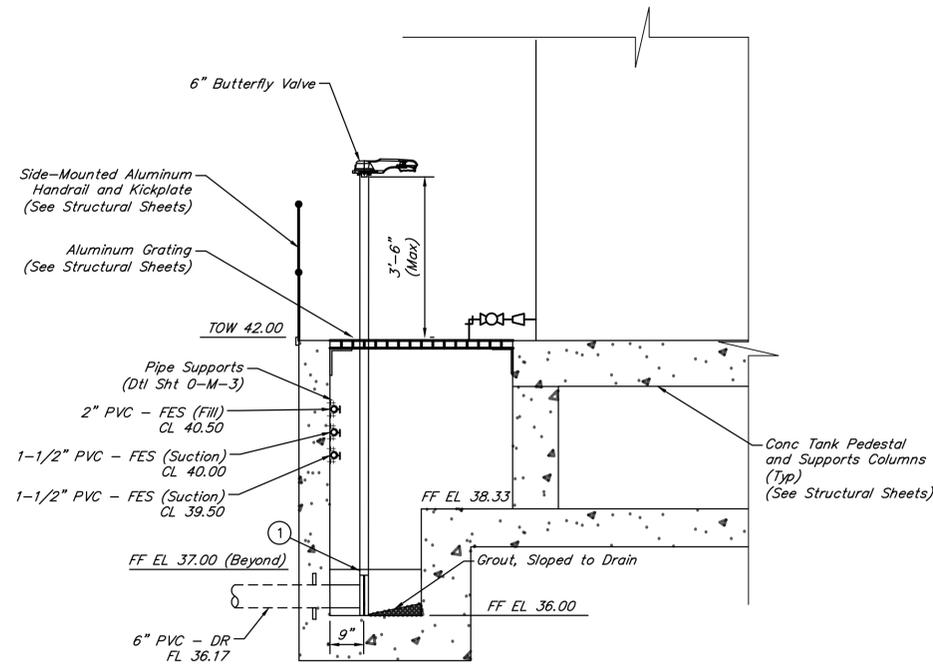
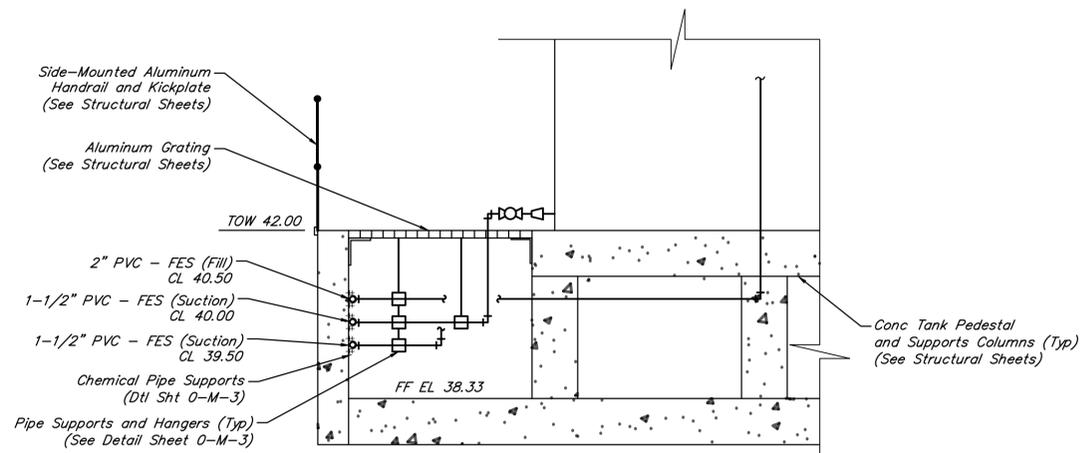
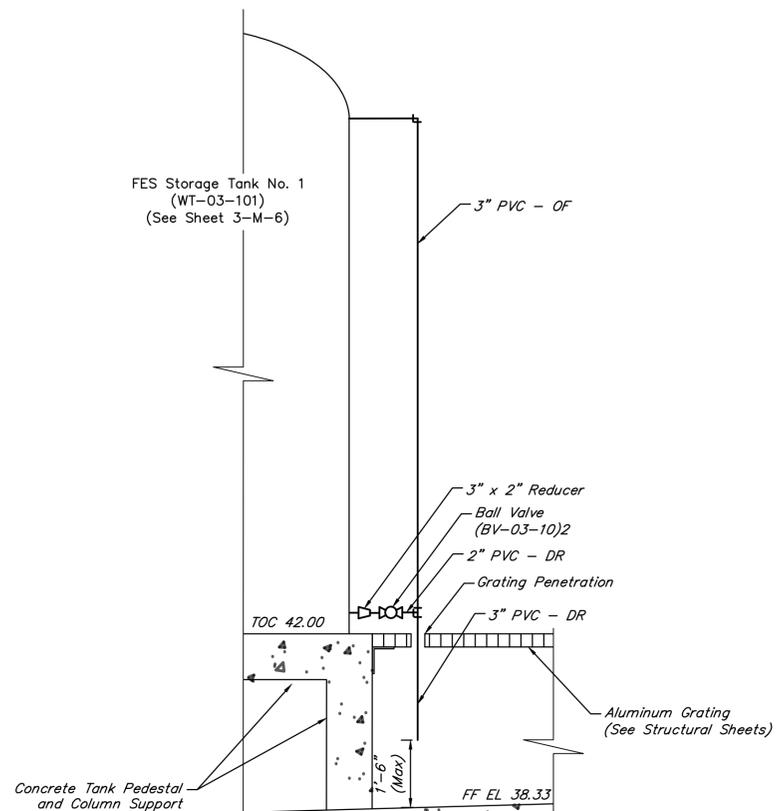
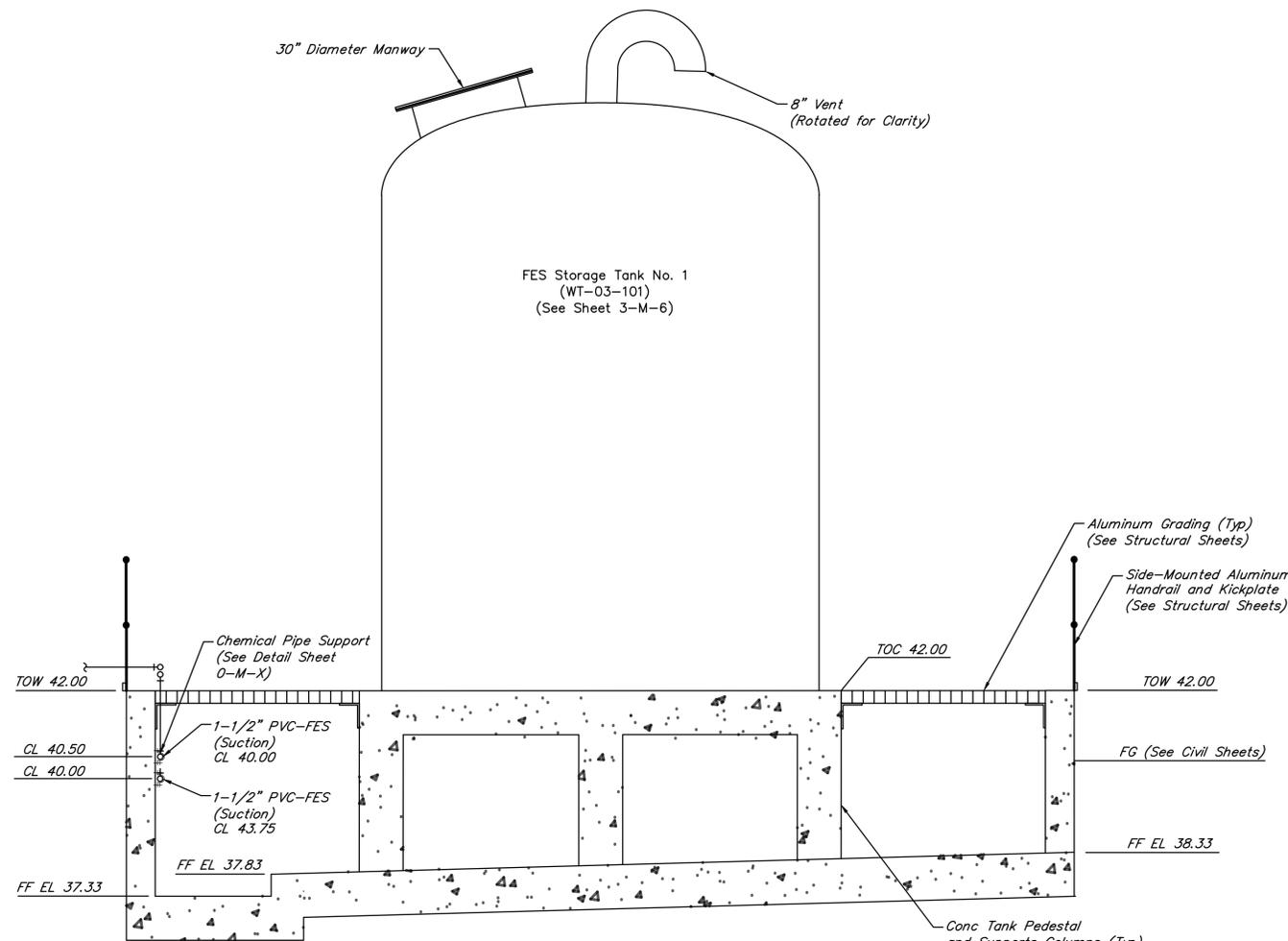
**CHEMICAL STORAGE AND CONTAINMENT LOWER PLAN**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 1/2"=1'-0" HORIZ: XXX VERT: XXX

CATEGORY NO. **3-M-3** SHEET NO. 68 OF XXX  
 FOR CITY OF HOUSTON USE ONLY

**CHEMICAL SYSTEM PROPOSED LOWER PLAN EL 40.25**  
 SCALE: 1/2" = 1'-0"



VALVES, FITTINGS AND ACCESSORIES SCHEDULE	
No.	DESCRIPTION
1	6" Butterfly Valve (BFV-03-001) (See Note 4)

- NOTES:**
- Pipes with diameter less than 3" do not have all valves and fittings shown and are not labeled with valve and accessories schedule. Refer to P&ID.
  - Chemical piping running along the inside wall of the chemical containment pad shall be mounted with FRP unistrut & SS hardware. The maximum distance between supports shall be 4'-0".
  - Chemical piping running to and from the chemical tanks and not supported along the inside wall of the chemical containment pad shall be mounted with pipe hangers & SS hardware. The maximum distance between supports shall be 4'-0".
  - Install thermoplastic butterfly valves with extended lever operator. Attach valve to 6" PVC-DR line with 6" PVC solvent welded flange adapter. Notch grating for the valve stem.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: NOVEMBER 2025

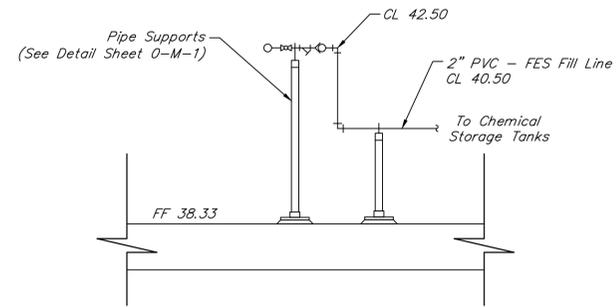


CITY OF HOUSTON  
HARRIS COUNTY, TEXAS  
DATE: JULY 2025 DGN BY: CTHOMAS  
JOB NO: 00050-0099-01 DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
CHEMICAL FEED SYSTEM  
PROPOSED SECTION  
SHEET 1 OF 2

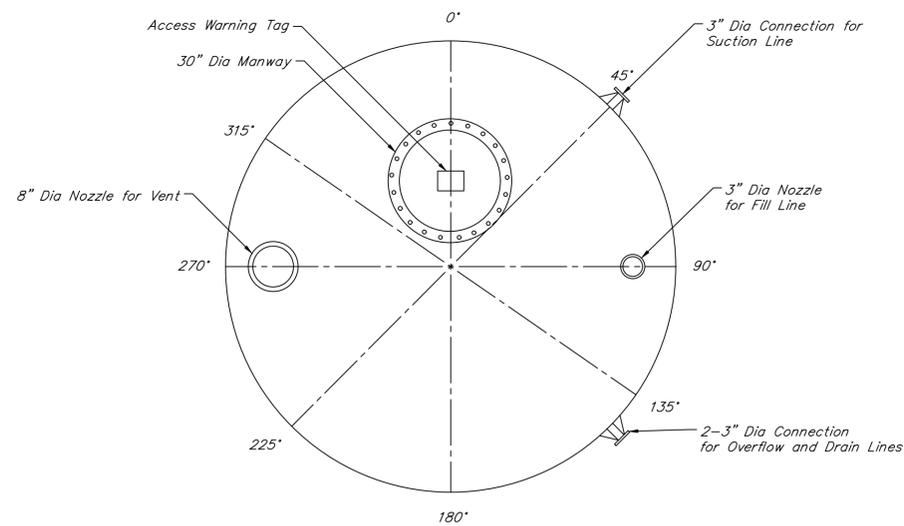
CITY OF HOUSTON  
HOUSTON PUBLIC WORKS  
DRAWING SCALE 1/2"=1'-0" HORIZ: XXX VERT: XXX  
CATEGORY NO. 3-M-4 SHEET NO. 69 OF XXX  
FOR CITY OF HOUSTON USE ONLY



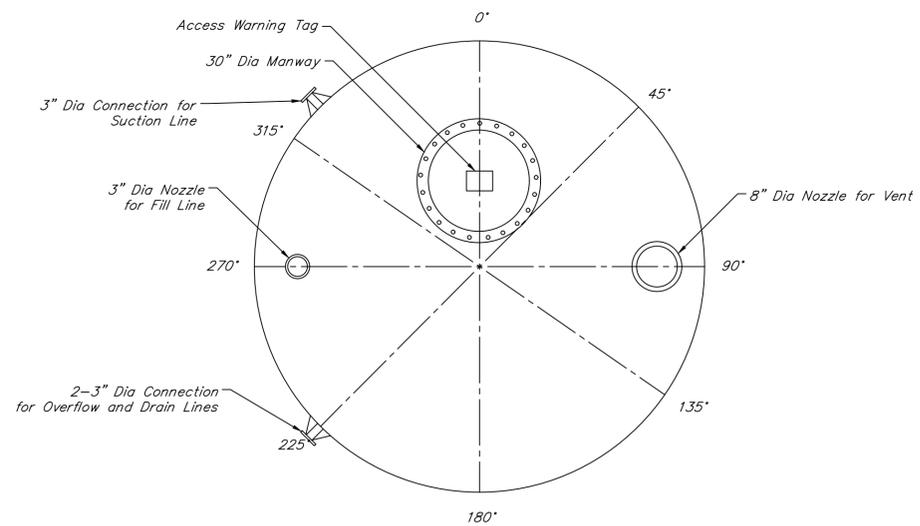
**SECTION E**  
SCALE: 1/2" = 1'-0"

**NOTES:**

1. Pipes with diameter less than 3" do not have all valves and fittings shown and are not labeled with valve and accessories schedule. Refer to P&ID.
2. Mount all small diameter piping to wall with FRP unistrut & SS hardware. The maximum distance between supports shall be 4'-0".



**FERROUS SULFATE STORAGE TANK Nos. 1 & 2 TOP VIEW - TRUE ORIENTATION**  
NOT TO SCALE



**FERROUS SULFATE STORAGE TANK No. 3 TOP VIEW - TRUE ORIENTATION**  
NOT TO SCALE

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: NOVEMBER 2025



Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: CTHOMAS  
JOB NO: 00050-0099-01 DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION

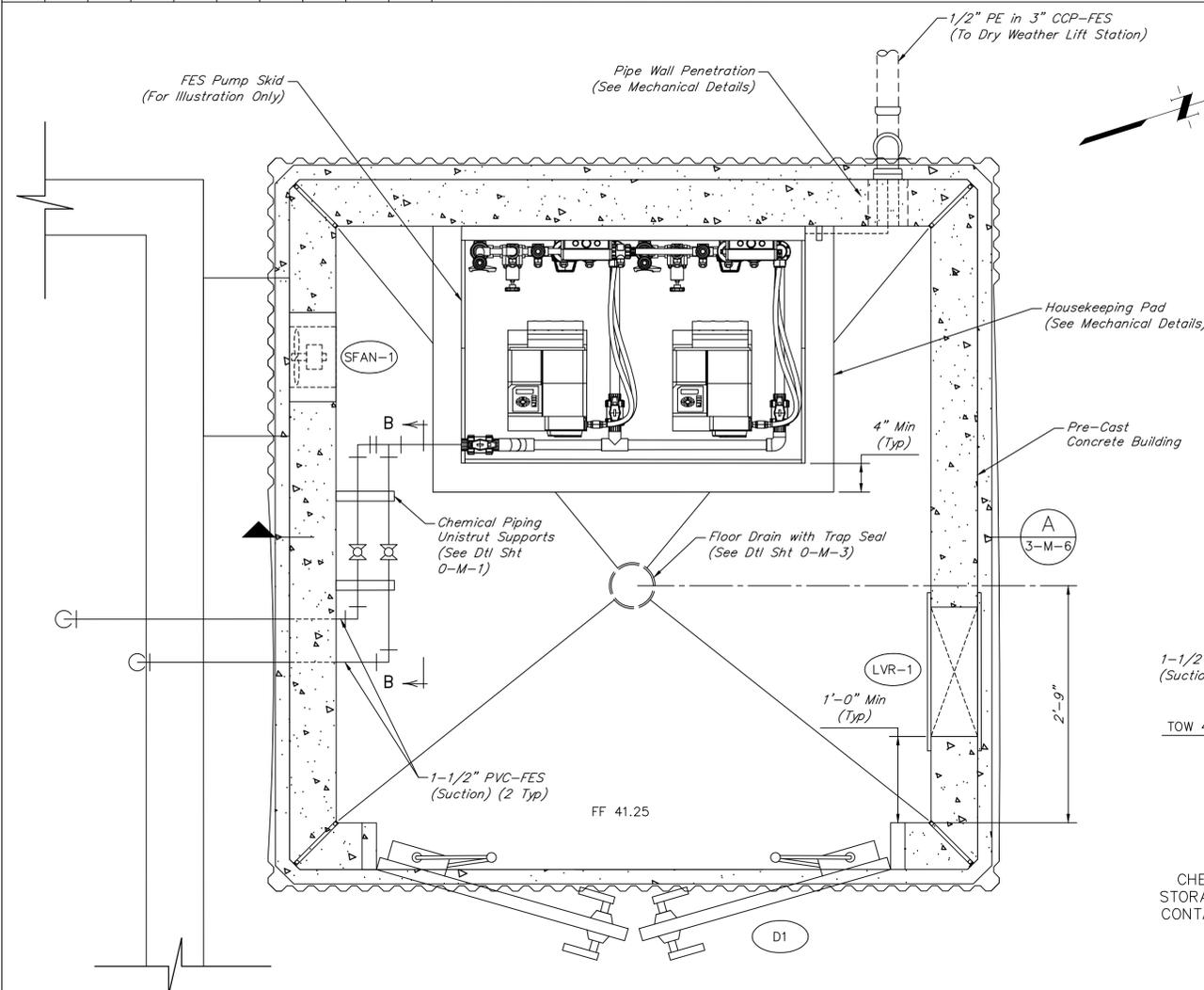
**CHEMICAL TANK DETAILS**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

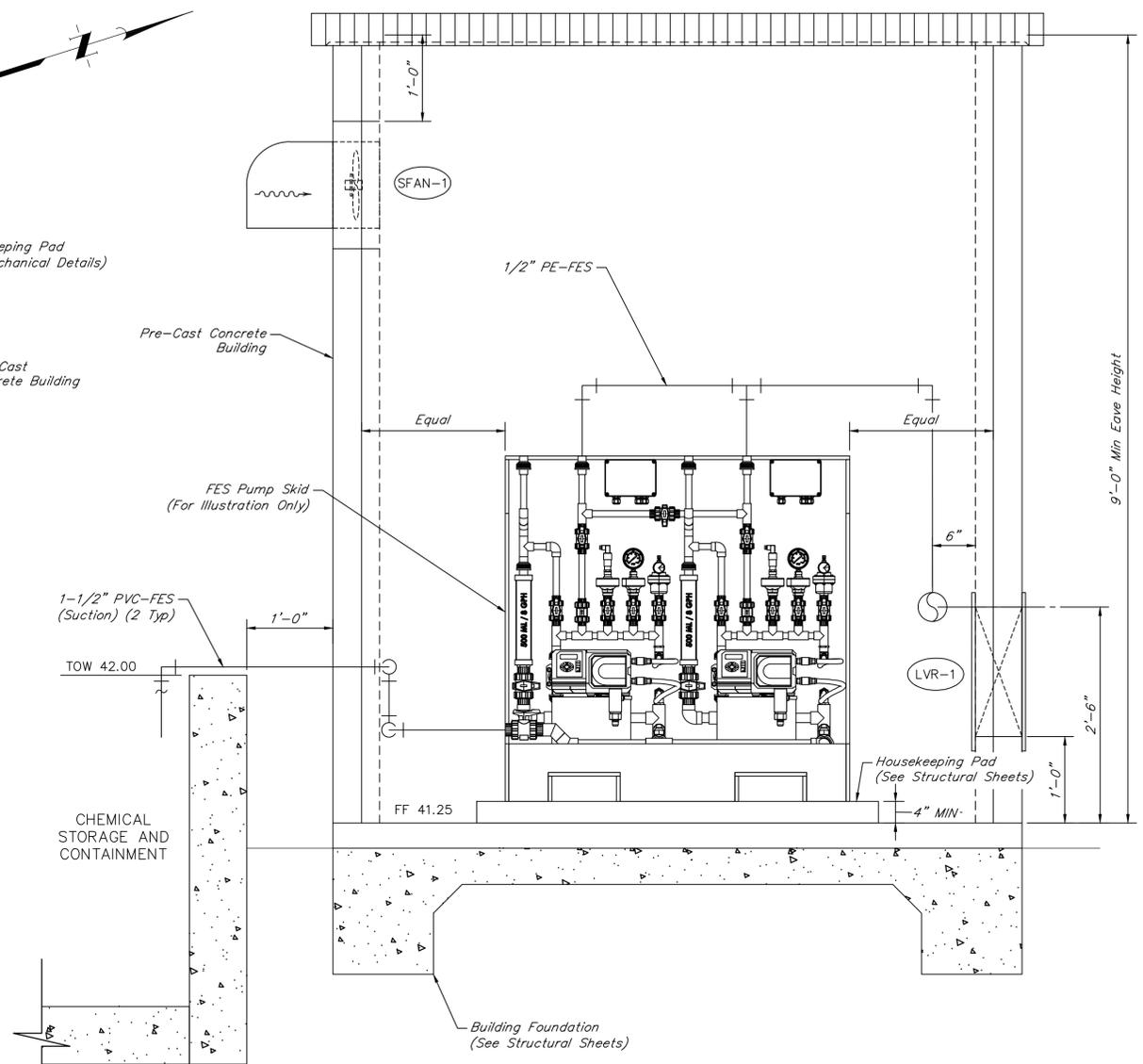
DRAWING SCALE NO SCALE HORIZ: XXX VERT: XXX

CATEGORY NO. **3-M-5** SHEET NO. 70 OF XXX

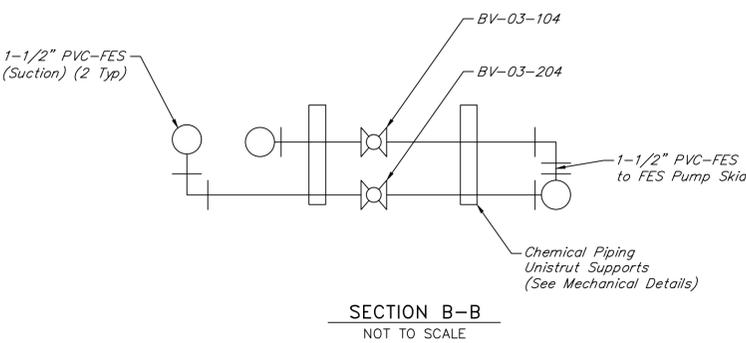
FOR CITY OF HOUSTON USE ONLY



**FES FEED BUILDING PLAN**  
SCALE: 1"=1'-0"



**FES BUILDING SECTION A**  
SCALE: 1"=1'-0"



**NOTES:**

1. Pipes with diameter less than 3" do not have all valves and fittings shown and are not labeled with valve and accessories schedule. Refer to P&ID.
2. Mount all small diameter piping to wall with FRP unistrut & SS hardware. The maximum distance between supports shall be 4'-0".

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: HARRY W. ISENSEE III, P.E.  
P.E. Serial No.: 144401  
Date: NOVEMBER 2025



Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JULY 2025 DGN BY: CTHOMAS  
JOB NO: 00050-0099-01 DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
**FES FEED BUILDING PLAN AND SECTIONS**  
SHEET 1 OF 2

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX  
CATEGORY NO. **3-M-6** SHEET NO. 71 OF XXX  
FOR CITY OF HOUSTON USE ONLY

**DOOR SCHEDULE**

ID NO	BUILDING	DOOR DESCRIPTION							FRAME		REMARKS
		TYPE	WIDTH	HEIGHT	THICK	MAT'L	FINISH	MAT'L	FINISH		
D1	FES	DOUBLE	6'-0"	7'-0"	1'-3/4"	FRP	PAINT	FRP	GELCOAT	NOTES #1, 2, 3	

- DOOR NOTES:**
1. Provide weatherstripping.
  2. Provide padlock.
  3. Provide windspeed rating for 110 mph with 3-second gusts.

**FAN SCHEDULE**

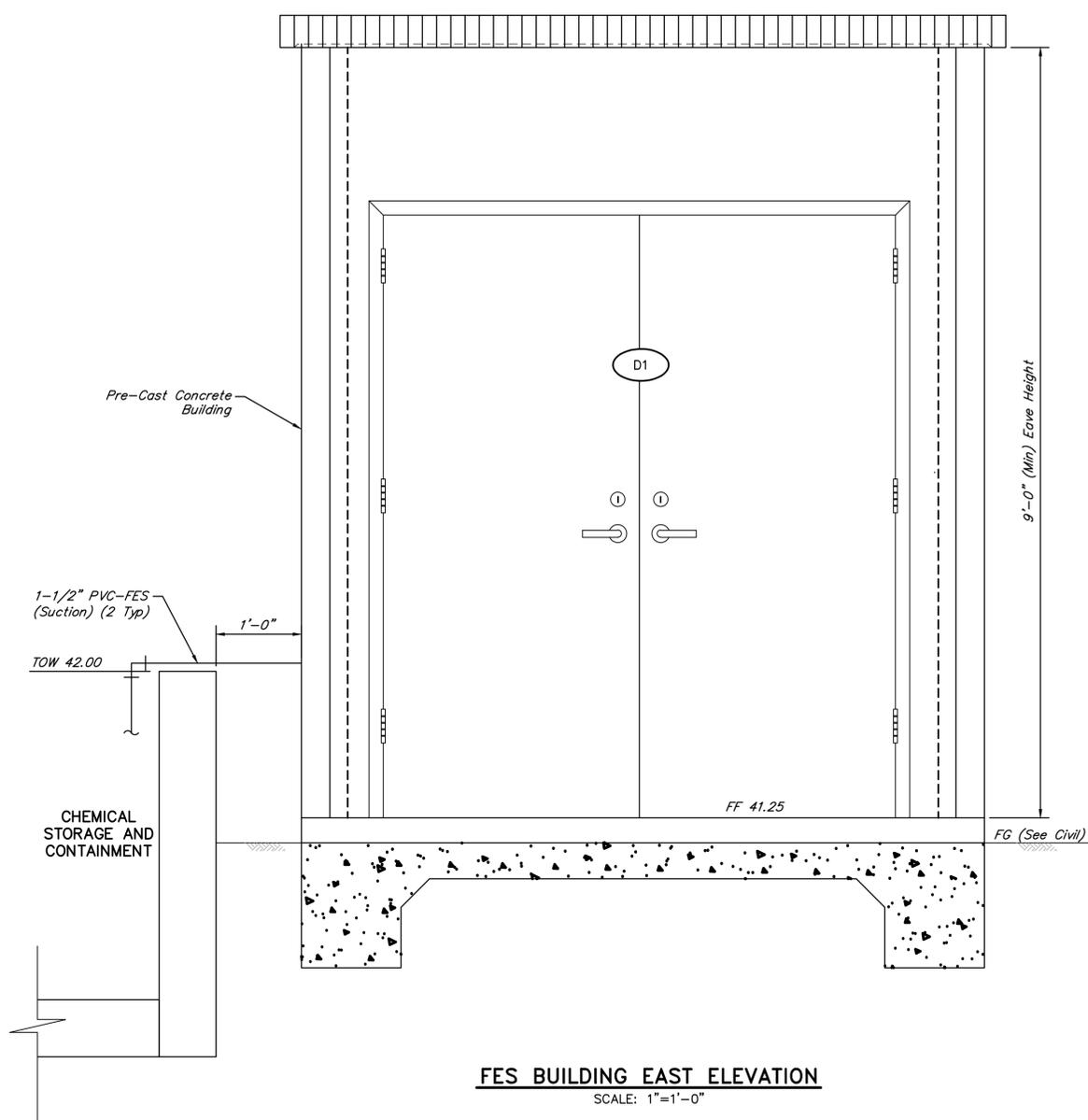
ID NO	LOCATION	MIN FLOW (CFM)	STATIC PRESSURE IN WC (IN)	BLADE DIA	MANUFACTURER /MODEL	MOUNTING		NOTES
						TYPE	LOCATION	
SFAN-1	FES FEED BUILDING	246	0.25	10"	DAYTON/1BLH6	WALL	HIGH	#1, 2, 3, 4, 5, 6, 7

- FAN NOTES:**
1. Provide disconnect switch.
  2. Provide birdscreen.
  3. Provide backdraft dampers.
  4. Provide weather hood.
  5. Provide factory mounted brackets and hanging kit.
  6. Provide FRP material.
  7. Interlock with local switch.

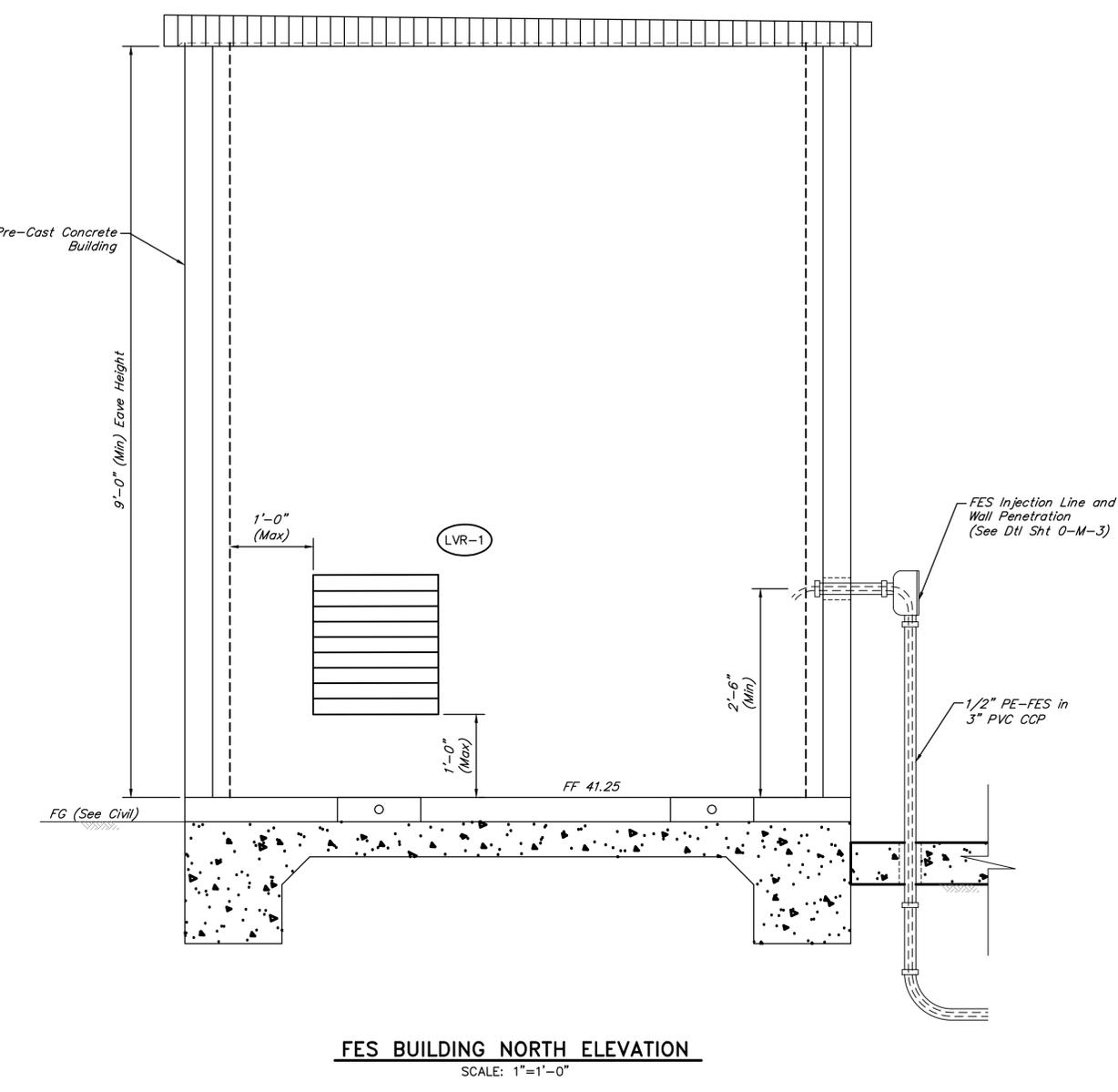
**LOUVER SCHEDULE**

ID NO	LOCATION	SERVICE	MIN SHUTTER FREE AREA (SF)	SIZE (IN)	MANUFACTURER /MODEL	MOUNTING		REMARKS
						TYPE	LOCATION	
LVR-1	FES FEED BUILDING	SUPPLY	0.4	12	DAYTON 805TT9	WALL	LOW	NOTES #1, 2

- LOUVER NOTES:**
1. Provide birdscreen.
  2. Provide FRP material.



**FES BUILDING EAST ELEVATION**  
SCALE: 1"=1'-0"



**FES BUILDING NORTH ELEVATION**  
SCALE: 1"=1'-0"

**NOTES:**

1. Pipes with diameter less than 3" do not have all valves and fittings shown and are not labeled with valve and accessories schedule. Refer to P&ID.
2. Chemical piping running along the inside wall of the chemical containment pad shall be mounted with FRP unistrut & SS hardware. The maximum distance between supports shall be 4'-0".
3. Chemical piping running to and from the chemical tanks and not supported along the inside wall of the chemical containment pad shall be mounted with pipe hangers & SS hardware. The maximum distance between supports shall be 4'-0".

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: HARECALANSE/SRE, I.P.E.  
P.E. Serial No.: 544431  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MEMMICHHELL  
JOB NO: 00050-0099-01 DWG BY: CHUDSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

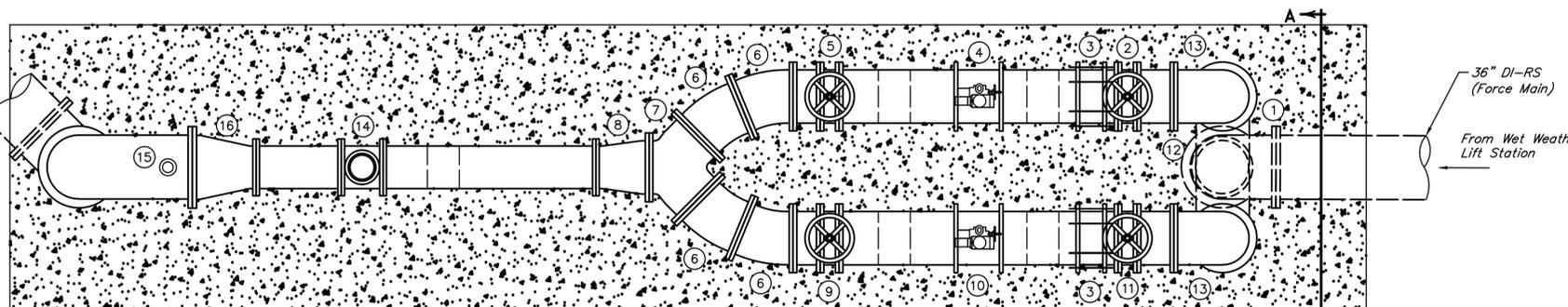
SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
FES FEED BUILDING  
PLAN AND SECTIONS  
SHEET 2 OF 2

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/2"=1'-0" HORIZ: XXX VERT: XXX

CATEGORY NO. **3-M-7** SHEET NO. 72 OF XXX  
FOR CITY OF HOUSTON USE ONLY

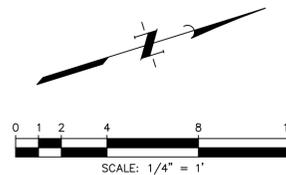
36" DI-RS  
(Force Main)  
To Wet Weather  
Lift Station



**PLAN VIEW**  
SCALE: 1/4"=1'-0"

VALVE AND ACCESSORIES SCHEDULES	
No.	DESCRIPTION
①	36" 90° Bend, MJ
②	30" Knife Gate Valve, FJ (KGV-02B-105)
③	30" Dismantling Joint, FJ
④	30" Actuated Flow Control Valve, FJ (PV-02B-001)
⑤	30" Knife Gate Valve, FJ (KGV-02B-105)
⑥	30" 22.5° Bend, FJ
⑦	30" Wye Connection, FJ
⑧	30" x 24" Reducer, FJ
⑨	30" Knife Gate Valve, FJ (KGV-02B-106)
⑩	30" Actuated Flow Control Valve, FJ (PV-02B-002)
⑪	30" Knife Gate Valve, FJ (KGV-02B-106)
⑫	30" Wye Connection, FJ
⑬	30" 90° Bend, FJ
⑭	24" Flow Meter
⑮	Combination Air Release Valve
⑯	24" x 36" Reducer, FJ
⑰	36" x 30" Reducer, FJ
⑱	30" x 30" x 24" Tee, FJ

⊙ Denotes the use of a restrained, push-on connection



**NOTES:**

- Contractor shall apply protective coating to all proposed above ground piping.
- All proposed valves shall be installed with position indicator.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: JMMUSSO

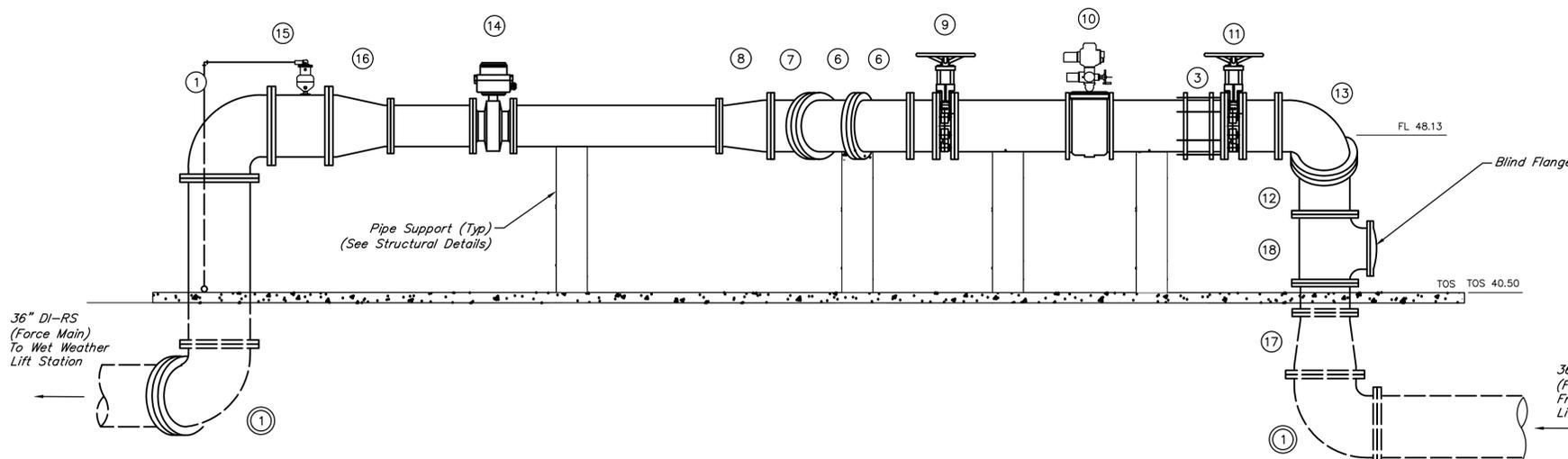
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION

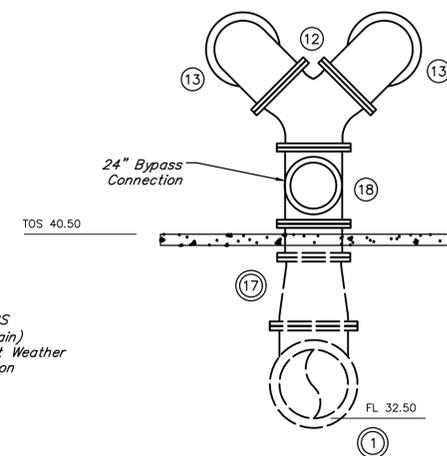
**WET WEATHER LIFT STATION  
FLOW METER STATION**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

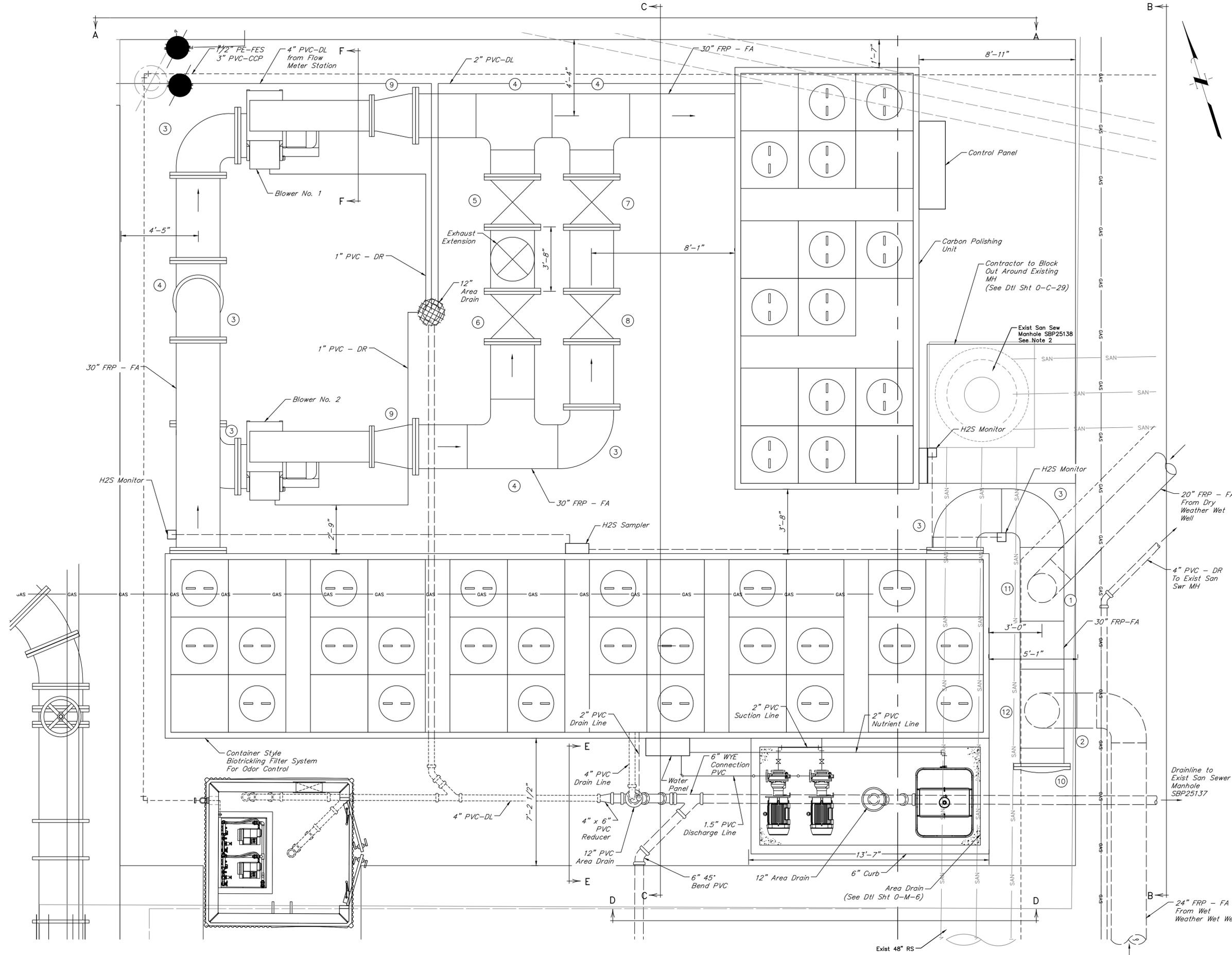
DRAWING SCALE 1/4"=1' HORIZ: XXX VERT: XXX  
CATEGORY NO. **4-M-1** SHEET NO. 62 OF XXX  
FOR CITY OF HOUSTON USE ONLY



**SECTION VIEW B-B**  
SCALE: 1/4"=1'-0"



**SECTION VIEW A-A**  
SCALE: 1/4"=1'-0"



VALVE AND ACCESSORIES SCHEDULES	
No.	DESCRIPTION
1	20" 90° Bend, FJ
2	24" 90° Bend, FJ
3	30" 90° Bend, FJ
4	30" TEE, FJ
5	30" Butterfly Valve, FJ (BFV-04-101)
6	30" Butterfly Valve, FJ (BFV-04-102)
7	30" Butterfly Valve, FJ (BFV-04-103)
8	30" Butterfly Valve, FJ (BFV-04-104)
9	(15"x21") Rectangular X 30" Circular Reducer, FJ
10	30" Blind Flange, FJ
11	20" x 30" Tee, FJ
12	24" x 30" Tee, FJ

**NOTES:**

- See Sheet 5-M-2 for Notes.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: JMMUSSO

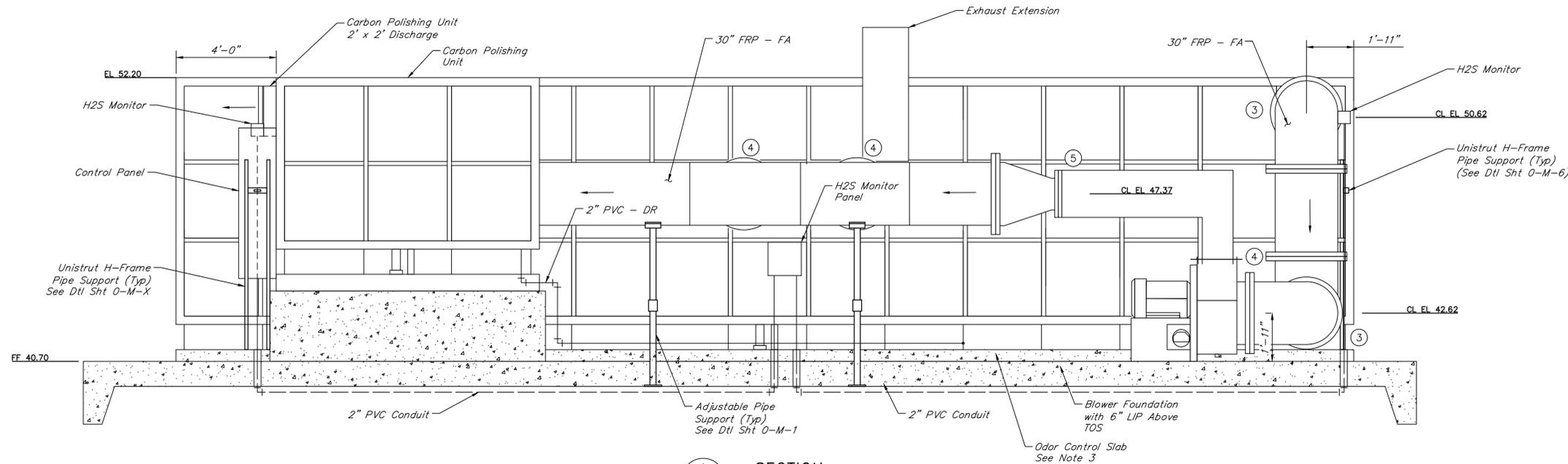
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION

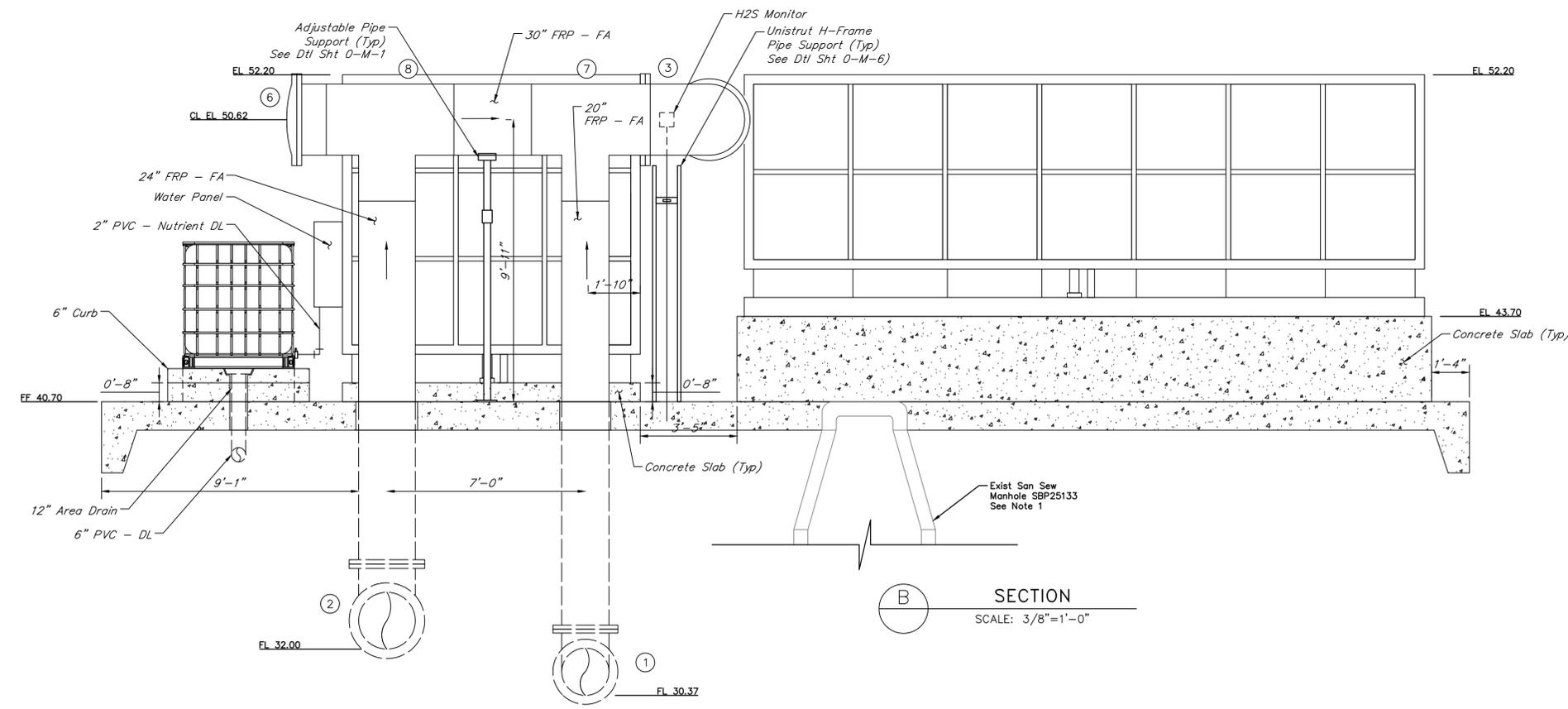
**ODOR CONTROL SYSTEM  
PROPOSED PLAN**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/8"=1' HORIZ: XXX VERT: XXX  
CATEGORY NO. 5-M-1 SHEET NO. 73 OF XXX  
FOR CITY OF HOUSTON USE ONLY



**A** SECTION  
SCALE: 3/8"=1'-0"



**B** SECTION  
SCALE: 3/8"=1'-0"

**VALVE AND ACCESSORIES SCHEDULES**

No.	DESCRIPTION
①	20" 90° Bend, FJ
②	24" 90° Bend, FJ
③	30" 90° Bend, FJ
④	30" TEE, FJ
⑤	(15"x21") Rectangular X 30" Circular Reducer, FJ
⑥	30" Blind Flange, FJ
⑦	20" x 30" TEE, FJ
⑧	24" x 30" Tee, FJ

**NOTES:**

- Contractor to stencil flow direction arrows every 10'.
- Exist 7" Sanitary Sewer MH rim elevation to be raised with adjustment rings as required to match FF elevation of odor control pad.
- Contractor to provide yellow-stripe visual marker to differentiate odor control slab from finished floor.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: JMMUSSO

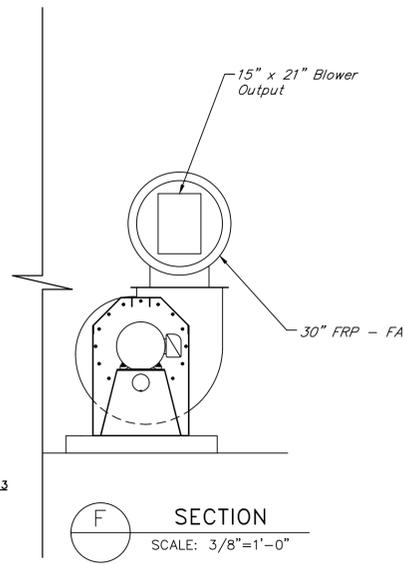
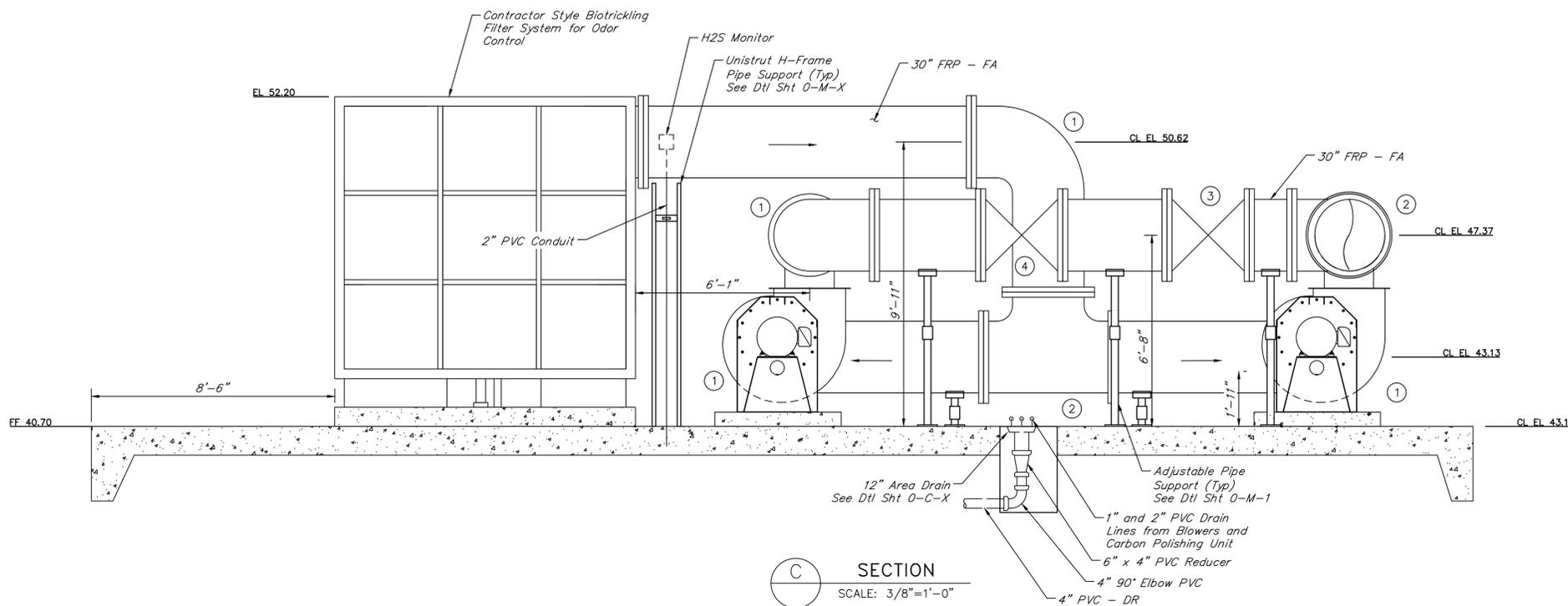
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION

**ODOR CONTROL SYSTEM  
PROPOSED SECTION 1 OF 2**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/8"=1' HORIZ: XXX VERT: XXX  
CATEGORY NO. **5-M-2** SHEET NO. 74 OF XXX  
FOR CITY OF HOUSTON USE ONLY



No.	DESCRIPTION
①	30" 90° Bend, FJ
②	30" TEE, FJ
③	30" Butterfly Valve, FJ (BFV-04-103)
④	30" Butterfly Valve, FJ (BFV-04-104)
⑤	24" x 30" Tee, FJ
⑥	24" 90° Bend, FJ

- NOTES:**
- Contractor to stencil flow direction arrows every 10'.
  - Contractor to provide yellow-stripe visual marker to differentiate odor control slab from finished floor.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: WILLIAM R. SAGASTIZADO, P.E.  
P.E. Serial No.: 125999  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: JMMUSSO

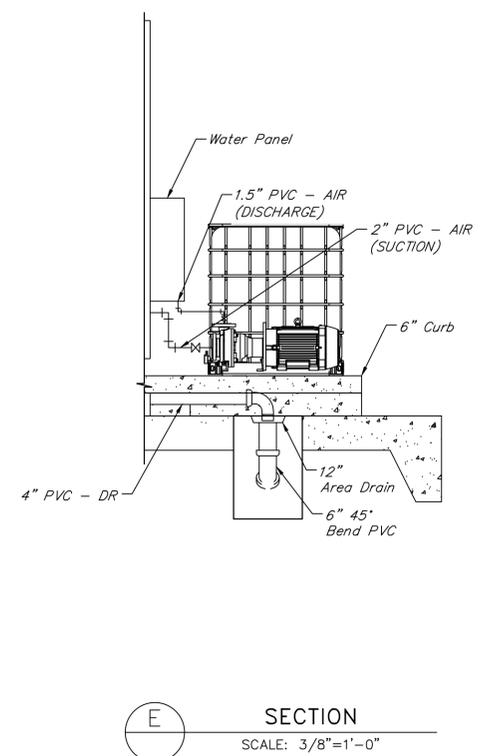
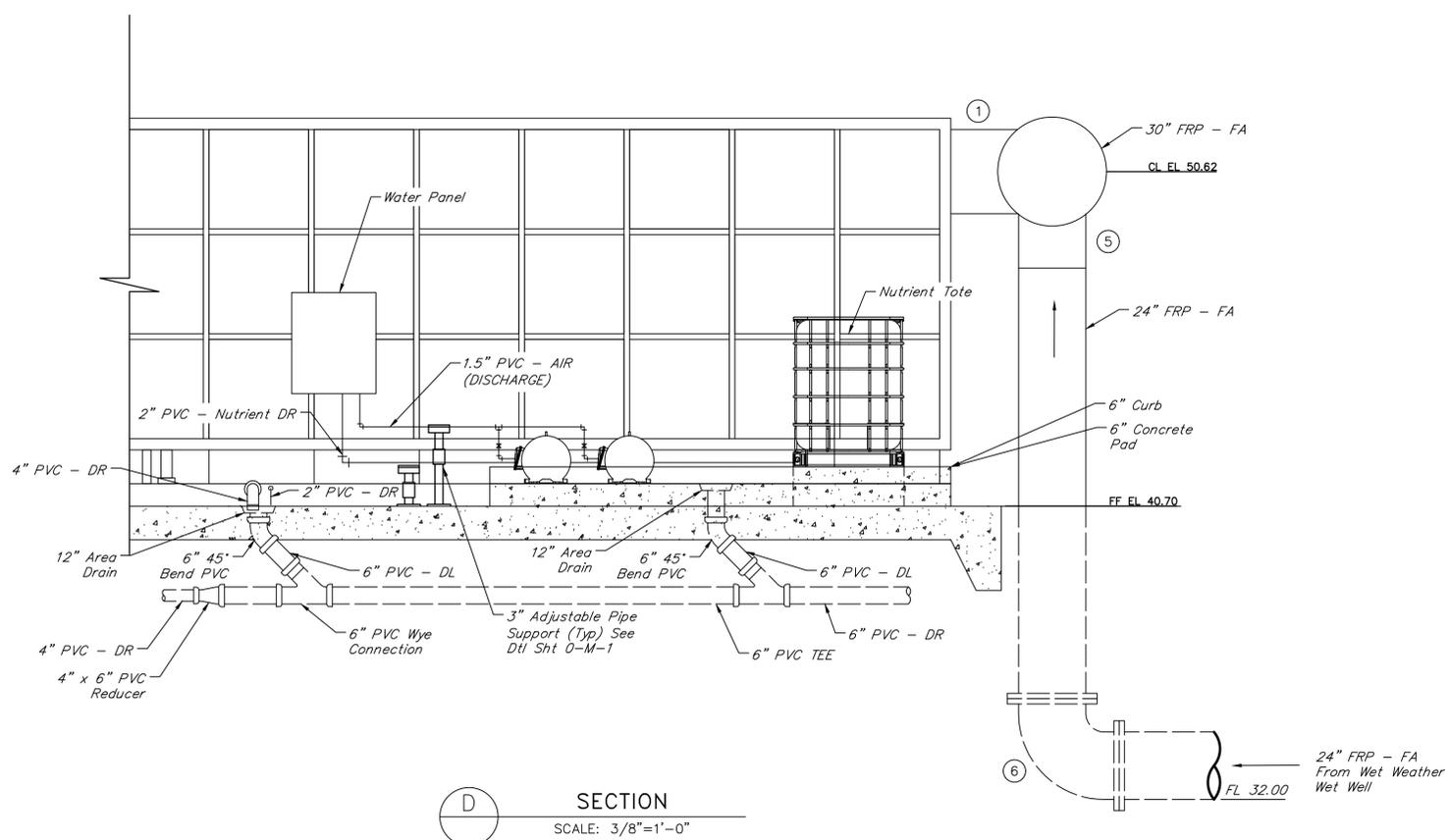
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

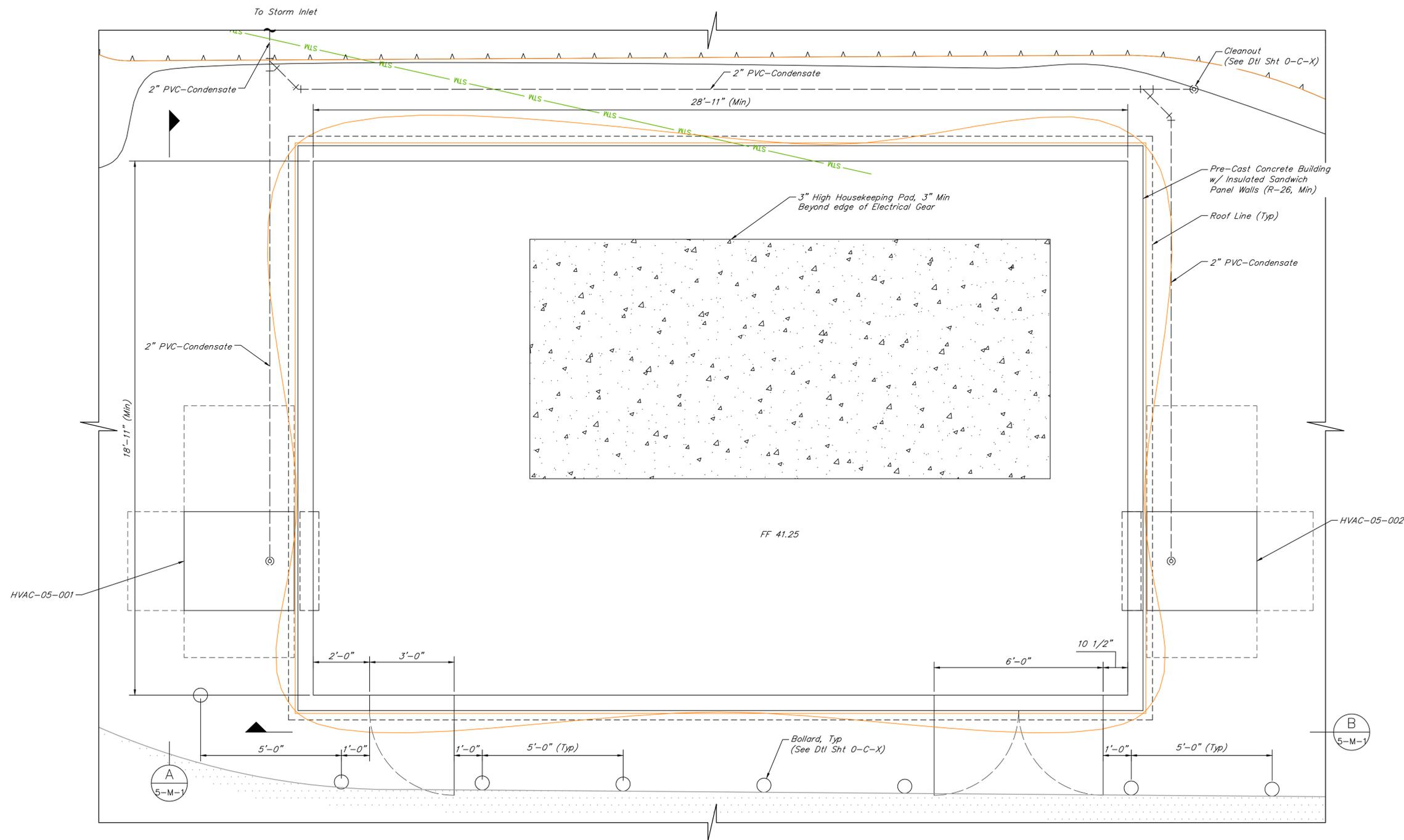
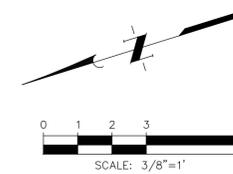
SCOTT STREET No. 1  
LIFT STATION REHABILITATION

ODOR CONTROL SYSTEM  
PROPOSED SECTION 2 OF 2

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/8"=1' HORIZ: XXX VERT: XXX  
CATEGORY NO. 5-M-3 SHEET NO. 75 OF XXX  
FOR CITY OF HOUSTON USE ONLY





NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: H. ESCALANTE, JR., P.E.  
 P.E. Serial No.: 54444  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
 JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

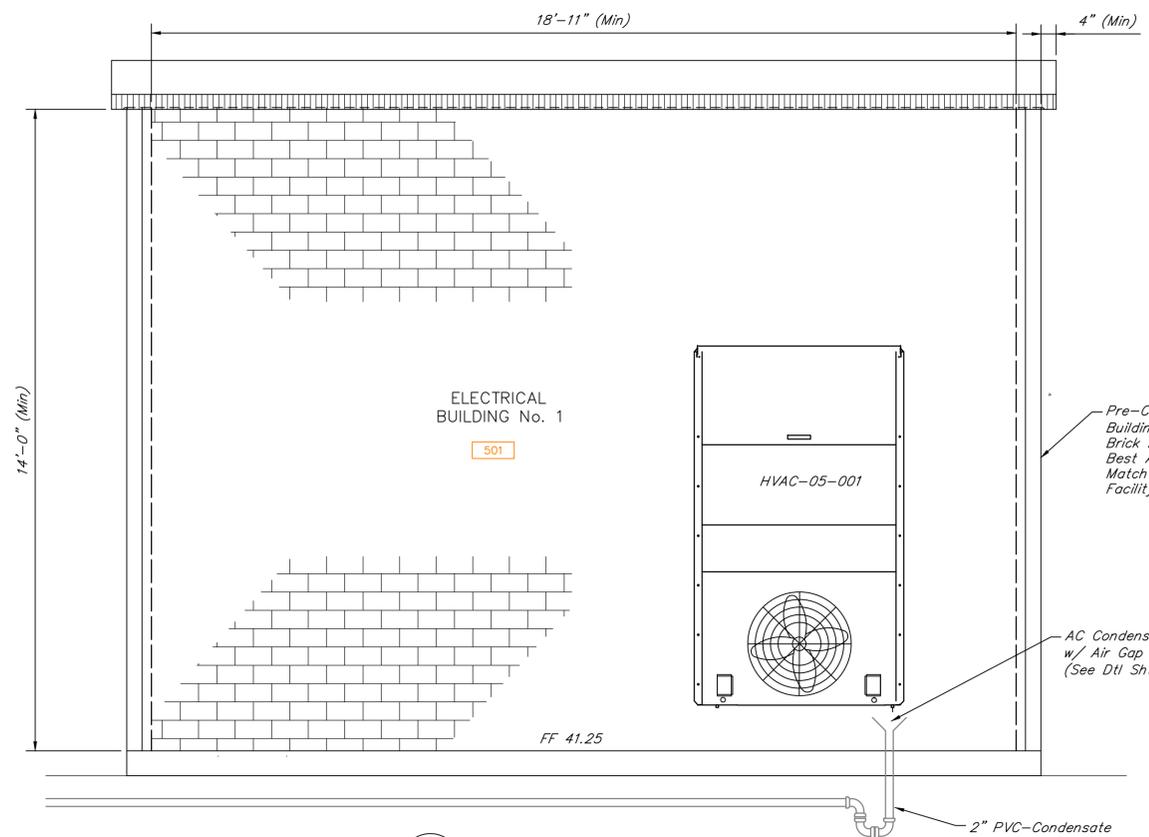
**ELECTRICAL BUILDING No. 1**  
**BUILDING PLAN**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE 3/8"=1' HORIZ: XXX VERT: XXX  
 CATEGORY NO. **6-M-1** SHEET NO. 76 OF XXX  
 FOR CITY OF HOUSTON USE ONLY

**ELECTRICAL BUILDING No. 1 PLAN**  
 SCALE: 1/2"=1'-0"

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



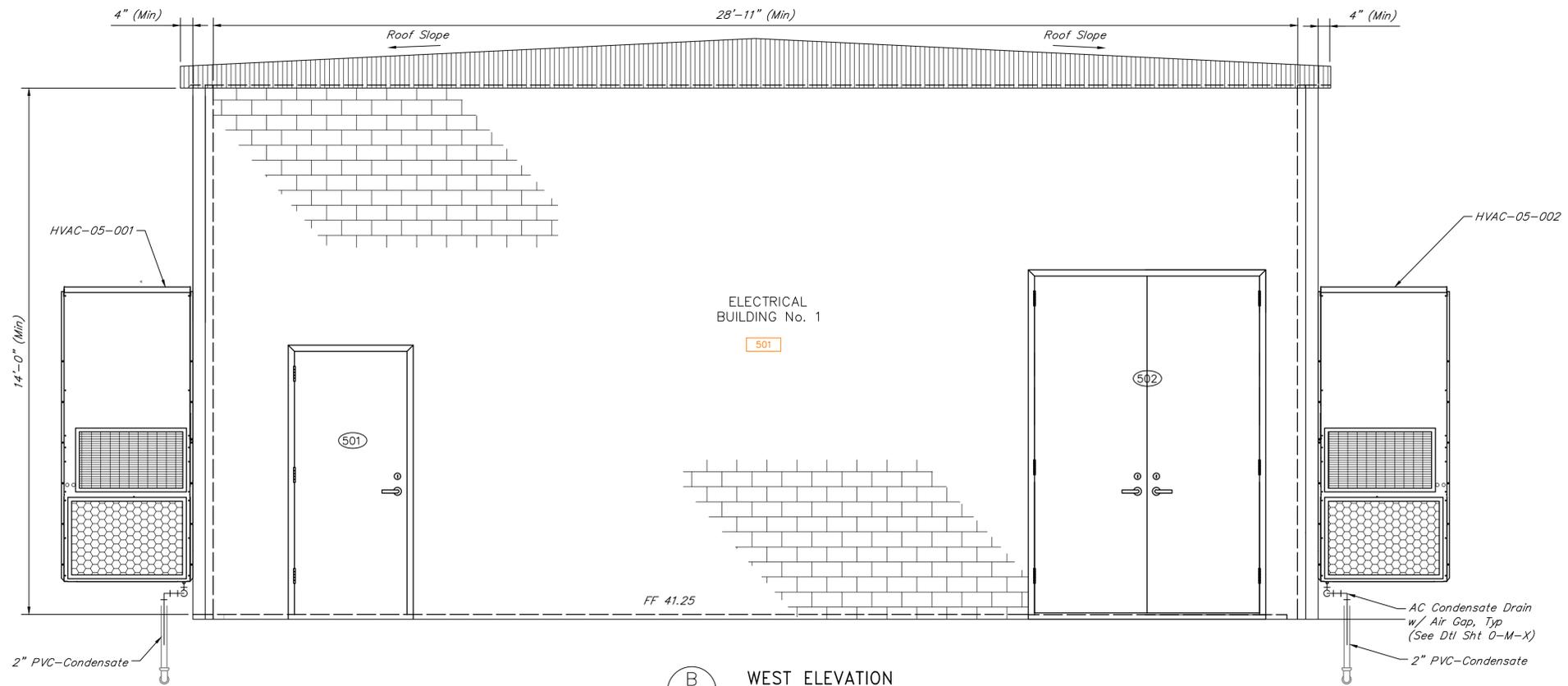
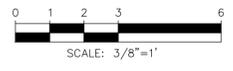
**A**  
5-M-1  
NORTH ELEVATION  
SCALE: 1/2"=1'-0"

DOOR SCHEDULE										
I.D. No.	ROOM	DOOR DESCRIPTION						FRAME		REMARKS
		TYPE	WIDTH	HEIGHT	THICK	MAT'L	FINISH	MAT'L	FINISH	
501	Elec Bldg 2	SINGLE	3'-0"	7'-0"	1 3/4"	METAL	PAINT	METAL	PAINT	NOTES 1 - 8
502	Elec Bldg 2	DOUBLE	6'-0"	9'-0"	1 3/4"	METAL	PAINT	METAL	PAINT	NOTES 1 - 9

ROOM SCHEDULE										
ROOM No.	ROOM NAME	CEILING HEIGHT	CEILING	FLOOR	BASE	MILLWORK	NORTH WALL	SOUTH WALL	EAST WALL	WEST WALL
501	ELEC BLDG No. 1	14'-0"	OPEN	SC-01	NONE	NONE	BF-01	BF-01	BF-01	BF-01

FINISH SCHEDULE					
TAG	TYPE	COMPANY	NAME	MODEL	SIZE
SC-01	SEALED CONCRETE	W.R. MEADOWS	VOVOMP	-----	-----
BF-01	CONCRETE	SPECIFICATION 03430	SPECIFICATION 03430	SPECIFICATION 03430	SPECIFICATION 03430

- DOOR NOTES:**
1. Provide panic hardware (interior).
  2. Provide pull handle (exterior).
  3. Provide closer.
  4. Provide weather strip.
  5. Provide door sweep.
  6. Provide threshold.
  7. Provide drip cap.
  8. Provide wind speed rating for 110 mph with 3-second gust.
  9. Provide astragal.



**B**  
5-M-1  
WEST ELEVATION  
SCALE: 1/2"=1'-0"

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: H. ESCALANTE, JR., P.E.  
P.E. Serial No.: 54444  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: MBMITCHELL  
JOB NO: 00050-0099-01 DWG BY: JMMUSSO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION

ELECTRICAL BUILDING No. 1  
BUILDING ELEVATIONS

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE 3/8"=1' HORIZ: XXX VERT: XXX

CATEGORY NO. 6-M-2 SHEET NO. 77 OF XXX  
FOR CITY OF HOUSTON USE ONLY

**STRUCTURAL NOTES:**

- I. GENERAL
  - A. All concrete work shall be performed in accordance with ACI 301 specifications, including but not limited to formwork installation, reinforcement placement, concrete mixing, delivery, placement, consolidation, finishing, curing, and protection, ensuring compliance with required strength, durability, and surface quality standards.
  - B. Design shall conform to the latest IBC Building Code requirements and latest ACI-318 code for concrete structures.
  - C. All structural plan dimensions are interpreted from and shall be verified with the civil drawings. The engineer shall be notified if discrepancies exist.
  - D. Structural drawings to be coordinated with civil, electrical, grading, mechanical drawings for all openings, inserts, elevation, and related items.
  - E. All structural openings dimensions and locations shall be verified with the mechanical drawings. The engineer shall be notified if discrepancies exist.
  - F. Any unusual conditions encountered shall be brought to the attention of the engineer prior to concrete placement.
  - G. Locations of construction joints not shown shall be approved by the engineer prior to concrete placement.
  - H. The contractor shall adhere to the trench and excavation safety requirements set forth in the occupational safety and health administration (OSHA) Standards 29 CFR, Part 1926, Subpart P, excavations.
- II. CONCRETE
  - A. All concrete shall have a minimum compressive strength of 4000 PSI at 28 Days in accordance with ASTM C-39 at 28 days in accordance with ASTM C-78. An air entrainment agent shall be used. fly ash shall not be used.
  - B. Where concrete is placed against forms or seal slabs, reinforcing bars shall have a minimum of 2 inches clear cover unless shown otherwise. Where concrete is placed against earth, or in contact with liquid, reinforcing bars shall have a minimum of 3 inches clear cover.
  - C. Metal keyed construction joints and sawed joints may not be used. All joints below the highest water line shall have an approved waterstop.
  - D. Apply float finish to slab surfaces to receive a trowel finish.
  - E. All construction joints shall be thoroughly cleaned before fresh concrete is placed. Construction joints shall be roughened to a 1/4" amplitude.
  - F. Except where floor drains occur, depressions between high spots shall not be greater than 1/8 in. Below a 10 ft. long straightedge in accordance with ACI 302.
  - G. Concrete faces shall not deviate more than 3/16" from the plan dimensions.
  - H. All exposed edges of beams, columns, slabs and walls shall be chamfered 3/4" unless masonry or other members are erected flush with them.
  - J. Unless noted, anchor bolts and expansion bolts shall be stainless steel. All steel embedded items to be hot-dip galvanized.
- III. REINFORCING STEEL
  - A. All reinforcing bars shall conform to ASTM A-615, 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.
  - B. Detailing of reinforcing shall be in accordance with ACI 315, latest edition, unless shown otherwise. Placing of reinforcing shall be in accordance with C.R.S.I., "Recommended practice for placing of reinforcing bars", latest edition.
  - C. Where it is necessary to splice reinforcement at locations other than those shown on the drawings, the splice locations shall be approved by the engineer. Lap splices and embedment lengths, not shown on the drawings, shall be in accordance with C.R.S.I., Latest edition.
  - D. Support for the reinforcement shall be by metal high chairs either galv. or plastic dipped and spaced not more than six feet center to center.
  - E. 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.
- IV. FOUNDATIONS
  - A. The mats should be poured the same day that they are excavated to minimize drying of the bearing soils. However, a lean concrete slab can be placed to protect the bearing area if the mats are left open overnight.
  - B. Site grading, fill material properties, excavation, subgrade preparation soil improvement, and allowable bearing pressure, shall follow geotechnical report.

- V. STRUCTURAL STEEL:
  - A. Structural steel shall conform to the latest AISC "Specification for the design, fabrication and erection of structural steel for buildings".
  - B. Structural steel materials shall comply with the following specifications: Angles. Plates. Bars. Channels ASTM A36 U.N.O.
  - C. Field connections shall be bolted, except as otherwise shown or noted.
  - D. 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 XX electrode.
  - E. Anchor bolts and misc embedded steel ----- ASTM A36. Anchor bolts which are submerged, located above a liquid surface, or are in a corrosive atmosphere ----- 361 SS.
  - F. All equipment anchor bolt dimensions and locations shall be verified from certified vendor drawings, prior to construction.
  - G. All embedded items and steel structures exposed to weather to be hot-dip galvanized.

**DESIGN CRITERIA:**

- A. Dead load materials assumed in the design are shown on the mechanical and structural drawings.
- B. Design code is IBC 2021
- C. Live Loads:
 

	Uniform Load	Concentrated Load
Location	Operation Area	Stairs and Exits
Handrails and Guardrails	100 PSF Reducible 50 PSF or 200 Lbs applied at top rail in any direction. 50 Lbs in any direction applied at intermediate rails.	300 Lbs
Grab Bars		250 Lbs any Direction
- D. Wind Loads:
 

Basic Wind Speed	137 MPH (3-Sec Gust)	
Risk Category	III	
Exposure Category	C	
Internal Pressure Coeff	+/- 0.18	
Components & Cladding	Not Applicable	
- E. Seismic Load:
 

Seismic Importance Factor	1.25	
Spectral Responce Acceleration (Ss / S1)	0.082 / 0.044	
Site Class	D	
Spectral Responce Coeff. (Sds / Sd1)	0.072 / 0.066	
Seismic Design Category	A	
- F. Handrails, guardrails and grab bars (including attachment to structure) shall be designed by the fabricator for the loads indicated in the referenced building code. Shop drawings shall be sealed by a professional engineer in the state of Texas, representing the fabricator. All handrails are to be aluminum tube sch 10, with cast aluminum Slip-Joint Type fillings by J.C. Denier Co., Inc. A 4"x4" aluminum plate with mill finish shall be used as kick plate.
- G. Stairs shall be designed by the steel fabricator for code required loads. Shop drawings shall be sealed by a professional engineer in the state of where the project is located, representing the fabricator.

**TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS GRADE 60 (UNCOATED) REINFORCEMENT**

BAR SIZE	NORMAL WEIGHT					
	F'c = 3000		F'c = 4000		F'c = 5000	
	CLASS A	CLASS B	CLASS A	CLASS B	CLASS A	CLASS B
#3	17	22	15	19	13	17
#4	22	29	19	25	17	23
#5	28	36	24	31	22	28
#6	33	43	29	37	26	34
#7	48	63	42	54	38	49
#8	55	72	48	62	43	56
#9	62	81	54	70	48	63
#10	70	91	61	79	54	71
#11	78	101	67	87	60	78

- Notes:
1. All lengths shown in the table are in inches.
  2. Ld = Tension development length.
  3. The table to the left is valid for
    - a. Beams and columns where concrete cover >= db, c/c bar spacing >= 2db, and with stirrups or ties throughout Ld are not less than the code minimum.
    - b. Other elements such as slabs, walls, etc. where concrete cover >= db, c/c bar spacing >= 3db.
  4. For top bars, multiply the splice lengths by 1.30. Top bars require a minimum of 12" of fresh concrete below bar.
  5. When bars of a different size are lap spliced in tension, splice length shall be the larger of Ld of the larger bar and compression lap splice length of smaller bar.
  6. Bars spliced by non-contact lap spliced shall not be spaced transversely farther apart than the smaller of one-fifth the required lap splice length and 6".

**DEVELOPMENT LENGTHS OF STANDARD HOOKS IN TENSION GRADE 60 (UNCOATED) REINFORCEMENT**

BAR SIZE	NORMAL WEIGHT					
	F'c = 3000		F'c = 4000		F'c = 5000	
	Lhb	0.7Lhb	Lhb	0.7Lhb	Lhb	0.7Lhb
#3	9	6	8	6	7	6
#4	11	8	10	7	9	6
#5	14	10	12	9	11	8
#6	17	12	15	10	13	9
#7	20	14	17	12	15	11
#8	22	16	19	14	17	12
#9	25	18	22	15	20	14
#10	28	20	25	17	22	16
#11	31	22	27	19	24	17

- Notes:
1. All lengths shown in the table are in inches.
  2. Lhb = Tension development length.
  3. Ldh = Lhb, unless conditions of Item 4 are satisfied.
  4. Ldh = 0.7 Lhb, when side cover normal to plane of hook is not less than 2 1/2 inches and for 90° hook, cover on bar extension beyond hook shall not be less than 2 inches.
  5. Hooks shall not be considered effective in developing bars in compression.



NO.	DATE	REVISIONS						APP.	

**INTERIM REVIEW**

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Engineer: AHMAD DANESHVAR, P.E.

P.E. Serial No.: 132679

Date: JANUARY 2026

**QUIDDITY**

Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026      DGN BY: RMERHI  
JOB NO: 00050-0099-01      DWG BY: SFUENTES

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

**SCOTT STREET No. 1  
LIFT STATION REHABILITATION**

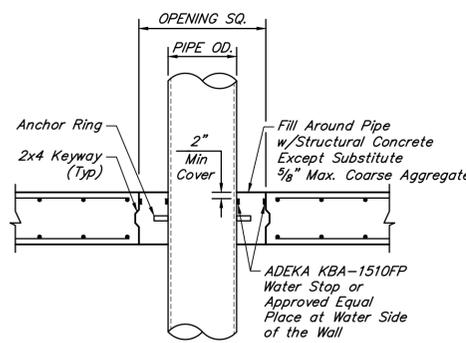
**STRUCTURAL NOTES  
& DETAILS SHEET 1 OF 4**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN    HORIZ: XXX    VERT: XXX

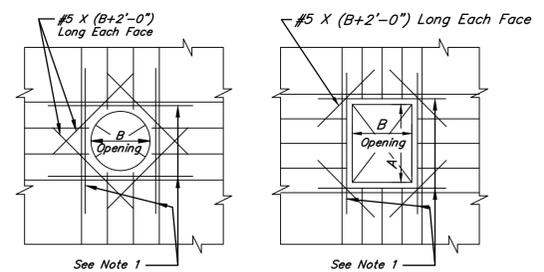
CATEGORY NO. **0-S-1**    SHEET NO. # OF XXX

FOR CITY OF HOUSTON USE ONLY



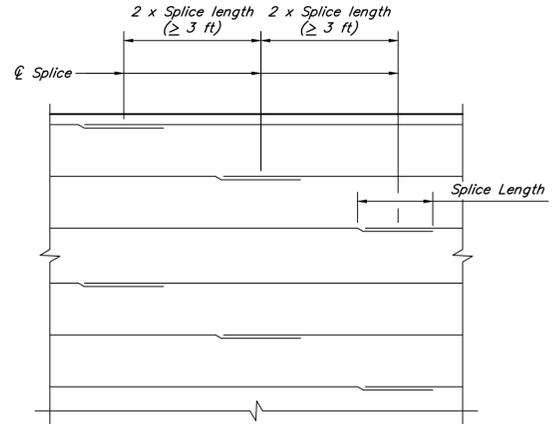
PIPE DIA.	OPENING SQ. (in)
4" - 20"	Pipe Nominal Diameter + 10"
24" - 54"	Pipe Nominal Diameter + 12"

**PIPE (W/ANCHOR RING) OPENING DETAIL**  
SCALE 3/4" = 1'-0"

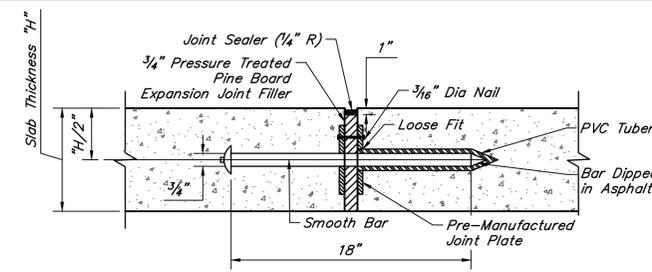


- NOTE:**
1. Provide additional bars equal to one-half of bars interrupted at each side of opening at 3" C/C. These bars shall be original sizes and lengths as those of the interrupted bars. (Typical for openings in slabs and walls.)
  2. Additional bars are extended minimum development length beyond opening edge.
  3. For openings 1'-0" or less, the slab steel can be respaced without additional reinforcing.

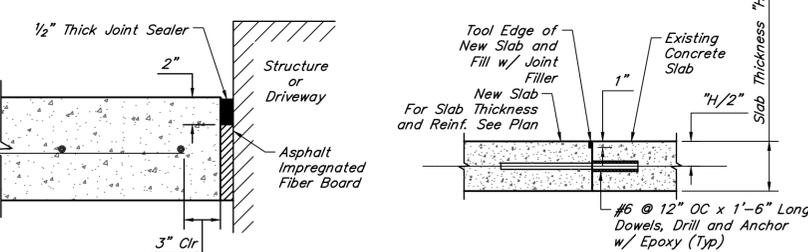
**ADDITIONAL REINFORCING STEEL AT PIPE OPENINGS**  
NOT TO SCALE



**REBAR SPLICE LENGTH**  
#5- 2'-6" #6- 3'-0"  
#7- 3'-6" #8- 4'-0"  
**HORIZONTAL WALL REINFORCING SPLICE LOCATION DETAILS**  
SCALE 3/8" = 1'-0"

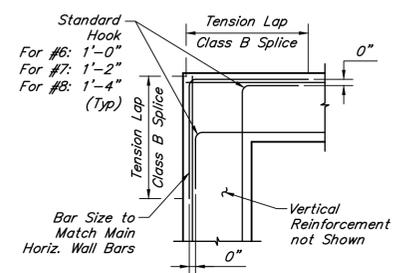


**DOWELED EXPANSION JOINT**  
SCALE: 1 1/2" = 1'-0"

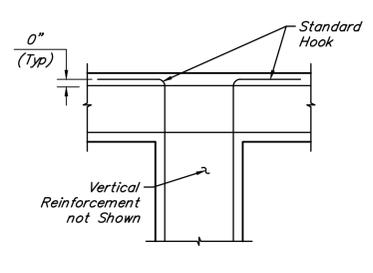


**ISOLATION JOINT (IJ)**  
NOT TO SCALE

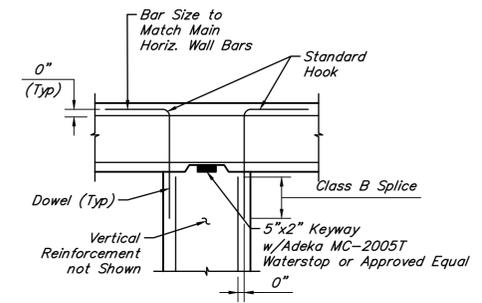
**CONSTRUCTION JOINT AT EXISTING PAVEMENT**  
NOT TO SCALE



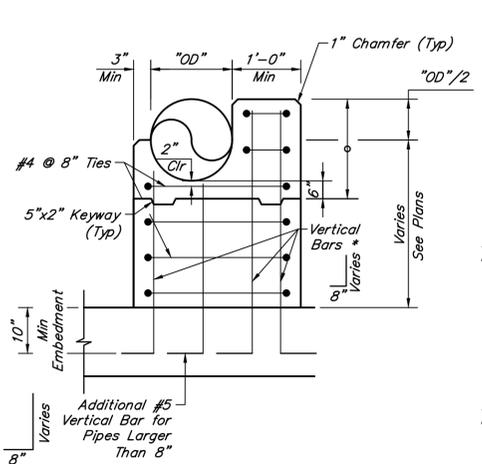
**CORNER DETAILS**  
3/4" = 1'-0"



**INTERSECTION DETAILS WITHOUT CONSTRUCTION JOINT**  
1/2" = 1'-0"



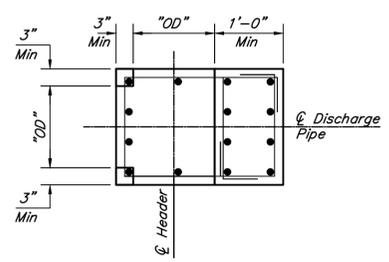
**INTERSECTION DETAILS WITH CONSTRUCTION JOINT**  
1/2" = 1'-0"



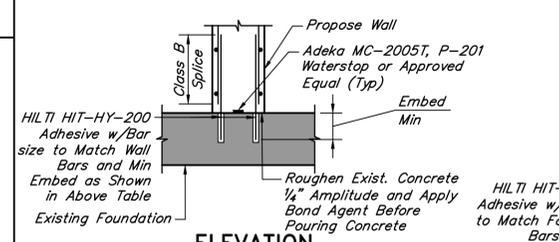
**THRUST BLOCK ELEVATION**  
SCALE: 3/4" = 1'-0"

**\*VERTICAL BARS**

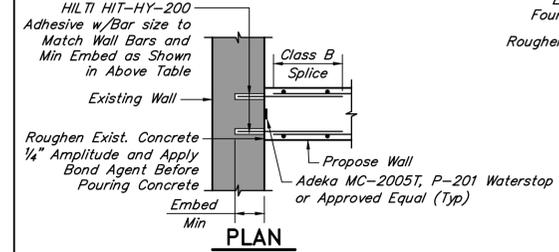
PIPE DATA	NO. OF VERT BARS
4"-8"	3 x 2#5
10"-12"	3 x 3#5
14"-16"	3 x 4#5
18"-20"	3 x 4#5



**THRUST BLOCK PLAN**  
(3x4 #5 LAYOUT IS SHOWN AS AN EXAMPLE)  
SCALE: 3/4" = 1'-0"

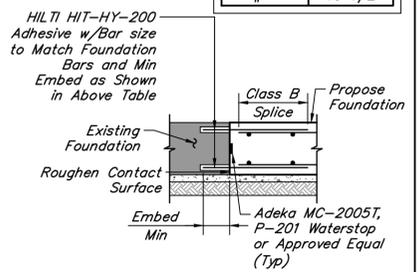


**NEW WALL TO EXISTING FOUNDATION CONNECTION ELEVATION**  
SCALE: 1/2" = 1'-0"



**NEW WALL TO EXISTING WALL CONNECTION PLAN**  
SCALE: 1/2" = 1'-0"

BAR SIZE	EMBED (MIN)
#5	7 1/2"
#6	9"
#7	10 1/2"
#8	12"
#9	13 1/2"



**NEW FOUNDATION TO EXISTING FOUNDATION CONNECTION ELEVATION**  
SCALE: 1/2" = 1'-0"

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: AHMAD DANESHVAR, P.E.  
P.E. Serial No.: 132679  
Date: JANUARY 2026



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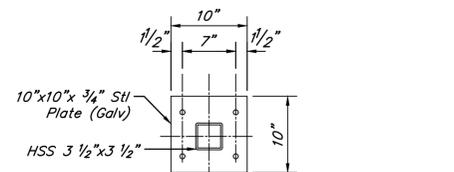
SCOTT STREET No. 1  
LIFT STATION REHABILITATION

STRUCTURAL DETAILS  
SHEET 2 OF 4

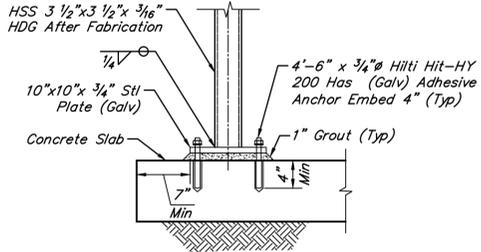
CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX

CATEGORY NO. 0-S-2 SHEET NO. # OF XXX  
FOR CITY OF HOUSTON USE ONLY

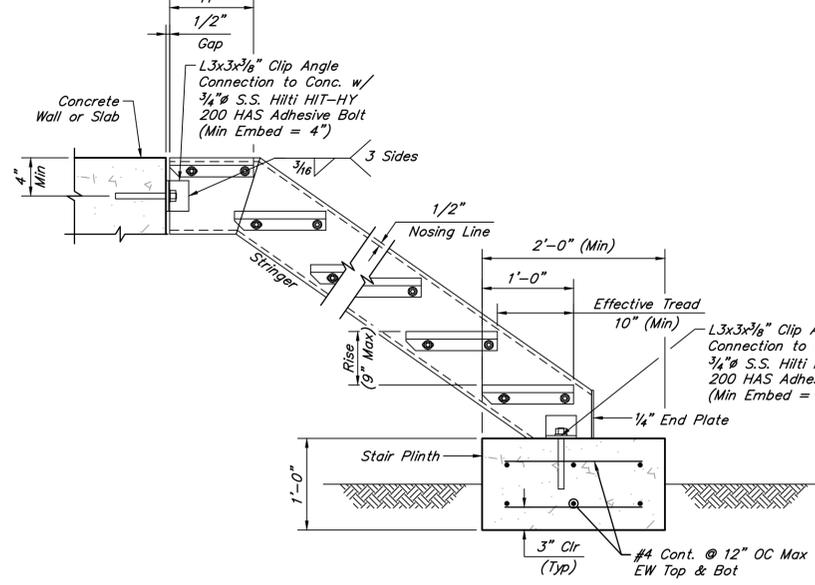


**PLATE**  
SCALE 1"=1'-0"

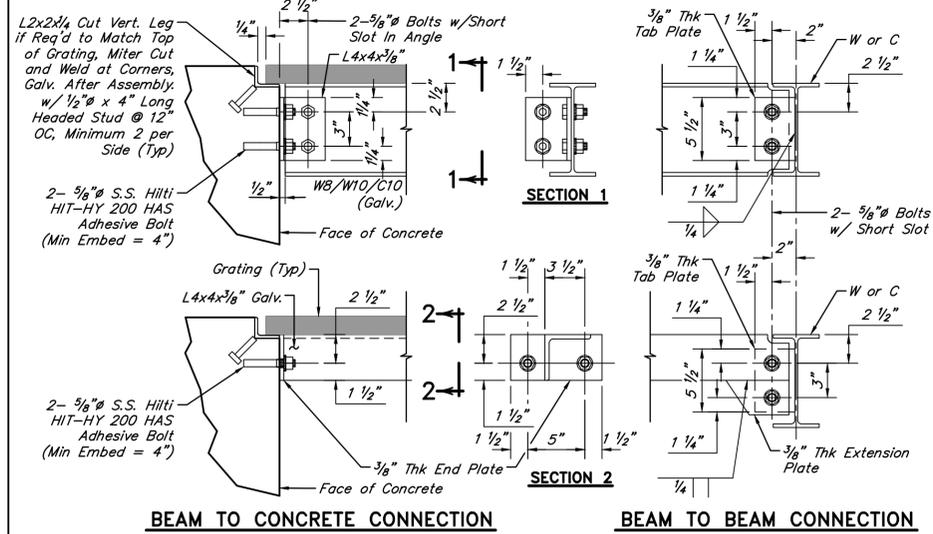


**VIEW**  
SCALE 1"=1'-0"

**DEVICE MOUNTING POST DETAIL**  
SCALE 1"=1'-0"

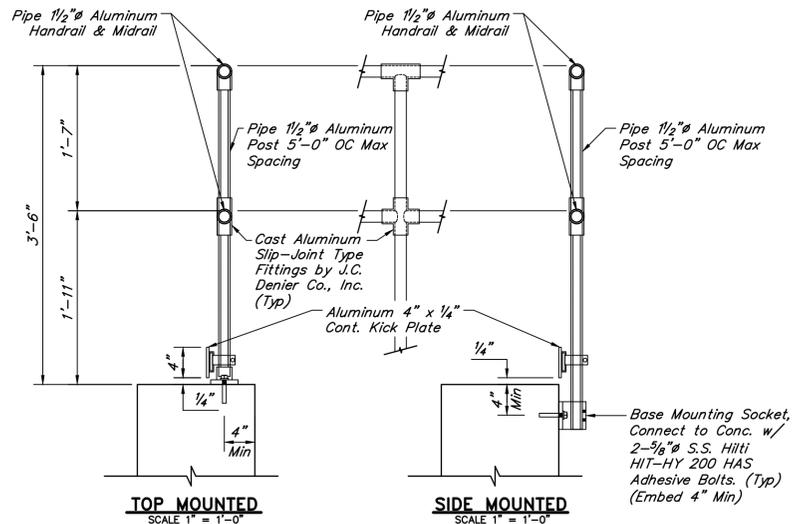


**STAIR STRINGER CONNECTION**  
1" = 1'-0"

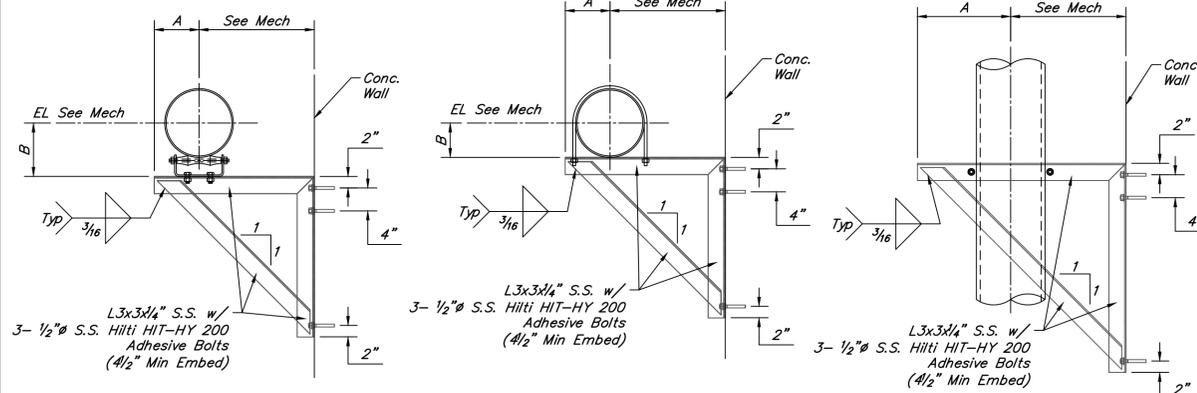


**BEAM TO CONCRETE CONNECTION**      **BEAM TO BEAM CONNECTION**  
**GRATING ANGLE SUPPORT AND BEAM**

WHEN PROVIDING ALUMINUM OR STAINLESS STEEL GRATING AND 1/8" x 1" NEOPRENE, TEFLON OR UHMW POLYETHYLENE PAD, ADHERE TO ANGLE.  
1 1/2" = 1'-0"



**ALUMINUM HANDRAIL**  
SCALE 1"=1'-0"



**PIPE SUPPORT TYPE "A" WITH ROLLER CHAIR**      **PIPE SUPPORT TYPE "B" WITH U-BOLT**      **PIPE SUPPORT TYPE "C" WITH U-BOLT**

**PIPE SUPPORT DETAIL**

**PIPE SUPPORT SCHEDULE**

PS No.	PS Type	PIPE OD (in)	Dimensions	
			A (in)	B (in)
PS 1	A	10"	10"	10"
PS 2	C	6"	10"	--
PS 3	A	8"	10"	8 1/2"
PS 4				
PS 5				
PS 6				

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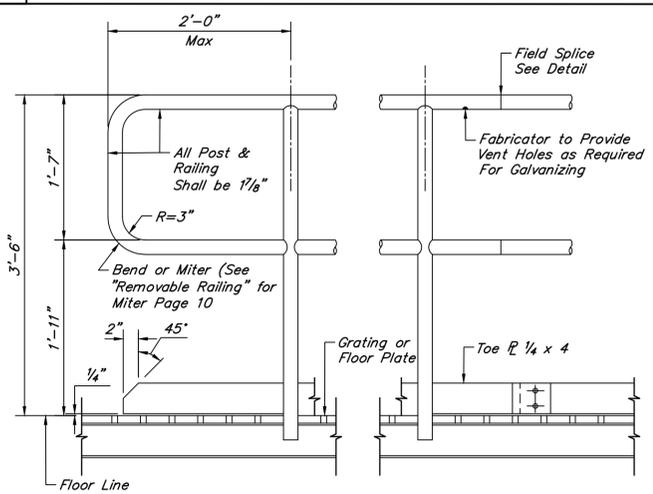
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**SCOTT STREET No. 1**  
**LIFT STATION REHABILITATION**

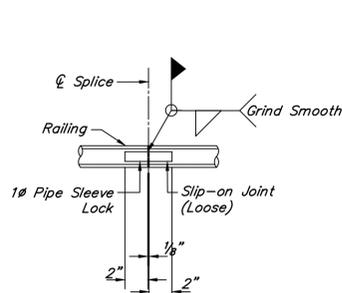
**STRUCTURAL DETAILS**  
**SHEET 3 OF 4**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

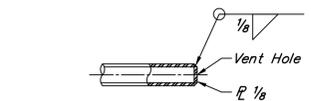
DRAWING SCALE AS SHOWN    HORIZ: XXX    VERT: XXX  
CATEGORY NO. **0-S-3**    SHEET NO. # OF XXX  
FOR CITY OF HOUSTON USE ONLY



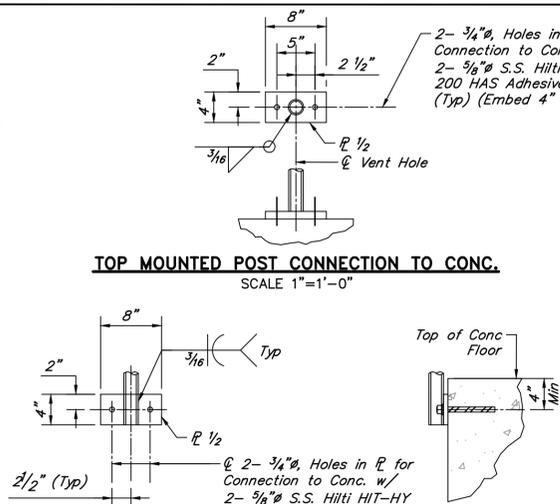
**ELEVATION - TYPICAL RAILING**  
SCALE 1"=1'-0"



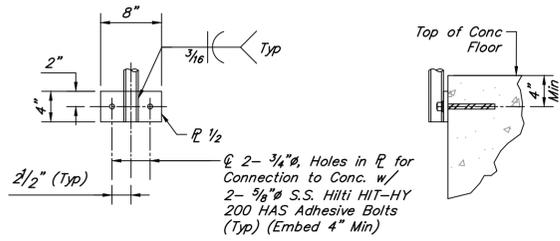
**FIELD SPLICE DETAIL**



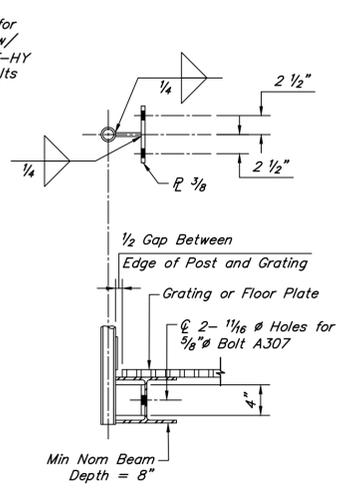
**END CLOSURE DETAIL**



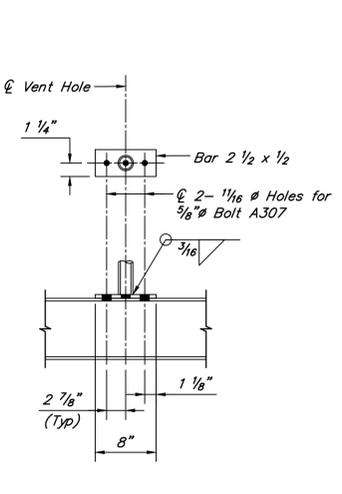
**TOP MOUNTED POST CONNECTION TO CONG.**  
SCALE 1"=1'-0"



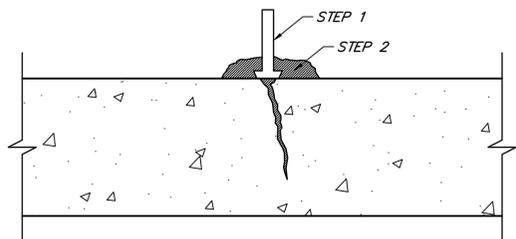
**SIDE MOUNTED POST CONNECTION TO CONG.**  
SCALE 1"=1'-0"



**SIDE MOUNTED POST CONNECTION TO STEEL BEAM**  
SCALE 1"=1'-0"



**TOP MOUNTED POST CONNECTION TO STEEL BEAM**  
SCALE 1"=1'-0"

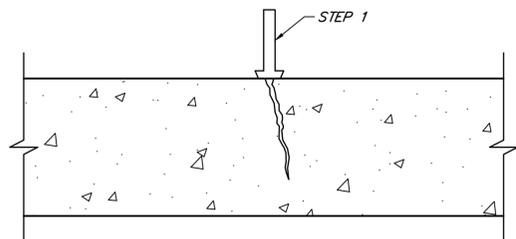


1. CLEAN THE CONCRETE SURFACE AND SET PORTING DEVICES OVER CRACKS.
2. PLACE MIXED SIKADUR 31, HI-MOD GEL EPOXY RESIN ADHESIVE, OR APPROVED EQUAL, OVER CRACKS AND AROUND EACH INJECTION PORT A MIN. OF 1" WIDE BY 1/4" THICK.
3. ALLOW SUFFICIENT TIME FOR EPOXY RESIN ADHESIVE CAP SEAL TO SET BEFORE INJECTING.
4. WHEN THE CAP SEAL HAS CURED, INJECT SIKADUR 35, HI-MOD LV, OR APPROVED EQUAL, WITH STEADY PRESSURE. PER MANUFACTURER INSTRUCTION.
5. USE AUTOMATED INJECTION EQUIPMENT OR MANUAL METHOD.

**CRACK NO. 1 FILLER/CAP SEAL**

⊙ **CRACKS > 1/8"**

SCALE: 1 1/2" = 1'-0"



1. CLEAN THE CONCRETE SURFACE AND SET PORTING DEVICES OVER CRACKS. PER MANUFACTURER INSTRUCTION.
2. INJECT SIKAFIX HH+HYDROPHOBIC URETHANE OR APPROVED EQUAL.
3. USE AUTOMATED INJECTION EQUIPMENT OR MANUAL METHOD.
4. BEGIN INJECTING AT THE BOTTOM OF THE CRACK AND WORK VERTICALLY.

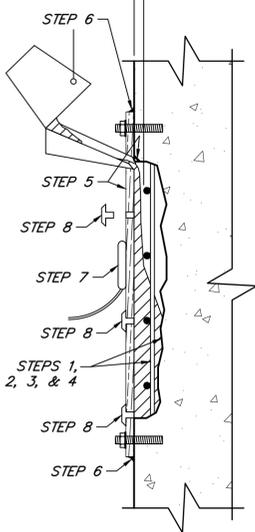
**CRACK NO. 2 FILLER**

⊙ **HAIRLINE CRACKS**

SCALE: 1 1/2" = 1'-0"

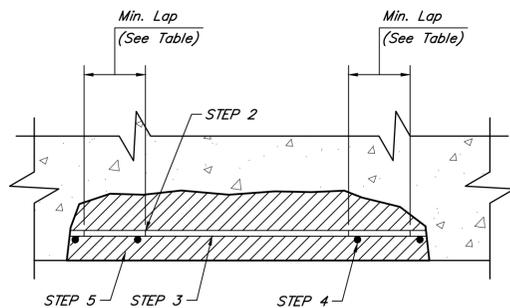
Provide Min Cover of 3" for Bottom of Beams, 1 1/2" for Sides of Beams, and 1 1/2" for Bottom of Slabs

1. BREAK-OUT CRACKED OR SPALLED CONCRETE AND REMOVE ANY FORM OR OTHER DEBRIS UNTIL SOLID CONCRETE IS REACHED.
2. REPLACE STEEL REINFORCEMENT AS DIRECTED BY ENGINEER. FOR REINFORCING REPLACEMENT, REFER TO DETERIORATED REINFORCING REPLACEMENT DETAIL.
3. PREPARE SURFACE ACCORDING TO THE SIKACRETE 211 SPECIFICATIONS AND/OR MANUFACTURER'S RECOMMENDATIONS.
4. PRE-WET SURFACE TO SSD. APPLY BOND AGENT SIKA ARMATEC 110 EPOCEM, OR APPROVED EQUAL, TO REINFORCING STEEL.
5. SET FORM AND CHIP SPOT FOR POUR BOX. APPLY RELEASE AGENT TO FORM, OR USE PLASTIC LINED PLYWOOD.
6. RUN BEAD OF SIKAFLEX 1A, OR APPROVED EQUAL, AROUND FORM EDGE, LET CURE, THEN ANCHOR FORM. FILL WITH WATER TO CHECK FOR WATER TIGHTNESS. LET DRAIN TO NO FREE STANDING WATER.
7. VIBRATE FORM WHILE POURING SIKACRETE 211, OR APPROVED EQUAL.
8. VENT TO BE CAPPED WHEN STEADY FLOW IS EVIDENT.
9. STRIP FORM WHEN APPROPRIATE.
10. DRY PACK ANCHOR HOLES WITH MORTAR.



**FORM AND POUR (VERTICAL) CONCRETE REPAIR**

NOT TO SCALE



1. SHORE STRUCTURE AS REQUIRED PRIOR TO MODIFICATIONS OF STRUCTURAL CONNECTIONS.
2. EXPOSED REINFORCING STEEL SHOULD BE MECHANICALLY CLEANED OR SAND BLASTED TO REMOVE ALL TRACES OF RUST.
3. DETERMINE STEEL SECTION LOSS FOR EACH EXPOSED REINFORCING BAR. REPLACE BARS WHERE MORE THAN 25% AREA LOSS HAS OCCURRED, AS DIRECTED BY THE ENGINEER.
4. SPLICE EXISTING BAR W/ A NEW BAR (ASTM A615 GRADE 60) OF STEEL CROSS SECTIONAL AREA EQUIVALENT TO 68% OF THE CROSS SECTIONAL AREA OF THE EXISTING BAR.
5. COMPLETE CONCRETE REPAIR. (SEE DETAIL)

**DETERIORATED REINFORCING REPLACEMENT**

NOT TO SCALE

BAR SIZE	DIAMETER (IN.)	CROSS-SECTIONAL AREA (IN <sup>2</sup> )	MIN. LAP (IN.)
#3	0.375	0.11	12
#4	0.500	0.20	15
#5	0.625	0.31	19
#6	0.750	0.44	23
#7	0.875	0.60	33
#8	1.000	0.79	37
#9	1.128	1.00	42
#10	1.270	1.27	47
#11	1.410	1.56	52

NOTE:

LAP LENGTHS SHOWN ARE FOR COVERS OF AT LEAST 1.0 BAR DIAMETER AND HORIZONTAL C.C. SPACING OF AT LEAST 2.0 BAR DIAMETERS. IF THE LATTER CANNOT BE ACHIEVED ON A BEAM, CRACK FILLER/CAP SEAL DETAIL MAY BE USED. OTHERWISE, IF AN ADEQUATE SPLICE LENGTH CANNOT BE ACHIEVED, USE AN APPROVED MECHANICAL OR WELDED SPLICE CAPABLE OF DEVELOPING AT LEAST 125% OF THE SPECIFIED YIELD STRENGTH OF THE BAR. ALL WELDING SHALL CONFORM TO "STRUCTURAL WELDING CODE - REINFORCING STEEL" (ANSI/AWS D1.4). NEW REINFORCING TO BE WELDED SHALL CONFORM TO ASTM A706. IF A CHEMICAL ANALYSIS OF THE EXISTING BARS IS NOT KNOWN OR OBTAINED, THEN THE EXISTING BARS SHOULD BE PREHEATED PER ANSI/AWS D1.4.

NO.	DATE	REVISIONS	APP.

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P.E. Serial No.: 132679  
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CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: RMERHI  
JOB NO: 00050-0099-01 DWG BY: SFUENTES

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

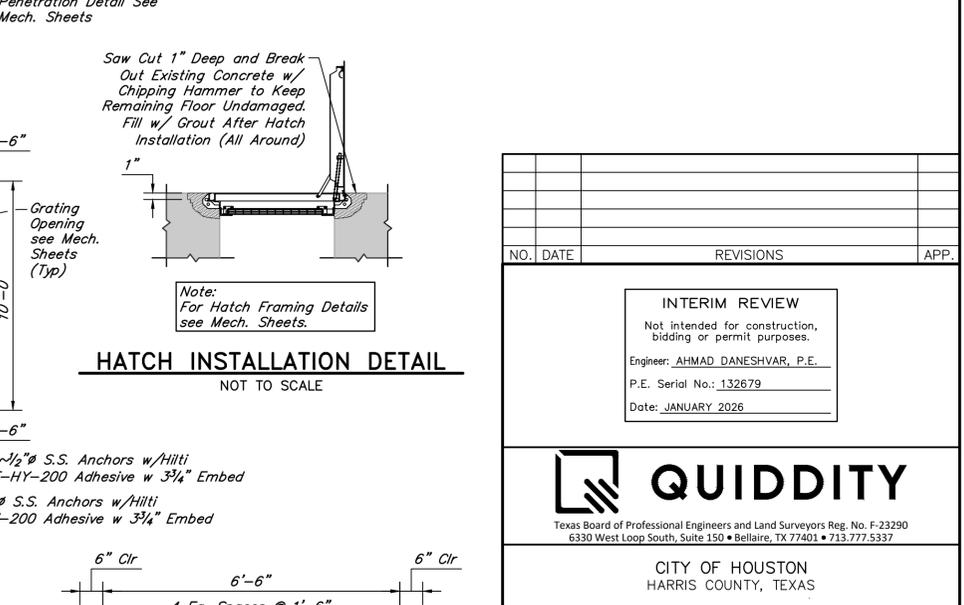
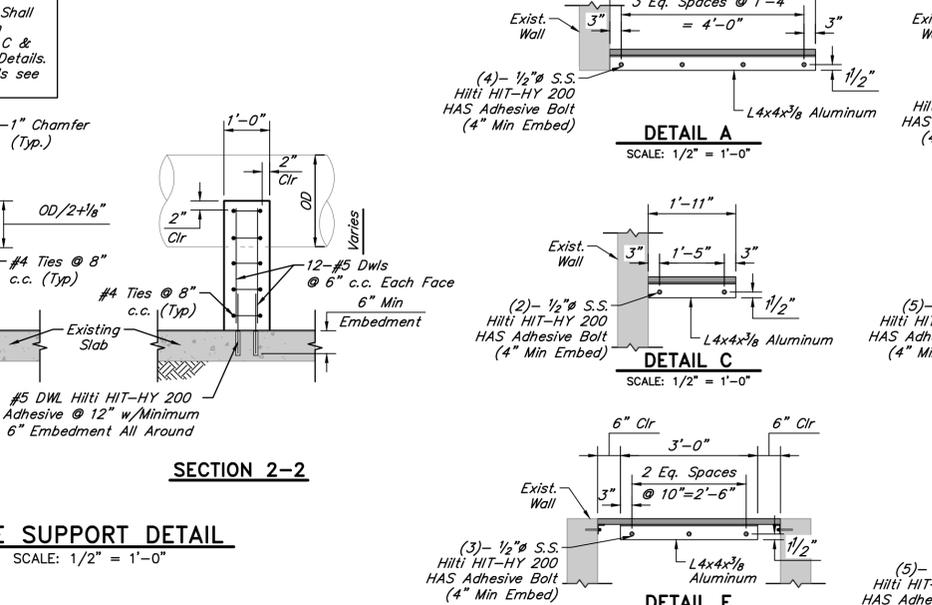
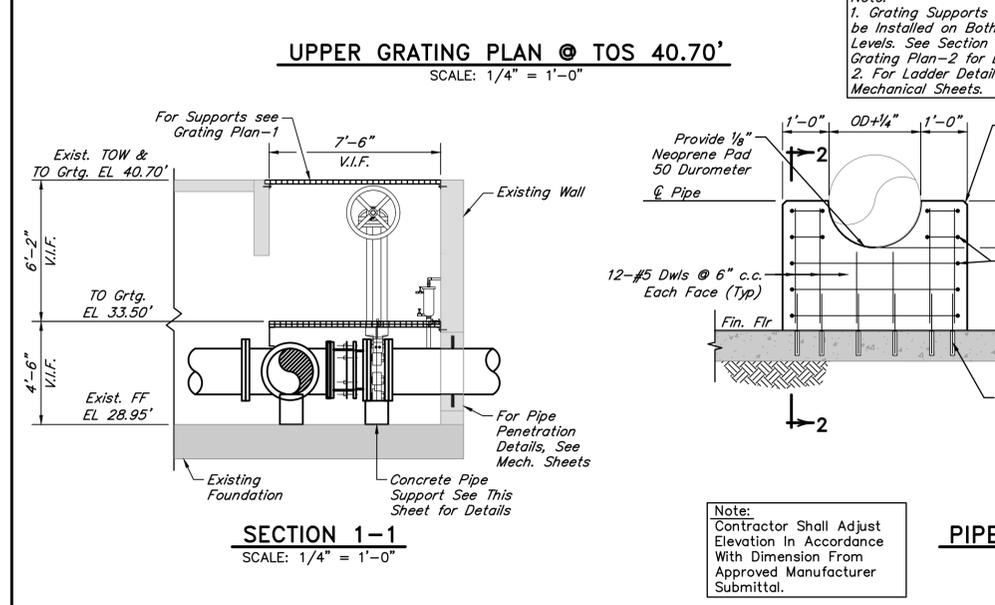
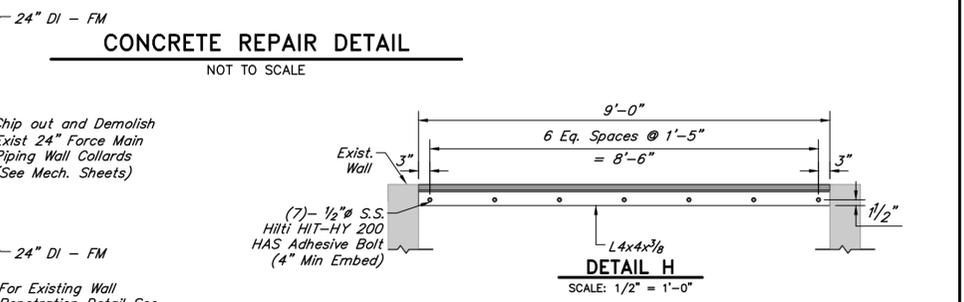
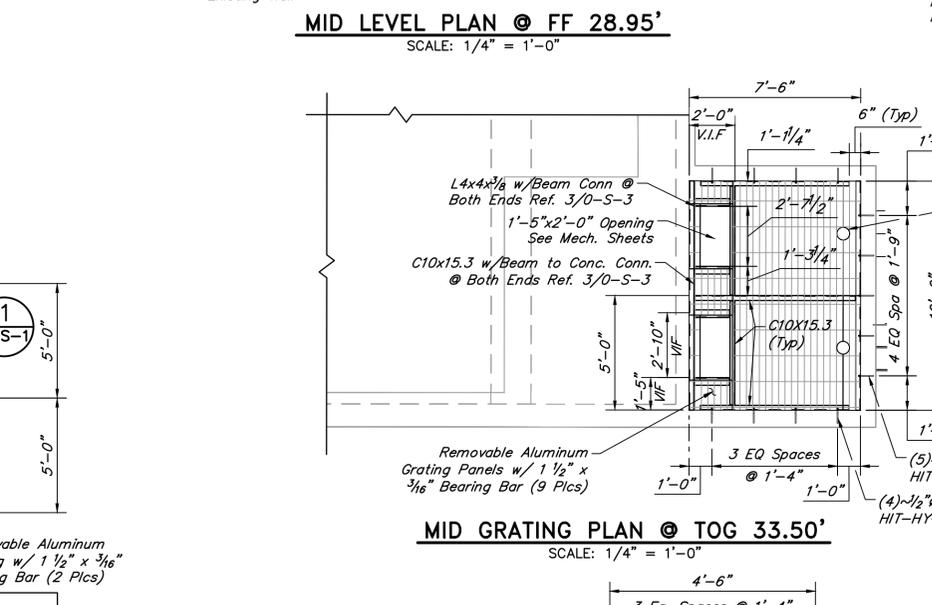
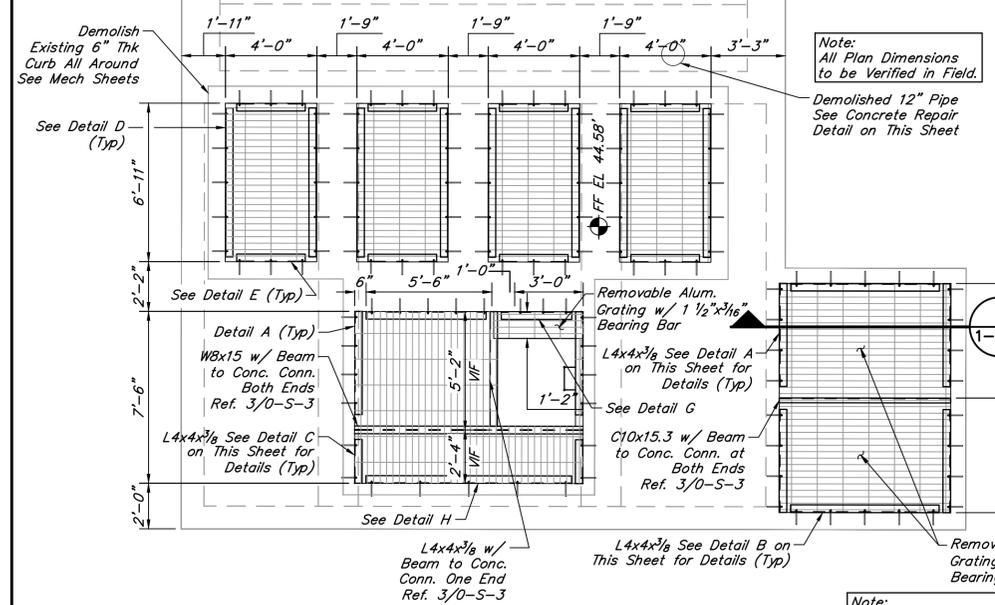
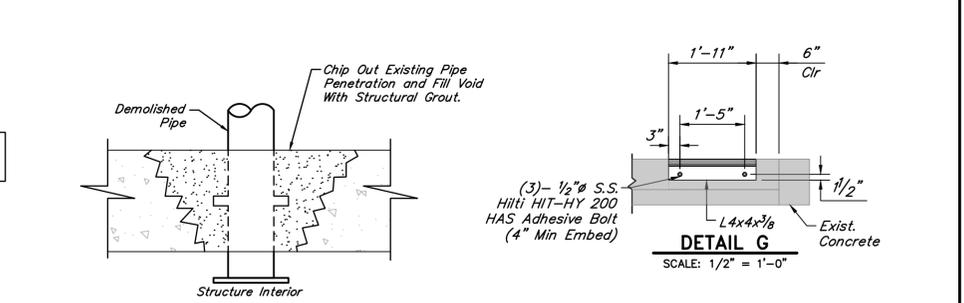
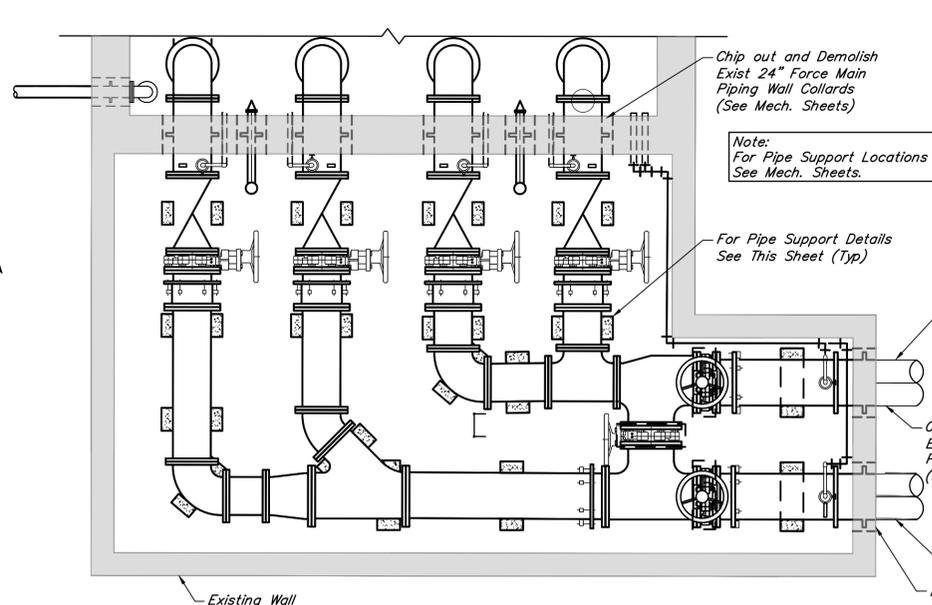
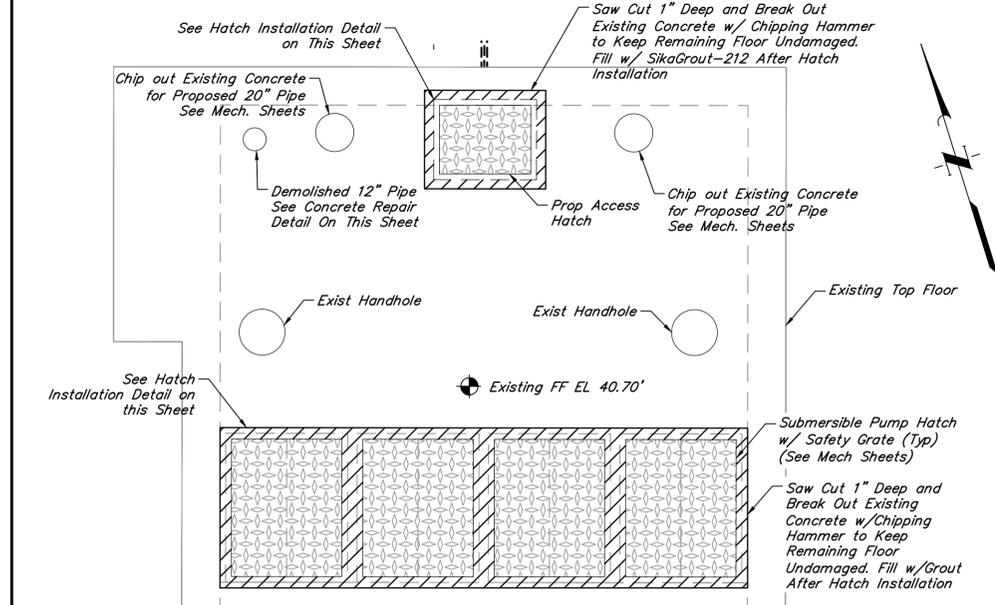
SCOTT STREET No. 1  
LIFT STATION REHABILITATION

STRUCTURAL DETAILS  
SHEET 4 OF 4

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX

CATEGORY NO. **0-S-4** SHEET NO. # OF XXX  
FOR CITY OF HOUSTON USE ONLY



NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction, bidding or permit purposes.  
 Engineer: AHMAD DANESHVAR, P.E.  
 P.E. Serial No.: 132679  
 Date: JANUARY 2026

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.717.5337

CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: JTREVINO  
 JOB NO: 00050-0099-01 DWG BY: ASALGADO

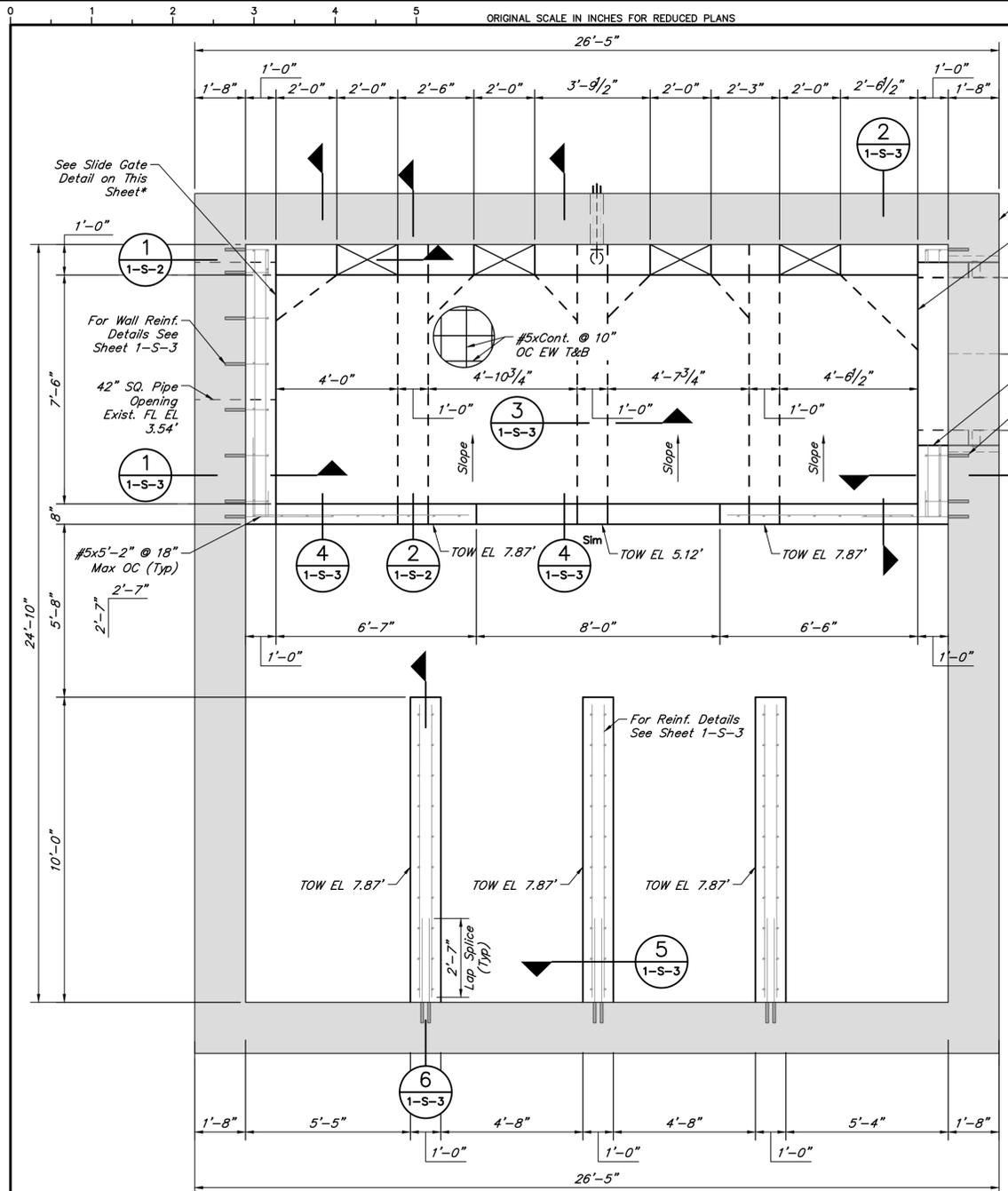
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

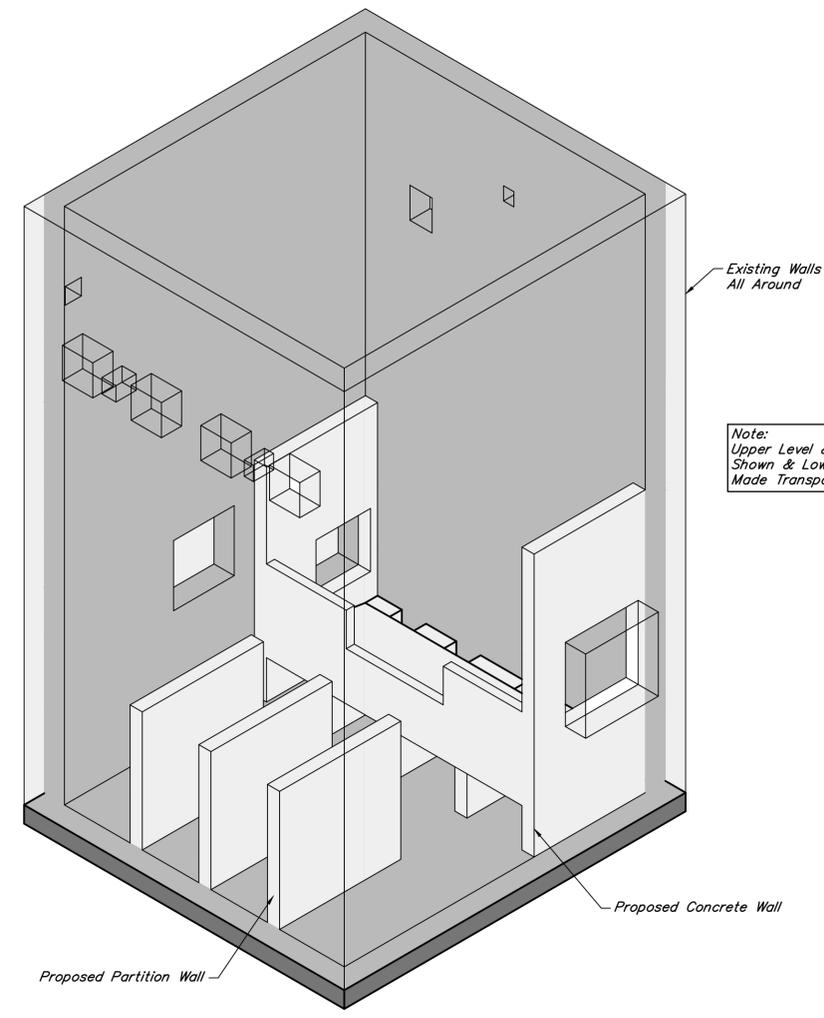
DRY WEATHER PUMP STATION  
 IMPROVEMENT PLAN

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX  
 CATEGORY NO. 1-S-1 SHEET NO. # OF XXX  
 FOR CITY OF HOUSTON USE ONLY



**LOWER LEVEL PLAN @ FF -1.97**  
SCALE: 3/8" = 1'-0"



**3D VIEW**  
SCALE: 3/16" = 1'-0"

NO.	DATE	REVISIONS	APP.

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**CITY OF HOUSTON**  
HARRIS COUNTY, TEXAS

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JOB NO: 00050-0099-01 DWG BY: ASALGADO

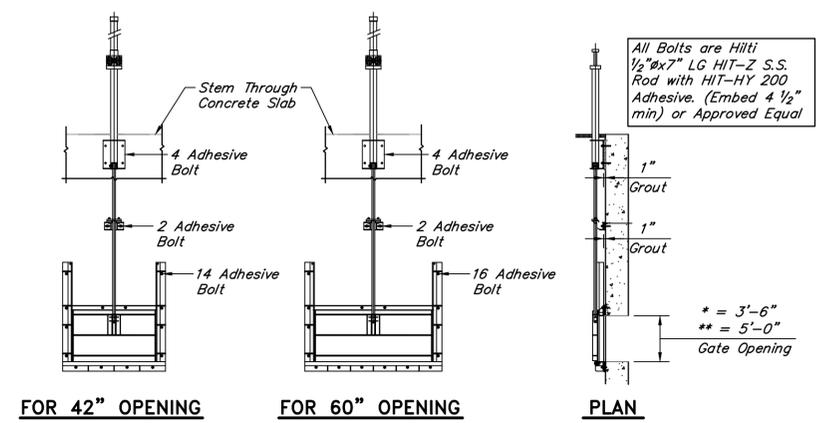
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

**SCOTT STREET No. 1**  
**LIFT STATION REHABILITATION**  
**DRY WEATHER PUMP STATION**  
**LOWER LEVEL PLAN**  
**& 3D VIEW**

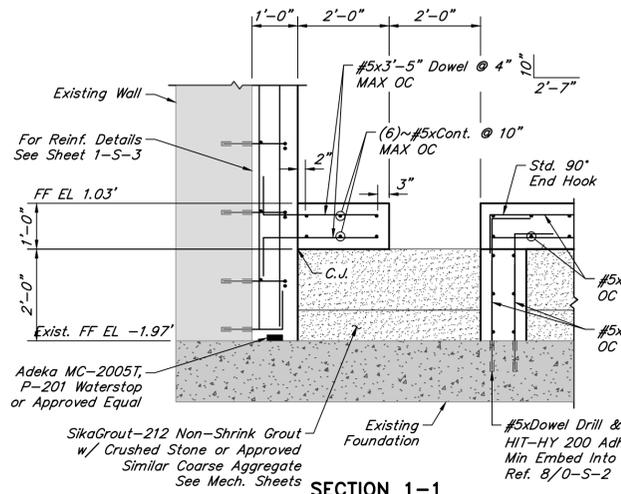
**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX

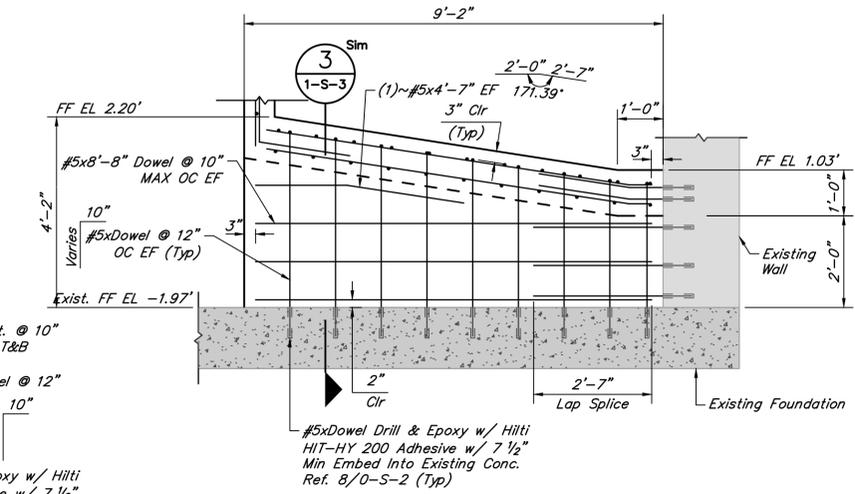
CATEGORY NO. **1-S-2** SHEET NO. # OF XXX  
FOR CITY OF HOUSTON USE ONLY



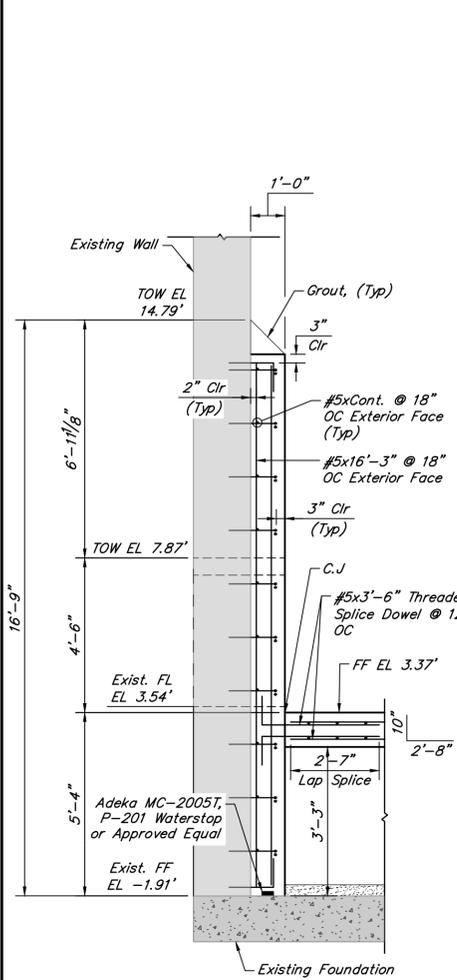
**SLIDE GATE TO CONCRETE WALL FIXING DETAIL**  
SCALE: 1/4" = 1'-0"



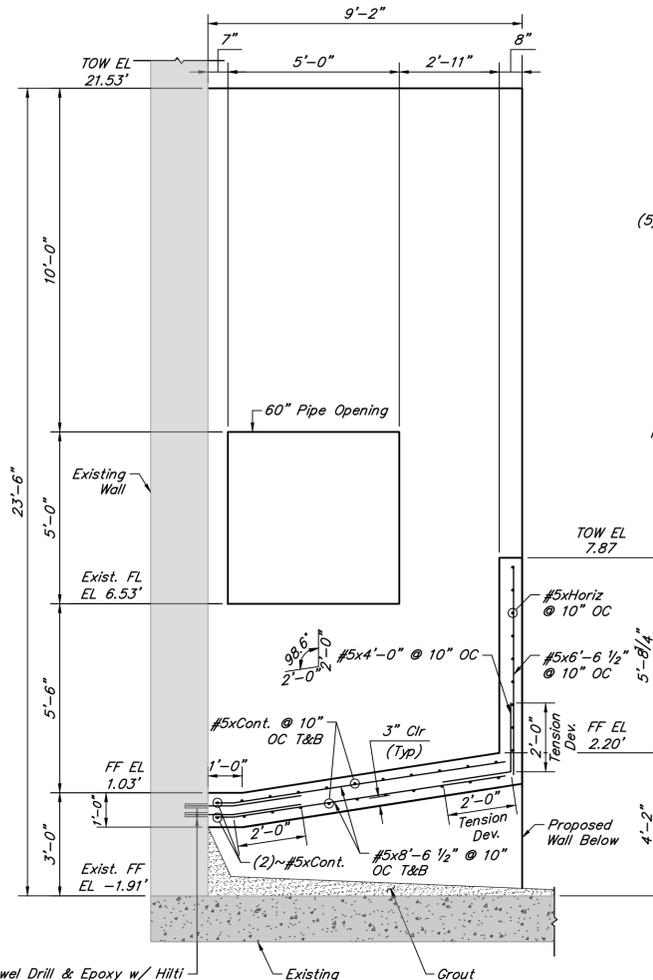
**SECTION 1-1**  
SCALE: 1/2" = 1'-0"



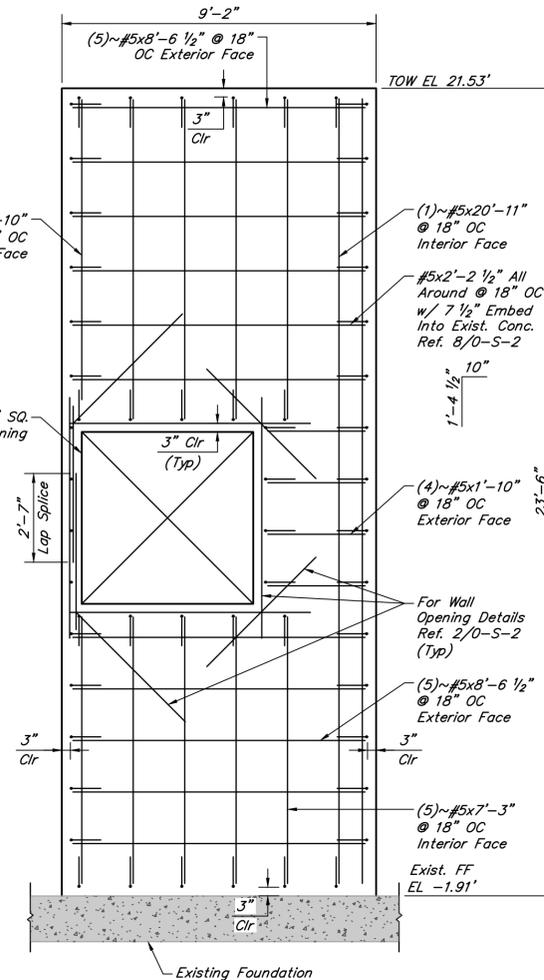
**SECTION 2-2**  
SCALE: 1/2" = 1'-0"



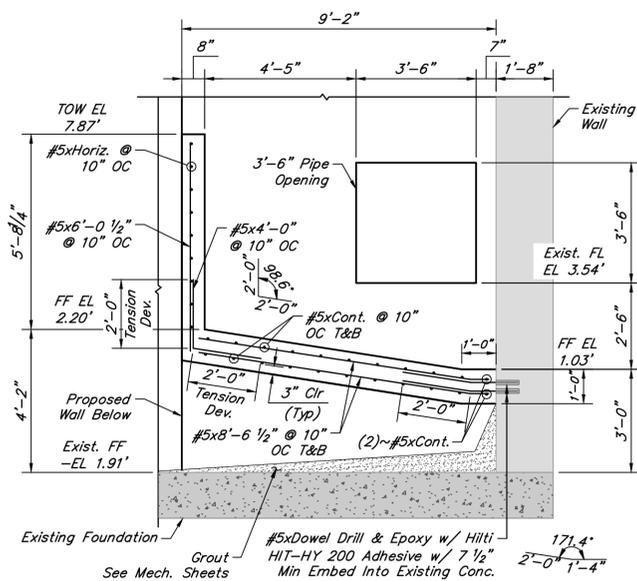
**SECTION 1-1**  
SCALE: 3/8" = 1'-0"



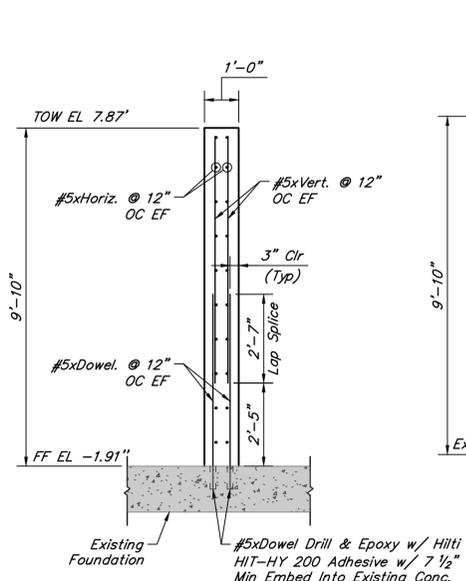
**SECTION 2-2**  
SCALE: 3/8" = 1'-0"



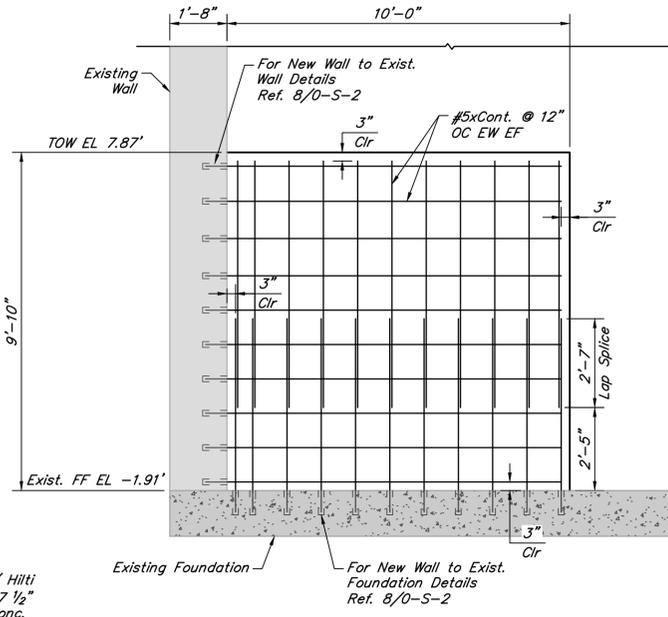
**SECTION 3-3**  
SCALE: 3/4" = 1'-0"



**SECTION 4-4**  
SCALE: 3/8" = 1'-0"



**SECTION 5-5**  
SCALE: 3/8" = 1'-0"



**SECTION 6-6**  
SCALE: 3/8" = 1'-0"

NO.	DATE	REVISIONS	APP.

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P.E. Serial No.: 132679  
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**CITY OF HOUSTON**  
HARRIS COUNTY, TEXAS

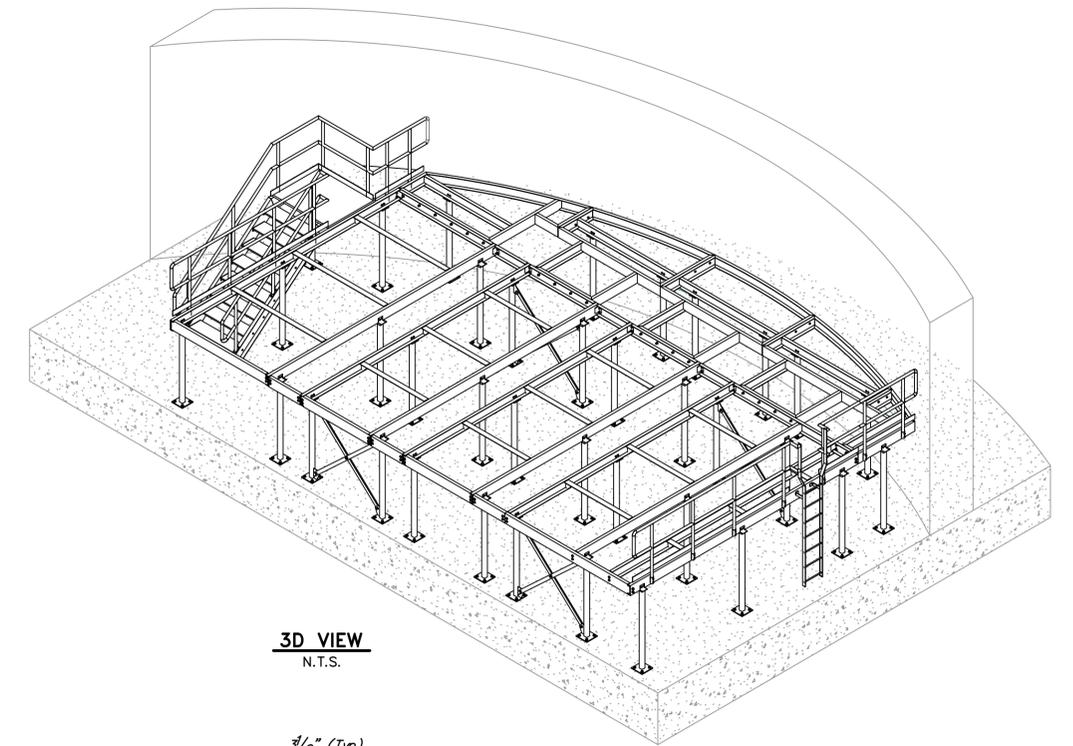
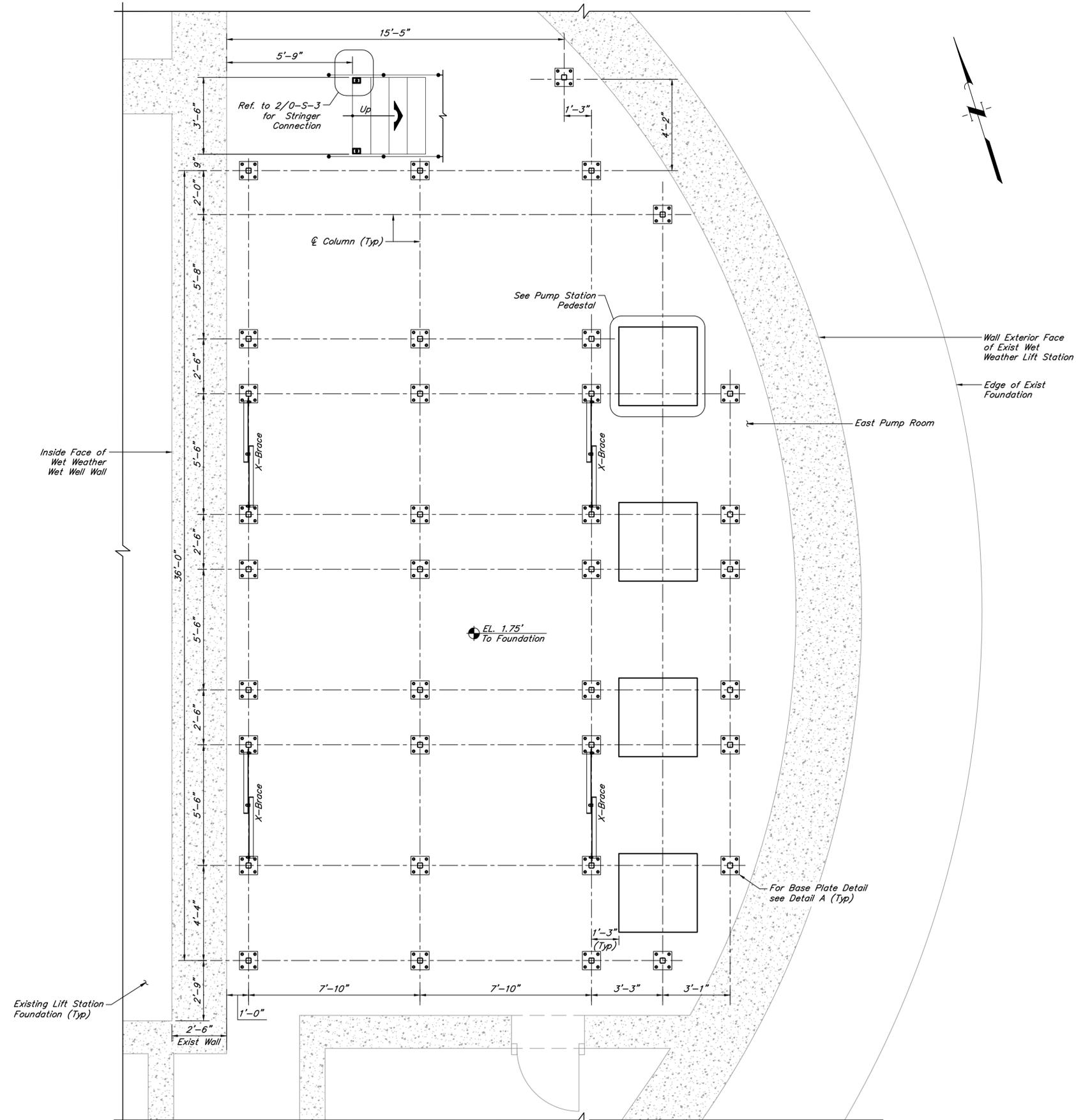
DATE: JANUARY 2026 DGN BY: JTREVINO  
JOB NO: 00050-0099-01 DWG BY: ASALGADO

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

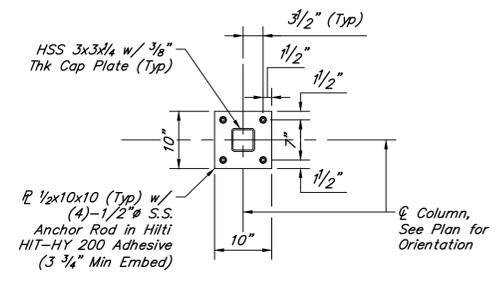
**SCOTT STREET No. 1**  
LIFT STATION REHABILITATION  
**DRY WEATHER PUMP STATION**  
LOWER LEVEL SECTIONS

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

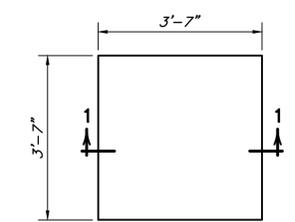
DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX  
CATEGORY NO. **1-S-3** SHEET NO. # OF XXX  
FOR CITY OF HOUSTON USE ONLY



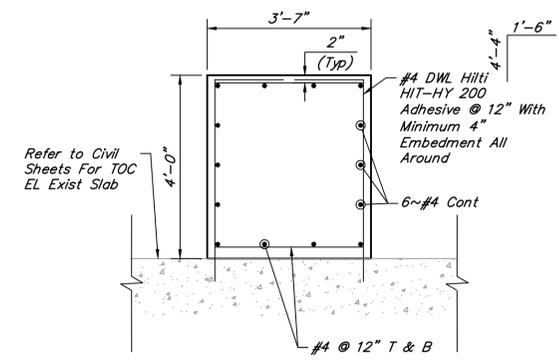
**3D VIEW**  
N.T.S.



**DETAIL A**  
SCALE: 3/4" = 1'-0"



**PUMP STATION PEDESTAL PLAN**  
1/2" = 1'-0"



**SECTION 1-1**  
SCALE: 1" = 1'-0"

**WET WEATHER LIFT STATION WALKWAY FOUNDATION PLAN**  
(EAST SIDE SHOWN, WEST SIDE WILL BE A MIRRORED LAYOUT OF THE EAST SIDE)  
3/8" = 1'-0"

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
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Engineer: AHMAD DANESHVAR, P.E.  
P.E. Serial No.: 132679  
Date: JANUARY 2026



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CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: FFOROUZANNIA  
JOB NO: 00050-0099-01 DWG BY: SFUENTES

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION

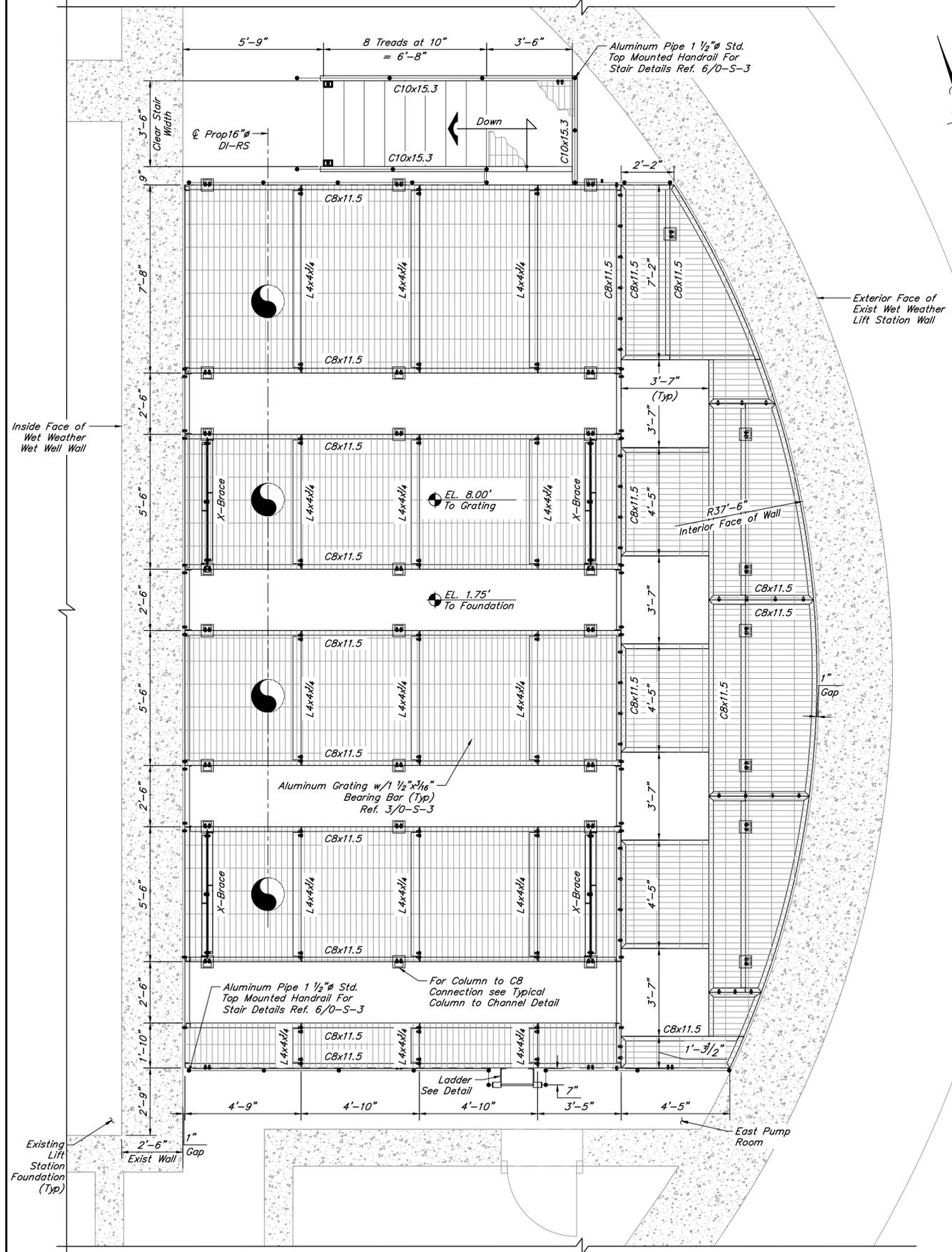
**WET WEATHER LIFT STATION WALKWAY PLATFORM FOUNDATION**

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

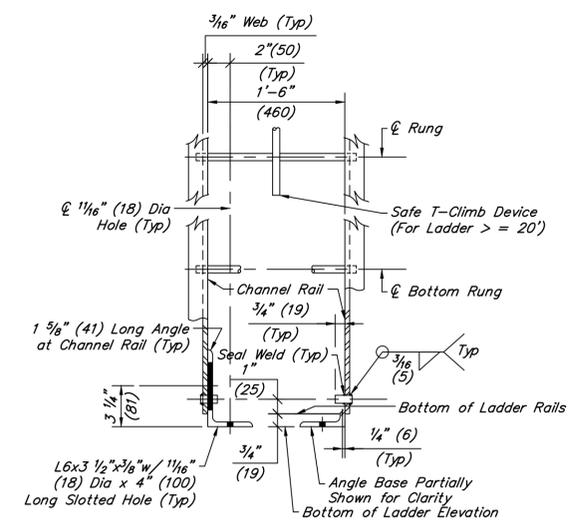
DRAWING SCALE 3/8"=1'-0" HORIZ: XXX VERT: XXX

CATEGORY NO. **2-S-1** SHEET NO. # OF XXX  
FOR CITY OF HOUSTON USE ONLY

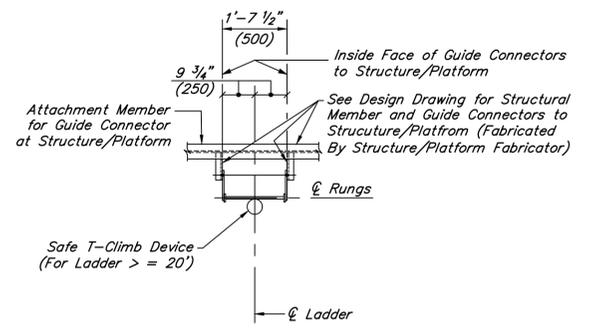
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



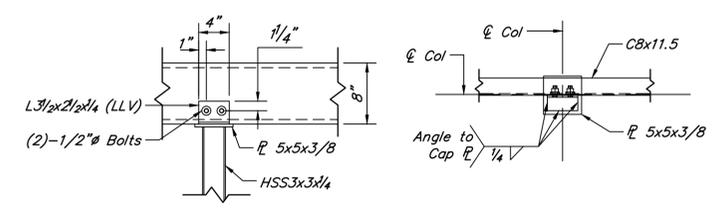
**WET WEATHER LIFT STATION GRATING PLAN**  
 (EAST SIDE SHOWN; WEST SIDE WILL BE A MIRRORED LAYOUT OF THE EAST SIDE)  
 ALL HORIZONTAL BEAMS ARE C8x11.5 (UNO)  
 3/8" = 1'-0"



**LADDER BASE CONNECTION FRONT ELEVATION**  
 SCALE 1" = 1'-0"



**PLAN LADDER GUIDE CONNECTION DETAILS TO STRUCTURE/PLATFORM**  
 SCALE N.T.S.



**TYPICAL COLUMN TO CHANNEL**  
 SCALE: 1" = 1'-0"

NO.	DATE	REVISIONS	APP.

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 P.E. Serial No.: 132679  
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**CITY OF HOUSTON**  
 HARRIS COUNTY, TEXAS

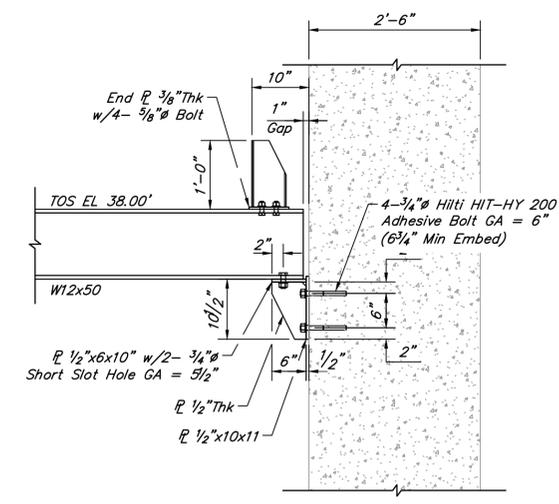
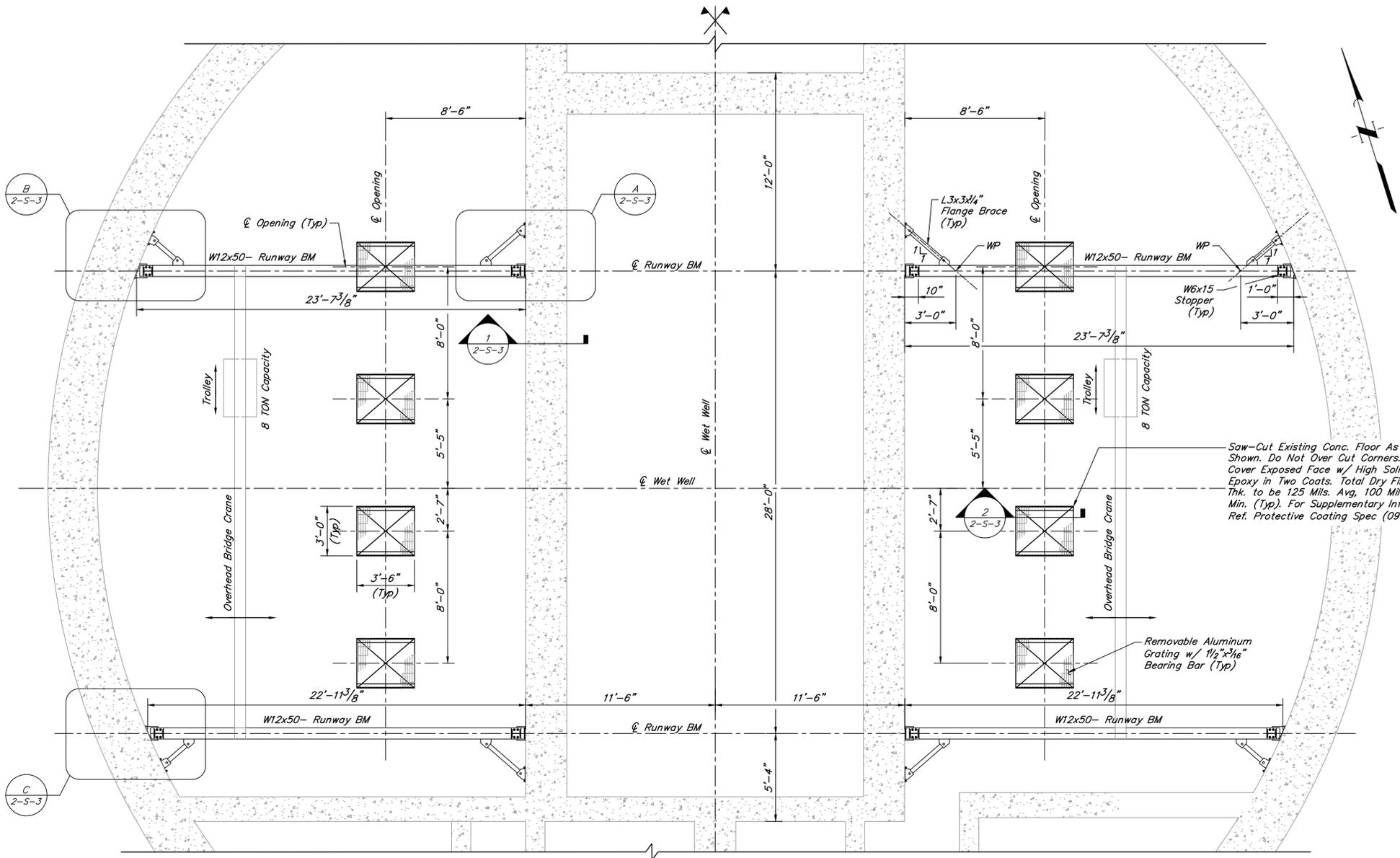
DATE: JANUARY 2026 DGN BY: FFOROUZANNIA  
 JOB NO: 00050-0099-01 DWG BY: SFUENTES

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**SCOTT STREET No. 1**  
**LIFT STATION REHABILITATION**  
**WET WEATHER LIFT STATION**  
**WALKWAY PLATFORM**  
**GRATING PLAN**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX  
 CATEGORY NO. **2-S-2** SHEET NO. # OF XXX  
 FOR CITY OF HOUSTON USE ONLY



SECTION 1-1  
SCALE: 3/4" = 1'-0"

**NOTE:**  
1. All proposed grating and handrails shall be made of aluminum powder-coated dark green.

NO.	DATE	REVISIONS	APP.

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P.E. Serial No.: 132679  
Date: JANUARY 2026



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HARRIS COUNTY, TEXAS

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SCOTT STREET No. 1  
LIFT STATION REHABILITATION

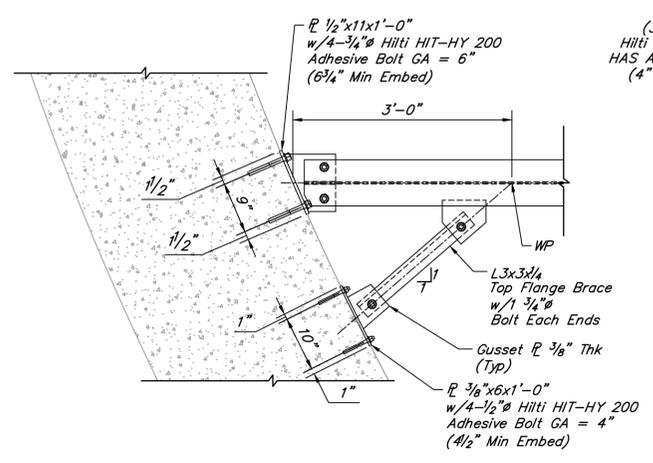
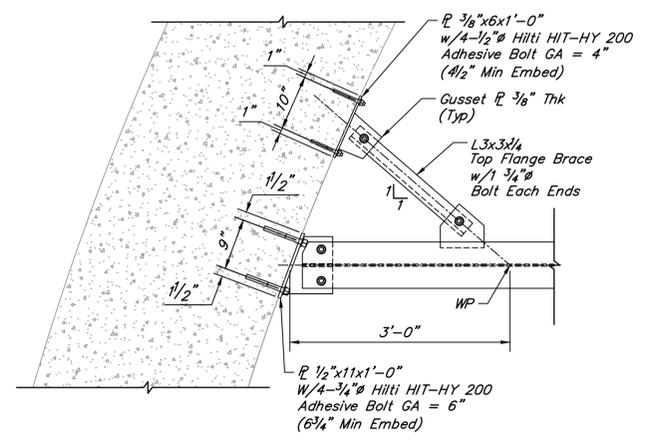
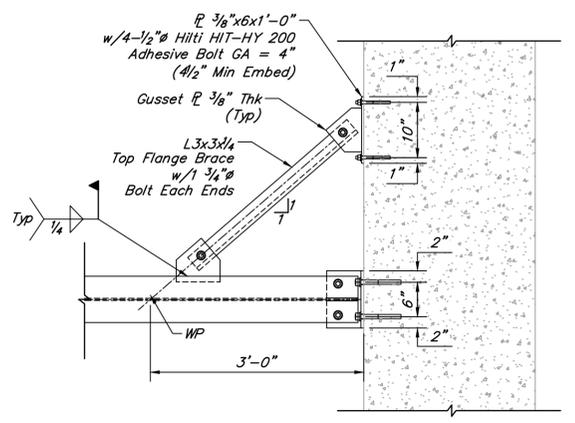
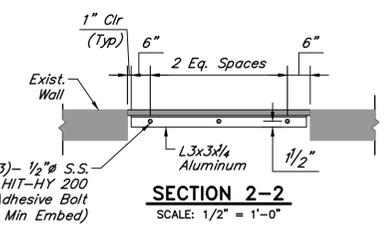
**WET WEATHER LIFT STATION  
OVERHEAD CRANE-RUNWAY BEAMS**

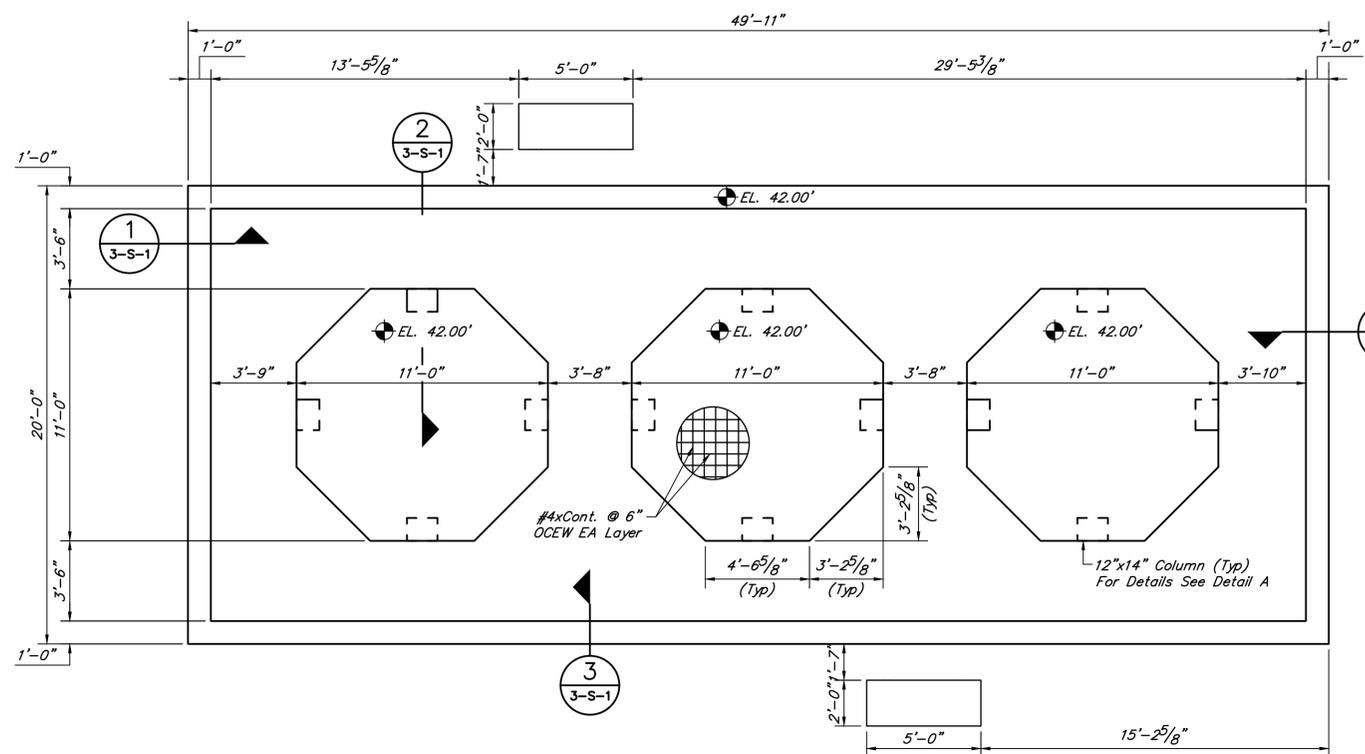
**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX

CATEGORY NO. **2-S-3** SHEET NO. # OF XXX  
FOR CITY OF HOUSTON USE ONLY

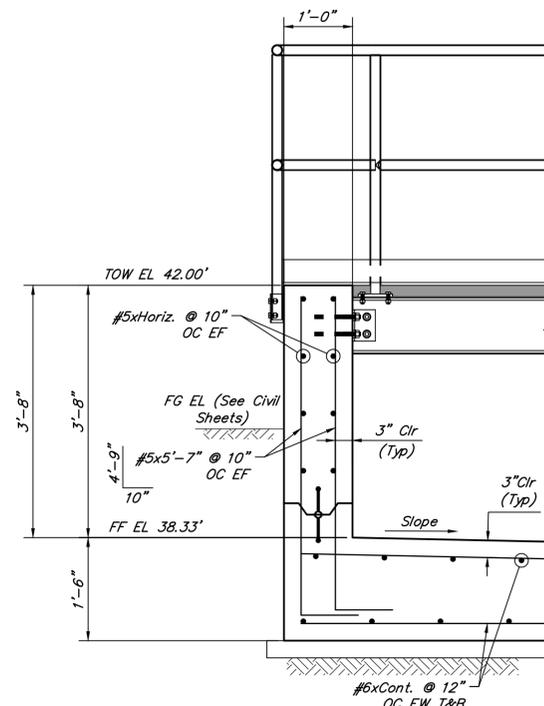
**OVERHEAD CRANE-RUNWAY BEAMS**  
1/4" = 1'-0"



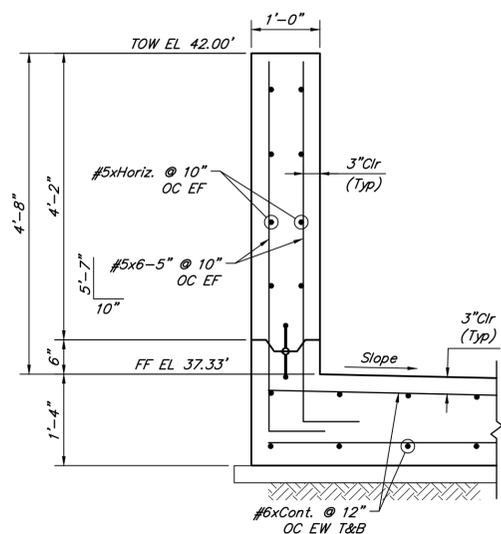


**CONCRETE TOP OF WALL PLAN**  
SCALE: 1/4" = 1'-0"

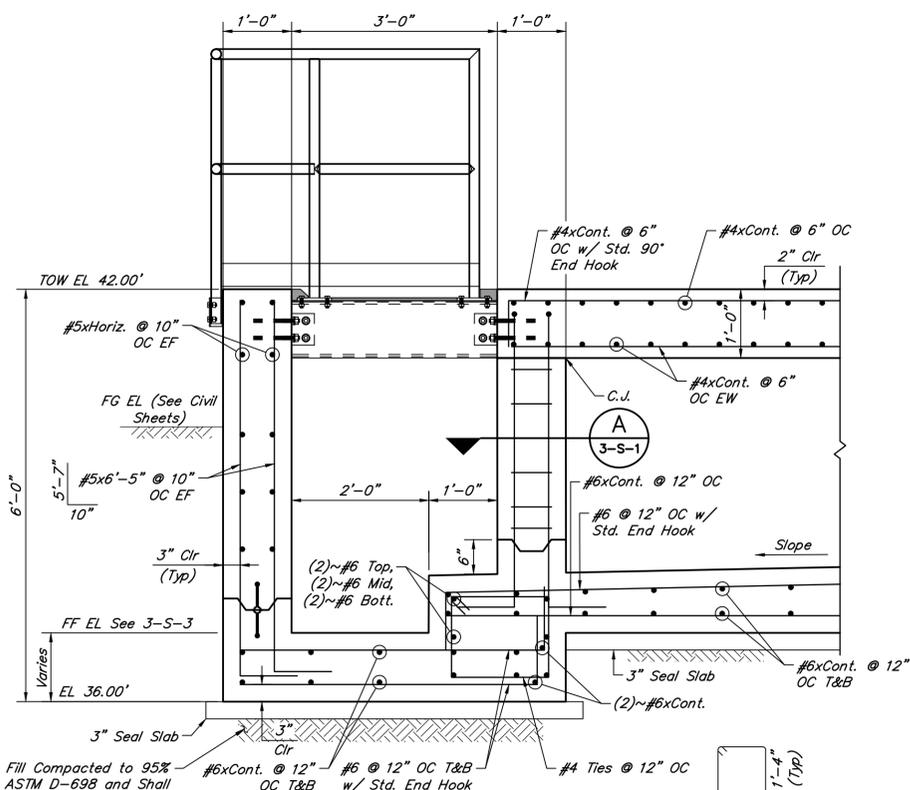
Note: Steel Elements Not Shown for Clarity



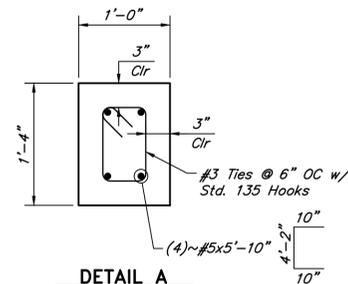
**SECTION 3-3**  
SCALE: 3/4" = 1'-0"



**SECTION 1-1**  
SCALE: 3/4" = 1'-0"



**SECTION 2-2**  
SCALE: 3/4" = 1'-0"



**DETAIL A**  
SCALE: 1" = 1'-0"

NO.	DATE	REVISIONS	APP.

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SCOTT STREET No. 1  
LIFT STATION REHABILITATION

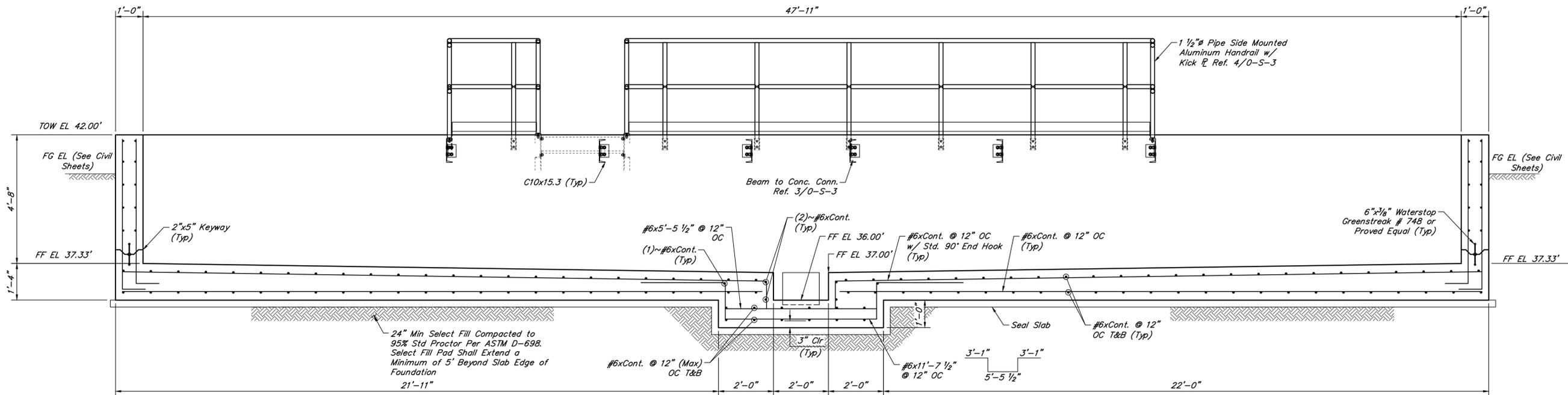
CHEMICAL STORAGE  
TOP VIEW PLAN & SECTIONS

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

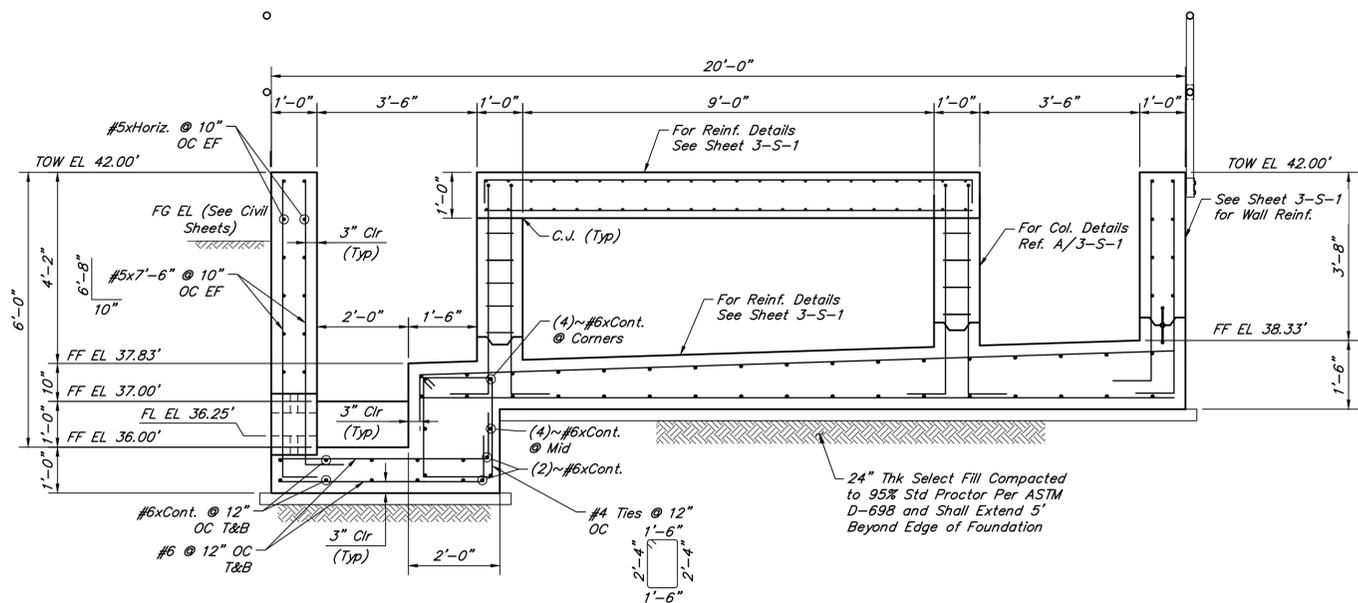
DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX

CATEGORY NO. 3-S-1 SHEET NO. # OF XXX  
FOR CITY OF HOUSTON USE ONLY





**SECTION 1-1**  
SCALE: 1/2" = 1'-0"



**SECTION 2-2**  
SCALE: 1/2" = 1'-0"

NO.	DATE	REVISIONS	APP.

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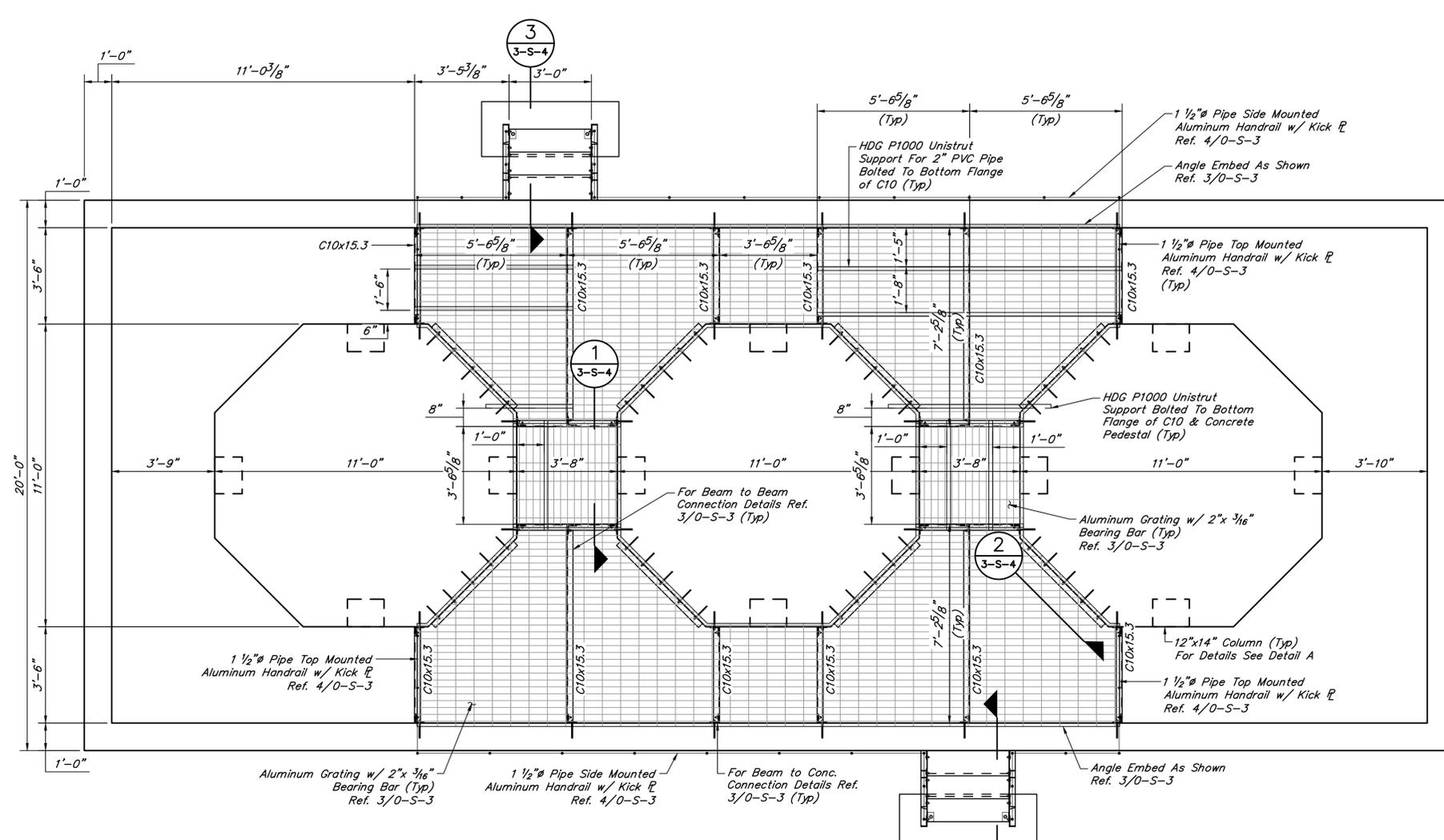
SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
CHEMICAL STORAGE  
& CHEMICAL BUILDING PAD  
FOUNDATION SECTIONS

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

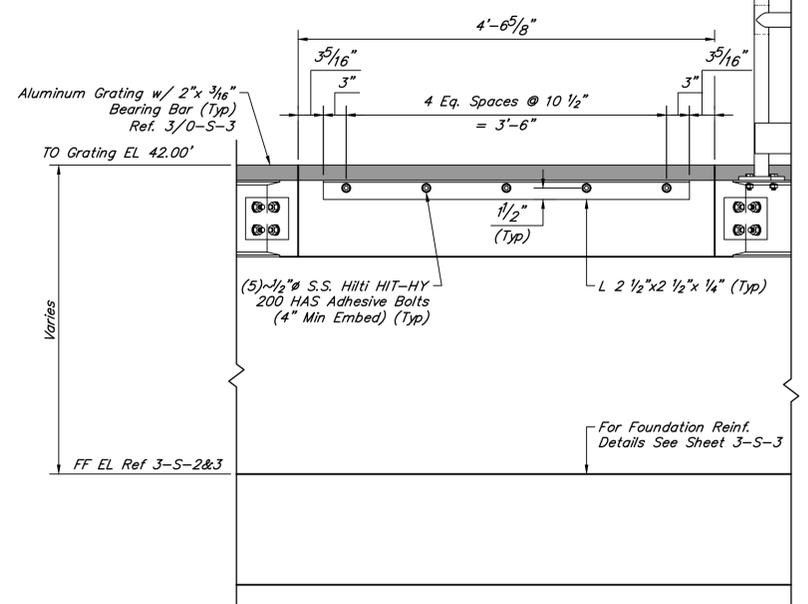
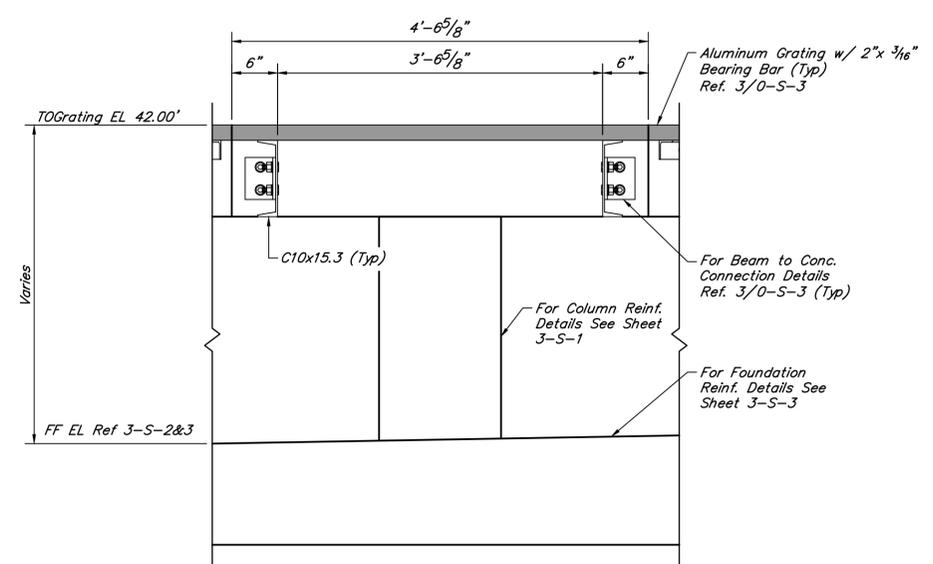
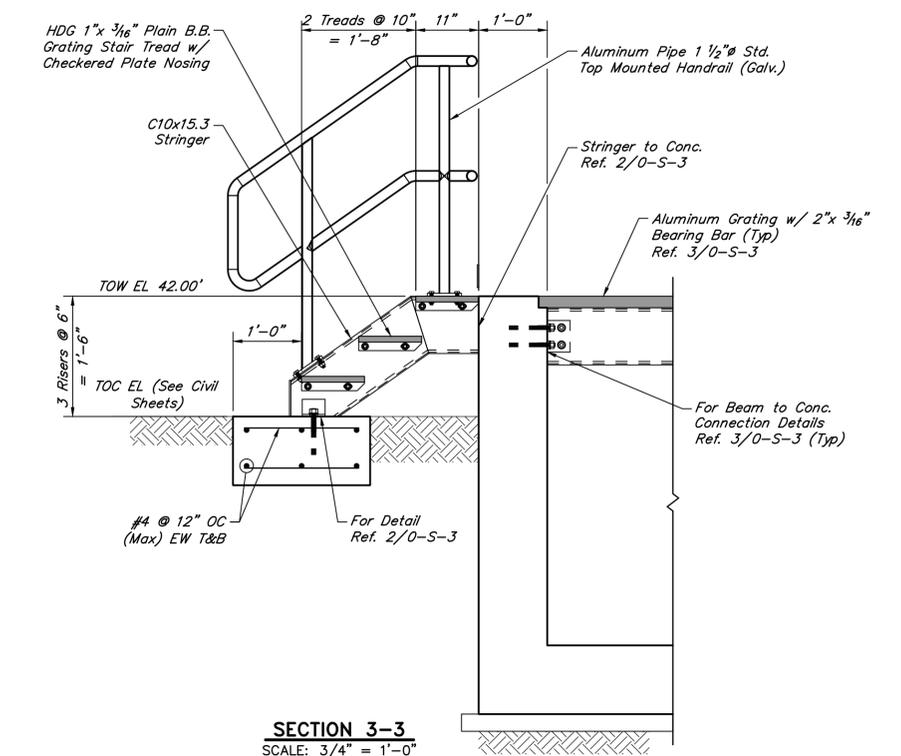
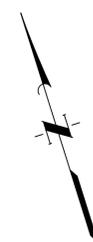
DRAWING SCALE 1/2"=1'-0" HORIZ: XXX VERT: XXX

CATEGORY NO. 3-S-3 SHEET NO. # OF XXX  
FOR CITY OF HOUSTON USE ONLY

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



**GRATING PLAN**  
SCALE: 3/8" = 1'-0"



NO.	DATE	REVISIONS	APP.

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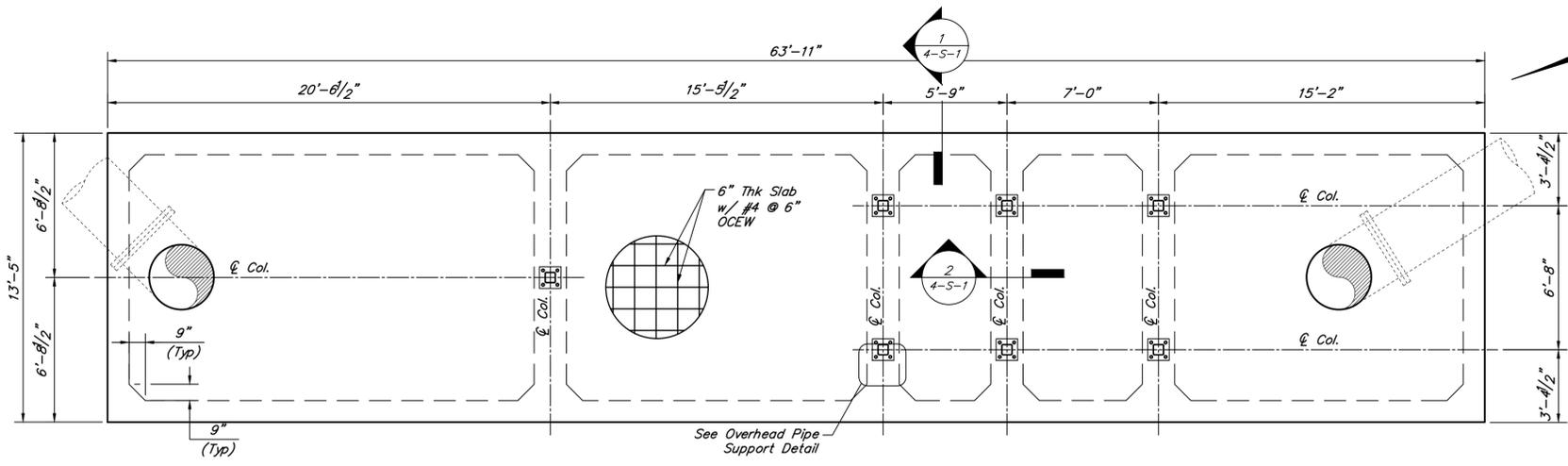
SCOTT STREET No. 1  
LIFT STATION REHABILITATION

CHEMICAL STORAGE  
GRATING PLAN & SECTIONS

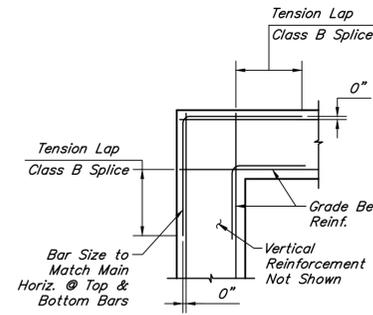
CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX

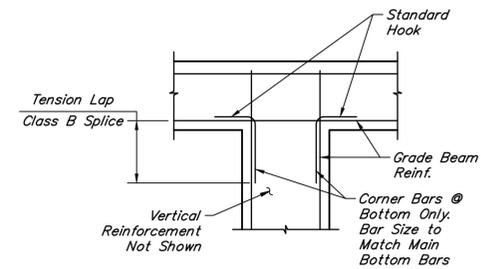
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FOR CITY OF HOUSTON USE ONLY



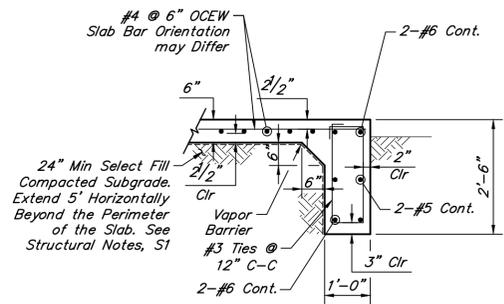
**FOUNDATION PLAN**  
SCALE: 1/4" = 1'-0"



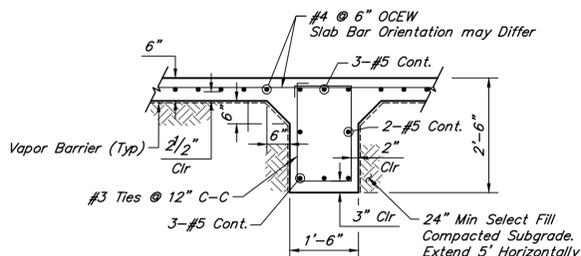
**GRADE BEAM CORNER DETAILS**  
SCALE: 3/4" = 1'-0"



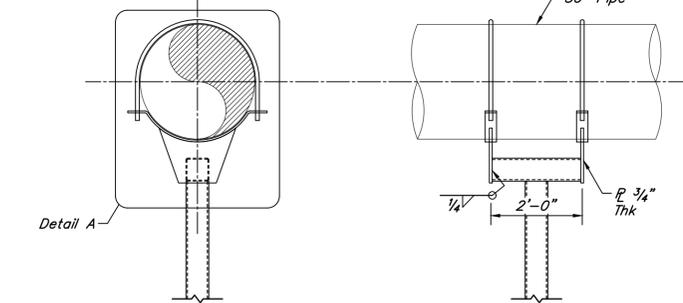
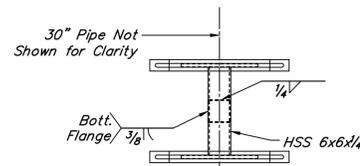
**GRADE BEAM INTERSECTION DETAILS**  
SCALE: 1/2" = 1'-0"



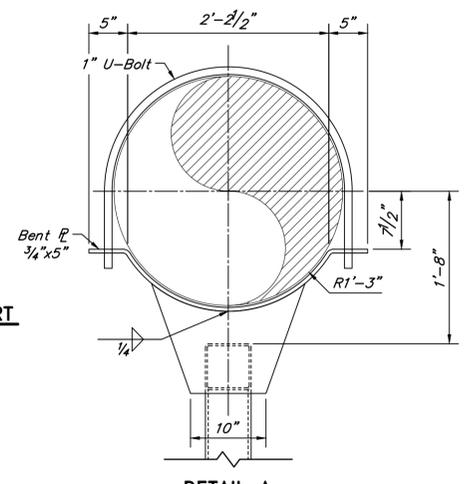
**SECTION 1-1**  
SCALE: 1/2" = 1'-0"  
Vertical Wall Reinforcement not Shown for Clarity



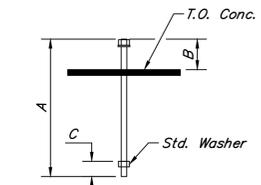
**SECTION 2-2**  
SCALE: 1/2" = 1'-0"  
Wall Details not Shown for Clarity



**OVERHEAD PIPE SUPPORT**  
SCALE: 1/2" = 1'-0"

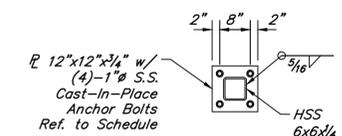


**DETAIL A**  
SCALE: 1" = 1'-0"



**(TYP) ANCHOR RODS**  
NOT TO SCALE

ANC. ROD SCHEDULE TYP			
DIAMETER	A	B	C
1"	24"	5"	3"



**BASEPLATE DETAIL**  
SCALE: 1/2" = 1'-0"

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
Not intended for construction, bidding or permit purposes.  
Engineer: AHMAD DANESHVAR, P.E.  
P.E. Serial No.: 132679  
Date: JANUARY 2026



Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: RMERHI  
JOB NO: 00050-0099-01 DWG BY: SFUENTES

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

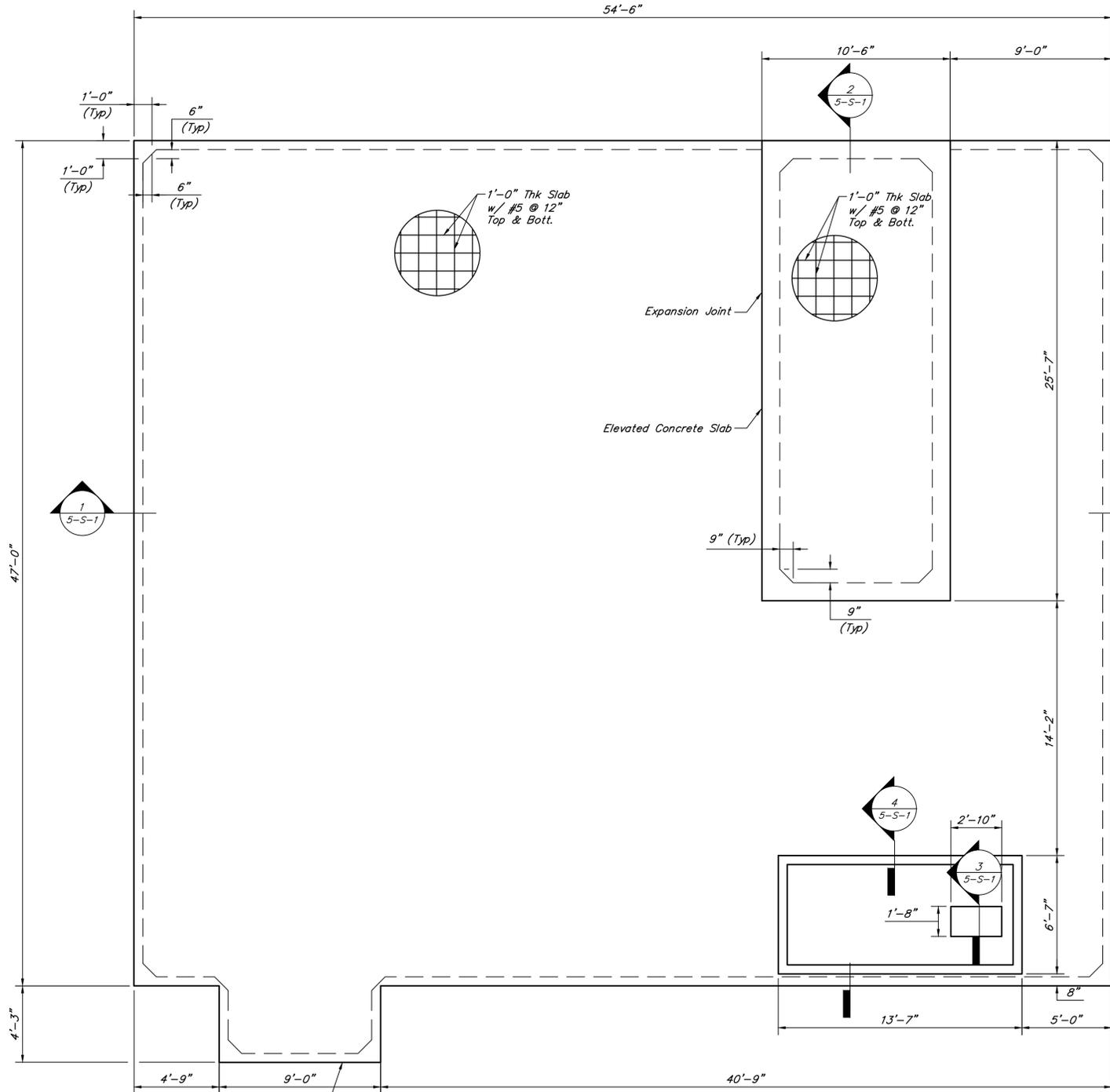
SCOTT STREET No. 1  
LIFT STATION REHABILITATION

WET WEATHER LIFT STATION  
FLOW METER STATION

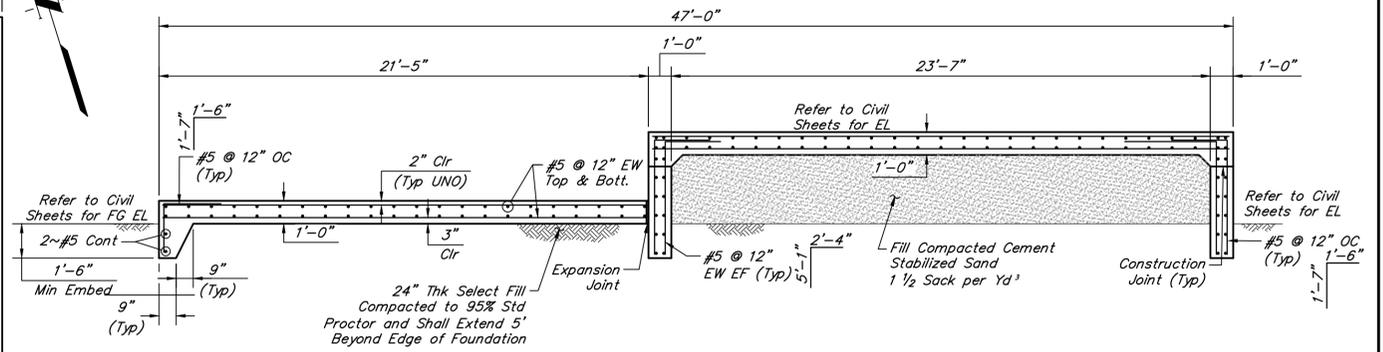
CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX

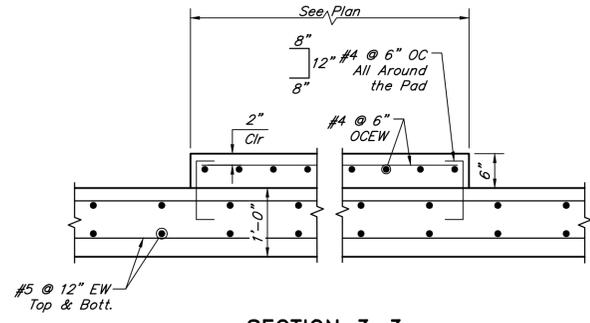
CATEGORY NO. 4-S-1 SHEET NO. # OF XXX  
FOR CITY OF HOUSTON USE ONLY



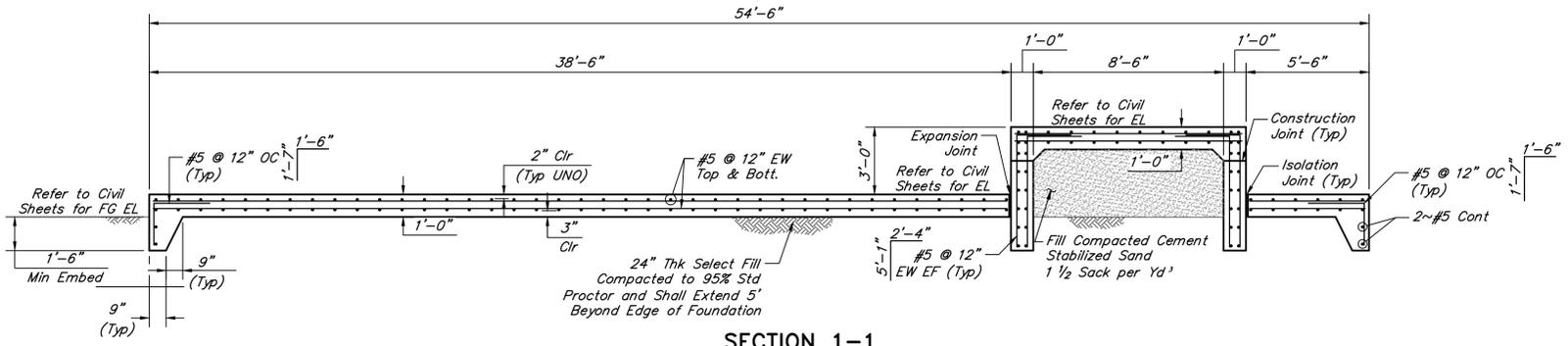
**ODOR CONTROL STATION FOUNDATION PLAN**  
1/4" = 1'-0"



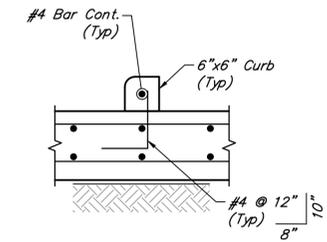
**SECTION 2-2**  
1/4" = 1'-0"



**SECTION 3-3**  
SCALE: 3/4" = 1'-0"



**SECTION 1-1**  
1/4" = 1'-0"



**SECTION 4-4**  
SCALE: 3/4" = 1'-0"

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW  
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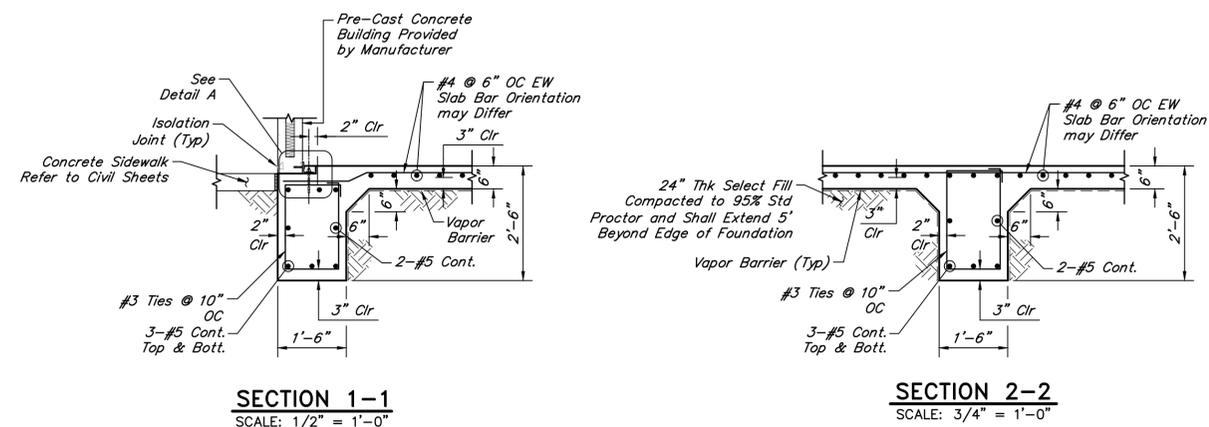
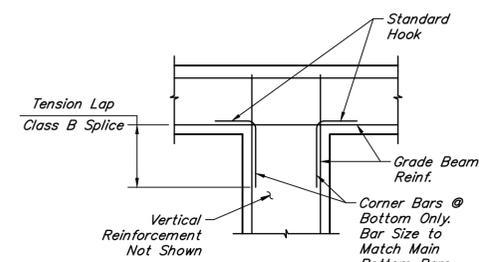
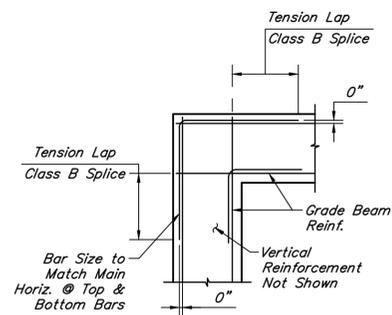
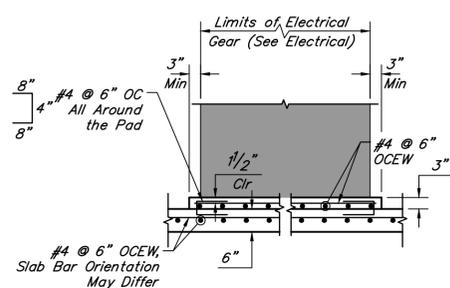
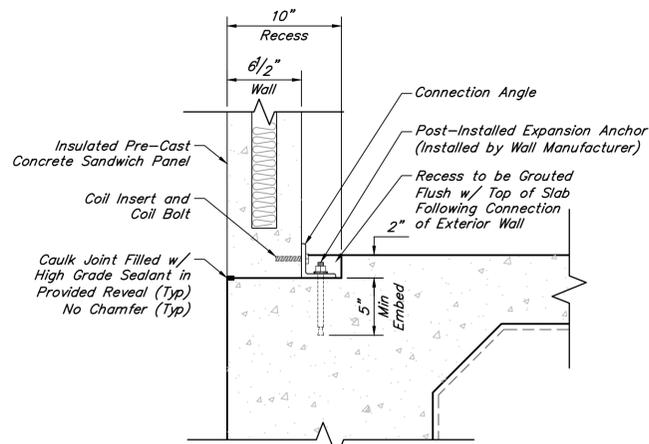
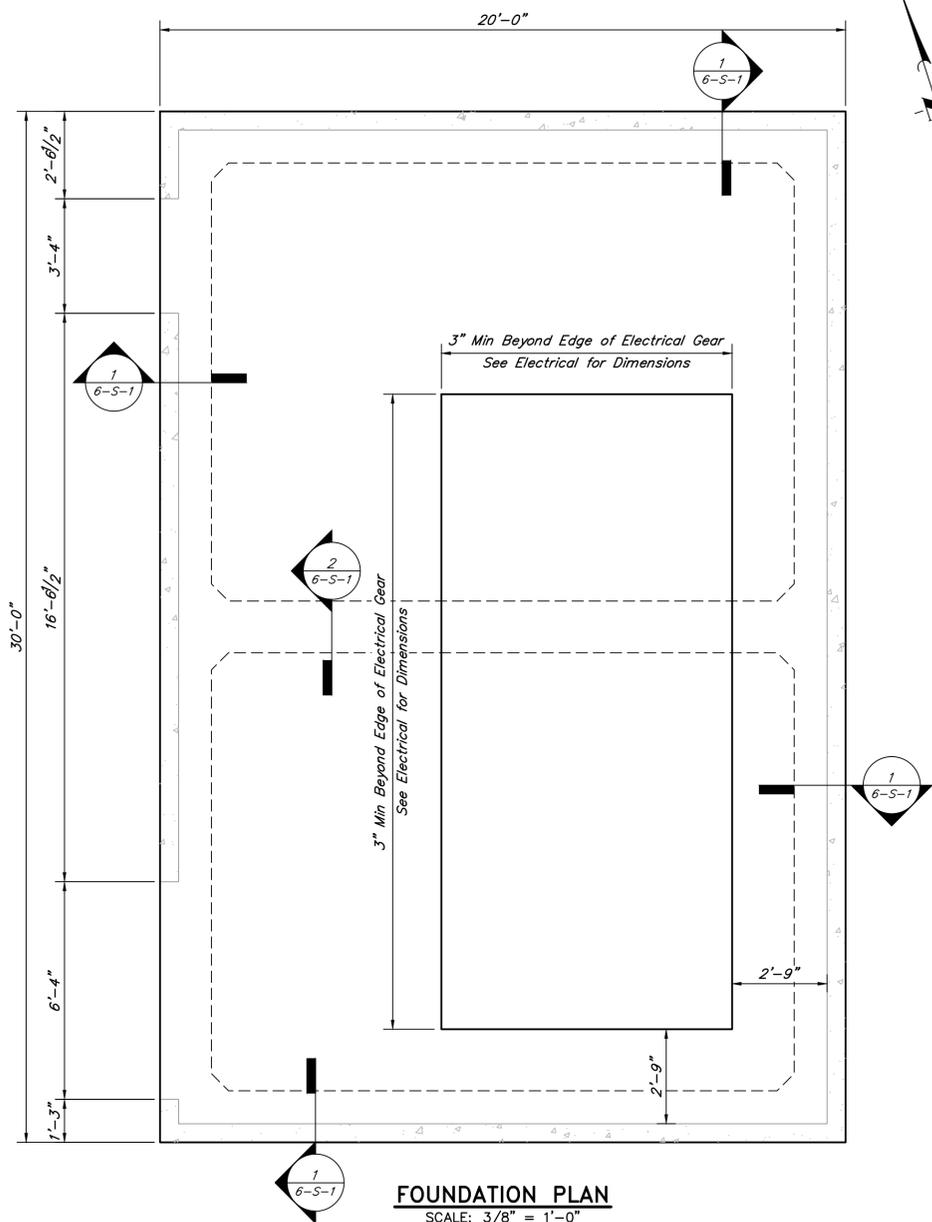
NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
ODOR CONTROL STATION  
FOUNDATION PLAN  
& SECTIONS

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE 1/4"=1'-0" HORIZ: XXX VERT: XXX

CATEGORY NO. 5-S-1 SHEET NO. # OF XXX  
FOR CITY OF HOUSTON USE ONLY



**BUILDING NOTES:**  
BUILDING CODE:

- 2021 Edition of the international building code.
- ASCE-7, Minimum design loads for buildings and other structures.
- Proposed building category: U
  - Type of construction: III-B
  - Allowable No. of stories: 2 -Actual: 1 -50%
  - Allowable building area: 8,500 sf -Actual: 600 SF -7.06%
  - Allowable building height: 55 ft -Actual: 14 ft -25.4%
- Risk category: III (Table 1604.5, Waste Water Treatment Facilities)
  - Fire resistance rating requirements for exterior walls: -0 hr (Table 602)
  - Rating of exterior building wall -2 hr
- Maximum area of exterior wall openings:
  - Unprotected, non-sprinkled-Greater than 30 ft -No-Limit (Table 705.8)
- This drawing to be read in conjunction with Mechanical drawings.

NO.	DATE	REVISIONS	APP.

INTERIM REVIEW  
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Engineer: AHMAD DANESHVAR, P.E.  
P.E. Serial No.: 132679  
Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: RMERHI  
JOB NO: 00050-0099-01 DWG BY: SFUENTES

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
ELECTRICAL BUILDING NO. 1  
PLAN & SECTIONS

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE AS SHOWN HORIZ: XXX VERT: XXX  
CATEGORY NO. 6-S-1 SHEET NO. # OF XXX  
FOR CITY OF HOUSTON USE ONLY

SYMBOLS	DESCRIPTION	SYMBOLS	DESCRIPTION	SYMBOLS	DESCRIPTION	SYMBOLS	DESCRIPTION																
	MEDIUM VOLTAGE DRAWOUT TYPE POWER CIRCUIT BREAKER CS-CONTROL SWITCH		VOLTMETER (WITH SWITCH IF 3-PHASE)		PILOT LIGHT, COLOR AS NOTED * R- RED G- GREEN B- BLUE W- WHITE A- AMBER		LIGHTNING ARRESTER/SURGE CAPACITOR																
	LOW VOLTAGE CIRCUIT BREAKER, 3 POLE UNLESS OTHERWISE NOTED. LSIG IF NOTED MCP IF NOTED ERMS IF NOTED		AMMETER (WITH SWITCH IF 3-PHASE)		PILOT LIGHT, PUSH-TO-TEST TYPE, COLOR AS NOTED ABOVE.		GROUND ROD																
	COMBINATION MOTOR CIRCUIT PROTECTOR AND MAGNETIC MOTOR STARTER, FULL VOLTAGE NON-REVERSING UNLESS OTHERWISE NOTED: * FVR-FULL VOLTAGE REVERSING RVNR-REDUCED VOLTAGE NON-REVERSING 2S1W-TWO SPEED, ONE WINDING 2S2W-TWO SPEED, TWO WINDING		METER * WM- WATTMETER WHM- WATTHOUR METER WHDM- WATTHOUR DEMAND METER WHDR- WATTHOUR DEMAND RECORDER PF- POWER FACTOR METER RT- RUNNING TIME METER		TIME DELAY RELAY RANGE AS NOTED SET POINT AS NOTED		GROUND ROD TEST WELL																
	NON-FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE * AMPERE RATING NOTED IF OTHER THAN 30A		RELAY, NO. AS INDICATED 25- SYNCHRONISM CHECK RELAY 27- UNDER VOLTAGE RELAY 38- BEARING PROTECTIVE DEVICE 40- LOSS OF EXCITATION RELAY 42- RUNNING CONTACTOR/PILOT RELAY 46- REVERSE PHASE/PHASE BALANCE/CURRENT RELAY 47- PHASE SEQUENCE VOLTAGE RELAY 49- MACHINE OR TRANSFORMER THERMAL RELAY 50- INSTANTANEOUS OVERCURRENT RELAY 50G- INSTANTANEOUS GROUND 51- TIME OVER CURRENT RELAY 51G- TIME OVERCURRENT RELAY, GROUNDING RESISTOR TYPE 51N- TIME OVERCURRENT RELAY, RESIDUAL TYPE 51V- TIME OVERCURRENT RELAY WITH VOLTAGE RESTRAINT 60- NEGATIVE SEQUENCE VOLTAGE RELAY 62- TIME DELAY RELAY 63- OVER PRESSURE RELAY 67- AC DIRECTIONAL OVERCURRENT RELAY 83- AUTOMATIC SELECTIVE CONTROL OR TRANSFER RELAY 86- LOCKING-OUT RELAY 87- DIFFERENTIAL PROTECTIVE RELAY B- SUFFIX INDICATES "BUS" G- SUFFIX INDICATES "GENERATOR" GF- GROUND FAULT ST- SHUNT TRIP T- SUFFIX INDICATES "TRANSFORMER" X- SUFFIX INDICATES "AUXILIARY"		TDD-TIME DELAY AFTER DE-ENERGIZATION-OFF DELAY TDE-TIME DELAY AFTER ENERGIZATION-ON DELAY		FUSE, AMPERE RATING AS NOTED																
	FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE, AMPERE RATING AND FUSE SIZE AS NOTED: * AMPERE RATING NOTED IF OTHER THAN 30A FUSE RATING		TRANSUCER AX- CURRENT TRANSUCER WX- WATT TRANSUCER		NCTO-NORMALLY CLOSED, TIMED CLOSING WHEN ENERGIZED		HEATER																
	MOTOR ISOLATION SWITCH, HORSEPOWER RATED		RELAY, NO. AS INDICATED 25- SYNCHRONISM CHECK RELAY 27- UNDER VOLTAGE RELAY 38- BEARING PROTECTIVE DEVICE 40- LOSS OF EXCITATION RELAY 42- RUNNING CONTACTOR/PILOT RELAY 46- REVERSE PHASE/PHASE BALANCE/CURRENT RELAY 47- PHASE SEQUENCE VOLTAGE RELAY 49- MACHINE OR TRANSFORMER THERMAL RELAY 50- INSTANTANEOUS OVERCURRENT RELAY 50G- INSTANTANEOUS GROUND 51- TIME OVER CURRENT RELAY 51G- TIME OVERCURRENT RELAY, GROUNDING RESISTOR TYPE 51N- TIME OVERCURRENT RELAY, RESIDUAL TYPE 51V- TIME OVERCURRENT RELAY WITH VOLTAGE RESTRAINT 60- NEGATIVE SEQUENCE VOLTAGE RELAY 62- TIME DELAY RELAY 63- OVER PRESSURE RELAY 67- AC DIRECTIONAL OVERCURRENT RELAY 83- AUTOMATIC SELECTIVE CONTROL OR TRANSFER RELAY 86- LOCKING-OUT RELAY 87- DIFFERENTIAL PROTECTIVE RELAY B- SUFFIX INDICATES "BUS" G- SUFFIX INDICATES "GENERATOR" GF- GROUND FAULT ST- SHUNT TRIP T- SUFFIX INDICATES "TRANSFORMER" X- SUFFIX INDICATES "AUXILIARY"		NCTC-NORMALLY CLOSED, TIMED CLOSING WHEN DE-ENERGIZED		INDUCTOR																
	DRAWOUT TYPE EQUIPMENT OR DEVICE		SPECIAL CAPACITOR * SC- SURGE CAPACITOR PF- POWER FACTOR CORRECTION CAPACITOR INCLUDING INDUCTIVE LINK AS NEEDED		FIELD INSTRUMENT, TAG NO. OR LOOP # AS INDICATED *INDICATES INSTRUMENT TYPE DEFINED ON LOOP SHEETS ## - INDICATES LOOP NO.		CONTACT, NORMALLY OPEN (NO)																
	MEDIUM VOLTAGE CABLE TERMINATION		PUSH BUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY CLOSED		LIQUID LEVEL (FLOAT) SWITCH NORMALLY OPEN, CLOSSES ON RISING LEVEL		CONTACT, NORMALLY CLOSED (NC)																
	MEDIUM VOLTAGE FUSED AIR INTERRUPTER SWITCH		PUSH BUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY OPEN		NORMALLY CLOSED, OPENS ON RISING LEVEL		OVERLOAD RELAY HEATER																
	MEDIUM VOLTAGE FUSED MOTOR CONTROLLER		EMERGENCY STOP PUSH BUTTON WITH RED MUSHROOM HEAD OPERATOR (MAINTAINED CONTACT)		NORMALLY OPEN, CLOSSES ON DROPPING LEVEL		KEY INTERLOCK																
	TRANSFORMER, RATINGS AND CONNECTIONS AS NOTED, UNLESS OTHERWISE NOTED ON THE SINGLE LINE DIAGRAMS ALL DRY TYPE TRANSFORMERS SERVICING ADMINISTRATIVE AND LABORATORY SPACES SHALL HAVE A K FACTOR OF 13. ALL OTHER DRY TYPE TRANSFORMERS SHALL HAVE A K-4 RATING. ISOLATION TRANSFORMERS SHALL HAVE A K-20 RATING		STOP PUSH BUTTON WITH RED HEAD OPERATOR (MAINTAINED CONTACT) WITH LOCKABLE OPTION * : E-STOP * : STOP		TEMPERATURE SWITCH OR THERMOSTAT NORMALLY OPEN, CLOSSES ON RISING TEMPERATURE		TERMINAL OR TEST BLOCK																
	CURRENT TRANSFORMER: * QUANTITY A= PRIMARY AMPERES		START-STOP PUSH BUTTON CONTROL STATION (MOMENTARY CONTACT) "L" DENOTES LOCKOUT TYPE		NORMALLY OPEN, CLOSSES ON DROPPING PRESSURE		RESISTANCE TEMPERATURE DETECTOR																
	POTENTIAL TRANSFORMER: * QUANTITY PV= PRIMARY VOLTAGE SV= SECONDARY VOLTAGE		START-STOP PUSH BUTTON CONTROL STATION, MAINTAINED CONTACT WITH LOCKOUT DEVICE ON STOP		NORMALLY CLOSED, OPENS ON DROPPING PRESSURE		VIBRATION DETECTOR																
	GENERATOR, RATINGS AND CONNECTIONS AS NOTED		3 POSITION SELECTOR SWITCH, MAINTAINED CONTACT O-OPEN X-CLOSED <table border="1"> <thead> <tr> <th>POSITION</th> <th>TOP CONTACT</th> <th>MIDDLE CONTACT</th> <th>BOTTOM CONTACT</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>X</td> <td>O</td> <td>O</td> </tr> <tr> <td>B</td> <td>O</td> <td>O</td> <td>O</td> </tr> <tr> <td>C</td> <td>O</td> <td>O</td> <td>X</td> </tr> </tbody> </table> * NAMEPLATE (A/B/C) HOA- HAND/OFF/AUTO HOR- HAND/OFF/REMOTE LOR- LOCAL/OFF/REMOTE RSL- RAISE/STOP/LOWER TOA- TEST/OFF/AUTO	POSITION	TOP CONTACT	MIDDLE CONTACT	BOTTOM CONTACT	A	X	O	O	B	O	O	O	C	O	O	X		FLOW SWITCH (AIR, WATER, ETC.) NORMALLY OPEN, CLOSSES ON INCREASED FLOW		ELAPSED TIME METER
POSITION	TOP CONTACT	MIDDLE CONTACT	BOTTOM CONTACT																				
A	X	O	O																				
B	O	O	O																				
C	O	O	X																				
	VARIABLE SPEED DRIVE CONTROLLER * D.C.= D.C. DRIVE CONTROLLER SCR= SILICON CONTROLLED RECTIFIER VFD= VARIABLE FREQUENCY DRIVE AFD= ADJUSTABLE FREQUENCY DRIVE ASD= ADJUSTABLE SPEED DRIVE		OFF/ON SELECTOR SWITCH		POSITION (LIMIT) SWITCH NORMALLY OPEN		MOTOR OPERATED VALVE																
	VACUUM CONTACTOR		TORQUE SWITCH NORMALLY OPEN - HELD CLOSED NORMALLY CLOSED NORMALLY CLOSED - HELD OPEN		CONDUCTOR PULL BOX		JUNCTION BOX																
	UNIT HEATER - ELECTRIC HEATING COIL AND FAN		CONTROL RELAY COIL, NUMBER AS INDICATED		4-20mA SIGNAL JUNCTION BOX		CONTROL JUNCTION BOX																
	UNIT HEATER - STEAM OR WATER HEATING COIL AND FAN		RVSS: REDUCED VOLTAGE SOLID STATE SOFT STARTER		PULL BOX		TERMINATION CABINET																
	MOTOR, NUMERAL INDICATES HORSEPOWER		RVAT: REDUCED VOLTAGE AUTO-TRANSFORMER		REMOTE DEVICES		MOV WITHOUT INTEGRATED DISCONNECT																
	SURGE PROTECTION DEVICE				MOV WITH INTEGRATED DISCONNECT		INDICATES LIMITS OF EQUIPMENT OR WIRING ENCLOSURE																
					CONDUCTORS OR CONDUITS CROSSING PATHS BUT NOT CONNECTED		(MPR) MOTOR PROTECTION RELAY																
					CONDUCTORS ELECTRICALLY CONNECTED																		

NO.	DATE	REVISIONS	APP.

**KGI** Kalluri Group, Inc. TBPE Registration No. F-665  
16300 Katy Freeway, Suite 172  
Houston, Texas 77094  
Phone: (713)-365-9288  
PROJECT 4285

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

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DATE:	
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FB NO. XXXXXX

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS  
**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
ELECTRICAL  
**LEGENDS AND SYMBOLS SHEET 1**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 0-E-01	
SHEET NO. XXX OF XX	

SYMBOLS	DESCRIPTION
	REFER TO LIGHT FIXTURE SCHEDULE FOR TYPE FIXTURE: "A"- FIXTURE TYPE "b"- CONTROLLED BY SWITCH "b" "LA-3"- CIRCUIT 3 FROM PANEL LA
	REFER TO LIGHT FIXTURE SCHEDULE FOR TYPE FIXTURE, NOTATIONS SAME AS ABOVE
	INDICATES LIGHT FIXTURES WHICH ARE NONSWITCHED, NOTATIONS SAME AS ABOVE "NS" - NONSWITCHED
	WALL MOUNTED LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	POLE MOUNTED LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	EMERGENCY LIGHTING BATTERY UNIT WITH TWO LAMP HEADS, NOTATIONS SAME AS ABOVE
	REMOTE EMERGENCY ADJUSTABLE WALL LIGHTING FIXTURE WITH TWO LAMP HEADS, NOTATIONS SAME AS ABOVE
	CEILING MOUNTED EXIT SIGN, NOTATIONS SAME AS ABOVE
	WALL OUTLET EXIT SIGN. ARROW INDICATES DIRECTION OF EGRESS, NOTATIONS SAME AS ABOVE
	CONDUIT, EXPOSED/SURFACE MOUNTED
	CONDUIT OR DUCTBANK, CONCEALED
	CONDUIT, EXPOSED/SURFACE MOUNTED, TURNING UP
	CONDUIT, EXPOSED/SURFACE MOUNTED, TURNING DOWN
	CONDUIT STUBBED OUT AND CAPPED
	FLEXIBLE METAL CONDUIT "WHIP" (2#12, #12G, 3/4"C UNLESS OTHERWISE NOTED) FOR RECESSED LIGHTING FIXTURES AND LIQUID TIGHT MOTOR CONNECTIONS
	HOMERUN, CIRCUITS 1 AND 3 RUN TO PANEL LP-1
	SINGLE POLE SWITCH "b"- INDICATES SWITCH LEG SHALL CONTROL LIGHT FIXTURES WITH "b" DESIGNATION
	MULTI POLE SWITCH "x"- INDICATES NUMBER OF POLE "b"- NOTATIONS SAME AS ABOVE
	SINGLE POLE SWITCH AND PILOT LIGHT, "b"- NOTATIONS SAME AS ABOVE
	DIMMER LIGHTING CONTROL SWITCH, "b"- NOTATIONS SAME AS ABOVE
	TIME SWITCH, "b"-NOTATIONS SAME AS ABOVE
	MANUAL MOTOR STARTER /DISCONNECT
	SINGLE POLE SWITCH WITH OCCUPANCY SENSOR
	SINGLE POLE DIMMER SWITCH
	SWITCH ENCLOSURE "x"- NOTATIONS SAME AS ABOVE "b"- NOTATIONS SAME AS ABOVE "xx"- INDICATES ENCLOSURE TYPE
	LIGHTING CONTACTOR WITH NUMBER OF POLES AS INDICATED

SYMBOLS	DESCRIPTION
	LIGHTING PANELBOARD (TYPICAL 120V/240V OR 120V/208V)
	DISTRIBUTION PANELBOARD (TYPICAL 277V/480V)
	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W * GFI- GROUND FAULT INTERRUPTER TYPE WP- WEATHERPROOF "LA-3"- CIRCUIT 3 FROM PANEL LA
	WELDING RECEPTACLE
	20A, 240V, 2P, 3W, RECEPTACLE
	CLASS 1, DIVISION 1, RATED TWIST LOCK RECEPTACLE, VOLTAGE AND AMPERAGE RATING AS NOTED
	SINGLE FACE, SINGLE GANG PEDESTAL WITH 20A, 120V, 2P, 3W DUPLEX RECEPTACLE, FURNISHED AND INSTALLED UNDER DIVISION 16 UNLESS OTHERWISE NOTED. * DENOTES FURNISHED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS BUT INSTALLED UNDER DIVISION 16
	DOUBLE FACE, SINGLE GANG PEDESTAL WITH 20A, 120V, 2P, 3W DUPLEX RECEPTACLE AND 20A, 240V, 2P, 3W SINGLE RECEPTACLE, FURNISHED AND INSTALLED UNDER DIVISION 16 UNLESS OTHERWISE NOTED. * DENOTES FURNISHED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS BUT INSTALLED UNDER DIVISION 16
	DOUBLE RECEPTACLE, 20A, 120V, 2P, 3W MOUNTED IN BOX CURB FURNISHED UNDER OTHER DIVISIONS OF THE SPECIFICATIONS BUT INSTALLED UNDER DIVISION 16
	SINGLE GANG 20A, 120V, 3P, 3W RECEPTACLE
	QUAD RECEPTACLE
	OCCUPANCY SENSOR CAPABLE OF VACANCY
	PHOTOCELL

SYMBOLS	DESCRIPTION
COMMUNICATIONS SYSTEMS	
	TELEPHONE OUTLET
	DATA OUTLET
	DATA INPUT/OUTPUT CABLE OUTLET. "P" DENOTES PROCESS COMPUTER SYSTEM
	VOICE/DATA OUTLET
	PAGING SPEAKER HORN
	PAGING SPEAKER BI-DIRECTIONAL
	PAGING SPEAKER, CEILING MOUNTED TYPE
	PAGING SPEAKER, WALL MOUNTED TYPE
SECURITY SYSTEMS	
	SECURITY ALARM PANEL
	SECURITY ALARM DOOR SWITCH
	SECURITY ALARM KEY PAD
	SECURITY SYSTEM CARD ACCESS READER
	SECURITY ALARM WINDOW SWITCH
	SECURITY ALARM MOTION DETECTOR
	SECURITY CAMERA * CCTV- CLOSED CIRCUIT TV CAMERA PTZ- PAN, TILT, ZOOM CAMERA LENS CONTROLS
	GLASS BREAK DETECTOR
	ACCESS CONTROL PANEL
FIRE ALARM SYSTEMS	
	FIRE ALARM CONTROL PANEL
	SMOKE DETECTOR *: D- DENOTES DUCT SMOKE DETECTOR R- DENOTES FIXED TEMPERATURE RATE-OF-RISE TYPE.
	FIRE ALARM MANUAL PULL STATION, MOUNT AT 4'-0"
	ALARM HORN, MOUNT AT 7'-6" *: F- DENOTES FIRE ALARM
	ALARM STROBE, MOUNT AT 6'-8" *: F- DENOTES FIRE ALARM
	ALARM HORN AND STROBE LIGHT COMBINATION, MOUNT AT 6'-8" *: F- DENOTES FIRE ALARM

ABBREVIATIONS	CONTINUED BELOW LEFT
AC	ALTERNATING CURRENT
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AG	ABOVE GRADE
ALUM	ALUMINUM
AMP/A	AMPERE
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLF	CURRENT LIMITING FUSE
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CS	CONTROL SWITCH
CT	CURRENT TRANSFORMER
CU	COPPER
DC	DIRECT CURRENT
DI	DOOR INTERLOCK
DN	DOWN
DWG	DRAWING
EHH	ELECTRICAL HANDHOLE
EC	EMPTY CONDUIT
ELEC	ELECTRICAL
ELEV	ELEVATION
EM	EMERGENCY
EMH	ELECTRICAL MANHOLE
EO	ELECTRICALLY OPERATED
ERMS	ENERGY-REDUCING
FBO	FURNISHED BY OTHERS
FO	FIBER OPTIC
FRP	FIBERGLASS REINFORCED POLYESTER
FU	FUSE
GCP	GENERATOR CONTROL PANEL
GEN	GENERATOR
G, GRD	GROUND
GFI	GROUND FAULT INTERRUPTER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GO	GATE OPERATOR
GRS	GALVANIZED RIGID STEEL
HH	HANDHOLE
HT	HEIGHT
HTP	HEAT TRACE PANEL
HZ	HERTZ
IMH	INSTRUMENT MAN HOLE
INST	INSTRUMENT
LA	LIGHTNING ARRESTER
LC	LIGHTNING CONTACTOR
LCP	LOCAL CONTROL PANEL
LGTS	LIGHTS
LP	LIGHTING PANEL
	CONTINUED ABOVE RIGHT
LSIG	LONG TIME/SHORT TIME/ INSTANTANEOUS/GROUND FAULT FEATURE INCLUDED
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MFR	MANUFACTURER
MH	MANHOLE
MLO	MAIN LUGS ONLY
MPR	MOTOR PROTECTION RELAY
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
NC	NORMALLY CLOSED
NO	NORMALLY OPEN OR NUMBER
NTS	NOT TO SCALE
OL	OVERLOAD
OLX	OVERLOAD CONTROL RELAY
PB	PUSH BUTTON OR PULL BOX
PCC	PUMP CONTROL CONSOLE
PPR	PHASE PROTECTIVE RELAY
PFR	PHASE FAILURE RELAY
PH	PHASE
PNLBD	PANELBOARD
PR	PAIR
PT	POTENTIAL TRANSFORMER
PTT	PUSH TO TEST TYPE
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
RCP	RELAY CONTROL PANEL
RECP	RECEPTACLES
RVSS	REDUCED VOLTAGE SOFT STARTER
SC	SURGE CAPACITOR
SCH	SCHEMATIC
SCCR	SHORT CIRCUIT CURRENT RATING
SEC	SECONDS OR SECONDARY
SH	SHIELDED OR SHEET
SHT	SHEET
SM	MOTOR RATED SWITCH
SN	SOLID NEUTRAL
SS	STAINLESS STEEL
ST	STARTER
SV	SOLENOID VALVE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TC	TERMINATION CABINET
TEL	TELEPHONE
TO	TIME DELAY ON OPENING
TS	TEMPERATURE SWITCH
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
TSW	TWISTED SHIELDED WIRE
UG	UNDERGROUND
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
VO	VALVE OPERATOR
W	WIRE
WP	WEATHERPROOF
XP	EXPLOSION PROOF
XFMR	TRANSFORMER

NO.	DATE	REVISIONS	APP.

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PROJECT 4285

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JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

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SURVEYED BY: \_\_\_\_\_

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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
ELECTRICAL

**LEGENDS AND SYMBOLS**  
**SHEET 2**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 0-E-02	
SHEET NO. XXX OF XX	

**ELECTRICAL GENERAL NOTES**

- WHERE NOTES ON THE DRAWINGS STATE THAT "THE CONTRACTOR SHALL FIELD VERIFY", THE INTENT IS FOR THE CONTRACTOR TO INVESTIGATE EXISTING CONDITIONS, PRIOR TO THE START OF WORK, TO ENSURE THE WORK CAN BE COMPLETED AS DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACT PRICE SHALL NOT BE INCREASED IF THE CONTRACTOR HAS NOT INVESTIGATED, PRIOR TO THE START OF WORK, WHERE THE NOTES DIRECTING THAT TO BE DONE.
- ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH LATEST EDITION OF THE NEC (NATIONAL ELECTRICAL CODE), LOCAL CODES, AND AUTHORITIES HAVING JURISDICTION.
- ALL PROPOSED ELECTRICAL EQUIPMENT THAT SERVE THE FACILITY SHALL BE ELEVATED TO ATLEAST 3FT ABOVE THE 500 YEAR FLOOD PLAIN ELEVATION. 500 YEAR FLOOD ELEVATION IS EL.32.00.
- THE NOTES CONTAINED ON THIS SHEET ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR WHEN WORKING IN THE FIELD, AND CONTAIN EXCERPTS FROM THE SPECIFICATION SECTIONS. HOWEVER THE CONTRACTOR IS HEREBY ADVISED THAT THE CONTRACT DOCUMENTS CONSIST OF BOTH THE DRAWINGS AND THE SPECIFICATIONS, AND THAT THE CONTRACTOR MUST COMPLY FULLY WITH BOTH THE BID DRAWINGS AND SPECIFICATIONS.
- ALL EQUIPMENT WIRING, RACEWAYS, ETC. SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), LOCAL CODES, AND INDUSTRY STANDARDS (IE. UL, NEMA, IEEE, ANSI, ETC.) THE DRAWING NOTES AND DETAILS SHALL BE COMPLIED WITH IN ADDITION TO THE REQUIREMENTS IN THE SPECIFICATIONS. REFER TO EACH SPECIFICATION SECTION FOR ADDITIONAL REQUIREMENTS.
- ALL RACEWAY INSTALLATIONS SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS. ALL EXPOSED RACEWAY SHALL BE INSTALLED PARALLEL TO BEAMS, CEILINGS, FLOORS AND WALLS. SEE SPECIFICATION ON RACEWAYS FOR ADDITIONAL REQUIREMENTS.
- CONDUIT IN AIR CONDITIONED SPACES MAY BE RIGID ALUMINUM. EXPOSED CONDUIT LOCATED IN THE WET WELLS, DRY WELLS AND ALL OUTDOORS SHALL BE PVC COATED RIGID ALUMINUM. IT SHALL BE, PREPARED, THREADED, SUPPORTED AND INSTALLED IN A WORKMANSHIP LIKE MANNER AND STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, SPECIFICATIONS, AND DRAWINGS.
- PVC COATED CONDUIT SHALL BE TERMINATED INTO ENCLOSURES WITH PVC COATED MYERS TYPE HUBS. IT SHALL BE PERPENDICULAR TO THE WALLS OF THE ENCLOSURE. THE USE OF CONDUIT FITTINGS TO ENTER ENCLOSURES IS NOT PERMITTED, RFI THE SITUATION FOR EXCEPTION ACCEPTANCE.
- ALL RACEWAY INSTALLATIONS, CROSSING EXPANSION JOINTS OR TRANSITIONS SHALL HAVE EXPANSION OR EXPANSION/DEFLECTION TYPE FITTINGS AS SPECIFIED FOR THE APPLICATION. SEE THE DRAWINGS AND THE SPECIFICATION ON RACEWAYS FOR THE EXACT TYPE OF FITTING TO BE USED.
- NO CONDUIT SMALLER THAN 3/4" IS ALLOWED, EXCEPT WHERE REQUIRED TO ENTER A SPECIFIC DEVICE OR INSTRUMENT. POWER CONDUCTOR SHALL #12 AWG MINIMUM. CONDUCTORS SMALLER THAN #12 AWG IN DUCT BANK SHALL BE IN MULTI-CONDUCTOR CABLES. ALL CABLES ROUTED UNDERGROUND SHALL BE RATED FOR WET ENVIRONMENT.
- CONTRACTOR SHALL CONFIRM UNDERGROUND DUCTS SIZES FOR ALL UNDERGROUND DUCT BANKS TO BE SCH 80 RIGID PVC, ENCASED IN REBAR REINFORCED RED CONCRETE. CONCRETE SHALL BE DYED RED, IN THE TRUCK, BEFORE PLACEMENT. DUCT BANKS SHALL RISE VERTICALLY TO BE POURED MONOLITHIC WITH STRUCTURES, ROADWAYS OR FOUNDATIONS. DUCT BANKS SHALL NOT BE SUBJECT TO DISPROPORTIONATE SETTLING. COORDINATE ROUTING OF NEW CONDUIT AND DUCT BANKS TO AVOID INTERFERENCE WITH EXISTING CONDUIT, DUCT BANKS, AND OTHER UNDERGROUND UTILITIES.
- ALL CHANGES OF DIRECTION GREATER THAN 10 DEGREES IN UNDERGROUND DUCT BANKS SHALL BE ACCOMPLISHED USING PVC COATED RIGID ALUMINUM FACTORY BENDS. BENDS OF PVC CONDUIT GREATER THAN 10 DEGREES, OR THE USE OF FLEXIBLE CONDUIT OF ANY TYPE, IS NOT PERMITTED. SEE THE SPECIFICATIONS FOR MORE REQUIREMENTS.
- LIQUID TIGHT FLEXIBLE ALUMINUM CONDUIT SHALL BE USED FOR: THE PRIMARY AND SECONDARY OF TRANSFORMERS, DEVICE TERMINATIONS AND WHERE VIBRATION IS PRESENT. USE IN CONDUIT RUNS IS NOT PERMITTED. LIQUID TIGHT FLEXIBLE ALUMINUM CONDUIT SHALL HAVE A MAXIMUM LENGTH OF 3 FEET. THE MAXIMUM BENDING RADIUS SHALL NOT BE LESS THAN THAT SHOWN IN THE NEC CHAPTER 9, TABLE 2.
- THE WIRING DIAGRAMS, BLOCK DIAGRAMS, QUANTITY/SIZES OF WIRES/CONDUITS PRESENTED IS BASED UPON THE SELECTED DESIGN EQUIPMENT. DEVIATIONS FROM THE DESIGN CRITERIA IS ACCEPTABLE; IF SUBMITTED EQUIPMENT IS COMPLIANT WITH THE RELATED PERFORMANCE SPECIFICATIONS, IS APPROVED BY THE CITY, AND CONTRACTOR MAKES THE REQUIRED CHANGES THROUGH SUBMITTAL PROCESS WITH SUPPORTING DOCUMENTS FOR THE CHANGES REQUIRED ALL OF THIS SHALL BE AT THE CONTRACTOR'S EXPENSE. ALL MODIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL AND SHOWN IN AS BUILT DRAWINGS. THE SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFIED.
- WHERE ENVIRONMENT CONTAINS "GASES" SEAL ALL RACEWAYS ENTERING JUNCTION BOXES OR CONTROL PANELS. REFER TO THE DRAWINGS AND SPECIFICATIONS FOR DETAILS.
- ALL EQUIPMENT AND ENCLOSURE LOCATIONS ARE APPROXIMATE, BASED ON DESIGN EQUIPMENT. THE ULTIMATE EXACT LOCATIONS SHALL BE COORDINATED DURING CONSTRUCTION.
- EQUIPMENT, ENCLOSURES, TERMINAL AND JUNCTION BOX DIMENSIONS SHALL BE COORDINATED WITH ACCEPTED EQUIPMENT AND VERIFIED WITH EQUIPMENT SUPPLIERS.
- CORING OF ANY EXISTING STRUCTURE SHALL BE: XRAY RESEARCHED, SUBMITTED FOR ACCEPTANCE, AND COORDINATED WITH THE OWNER & STRUCTURAL ENGINEER.
- PROVIDE CONDUIT SEALS FOR CONDUIT PENETRATIONS AS PER NFPA 70 (NEC) AND NFPA 820.
- ALL STRUT (SLOTTED CHANNEL), WASHERS, SCREWS, NUTS, CONDUIT CLAMPS, ALL THREAD SPRING NUTS AND MISC. MOUNTING HARDWARE SHALL BE 316 STAINLESS STEEL.
- LIGHTING FIXTURES SHALL BE MOUNTED ACCORDING TO THE MOUNTING HEIGHT GIVEN ON THE DRAWINGS. THE MOUNTING HEIGHT SHALL BE MEASURED FROM THE BOTTOM OF THE LIGHTING FIXTURE TO THE FINISHED FLOOR.
- CONDUIT AND WIRE FOR THE HVAC EQUIPMENT, AND MISCELLANEOUS DEVICES, SHALL BE COORDINATED WITH HVAC REQUIREMENTS.
- ALL CONDULETS SHALL BE FORM 7 AND SHALL HAVE 316 SS CLAMP COVERS WITH 316 SS CLAMPS AND SCREWS. SCREW DOWN COVERS ARE UNACCEPTABLE. REFER TO THE SPECIFICATIONS FOR MORE INFORMATION.
- ALL BARE GROUNDING CONDUCTORS SHALL BE COPPER, ALL GROUND RODS SHALL BE 3/4" BY 10' LONG, UNLESS OTHERWISE SHOWN ON THE DRAWINGS. ALL EXPOSED COPPER GROUND CABLES SHALL BE GREEN INSULATED CONDUCTORS WITH XHHW INSULATION.

**EARLY WORK GENERAL NOTES**

- CONTRACTOR SHALL FIELD VERIFY IN THE FIRST DAYS ON SITE: THE "AS FOUND" CONDITIONS OF ELECTRICAL EQUIPMENT. THE OPERATIONAL STATUS OF EXISTING EQUIPMENT (IS IT AVAILABLE FOR SERVICE) SHALL BE ESTABLISHED WITH OPERATIONS. SITE DUCT BANKS SHALL BE RESEARCHED FOR CONDUCTOR REMOVAL AND DEMOLITION. RESULTS OF THE RESEARCH AND CONTRACTIBILITY ASSURANCE SHALL BE SUBMITTED FOR ACCEPTANCE PRIOR TO ANY DISCONNECTIONS OR INSTALLATIONS. SEE AS FOUND DOCUMENTATION NOTES ON THIS SHEET.
- A "TEMPORARY POWER PLAN" SHALL BE CREATED BY THE CONTRACTOR IN COORDINATION WITH THE YARD PIPING PHASES, TEMPORARY PUMPING AND CHEMICAL TREATMENTS REQUIRED. THE DRAWINGS PROVIDE AN ACCEPTABLE MINIMUM OF TEMPORARY SERVICE ALLOWED. SUBMIT THE PLAN UNDER SPECIFICATION 16060 FOR ACCEPTANCE PRIOR TO ANY WORK BEING DONE ON THE SITE.
- A TEMPORARY SERVICE RACK SHALL BE CONSTRUCTED, AND A "TEMPORARY" SERVICE PROVIDED. CONTRACTOR SHALL PAY FOR AND COORDINATE WITH CPE (CENTERPOINT ENERGY) FOR THE TEMPORARY SERVICE. ALL TEMPORARY FACILITIES SHALL BE INSTALLED IN COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE AND IN ACCORDANCE WITH LOCAL REQUIREMENTS.
- TEMPORARY POWER IS TO BE ROUTED OVERHEAD, FROM THE TEMPORARY SERVICE RACK, TO THE WET WEATHER LIFT STATION. A 480V AND 120V POWER PANEL SHALL BE INSTALLED IN THE LIFT STATION ELECTRICAL ROOM, SEE PLANS FOR MORE INFORMATION. TEMPORARY SUMP PUMPS, A SAFE LEVEL OF VENTILATION, AND COMPLIANT CONSTRUCTION LIGHTING SHALL BE PROVIDED POWER AND CONTROL AS REQUIRED. MODIFICATIONS TO EXISTING EQUIPMENT MAY BE MADE, FOR TRANSITION TO TEMPORARY, IF CLEARLY DEFINED IN THE "TEMPORARY POWER PLAN". WET WEATHER STATION BUILDING EXTERIOR WALL PACK CIRCUITS SHALL BE PROVIDED TEMPORARY POWER AND CONTROL, TO KEEP THE SITE SAFELY LIT. THE TWO SUMP PUMP SYSTEMS ARE TO EACH HAVE THE CONTROLLERS LOCATED ON THE MOTOR LEVEL. ENSURE A SAFE WORKPLACE, ON THE SITE AND IN THE LIFT STATION BUILDING. ALL INDOOR LIGHTING AND VENTILATION SHALL BE IN ACCORDANCE WITH OSHA SAFE WORKPLACE REQUIREMENTS.
- COORDINATE WITH OTHERS TO PROVIDE ADEQUATE TEMPORARY POWER AND CONTROLS TO THE TEMPORARY ODOR CONTROL SYSTEM. EXISTING ELECTRICAL EQUIPMENT AND COMPONENTS THAT SERVE THE EXISTING FACILITY MAY BE UTILIZED FOR TEMPORARY OPERATION.
- THE DRY WEATHER STATION WILL BE REMOVED FROM SERVICE. BYPASS OPERATION MAY REQUIRE TEMPORARY POWER OR CONTROL EQUIPMENT, DEPENDENT ON CONTRACTOR'S TEMPORARY BYPASSING PLAN, SEQUENCE SCHEDULE, MEANS AND METHODS. DURING THE DRY WEATHER LIFT STATION WET WELL STRUCTURAL REHABILITATION ALL OF THE RELATED EXISTING ELECTRICAL SHALL BE REMOVED AND REPLACED.

**AS FOUND DOCUMENTATION NOTES**

- DO NOT START WORK OR MAKE ANY MODIFICATIONS TO EXISTING EQUIPMENT UNTIL THE FOLLOWING "AS FOUND" RECORD OF CONDITION HAS BEEN DONE:
  - THE OWNER AND CONTRACTOR SHALL WALK THE SITE TOGETHER WITHNESS AND RECORD THE OPERATION CONDITION OF ALL THE EXISTING EQUIPMENT RELATED TO THIS PROJECT. THE CONTRACTOR SHALL NOTE ANY DEFECTS, DEFICIENCIES OR DEVIATIONS FROM THE DRAWINGS.
  - WRITTEN AND PHOTOGRAPHIC "AS FOUND" RECORD OF EXISTING CONDITIONS SHALL BE KEPT IN THE OWNER/CONTRACTOR TRAILER, FOR GENERAL INFORMATIONAL USAGE AND PROOF OF STATUS.
  - EXISTING CONCRETE EMBEDDED CONDUIT MAY BE USED FOR NEW CONDUCTORS WITH APPROVAL FROM THE OWNER/ENGINEER ON A CASE-BY-CASE BASIS.

**PROJECT DEMOLITION AND REMOVAL NOTES**

- THE EXISTING ELECTRIC SERVICE ENTRANCE DUCT BANK IS TO BE EXCAVATED AND CUT IN TWO PLACES, AT THE CPE TRANSFORMER AND WET WEATHER STATION, THEN RE-ROUTED THROUGH THE NEW ELECTRICAL BUILDING SERVICE EQUIPMENT.
- PROPOSED YARD PIPING WORK WILL REQUIRE DEMOLITION OF SOME OF THE EXISTING ELECTRICAL DUCT BANKS. EXISTING DUCT BANK SECTIONS THAT DO NOT REQUIRE REMOVAL MAY BE CONSIDERED FOR USAGE, SUBMIT AN RFI FOR PROPOSED WORK CONSIDERATION.
- THE DRY WEATHER STATION SHALL BE SHUT DOWN AND ALL ELECTRICAL ASPECTS REMOVED AND REPLACED. INCLUDING BUT NOT LIMITED TO: PUMPS, TERMINATION BOXES, CONDUCTORS, CONDUIT, LIGHTING, AND RELATED CONTROLS. SCADA AND CONTROL DEVICES ARE TO BE REMOVED AND REPLACED WITH ALL NEW EQUIPMENT.
- THE WET WEATHER STATION SHALL BE SHUT DOWN AND ALL ELECTRICAL ASPECTS REMOVED AND REPLACED. INCLUDING BUT NOT LIMITED TO: THE MAIN SWITCHGEAR, THE MOTOR CONTROL CENTERS, PANEL BOARDS, DISCONNECTS, TRANSFORMERS ALL CONDUCTORS, LIGHTING, HVAC, VENTILATION, AND RELATED CONTROLS. THE SITE SCADA CONTROL PANELS ARE TO BE REMOVED AND REPLACED WITH ALL NEW EQUIPMENT. THE LOWER (PUMP) LEVEL OF THE WET WEATHER STATION DRY WELL, HAS FLOODED MULTIPLE TIMES. IN ADDITION TO ALL THE CONDUCTORS, DEVICES, EXPOSED CONDUIT, SUPPORTS, AND ANCHORS BEING REMOVED AND REPLACED WITH NEW THE EXISTING SUMP PUMP POWER AND CONTROL CONNECTIONS ARE TO BE RELOCATED TO THE MOTOR LEVEL.
- SITE LIGHTING, ODOR CONTROL AND CHEMICAL SYSTEMS EQUIPMENT REMOVAL INCLUDES BUT IS NOT LIMITED TO; POLE TYPE SITE LIGHTING, DISCONNECTS, TERMINATION BOXES, CONTROL PANELS, GROUNDING SYSTEM AND MISCELLANEOUS ELECTRICAL EQUIPMENT. ALL DEVICES, ALL CONDUCTORS, ALL EXPOSED OUTDOOR CONDUIT, ALL SUPPORTS, AND ANCHORS ARE TO BE REMOVED AND REPLACED WITH NEW.
- THE DRAWINGS ILLUSTRATE THE ENGINEER'S INTENT AND GENERALLY SCOPE THE DEMOLITION WORK. FOR DRAWING CLARITY NOT ALL ITEMS TO BE REMOVED MAY BE SHOWN. ALL REMOVALS SHALL BE COORDINATED WITH OTHER TRADES AND THE CONSTRUCTION SCHEDULE.
- THE OWNER SHALL WALK THE SITE DEMOLITION, WITH THE CONTRACTOR, AND HAS FIRST RIGHT OF REFUSAL TO THE EQUIPMENT BEING REMOVED. THE CONTRACTOR SHALL DELIVER THE EQUIPMENT, THE OWNER WISHES TO RETAIN, TO THE LOCATION DESIGNATED BY THE OWNER IN THE SPECIFICATIONS.

**WORK SCOPE GENERAL DESCRIPTION**

- COORDINATE, SUBMIT, AND INSTALL COMPLETE TEMPORARY FACILITIES SYSTEMS TO SUPPORT; THE WET WEATHER STATION, REHABILITATION, THE CONTRACTOR'S CONSTRUCTION TEMPORARY, LIFT STATION BYPASS AND REQUIRED SYSTEMS. COMPLETELY REMOVE ALL TEMPORARY FACILITIES AFTER COMPLETION OF PROPOSED FACILITIES AND ACCEPTANCE OF THEM.
- THE PROPOSED ELECTRICAL BUILDING ELECTRICAL EQUIPMENT IS TO PROVIDE BOTH PORTABLE, AND PERMANENT GENERATOR CONNECTION CAPABILITY. IT WILL ALSO HOUSE NEW DRY WEATHER LIFT STATION ELECTRICAL AND SCADA EQUIPMENT. THE WET WEATHER STATION, NEW CHEMICAL FACILITY, NEW FLOW CONTROL STATION, NEW ODOR CONTROL FACILITY AND PROPOSED SITE LIGHTING SYSTEM SHALL ALSO BE FED FROM THE NEW ELECTRICAL BUILDING.
- SCADA SERVICE UNDERGROUND, TO THE SITE, IS TO BE EXCAVATED, INTERCEPTED AND ROUTED THROUGH THE NEW SCADA CONTROL PANEL IN THE NEW ELECTRICAL BUILDING.
- THE DRY WEATHER STATION SHALL BE PROVIDED A COMPLETE ELECTRICAL RESTORATION, ALL NEW PUMPS, CABLE SUPPORTS, SEALS, INSTRUMENTS, FLOATS, AND TERMINATION BOXES. ALL NEW EXPOSED CONDUIT, TAGS, SUPPORTS, FLEXIBLE FINAL CONNECTIONS, NAMEPLATES AND LABELS. THE NEW DRY WEATHER STATION LIFT PUMPS SHALL BE POWERED AND CONTROLLED FROM THE NEW ELECTRICAL BUILDING. CONTRACTOR SHALL PROVIDE A COMPLETE AND WORKING, SCADA INTEGRATED, PUMP SYSTEM.
- THE WET WEATHER STATION SHALL BE PROVIDED A COMPLETE ELECTRICAL RESTORATION, ALL NEW SWITCHGEAR, MOTOR CONTROLLER EQUIPMENT, PANELBOARDS, TRANSFORMERS, HVAC STARTING EQUIPMENT, AND MISCELLANEOUS BUILDING IMPROVEMENTS. THE VERTICAL SHAFT DRIVEN PUMPS ARE TO BE REMOVED AND THE NEW DRY PIT SUBMERSIBLE PUMPS ARE TO BE RELOCATED, COORDINATE NEW CONDUIT EXACT ROUTE WITH MECHANICAL. DRY PIT SUBMERSIBLE FACTORY PUMP CABLE ROUTE AND SUPPORTS SHALL BE COORDINATED WITH STRUCTURAL AND MECHANICAL. NEW INSTRUMENTS, FLOATS, AND TERMINATION BOXES SHALL BE PROVIDED. ALL NEW EXPOSED CONDUIT, TAGS, SUPPORTS, FLEXIBLE FINAL CONNECTIONS, NAMEPLATES AND LABELS. CONTRACTOR SHALL PROVIDE A COMPLETE AND WORKING, SCADA INTEGRATED, PUMP SYSTEM.
- NEW DUCT BANK SHALL SUPPLY THE PROPOSED CHEMICAL STORAGE AND FEED FACILITIES POWER AND CONTROL, FROM THE PROPOSED ELECTRICAL BUILDING. CONTRACTOR SHALL PROVIDE A COMPLETE AND WORKING, SCADA INTEGRATED, CHEMICAL STORAGE AND FEED SYSTEM.
- NEW DUCT BANK SHALL FEED THE PROPOSED FLOW CONTROL STATION. IT SHALL IS TO BE PROVIDED WITH NEW MODULATING CONTROL VALVES, A FLOW METER AND ALL INSTRUMENTS REQUIRED. CONTRACTOR SHALL PROVIDE A COMPLETE AND WORKING, SCADA INTEGRATED, FLOW CONTROL STATION.
- NEW DUCT BANK SHALL FEED THE NEW ODOR CONTROL FACILITIES IS TO BE PROVIDED NEW DUCT BANK TO THE CONTROL BUILDING. AN EQUIPMENT RACK AND ODOR CONTROL PANEL ARE TO BE COORDINATED. THE EXISTING ODOR CONTROL SYSTEM IS TO BE REMOVED AND RELOCATED FOR TEMPORARY SERVICE, PROVIDE ALL TEMPORARY FOR THIS TASK EARLY.
- GENERAL SITE IMPROVEMENTS INCLUDE BUT ARE NOT LIMITED TO GROUNDING, TEST WELLS SHALL BE REMOVED AND REPLACED AS SHOWN. GROUNDING CABLE SYSTEM SHALL BE REPLACED THROUGH THE CONSTRUCTION PHASES. FENCE GROUNDING, TO THE PROPOSED FENCE SYSTEM SHALL BE PROVIDED ALL NEW HARDWARE. SITE LIGHTING INCLUDING BUT NOT LIMITED TO NEW LIGHTING CONTROL PANEL, NEW LED SITE LIGHT FIXTURES, WITH CONVENIENCE OUTLETS AS SHOWN.

NO.	DATE	REVISIONS	APP.

**NOTICE:**  
 FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811

VERIFICATION OF PRIVATE UTILITY LINES

Date:

CenterPoint Energy natural gas utilities shown. (Gas services lines are not shown. This signature not to be used for conflict verification. Signature Valid for six months.

Date:

CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY. (This Signature verifies existing underground facilities - not to be used for conflict verification.) Signature Valid for six months.

Date:

Approved by AT&T Texas / SWBT underground conduit facilities only. Signature valid for one year.

**KGI**  **Kalluri Group, Inc.** TBPE Registration No. F-665  
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 PROJECT 4285

**QUIDDITY**   
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

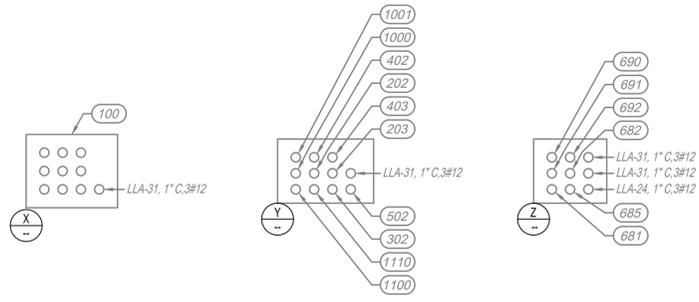
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
 ELECTRICAL

**CONSTRUCTION NOTES**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. <b>0-E-03</b>	
SHEET NO. XXX OF XX	



EXISTING DUCT BANK

SECTIONS  
NONE

THE EXISTING DUCT BANK SECTIONS ARE PROVIDED FOR BIDDING AND GENERAL INFORMATION, NONE OF THE EXISTING DUCT BANK CAN BE CONSIDERED FOR PROPOSED WORK

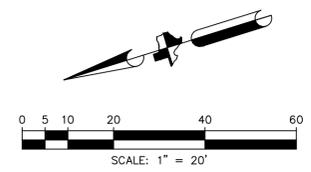
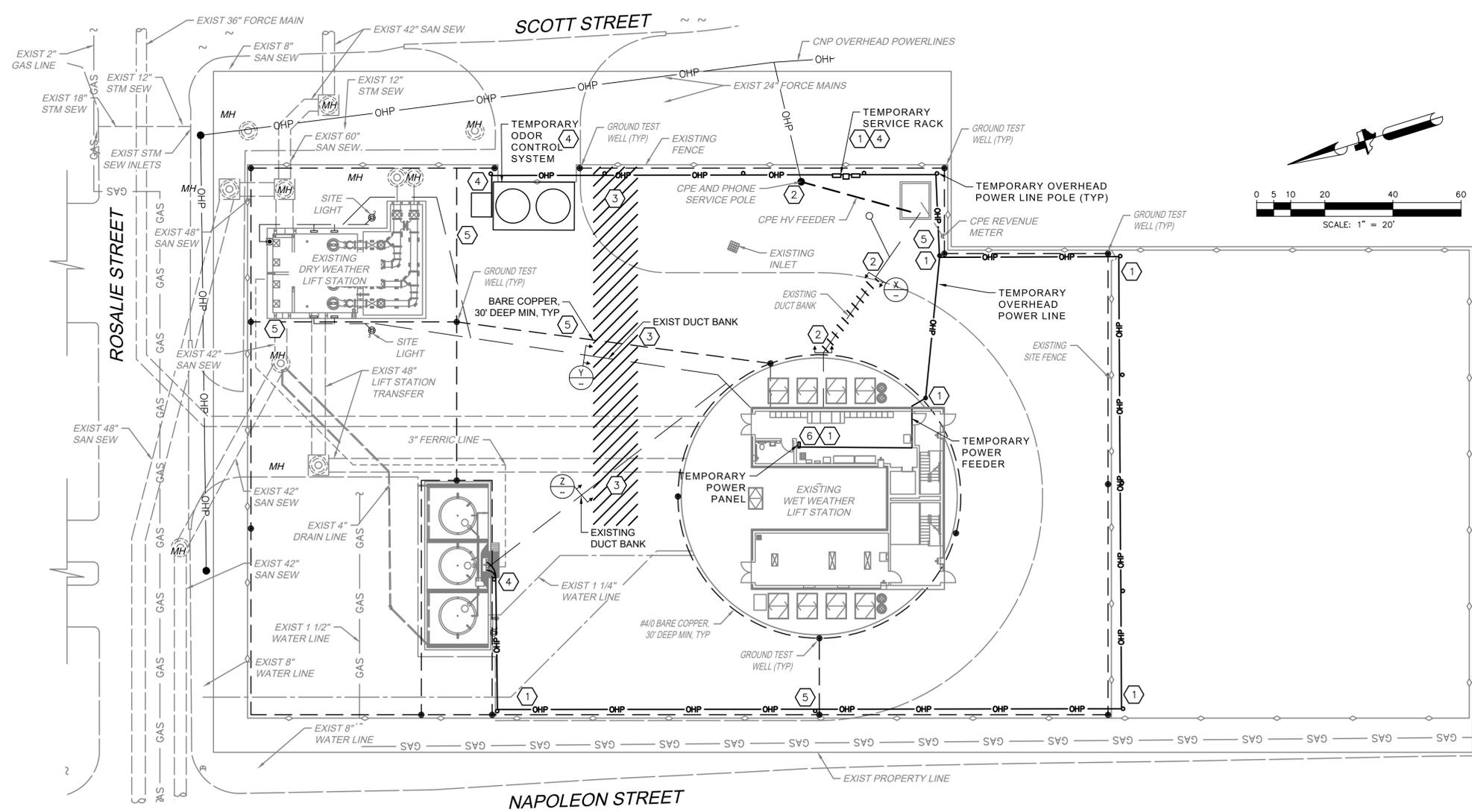
ELECTRICAL TASKS NOTES:

- 1 A TEMPORARY POWER RACK AND OVERHEAD LINE SYSTEM WILL BE REQUIRED FOR POWER, CONTROL AND SCADA TO FEED CRITICAL SYSTEMS. CONSTRUCTION AND TESTING POWER, UPON INSTALLATION OF THE TEMPORARY SERVICE AND DISTRIBUTION CONTRACTOR SHALL COORDINATE TO HAVE THE EXISTING CPE ELECTRIC UTILITY SERVICE DE-ENERGIZED. CONDUCTORS SHALL BE DISCONNECTED, REMOVED AND REPLACED TO ACCOMPLISH THE VARIOUS CONSTRUCTION PHASES REQUIRED.
- 2 THE EXISTING ELECTRIC SERVICE UNDERGROUND FEEDERS SHALL BE LOCATED AT THE EAST EDGE OF THE ROADWAY AND AT THE LIFT STATION STRUCTURE. THE SERVICE FEEDER DUCT BANK IS TO BE INTERCEPTED AND REROUTED THROUGH THE NEW ELECTRICAL BUILDING SWITCHGEAR.
- 3 COORDINATE EARLY PHASE WORK WITH YARD PIPING, WILL EXCAVATE THIS AREA. THE DRY WEATHER LIFT STATION DUCT BANK SHALL BE PROVIDED TEMPORARY SUPPORT TO SPAN THE WIDE AND DEEP EXCAVATION. THE DRY WEATHER LIFT STATION SHALL REMAIN IN SERVICE; THE DUCT BANK, POWER, INSTRUMENTS, AND FLOATS ARE TO BE REMOVED AND REPLACED IN A LATER PHASE.
- 4 EARLY PHASE WORK WILL REQUIRE THE EXISTING ODOR CONTROL FACILITY TO BE PROVIDED TEMPORARY POWER, WHERE IT EXIST. IN ANOTHER PHASE IT IS TO BE DISCONNECTED, RELOCATED AND CONNECTED TO TEMPORARY FACILITIES FOR AN EXTENDED PERIOD OF SERVICE. COORDINATE LOCATION OF TEMPORARY PROVISIONS AND INCLUDE IN PROJECT "TEMPORARY FACILITIES PLAN".
- 5 SITE GROUNDING WILL REQUIRE CUTTING FOR PROPOSED YARD PIPING AND WILL REQUIRE REPAIRS THROUGH ALL PHASES OF CONSTRUCTION.
- 6 THE CONTRACTOR SHALL PROVIDE A TEMPORARY POWER PANEL IN THE LIFT STATION ELECTRICAL ROOM TO SERVE TEMPORARY LIGHTING, TEMPORARY VENTILATION, SUMP PUMPS, CRITICAL EQUIPMENT, CONTROL AND SCADA CIRCUITS. SEE EXISTING WET WEATHER PUMP STATION DRAWINGS FOR MORE INFORMATION. SEE O-E-05 AND EXISTING WET WEATHER STATION PLANS FOR MORE INFORMATION.

GENERAL ELECTRICAL NOTES:

- A. THIS DRAWING ILLUSTRATES THE EXISTING SITE AND EARLY ELECTRICAL TASKS FOR TEMPORARY POWER. IT DESCRIBES EQUIPMENT TO BE REMOVED, RELOCATED, AND REPLACED IN THIS PROJECT. SEE WET WEATHER PUMP STATION DRAWINGS FOR EQUIPMENT REMOVALS AND TEMPORARY REQUIREMENTS. SEE DIVISION 16 SPECIFICATIONS FOR ALL WORK AND EQUIPMENT REQUIREMENTS. ALL TEMPORARY CONDUIT AND CONDUCTORS, FOR ALL SYSTEMS IS TO BE INSTALLED IN COMPLIANCE WITH THE NEC ARTICLE 590.
- B. PRIOR TO START OF WORK THE CONTRACTOR SHALL DOCUMENT THE OPERATIONAL STATUS OF ALL SITE LIGHTING, EQUIPMENT TO BE PROVIDED TEMPORARY PROVISIONS OR REMOVED FROM SERVICE. THE OPERATIONAL STATUS, OF ALL EQUIPMENT ON SITE IS TO BE CONFIRMED WITH OPERATIONS PRIOR TO START OF WORK. TO ENSURE THERE ARE NO SURPRISES LATER, EQUIPMENT THAT IS NOT FUNCTIONAL AT START OF THE PROJECT IS TO BE DOCUMENTED IN AN "AS FOUND" SHOP DRAWING SUBMITTAL. SEE SPECIFICATION 16060 FOR SUBMITTAL REQUIREMENT. PATH OF POWER, CONTROL AND SCADA CIRCUITS SHALL BE CONFIRMED PRIOR TO INSTALLATION OF TEMPORARY OR REMOVAL FROM AVAILABILITY.
- C. CONTRACTOR SHALL NOTIFY THE CITY CONSTRUCTION REPRESENTATIVE, UPON DISCOVERY, OF ANY CONCEALED DEVIATIONS FROM THE DRAWINGS EXPOSED AFTER "AS FOUND" DOCUMENT SUBMITTAL.
- D. CONTRACTOR HAS TASKS, IN THIS PROJECT, IN NEAR PROXIMITY TO CNP OVERHEAD POWER LINES. CONTRACTOR SHALL FOLLOW NEC AND CNP STANDARDS FOR SAFE WORKING DISTANCE, TEMPORARY SIGNAGE AND PROCEDURES.
- E. TEMPORARY PROVISIONS INCLUDE SITE LIGHTING, POWER, CONTROLS, SCADA AND COMMUNICATIONS. IF THE EXISTING DRY WEATHER PUMP STATION IS IN SERVICE AND EXISTING SITE LIGHTING POLES 2 AND 3 CANNOT BE KEPT ON WITH TEMPORARY PROVISIONS, THE CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTING FOR THE DRY WEATHER PUMP STATION.

NO.	DATE	REVISIONS	APP.



OVERALL SITE AND TEMPORARY  
PLAN  
1" = 20'-0"

**NOTICE:**  
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VERIFICATION OF PRIVATE UTILITY LINES

Date: \_\_\_\_\_

CenterPoint Energy natural gas utilities shown.  
(Site services listed are not shown. This signature not to be used for conflict verification.)

Signature Valid for six months.

Date: \_\_\_\_\_

CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY.  
(This Signature verifies existing underground facilities - not to be used for conflict verification.)

Signature Valid for six months.

Date: \_\_\_\_\_

Approved by AT&T Texas / SWBT underground conduit facilities only.  
Signature valid for one year.

Approved by \_\_\_\_\_

**KGI** TBPE Registration No. F-665  
16300 Katy Freeway, Suite 172  
Houston, Texas 77094  
Phone: (713)-365-9288  
PROJECT 4285

**Kalluri Group, Inc.**

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

DESIGNED BY: \_\_\_\_\_

DRAWN BY: \_\_\_\_\_

SURVEYED BY: \_\_\_\_\_

FB NO. XXXXXX

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JANUARY 19, 2026  
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
LIFT STATION REHABILITATION  
ELECTRICAL**

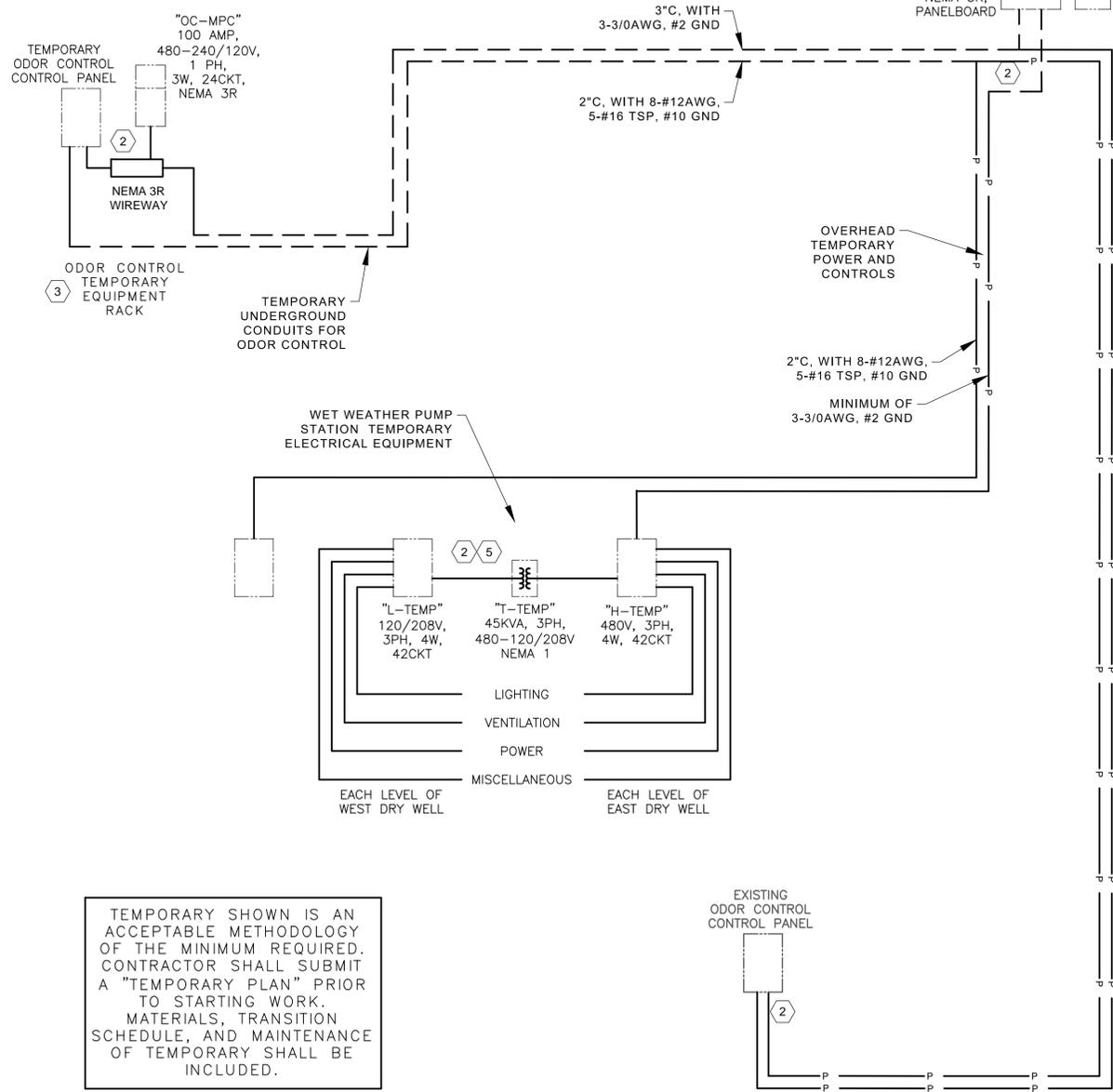
**OVERALL SITE AND  
TEMPORARY PLAN**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 0-E-04	
SHEET NO. XXX OF XX	

NO.	DATE	REVISIONS	APP.

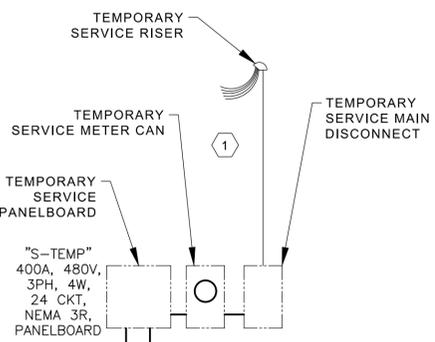
**NOTES:**

- CONTRACTOR SHALL COORDINATE THE TEMPORARY ELECTRIC UTILITY SERVICE WITH CENTERPOINT ENERGY. THE EXISTING SERVICE SHALL DE-ENERGIZED EARLY IN THE THE PROJECT. ESTABLISHING THE TEMPORARY FACILITIES IS REQUIRED PRIOR TO START OF DEMOLITION WORK.
- UNDERGROUND CONDUIT, EXPOSED CONDUIT, TEMPORARY RACKS, AND AN OVERHEAD LINE SYSTEM IS REQUIRED FOR POWER, CONTROL AND SCADA TO FEED CRITICAL SYSTEMS, DURING CONSTRUCTION, TESTING AND ACCEPTANCE.
- THE EXISTING ODOR CONTROL CHEMICAL FACILITY IS TO BE PROVIDED TEMPORARY WHERE IT EXIST. THEN DISCONNECTED, RELOCATED AND CONNECTED TO TEMPORARY FACILITIES FOR AN EXTENDED PERIOD OF TEMPORARY SERVICE.
- THE CONTRACTOR SHALL PROVIDE A TEMPORARY POWER PANEL IN THE LIFT STATION ELECTRICAL ROOM TO SERVE TEMPORARY LIGHTING, TEMPORARY VENTILATION, SUMP PUMPS, CRITICAL EQUIPMENT, CONTROL AND SCADA CIRCUITS. THE PANEL SHALL REMAIN IN SERVICE DURING THE ENTIRE CONSTRUCTION PROCESS. NEW FACILITIES ARE TO BE IN SERVICE CONCURRENTLY WITH TEMPORARY FACILITIES THROUGH TESTING AND COMMISSIONING.



TEMPORARY SHOWN IS AN ACCEPTABLE METHODOLOGY OF THE MINIMUM REQUIRED. CONTRACTOR SHALL SUBMIT A "TEMPORARY PLAN" PRIOR TO STARTING WORK. MATERIALS, TRANSITION SCHEDULE, AND MAINTENANCE OF TEMPORARY SHALL BE INCLUDED.

**TEMPORARY SITE POWER  
DIAGRAM**  
NONE



**TEMPORARY SYSTEMS NOTES:**

- THIS DRAWING IS PROVIDED TO ILLUSTRATE AND DEFINE THE MINIMUM TEMPORARY CENTERPOINT ELECTRIC SERVICE REQUIRED FOR PROJECT CONSTRUCTION POWER. DATA FOR THE TEMPORARY EQUIPMENT, REQUIRED TO SERVE THE CONSTRUCTION, CONDUIT AND CONDUCTORS ARE ALSO SHOWN. NOT ALL TEMPORARY POWER REQUIRED FOR THE CONTRACTOR'S NEEDS ARE ILLUSTRATED HERE, OFFICE TRAILERS, FABRICATION AREAS AND CONTRACTOR SECURITY POWER MAY UTILIZE THIS SERVICE. CONTRACTOR SHALL CALCULATE THE TOTAL TEMPORARY REQUIRED AND ADJUST EQUIPMENT TO TOTAL NEEDS. ALL TEMPORARY FACILITIES SHALL BE PROVIDED AND INSTALLED IN COMPLIANCE WITH CENTERPOINT SERVICE STANDARDS, OSHA AND NEC ARTICLE 590.
- TEMPORARY PROVISIONS REQUIRED INCLUDE BUT ARE NOT LIMITED TO POWER (480V & 120V), CONTROLS (TEMPORARY STARTERS/CONTACTORS), SCADA (PLC I/O) AND COMMUNICATIONS (CAT5 OR FIBER) FOR FACILITY TEMPORARY ODOR CONTROL SYSTEM SUPPORT SHALL ALL BE PROVIDED.
- "CONSTRUCTION" TEMPORARY IS ALSO REQUIRED IN THE WET WEATHER STATION FOR OSHA WORKPLACE SAFETY. EXTENSION CORDS SHALL NOT BE ROUTED DOWN STAIRWELLS DURING CONSTRUCTION, EXISTING PANELBOARD CIRCUIT CONDUIT AND CONDUCTORS MAY BE PROVIDED TEMPORARY CONNECTION FOR CONVENIENCE POWER. EXISTING LIGHTING SHALL NOT BE USED FOR TEMPORARY. IT IS NOT ADEQUATE FOR CONSTRUCTION. "STRINGS" OF TEMPORARY LIGHTING ARE REQUIRED IN STAIRWAYS AND ON EACH LEVEL OF THE STATION. TEMPORARY CONNECTION TO SITE LIGHTING IS REQUIRED. DUCT BANKS ARE TO BE REMOVED AND SITE LIGHTING SHALL BE MAINTAINED.
- TWO TEMPORARY LOWER LEVEL SUMP PUMPING SYSTEMS SHALL BE PROVIDED TO MAINTAIN A DRY LOWER LEVEL, NO ADDITIONAL FUNDS SHALL BE ALLOWED FOR THESE TEMPORARY FACILITIES.
- A CONTINUOUSLY OPERATIONAL OSHA COMPLIANT TEMPORARY VENTILATION SYSTEM SHALL BE PROVIDED, FOR DURATION OF CONSTRUCTION, TO SERVE ALL LEVELS OF THE DRY WELL.
- CONTRACTOR SHALL NOTIFY PROJECT MANAGEMENT, UPON DISCOVERY, OF ANY DEVIATIONS FROM THE CONTRACT DRAWINGS, EXPOSED IN "AS FOUND" RESEARCH.
- CONTRACTOR HAS TASKS, IN THIS PROJECT, IN NEAR PROXIMITY TO CNP OVERHEAD POWER LINES. CONTRACTOR SHALL FOLLOW NEC AND CNP STANDARDS FOR SAFE WORKING DISTANCE, INCLUDING TEMPORARY OVERHEAD SIGNAGE AND PROCEDURES.

THE EXISTING PANELBOARD SCHEDULE IS SHOWN FOR GENERAL INFORMATION AND USAGE FOR TEMPORARY CONNECTIONS.

**EXISTING PANEL "LLA"**

CKT. DESCRIPTION	LOAD	BKR.	A	B	C	BKR.	LOAD	CKT. DESCRIPTION
ELECTRICAL ROOM LIGHTING	800	20	1		2	20	600	STAIRWELL LIGHTING
ELECTRICAL ROOM LIGHTING	800	20	3		4	20	500	DRAIN PUMP & STORAGE LIGHTING
ELECTRICAL ROOM RECEPTACLES	1200	20	5		6	20	400	DRAIN PUMP & STORAGE RECEPT
MECHANICAL ROOM LIGHTING	800	20	7		8	20	800	MCC SPACE HEATERS
MECHANICAL RM EXIT/EMER LIGHTS	600	20	9		10	20	-	ELECTRICAL ROOM AIR COMPRESSOR
MECHANICAL ROOM RECEPTACLES	1200	20	11		12	20	800	BATHROOM BASEBOARD HEATER
MOTOR ROOM WEST LIGHTING	1400	20	13		14	20	1500	HOT WATER HEATER
MOTOR ROOM WEST RECEPTACLES	400	20	15		16	20	500	IRRIGATION CONTROLLER
MOTOR ROOM EAST LIGHTING	1400	20	17		18	30	500	TEMPURATURE CONTRL TCP-1
MOTOR ROOM EAST RECEPTACLES	400	20	19		20	30	1500	DRINKING WATER FOUNDATION
PUMP ROOM WEST LIGHTING	1100	20	21		22	20	1000	AIR HAND DRYER
PUMP ROOM WEST RECEPTACLES	400	20	23		24	20	600	CHEMICAL FEED SYSTEM
PUMP ROOM EAST LIGHTING	1100	20	25		26	20	600	EXHAUST FANS 5&6
PUMP ROOM EAST RECEPTACLES	400	20	27		28	20	400	EXHAUST FANS 7&8
OUTDOOR BUILDING LIGHTING	800	20	29		30	20	-	LIGHTING CONTROLS
OUTDOOR SITE LIGHTING	1000	20	31		32	20	-	ELEVATOR CAB LIGHTING
ELEVATOR EQUIP RM A/C UNIT	400	20	33		34	20	-	ELEVATOR PIT LIGHTING
SPARE	600	20	35		36	20	900	SPARE
WET WEATHER CONTROL PANEL	900	20	37		38	20	-	SPARE
UPS SYSTEM	1800	20	39		40	20	-	SPARE
LEVEL TRANSMITTERS	-	20	41		42	20	-	SPARE

**EXISTING PANELBOARD LLA  
CIRCUIT SCHEDULE**  
NONE

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VERIFICATION OF PRIVATE UTILITY LINES  
Date:

CenterPoint Energy natural gas utilities shown. (Site services lines are not shown. This signature not to be used for conflict verification.)  
Signature Valid for six months.  
Date:

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Date:

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Phone: (713)-365-9288  
PROJECT 4285

**Kalluri Group, Inc.**

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY:  
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DESIGNED BY:  
DRAWN BY:  
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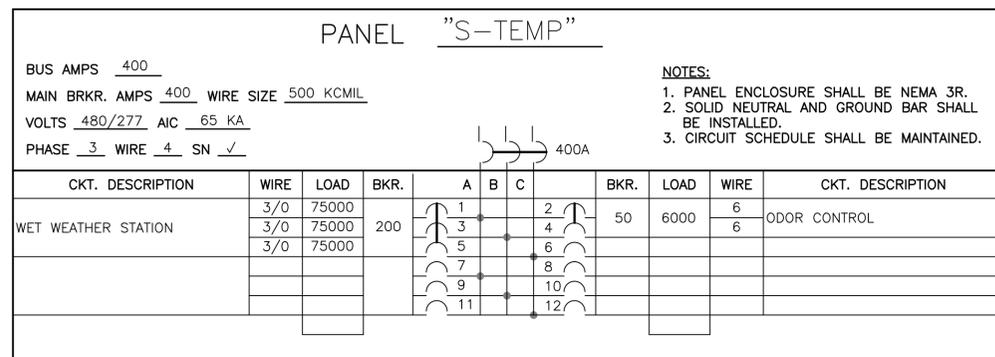
**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
LIFT STATION REHABILITATION  
ELECTRICAL  
TEMPORARY SITE POWER  
RISER DIAGRAM**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 0-E-05	
SHEET NO. XXX OF XX	

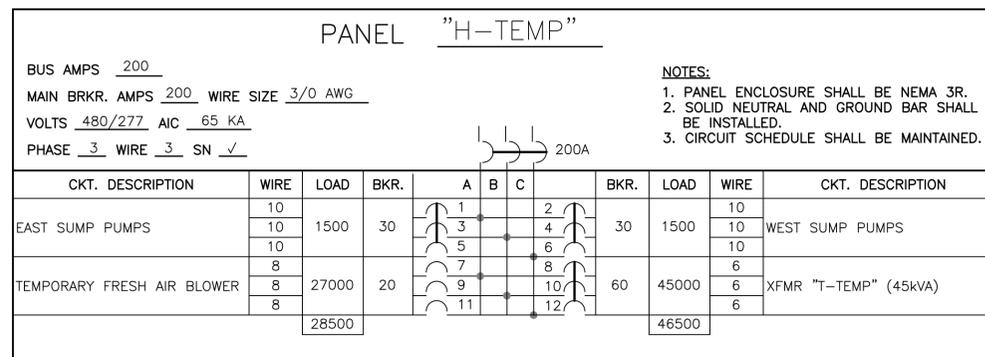
NO.	DATE	REVISIONS	APP.

"S-TEMP" TEMPORARY SERVICE  
 PANELBOARD IS TO BE LOCATED ON A  
 RACK NEAR THE TEMPORARY ELECTRICAL  
 SERVICE



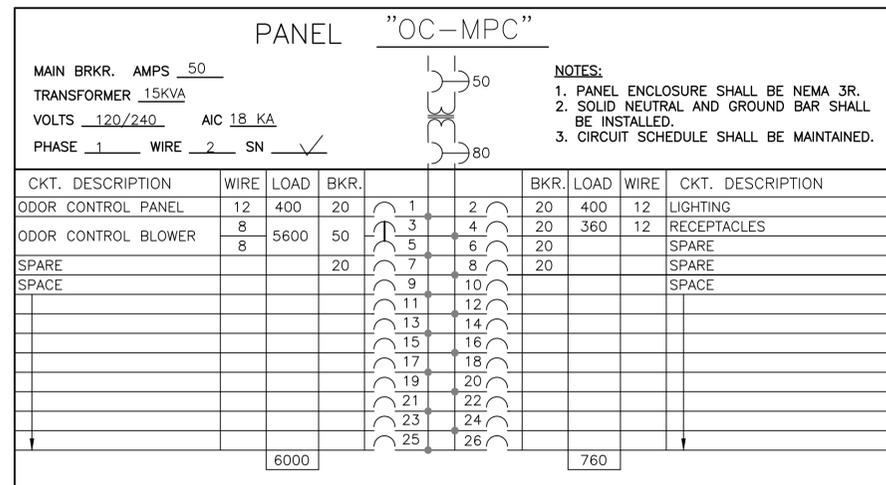
TOTAL VA = 81,000  
 81 KVA AT 3 PHASE 480V = 97.4 AMPS  
 THE CONDUCTORS, PANEL, AND MAIN BREAKER ARE  
 ALL RATED PROPERLY TO SERVE THE LOAD

"H-TEMP" TEMPORARY PANELBOARD IS TO  
 BE LOCATED ON A RACK (NOT A WALL)  
 IN THE WET WEATHER STATION  
 ELECTRICAL ROOM



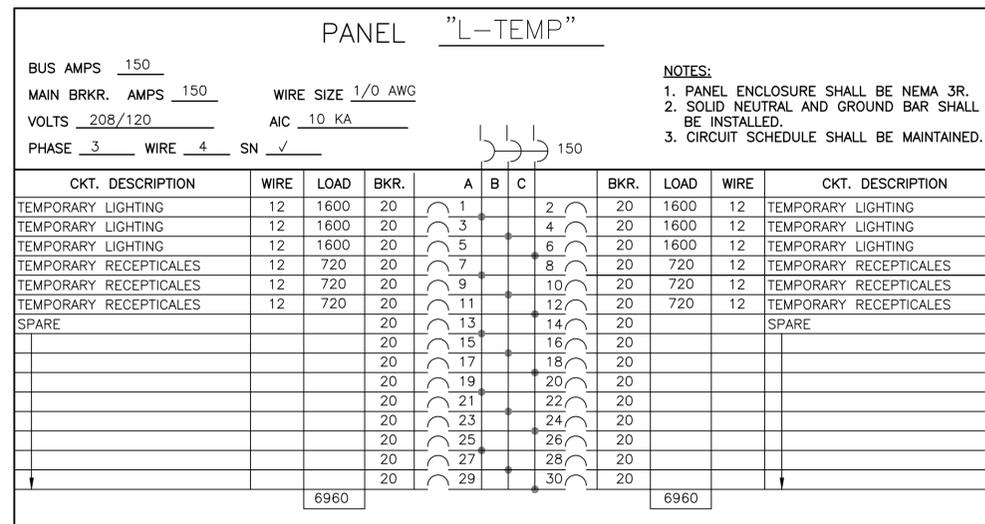
TOTAL VA = 75,000  
 75 KVA AT 3 PHASE 480V = 90.2 AMPS  
 THE CONDUCTORS, PANEL, AND MAIN BREAKER ARE  
 ALL RATED PROPERLY TO SERVE THE LOAD

"OC-MPC" TEMPORARY MINI-POWER  
 CENTER PANELBOARD IS TO BE LOCATED  
 AT THE TEMPORARY ODOR CONTROL  
 EQUIPMENT RACK



TOTAL VA = 6,760  
 6.8 KVA AT 240V = 28.3 AMPS  
 THE CONDUCTORS, PANEL, AND MAIN BREAKER ARE  
 ALL RATED PROPERLY TO SERVE THE LOAD

"L-TEMP" TEMPORARY PANELBOARD IS TO  
 BE LOCATED ON A RACK (NOT A WALL)  
 IN THE WET WEATHER STATION  
 ELECTRICAL ROOM



TOTAL VA = 13,920  
 13.92 KVA AT 240V = 33.5 AMPS  
 THE CONDUCTORS, PANEL, AND MAIN BREAKER ARE  
 ALL RATED PROPERLY TO SERVE THE LOAD

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 (Gas services listed are not shown. This signature not to be used for conflict verification.)  
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Date: \_\_\_\_\_  
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**KGI** **Kalluri Group, Inc.** TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
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 SURVEYED BY: \_\_\_\_\_  
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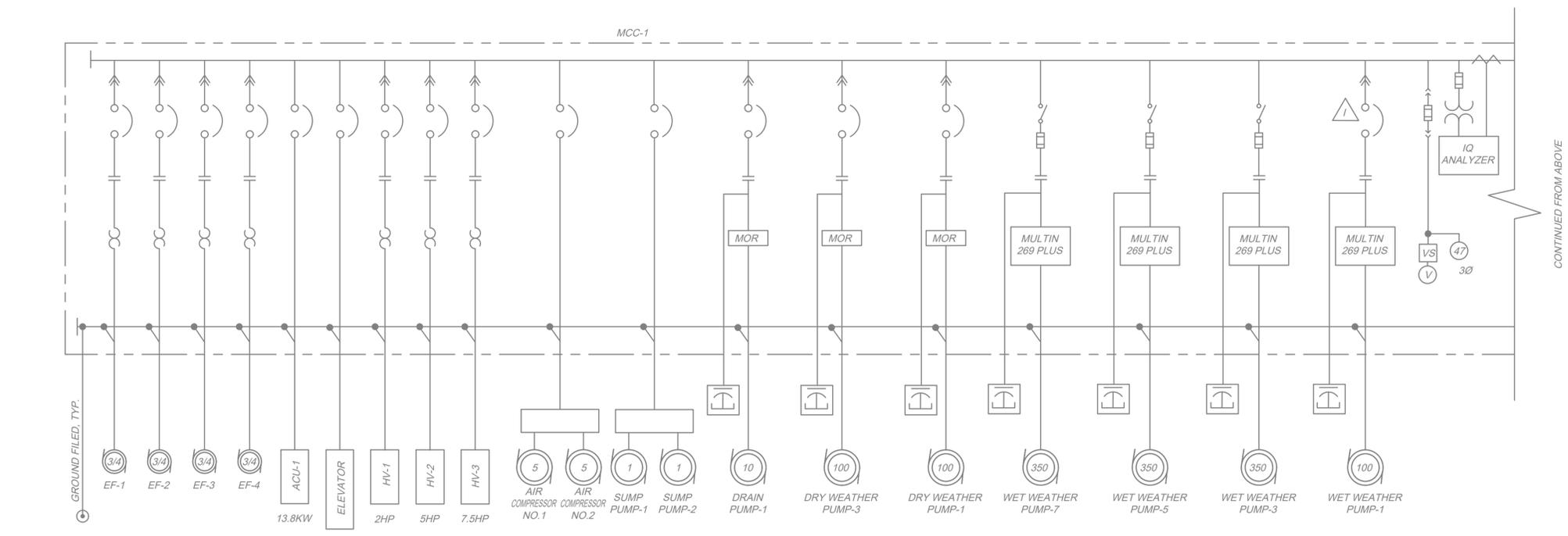
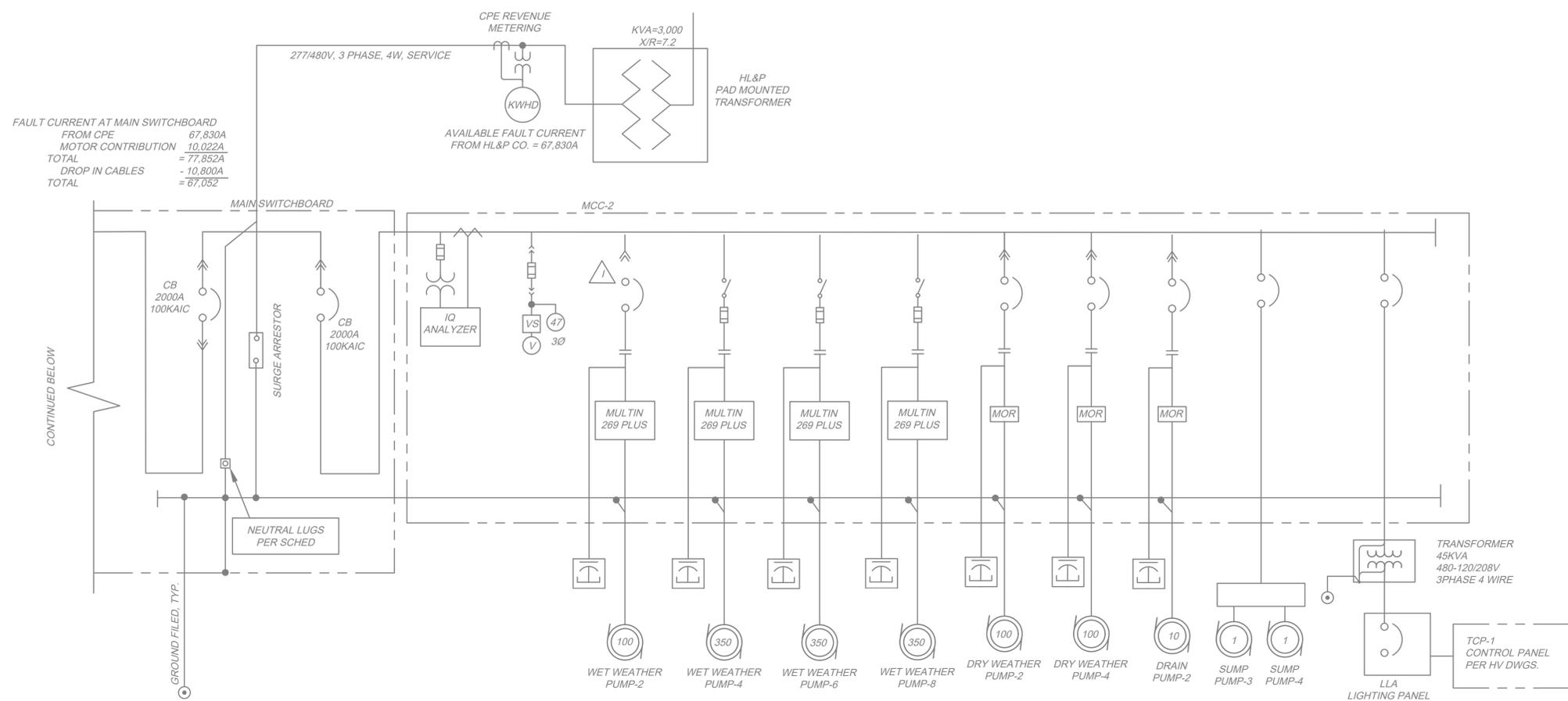
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
 LIFT STATION REHABILITATION  
 ELECTRICAL  
 TEMPORARY PANELBOARD  
 SCHEDULES**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. <b>0-E-06</b>	
SHEET NO. XXX OF XX	

NO.	DATE	REVISIONS	APP.



EXISTING OVERALL ONE LINE  
**DIAGRAM**  
NONE

- GENERAL NOTES:**
- A. THIS OVERALL ONE LINE DIAGRAM ILLUSTRATES THE EXISTING ELECTRICAL SYSTEM. ALL OF THE ELECTRICAL EQUIPMENT IS TO BE REMOVED AND REPLACED. IT DOES NOT SHOW ALL EQUIPMENT TO BE REMOVED, AND IS SIMPLIFIED, IT PROVIDES FAMILIARITY WITH THE PROJECT.
  - B. CONTRACTOR SHALL PROVIDE EXTENDED CONTINUOUS TEMPORARY POWER FOR, BUT NOT LIMITED TO; SITE ODOR CONTROL, SITE LIGHTING, WET WEATHER STATION INTERIOR LIGHTING, OSHA COMPLIANT DRY WELL VENTILATION, AND CONSTRUCTION TOOLS DURING THE BYPASS PUMPING POWER OUTAGES.
  - C. THE EAST AND WEST DRY WELL SUMP PUMPS SHALL BE DISCONNECTED FROM EXISTING POWER AND PROVIDED TEMPORARY POWER.

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 PROJECT 4285

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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
LIFT STATION REHABILITATION  
ELECTRICAL  
**OVERALL ONE LINE DIAGRAM - EXISTING**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 0-E-07	
SHEET NO. XXX OF XX	

TAG	DESCRIPTION	ROUTING		CONDUIT & WIRE SIZES
		FROM	TO	
A	MAIN BONDING JUMPER	MCC NEUTRAL	MCC GROUND	#4/0 CU
B	EQUIPMENT BONDING JUMPER	MCC GROUND	MCC ENCLOSURE	#4/0 CU
100	SERVICE ENTRANCE	HL&LP SERVICE	MOTOR CONTROL CENTER	3 #750 MCM, #2/0 NEUT & #2/0 GND IN EA OF 9 - 4" RGS
101	LIGHTING DOWN LEAD, TYP	LIGHTNING ARRESTOR	LIGHTNING GROUND FIELD	#2/0 LIGHTING DOWN LEAD
102	TELEPHONE SERVICE	SWB SERVICE (35 KV TERMINAL POLE)	TELEP-ONE TERMINAL CABINET	2" PVC RGS - TELEPHONE
200	DRY WEATHER PUMP NO.1 POWER	DRY WEATHER PUMP NO.1	PUMP NO.1 TERMINAL CABINET	3/C #2/0 8, #6 GND CABLE-3 PVC RGS PER PUMP MFG CABLE SIZE
201	DRY WEATHER PUMP NO.1 CONTROLS	DRY WEATHER PUMP NO.1	PUMP NO.1 TERMINAL CABINET	9/C #14 (8 CONTROL - GND)1 1/2" PVC RGS NOTES2
202	DRY WEATHER PUMP NO.1 POWER	DRY WEATHER PUMP NO.1 TERMINAL CABINET	PUMP STARTER	3 #2/0 & #6 GND- 3" RGS
203B	DRY WEATHER PUMP NO.1 CONTROLS	TERMINAL CABINET	PUMP STARTER	7 #14 (4 CONTROL, 1 GND & 2 SPARE)-1" PVC GRGS
204	DRY WEATHER PUMP NO.1 CONTROLS	STARTER N MOTOR CONTROL CENTER	172-LCP-1 CONTROL PANEL	1 SHIELDED PAR #16- 3/4" RGS
205	DRY WEATHER PUMP NO.1 CONTROLS	STARTER N MOTOR CONTROL CENTER	172-LCP-1 CONTROL PANEL	20#14 (4 SPARE), 2 #12(CT) & #14 GND - 1 1/2" PVC RGS
206	DRY WEATHER PUMP NO.1 CAPACITOR	DRY WEATHER PUMP NO.1 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #4 & #6 GND CABLE- 1" RGS
207	COMBINED CURRENT TRANSMITTERS	MOTOR CONTROL CENTER	172-LCP-1 CONTROL PANEL	3 2/C SIG CABLE - 1"RGS
300	DRY WEATHER PUMP NO.2 POWER	DRY WEATHER PUMP NO.2	PUMP NO.2 TERMINAL CABINET	3/C #2/0 & #6 GND CABLE - 3" PVC RGS NOTE 2
301	DRY WEATHER PUMP NO.2 CONTROLS	DRY WEATHER PUMP NO.2	PUMP NO.2 TERMINAL CABINET	9/C #14 (8 CONTROL + GND)-1 1/2" PVC RGS NOTE2
302	DRY WEATHER PUMP NO.2 POWER	DRY WEATHER PUMP NO.2 TERMINAL CABINET	PUMP STARTER	3 #2/0 & #6 GND - 3" RGS
303	DRY WEATHER PUMP MAIN-CONTROLS	172-LCP-1 CONTROL PANEL	PT-172-01,PT-172-02	2 SH. PR. #16-1" PVC RGS
304	DRY WEATHER PUMP NO.2 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-1 CONTROL PANEL	1 SHIELED PAIR #16 - 3/4" RGS
305	DRY WEATHER PUMP NO.2 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-1 CONTROL PANEL	20 #14(4 SPARE #12(CT) & #14 GND - 1 1/2" PVC RGS)
306	DRY WEATHER PUMP NO.2 CAPACITOR	DRY WEATHER PUMP NO.2 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #4 & #6 GND CABLE - 1" RGS
400	DRY WEATHER PUMP NO.3 POWER	DRY WEATHER PUMP NO.3	PUMP NO.3 TERMINAL CABINET	3/C #2/0 & #6 GND CABLE - 3" PVC RGS NOTE 2
401	DRY WEATHER PUMP NO.3 CONTROLS	DRY WEATHER PUMP NO.3	PUMP NO.3 TERMINAL CABINET	9/C #14(8 CONTROL - GND) - 1 1/2" PVC RGS NOTE 2
402	DRY WEATHER PUMP NO.3 POWER	DRY WEATHER PUMP NO.3 TERMINAL CABINET	PUMP STARTER	3 #2/0& #6 GND - 3 " RGS
403A	DRY WEATHER PUMP NO.3 CONTROLS	TERMINAL CABINET	PUMP STARTER	7 #14 (4 CONTROL, 1 GND & 2 SPARE)- 1" PVC RGS
404	DRY WEATHER PUMP NO.3 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-1 CONTROL PANEL	1 SHIELED PAIR #16 - 3/4" RGS
405	DRY WEATHER PUMP NO.3 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-1 CONTROL PANEL	20 #14 (4 SPARE), 2 #12(CT) & #14 GND - 1 1/2" PVC RGS
406	DRY WEATHER PUMP NO.3 CAPACITOR	DRY WEATHER PUMP NO.3 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #6 & #8 GND CABLE - 1" RGS
500	DRY WEATHER PUMP NO.4 POWER	DRY WEATHER PUMP NO.4	PUMP NO.4 TERMINAL CABINET	3/C #2/0 & #6 GND CABLE - 3" PVC RGS NOTE 2
501	DRY WEATHER PUMP NO.4 CONTROLS	DRY WEATHER PUMP NO.4	PUMP NO.4 TERMINAL CABINET	9/C #14 (8 CONTROL + GND)- 1 1/2" PVC RGS
502	DRY WEATHER PUMP NO.4 POWER	DRY WEATHER PUMP NO.4 TERMINAL CABINET	PUMP STARTER	3 #2/0 & #6 GND - 3" RGS
503	NOT USED			NOT USED
504	DRY WEATHER PUMP NO.4 CONTROLS	STARTER N MOTOR CONTROL CENTER	172-LCP-1 CONTROL PANEL	1 SHIELED PAIR #16 - 3/4" RGS
505	DRY WEATHER PUMP NO.4 CONTROLS	STARTER N MOTOR CONTROL CENTER	172-LCP-1 CONTROL PANEL	20 #14 (4 SPARE, 2 #12(CT) & #14 GND - 1 1/2" PVC RGS)
506	DRY WEATHER PUMP NO.4 CAPACTOR	DRY WEATHER PUMP NO.4 MOTOR STARTER	POWER FACTOR CORRECTION CAPCITOR	3/C #4 & #6 GND CABLE - 1" RGS
600	LIGHTING PANEL FEEDER	MOTOR CONTROL CENTER	LIGHTING TRANSFORMER	3 #2 & #4 GND - 1 1/4" RGS
601	LIGHTING PANEL GROUND	LIGHTING PANEL	GROUND FIELD	#4 GND - 1" RGS
602	LIGHTING TRANSFORMER	LIGHTING TRANSFORMER	LIGHTING PANEL	3 #1/0, #2 GND - 1 1/2" RGS
605	SUMP PUMPS CONTROL PANEL-1	MOTOR CONTROL CENTER	SUMP PUMPS CONTROL PANEL-1 & PUMPS 1 & 2	20 #14 (4 SPARE, 2 #12(CT) & #14 GND - 1 1/2" PVC RGS)
610	SUMP PUMPS CONTROL PANEL-2	MOTOR CONTROL CENTER	SUMP PUMPS CONTROL PANEL-1 & PUMPS 3 & 4	3/C #4 & #6 GND CABLE - 1" RGS
203A	DRY WEATHER PUMP NO.2 CONTROLS	TERMINAL CABINET	PUMP STARTER	7 #14(4 CONTROL, 1 GND,& 2 SPARE)- 1 PVC/RGS
403B	DRY WEATHER PUMP NO.4 CONTROLS	TERMINAL CABINET	PUMP STARTER	7 #14(4 CONTROL, 1 GND, & 2 SPARE)- 1 PVC/RGS
615	DRAIN PUMP-1 POWER	MOTOR CONTROL CENTER	DRAIN PUMP-1	3 #12 & #12 GND - 1" RGS
616	DRAIN PUMP-1 CONTROL	MOTOR CONTROL CENTER	DRAIN PUMP-1 & -S-172-13	6 #14 & #14 GND - 1" RGS
617	DRAIN PUMP-1 CONTROL	MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	15 #14 (4 SPARE), & #14 GND - 14/2" PVC RGS
618	DRAIN PUMP-1 CONTROL	MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	1 SHIELED PAIR #16 - 3/4" RGS
620	DRAIN PUMP-2 POWER	MOTOR CONTROL CENTER	DRAIN PUMP-2	3 #12 & #12 GND - 1" RGS
621	DRAIN PUMP-2 CONTROL	MOTOR CONTROL CENTER	DRAIN PUMP-2 & HS-172-14	6 #14 & #14 GND - 1" RGS
622	DRAIN PUMP-2 CONTROL	MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	15 #14 (4 SPARE), & #14 GND - 14/2" PVC RGS
623	DRAIN PUMP-2 CONTROL	MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	1 SHIELED PAIR #16 - 3/4" RGS
625	AIR COMPRESSORS CONTROL PANEL	MOTOR CONTROL CENTER	AIR COMPRESSORS CONTROL PANEL	3 #10 & #10 GND - 1" RGS
630	ELEVATOR	MOTOR CONTROL CENTER	ELEVATOR	3 #6 & #8 GND - 1 1/2" RGS
631				
635	TOP-1 CONTROL	MOTOR CONTROL CENTER	TOP-1	20#14 & #14 GND - 1" RGS
636				
640	HV-1 POWER	MOTOR CONTROL CENTER	HV-1	3 #12 & #12 GND - 1" RGS
641	HV-1 CONTROL	TCP	HV-1	8 #14 & #14 GND - 1" RGS
642	HV-2 POWER	MOTOR CONTROL CENTER	HV-2	3 #12 & #12 GND - 1" RGS
643	HV-2 CONTROL	TCP	HV-2	8 #14 & #14 GND - 1" RGS
644	HV-3 POWER	MOTOR CONTROL CENTER	HV-3	3 #12 & #12 GND - 1" RGS
645	HV-3 CONTROL	TCP	HV-3	8 #14 & #14 GND - 1" RGS
650	EF-1	MOTOR CONTROL CENTER	EF-1	3 #12 & #12 GND - 1" RGS
651	EF-2	MOTOR CONTROL CENTER	EF-2	3 #12 & #12 GND - 1" RGS
652	EF-3	MOTOR CONTROL CENTER	EF-3	3 #12 & #12 GND - 1" RGS
653	EF-4	MOTOR CONTROL CENTER	EF-4	3 #12 & #12 GND - 1" RGS
663				
664				
670	AIR CONDITIONING UNIT - POWER	MOTOR CONTROL CENTER	ACU-1	3 #8 & #8 GND - 1" RGS
671	AIR CONDITIONING UNIT - CONTROL	TCP-1	ACU-1	4 #14 & #14 GND - 1" RGS
680				
681	CHEMICAL FEED SYSTEM - CONTROL	172-LCP-1 CONTROL PANEL(DWCP)	CHEMICAL FEED PUMP PANEL	2 SHIELED PAIRS #16-1" PVC RGS(PACING SIGNAL)
682	CHEMICAL FEED SYSTEM - CONTROL	172-LCP-1 CONTROL PANEL(DWCP)	LIT-172-01,02,03	4 #14 & #14 GND - 1" RGS(HIGH LEVEL ALARM)
685	CHEMICAL FEED SYSTEM - CONTROL	172-LCP-1 CONTROL PANEL(DWCP)	LIT-172-01,02,03	4 #14 & #14 GND - 1" RGS(LEVEL STATUS)

NO.	DATE	REVISIONS	APP.

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 Phone: (713)-365-9288  
**Kalluri Group, Inc.** PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 SURVEYED BY: \_\_\_\_\_  
 FB NO. XXXXXX

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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
 LIFT STATION REHABILITATION  
 ELECTRICAL  
 CONDUIT & CONDUCTOR SCHEDULE  
 SHEET 1 - EXISTING**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 0-E-08	
SHEET NO. XXX OF XX	

NO.	DATE	REVISIONS	APP.

TAG	DESCRIPTION	ROUTING		CONDUIT & WIRE SIZES
		FROM	TO	
686	CHEMICAL FEED SYSTEM - CONTROL	LIT-172-01	LIT-172-01	1 SHIELD PAIRS #16-1" PVC RGS
687	CHEMICAL FEED SYSTEM - CONTROL	LIT-172-02	LIT-172-02	1 SHIELD PAIRS #16-1" PVC RGS
688	CHEMICAL FEED SYSTEM - CONTROL	LIT-172-03	LIT-172-03	1 SHIELD PAIRS #16-1" PVC RGS
690	CHEMICAL FEED SYSTEM - POWER	172-LCP-1 CONTROL PANEL (DWCP)	CHEMICAL FEED PUMP PANEL 3X	#12 & #12 GND (2H+1N+1G)(PUMP 1 & 2 POWER)
691	CHEMICAL FEED SYSTEM - CONTROL	172-LCP-1 CONTROL PANEL (DWCP)	LIT-172-01,02,03	(SPARE)
692	CHEMICAL FEED SYSTEM - CONTROL	172-LCP-1 CONTROL PANEL (DWCP)	CHEMICAL FEED PUMP PANEL	(SPARE)
900	INTRUSION ALARM	DOOR LIMIT SWITCH	172-LCP-2 CONTROL PANEL	2 #14 & #14 GND - 1"RGS
901	VOLTAGE MONITOR RELAY	MOTOR CONTROL CENTER-2	172-LCP-1 CONTROL PANEL	4 #14 & #14 GND - 1"RGS
902	FORCE MAIN HIGH PRESSURE	PSH-172-01	172-LCP-2 CONTROL PANEL	2-16/2TS CABLES 1" RGS RFI-BE-07
903	VOLTAGE MONITOR RELAY	MOTOR CONTROL CENTER-1	172-LCP-2 CONTROL PANEL	4 #14 & #14 GND - 1"RGS
1000	AIR CELL TUBING	172-LCP-1 CONTROL PANEL	AIR CELL NO.1	2" PVC RGS AIR TUBING
1001	AIR CELL TUBING	172-LCP-1 CONTROL PANEL	AIR CELL NO.2	2" PVC RGS AIR TUBING
1002	AIR CELL TUBING	172-LCP-2 CONTROL PANEL	AIR CELL NO.1	2" PVC RGS AIR TUBING
1003	AIR CELL TUBING	172-LCP-2 CONTROL PANEL	AIR CELL NO.2	2" PVC RGS AIR TUBING
1100	FUTURE SPACE - TO FIELD	MOTOR CONTROL CENTER	PUMP NO.1 TERMINAL CABINET	1" PVC RGS (SPARE)
1101	NOT USED			NOT USED
1110	NOT USED			NOT USED
1200	FUTURE SPACE - TO FIELD	MOTOR CONTROL CENTER	PUMP NO.2 TERMINAL CABINET	(SPARE)
1201	NOT USED			NOT USED
2100	WET WEATHER PUMP NO.1 POWER	WET WEATHER PUMP NO.1	PUMP STARTER IN MCC	3 #2/0 & #6 GND - 3" RGS
2101	WET WEATHER PUMP NO.1 CONTROLS	WET WEATHER PUMP NO.1 & LOCKOUT SWITCH	PUMP STARTER IN MCC	22 #14, #14 GND - 1 1/2" RGS
2102	WET WEATHER PUMP NO.1 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	22 #14 (4 SPARE),2#12(CT) & #14 GND - 1 1/2" RGS
2103	WET WEATHER PUMP NO.1 CONTROLS	WET WEATHER PUMP NO.1	PUMP STARTER & MULTILIN RELAY IN MCC	7/C #18 SHIELDED TRIADS -3" RGS
2104	WET WEATHER PUMP NO.1 CAPACITOR	WET WEATHER PUMP NO.1 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #2/0 & #6 GND - 2" RGS
2105	WET WEATHER DSCH VLV. NO.1-CONTROLS	172-LCP-2	172-CV-05	6#14 & #14 GND-1" RGS
2200	WET WEATHER PUMP NO.2 POWER	WET WEATHER PUMP NO.2	PUMP STARTER IN MCC	3 #350 MCM & #2/0 GND IN EA OF 2 - 3" RGS
2201	WET WEATHER PUMP NO.2 CONTROLS	WET WEATHER PUMP NO.2 & LOCKOUT SWITCH	PUMP STARTER IN MCC	22 #14, #14 GND - 1 1/2" RGS
2202	WET WEATHER PUMP NO.2 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	22 #14 (4 SPARE),2#12(CT) & #14 GND - 1 1/2" RGS
2203	WET WEATHER PUMP NO.2 CONTROLS	WET WEATHER PUMP NO.2	PUMP STARTER & MULTILIN RELAY IN MCC	7/C #18 SHIELDED TRIADS -3" RGS
2204	WET WEATHER PUMP NO.2 CAPACITOR	WET WEATHER PUMP NO.2 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #2/0 & #6 GND - 2" RGS
2205	WET WEATHER DSCH VLV. NO.2-CONTROLS	172-LCP-2	172-CV-06	6#14 & #14 GND-1" RGS
2300	WET WEATHER PUMP NO.3 POWER	WET WEATHER PUMP NO.3	PUMP STARTER IN MCC	3 #350 MCM & #2/0 GND IN EA OF 2 - 3" RGS
2301	WET WEATHER PUMP NO.3 CONTROLS	WET WEATHER PUMP NO.3 & LOCKOUT SWITCH	PUMP STARTER IN MCC	22 #14, #14 GND - 1 1/2" RGS
2302	WET WEATHER PUMP NO.3 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	22 #14 (4 SPARE),2#12(CT) & #14 GND - 1 1/2" RGS
2303	WET WEATHER PUMP NO.3 CONTROLS	WET WEATHER PUMP NO.3	PUMP STARTER & MULTILIN RELAY IN MCC	8/C #18 SHIELDED TRIADS -3" RGS
2304	WET WEATHER PUMP NO.3 CAPACITOR	WET WEATHER PUMP NO.3 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #2/0 & #6 GND - 2" RGS
2305	WET WEATHER DSCH VLV. NO.3-CONTROLS	172-LCP-2	172-CV-07	6#14 & #14 GND-1" RGS
2400	WET WEATHER PUMP NO.4 POWER	WET WEATHER PUMP NO.4	PUMP STARTER IN MCC	3 #350 MCM & #2/0 GND IN EA OF 2 - 3" RGS
2401	WET WEATHER PUMP NO.4 CONTROLS	WET WEATHER PUMP NO.4 & LOCKOUT SWITCH	PUMP STARTER IN MCC	22 #14, #14 GND - 1 1/2" RGS
2402	WET WEATHER PUMP NO.4 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	22 #14 (4 SPARE),2#12(CT) & #14 GND - 1 1/2" RGS
2403	WET WEATHER PUMP NO.4 CONTROLS	WET WEATHER PUMP NO.4	PUMP STARTER & MULTILIN RELAY IN MCC	8/C #18 SHIELDED TRIADS -3" RGS
2404	WET WEATHER PUMP NO.4 CAPACITOR	WET WEATHER PUMP NO.4 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #2/0 & #6 GND - 2" RGS
2405	WET WEATHER DSCH VLV. NO.4-CONTROLS	172-LCP-2	172-CV-08	6#14 & #14 GND-1" RGS
2500	WET WEATHER PUMP NO.5 POWER	WET WEATHER PUMP NO.5	PUMP STARTER IN MCC	3 #350 MCM & #2/0 GND IN EA OF 2 - 3" RGS
2501	WET WEATHER PUMP NO.5 CONTROLS	WET WEATHER PUMP NO.5 & LOCKOUT SWITCH	PUMP STARTER IN MCC	22 #14, #14 GND - 1 1/2" RGS
2502	WET WEATHER PUMP NO.5 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	22 #14 (4 SPARE),2#12(CT) & #14 GND - 1 1/2" RGS
2503	WET WEATHER PUMP NO.5 CONTROLS	WET WEATHER PUMP NO.5	PUMP STARTER & MULTILIN RELAY IN MCC	8/C #18 SHIELDED TRIADS -3" RGS
2504	WET WEATHER PUMP NO.5 CAPACITOR	WET WEATHER PUMP NO.5 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #2/0 & #6 GND - 2" RGS
2505	WET WEATHER DSCH VLV. NO.5-CONTROLS	172-LCP-2	172-CV-09	6#14 & #14 GND-1" RGS
2600	WET WEATHER PUMP NO.6 POWER	WET WEATHER PUMP NO.6	PUMP STARTER IN MCC	3 #350 MCM & #2/0 GND IN EA OF 2 - 3" RGS
2601	WET WEATHER PUMP NO.6 CONTROLS	WET WEATHER PUMP NO.6 & LOCKOUT SWITCH	PUMP STARTER IN MCC	22 #14, #14 GND - 1 1/2" RGS
2602	WET WEATHER PUMP NO.6 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	22 #14 (4 SPARE),2#12(CT) & #14 GND - 1 1/2" RGS
2603	WET WEATHER PUMP NO.6 CONTROLS	WET WEATHER PUMP NO.6	PUMP STARTER & MULTILIN RELAY IN MCC	8/C #18 SHIELDED TRIADS -3" RGS
2604	WET WEATHER PUMP NO.6 CAPACITOR	WET WEATHER PUMP NO.6 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #2/0 & #6 GND - 2" RGS
2605	WET WEATHER DSCH VLV. NO.6-CONTROLS	172-LCP-2	172-CV-10	6#14 & #14 GND-1" RGS
2700	WET WEATHER PUMP NO.7 POWER	WET WEATHER PUMP NO.7	PUMP STARTER IN MCC	3 #350 MCM & #2/0 GND IN EA OF 2 - 3" RGS
2701	WET WEATHER PUMP NO.7 CONTROLS	WET WEATHER PUMP NO.7 & LOCKOUT SWITCH	PUMP STARTER IN MCC	22 #14, #14 GND - 1 1/2" RGS
2702	WET WEATHER PUMP NO.7 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	22 #14 (4 SPARE),2#12(CT) & #14 GND - 1 1/2" RGS
2703	WET WEATHER PUMP NO.7 CONTROLS	WET WEATHER PUMP NO.7	PUMP STARTER & MULTILIN RELAY IN MCC	8/C #18 SHIELDED TRIADS -3" RGS
2704	WET WEATHER PUMP NO.7 CAPACITOR	WET WEATHER PUMP NO.7 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #2/0 & #6 GND - 2" RGS
2705	WET WEATHER DSCH VLV. NO.7-CONTROLS	172-LCP-2	172-CV-11	6#14 & #14 GND-1" RGS
2800	WET WEATHER PUMP NO.8 POWER	WET WEATHER PUMP NO.8	PUMP STARTER IN MCC	3 #350 MCM & #2/0 GND IN EA OF 2 - 3" RGS
2801	WET WEATHER PUMP NO.8 CONTROLS	WET WEATHER PUMP NO.8 & LOCKOUT SWITCH	PUMP STARTER IN MCC	22 #14, #14 GND - 1 1/2" RGS
2802	WET WEATHER PUMP NO.8 CONTROLS	STARTER IN MOTOR CONTROL CENTER	172-LCP-2 CONTROL PANEL	22 #14 (4 SPARE),2#12(CT) & #14 GND - 1 1/2" RGS
2803	WET WEATHER PUMP NO.8 CONTROLS	WET WEATHER PUMP NO.8	PUMP STARTER & MULTILIN RELAY IN MCC	8/C #18 SHIELDED TRIADS -3" RGS
2804	WET WEATHER PUMP NO.8 CAPACITOR	WET WEATHER PUMP NO.8 MOTOR STARTER	POWER FACTOR CORRECTION CAPACITOR	3/C #2/0 & #6 GND - 2" RGS
2805	WET WEATHER DSCH VLV. NO.8-CONTROLS	172-LCP-2	172-CV-12	6#14 & #14 GND-1" RGS

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VERIFICATION OF PRIVATE UTILITY LINES

Date: \_\_\_\_\_  
 CenterPoint Energy natural gas utilities shown. (See services listed on end sheet. This signature not to be used for conflict verification.)  
 Signature Valid for six months.

Date: \_\_\_\_\_  
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 Approved by AT&T Texas / SWBT underground conduit facilities only. Signature valid for one year.

**KGI**  **Kalluri Group, Inc.** TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 SURVEYED BY: \_\_\_\_\_  
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

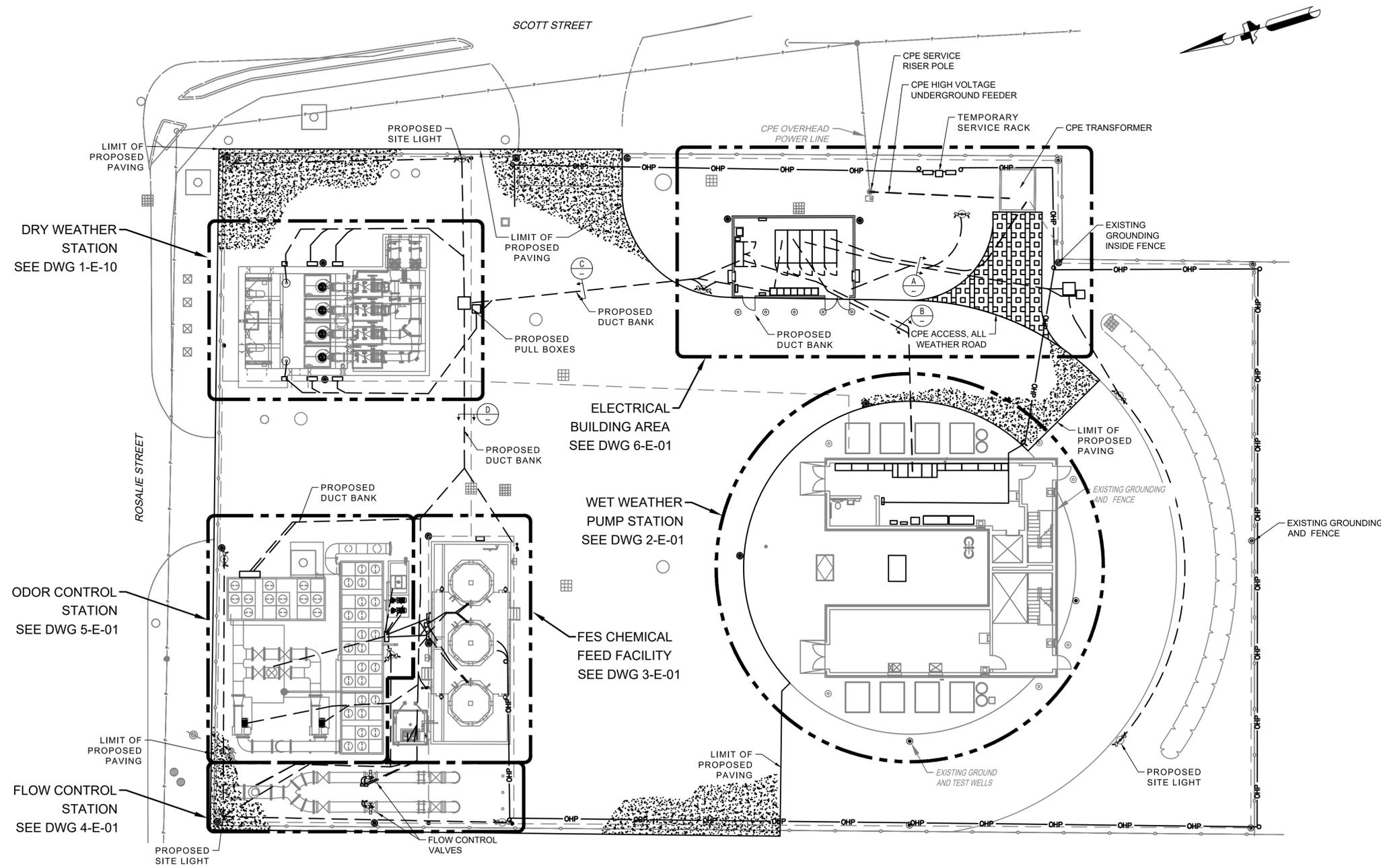
**SCOTT STREET NO. 1  
 LIFT STATION REHABILITATION  
 ELECTRICAL  
 CONDUIT & CONDUCTOR SCHEDULE  
 SHEET 2 - EXISTING**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 0-E-09	
SHEET NO. XXX OF XX	

NO.	DATE	REVISIONS	APP.

**GENERAL ELECTRICAL NOTES:**

- A. THIS DRAWING ILLUSTRATES THE PROPOSED SITE AND DESCRIBES RELATED WORK AREAS, WITH ENLARGED DRAWING NUMBERS. CONCRETE ENCASED DUCT BANKS ARE SHOWN IN SLAB CONDUIT RUNS ARE NOT, FOR CLARITY. IT ALSO SHOWS THE DESIGN LIMITS OF NEW SITE PAVING AND FACILITIES EXPECTED TO REMAIN, IN THIS PROJECT. SEE DIVISION 16 SPECIFICATIONS FOR ALL PROPOSED WORK AND EQUIPMENT REQUIREMENTS.
- B. CONTRACTOR HAS TASKS, IN THIS PROJECT, IN NEAR PROXIMITY TO CPE OVERHEAD POWER LINES. CONTRACTOR SHALL FOLLOW NEC AND CPE STANDARDS FOR SAFE WORKING DISTANCE, TEMPORARY SIGNAGE AND PROCEDURES.
- C. TEMPORARY PROVISIONS ARE TO REMAIN IN SERVICE WHILE PROPOSED WORK, INCLUDING POWER, CONTROLS, SCADA AND COMMUNICATIONS, IS TESTED AND ACCEPTED.



PROPOSED OVERALL SITE  
**PLAN**  
 1" = 15'-0"

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 Phone: (713)-365-9288  
 PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

DESIGNED BY: \_\_\_\_\_

DRAWN BY: \_\_\_\_\_

SURVEYED BY: \_\_\_\_\_

FB NO. XXXXXX

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 JANUARY 19, 2026  
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<b>CITY OF HOUSTON</b> HOUSTON PUBLIC WORKS	
<b>SCOTT STREET NO. 1</b> LIFT STATION REHABILITATION ELECTRICAL	
<b>OVERALL SITE PLAN - PROPOSED</b>	
WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 0-E-10	
SHEET NO. XXX OF XX	

EQUIPPED SPACE	MCC-1 FEEDER	METERING AND	UTILITY SERVICE MAIN BREAKER	EQUIPPED SPACE
MCC-2 FEEDER	PORTABLE GENSET CONNECTION	PERMANENT GENSET CONNECTION	SURGE PROTECTIVE DEVICE	HOUSE POWER FEEDER

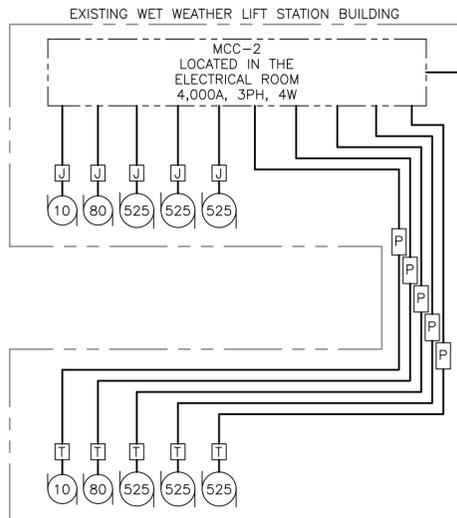
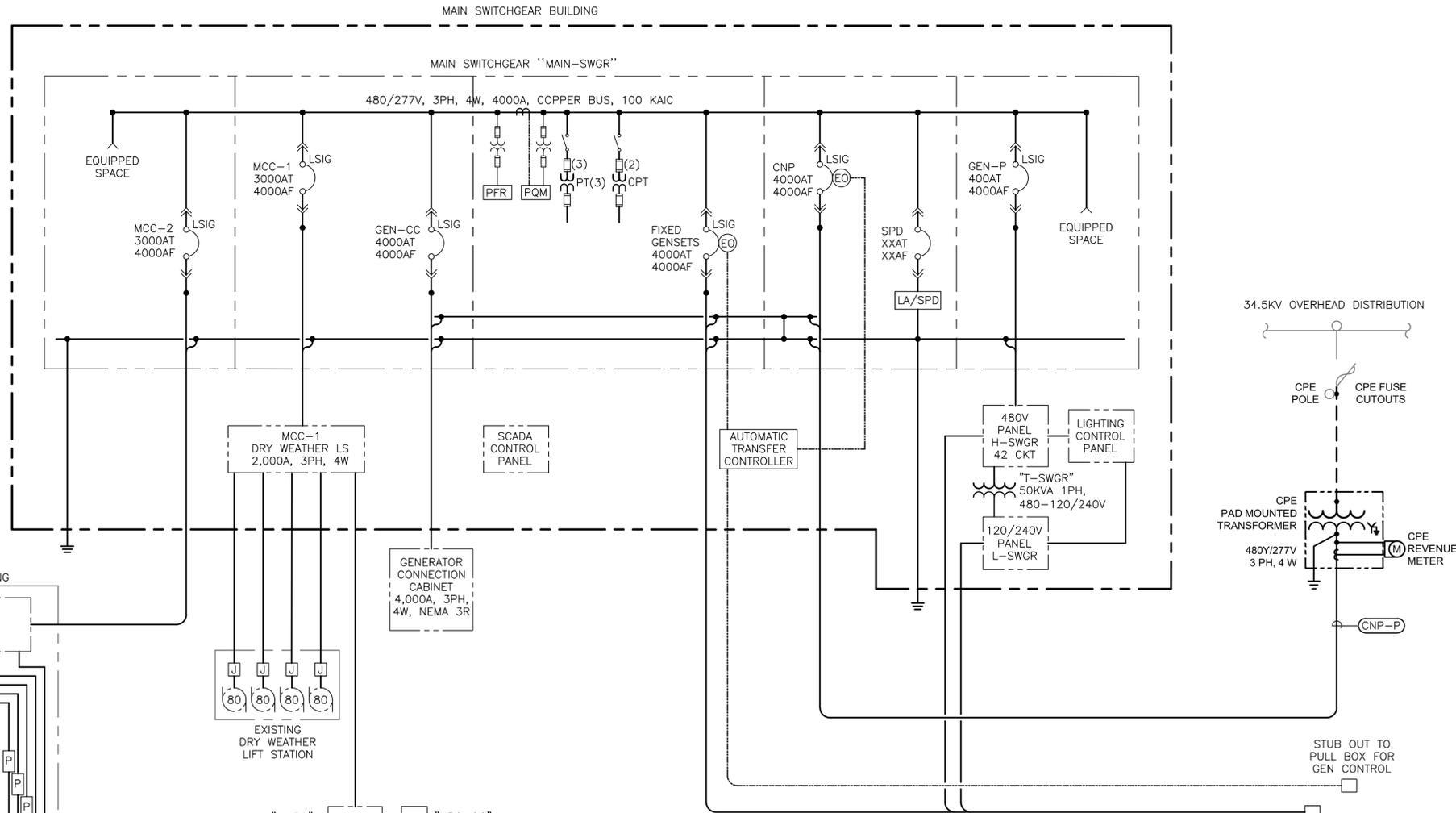
PROPOSED MAIN SWITCHGEAR  
ELEVATION  
NONE

GENERAL NOTES:

- A. THIS DRAWING IS PROVIDED TO ILLUSTRATE THE PROPOSED ELECTRICAL POWER DISTRIBUTION SCHEME.
- B. THE ELECTRICAL BUILDING EQUIPMENT IS DESIGNED AROUND EATON BRAND, MAGNUM BREAKER SERIES SWITCHGEAR, WITH MAINTENANCE BYPASS SWITCHES.
- C. THE MAIN-SWITCHGEAR SHALL BE CAPABLE OF A PORTABLE GENERATOR CONNECTION WITH HAND OPERATION, WITH PERMANENT GENERATOR AND UTILITY CONNECTION. AUTOMATIC TRANSFER OPERATION SHALL BE PROVIDED BY A BREAKER CONTROLLER, TO TRANSFER LOAD TO THE AVAILABLE POWER SOURCE.
- D. THE PROPOSED DRY WEATHER LIFT STATION MCC-1 AND WET WEATHER WEATHER MCC-2 SHALL BE NEMA 12 ENCLOSED.

NO.	DATE	REVISIONS	APP.

BREAKER ARRANGEMENT SHOWN IS DIAGRAMMATIC  
PHYSICAL ARRANGEMENT SHALL CONSIDER SITE LAYOUT AND MANUFACTURER'S REQUIREMENTS



PROPOSED MAIN SWITCHGEAR SIMPLIFIED ONE LINE  
DIAGRAM  
NONE

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VERIFICATION OF PRIVATE UTILITY LINES  
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**KGI** Kalluri Group, Inc. TBPE Registration No. F-665  
16300 Katy Freeway, Suite 172  
Houston, Texas 77094  
Phone: (713)-365-9288  
PROJECT 4285

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY:  
DATE:  
DESIGNED BY:  
DRAWN BY:  
SURVEYED BY:  
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
LIFT STATION REHABILITATION  
ELECTRICAL  
OVERALL ONE LINE DIAGRAM - PROPOSED

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 0-E-11	
SHEET NO. XXX OF XX	

NO.	DATE	REVISIONS	APP.

MCC-1 LOAD CALCULATIONS

SECTION A LOAD DESCRIPTION	CONNECTED KVA	CONNECTED AMPS
WET WEATHER PUMP 1 - 80 HP	77.7	93.5
WET WEATHER PUMP 2 - 80 HP	77.7	93.5
WET WEATHER PUMP 3 - 80 HP	77.7	93.5
WET WEATHER PUMP 4 - 80 HP	77.7	93.5
PANELBOARD H-OC	48.2	58.0
<b>LOAD TOTAL</b>	<b>359</b>	<b>423</b>

THE CONNECTED 1610.6 KVA AT 480 VOLTS = 1937.5 AMPS, THE MCC-2A FEEDER BREAKER IS RATED 2000 AMPS AND IS SUFFICIENT FOR THE MCC-2A SECTION.

MCC-2 LOAD CALCULATIONS

SECTION A LOAD DESCRIPTION	CONNECTED KVA	CONNECTED AMPS
WET WEATHER PUMP 1 - 80 HP	77.7	93.5
WET WEATHER PUMP 3 - 525 HP	507.1	610
WET WEATHER PUMP 5 - 525 HP	507.1	610
WET WEATHER PUMP 7 - 525 HP	507.1	610
DRAIN PUMP 1 - 10 HP	11.6	14
<b>SECTION 2A LOAD</b>	<b>1610.6</b>	<b>1937.5</b>

THE RUNNING LOAD = 1937.5 AMPS, THE MCC-2A FEEDER BREAKER IS RATED 2000 AMPS AND IS SUFFICIENT FOR THE MCC-2A SECTION.

SECTION B LOAD DESCRIPTION	CONNECTED KVA	CONNECTED AMPS
WET WEATHER PUMP 2 - 80 HP	77.7	93.5
WET WEATHER PUMP 4 - 525 HP	507.1	610
WET WEATHER PUMP 6 - 525 HP	507.1	610
WET WEATHER PUMP 8 - 525 HP	507.1	610
DRAIN PUMP 2 - 10 HP	11.6	14
PANELBOARD H-WW	70.6	85
<b>SECTION 2B LOAD</b>	<b>1681.2</b>	<b>2022.5</b>

THE RUNNING LOAD = 1412.5 AMPS, THE MCC-2B FEEDER BREAKER IS RATED 2000 AMPS AND IS SUFFICIENT FOR THE MCC-2B SECTION.

MCC-2 TOTAL LOAD

CONNECTED KVA	CONNECTED AMPS
3291.8	3960

THE MCC-2 RUNNING LOAD = 3350 AMPS, THE MCC-2 FEEDER CABLES AND MAIN SWITCHGEAR FEEDER BREAKER ARE SUFFICIENT FOR THE MCC-2 LOADS.

MAIN SWITCHGEAR LOAD ANALYSIS

SECTION B LOAD DESCRIPTION	CONNECTED KVA	CONNECTED AMPS
DRY WEATHER PUMP STATION MCC-1	359	423
WET WEATHER PUMP STATION MCC-2	3291.8	3960
PANELBOARD H-EB	124.7	85
<b>CONNECTED SUBTOTAL</b>	<b>3775.5</b>	<b>4468</b>
25% OF LARGEST MOTOR LOAD	126.7	152.5
<b>CALCULATED NEC LOAD</b>	<b>3902.2</b>	<b>4620.5</b>

THE MAIN SWITCHGEAR RUNNING LOAD = 3926 AMPS, THE SWITCHGEAR IS RATED 5000 AMP. THE 9 SETS OF 750 KCMIL FEEDER CABLES ARE RATED 4275 AMPS, AND THE MAIN BREAKER IS SET TP 4250 AMPS (5000 @ .85). ALL ASPECTS OF THE SERVICE ARE SUFFICIENT FOR THE LOADS.

RUNNING KVA	RUNNING AMPS
281.3	338.5
2784.7	3350
85	85
<b>3151</b>	<b>3773.5</b>
<b>3151</b>	<b>3926</b>

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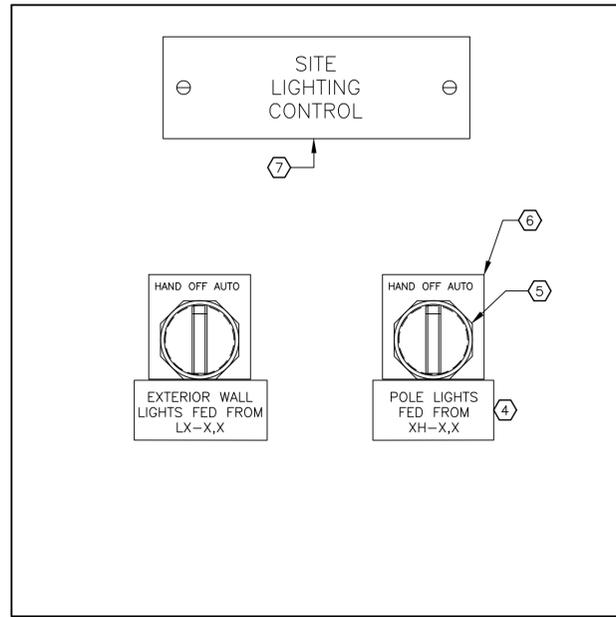
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

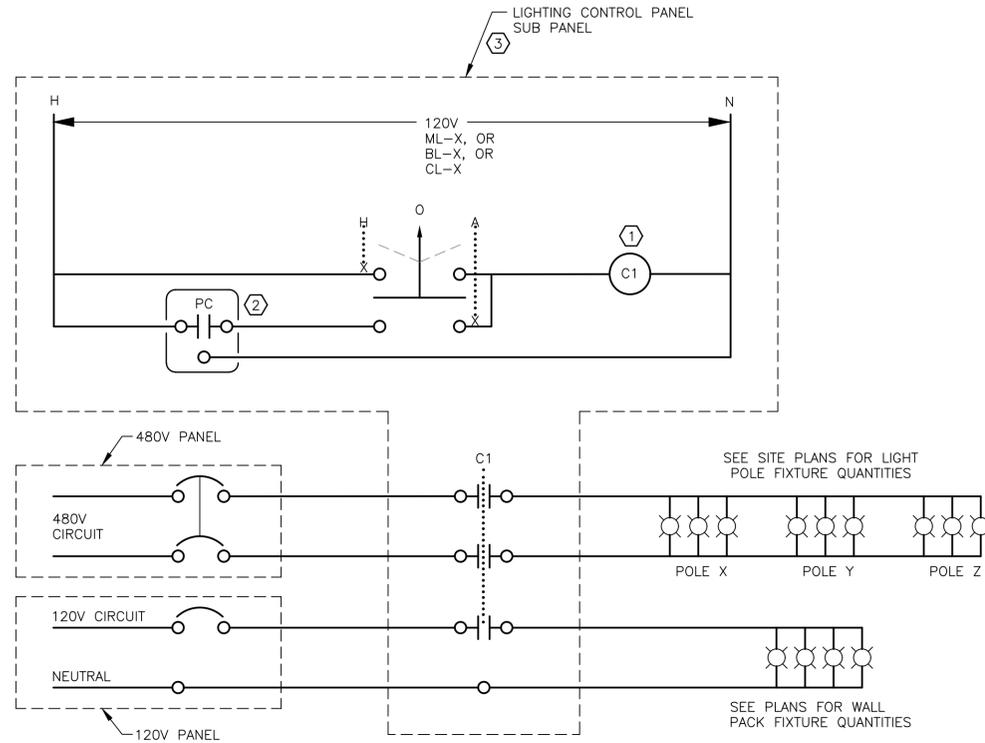
**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
ELECTRICAL  
**OVERALL LOAD ANALYSIS -**  
**PROPOSED**

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TYPICAL LIGHTING CONTROL PANEL FRONT



TYPICAL LIGHTING CONTROL PANEL WIRING SCHEMATIC

- NOTES:**
- 1 PROVIDE EATON "CN35 SERIES" (OR EQUAL) ELECTRICALLY HELD LIGHTING CONTACTOR, WITH MINIMUM OF TWO SPARE CONTACTS PER CONTACTOR.
  - 2 PROVIDE PHOTOCELL 4' MINIMUM ABOVE ROOF LINE LOCATED WITH NORTHERN EXPOSURE AND PROVEN FUNCTIONAL FOR SUNSET TO SUNRISE OPERATION.
  - 3 INSTALL COMPONENTS ON SUB PANEL, PROVIDE FIELD WIRING AND RAIL MOUNTED TERMINAL BLOCKS (30A MIN.). ALL CONDUCTORS TO/FROM CONTROL PANEL SHALL PASS THROUGH TERMINAL BLOCKS BEFORE CONNECTION TO DEVICE WITHIN THE PANEL. PANEL WIRING SHOP DRAWING SHALL BE SUBMITTED FOR ENGINEER APPROVAL AND A PERMANENT COPY OF APPROVED DRAWING SHALL BE PROVIDED IN POCKET INSIDE ON PANEL DOOR.
  - 4 PHENOLIC THREE LAYER NAMEPLATE WITH 3/16" BLACK LETTERS ON WHITE BACKGROUND, INDICATE CIRCUIT NUMBERS FOR EACH CIRCUIT. SEE PANEL SCHEDULES FOR RELATED CIRCUITS.
  - 5 3 POSITION SELECTOR SWITCH WITH SEALED MAINTAINED CONTACTS.
  - 6 FACTORY LEGEND PLATE WITH 3/16" BLACK TEXT ON WHITE LABELED AS SHOWN.
  - 7 PHENOLIC THREE LAYER NAMEPLATE WITH 3/8" BLACK LETTERS ON WHITE BACKGROUND.

**LIGHT FIXTURE SCHEDULE**

TYPE	DESCRIPTION	CATALOG NUMBER	LAMPS	INPUT VOLTAGE	INPUT WATTS	REMARKS
A	WHITE LINEAR 48" LED FIXTURE WITH WIDE DIFFUSE LENS AND HIGH EFFICIENCY PACKAGE	LITHONIA CLX-L48-7000LM-HEF-WDL-MVOLT-GZ10-50K-80CRI-WH	LED	120	45	INSTALL FIXTURES IN OVERHEAD ROWS
B	VAPOR TIGHT LED STRIP LIGHT FIXTURE USED FOR OUTDOOR AND CANOPIES.	LITHONIA CSVT-L48-5000LM-MVOLT-SWW3-80CRI	LED	120	42	INSTALL FIXTURE IN DRY WELLS.
C	DARK BRONZE VANDAL RESISTANT LED WALL PACK LUMINAIRE	LITHONIA TWPX1-LED-P1-50K-MVOLT-DDBXD	LED	120	10	INSTALL FIXTURE WITH TOP AT ONE FOOT BELOW ROOF OR SOFFIT
D	DARK BRONZE ALUMINUM WALL PACK LED FIXTURE WITH 90 MINUTE EMERGENCY BATTERY PACK.	LITHONIA WST-LED-P3-50K-VF-MVOLT-E20WC-DDBXD	LED	120	50	INSTALL FIXTURE WITH TOP AT ONE FOOT BELOW ROOF.
E	EMERGENCY FIXTURE WITH TWO HEADS AND SEALED LEAD ACID 90 MINUTE BATTERY.	LITHONIA ELT24-W-MT WITH ELAMSTS MOUNTING SHELF. PAINT SHELF WHITE.	HALOGEN	120	20	INSTALL FIXTURE WITH BOTTOM OF FIXTURE AT 10'-0" ABOVE THE FLOOR. ADD A CORD WITH PLUG TO THE FIXTURE AND PLUG THE CORD INTO A RECEPTACLE MOUNTED TO THE SIDE OF THE FIXTURE.
X	WHITE LED EXIT SIGN FIXTURE IN A THERMOPLASTIC HOUSING WITH RED LETTERS AND NICKEL CADMIUM BATTERY	LITHONIA LQM-S-W-3-R-120/277-ELN	LED	120	1	INSTALL A FIXTURE ABOVE EACH EXIT DOOR.
S	STANCHION LED FIXTURE	EATON EVLEDJ4C701	LED	120	53	INSTALL STANCHION LIGHT FIXTURE TO THE POLE MOUNTED TO THE HANDRAIL.
P	SITE POLE LIGHTING	LITHONIA DSXF2-LED-6-P2-50K-WFL-480-IS-ODF-DNAXD	LED	480	138	INSTALL ON TOP OF LIGHTING POLE.

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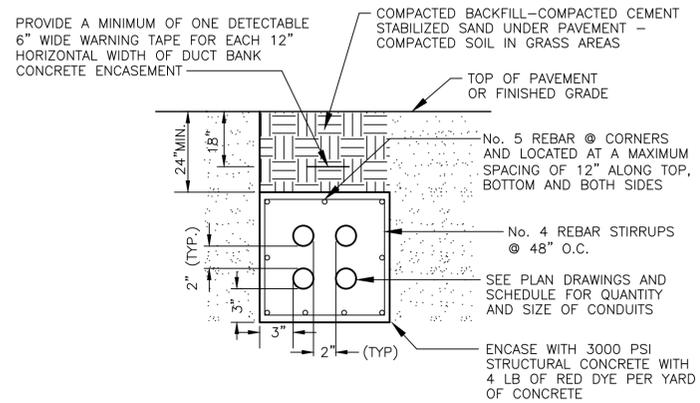
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
 ELECTRICAL  
**LIGHT FIXTURE SCHEDULE AND CONTROL DIAGRAM**

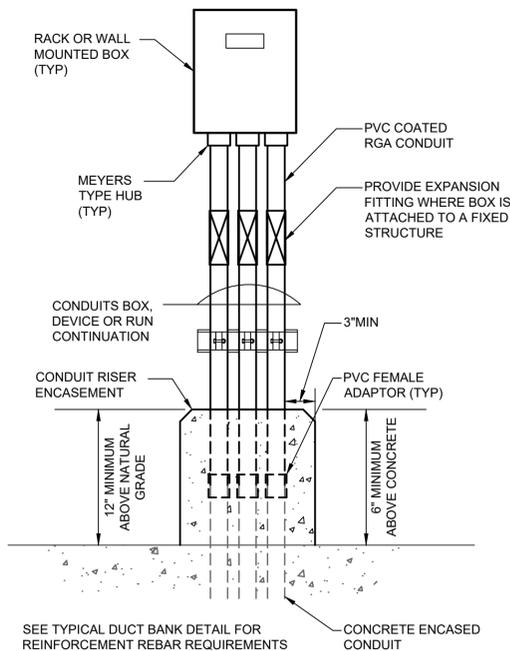
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TAHA LOTIA	
DWG NO. 0-E-21	
SHEET NO. XXX OF XX	

DUCT BANK CONCRETE ENCASEMENT SHALL BE CONTINUOUS AND DUCT BANK REINFORCEMENT REBAR SHALL BE CONNECTED TO THE DESTINATION. FOR PULL BOX ENTRY OR RISING NEXT TO A STRUCTURE DRILL BOX OR STRUCTURE AND PROVIDE #5 DOWELS 4 INCHES DEEP. FOR ENTRY TO STRUCTURE SLAB OR FOUNDATIONS CONNECT BOTH REINFORCEMENT REBAR SYSTEMS WITH 6 INCH OVERLAP DOUBLE TIED.



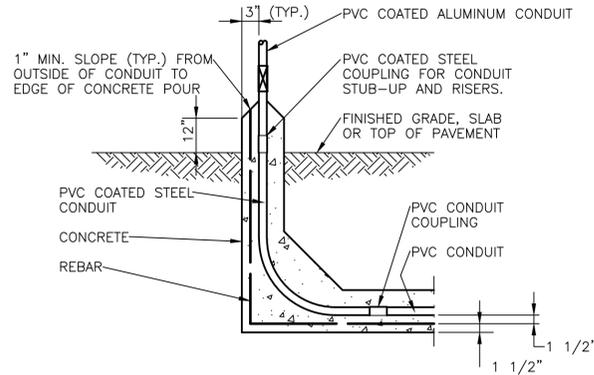
TYPICAL DUCT BANK INSTALLATION

DETAIL 1  
NTS



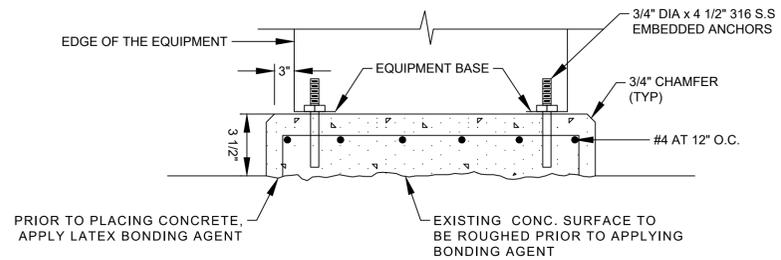
CONDUIT RISER CONCRETE ENCASEMENT

DETAIL 2  
NTS



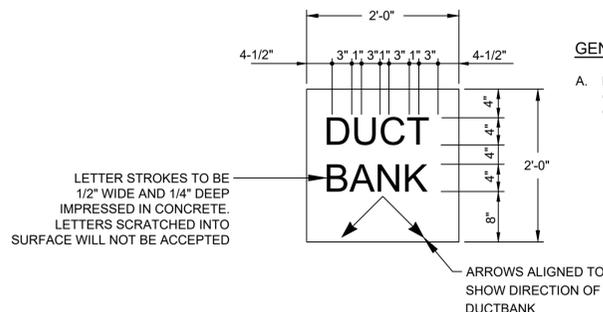
TYPICAL SINGLE CONDUIT DUCT BANK STUB-UP

DETAIL 3  
NTS



EQUIPMENT HOUSEKEEPING CONCRETE PAD

DETAIL 4  
NTS



CONCRETE DUCT BANK MARKER

DETAIL 5  
NTS

GENERAL NOTES:

- A. INSTALL AT 90° INTERVALS MAXIMUM OR ONE MARKER BETWEEN EACH MANHOLE OR HAND HOLE.

NO.	DATE	REVISIONS	APP.

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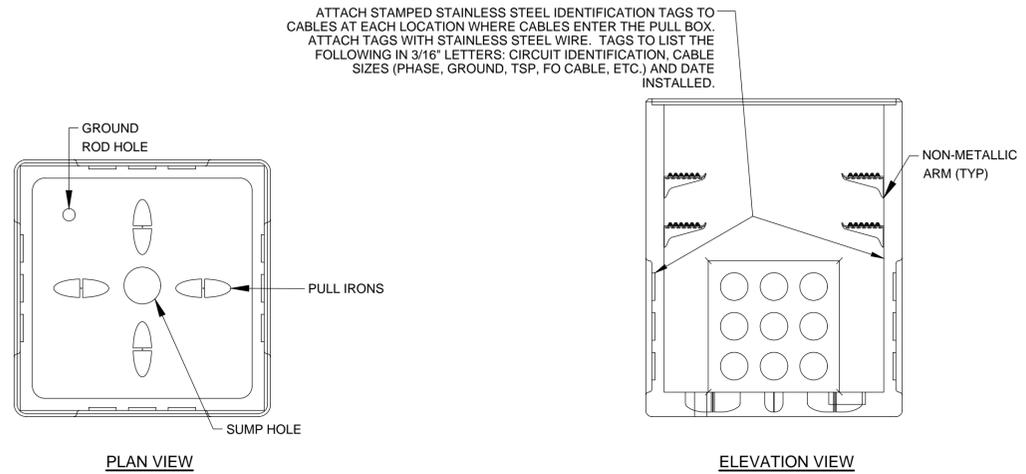
**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
LIFT STATION REHABILITATION  
ELECTRICAL

**ELECTRICAL DETAILS**  
SHEET 1

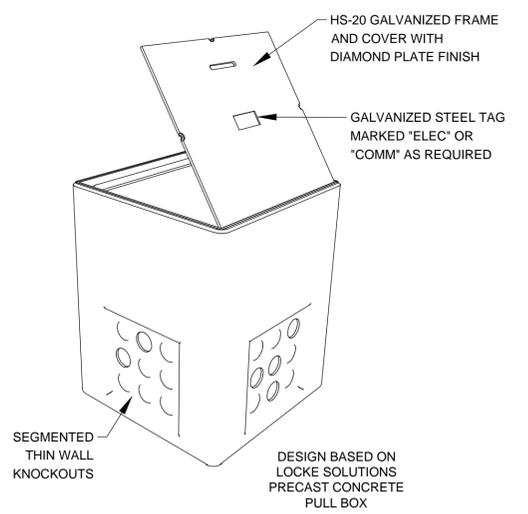
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HASAN MCKEE, P.E.	
DWG NO. 0-E-91	
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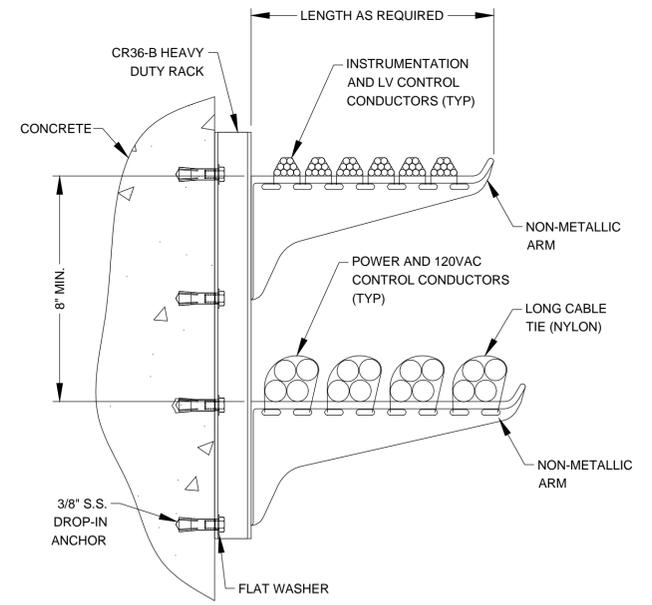
PULL BOX SIZES			
DESIGNATION	INSIDE WIDTH (W)	INSIDE LENGTH (L)	INSIDE DEPTH (D)
E1	12"	24"	22"
E2	24"	24"	42"
E3	36"	36"	48"
E4	48"	48"	48"
E5	48"	48"	60"
I1	12"	24"	22"
I2	24"	24"	42"
I3	36"	36"	48"
I4	48"	48"	48"

- NOTES:**
- COVERS FOR ALL PULL BOXES TO BE HOT-DIP GALVANIZED AND DESIGNED FOR AASHTO HS-20 LOADING.
  - "E" PULL BOXES TO HAVE "ELEC" TAG ON THE COVER.
  - "I" PULL BOXES TO HAVE "COMM" TAG ON THE COVER.
  - "C" PULL BOXES TO HAVE "CONTROLS" TAG ON THE COVER.



ELECTRICAL PULL BOX  
DETAIL 1  
NTS

- PULL BOX NOTES:**
- PROVIDE UNDERGROUND DEVICES CABLE RACK SYSTEMS AS REQUIRED TO SUPPORT CABLES ROUTED AROUND THE WALLS OF THE UNDERGROUND PULL BOX.
  - CABLES SHALL BE SECURED TO RACK ARMS WITH CABLE TIES, PROVIDE UNDERGROUND DEVICES, INC. NO. 36 VERTICAL RACK WITH 14" ARMS AS REQUIRED. SECURE RACKS TO PULL BOX WALLS WITH 316 SS HARDWARE.



PULL BOX CABLE RACK INSTALLATION  
DETAIL 2  
NTS

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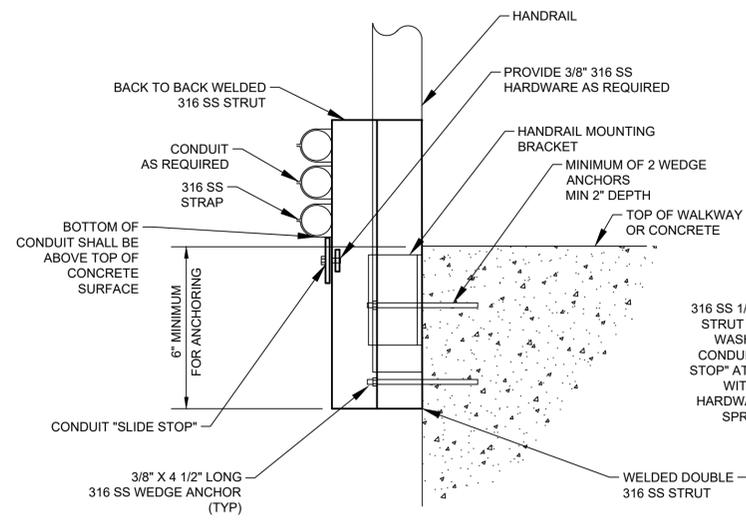
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LIFT STATION REHABILITATION  
ELECTRICAL

**ELECTRICAL DETAILS**  
SHEET 2

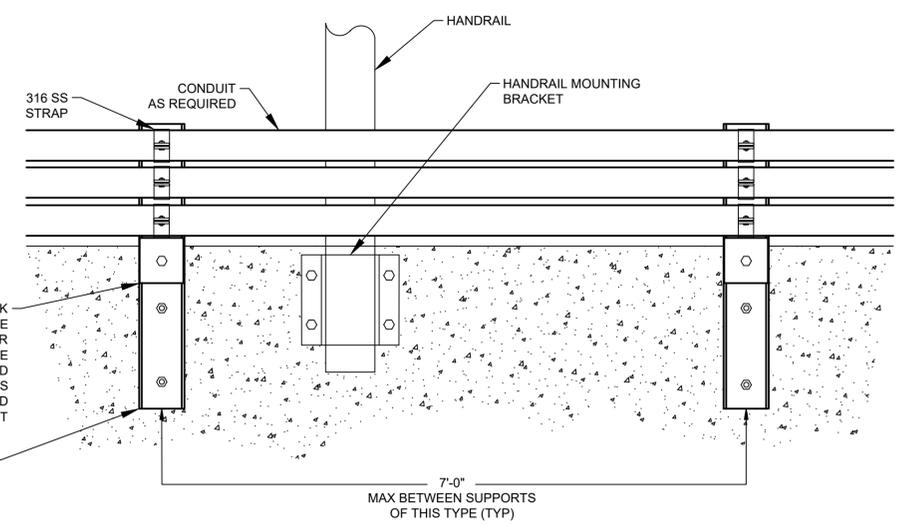
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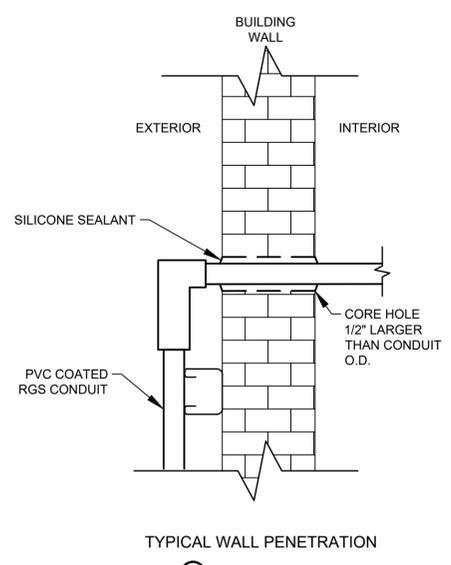
SIDE VIEW  
EDGE OF STRUCTURE CONDUIT SUPPORT

**(A) DETAIL**  
NTS

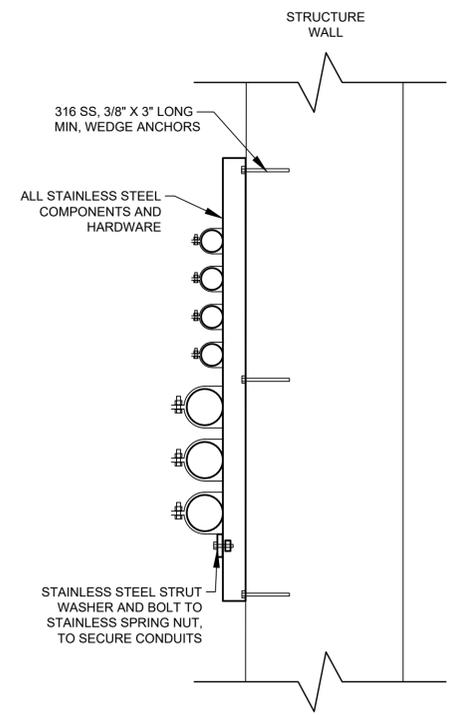


ELEVATION  
EDGE OF STRUCTURE CONDUIT SUPPORT

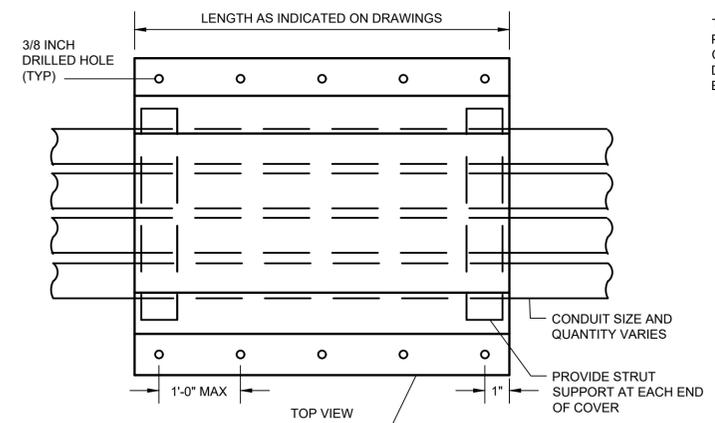
**(B) DETAIL**  
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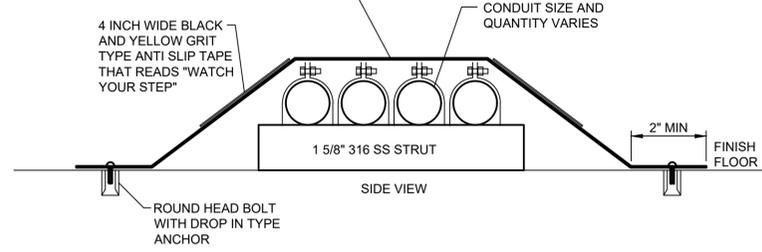
TYPICAL WALL PENETRATION  
**(C) DETAIL**  
NTS



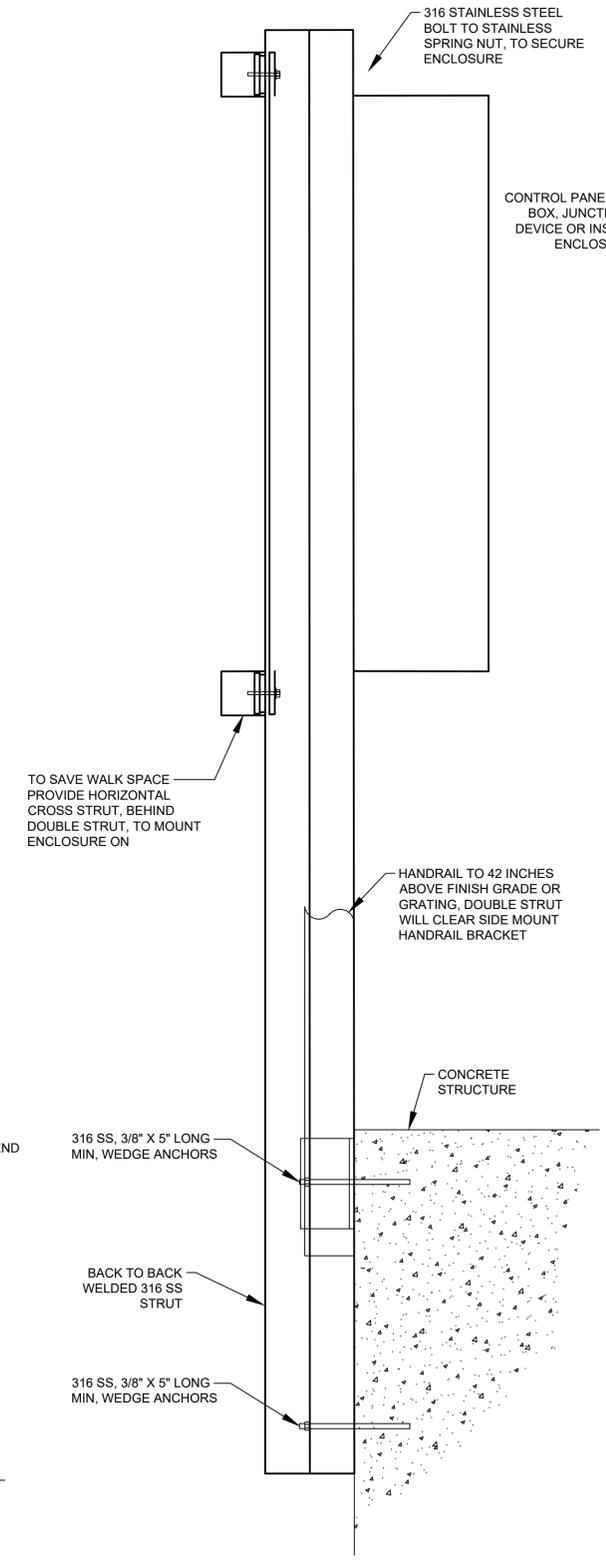
TYPICAL VERTICAL WALL RACK  
**(D) DETAIL**  
NTS



PROVIDE 3/8\"/>



TYPICAL WALK-OVER TREAD PLATE  
**(E) DETAIL**  
NTS



EDGE OF STRUCTURE PANEL SUPPORT  
**(F) DETAIL**  
NTS

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<small>Approved by AT&amp;T Texas / SWBT underground conduit facilities only. Signature valid for one year.</small>	

**KGI** Kalluri Group, Inc. TBPE Registration No. F-665  
16300 Katy Freeway, Suite 172  
Houston, Texas 77094  
Phone: (713)-365-9288  
PROJECT 4285

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

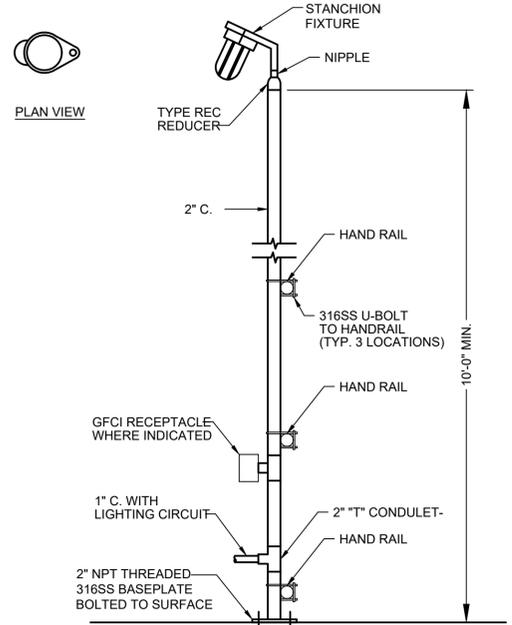
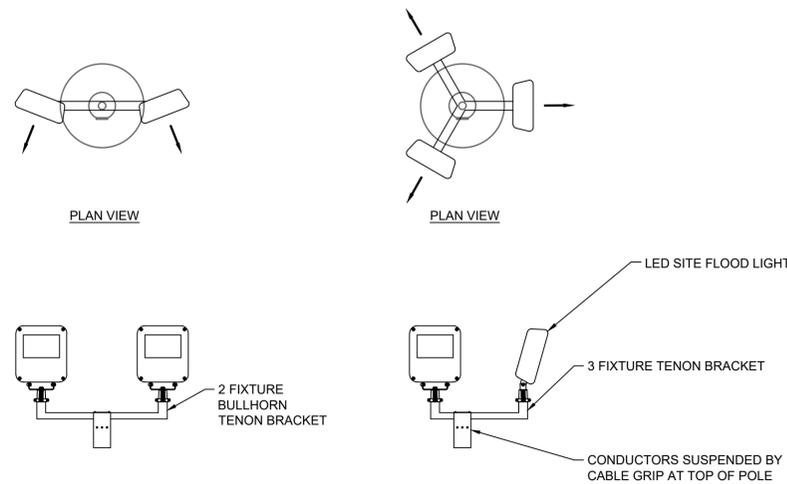
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DESIGNED BY:	
DRAWN BY:	
SURVEYED BY:	
FB NO. XXXXXX	

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

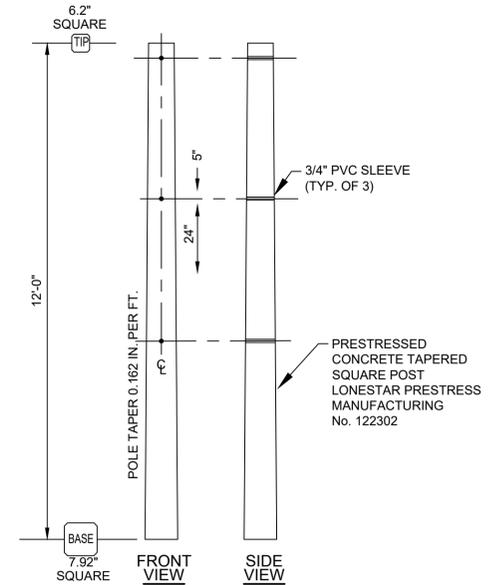
**SCOTT STREET NO. 1**  
LIFT STATION REHABILITATION  
ELECTRICAL  
**ELECTRICAL DETAILS**  
SHEET 3

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 0-E-93	
SHEET NO. OF XX	

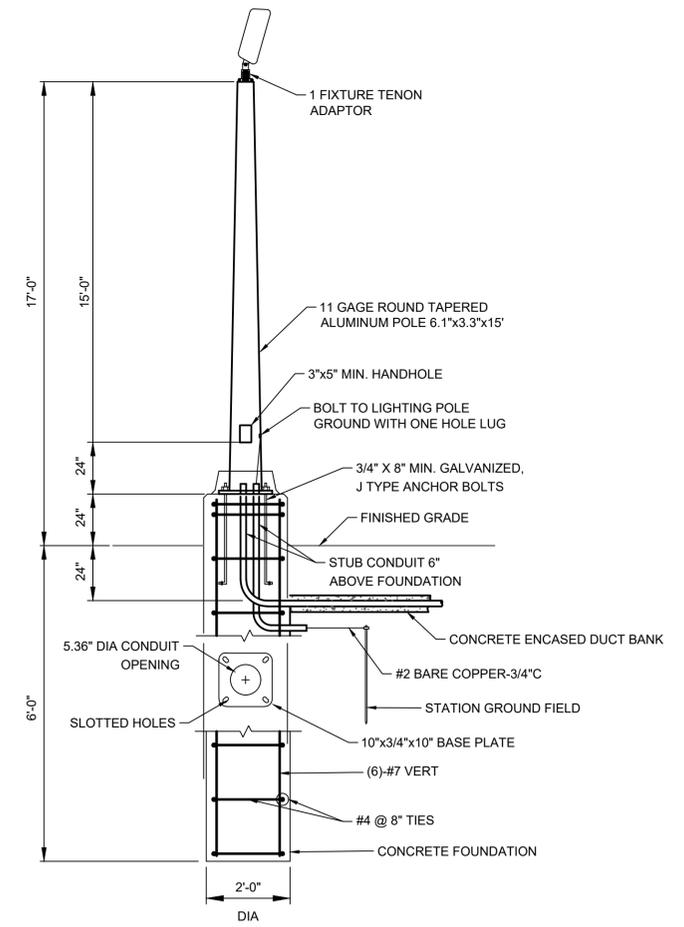
NO.	DATE	REVISIONS	APP.



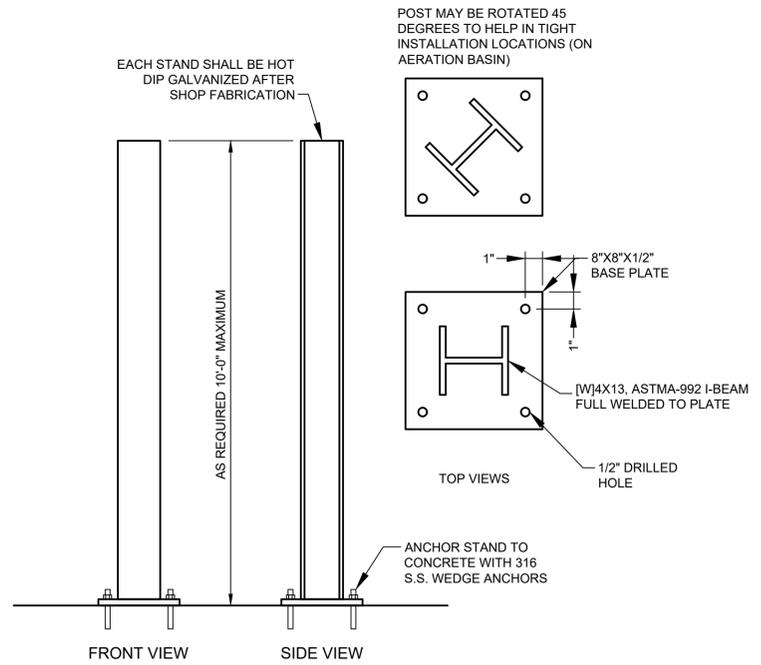
CONDUIT MOUNTED STANCHION LIGHT FIXTURE  
**(B) DETAIL**  
NTS



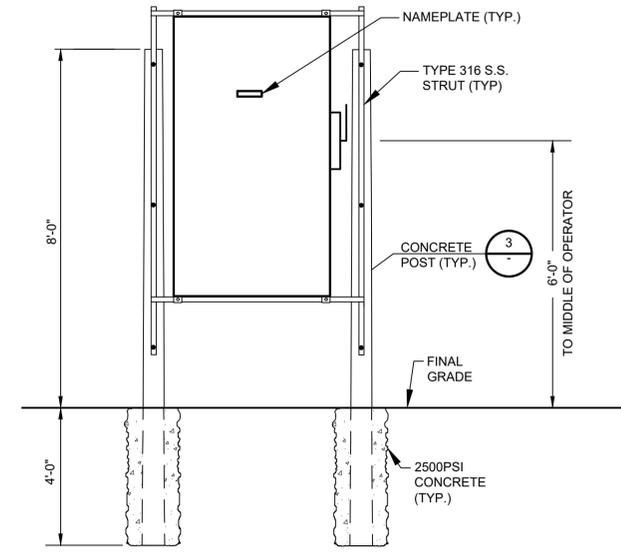
CONCRETE POST DETAIL  
**(C) DETAIL**  
NTS



SITE LIGHT  
**(A) DETAIL**  
NTS



VERTICAL SUPPORT  
**(D) DETAIL**  
NTS



MOBILE GENERATOR CONNECTION CABINET SUPPORT  
**(E) DETAIL**  
NTS

**NOTICE:**  
FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811

VERIFICATION OF PRIVATE UTILITY LINES

Date: \_\_\_\_\_

CenterPoint Energy natural gas utilities shown. (Gas services lines are not shown. This signature not to be used for conflict verification. Signature valid for six months.)

Date: \_\_\_\_\_

CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY. (This Signature verifies existing underground facilities - not to be used for conflict verification.) Signature valid for six months.

Date: \_\_\_\_\_

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APPROVED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

DESIGNED BY: \_\_\_\_\_

DRAWN BY: \_\_\_\_\_

SURVEYED BY: \_\_\_\_\_

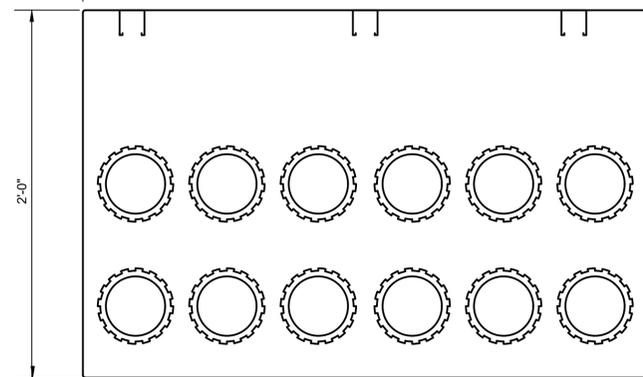
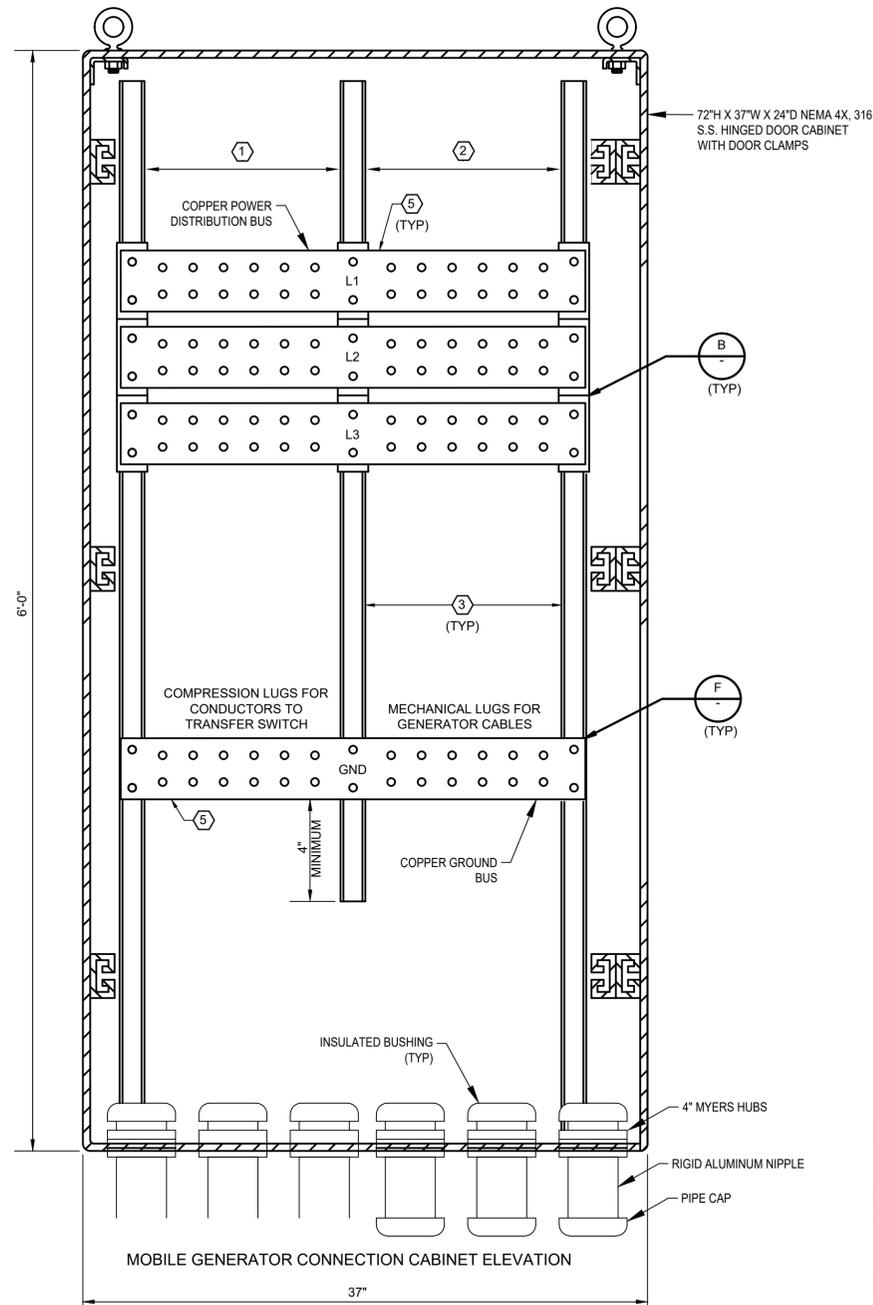
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

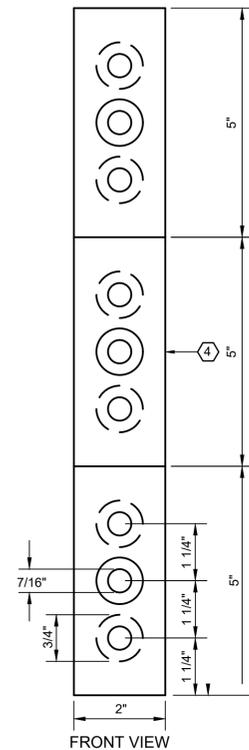
**SCOTT STREET NO. 1**  
LIFT STATION REHABILITATION  
ELECTRICAL  
**ELECTRICAL DETAILS**  
SHEET 4

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 0-E-94	
SHEET NO. OF XX	



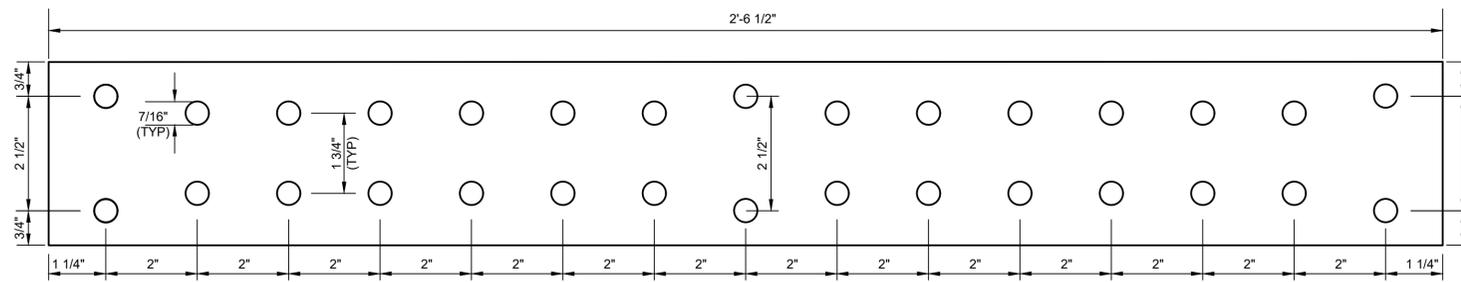
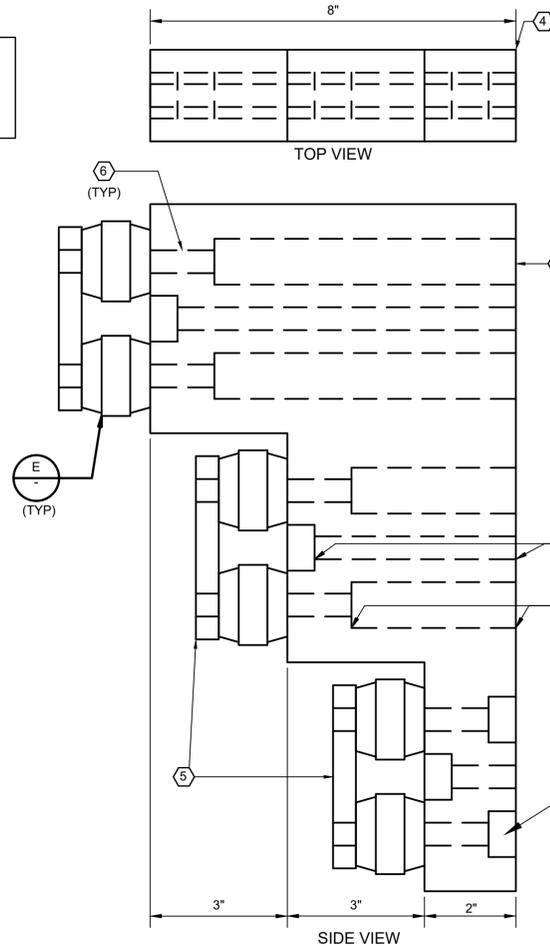
**(A) DETAIL**  
NTS

CONTRACTOR SHALL PROVIDE A SHOP DRAWING FOR THE GENERATOR CONNECTION CABINET.



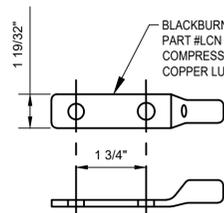
PHASE BUS INSULATED SUPPORT

**(B) DETAIL**  
NTS



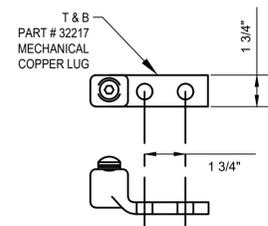
TYPICAL BUS HOLE LAYOUT

**(C) DETAIL**  
NTS



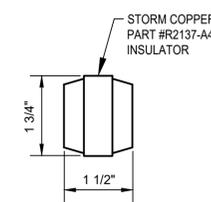
LUGS FOR CABLES TO TRANSFER SWITCH

**(D) DETAIL**  
NTS



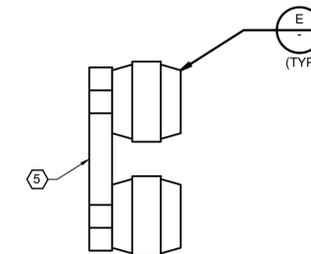
LUGS FOR CABLES TO PORTABLE GENERATOR

**(E) DETAIL**  
NTS



INSULATOR

**(F) DETAIL**  
NTS



GROUND BUS INSULATED SUPPORT

**(G) DETAIL**  
NTS

- NOTES:
- ① CABLES CONNECTED TO TRANSFER SWITCH.
  - ② PROVISIONS TO CONNECT PORTABLE GENERATOR CABLES.
  - ③ TYPE 316 STAINLESS STEEL 1 5/8" 12 GAUGE STRUT.
  - ④ 2" THICK MICARTA INSULATING BOARD.
  - ⑤ 1/2" X 4" COPPER BAR.
  - ⑥ TYPE 316 STAINLESS STEEL BOLTS.

NO.	DATE	REVISIONS	APP.

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VERIFICATION OF PRIVATE UTILITY LINES

Date: \_\_\_\_\_

CenterPoint Energy natural gas utilities shown. (See services listed on end sheet. This signature not to be used for conflict verification.)  
Signature Valid for six months.

Date: \_\_\_\_\_

CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY. (This Signature verifies existing underground facilities - not to be used for conflict verification.)  
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16300 Katy Freeway, Suite 172  
Houston, Texas 77094  
Phone: (713)-365-9288  
PROJECT 4285

**Kalluri Group, Inc.**

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

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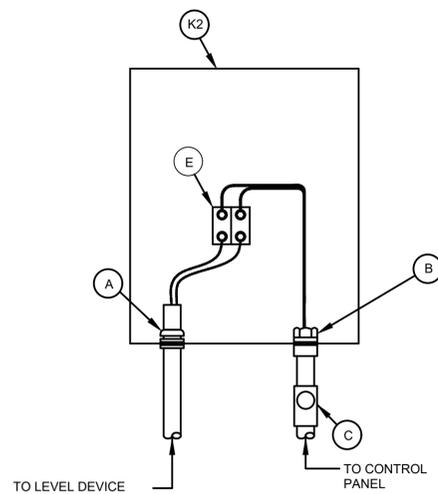
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
LIFT STATION REHABILITATION  
ELECTRICAL

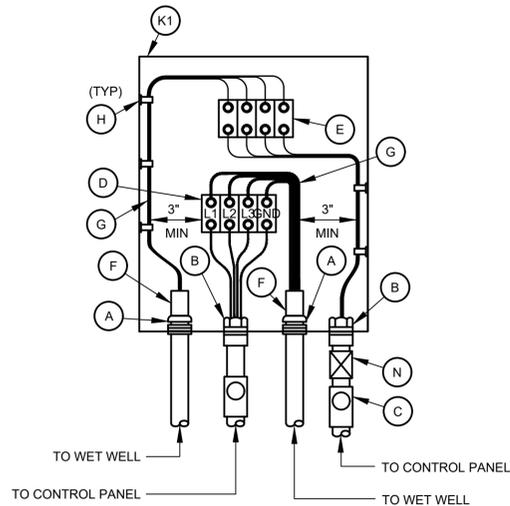
**ELECTRICAL DETAILS**  
SHEET 5

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 0-E-95	
SHEET NO. OF XX	



LEVEL SIGNAL JUNCTION BOX

**A** DETAIL  
NTS



PUMP CABLE JUNCTION BOX

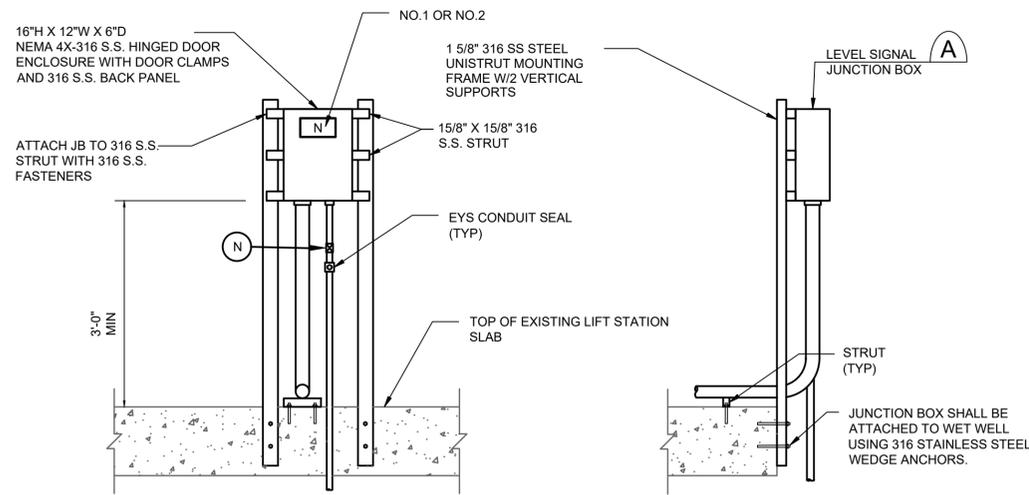
**B** DETAIL  
NTS

JUNCTION BOX EQUIPMENT SCHEDULE

- A - OZ GEDNEY CSBE SEAL WITH 316 S.S. PRESSURE PLATES AND HARDWARE
- B - WATERTIGHT CONDUIT HUB WITH INSULATED BUSHING
- C - CLASS I, DIV 1, EXLOSION PROOF SEAL INSTALLED PER NEC DIV 501
- D - POWER TERMINAL BLOCK W/SCREW DOWN BOX LUGS
- E - CONTROL TERM BLOCK W/SCREW DOWN BOX LUGS
- F - MULTI-CONDUCTOR CABLE, REMOVE OUTER JACKET AS SHOWN
- G - WIRING AS SCHEDULED
- H - WIRING HARNESS PERMANENTLY AFFIXED
- I - PUMP CONTROL WIRING FROM PUMPS 2; 2 & 3; 4; OR D2, AS APPLICABLE
- J - 1 1/2" PVC COATED CONDUIT NIPPLE
- K1 - NEMA 4X 316 STAINLESS STEEL JUNCTION BOX WITH GASKETED FRONT COVER, SINGLE QUARTER TURN, OIL-TIGHT LATCH AND PADLOCKING PROVISIONS, HOFFMAN A24H2010SS6LP OR EQUAL. MINIMUM SIZE: 20"W X 24"H X 10"D
- K2 - NEMA 4X 316 STAINLESS STEEL JUNCTION BOX WITH GASKETED FRONT COVER, SINGLE QUARTER TURN, OIL-TIGHT LATCH AND PADLOCKING PROVISIONS, HOFFMAN A16H1206SS6LP OR EQUAL. MINIMUM SIZE: 12"W X 16"H X 6"D
- L - NAMEPLATE, 3/8" HIGH LETTERS IN WHITE ON BLACK BAKELIGHT (SEE NAMEPLATE SCHEDULE)
- M - TRANSDUCER BREATHER PERMANENTLY AFFIXED
- N - EXPANSION JOINT/SLEEVES

GENERAL NOTES:

- A. NAMEPLATES SHALL BE MOUNTED TO JUNCTION BOXES USING 316 STAINLESS STEEL HARDWARE.
- B. MAINTAIN MINIMUM SEPARATION REQUIRED UNDER NEC ARTICLE 504, BETWEEN INTRINSICALLY SAFE CONTROL WIRING AND NON-INTRINSICALLY SAFE MOTOR FEEDER WIRING.
- D. UNLESS OTHERWISE NOTED, ALL EXPOSED CONDUITS SHALL BE PVC COATED RIGID GALVANIZED STEEL.
- E. UNLESS OTHERWISE NOTED, ALL NUTS, BOLTS, SCREWS WASHERS, ETC SHALL BE TYPE 316 STAINLESS STEEL.
- F. ALL UNDERGROUND CONDUITS TO BE ENCASED IN REINFORCED CONCRETE DUCT BANK.
- G. PROVIDE ANTI-CORROSIVE SPRAY ON ANY BARE METAL PARTS OR EXPOSED WIRE.

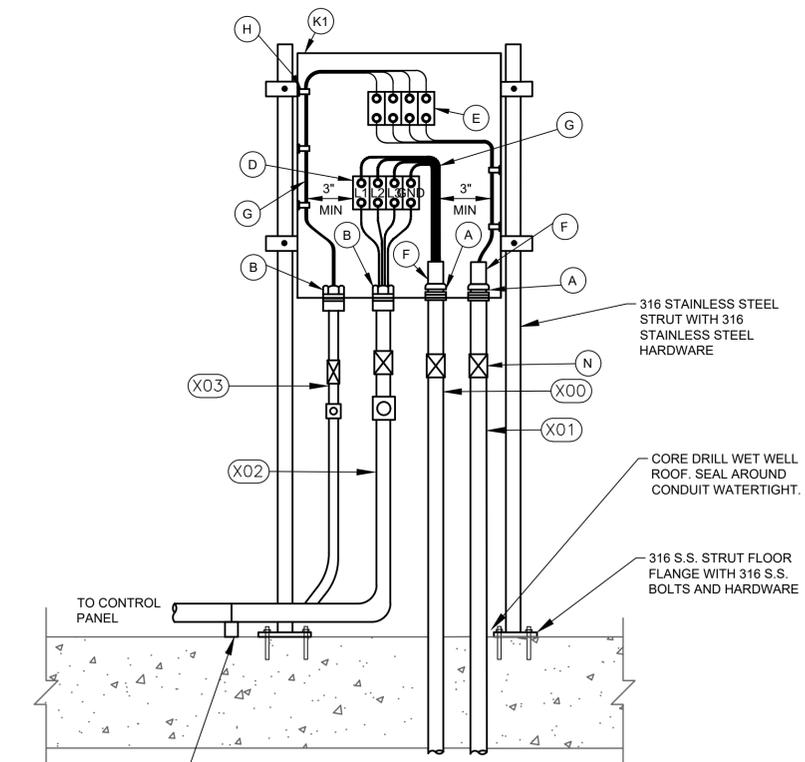


FRONT VIEW

SIDE VIEW

LEVEL SIGNAL JUNCTION BOX ELEVATION

**C** DETAIL  
NTS



316 S.S. STRUT WITH 316 S.S. CONDUIT CLAMP

PUMP CABLE JUNCTION BOX

**D** DETAIL  
NTS

NO.	DATE	REVISIONS	APP.

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Houston, Texas 77094  
Phone: (713)-365-9288  
PROJECT 4285

**QUIDDITY**  
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JOB NO: 00050-0099-01 DATE: 1/19/2026

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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

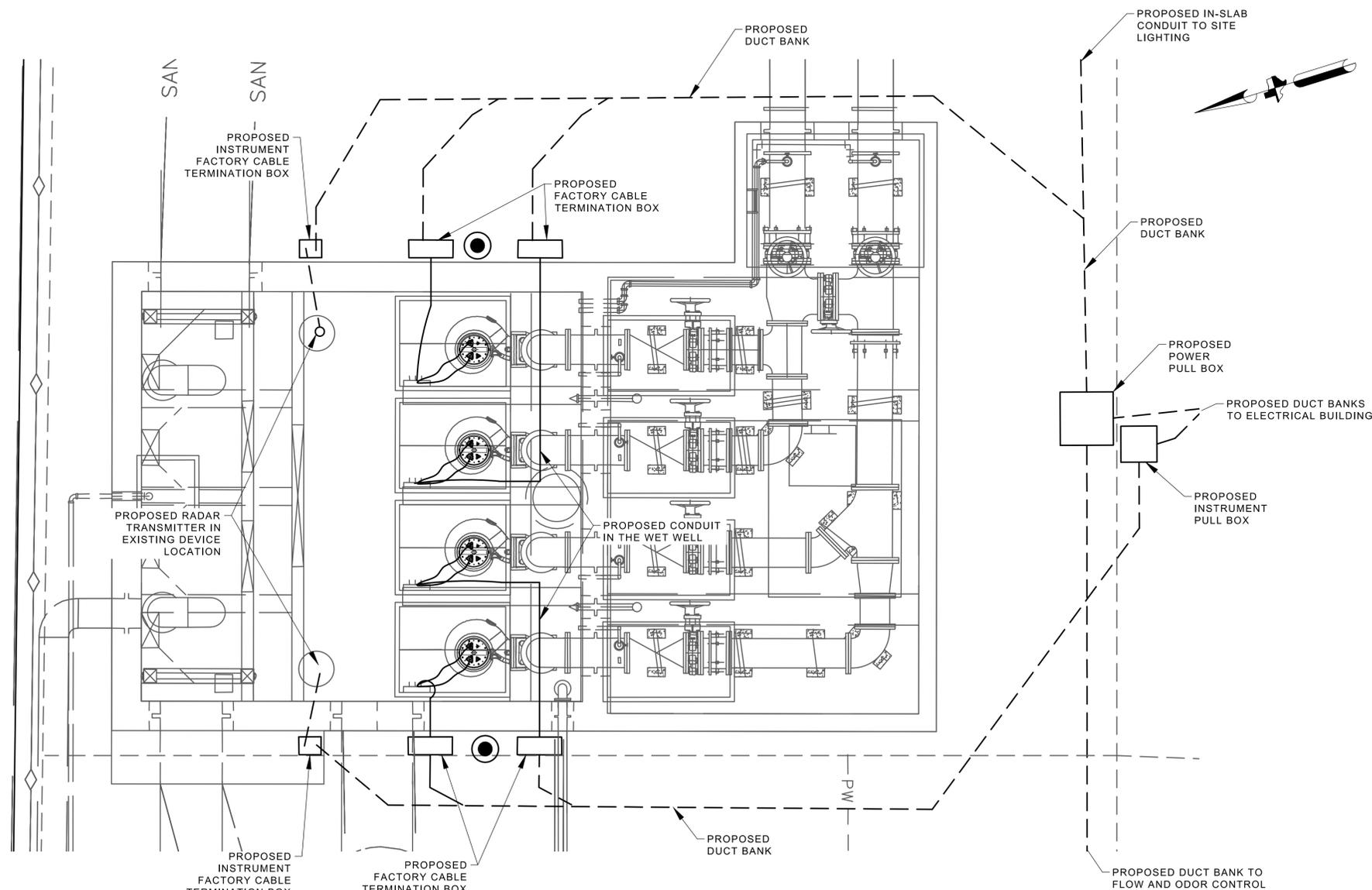
**SCOTT STREET NO. 1  
LIFT STATION REHABILITATION  
ELECTRICAL  
ELECTRICAL DETAILS  
SHEET 6**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 0-E-96	
SHEET NO. OF XX	

NO.	DATE	REVISIONS	APP.

**GENERAL ELECTRICAL NOTES:**

- A. THIS DRAWING ILLUSTRATES THE DRY WEATHER PUMP STATION PROPOSED ELECTRICAL, INSTRUMENTATION AND CONTROL. IT DESCRIBES EQUIPMENT, AND INSTRUMENTS TO BE PROVIDED IN THIS PROJECT. SEE DETAIL DRAWINGS, DIVISION 13 AND DIVISION 15 SPECIFICATIONS FOR ALL ASPECTS OF SUPPLY.
- B. CONTRACTOR HAS TASKS, IN THIS PROJECT, IN NEAR PROXIMITY TO CNP OVERHEAD POWER LINES. CONTRACTOR SHALL FOLLOW NEC AND CNP STANDARDS FOR SAFE WORKING DISTANCE, TEMPORARY SIGNAGE AND PROCEDURES.



PROPOSED DRY WEATHER PUMP STATION ENLARGED

**PLAN**

1/4" = 1'-0"

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 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

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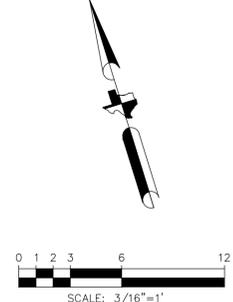
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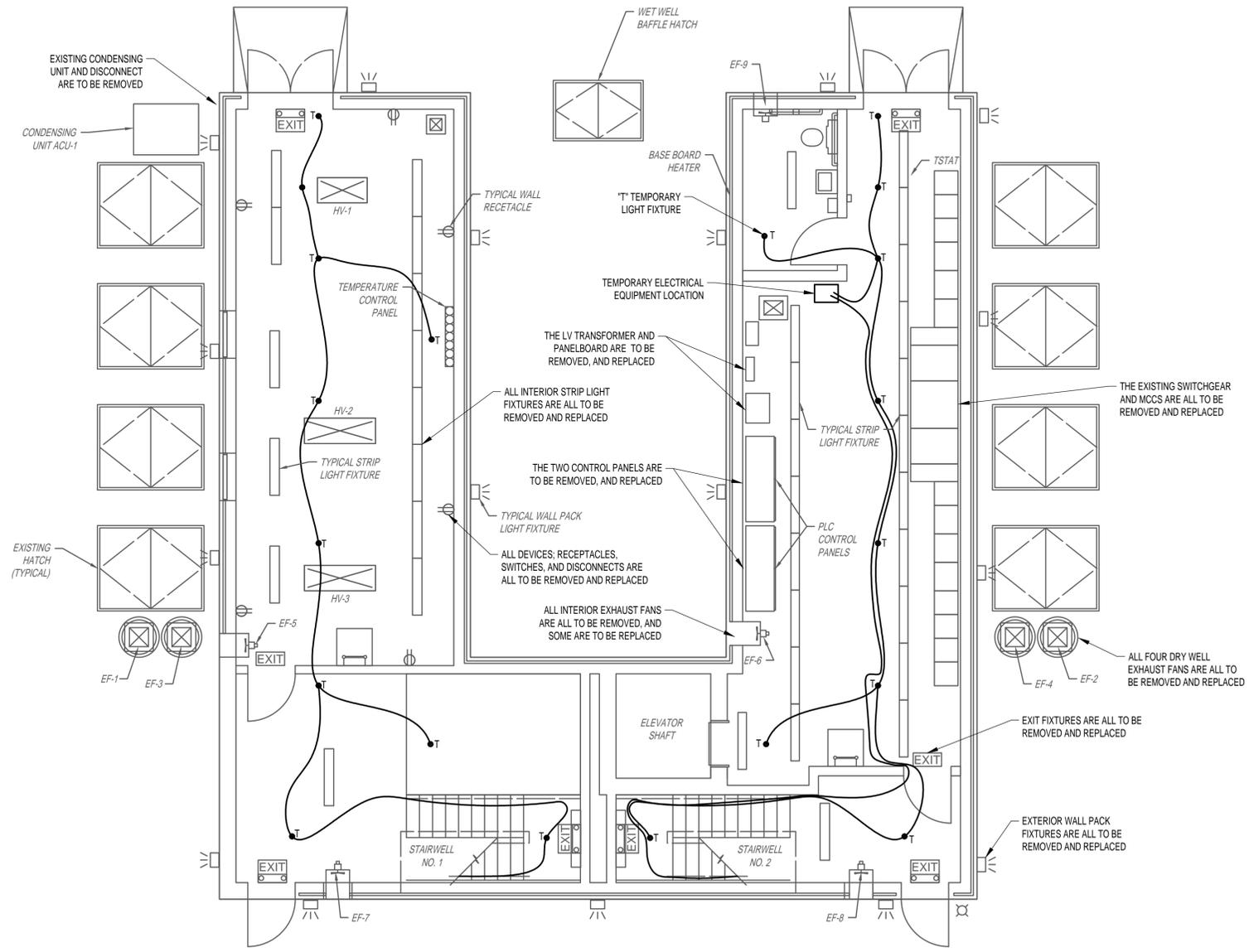
**SCOTT STREET NO. 1  
 LIFT STATION REHABILITATION  
 ELECTRICAL  
 DRY WEATHER PUMP STATION  
 ENLARGED PLAN -  
 PROPOSED**

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R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 1-E-01	
SHEET NO. OF XX	

NO.	DATE	REVISIONS	APP.



- GENERAL NOTES:**
- THIS DRAWING IS PROVIDED TO ILLUSTRATE THE WET WEATHER PUMP STATION GROUND FLOOR ELECTRICAL REMOVALS AND DESCRIBE THE TASKS.
  - PERFORM AS FOUND CONDITION ASSESSMENT AND PROVIDE TEMPORARY PLAN. UPON INSTALLATION OF TEMPORARY FACILITIES REMOVALS MAY BEGIN.
  - THE WET WEATHER PUMP STATION IS TO HAVE ALL ELECTRICAL DEVICES, LIGHTING, CONTROL PANELS, PANELBOARDS, MCC, AND SWITCHGEAR REMOVED.
  - ALL CONDUCTORS SHALL BE REMOVED, NO EXISTING LIGHTING OR RECEPTACLES MAY BE ENERGIZED WITH TEMPORARY POWER.
  - DRY WELL SUMP PUMPS SHALL BE PROVIDED TEMPORARY POWER AT ALL TIMES, DURATION OF THE PROJECT.
  - FOR CLARITY NOT ALL ITEMS REQUIRING REMOVAL AND REPLACEMENT ARE ILLUSTRATED HERE. IT IS A COMPLETE REMOVAL AND REPLACEMENT.
  - COORDINATE A SCADA WORKSHOP PRIOR TO START OF REMOVALS TO SCHEDULE SCADA CONNECTION TRANSITIONS.



EXISTING WET WEATHER PUMP STATION GROUND LEVEL  
**PLAN**  
 3/16" = 1'-0"

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 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

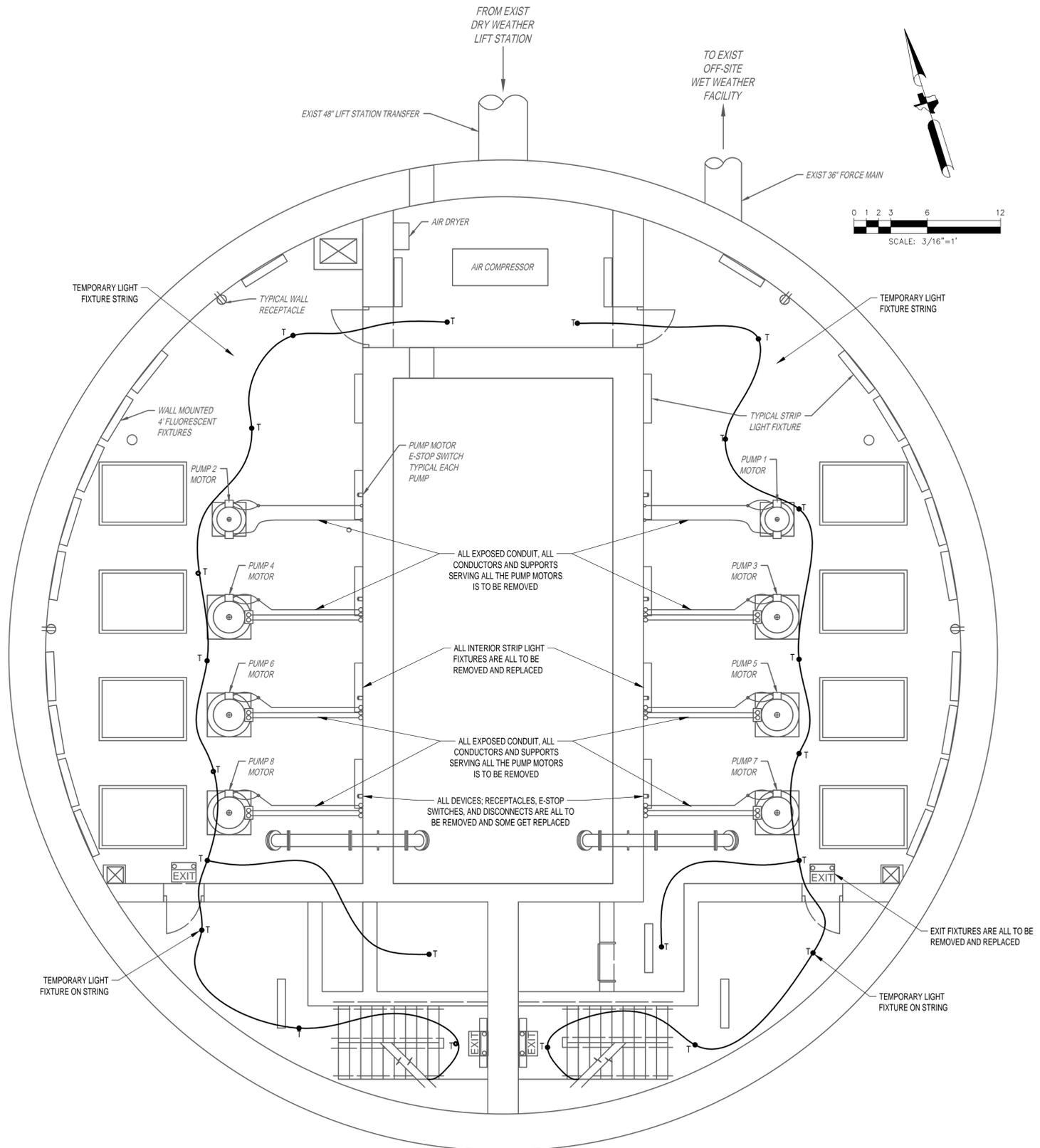
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
 LIFT STATION REHABILITATION  
 ELECTRICAL  
 WET WEATHER PUMP STATION  
 GROUND LEVEL PLAN -  
 EXISTING**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-E-01	
SHEET NO. XXX OF XX	



**GENERAL NOTES:**

- A. THIS DRAWING IS PROVIDED TO ILLUSTRATE THE WET WEATHER PUMP STATION MOTOR LEVEL ELECTRICAL REMOVALS AND DESCRIBE THE TASKS.
- B. PERFORM AS FOUND CONDITION ASSESSMENT AND INCLUDE MOTOR LEVEL WORK IN THE TEMPORARY PLAN. UPON INSTALLATION OF TEMPORARY FACILITIES REMOVALS MAY BEGIN. THE TEMPORARY LIGHTING SHOWN IS THE MINIMUM NUMBER OF FIXTURES TO BE PROVIDED. COORDINATE TO PROVIDE LIGHT FOR ALL PROCESS MECHANICAL TASKS.
- C. THE WET WEATHER PUMP STATION MOTOR LEVEL IS TO HAVE ALL ELECTRICAL DEVICES, LIGHTING, AND CONTROL PANELS REMOVED.
- D. ALL EXPOSED CONDUIT AND ALL CONDUCTORS SHALL BE REMOVED, NO EXISTING LIGHTING OR RECEPTACLES MAY BE ENERGIZED WITH TEMPORARY POWER.
- E. DRY WELL SUMP PUMPS SHALL BE PROVIDED TEMPORARY POWER ON THIS LEVEL, NOT THE LOWER PUMP LEVEL, AT ALL TIMES, FOR DURATION OF THE PROJECT.
- F. FOR CLARITY NOT ALL ITEMS REQUIRING REMOVAL AND REPLACEMENT ARE ILLUSTRATED HERE. IT IS A COMPLETE REMOVAL AND REPLACEMENT.
- G. COORDINATE WITH OTHER TRADES PRIOR TO START OF REMOVALS TO SCHEDULE DISCONNECTIONS.

EXISTING WET WEATHER PUMP STATION MOTOR LEVEL

**PLAN**  
3/16" = 1'-0"

NO.	DATE	REVISIONS	APP.

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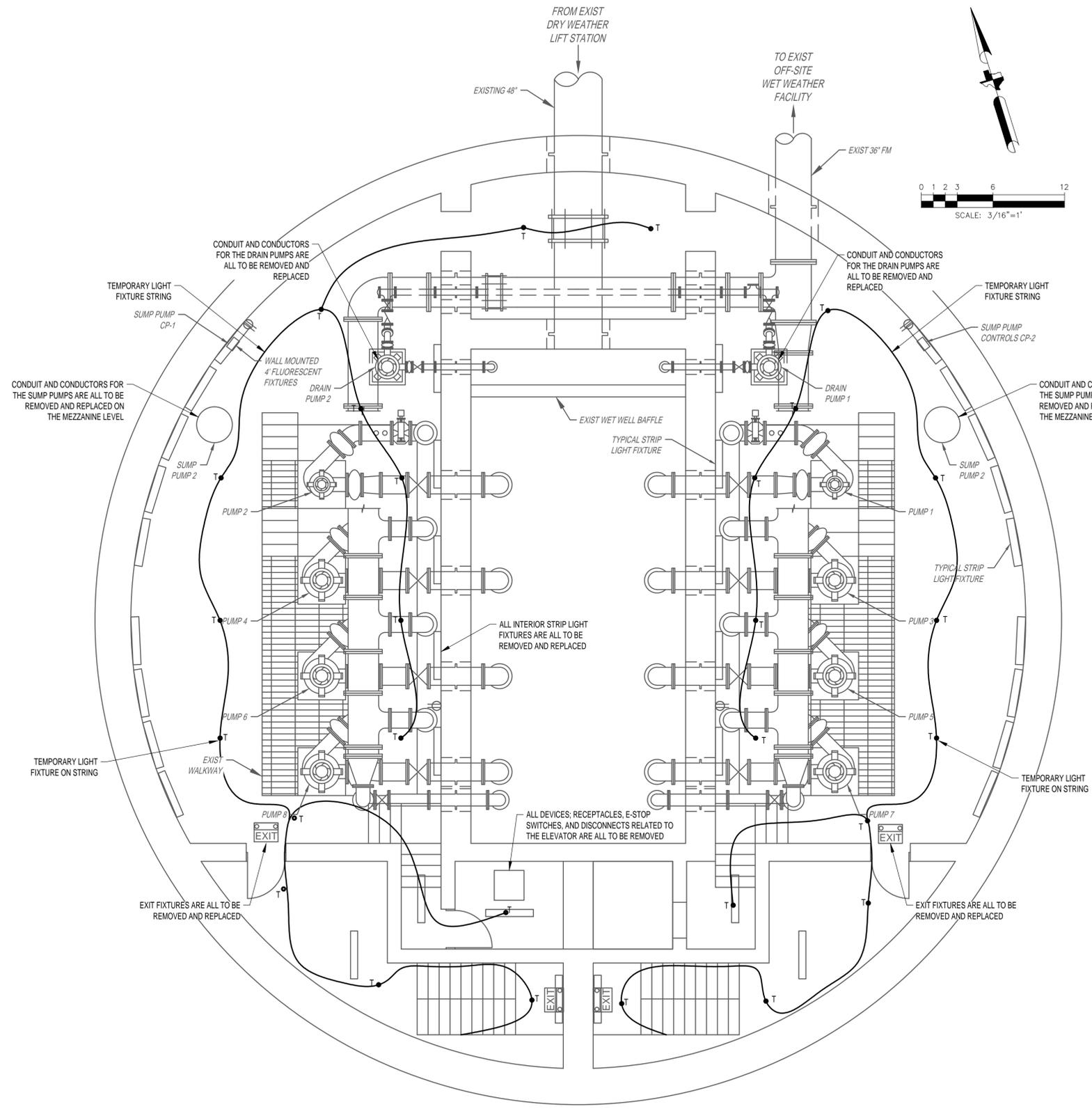
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
LIFT STATION REHABILITATION  
ELECTRICAL  
WET WEATHER PUMP STATION  
MOTOR LEVEL PLAN -  
EXISTING**

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TAHA LOTIA	
DWG NO. 2-E-02	
SHEET NO. XXX OF XX	

NO.	DATE	REVISIONS	APP.



- GENERAL NOTES:**
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  - PERFORM AS FOUND CONDITION ASSESSMENT AND INCLUDE PUMP LEVEL WORK IN THE TEMPORARY PLAN. UPON INSTALLATION OF TEMPORARY FACILITIES REMOVALS MAY BEGIN. THE TEMPORARY LIGHTING SHOWN IS THE MINIMUM NUMBER OF FIXTURES TO BE PROVIDED. COORDINATE TO PROVIDE LIGHT FOR ALL PROCESS MECHANICAL TASKS.
  - THE WET WEATHER PUMP STATION PUMP LEVEL IS TO HAVE ALL ELECTRICAL DEVICES, LIGHTING, AND CONTROL PANELS REMOVED.
  - ALL EXPOSED CONDUIT AND ALL CONDUCTORS SHALL BE REMOVED, NO EXISTING LIGHTING OR RECEPTACLES MAY BE ENERGIZED WITH TEMPORARY POWER.
  - DRY WELL SUMP PUMPS SHALL BE PROVIDED TEMPORARY POWER ON THIS LEVEL, NOT THE LOWER PUMP LEVEL, AT ALL TIMES, FOR DURATION OF THE PROJECT.
  - THE WET WELL DRAIN PUMPS ARE NOT INCLUDED IN THIS PROJECT FOR REPLACEMENT. EXISTING CONDUIT AND CONDUCTORS WILL BE REMOVED AND REPLACED.
  - FOR CLARITY NOT ALL ITEMS REQUIRING REMOVAL AND REPLACEMENT ARE ILLUSTRATED HERE. IT IS A COMPLETE REMOVAL AND REPLACEMENT.
  - COORDINATE WITH OTHER TRADES PRIOR TO START OF REMOVALS TO SCHEDULE DISCONNECTIONS.

EXISTING WET WEATHER PUMP STATION PUMP LEVEL  
**PLAN**  
 3/16" = 1'-0"

**KGI** Kalluri Group, Inc. TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01	DATE: 1/19/2026
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DRAWN BY:	
SURVEYED BY:	
FB NO. XXXXXX	

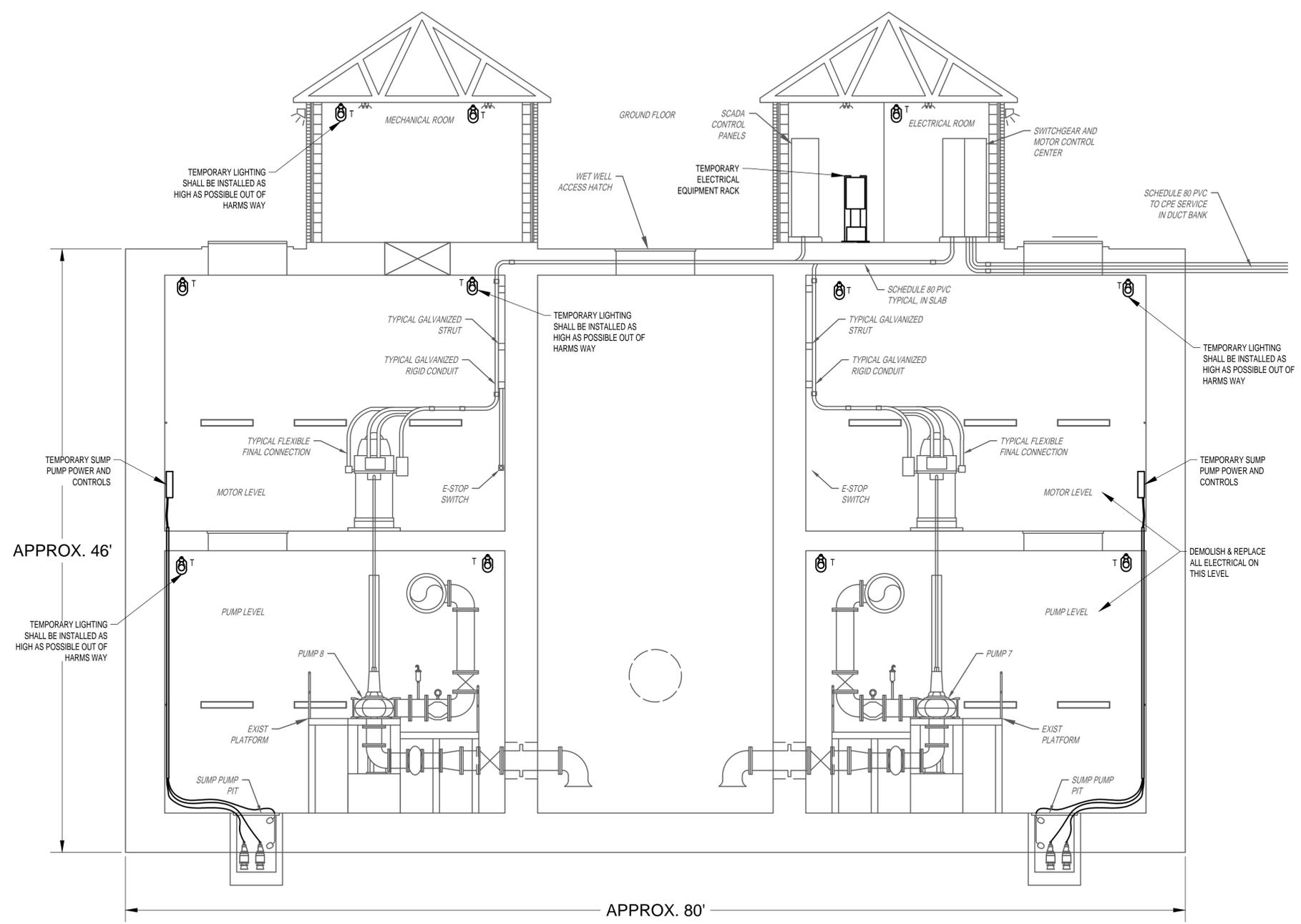
**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
 LIFT STATION REHABILITATION  
 ELECTRICAL  
 WET WEATHER PUMP STATION  
 PUMP LEVEL PLAN -  
 EXISTING**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-E-03	
SHEET NO. XXX OF XX	

NO.	DATE	REVISIONS	APP.

- GENERAL NOTES:**
- THIS DRAWING IS PROVIDED TO ILLUSTRATE EXISTING ELEVATIONS OF THE WET WEATHER PUMP STATION, ELECTRICAL REMOVALS, AND TEMPORARY INSTALLATIONS. TEMPORARY LIGHTING LOCATIONS ARE TO INDICATE THAT FIXTURES ARE INTENDED TO BE BELOW OBSTACLES.
  - PERFORM AS FOUND ASSESSMENT OF CONCRETE ENCASED CONDUIT ROUTINGS, TO FACILITATE PROPOSED ELECTRICAL INSTALLATIONS, EMBEDDED CONDUIT MAY BE UTILIZED WITH RFI ACCEPTANCE. FIND ROUTES BETWEEN FLOORS, PANELS AND EQUIPMENT, TO SAVE CORING NEW HOLES. PROVIDE TEMPORARY FACILITIES PRIOR TO ANY CONDUCTOR REMOVALS.
  - ALL PUMP SYSTEMS CONDUIT AND CONDUCTORS SHALL BE REMOVED, NO EXISTING LIGHTING OR RECEPTACLES MAY BE ENERGIZED WITH TEMPORARY POWER.
  - DRY WELL SUMP PUMPS SHALL BE PROVIDED TEMPORARY POWER AT ALL TIMES, DURATION OF THE PROJECT.
  - FOR CLARITY NOT ALL ITEMS REQUIRING REMOVAL AND REPLACEMENT ARE ILLUSTRATED HERE. IT IS A COMPLETE CONDUCTOR REMOVAL AND REPLACEMENT PROJECT.
  - COORDINATE A SCADA WORKSHOP PRIOR TO START OF REMOVALS TO SCHEDULE SCADA CONNECTION TRANSITIONS.



EXISTING WET WEATHER PUMP STATION  
**SECTION**  
 1" = 5'-0"

**KGI**  TBPE Registration No. F-665  
 Kalluri Group, Inc. 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

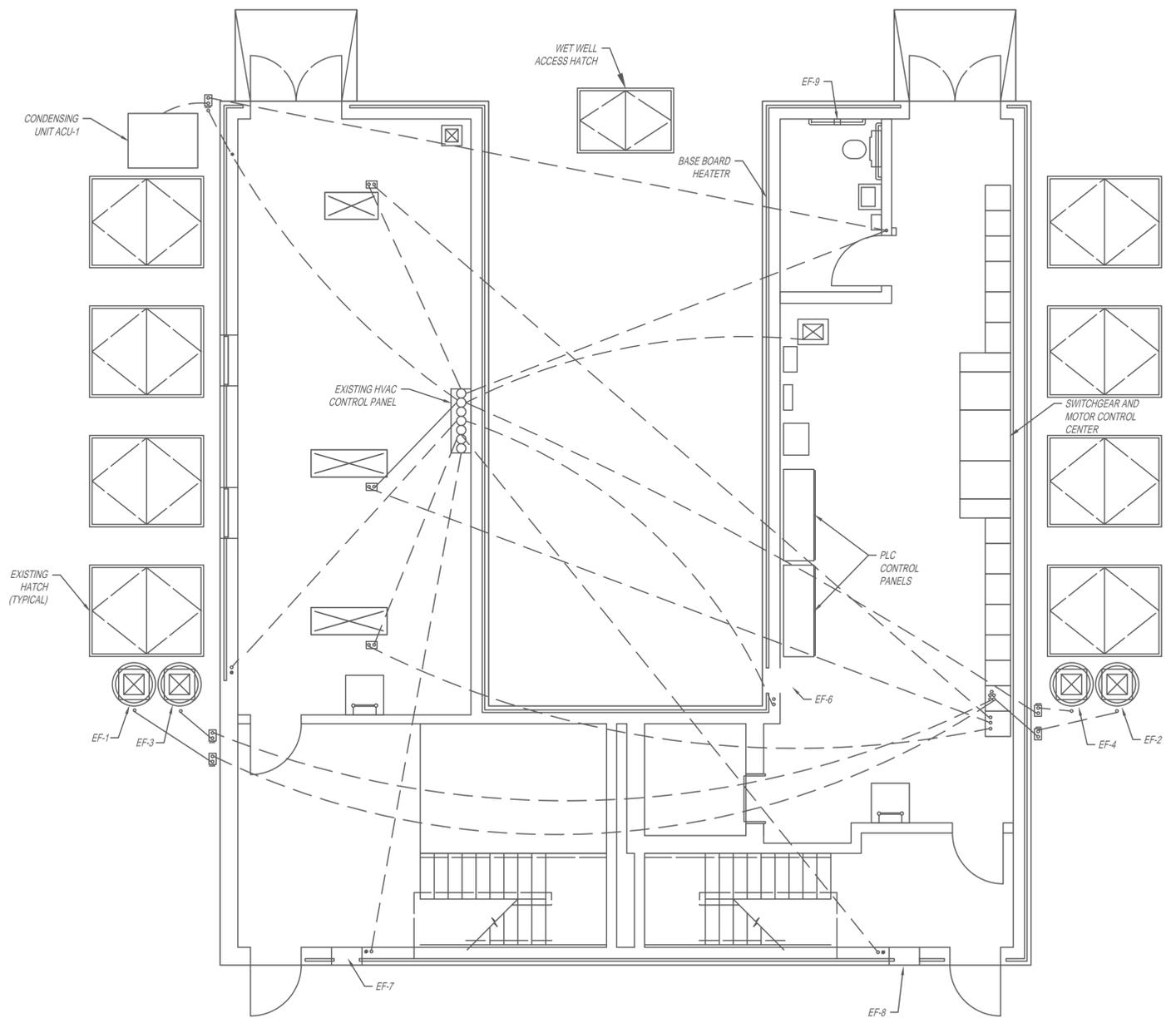
**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS  
**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
 ELECTRICAL  
**WET WEATHER PUMP STATION**  
 SECTION - EXISTING

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. <b>2-E-04</b>	
SHEET NO. XXX OF XX	

NO.	DATE	REVISIONS	APP.



**GENERAL NOTES:**

- A. THIS DRAWING IS PROVIDED TO ILLUSTRATE THE WET WEATHER PUMP STATION GROUND FLOOR HVAC IN-SLAB CONDUITS.
- B. CONTRACTOR SHALL REMOVE EXISTING HVAC EXPOSED CONDUIT/CONDUCTORS AND PROVIDE NEW HVAC CONDUIT AND CONDUCTORS. PERFORM AS FOUND CONDITION ASSESSMENT AND DETERMINE IF EMBEDDED CONDUITS WILL BE CUT DURING NEW SAW CUTTING OF STRUCTURE. EXISTING EMBEDDED CONDUITS MAY BE UTILIZED FOR PROPOSED WORK. PROVIDE TEMPORARY FACILITIES PRIOR TO REMOVALS.
- C. FOR CLARITY NOT ALL ITEMS REQUIRING REMOVAL AND REPLACEMENT ARE ILLUSTRATED HERE. IT IS A COMPLETE REMOVAL AND REPLACEMENT.
- D. COORDINATE WITH HVAC PRIOR TO START OF REMOVALS TO SCHEDULE SCADA CONNECTION TRANSITIONS.

EXISTING WET WEATHER PUMP STATION GROUND LEVEL HVAC CONDUIT

**PLAN**  
1" = 5'-0"

**KGI**  TBPE Registration No. F-665  
 Kalluri Group, Inc. 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
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**QUIDDITY**  
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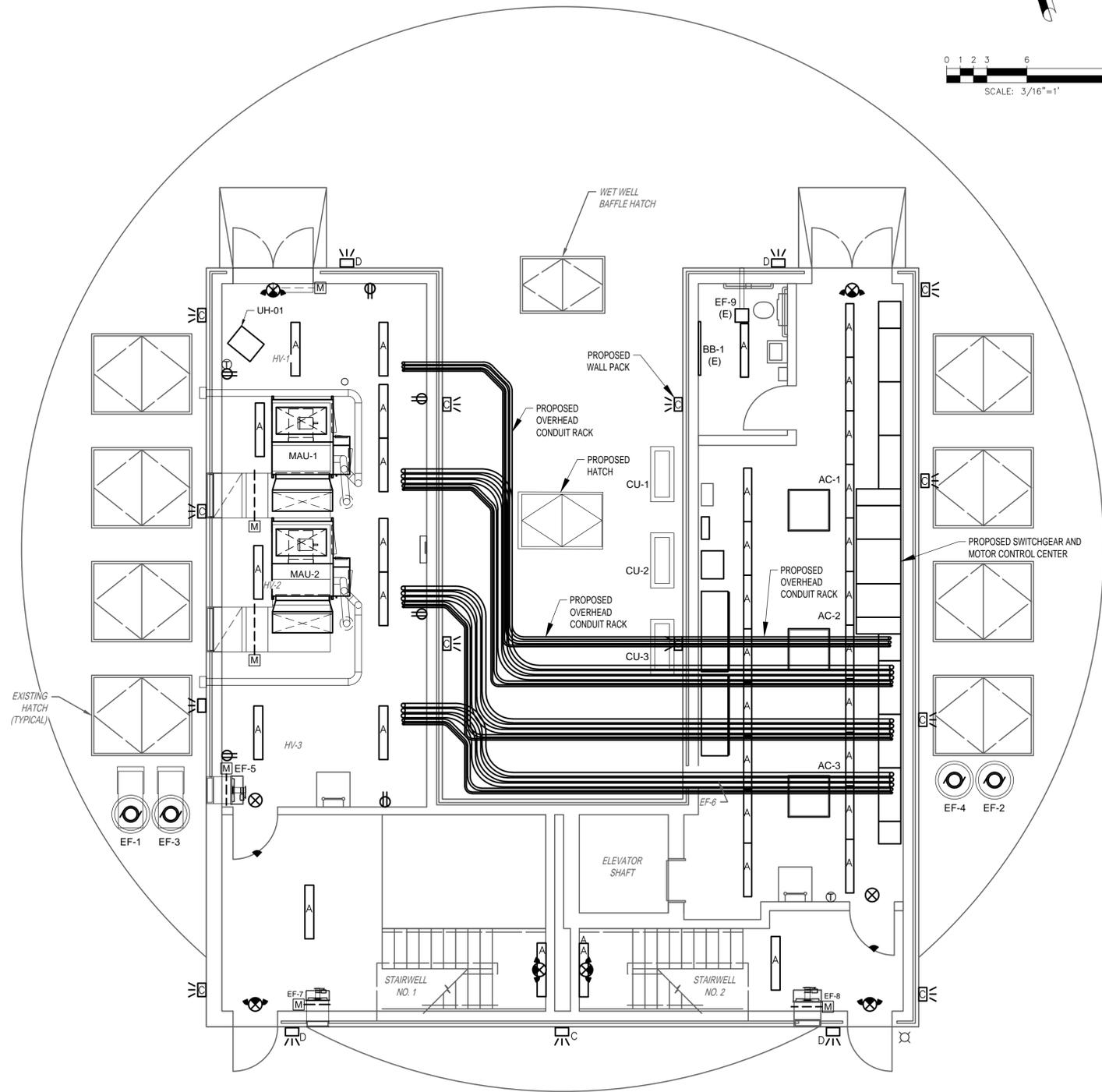
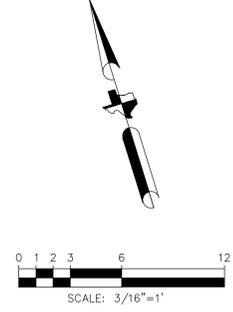
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
LIFT STATION REHABILITATION  
ELECTRICAL  
WET WEATHER PUMP STATION  
GROUND LEVEL HVAC CONDUIT PLAN -  
EXISTING**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-E-05	
SHEET NO. XXX OF XX	

NO.	DATE	REVISIONS	APP.



**GENERAL NOTES:**

- A. THIS DRAWING IS PROVIDED TO ILLUSTRATE THE WET WEATHER PUMP STATION GROUND FLOOR PROPOSED ELECTRICAL CONDITION, AND DESCRIBE TASKS.
- B. PROVIDE A COMPLETE AND WORKING WET WEATHER LIFT STATION IN COMPLIANCE WITH THE, CURRENT AT THE TIME OF BID, GUIDELINES.
- C. THE WET WEATHER PUMP STATION IS TO HAVE ALL ELECTRICAL DEVICES, LIGHTING, CONTROL PANELS, PANELBOARDS, MCC, AND SWITCHGEAR PROVIDED IN COMPLIANCE WITH THE RELATED SPECIFICATIONS AND APPROVED SHOP DRAWING SUBMITTALS.
- D. ALL EXPOSED CONDUIT AND CONDUCTORS SHALL BE NEW. ALL LIGHTING, RECEPTACLES, AND EQUIPMENT SHALL BE CLEAN AND PROVIDED NAMEPLATES PER SPECIFICATIONS.
- E. COORDINATE WITH OTHERS TO PROVIDE HVAC POWER AND LOW VOLTAGE CONDUIT AND CONDUCTORS, AS REQUIRED PER HVAC RISER DIAGRAM.
- F. FOR CLARITY NOT ALL ITEMS REQUIRED ARE ILLUSTRATED HERE; SEE SITE PLANS, ONE LINE DIAGRAMS, SCHEDULES, AND DETAILS FOR COMPLETE REPLACEMENT REQUIREMENTS.
- G. COORDINATE WITH SCADA GROUP THROUGH THE WORKSHOPS AND PRIOR TO START TO ENSURE ALL CURRENT SCADA DEVICES AND CONNECTIONS ARE PROVIDED.

PROPOSED WET WEATHER PUMP STATION GROUND LEVEL

**PLAN**  
3/16" = 1'-0"

**KGI**  TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

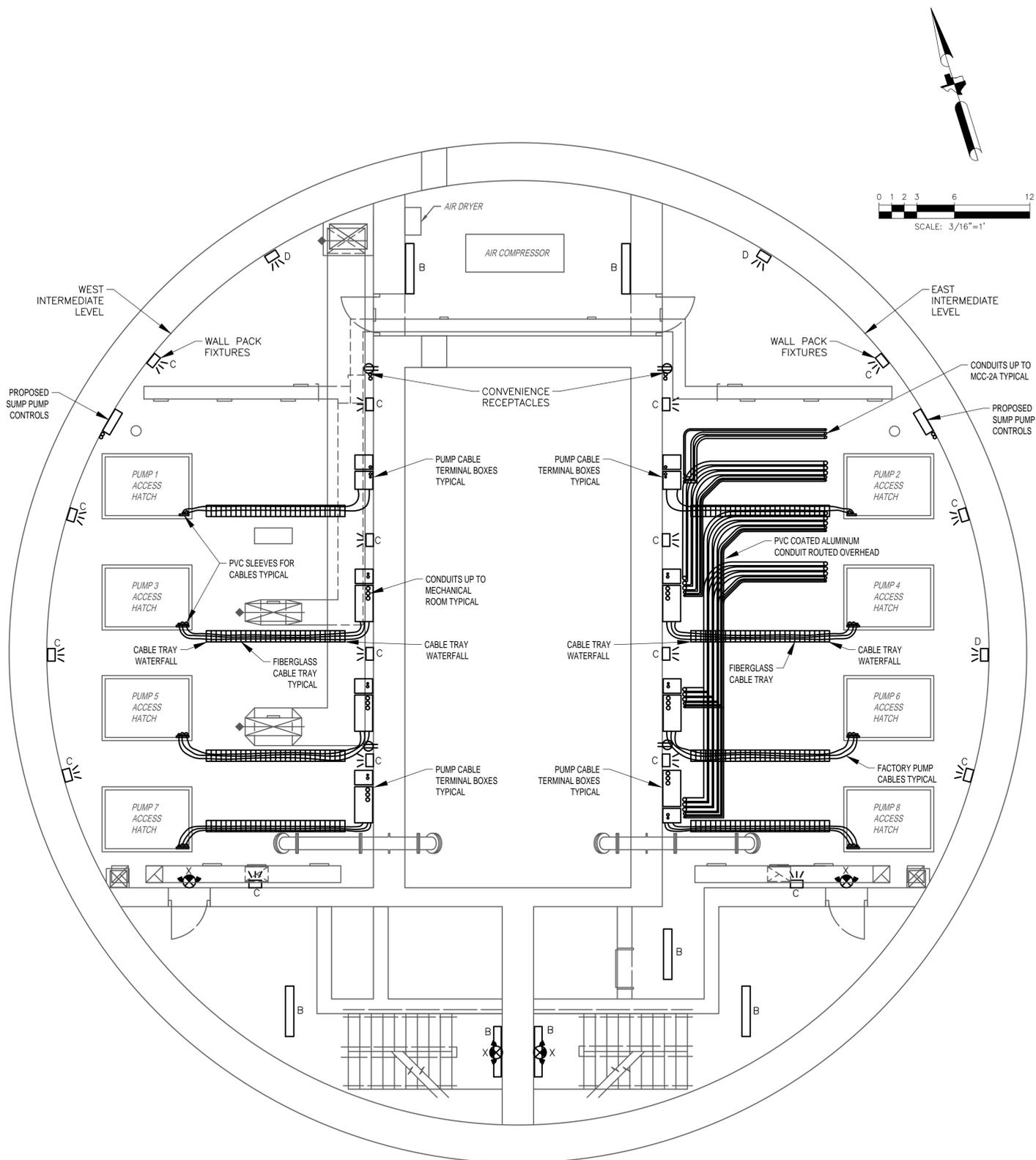
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
LIFT STATION REHABILITATION  
ELECTRICAL  
WET WEATHER PUMP STATION  
GROUND LEVEL PLAN -  
PROPOSED**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-E-11	
SHEET NO. XXX OF XX	

NO.	DATE	REVISIONS	APP.



- GENERAL NOTES:**
- THIS DRAWING IS PROVIDED TO ILLUSTRATE THE WET WEATHER PUMP STATION INTERMEDIATE LEVEL PROPOSED ELECTRICAL CONDITION, AND DESCRIBE TASKS.
  - PROVIDE A COMPLETE AND WORKING WET WEATHER LIFT STATION IN COMPLIANCE WITH THE CURRENT GUIDELINES AT THE TIME OF BID, GUIDELINES.
  - THE WET WEATHER PUMP STATION IS TO HAVE ALL ELECTRICAL DEVICES, LIGHTING, CONTROL PANELS, PANELBOARDS, MCC, AND SWITCHGEAR PROVIDED IN COMPLIANCE WITH THE RELATED SPECIFICATIONS AND APPROVED SHOP DRAWING SUBMITTALS.
  - ALL EXPOSED CONDUIT AND CONDUCTORS SHALL BE NEW. ALL LIGHTING, RECEPTACLES, AND EQUIPMENT SHALL BE CLEAN AND PROVIDED NAMEPLATES PER SPECIFICATIONS.
  - COORDINATE WITH OTHERS TO PROVIDE HVAC POWER AND LOW VOLTAGE CONDUIT AND CONDUCTORS, AS REQUIRED PER HVAC RISER DIAGRAM.
  - FOR CLARITY NOT ALL ITEMS REQUIRED ARE ILLUSTRATED HERE; SEE SITE PLANS, ONE LINE DIAGRAMS, SCHEDULES, AND DETAILS FOR COMPLETE REPLACEMENT REQUIREMENTS.
  - COORDINATE WITH SCADA GROUP THROUGH THE WORKSHOPS AND PRIOR TO START TO ENSURE ALL CURRENT SCADA DEVICES AND CONNECTIONS ARE PROVIDED.

PROPOSED WET WEATHER PUMP STATION MEZZANINE LEVEL

**PLAN**  
3/16" = 1'-0"

**KGI** TBPE Registration No. F-665  
 Kalluri Group, Inc. 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

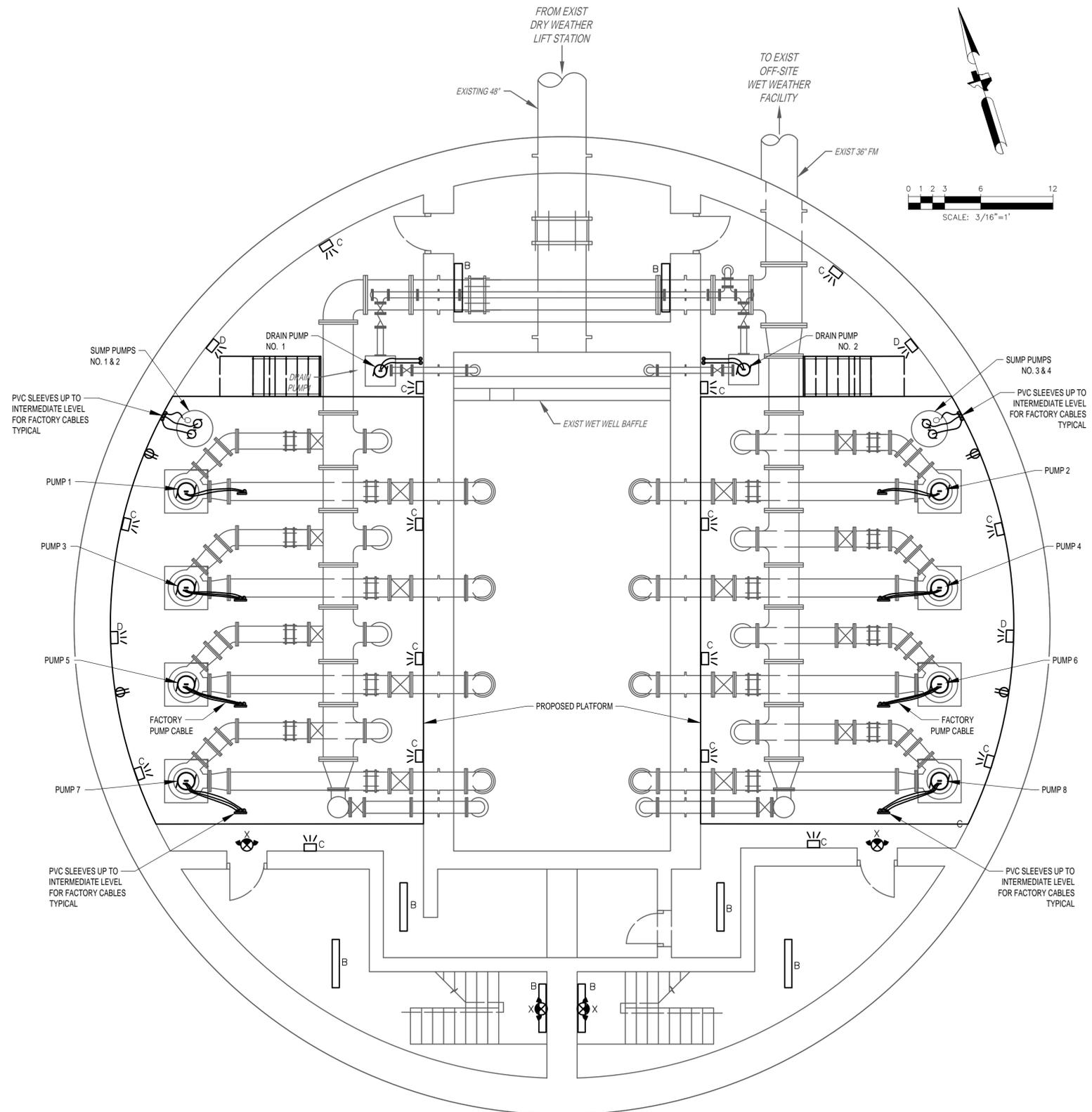
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SURVEYED BY:	
FB NO. XXXXXX	

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
 ELECTRICAL  
**WET WEATHER PUMP STATION**  
**MEZZANINE LEVEL PLAN -**  
**PROPOSED**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. <b>2-E-12</b>	
SHEET NO. XXX OF XX	



- GENERAL NOTES:**
- A. THIS DRAWING IS PROVIDED TO ILLUSTRATE THE WET WEATHER PUMP STATION LOWER LEVEL PROPOSED ELECTRICAL CONDITION, AND DESCRIBE TASKS.
  - B. PROVIDE A COMPLETE AND WORKING WET WEATHER LIFT STATION IN COMPLIANCE WITH THE, CURRENT AT THE TIME OF BID, GUIDELINES.
  - C. THE WET WEATHER PUMP STATION LOWER LEVEL IS TO HAVE ALL ELECTRICAL DEVICES, LIGHTING, CONDUIT AND CONDUCTORS PROVIDED IN COMPLIANCE WITH THE RELATED SPECIFICATIONS AND APPROVED SHOP DRAWING SUBMITTALS.
  - D. ALL EXPOSED CONDUIT AND CONDUCTORS SHALL BE NEW. ALL LIGHTING, RECEPTACLES, AND EQUIPMENT SHALL BE CLEAN AND PROVIDED NAMEPLATES PER SPECIFICATIONS AT TIME OF TESTING AND COMMISSIONING.
  - E. FOR CLARITY NOT ALL CONDUIT REQUIRED IS ILLUSTRATED HERE. EXISTING CONCRETE EMBEDDED CONDUIT MAY BE UTILIZED FOR PROPOSED WORK.
  - F. COORDINATE WITH SCADA GROUP THROUGH THE WORKSHOPS AND PRIOR TO START TO ENSURE ALL DEVICES AND CONNECTIONS ARE PROVIDED.

NO.	DATE	REVISIONS	APP.

**KGI** Kalluri Group, Inc. TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
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**CITY OF HOUSTON**  
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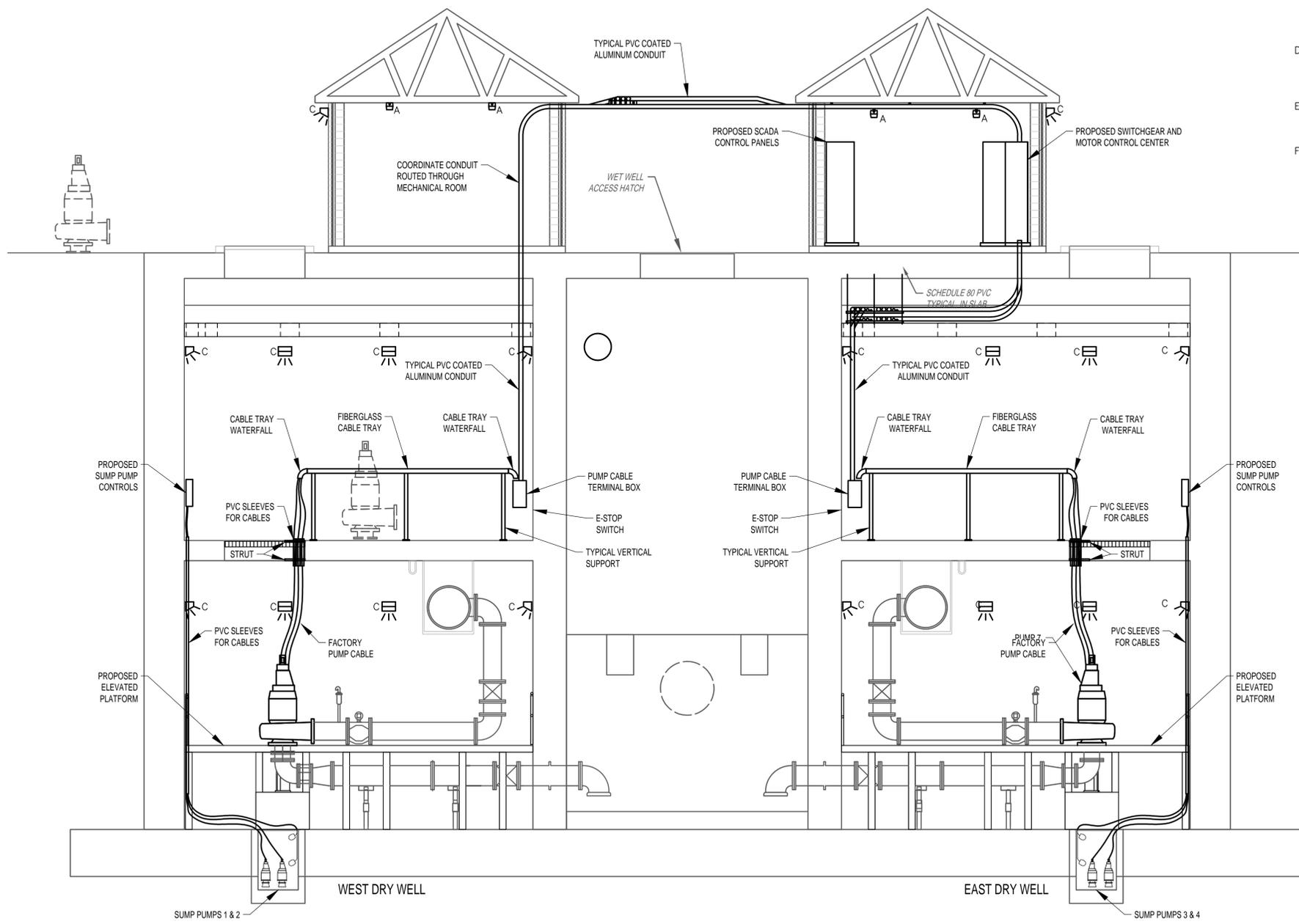
**SCOTT STREET NO. 1  
 LIFT STATION REHABILITATION  
 ELECTRICAL  
 WET WEATHER PUMP STATION  
 LOWER LEVEL PLAN -  
 PROPOSED**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-E-13	
SHEET NO. XXX OF XX	

PROPOSED WET WEATHER PUMP STATION LOWER LEVEL  
**PLAN**  
 3/16" = 1'-0"

NO.	DATE	REVISIONS	APP.

- GENERAL NOTES:**
- A. THIS DRAWING IS PROVIDED TO ILLUSTRATE ELEVATIONS OF THE WET WEATHER PUMP STATION, PROPOSED ELECTRICAL CONDITION, AND DESCRIBE TASKS.
  - B. PROVIDE A COMPLETE AND WORKING WET WEATHER LIFT STATION IN COMPLIANCE WITH THE, CURRENT AT THE TIME OF BID, GUIDELINES.
  - C. THE WET WEATHER PUMP STATION LOWER LEVEL IS TO HAVE ALL ELECTRICAL DEVICES, LIGHTING, CONDUIT AND CONDUCTORS PROVIDED IN COMPLIANCE WITH THE RELATED SPECIFICATIONS AND APPROVED SHOP DRAWING SUBMITTALS.
  - D. ALL EXPOSED CONDUIT AND CONDUCTORS SHALL BE NEW. ALL LIGHTING, RECEPTACLES, AND EQUIPMENT SHALL BE CLEAN AND PROVIDED NAMEPLATES PER SPECIFICATIONS AT TIME OF TESTING AND COMMISSIONING.
  - E. FOR CLARITY NOT ALL CONDUIT REQUIRED IS ILLUSTRATED HERE. EXISTING CONCRETE EMBEDDED CONDUIT MAY BE UTILIZED FOR PROPOSED WORK.
  - F. COORDINATE WITH SCADA GROUP THROUGH THE WORKSHOPS AND PRIOR TO START TO ENSURE ALL DEVICES AND CONNECTIONS ARE PROVIDED.



**PROPOSED WET WEATHER PUMP STATION**  
**SECTION**  
 1" = 5'-0"

**KGI**  TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
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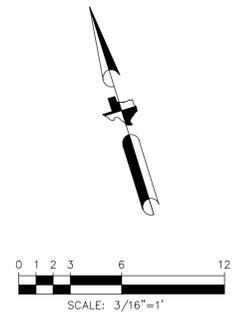
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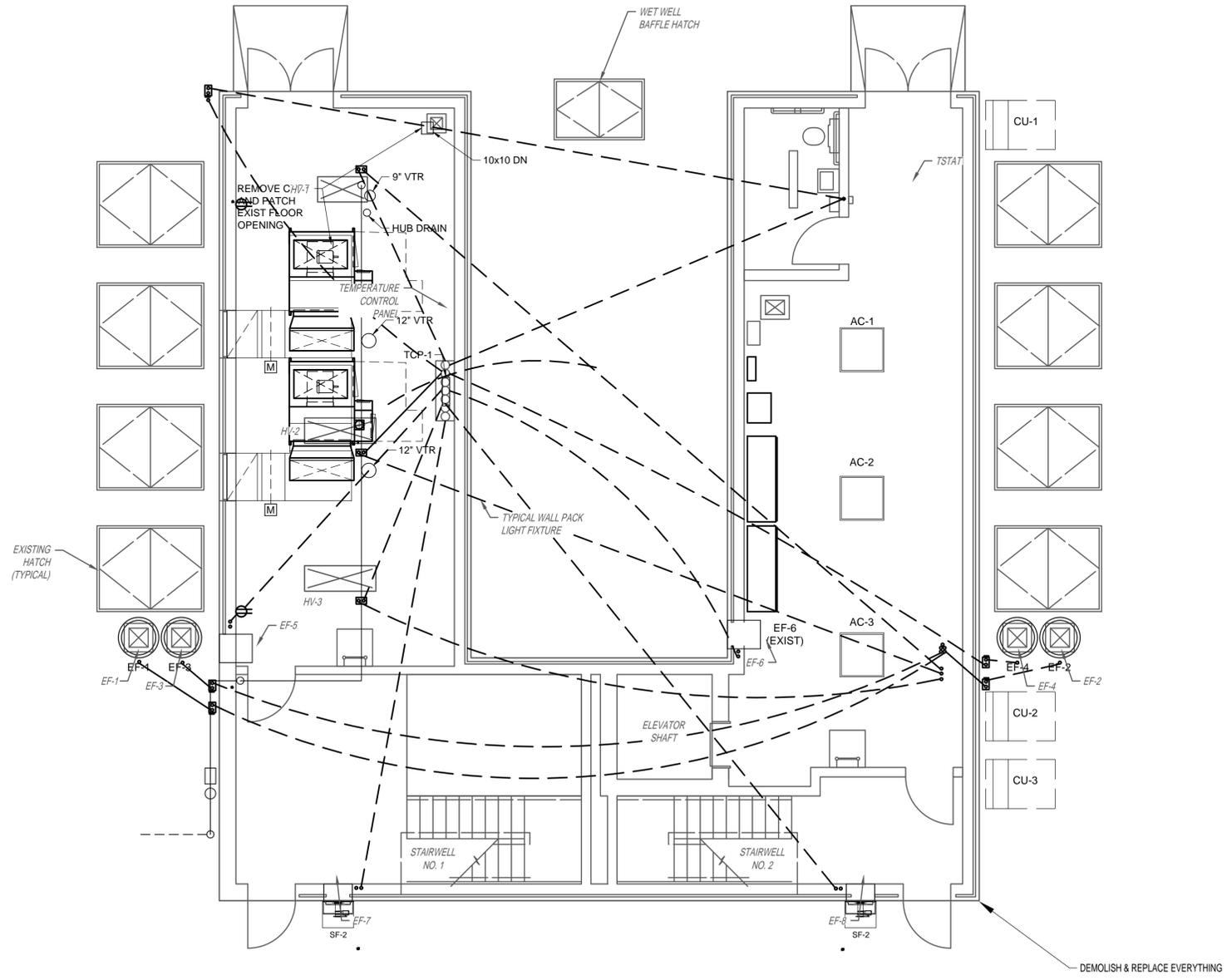
**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
 ELECTRICAL  
  
**WET WEATHER PUMP STATION**  
**SECTION - PROPOSED**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. <b>2-E-14</b>	
SHEET NO. XXX OF XX	

NO.	DATE	REVISIONS	APP.



- GENERAL NOTES:**
- A. THIS DRAWING IS PROVIDED TO ILLUSTRATE THE WET WEATHER PUMP STATION GROUND FLOOR HVAC IN-SLAB CONDUITS.
  - B. CONTRACTOR SHALL COORDINATE TO PROVIDE HVAC EXPOSED CONDUIT AND CONDUCTORS. MONITOR EMBEDDED CONDUITS THAT ARE CUT DURING CONSTRUCTION AND REPLACE THEM. DETERMINE EXISTING EMBEDDED CONDUITS THAT MAY BE UTILIZED FOR PROPOSED WORK. PROVIDE TEMPORARY FACILITIES PRIOR TO REMOVALS.
  - C. FOR CLARITY NOT ALL ITEMS REQUIRING REMOVAL AND REPLACEMENT ARE ILLUSTRATED HERE. IT IS A COMPLETE REMOVAL AND REPLACEMENT.
  - D. COORDINATE WITH HVAC PRIOR TO START OF REMOVALS TO SCHEDULE SCADA CONNECTION TRANSITIONS.



PROPOSED WET WEATHER PUMP STATION GROUND LEVEL HVAC  
**PLAN**  
 3/16" = 1'-0"

**KGI** Kalluri Group, Inc. TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
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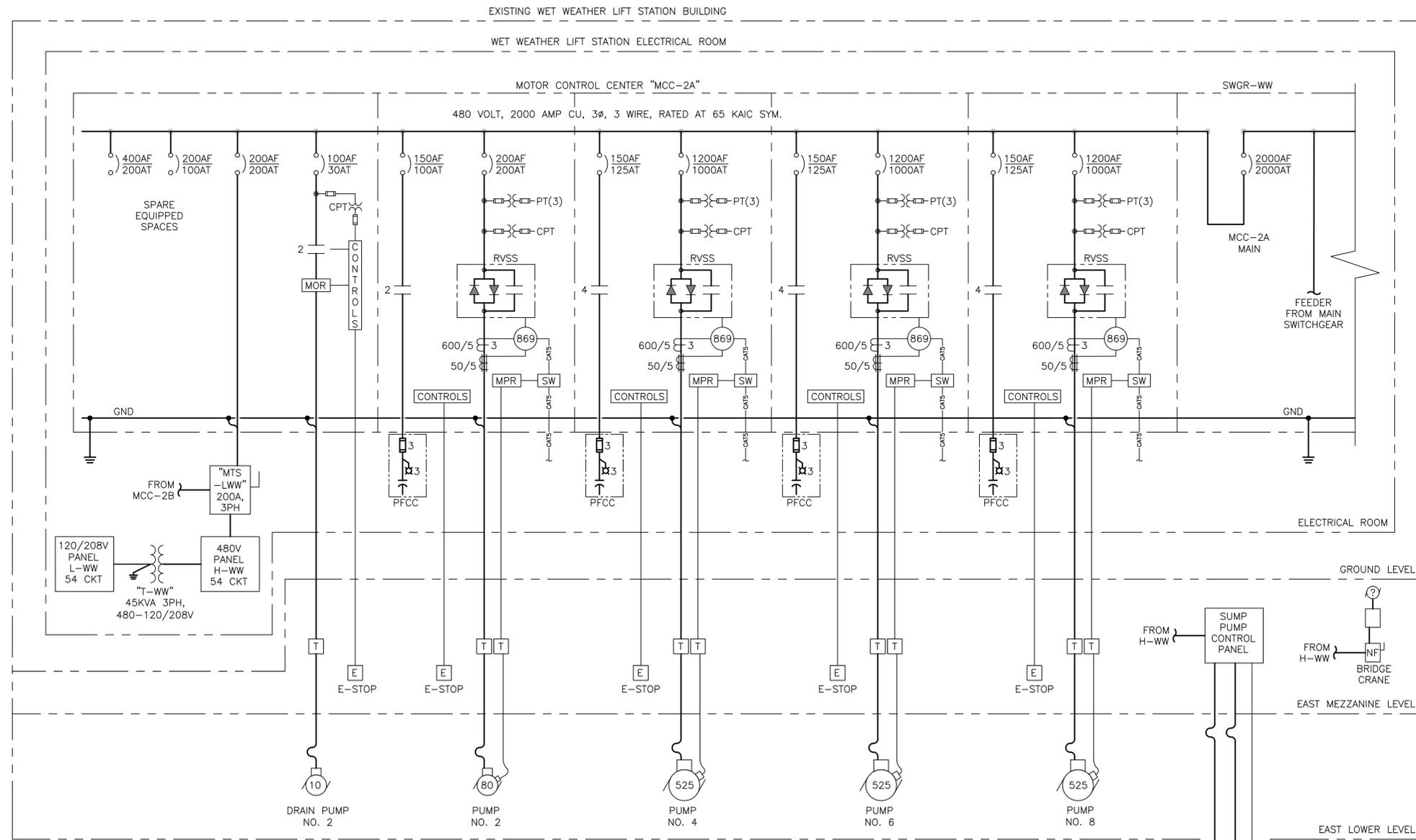
**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
 LIFT STATION REHABILITATION  
 ELECTRICAL  
 WET WEATHER PUMP STATION  
 GROUND LEVEL HVAC PLAN -  
 PROPOSED**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. <b>2-E-15</b>	
SHEET NO. XXX OF XX	

NO.	DATE	REVISIONS	APP.

GENERAL NOTES:  
 A. THIS DRAWING IS PROVIDED TO ILLUSTRATE THE A SECTION OF THE WET WEATHER PUMP STATION MCC-2.



PROPOSED MCC-2A ONE LINE  
**DIAGRAM**  
 NONE

**KGI** Kalluri Group, Inc. TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
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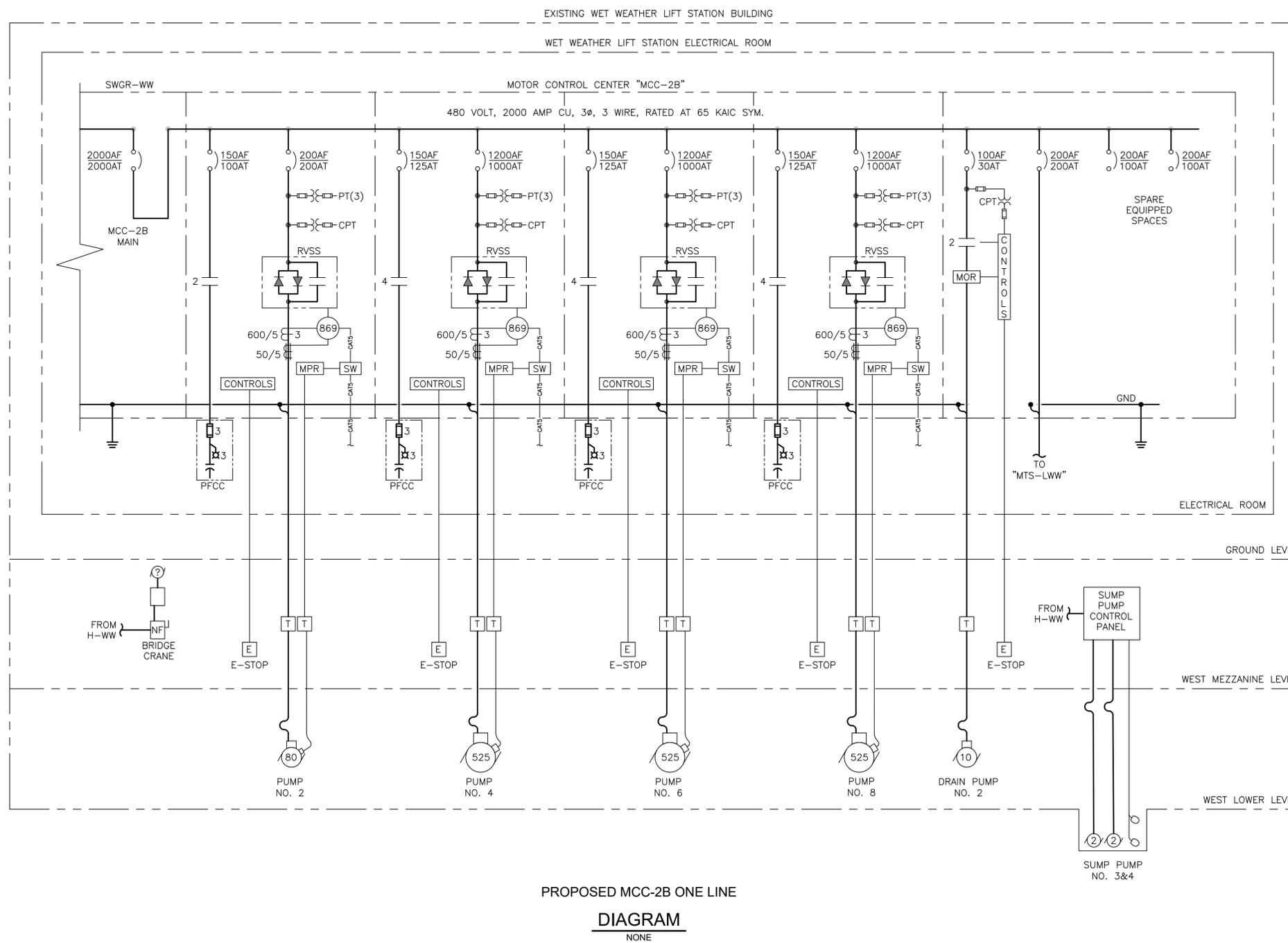
**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
 LIFT STATION REHABILITATION  
 ELECTRICAL  
 WET WEATHER PUMP STATION  
 MCC-2A ONE LINE DIAGRAM -  
 PROPOSED**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-E-21	
SHEET NO. XXX OF XX	

NO.	DATE	REVISIONS	APP.

GENERAL NOTES:  
 A. THIS DRAWING IS PROVIDED TO ILLUSTRATE THE B SECTION OF THE WET WEATHER PUMP STATION MCC-2.



PROPOSED MCC-2B ONE LINE  
**DIAGRAM**  
 NONE

**KGI** Kalluri Group, Inc. TBPE Registration No. F-665  
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
 LIFT STATION REHABILITATION  
 ELECTRICAL  
 WET WEATHER PUMP STATION  
 MCC-2B ONE LINE DIAGRAM -  
 PROPOSED**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-E-22	
SHEET NO. XXX OF XX	

NO.	DATE	REVISIONS	APP.

NOTES:

- ① BREAKER SHALL BE PROVIDED "FACTORY" PAD LOCK PROVISIONS.
- ② SEE SPECIFICATION 16290 FOR SURGE PROTECTION DEVICE REQUIREMENTS.

PANELBOARD IS TO BE LOCATED IN THE WET WEATHER LIFT STATION BUILDING ELECTRICAL ROOM

PANEL H-WW

FEEDER 4/0 AWG  
 BUS AMPS 225  
 MAIN LUG ONLY YES  
 VOLTS 480/277 AIC 65 KA  
 PHASE 3 WIRE 3

NOTES  
 1. SURFACE MOUNT  
 2. NEMA 12 ENCLOSURE  
 3. PHASE, AND GROUND BUS SHALL BE COPPER

CKT. DESCRIPTION	WIRE	LOAD	BKR.	A	B	C	BKR.	LOAD	WIRE	CKT. DESCRIPTION
① MAKE UP AIR HANDLER MAU-1	10	6,319	15	1	2		20	9,145	10	MAKE UP AIR HANDLER UNIT 2
① EXHAUST FAN EF-1	12	1,746	15	3	4		15	1,746	12	EXHAUST FAN EF-2
① EXHAUST FAN EF-3	12	1,746	15	5	6		15	1,746	12	EXHAUST FAN EF-4
① SUMP PUMP CP-1	10	5,653	20	7	8		20	5,653	10	SUMP PUMP CP-2
ELECTRIC HEATER UH-1	8	12,700	30	9	10		20	-	8	SPARE
SPARE	-	-	20	11	12		20	-	-	SPARE
SPARE	-	-	20	13	14		15	-	-	SPARE
EAST BRIDGE CRANE	10	6,319	30	15	16		30	6,319	10	WEST BRIDGE CRANE
② SURGE PROTECTIVE DEVICE	8	-	30	17	18		100	75,000	8	TRANSFORMER T-WW
		28,164		19	20			18,290		

TOTAL CONNECTED VA = 46,454  
 46.454 KVA = 55.87 AMPS AT 480 VOLTS  
 THE FEEDER CONDUCTORS, PANEL BUS, AND MAIN BREAKER ARE ALL RATED PROPERLY TO SERVE THE LOAD BRANCH CONDUCTORS ARE NOT SHOWN IN THE CONDUIT SCHEDULE

PANELBOARD IS TO BE LOCATED IN THE WET WEATHER LIFT STATION BUILDING ELECTRICAL ROOM

PANEL L-WW

FEEDER 4/0 AWG  
 BUS AMPS 225  
 MAIN BREAKER 200A  
 VOLTS 480/277 AIC 35 KA  
 PHASE 3 WIRE 4

NOTES  
 1. SURFACE MOUNT  
 2. NEMA 1 ENCLOSURE  
 3. PHASE, NEUTRAL AND GROUND BUS SHALL BE COPPER

CKT. DESCRIPTION	WIRE	LOAD	BKR.	A	B	C	BKR.	LOAD	WIRE	CKT. DESCRIPTION
ELECTRICAL ROOM LIGHTING	12	800	20	1	2		20	600	12	SWITCHGEAR & MCC SPACE HEATERS
MECHANICAL ROOM LIGHTING	12	800	20	3	4		20	500	12	BATHROOM BASEBOARD HEATER
ELECTRICAL ROOM RECEPTACLES	12	1400	20	5	6		20	400	12	HOT WATER HEATER
MECHANICAL ROOM RECEPTACLES	12	400	20	7	8		20	800	12	DRINKING WATER FOUNDATION
INTERMEDIATE LEVEL WEST LIGHTING	12	1200	20	9	10		20	1500	12	AIR HAND DRYER
INTERMEDIATE LEVEL WEST RECEPTACLES	12	1200	20	11	12		20	800	12	
INTERMEDIATE LEVEL EAST LIGHTING	12	1400	20	13	14		20	1500	12	
INTERMEDIATE LEVEL EAST RECEPTACLES	12	400	20	15	16		20	500	12	TEMPURATURE CONTROL PANEL TCP-1
LOWER LEVEL WEST LIGHTING	12			17	18		30	500	12	EXHAUST FANS 5&6
LOWER LEVEL WEST RECEPTACLES	12			19	20		30	1500	12	EXHAUST FANS 7&8
LOWER LEVEL EAST LIGHTING	12	1100	20	21	22		20	1000	12	
LOWER LEVEL EAST RECEPTACLES	12	400	20	23	24		20	600	12	
BUILDING EXTERIOR WALL LIGHTING	12	1100	20	25	26		20	600	12	
LIGHTING CONTACTOR CONTROLS	12	400	20	27	28		20	400	12	
	12	800	20	29	30		20	-	-	
	12	1000	20	31	32		20	-	-	
WET WEATHER SCADA CONTROL PANEL	12	400	20	33	34		20	-	-	
WET WEATHER SCADA UPS SYSTEM	12	600	20	35	36		20	-	-	ELECTRICAL ROOM AIR COMPRESSOR
LEVEL TRANSMITTERS	12	900	20	37	38		20	-	-	IRRIGATION CONTROLLER
	12	1800	20	39	40		20	-	-	SPARE
	12	-	20	41	42		20	-	-	SPARE
	12	1000	20	43	44		20	-	-	SPARE
	12	400	20	45	46		20	-	-	SPARE
	12	600	20	47	48		20	-	-	SPARE
	12	900	20	49	50		20	-	-	SPARE
	20	-	20	51	52		20	-	-	SPARE
SPARE	-	-	20	53	54		20	-	-	SPARE
		1725						15100		

TOTAL CONNECTED VA = 46,454  
 46.454 KVA = 55.87 AMPS AT 208 VOLTS  
 THE TRANSFORMER, FEEDER CONDUCTORS, PANEL BUS, AND MAIN BREAKER ARE ALL RATED PROPERLY TO SERVE THE LOAD BRANCH CONDUCTORS ARE NOT SHOWN IN THE CONDUIT SCHEDULE

**KGI** Kalluri Group, Inc. TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY:

DATE:

DESIGNED BY:

DRAWN BY:

SURVEYED BY:

FB NO. XXXXXX

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 STACY L. JORDAN  
 LICENSE NO. 148233  
 JANUARY 19, 2026  
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

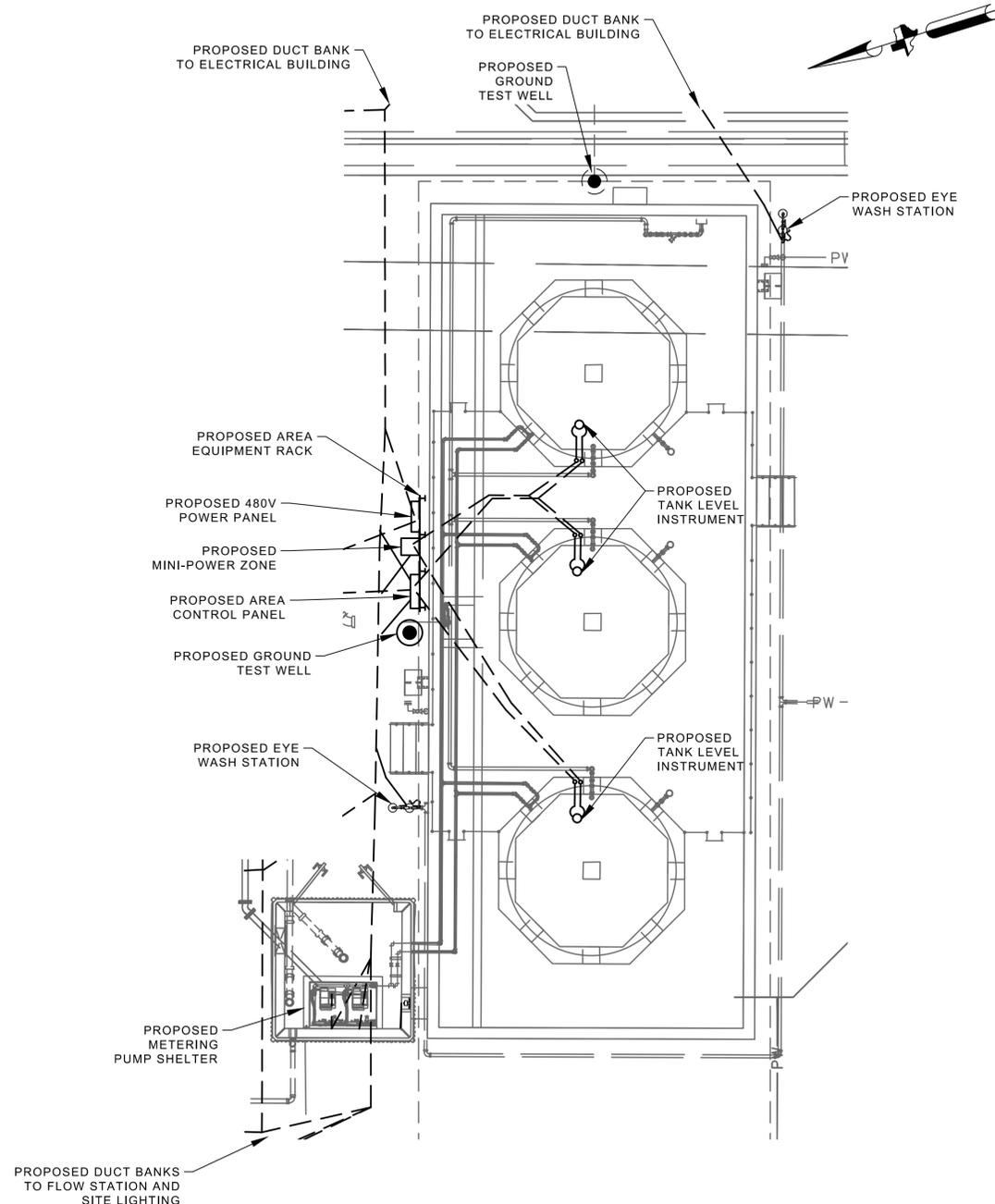
**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
 ELECTRICAL  
**WET WEATHER PUMP STATION**  
**PANELBOARD SCHEDULES -**  
**PROPOSED**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. <b>2-E-23</b>	
SHEET NO. XXX OF XX	

NO.	DATE	REVISIONS	APP.

**GENERAL NOTES:**

- A. THIS DRAWING ILLUSTRATES THE PROPOSED CHEMICAL STORAGE AND FEED AREAS. SEE DIVISION 13 AND 16 SPECIFICATIONS FOR ALL PROPOSED WORK AND EQUIPMENT REQUIREMENTS.
- B. CONTRACTOR SHALL COORDINATE PRIOR TO THE BID TO INCLUDE ALL ELECTRICAL INSTRUMENTATION AND CONTROL REQUIRED FOR CONTRACTORS CHOSEN CHEMICAL EQUIPMENT.
- C. CONTRACTOR HAS TASKS, IN THIS PROJECT, IN NEAR PROXIMITY TO CPE OVERHEAD POWER LINES. CONTRACTOR SHALL FOLLOW NEC AND CPE STANDARDS FOR SAFE WORKING DISTANCE, TEMPORARY SIGNAGE AND PROCEDURES.
- D. TEMPORARY PROVISIONS ARE TO REMAIN IN SERVICE WHILE PROPOSED WORK, INCLUDING POWER, CONTROLS, SCADA AND COMMUNICATIONS, IS TESTED AND ACCEPTED.



CHEMICAL FEED AND STORAGE FACILITY ENLARGED PLAN

**PLAN**  
1" = 5'-0"

**KGI**  TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
**Kalluri Group, Inc.** PROJECT 4285

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 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
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JOB NO: 00050-0099-01 DATE: 1/19/2026

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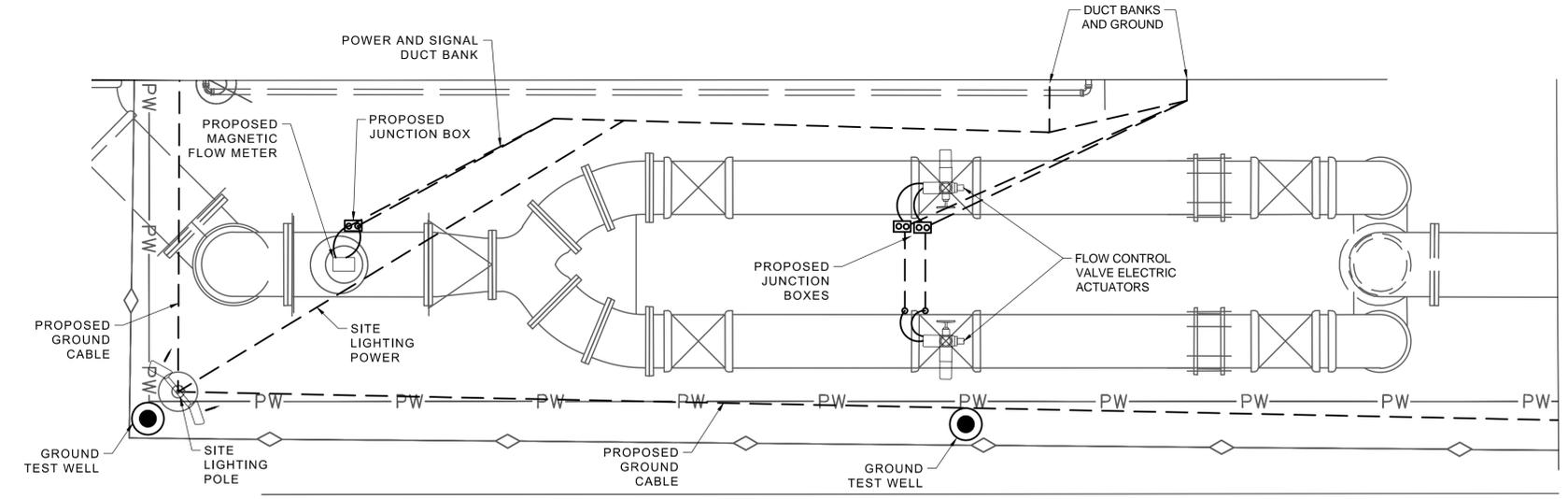
**SCOTT STREET NO. 1  
LIFT STATION REHABILITATION  
ELECTRICAL  
CHEMICAL FEED AND STORAGE  
FACILITY ENLARGED PLAN -  
PROPOSED**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
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DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 3-E-01	
SHEET NO. OF XX	

NO.	DATE	REVISIONS	APP.

**GENERAL NOTES:**

- A. THIS DRAWING ILLUSTRATES THE PROPOSED FLOW CONTROL AND METERING AREA. SEE DIVISION 13 AND 16 SPECIFICATIONS FOR ALL PROPOSED WORK AND EQUIPMENT REQUIREMENTS.
- B. CONTRACTOR SHALL COORDINATE PRIOR TO THE BID TO INCLUDE ALL ELECTRICAL INSTRUMENTATION AND CONTROL REQUIRED FOR CONTRACTORS CHOSEN EQUIPMENT.
- C. CONTRACTOR HAS TASKS, IN THIS PROJECT, IN NEAR PROXIMITY TO CPE OVERHEAD POWER LINES. CONTRACTOR SHALL FOLLOW NEC AND CPE STANDARDS FOR SAFE WORKING DISTANCE, TEMPORARY SIGNAGE AND PROCEDURES.
- D. TEMPORARY PROVISIONS ARE TO REMAIN IN SERVICE WHILE PROPOSED WORK, INCLUDING POWER, CONTROLS, SCADA AND COMMUNICATIONS, IS TESTED AND ACCEPTED.



**PROPOSED FLOW CONTROL STATION ENLARGED**  
**PLAN**  
1" = 5'-0"

**KGI** TBPE Registration No. F-665  
 Kalluri Group, Inc. 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

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 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
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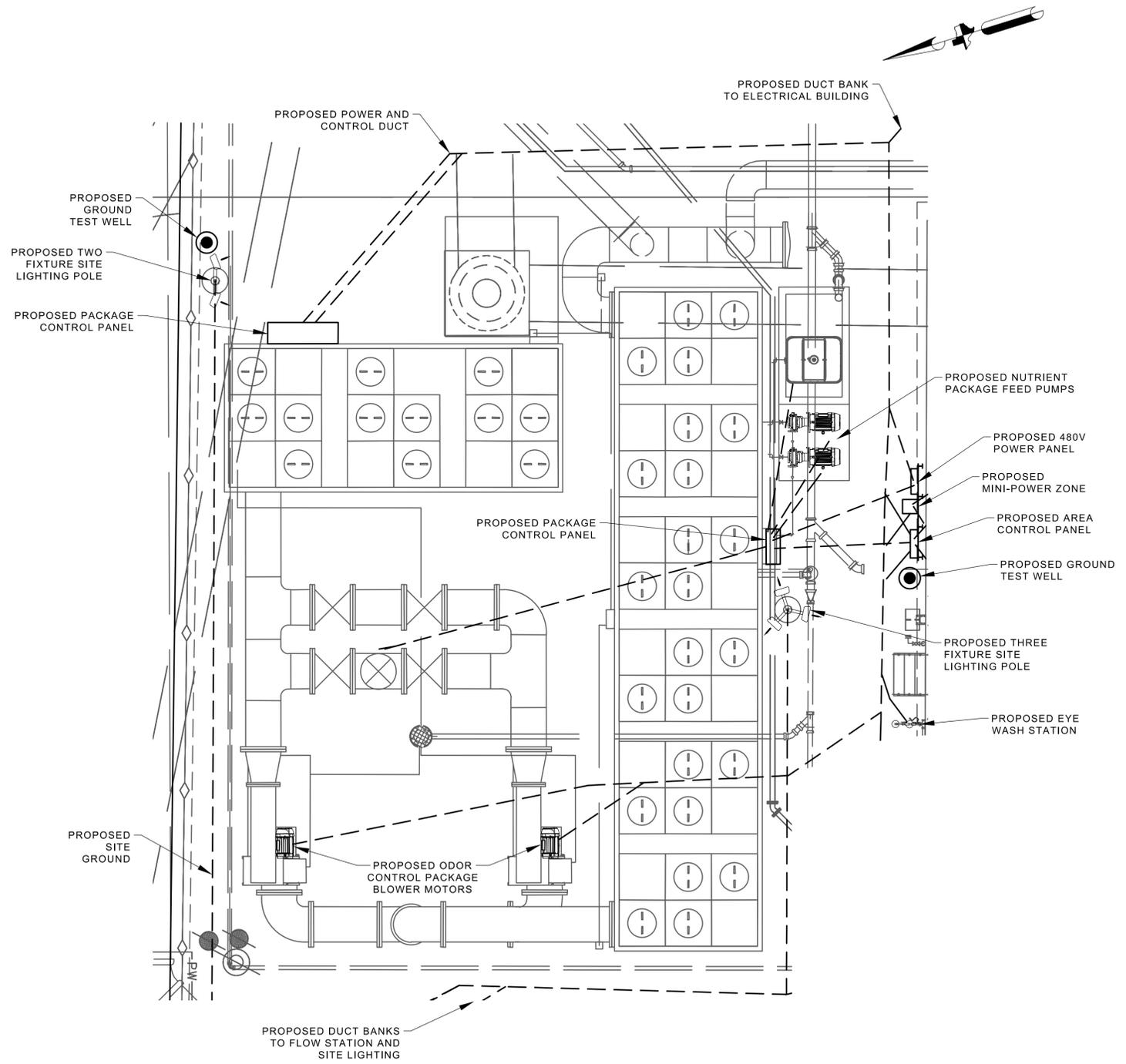
**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
ELECTRICAL  
**FLOW CONTROL STATION**  
**ENLARGED PLAN -**  
**PROPOSED**

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DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. <b>4-E-01</b>	
SHEET NO. OF XX	

NO.	DATE	REVISIONS	APP.

**GENERAL NOTES:**

- A. THIS DRAWING ILLUSTRATES THE PROPOSED ODOR CONTROL PACKAGE AREA. SEE DIVISION 13 AND 16 SPECIFICATIONS FOR ALL PROPOSED WORK AND EQUIPMENT REQUIREMENTS.
- B. CONTRACTOR SHALL COORDINATE PRIOR TO THE BID TO INCLUDE ALL ELECTRICAL INSTRUMENTATION AND CONTROL REQUIRED FOR CONTRACTORS CHOSEN ODOR CONTROL EQUIPMENT.
- C. CONTRACTOR HAS TASKS, IN THIS PROJECT, IN NEAR PROXIMITY TO CPE OVERHEAD POWER LINES. CONTRACTOR SHALL FOLLOW NEC AND CPE STANDARDS FOR SAFE WORKING DISTANCE, TEMPORARY SIGNAGE AND PROCEDURES.
- D. TEMPORARY PROVISIONS ARE TO REMAIN IN SERVICE WHILE PROPOSED WORK, INCLUDING POWER, CONTROLS, SCADA AND COMMUNICATIONS, IS TESTED AND ACCEPTED.



**PROPOSED ODOR CONTROL SYSEM ENLARGED**  
**PLAN**  
1" = 5'-0"

**KGI** TBPE Registration No. F-665  
16300 Katy Freeway, Suite 172  
Houston, Texas 77094  
Phone: (713)-365-9288  
**Kalluri Group, Inc.** PROJECT 4285

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
LIFT STATION REHABILITATION  
ELECTRICAL  
ODOR CONTROL SYSTEM  
ENLARGED PLAN -  
PROPOSED**

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DRAWING SCALE	
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CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 5-E-01	
SHEET NO. OF XX	

NO.	DATE	REVISIONS	APP.

NEW PANELBOARD "H-OC"  
IS TO BE LOCATED ON  
THE ODOR CONTROL AREA  
EQUIPMENT RACK

**PANEL "H-OC"**

BUS AMPS 225  
MAIN BRKR. AMPS 200  
VOLTS 480 KAIC 35  
PHASE 3 WIRE 3

NOTES  
1. ALL BUSS SHALL BE COPPER.  
2. BREAKERS 3P/20A UNLESS MARKED OTHERWISE  
3. ADJ. CKTS. TO BAL. PNL.  
4. SURFACE MOUNT, NEMA 1 PANEL INSIDE A HINGED DOOR NEMA 4X 316 STAINLESS STEEL ENCLOSURE

CKT. DESCRIPTION	WIRE	LOAD	BKR.		BKR.	LOAD	WIRE	CKT. DESCRIPTION
	12		20	1	2			
	12	3,730	20	3	4			
	12			5	6			
			20	7	8			
				9	10			
				11	12			
	12	1,492	20	13	14			
	12			15	16			
	12			17	18			
			20	19	20			
				21	22			
				23	24			
	4	11,190	50	25	26			SPARE
	4			27	28			
	4			29	30			
SPARE			20	43	44			SPARE
				45	46			
				47	48			
PANEL L-OC	8	3480	50	49	50			SPARE
	8	3480		51	52			
SPACE				53	54			SPACE
		12,660						
						12,300		

TOTAL VA = 24,960  
25 KVA AT 480V = 31 AMPS  
THE CONDUCTORS, PANEL, AND MAIN BREAKER ARE  
ALL RATED PROPERLY TO SERVE THE LOAD

NEW PANELBOARD "L-OC"  
IS TO BE LOCATED ON  
THE ODOR CONTROL AREA  
EQUIPMENT RACK

**PANEL "L-OC"**

MAIN BRKR. AMPS 80  
TRANSFORMER 15KVA  
VOLTS 120/240 AIC 18 KA  
PHASE 1 WIRE 2 SN ✓

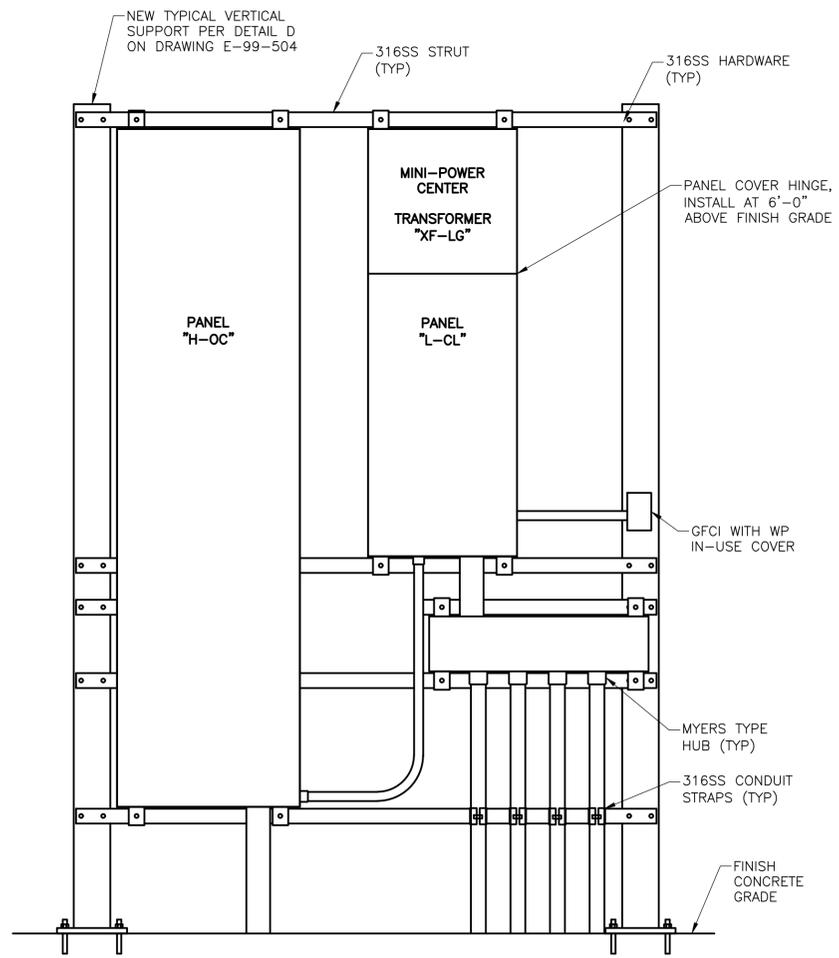
NOTES  
1. ALL BUSS SHALL BE COPPER.  
2. BREAKERS 1P/20A UNLESS MARKED OTHERWISE  
3. ADJ. CKTS. TO BAL. PNL.  
4. SURFACE MOUNT, NEMA 3R SS  
5. INSTALL MINI POWER CENTER WITH PANEL COVER HINGE AT 72" AFF.

CKT. DESCRIPTION	WIRE	LOAD	BKR.		BKR.	LOAD	WIRE	CKT. DESCRIPTION
	12	100	20	1	2			
	12	360	20	3	4			
	12	60	20	5	6			
	12	100	20	7	8			
	12	360	20	9	10			
	12	60	20	11	12			
	12	60	20	13	14	60	12	
	12	60	20	15	16			
			20	17	18			
SPARE			20	19	20	80	12	
SPARE			20	21	22			SPARE
FUTURE 1 CL-120			20	23	24			SPARE
FUTURE 2 CL-120			20	25	26	180	12	RACK OUTLET
		1,830						
				NEUT				
				GND		1,650		

TOTAL VA = 3,480  
3.5 KVA AT 240V = 14.5 AMPS  
THE CONDUCTORS, PANEL, AND MAIN BREAKER ARE  
ALL RATED PROPERLY TO SERVE THE LOAD

ODOR CONTROL AREA PANELBOARD  
**SCHEDULES**  
NTS

- GENERAL NOTES:**
- A. THIS DRAWING IS PROVIDED TO ILLUSTRATE THE ODOR CONTROL AREA ELECTRICAL RACK AND PANELBOARD SCHEDULES.
  - B. CONDUITS REQUIRED MAY NOT BE ILLUSTRATED ON ALL DRAWINGS SHOWING AN AREA. REFER TO THE CONDUIT AND CONDUCTOR SCHEDULES FOR MORE INFORMATION.



ODOR CONTROL AREA EQUIPMENT RACK  
**ELEVATION**  
NTS

**KGI** Kalluri Group, Inc.  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

TBPE Registration No. F-665  
16300 Katy Freeway, Suite 172  
Houston, Texas 77094  
Phone: (713)-365-9288  
PROJECT 4285

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY: \_\_\_\_\_  
DATE: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
SURVEYED BY: \_\_\_\_\_  
FB NO. XXXXXX

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HOUSTON PUBLIC WORKS

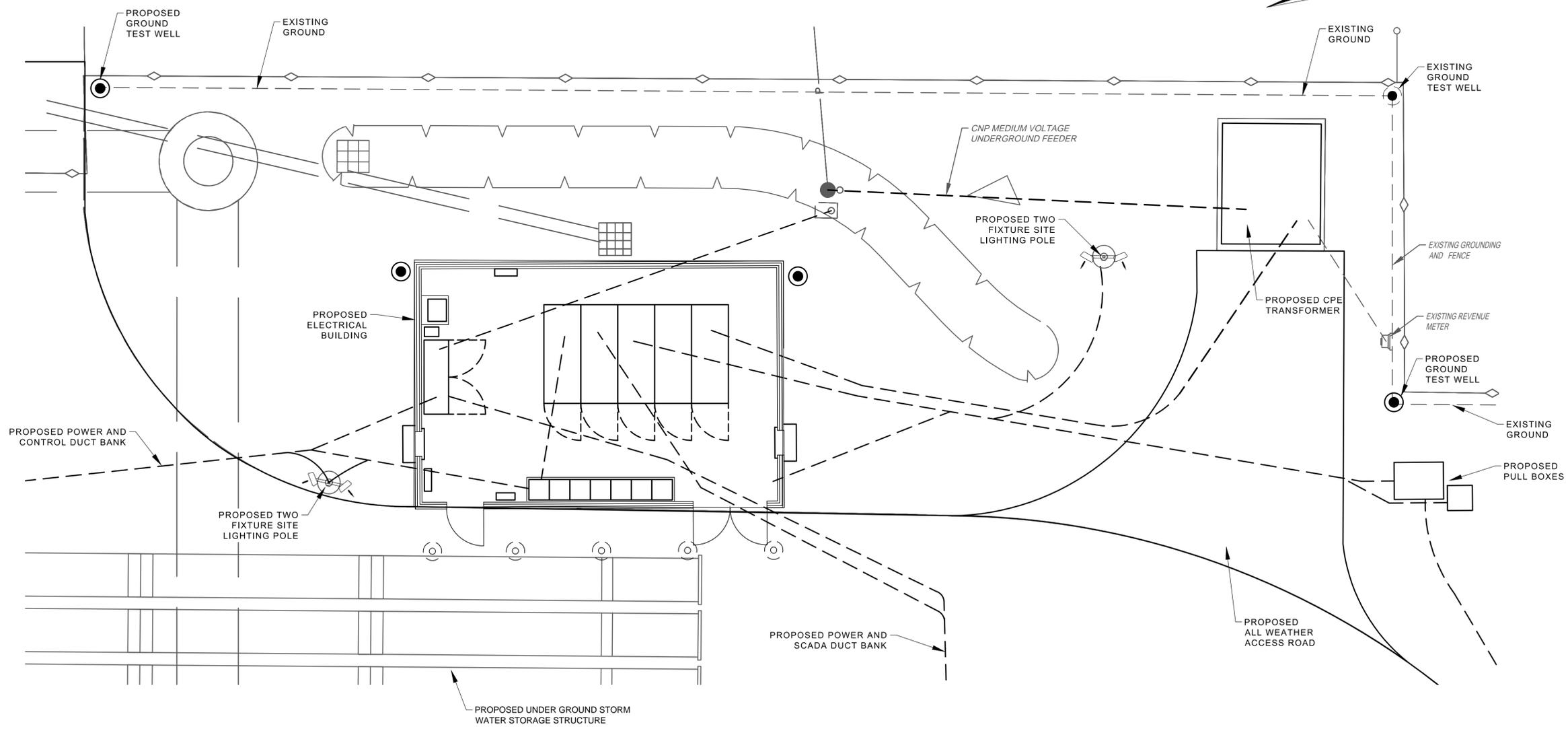
**SCOTT STREET NO. 1  
LIFT STATION REHABILITATION  
ELECTRICAL  
ODOR CONTROL AREA  
EQUIPMENT RACK & SCHEDULES -  
PROPOSED**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 5-E-11	
SHEET NO. OF XX	

NO.	DATE	REVISIONS	APP.

**GENERAL NOTES:**

- A. THIS DRAWING ILLUSTRATES THE PROPOSED ELECTRICAL BUILDING AREA. SEE DIVISION 13 AND 16 SPECIFICATIONS FOR ALL PROPOSED WORK AND EQUIPMENT REQUIREMENTS.
- B. CONTRACTOR HAS TASKS, IN THIS PROJECT, IN NEAR PROXIMITY TO CPE OVERHEAD POWER LINES. CONTRACTOR SHALL FOLLOW NEC AND CPE STANDARDS FOR SAFE WORKING DISTANCE, TEMPORARY SIGNAGE AND PROCEDURES.
- C. TEMPORARY PROVISIONS ARE TO REMAIN IN SERVICE WHILE PROPOSED WORK, INCLUDING POWER, CONTROLS, SCADA AND COMMUNICATIONS, IS TESTED AND ACCEPTED.



**PROPOSED ELECTRICAL BUILDING AREA**  
**PLAN**  
1" = 5'-0"

**KGI** TBPE Registration No. F-665  
 Kalluri Group, Inc. 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
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JOB NO: 00050-0099-01	DATE: 1/19/2026
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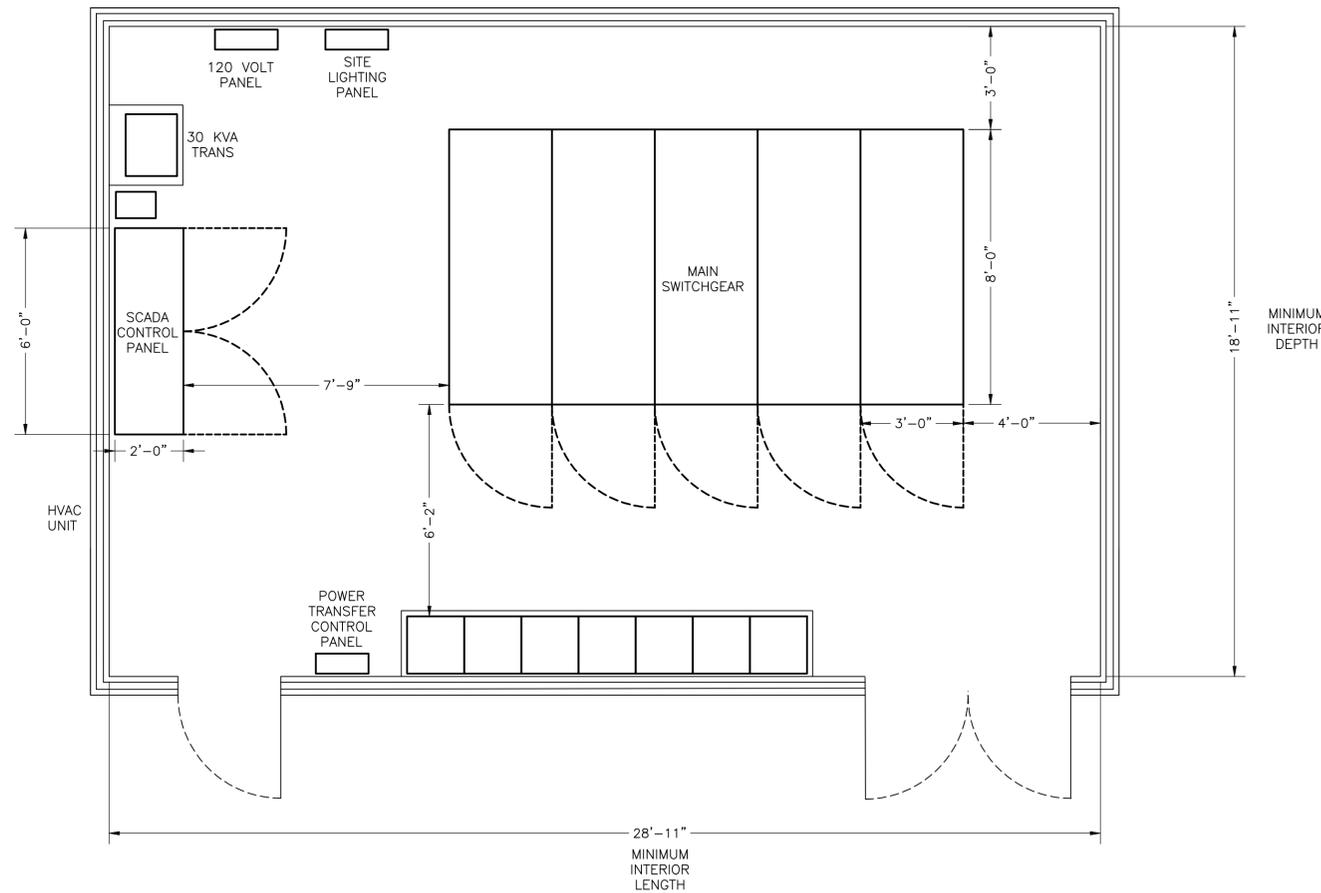
**SCOTT STREET NO. 1  
LIFT STATION REHABILITATION  
ELECTRICAL  
ELECTRICAL BUILDING  
AREA PLAN -  
PROPOSED**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
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CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 6-E-01	
SHEET NO. OF XX	

NO.	DATE	REVISIONS	APP.

**EQUIPMENT WEIGHT & HEAT LOAD**

480 MAIN SWITCHGEAR - 6 SECTIONS	= 680LB EACH	= 1.7KW EACH
480 MCC-1	= 500LB	= 1.4KW
SCADA CONTROL PANEL	= 800LB	= 420W
SCADA CP UPS	= 130LB	= 250W
480V PANEL	= 100LB EACH	= 200W
240/120V PANEL	= 100LB	= 100W
LIGHTING PKG & CONTROL PANEL	= 230LB	= 280W



**GENERAL NOTES:**

- A. THIS DRAWING IS PROVIDED TO ILLUSTRATE THE PROPOSED ELECTRICAL BUILDING, EQUIPMENT LOCATION AND LAYOUT MINIMUM CLEARANCE DIMENSIONS REQUIRED.

**NOTICE:**  
 FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811

VERIFICATION OF PRIVATE UTILITY LINES

Date: \_\_\_\_\_  
 CenterPoint Energy natural gas utilities shown.  
(Site services lines are not shown. This signature not to be used for conflict verification.)  
 Signature Valid for six months.

Date: \_\_\_\_\_  
 CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY.  
(This Signature verifies existing underground facilities - not to be used for conflict verification.)  
 Signature Valid for six months.

Date: \_\_\_\_\_  
 Approved by AT&T Texas / SWBT underground conduit facilities only.  
 Signature valid for one year.

Approved by AT&T Texas / SWBT underground conduit facilities only.  
 Signature valid for one year.

**KGI**  TBPE Registration No. F-665  
 Kalluri Group, Inc. 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

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 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY: \_\_\_\_\_  
 DATE: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_  
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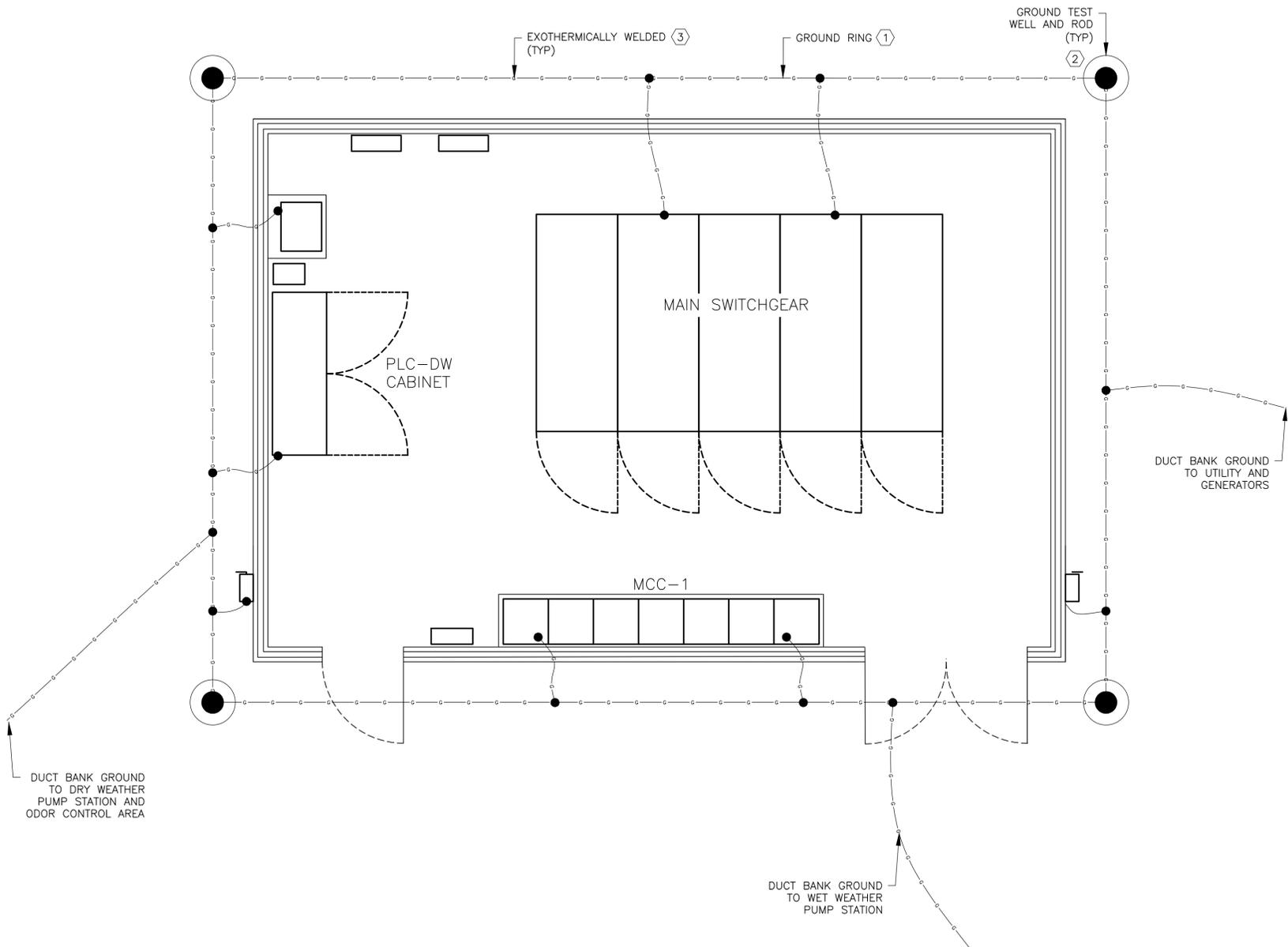
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
 ELECTRICAL  
**ELECTRICAL BUILDING**  
**EQUIPMENT PLAN -**  
**PROPOSED**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. <b>6-E-02</b>	
SHEET NO.            OF XX	

NO.	DATE	REVISIONS	APP.



**GENERAL NOTES:**

- A. THIS DRAWING IS PROVIDED TO ILLUSTRATE THE NEW ELECTRICAL BUILDING GROUNDING, AND UNDER SLAB PROVISIONS.
- B. ALL ELECTRICAL EQUIPMENT, STEEL RACKS, FOUNDATION REBAR AND FENCING ON THE SITE SHALL BE CONNECTED THROUGH THE DUCT BANK GROUND SYSTEM.

**KEYED NOTES:**

- ① 4/0 COPPER GROUND RING AT 24" MINIMUM BELOW GRADE.
- ② 3/4"X20' GROUND ROD WITH EXOTHERMIC CONNECTIONS TO GROUND RING.
- ③ EXOTHERMICALLY WELDED CONNECTION, SEE SPECIFICATIONS FOR REQUIREMENTS.
- ④ PROVIDE ONE 1" PVC CONDUIT ON THE EXTERIOR WALL OF THE PROPOSED BUILDING, FROM 12" BELOW TOP OF THE WALL TO GROUND RING FOR LIGHTNING PROTECTION DOWN LEAD.

**NOTICE:**  
 FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811

VERIFICATION OF PRIVATE UTILITY LINES	
CenterPoint Energy natural gas utilities shown. <small>(Site services listed are not shown. This signature not to be used for conflict verification.)</small>	Date:
CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY. <small>(This Signature verifies existing underground facilities - not to be used for conflict verification.)</small>	Date:
Approved by AT&T Texas / SWBT underground conduit facilities only. <small>Signature valid for one year.</small>	Date:

**KGI**  **Kalluri Group, Inc.**  
 TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

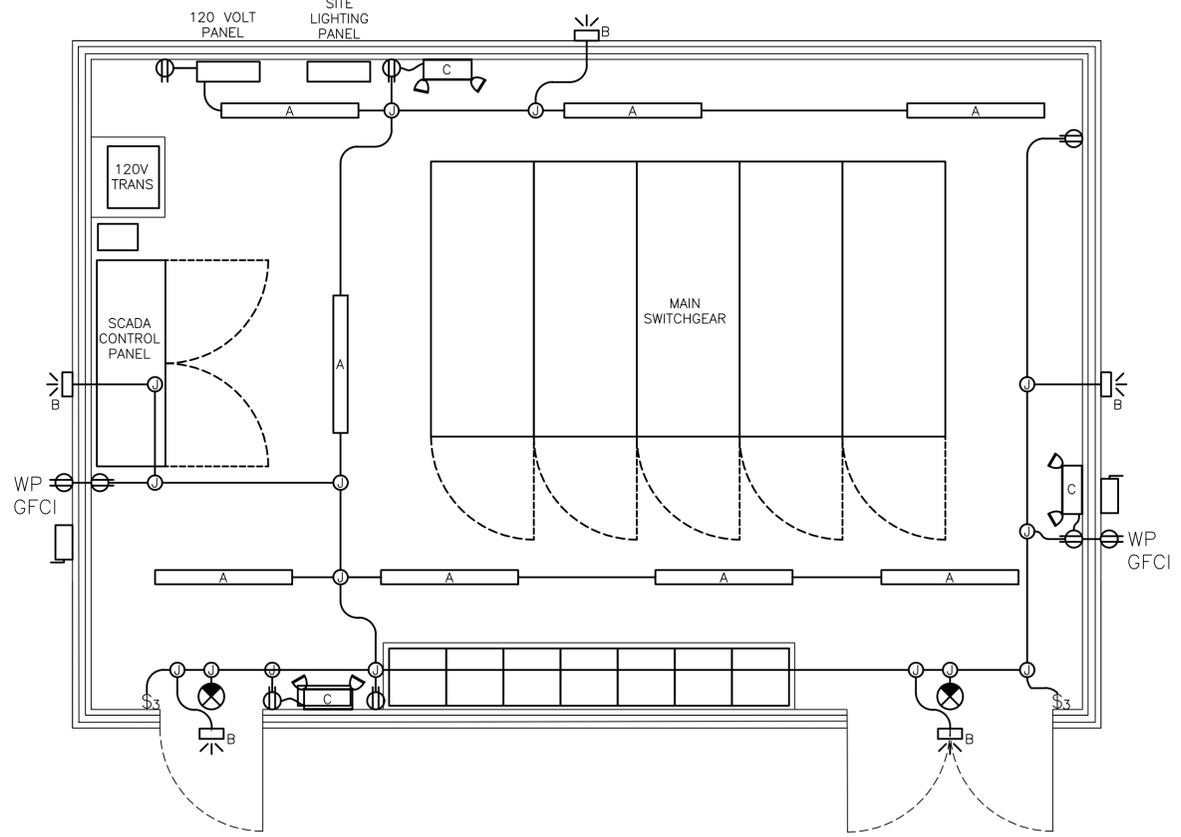
JOB NO: 00050-0099-01	DATE: 1/19/2026
APPROVED BY:	THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF REVIEW UNDER THE AUTHORITY OF  STACY L. JORDAN LICENSE NO. 148233 JANUARY 19, 2026 IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES.
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
 LIFT STATION REHABILITATION  
 ELECTRICAL  
 ELECTRICAL BUILDING  
 GROUNDING PLAN -  
 PROPOSED**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
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TAHA LOTIA	
DWG NO. <b>6-E-03</b>	
SHEET NO. OF XX	

NO.	DATE	REVISIONS	APP.



**GENERAL NOTES:**

- A. ROUTE CONDUITS UNDERGROUND IF POSSIBLE. IF CONDUITS MUST BE ROUTED OVERHEAD, ROUTE CONDUITS ON STRUT, ATTACHED TO STRUCTURE OR ON TRAPEZE TYPE HANGERS.
- B. ALL ANCHORS, STRUT, STRUT FITTINGS, STRAPS AND HARDWARE SHALL BE 316 STAINLESS STEEL.
- C. PROVIDE NEMA 4X, 316SS ENCLOSED, FUSED DISCONNECTS FOR THE A/C UNITS. COORDINATE EXACT FUSE SIZE WITH PROPOSED EQUIPMENT. A/C UNIT FEEDERS MAY BE ROUTED UNDER THE SLAB.
- D. PROVIDE CONDUIT AND PULL STRING FOR HVAC THERMOSTATS, COORDINATE LOCATIONS WITH HVAC.
- E. SEE LIGHT FIXTURE SCHEDULE FOR LIGHT FIXTURE CATALOG NUMBERS, FIXTURE DESCRIPTIONS AND INSTALLATION INSTRUCTIONS. SEE 0-E-XX FOR LIGHTING CONTROL REQUIREMENTS.
- F. ROUTE CONDUIT SUCH THAT THERE ARE NO CONNECTIONS IN CONDUIT FITTINGS. IF CONNECTIONS ARE REQUIRED A BOX SIZED ACCORDINGLY SHALL BE PROVIDED.
- G. PROVIDE RED DOT "CODE KEEPER TYPE (OR APPROVED EQUAL) METALLIC "IN-USE" GFCI COVER, INSTALLED AT 2'-0" FINISHED FLOOR.
- H. INSTALL RECEPTACLES 2'-0" ABOVE FINISHED FLOOR OR FINISHED GRADE. INSTALL LIGHT SWITCHES 3'-6" ABOVE FINISHED FLOOR.

**KGI** TBPE Registration No. F-665  
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 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

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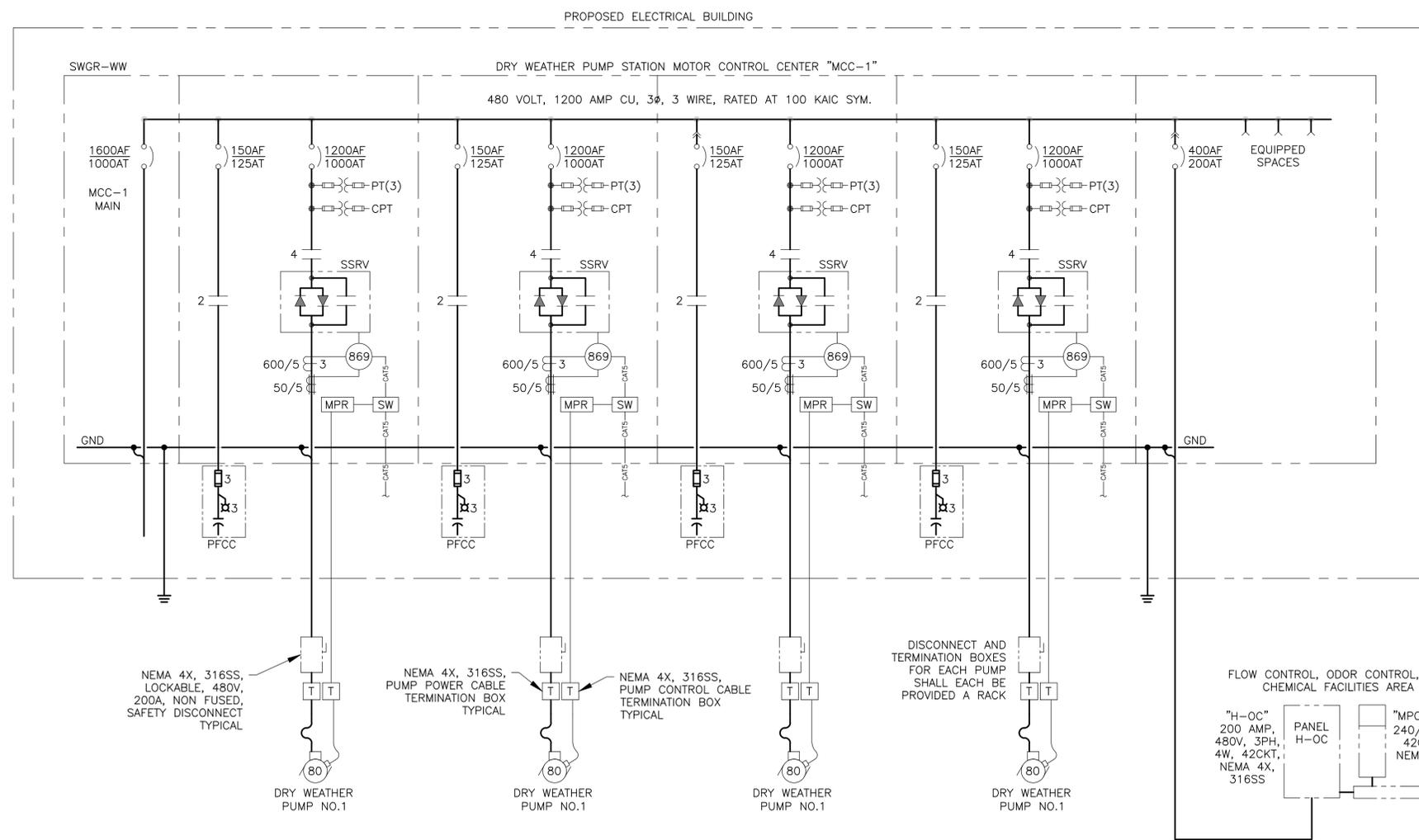
**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
 LIFT STATION REHABILITATION  
 ELECTRICAL  
 ELECTRICAL BUILDING  
 LIGHTING AND POWER PLAN  
 - PROPOSED**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. <b>6-E-04</b>	
SHEET NO. OF XX	

NO.	DATE	REVISIONS	APP.

**GENERAL NOTES:**  
 A. THIS DRAWING IS PROVIDED TO ILLUSTRATE THE DRY WEATHER PUMP STATION MCC-1.



DRY WEATHER PUMP STATION MCC-1 ONE LINE  
**DIAGRAM**  
 NONE

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 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
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 PROJECT 4285

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JOB NO: 00050-0099-01 DATE: 1/19/2026

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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
 ELECTRICAL  
**ELECTRICAL BUILDING**  
**MCC-1 ONE LINE DIAGRAM -**  
**PROPOSED**

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DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. <b>6-E-11</b>	
SHEET NO. XXX OF XX	

DUCTWORK SYMBOLS	
	SUPPLY DIFFUSER/GRILLE
	RETURN GRILLE
	EXHAUST GRILLE
	ROUND DUCT. SIZE IN INCHES. SIZE INDICATED IS DUCT DIAMETER.
	RECTANGULAR DUCT. SIZE IN INCHES. FIRST NUMBER IS SIDE SHOWN.
	SUPPLY OR OUTSIDE AIR DUCT UP
	SUPPLY OR OUTSIDE AIR DUCT DOWN
	RETURN DUCT UP
	RETURN DUCT DOWN
	EXHAUST DUCT UP
	EXHAUST DUCT DOWN
	ROUND DUCT UP
	ROUND DUCT DOWN
	RECTANGULAR ELBOW WITH TURNING VANES
	TRANSITION - RECTANGULAR TO RECTANGULAR
	TRANSITION - RECTANGULAR TO ROUND
	ELEVATION CHANGE (UP) RISE, (DN) DROP
	FLEXIBLE CONNECTION
	FLEXIBLE DUCT - SINGLE LINE
	DIFFUSER TAKEOFF WITH FLARED SPIN-IN TAP, MANUAL DAMPER AND FLEX DUCT
	RECTANGULAR DUCT BRANCH TAKEOFF WITH 45 DEG TAP
	ROUND DUCT BRANCH TAKEOFF WITH CONICAL TAP FROM RECT. OR ROUND MAIN

HVAC SYMBOLS	
	DIFFERENTIAL PRESSURE TRANSMITTER
	DIRECT EXPANSION (REFRIGERANT)
	END SWITCH (DAMPER MOTOR)
	FLOW SENSOR
	FLOW SWITCH
	GRAPHICAL USER INTERFACE
	HUMIDISTAT
	HUMIDITY SENSOR
	HAND-OFF-AUTO SWITCH
	MOTORIZED OPPOSED BLADE DAMPER
	MANUFACTURER'S CONTROL PANEL
	PRESSURE TRANSMITTER
	PRESSURE TEMPERATURE PORT
	DUCT MOUNTED SMOKE DETECTOR
	COMBINATION STARTER/DISCONNECT
	DUCT STATIC PRESSURE SENSOR
	TEMPERATURE SENSOR/TRANSMITTER
	TEMPERATURE CONTROLLER
	TEMPERATURE SENSOR/TRANSMITTER
	THERMOSTAT
	CURRENT SWITCH
	VARIABLE FREQUENCY DRIVE
	CONNECTION POINT NEW TO EXISTING
	FORCED AIR TO SPACE
	INDIRECT AIR FROM SPACE

GENERAL ABBREVIATIONS	
A @	AT
AD	AIR DROP
AFF	ABOVE FINISHED FLOOR
ALT	ALTITUDE
AP	ACCESS PANEL
ASD	ADJUSTABLE SPEED DRIVE
AUTO	AUTOMATIC
AUX	AUXILIARY
AVG	AVERAGE
B BDD	BACKDRAFT DAMPER
BHP	BRAKE HORSEPOWER
BLDG	BUILDING
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BTM	BOTTOM
BTU	BRITISH THERMAL UNIT
C C	CENTER LINE
CCW	COUNTER CLOCKWISE
CENT	CENTRIFUGAL
CFM	CUBIC FEET PER MINUTE
CLASS/DIVNEC	AREA CLASSIFICATION
CLG	CEILING
CLR	CLEAR
COL	COLUMN
CONT	CONTINUE, CONTINUOUS
CTR	CENTER
CU FT	CUBIC FEET
CW	CLOCKWISE
D DACS	DATA ACQUISITION AND CONTROL SYSTEM
I DB	DRY BULB
DCVBP	DOUBLE CHECK VALVE BACKFLOW PREVENTER
K DEG	DEGREE
DIA, Ø	DIAMETER
L DN	DOWN
DWG	DRAWING
E EA	EACH
M EL	ELEVATION
EMERG	EMERGENCY
ENT	ENTERING
EQUIP	EQUIPMENT
EWT	ENTERING WATER TEMPERATURE
F F	FAHRENHEIT
FLR	FLOOR
FLG	FLANGE
FL	FLOW LINE
FOB	FLAT ON BOTTOM
FPC	FIRE PROTECTION CONTRACTOR
FPS	FEET PER SECOND
FT	FEET
FWE	FURNISHED WITH EQUIPMENT
G GPM	GALLONS PER MINUTE
H H-O-A	HAND-OFF-AUTO
HP	HORSEPOWER
HVAC	HEATING, VENTILATION AND AIR CONDITIONING
HZ	HERTZ
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INV	INVERT
IOS	INSTALLED BY OTHER SECTION
IPS	IRON PIPE SIZE
KS	KITCHEN SINK
KW	KILOWATT
LAB	LABORATORY
LVG	LEAVING
LWT	LEAVING WATER TEMPERATURE
M	MOTOR
MATL	MATERIAL
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MTD	MOUNTED
N NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN OR NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE

ABBREVIATIONS - CONTINUED	
O OD	OUTSIDE DIAMETER
P PD	PRESSURE DROP
PG	PRESSURE GAUGE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSIG	PSI GAUGE
P&T	PRESSURE AND TEMPERATURE
R RM	ROOM
RPM	REVOLUTIONS PER MINUTE
S SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION
SF	SQUARE FOOT (FEET)
SHT	SHEET
SPEC	SPECIFICATIONS
SSTL	STAINLESS STEEL
SQ	SQUARE
T T&P	TEMPERATURE & PRESSURE RELIEF
TEMP	TEMPERATURE
THK	THICK(NESS)
TOC	TOP OF CONCRETE
TOP	TOP OF PIPE
TOS	TOP OF STEEL
TYP	TYPICAL
U UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
W W/	WITH
W/O	WITHOUT
WxH	WIDTH BY HEIGHT
W&T	WASTE AND TRAP
W&V	WASTE AND VENT

HVAC ABBREVIATIONS	
AC	AIR CONDITIONER
AHU	AIR HANDLING UNIT
CU	CONDENSING UNIT
EA	EXHAUST AIR
EF	EXHAUST FAN
MAU	MAKE-UP AIR UNIT
OA	OUTSIDE AIR
RA	RETURN AIR
RTU	ROOF TOP UNIT
SA	SUPPLY AIR

NO.	DATE	REVISIONS	APP.

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 Not intended for construction, bidding or permit purposes.  
 Engineer: RICARDO AZCARATE  
 P.E. Serial No.: 81863  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: \_\_\_\_\_  
 JOB NO: 00050-0099-01 DWG BY: M ANDERSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

SYMBOL & LEGEND - HVAC

CITY OF HOUSTON  
 HOUSTON PUBLIC WORKS

DRAWING SCALE N/A HORIZ: XXX VERT: XXX

CATEGORY NO. 2-H-1 SHEET NO. OF XXX

FOR CITY OF HOUSTON USE ONLY



**HVAC DEMOLITION NOTES:**

**GENERAL:**

1. THIS IS A WASTEWATER LIFT STATION WITH CORROSIVE AND CLASSIFIED AREAS. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS PER LATEST EDITION OF NFPA 820 – STANDARD FOR FIRE PROTECTION IN WASTEWATER TREATMENT AND COLLECTION FACILITIES.
2. THE LIFT STATION IS BEING REHABILITATED. SOME OF THE HVAC SERVING THE DRY WELLS, STAIRWELL AND ELECTRICAL ROOM IS BEING REPLACED OR DEMOLISHED.
3. EXISTING STRUCTURES, EQUIPMENT, ELEVATIONS, AND DETAILS SHOWN ARE NOT GUARANTEED TO BE ACCURATE AND ALL INCLUSIVE. EXISTING INFORMATION SHOWN IS APPROXIMATE, BASED ON AVAILABLE RECORD DRAWINGS.
4. BACKGROUNDS ARE DESIGN DRAWINGS FROM A PREVIOUS PROJECT. ACTUAL FIELD CONDITIONS MAY BE DIFFERENT FROM THOSE SHOWN ON THIS DRAWING. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS IMPACTED BY OR IMPACTING THIS WORK PRIOR TO INITIATING THE WORK. CONTRACTOR SHALL REFER TO CONSTRUCTION DOCUMENTS FOR RESPONSIBILITIES RELATIVE TO THE VERIFICATION OF EXISTING FACILITIES AND COORDINATION WITH PLANT OPERATION.
5. DEMOLITION LIMITS SHOWN ARE APPROXIMATE AND MAY NEED TO BE ADJUSTED BASED ON FIELD CONDITIONS.
6. EXISTING EQUIPMENT SHOWN MAY BE NOT AS SHOWN, OR NOT FUNCTIONAL AT THE TIME OF CONSTRUCTION. CONTRACTOR SHALL VERIFY FIELD CONDITIONS AT THE START OF CONSTRUCTION AND IMMEDIATELY NOTIFY THE OWNER OF ANY VARIATIONS THAT AFFECT THE PROPOSED WORK.
7. REMOVE ALL DEMOLITION MATERIALS AND DISPOSE OF THEM IN AN APPROVED MANNER IN ACCORDANCE WITH CONTRACT DOCUMENTS.

**PHASING:**

8. CONTRACTOR SHALL PHASE DEMOLITION WITH THE NEW EQUIPMENT INSTALLATION AND OPERATION IN ORDER TO MAINTAIN EXISTING VENTILATION RATES AT 6 AIR CHANGES PER HOUR (ACH) MINIMUM AT ALL TIMES. CONTRACTOR SHALL PROVIDE TEMPORARY VENTILATION TO MAINTAIN 6 AIR CHANGES PER HOUR MINIMUM DURING CONSTRUCTION.
9. COORDINATE WITH ELECTRICAL ON PHASING OF POWER REQUIREMENTS.

**HVAC NOTES:**

**GENERAL:**

1. CONTRACTOR SHALL REVIEW ALL CONTRACT DOCUMENTS AND PROVIDE EQUIPMENT, DUCTWORK, PIPING, AND ASSOCIATED INSULATION, COATINGS, SUPPORTS, CONTROLS AND DEVICES, REGARDLESS OF WHETHER IT'S SHOWN ON ONE DRAWING AND NOT ANOTHER. FOR EXAMPLE, A DAMPER SHOWN ON A PLAN BUT NOT THE SCHEMATIC, OR VICE VERSA SHALL BE PROVIDED.
- MATERIALS:**
2. EQUIPMENT THAT IS SCHEDULED TO BE ALUMINUM CONSTRUCTION AND HAS ANY COMPONENT THAT IS NOT OF THOSE MATERIALS, SHALL HAVE COATINGS SUITABLE FOR EXPOSURE TO HYDROGEN SULFIDE (H2S).
  3. WHERE COATINGS ARE REQUIRED, ALL COMPONENTS INSIDE AND OUTSIDE OF THE EQUIPMENT EXPOSED TO THE ENVIRONMENT ARE TO BE COATED.
  4. ALL SUPPORTS AND FASTENERS SHALL BE GALVANIZED STEEL, UNLESS NOTED OTHERWISE.
  5. ALL EXHAUST AND SUPPLY AIR DUCTWORK AND ASSOCIATED FITTINGS, AND DAMPERS SHALL BE GALVANIZED STEEL CONSTRUCTION WITH GALVANIZED STEEL HARDWARE. DUCTWORK SHALL BE DESIGNED FOR A MINIMUM 2-IN W.G. INTERNAL PRESSURE.

**EQUIPMENT:**

6. EQUIPMENT CLEARANCES SHALL BE PROVIDED PER THE NATIONAL ELECTRIC CODE (NEC) AND ACCESS REQUIREMENTS PER EQUIPMENT MANUFACTURER FOR MAINTENANCE AND REMOVAL OF PARTS.
7. FIELD MODIFICATION (E.G. CUTTING, REPAIR OF DAMAGED EQUIPMENT, ETC) WILL NOT BE ACCEPTED.
8. ELECTRIC UNIT HEATERS SHALL BE MOUNTED WITH BOTTOM OF EQUIPMENT AT 8'-0" AFF
9. ALL EQUIPMENT SHALL BE SECURELY ANCHORED TO STRUCTURE AND/OR ITS CONCRETE PAD.

**DAMPERS:**

10. ALL MOTORIZED DAMPERS ARE LOW LEAKAGE CLASS 1A @ 1 IN.W.G., UNLESS NOTED OTHERWISE.
11. MANUAL BALANCING DAMPERS SHALL BE PROVIDED FOR EACH AIR INLET OR OUTLET TO ACHIEVE THE AIRFLOW INDICATED.

**DUCTWORK INLET & OULETS (GRILLES, REGISTERS, DIFFUSERS, SCREENS):**

12. ALL INLETS AND OULETS SHALL HAVE A TERMINATING DEVICE (E.G. GRILLE OR SCREEN). ALL BOTTOM INLETS AT FLOOR LEVEL (E.G. 12" AFF) SHALL BE TERMINATED WITH 1/2"x1/2" 316 STAINLESS STEEL WIRE MESH IN A REMOVABLE FLANGED FRAME.

**PIPING:**

13. PIPE SUPPORTS SHALL BE GALVANIZED STEEL CONSTRUCTION WITH GALVANIZED STEEL HARDWARE AND PROVIDED EVERY 5-FT MAXIMUM, UNLESS OTHERWISE NOTED.
14. WHERE INSULATION IS TO BE PROVIDED ON PIPING, THE PIPE CLAMPS SHALL BE ON THE OUTSIDE OF THE INSULATION. PROVIDE RIGID INSULATION INSERTS AT EACH CLAMP LOCATION.
15. DRAIN PIPING SHALL BE SOLVENT WELDED SCH. 80 CPVC AND SLOPED AT 1/8" PER FOOT MINIMUM.

**CONTROLS:**

16. CONDUIT/WIRING BETWEEN HVAC EQUIPMENT AND ELECTRICAL EQUIPMENT SHALL BE FURNISHED AND INSTALLED BY ELECTRICAL.
17. CONDUIT/WIRING BETWEEN HVAC EQUIPMENT AND HVAC DEVICES SHALL BE FURNISHED AND INSTALLED BY HVAC PER DIVISION 16 SPECIFICATIONS.
18. CONTRACTOR SHALL VERIFY ALL EQUIPMENT AND DEVICE TAGS WITH DIVISION 17.

**COORDINATION:**

19. REFER TO MECHANICAL SHEETS FOR COORDINATION OF PROCESS EQUIPMENT, PIPING, AND ACCESSORIES. VERIFY SPACE REQUIREMENTS FOR HVAC EQUIPMENT, DUCTWORK, SUPPORTS, DEVICES, AND ALL CLEARANCES.
20. REFER TO ARCHITECTURAL AND STRUCTURAL SHEETS FOR COORDINATION OF ROOF, FLOOR, AND WALL OPENINGS.
21. COORDINATE WITH ACCESS HATCHES, BEAMS, AND CROSS BRACING.
22. COORDINATE LOCATION OF PENETRATIONS AND DUCTWORK ROUTING WITH EXISTING ELECTRICAL CONDUIT, WIRING, AND LIGHTS. REFER TO ELECTRICAL DRAWINGS FOR DEMOLITION AND NEW WORK.
23. REFER TO STRUCTURAL DETAILS FOR ADDITIONAL INFORMATION ON CONCRETE CURBS AND PADS.
24. HVAC CONTRACTOR SHALL COORDINATE PURCHASED EQUIPMENT WITH ROOF OPENINGS AND CONCRETE ROOF CURB/PAD SIZES.
25. REFER TO STRUCTURAL NOTES FOR PENETRATIONS AND ANCHORS IN EXISTING CONCRETE AND COORDINATION WITH REBAR.
26. ALL POWER WIRING/CONDUIT, STARTERS, AND DISCONNECTS ARE FURNISHED AND INSTALLED BY DIVISION 26, UNLESS OTHERWISE NOTED. NOTE, THE FOLLOWING EQUIPMENT HAVE STARTERS PROVIDED BY THE EQUIPMENT MANUFACTURER:
  - PACKAGED MAKE-UP AIR UNITS (MAU)
45. ANY DEVIATION FROM SCHEDULED VOLTS/PHASE, HORSEPOWER, OR MAX OVER CURRENT PROTECTION (MOCP) IS TO BE COORDINATED WITH ELECTRICAL AND NOTED ON THE SUBMITTAL FOR APPROVAL.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
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 Engineer: RICARDO AZCARATE  
 P.E. Serial No.: 81863  
 Date: JANUARY 2026



CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: \_\_\_\_\_  
 JOB NO: 00050-0099-01 DWG BY: M ANDERSON

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SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
  
HVAC GENERAL NOTES

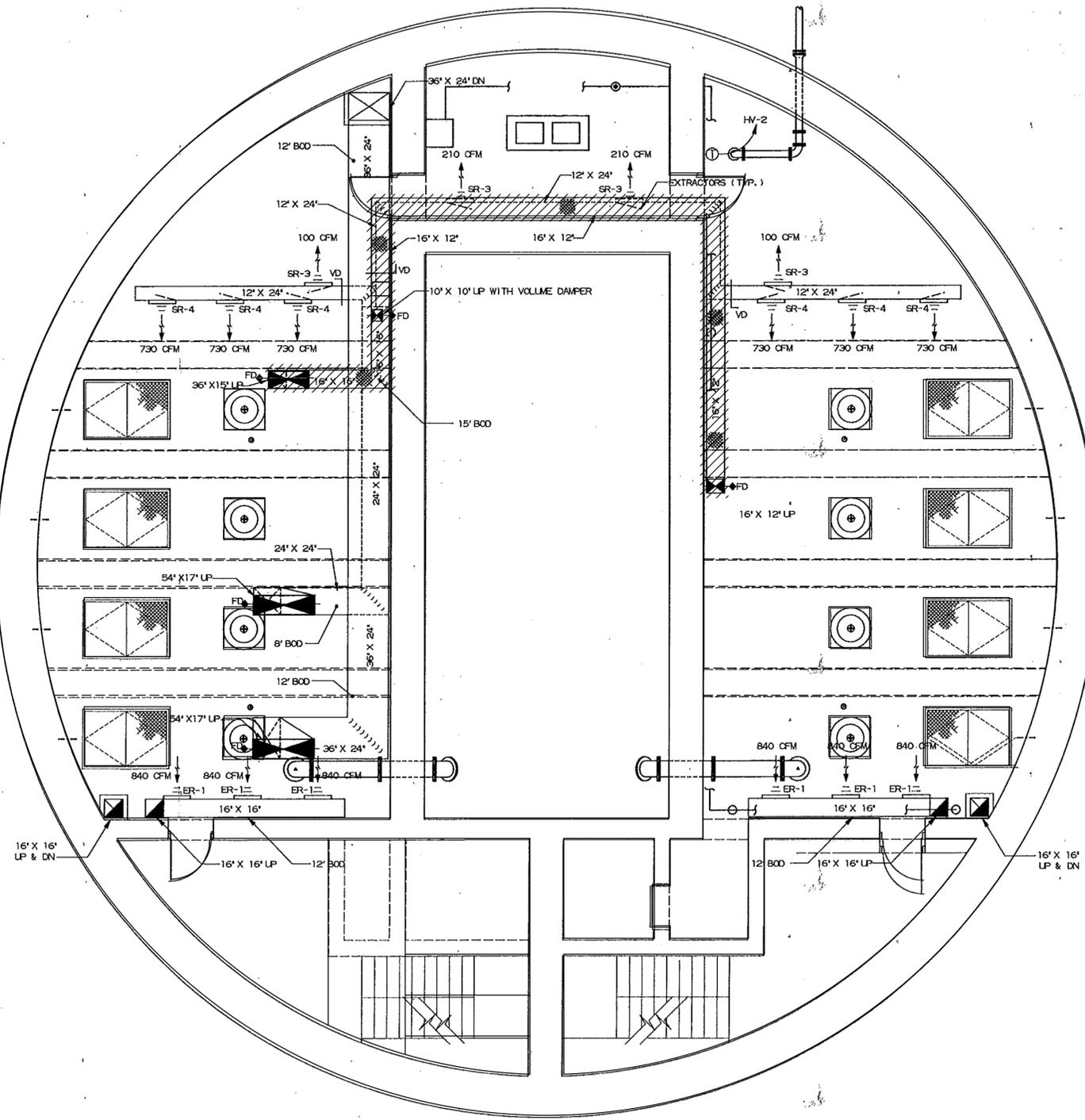
**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

DRAWING SCALE N/A HORIZ: **XXX** VERT: **XXX**  
 CATEGORY NO. **2-H-2** SHEET NO. \_\_\_\_\_ OF **XXX**  
 FOR CITY OF HOUSTON USE ONLY



**GENERAL NOTES:**

1. DEMOLISH ALL HANGERS, SUPPORTS, ASSOCIATED WITH THE DEMOLISHED DUCTWORK. REMOVE CONCRETE CURBS AND PATCH WALL AND FLOOR OPENINGS. SEE STRUCTURAL.



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SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
**INTERMEDIATE LEVEL –  
 HVAC DEMOLITION**

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

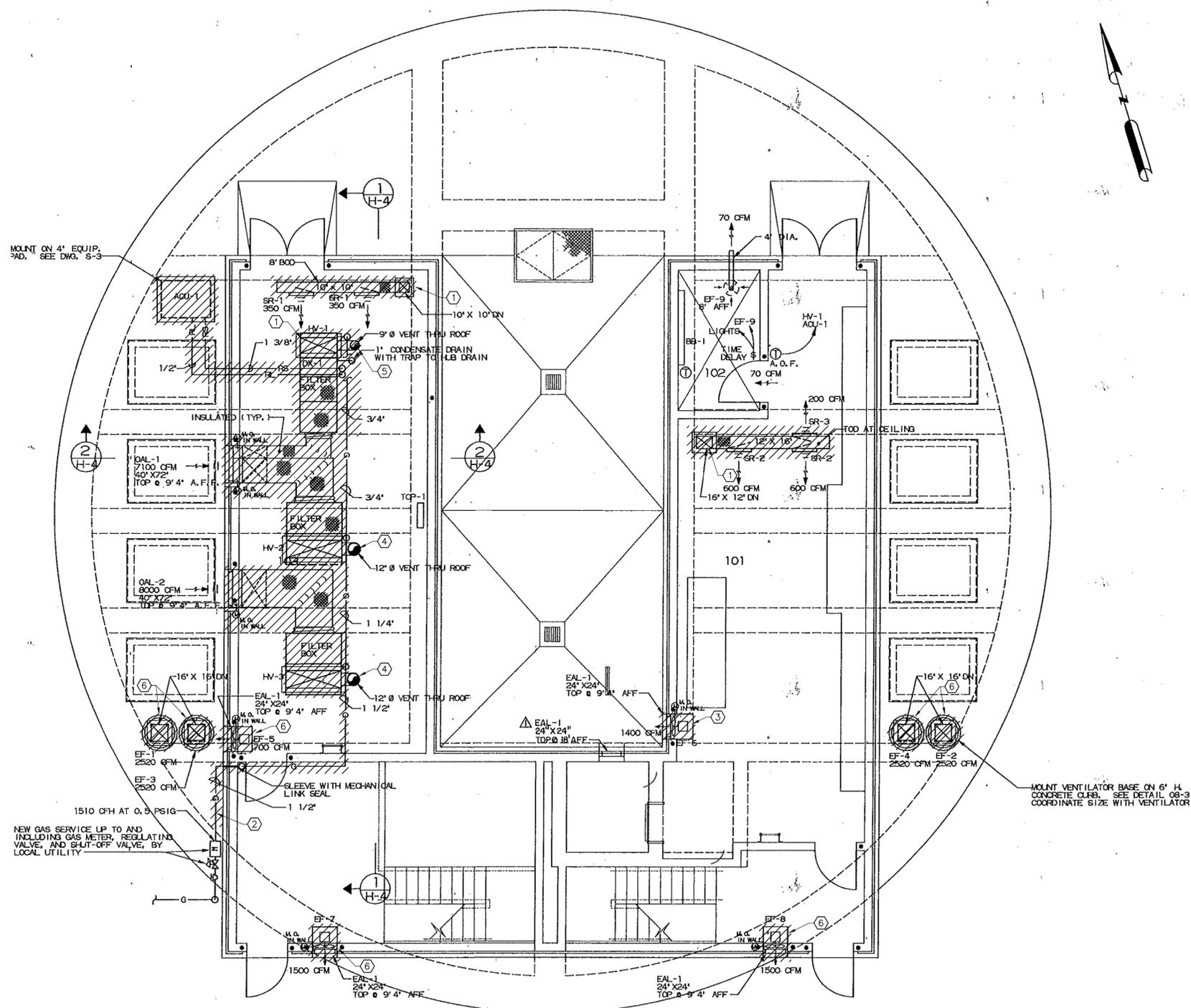
DRAWING SCALE N/A HORIZ: **XXX** VERT: **XXX**  
 CATEGORY NO. **2-H-3** SHEET NO. \_\_\_\_\_ OF **XXX**  
 FOR CITY OF HOUSTON USE ONLY



NOTES:  
1. REFER TO 2-H-2 FOR GENERAL NOTES

**GENERAL NOTES:**

1. DEMOLISH ALL PIPING, HANGERS, SUPPORTS, CONDUIT AND WIRE, ASSOCIATED WITH THE DEMOLISHED EQUIPMENT AND DUCTWORK. REMOVE CONCRETE CURBS AND PATCH WALL AND FLOOR OPENINGS, SEE STRUCTURAL.



**KEYED NOTES:**

- 1 REMOVE CONCRETE CURB AROUND DUCT, PATCH EXIST FLOOR OPENING, SEE STRUCT.
- 2 DEMO EXIST GAS PIPING AND ALL ASSOCIATED HANGERS AND SUPPORTS DOWNSTREAM OF EXIST PRESSURE REGULATOR. PATCH EXTERIOR WALL AND FIRE RATED STAIRWELL WALL.
- 3 DEMO EXIST EXHAUST FAN AND ASSOCIATED SUPPORTS, DAMPERS, AND CONTROLS. PATCH EXIST WALL OPENING, SEE ARCHITECTURAL.
- 4 REUSE PATH OF EXISTING FLUES THRU ROOF FOR NEW FLUES.
- 5 DEMOLISH EXISTING FLUE. THIS FLUE PATH WILL NOT BE REUSED. PATCH CEILING AND CAP ROOF PENETRATION.
- 6 THESE FANS ARE BEING REPLACED.

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DATE: JANUARY 2026 DGN BY: \_\_\_\_\_  
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SCOTT STREET No. 1  
LIFT STATION REHABILITATION  
UPPER LEVEL - HVAC  
DEMOLITION PLAN

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

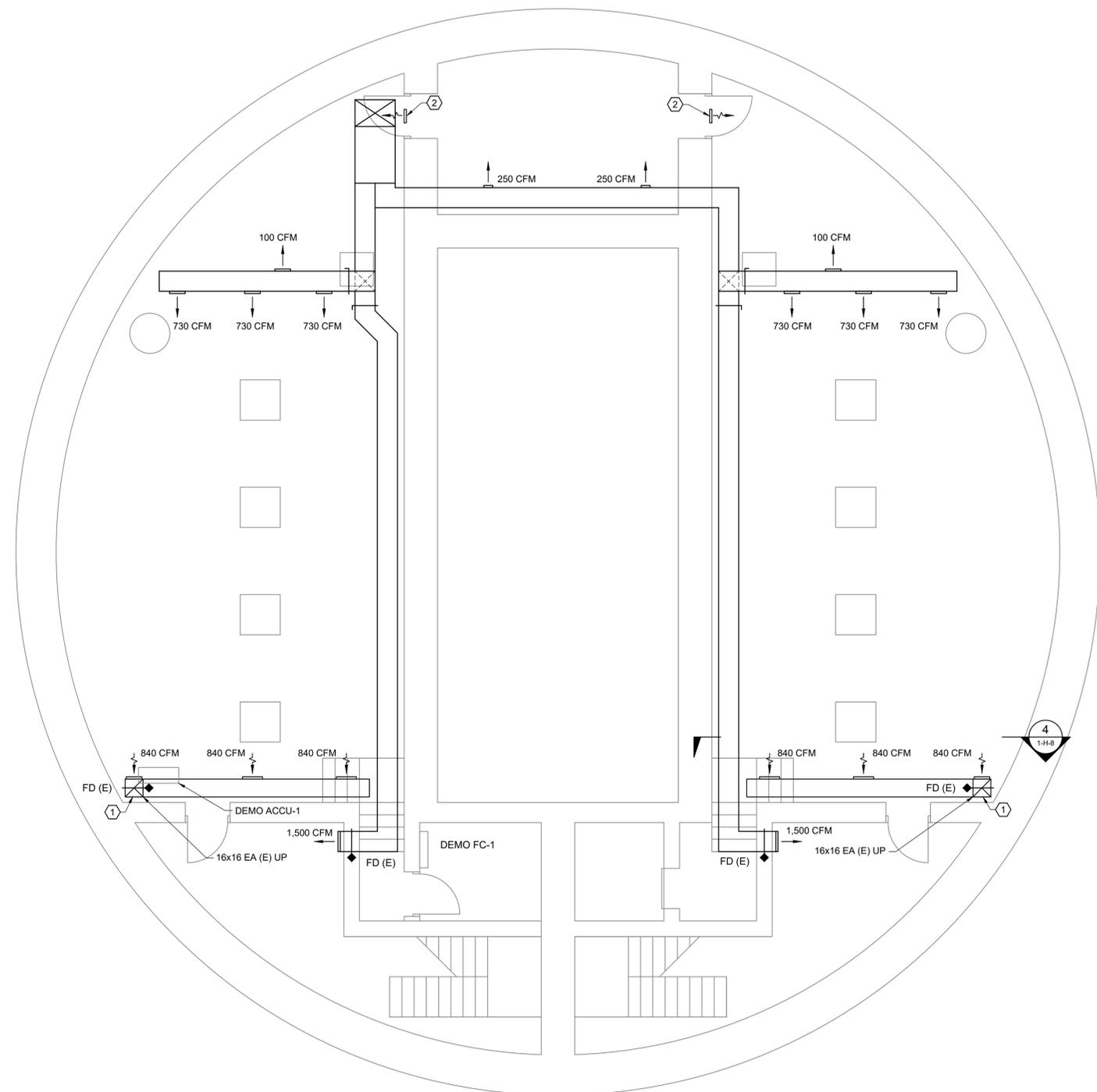
DRAWING SCALE N/A HORIZ: XXX VERT: XXX  
CATEGORY NO. 2-H-4 SHEET NO. OF XXX  
FOR CITY OF HOUSTON USE ONLY



TBPE REG. NO. F-10804

**GENERAL NOTES:**

1. REFER TO 2-H-2 FOR GENERAL NOTES.



**KEYED NOTES:**

- 1 16X16 DN TO 12" AFF, REPLACE ELL WITH TEE, PATCH EXIST HOLE.
- 2 CUT DOOR AND INSTALL 12X12 TRANSFER AIR GRILLE FOR 250 CFM.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**  
 Not intended for construction,  
 bidding or permit purposes.  
 Engineer: RICARDO AZCARATE  
 P.E. Serial No.: 81863  
 Date: JANUARY 2026



CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

DATE: JANUARY 2026 DGN BY: \_\_\_\_\_  
 JOB NO: 00050-0099-01 DWG BY: M ANDERSON

NOTE: CITY SIGNATURES VALID FOR ONE YEAR ONLY AFTER DATE OF SIGNATURES

SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

LOWER LEVEL – HVAC PLAN

CITY OF HOUSTON  
 HOUSTON PUBLIC WORKS

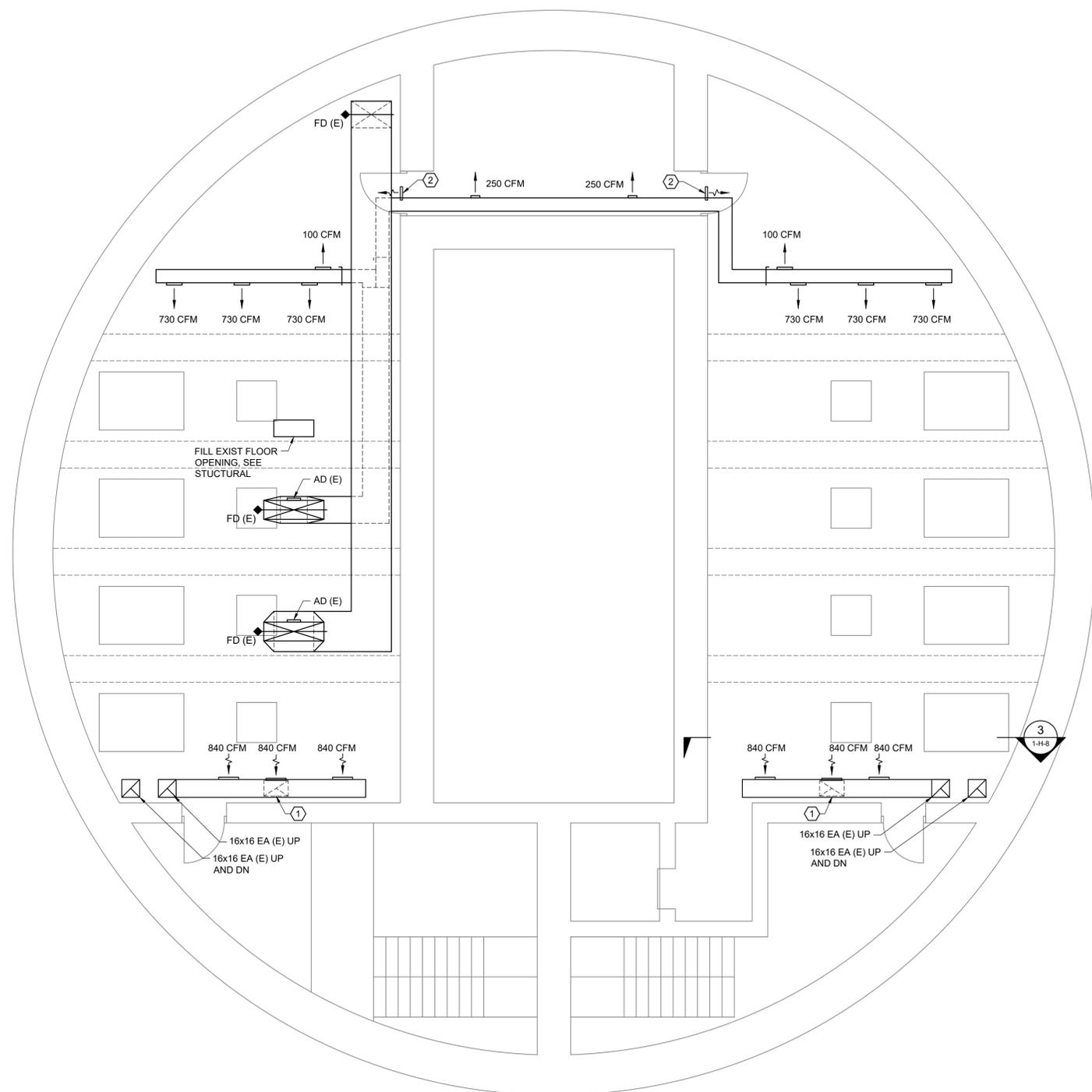
DRAWING SCALE N/A HORIZ: XXX VERT: XXX  
 CATEGORY NO. 2-H-5 SHEET NO. OF XXX  
 FOR CITY OF HOUSTON USE ONLY



TBPE REG. NO. F-10804

**GENERAL NOTES:**

- REFER TO 2-H-2 FOR GENERAL NOTES.



**KEYED NOTES:**

- 22x14 DN TO 12" AFF, TAP BOTTOM OF EXIST DUCT, RELOCATE EXIST REGISTER, PATCH EXIST HOLE.
- CUT DOOR AND INSTALL 12x12 TRANSFER AIR GRILLE FOR 250 CFM.

NO.	DATE	REVISIONS	APP.

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SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
 INTERMEDIATE LEVEL -  
 HVAC PLAN

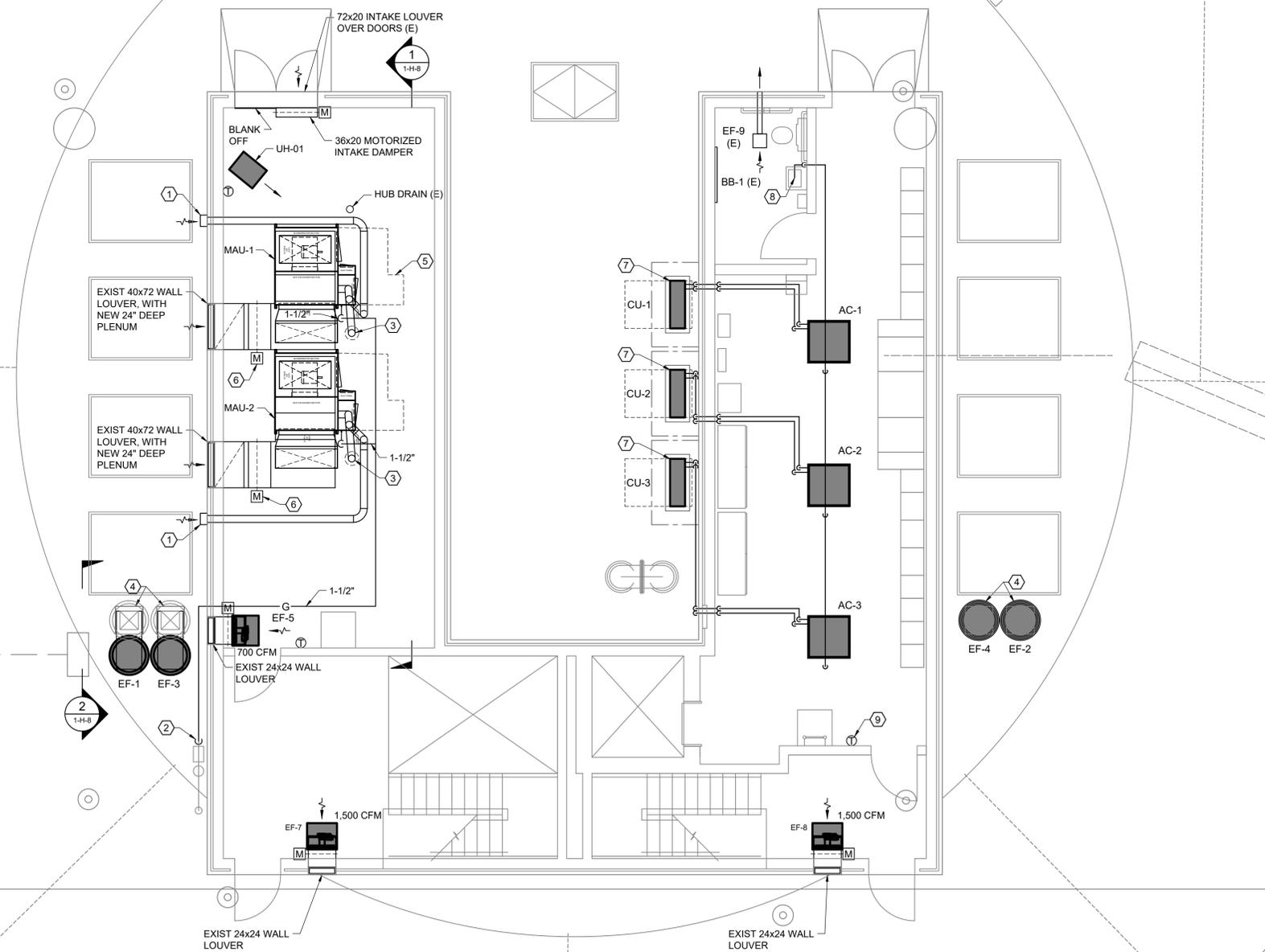
CITY OF HOUSTON  
 HOUSTON PUBLIC WORKS

DRAWING SCALE N/A HORIZ: XXX VERT: XXX  
 CATEGORY NO. 2-H-6 SHEET NO. OF XXX  
 FOR CITY OF HOUSTON USE ONLY



**GENERAL NOTES:**

1. REFER TO 2-H-2 FOR GENERAL NOTES.



**KEYED NOTES:**

- 1 CORE DRILL WALL AND INSTALL 6" SCH-40 CPVC COMBUSTION AIR INTAKE WITH APPROVED WALL CAP.
- 2 NEW GAS PIPING FROM EXIST PRESSURE REGULATOR TO NEW MAKE-UP AIR UNITS. ROUTE AROUND STAIRWELL. CORE DRILL EXTERIOR WALL AND SEAL WATER TIGHT.
- 3 NEW 5" DOUBLE WALL FLUE UP THRU EXIST FLUE PATH TO ABOVE ROOF WITH APPROVED RAIN CAP. MODIFY EXIST ROOF THIMBLE COUNTERFLASHING AROUND NEW SMALLER FLUE.
- 4 PROVIDE NEW, ALL WELDED, ALUMINUM, CURB CAP ADAPTOR FOR NEW EXHAUST FANS TALL ENOUGH TO HOUSE NEW OBD ISOLATION DAMPER WITH ACTUATOR MOUNTED ACCESSIBLE OUTSIDE OF CURB ADAPTOR.
- 5 REQUIRED NEC AND MAINTENANCE CLEARANCE, TYP.
- 6 NEW 40x30 ALUMINUM, LOW LEAKAGE, OBD MOTORIZED ISOLATION DAMPER.
- 7 NEW CONDENSING UNITS SECURED TO NEW 8" TALL CONCRETE PADS. CONSTRUCT ALL ALUMINUM SECURITY CAGE AROUND EQUIPMENT WITH VANDAL RESISTANT COMBINATION LOCKS FOR MAINTENANCE REMOVAL..
- 8 CORE DRILL THRU WALL. ROUTE CONDENSATE DRAIN EXPOSED DOWN WALL. REWORK LAV TAILPIECE AND CONNECT CONDENSATE PIPING. SLOPE CONDENSATE 1/8" PER FOOT.
- 9 TEMPERATURE INDICATING TRANSMITTER, HARD WIRED DIRECT TO SCADA FOR LOW AND HIGH TEMPERATURE ALARMS.

NO.	DATE	REVISIONS	APP.

**INTERIM REVIEW**

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Engineer: RICARDO AZCARATE

P.E. Serial No.: 81863

Date: JANUARY 2026



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CITY OF HOUSTON  
HARRIS COUNTY, TEXAS

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SCOTT STREET No. 1  
LIFT STATION REHABILITATION

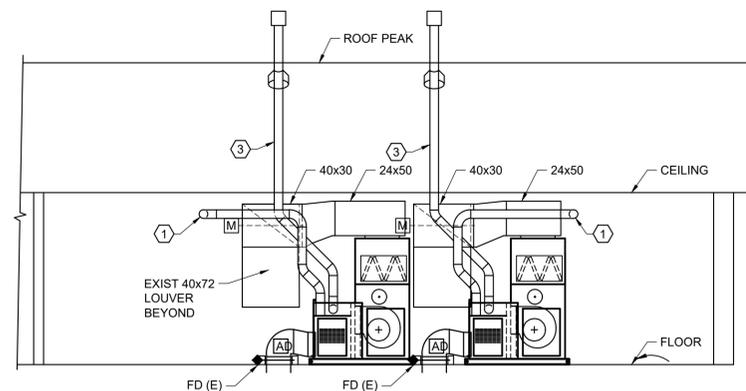
UPPER LEVEL – HVAC PLAN

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

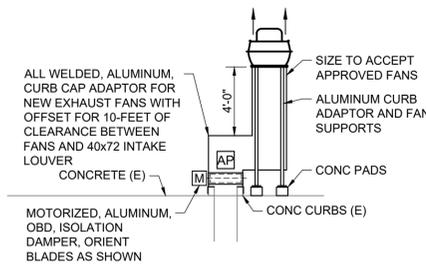
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CATEGORY NO. 2-H-7 SHEET NO. OF XXX  
FOR CITY OF HOUSTON USE ONLY



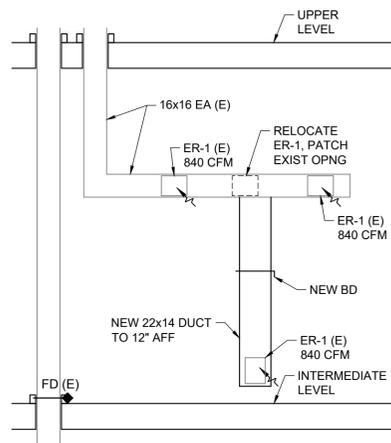
TBPE REG. NO. F-10804



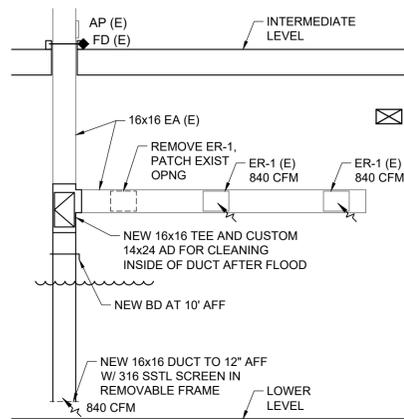
1 SECTION  
- 3/16"=1'-0"



2 SECTION  
- 3/16"=1'-0"



3 SECTION  
- 3/16"=1'-0"



4 SECTION  
- 3/16"=1'-0"

**GENERAL NOTES:**

1. REFER TO 2-H-2 FOR GENERAL NOTES.

NO.	DATE	REVISIONS	APP.

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LIFT STATION REHABILITATION

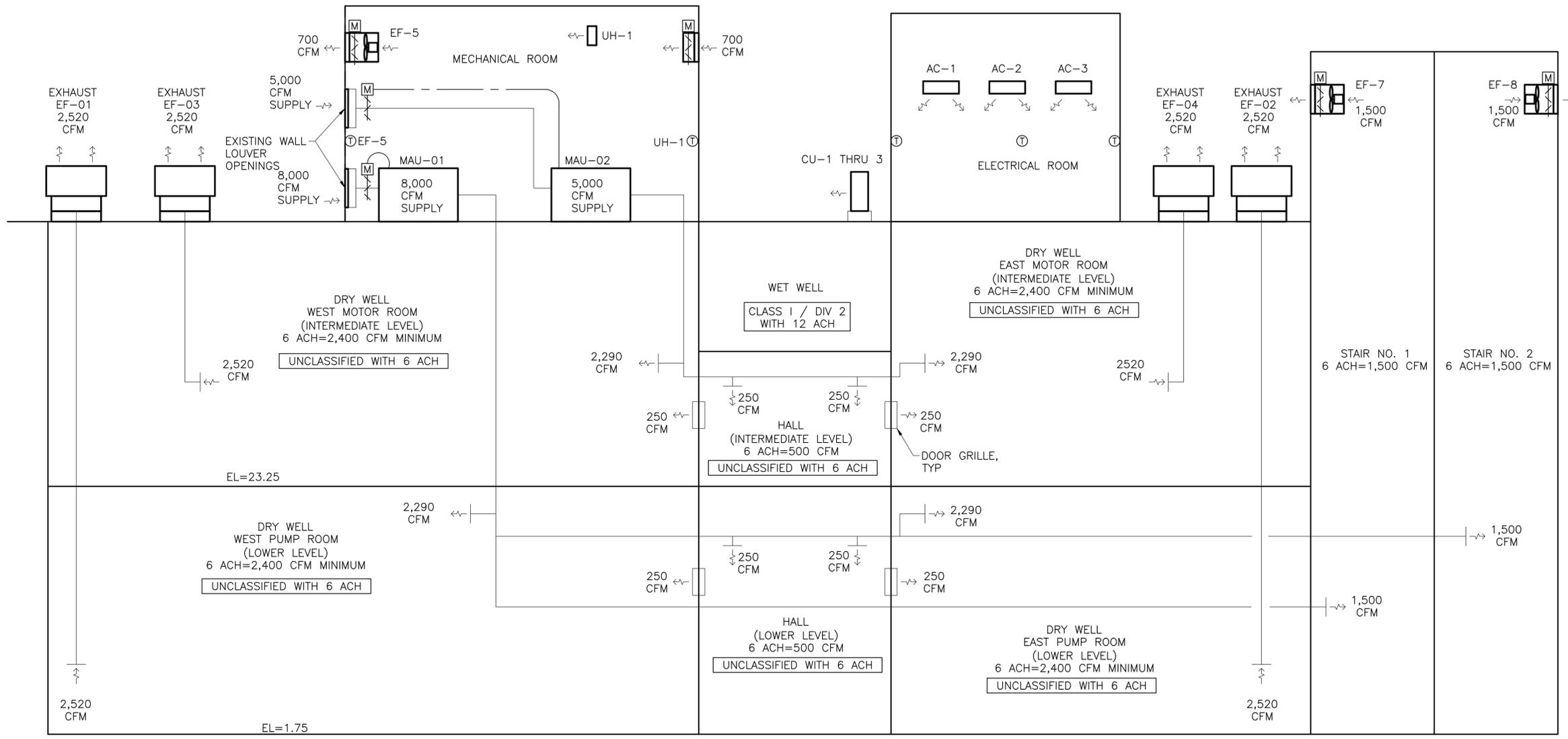
HVAC SECTIONS

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE N/A HORIZ: XXX VERT: XXX

CATEGORY NO. 2-H-8 SHEET NO. OF XXX  
FOR CITY OF HOUSTON USE ONLY





**SEQUENCES OF OPERATION:**

1. THE DRY WELLS, HALLS, AND STAIRWELLS ARE VENTILATED 24/7 TO STAY UNCLASSIFIED AT 6 AIR CHANGES PER HOUR. INTERLOCK DAMPERS TO OPEN WHEN THE ASSOCIATED EQUIPMENT IS OPERATING.
2. THE MECHANICAL ROOM IS VENTILATED BY A WALL MOUNTED EXHAUST FAN CONTROLLED BY A 120/1/60 NEMA 4X THERMOSTAT EQUAL TO PECO MODEL TF115-023 (INITIAL SETTING 80 DEGREES). INTERLOCK INTAKE AND EXHAUST DAMPERS TO OPEN WHEN FAN IS ON AND CLOSED WHEN FAN IS OFF.
3. THE MECHANICAL ROOM IS HEATED BY A UNIT HEATER WITH WALL MOUNTED REMOTE THERMOSTAT SUPPLIED BY THE MANUFACTURER (INITIAL SETTING 60 DEGREES).
4. THE ELECTRICAL ROOM IS COOLED AND HEATED BY VARIABLE REFRIGERANT FLOW (VRF) DX UNITS WITH WALL MOUNTED CONTROLLERS SUPPLIED BY THE MANUFACTURER.

NO.	DATE	REVISIONS	APP.

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CITY OF HOUSTON  
 HARRIS COUNTY, TEXAS

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SCOTT STREET No. 1  
 LIFT STATION REHABILITATION  
 HVAC SCHEMATIC

CITY OF HOUSTON  
 HOUSTON PUBLIC WORKS

DRAWING SCALE N/A HORIZ: XXX VERT: XXX  
 CATEGORY NO. 2-H-9 SHEET NO. OF XXX  
 FOR CITY OF HOUSTON USE ONLY



**MAKE UP AIR HANDLING UNIT SCHEDULE**

EQUIPMENT TAG NUMBER	MAU-1	MAU-2
BUILDING	WET WEATHER PUMP STATION	WET WEATHER PUMP STATION
UNIT TYPE	PACKAGED GAS FIRED	PACKAGED GAS FIRED
UNIT LOCATION	INDOOR	INDOOR
UNIT CONFIGURATION	HORIZONTAL	HORIZONTAL
FAN CONFIGURATION	DRAW-THRU	DRAW-THRU
ALTITUDE, FT. ABOVE SEA LEVEL	45	45
ENTERING TEMP. RANGE, DEG. F.	0-115	0-115
HOUSING MATERIAL - OUTSIDE	ALUMINUM	ALUMINUM
HOUSING MATERIAL - INSIDE	ALUMINUM	ALUMINUM
FILTERS:	YES	YES
FILTER TYPE	WASHABLE	WASHABLE
FILTER MATERIAL	ALUMINUM	ALUMINUM
MAX. FACE VELOCITY	500	500
UNIT SIZE, W X D X H, IN	BY VENDOR	BY VENDOR
PRESSURE DROP (CLEAN), IN. W.G.	BY VENDOR	BY VENDOR
HEATING COIL:	YES	YES
FUEL	NATURAL GAS	NATURAL GAS
TYPE	INDIRECT FIRED	INDIRECT FIRED
BURNER MATERIAL	CAST ALUMINUM	CAST ALUMINUM
AIRFLOW, CFM	5,000	8,000
MIN. TEMPERATURE RISE, DEG F	37.6	35.2
UNIT INPUT, MBH	250.00	375.00
MIN. UNIT OUTPUT, MBH	203.00	304.00
NUMBER OF STAGES	15:1	15:1
GAS MIN/MAX PRESSURE, IN. WC	MFR STD	MFR STD
SUPPLY FAN:		
FAN TYPE	CENTRIFUGAL	CENTRIFUGAL
TOTAL AIRFLOW, CFM	5,000	8,000
OUTSIDE AIR	100%	100%
EXTERNAL SP., IN. WG	0.8	0.8
TOTAL SP., IN. WG	2.75	2.75
FAN RPM	MFR STD	MFR STD
DRIVE TYPE	BELT	BELT
MOTOR HP	5.0	7.5
MOTOR RPM	1725	1725
FAN MOTOR ENCLOSURE	TEFC	TEFC
FAN MOTOR EFFICIENCY	PREMIUM	PREMIUM
SUPPLY AIR DISCHARGE LOCATION	HORIZONTAL	HORIZONTAL
ELECTRICAL:		
VOLTS/PHASE/HERTZ	460/3/60	460/3/60
EMERGENCY POWER	YES	YES
MINIMUM CIRCUIT AMPACITY	10	13.5
MAX. OVERCURRENT PROTECTION	15	20
CONTROL PANEL	NEMA 4X	NEMA 4X
SOUND DATA (DBA @ 5 FT. RADIUS)	79 MAX	79 MAX
OPERATING WEIGHT, LBS	2100	2100
ROOF CURB	N/A	N/A
MANUFACTURER	ENG-AIR	ENG-AIR
MODEL NUMBER	DJS40V	DJS40V
NOTES	1,2,3,4,5	1,2,3,4,5

REMARKS: (APPLICABLE TO ALL UNITS)  
 A. SCHEDULE IS INCOMPLETE WITHOUT SPECIFICATION SECTION 23 74 00.  
 B. PROVIDE HINGED ACCESS SECTIONS FOR MAINTENANCE ACCESSIBILITY TO INTERNAL COMPONENTS.  
 C. PROVIDE WITH UNIT MOUNTED DISCONNECT AND INTEGRAL MOTOR STARTER.  
 NOTES:  
 1. T.S.P. = INTERNAL LOSSES (BY VENDOR) + 3X CLEAN FILTER W.G. + E.S.P. (INDICATED ABOVE).  
 2. UNIT SHALL BE SINGLE-POINT CONNECTION WITH INTEGRAL TRANSFORMERS FOR CONTROL POWER AND 120V POWER.  
 3. PROVIDE WITH FILTER SECTION AND WASHABLE ALUMINUM FILTERS.  
 4. PROVIDE WITH CONNECTION AND CONFIGURATION FOR DUCTED COMBUSTION AIR.  
 5. PROVIDE WITH HORIZONTAL END DISCHARGE

**CONDENSING UNIT SCHEDULE (DUCTLESS SPLIT SYSTEMS)**

CONDENSING UNIT TAG NUMBER	CU-1 THRU 3
BUILDING	WET WEATHER PUMP STATION
AREA SERVED	ELECTRICAL ROOM
UNIT TYPE	AIR-COOLED
UNIT CONFIGURATION	HORIZONTAL
MOUNTING	PAD MOUNTED
AMBIENT TEMP. RATING DEG F. MAX	110
AMBIENT TEMP. RATING DEG F. MIN.	20
NOMINAL TONS	3.0
GROSS COOLING CAPACITY, MBH	36.0
GROSS HEATING CAPACITY, MBH	40.0
VOLTS/PHASE/HERTZ	208/1/60
ELECTRICAL MCA, AMPS	34
ELECTRICAL MOCP, AMPS	56
MANUFACTURER	TRANE/MITSUBISHI
MODEL NUMBER	PUZ-AK36NL
COMPRESSOR TYPE	SCROLL
REFRIGERANT TYPE	R454B
COOLING SEER	23.3
COOLING EER @ 95 DEG.F.	13.7
MOTOR HP	MFR. STD.
OPERATING WEIGHT, LBS	215
NOTES:	1

REMARKS: (APPLICABLE TO ALL UNITS)  
 A. SCHEDULE IS INCOMPLETE WITHOUT SPECIFICATION SECTION 15857.  
 B. PROVIDE LOW AMBIENT CONTROL WIND BAFFLE FOR OPERATION DOWN TO 0 DEG.F..  
 C. UNIT SHALL HAVE SPECIAL COATINGS ON UNIT, INSIDE AND OUT, INCLUDING CONDENSER COIL AND TUBES.  
 COATINGS SHALL RESIST HYDROGEN SULFIDE.  
 NOTES:  
 1. INDOOR UNIT IS POWERED BY OUTDOOR CONDENSING UNIT, FIELD WIRING/CONDUIT BY DIV. 16.

**AIR CONDITIONING UNIT SCHEDULE (DUCTLESS SPLIT SYSTEMS)**

AIR CONDITIONER TAG NUMBER	AC-1 THRU 3
BUILDING	WET WEATHER PUMP STATION
AREA SERVED	ELECTRICAL ROOM
UNIT TYPE	SPLIT DX
UNIT CONFIGURATION	4-WAY
MOUNTING	CEILING-CASSETTE
FAN CONFIGURATION	MFR. STD.
ALTITUDE, FT. ABOVE SEA LEVEL	20 (APPROX)
NOMINAL TONS	3
SUPPLY FAN:	
FAN TYPE	CENTRIFUGAL
TOTAL AIRFLOW, CFM (H/M/L)	670-850-1020-1200
MIN. OUTSIDE AIR, CFM	NONE
FAN CONTROL	4-SPEED
DRIVE TYPE	DIRECT
COOLING COIL:	
ENT. AIR TEMP. DB/WB, DEG F	80/67
APPROX LVG. AIR TEMP. DB/WB, DEG F	55/54
TOTAL COOLING CAPACITY, MBH	36.0
SENSIBLE CAPACITY, MBH	28.98
CALCULATED SENSIBLE LOAD, MBH	22.2
HEATING:	
TYPE	HEAT PUMP
RATED CAPACITY, MBH	23.6
REFRIGERANT TYPE	R454B
FILTERS	MFR STD
REFRIGERANT LIQUID PIPE SIZE, IN	3/8
REFRIGERANT GAS PIPE SIZE, IN	5/8
DRAIN PIPE SIZE	1-1/4
ELECTRICAL:	NOTE 1
VOLTS/PHASE/HERTZ	208/1/60
MINIMUM CIRCUIT AMPACITY, MCA	2
OPERATING WEIGHT, LBS	57
MANUFACTURER	MITSUBISHI
MODEL NUMBER	PLA-AE36NL
ASSOCIATED CONDENSING UNITS	CU-1 THRU 3
NOTES	1

REMARKS: (APPLICABLE TO ALL UNITS)  
 A. SCHEDULE IS INCOMPLETE WITHOUT SPECIFICATION SECTION 15857.  
 B. PROVIDE WIRED WALL MOUNTED CONTROLLER.  
 C. PROVIDE MANUFACTURER STANDARD CONDENSATE PUMP AND HIGH WATER CUTOFF.  
 D. PROVIDE WITH EEV KITS PER MANUFACTURER.  
 NOTES:  
 1. INDOOR UNIT IS POWERED BY OUTDOOR CONDENSING UNIT, FIELD WIRING/CONDUIT BY DIV. 16.

NO.	DATE	REVISIONS	APP.
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SCOTT STREET No. 1  
 LIFT STATION REHABILITATION

HVAC SCHEDULES I

CITY OF HOUSTON  
 HOUSTON PUBLIC WORKS

DRAWING SCALE N/A HORIZ: **XXX** VERT: **XXX**

CATEGORY NO. **2-H-10** SHEET NO. \_\_\_\_\_ OF **XXX**  
 FOR CITY OF HOUSTON USE ONLY



**METAL FAN SCHEDULE**

EQUIPMENT TAG NUMBER	EF-1 THRU 4	EF-5	EF-7 AND 8
BUILDING	WET WEATHER PUMP STATION	WET WEATHER PUMP STATION	WET WEATHER PUMP STATION
SERVICE	EXHAUST (24/7)	EXHAUST (SUMMER)	EXHAUST (24/7)
UNIT CONFIGURATION	UPBLAST	SIDEWALL	SIDEWALL
LOCATION	ROOF	MECHANICAL	STAIR
DISCHARGE	TOP	SIDEWALL	SIDEWALL
ALTITUDE, FT. ABOVE SEA LEVEL			
FAN MATERIAL OF CONSTRUCTION	ALUMINUM	ALUMINUM	ALUMINUM
FAN TYPE	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
AIRFLOW, CFM	2,520	700	1,500
TOTAL STATIC PRESSURE, IN. WG	0.5	0.3	0.3
AIR STREAM TEMP RANGE, DEG F	50-110	50-110	50-110
FAN RPM	1,555	749	1,056
DRIVE TYPE	DIRECT	DIRECT	DIRECT
MOTOR HP	1.0	0.25	860.00
MOTOR RPM	1,555	1,043	1,600
MOTOR ENCLOSURE	TEFC	TENV	TEFC
FAN SPEED CONTROL	YES	YES	YES
VOLTS/PHASE/HERTZ	460/3/60	115/1/60	115/1/60
EMERGENCY POWER	PER NFPA 820	PER NFPA 820	PER NFPA 820
SPARK PROOF	NO	NO	NO
SOUND DATA (DBA @ 5 FT. RADIUS)	67	61	68
VIBRATION ISOLATORS	MFR STD	MFR STD	MFR STD
STANDARD CURB CAP SIZE, IN x IN	22x22	NONE	NONE
CURB EXTENSION HEIGHT, IN	NONE	NONE	NONE
CURB ADAPTER SIZE, IN x IN	SEE PLANS	NONE	NONE
ROOF/WALL OPENING SIZE, IN x IN	SEE PLANS	SEE PLANS	SEE PLANS
OPERATING WEIGHT, LBS	100	103	147
MANUFACTURER	GREENHECK	GREENHECK	GREENHECK
MODEL NUMBER	CUE-140-VG	AER-20-VG	AER-20-VGD
DAMPER	NONE	SEE PLANS	NONE
NOTES	1, 2, 5	1, 2	1, 2
CONTROLS	24/7	SEE PLANS	24/7

GENERAL NOTES: (APPLICABLE TO ALL UNITS)  
 1. SCHEDULE IS INCOMPLETE WITHOUT SPECIFICATION SECTION 23 34 00.  
 2. PROVIDE ALL BELT DRIVEN EQUIPMENT WITH ONE SET OF SPARE BELT(S).

NOTES:  
 1. PROVIDE WITH ALUMINUM CONSTRUCTION, STAINLESS STEEL SHAFT AND FASTENERS, AND COATINGS ON FAN AND ACCESSORIES.  
 2. PROVIDE WITH 50 DEGREE CELCIUS RATED PREMIUM EFFICIENCY MOTOR.  
 3. PROVIDE WITH PITCHED ALUMINUM CURB TO MATCH ROOF SLOPE, INSULATION, WOOD NAILER, AND FOAM CURB SEAL.  
 4. PROVIDE WITH ALUMINUM 12" CURB EXTENSION WITH ACCESS DOOR AND ALUMINUM BACKDRAFT DAMPER.  
 5. PROVIDE ALUMINUM CURB ADAPTER, COORDINATE WITH STRUCTURAL FOR CONCRETE CURB DIMENSIONS.  
 6. PROVIDE WITH ALUMINUM GRILLE, WALL DISCHARGE CAP, 6" DUCT CONNECTION, COATING COLOR TBD BY ARCHITECTURAL.  
 7. PROVIDE WITH SHORT WALL HOUSING WITH OSHA GUARD  
 8. PROVIDE WITH WEATHERHOOD KIT AND BIRSCREEN AT INTAKE AIR OPENING, ALL ALUMINUM CONSTRUCTION.

**ELECTRIC UNIT HEATER SCHEDULE**

EQUIPMENT TAG NUMBER	UH-1
BUILDING	CHEMICAL BUILDING
ROOM SERVED	SODIUM HYPOCHLORITE ROOM
TOTAL CAPACITY, KW PER HEATER	10.0
AIRFLOW, CFM	700
AIR THROW, FT	N/A
AIR TEMP RISE, DEG F	45
FAN TYPE	PROPELLER
MOTOR ENCLOSURE	TEFC
TERMINAL ENCLOSURE	N/A
RATING	N/A
VOLTS/PHASE/HERTZ PER HEATER	480/3/60
TOTAL CURRENT DRAW, AMPS	12.7
EMERGENCY POWER	NO
OPERATING WEIGHT, LBS	45
MANUFACTURER	INDEECO UCI
MODEL NUMBER	926U10000UA
CONTROLS NOTES	C1

REMARKS: (APPLICABLE TO ALL UNITS)  
 A. SCHEDULE IS INCOMPLETE WITHOUT SPECIFICATION SECTION 15550.  
 B. PROVIDE CLEARANCES PER MANUFACTURER.  
 C. UNIT SHALL BE MOUNTED AT 8'-0" UNLESS NOTED OTHERWISE.

NOTES:  
 1. UNIT SHALL BE SINGLE POINT ELECTRICAL CONNECTION WITH INTEGRAL TRANSFORMER FOR UNIT CONTROLS. DISCONNECT BY ELECTRICAL.  
 2. PROVIDE WITH SWIVEL BRACKET FOR WALL OR CEILING MOUNTING AS INDICATED ON PLANS.  
 3. HEATING ELEMENTS SHALL BE 316 STAINLESS STEEL.  
 4. PROVIDE WITH REMOTE MOUNTED NEMA4X THERMOSTAT AND AUTO RESET THERMAL CUTOUT.

CONTROLS NOTES:  
 C1. UNIT SHALL RUN INTERMITTENTLY, TURNING ON/OFF BASED ON ROOM THERMOSTAT SETPOINT.

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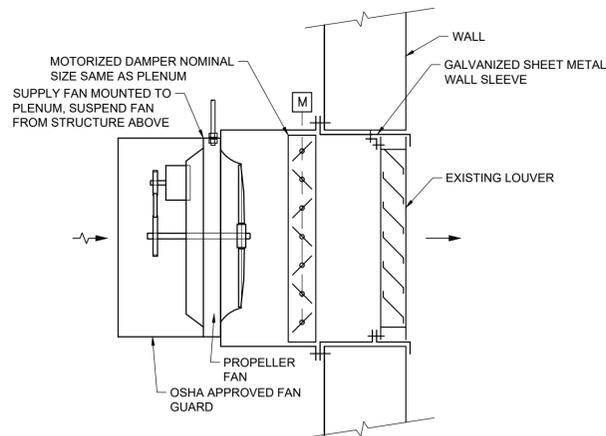
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SCOTT STREET No. 1  
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 HVAC SCHEDULES II

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

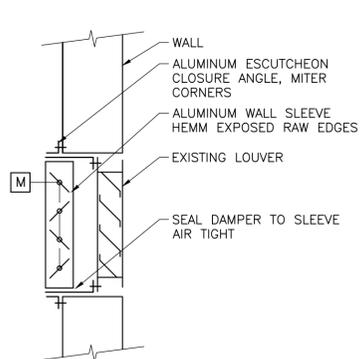
DRAWING SCALE N/A HORIZ: **XXX** VERT: **XXX**  
 CATEGORY NO. **2-H-11** SHEET NO. \_\_\_\_\_ OF **XXX**  
 FOR CITY OF HOUSTON USE ONLY





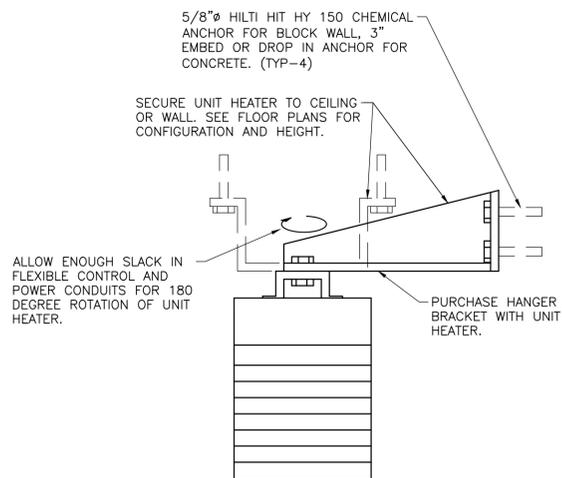
WALL MOUNTED EXHAUST FAN

DETAIL **A**  
NTS



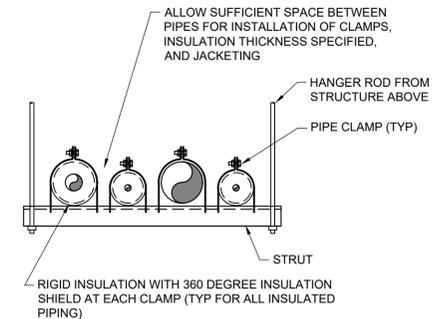
INTAKE DAMPER AT LOUVER

DETAIL **B**  
NTS



HORIZONTAL ELECTRIC UNIT HEATER

DETAIL **C**  
NTS



TRAPEZE HANGER

DETAIL **D**  
NTS

NOTES:

- DO NOT PENETRATE INSULATION WITH PIPE CLAMPS.
- GALVANIZED, CLAMPS, RODS, AND HARDWARE, TYP.

NO.	DATE	REVISIONS	APP.

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SCOTT STREET No. 1  
LIFT STATION REHABILITATION

HVAC DETAILS

CITY OF HOUSTON  
HOUSTON PUBLIC WORKS

DRAWING SCALE N/A HORIZ: XXX VERT: XXX  
CATEGORY NO. 2-H-12 SHEET NO. OF XXX  
FOR CITY OF HOUSTON USE ONLY



PRIMARY FLOW ELEMENTS	
	MAGNETIC FLOW METER
	ULTRASONIC DOPPLER FLOW METER
	ULTRASONIC TIME TRANSIT FLOW METER
	VORTEX FLOW METER
	VENTURI TUBE
	TURBINE OR PROPELLER TYPE METER
	ROTAMETER
	PITOT TUBE
	WEIR FLOW METER
	PARSHALL FLUME OR TRAPEZOIDAL FLUME
	ORIFICE PLATE
	THERMAL MASS FLOWMETER
PRIMARY LEVEL ELEMENTS	
	ULTRASONIC LEVEL TRANSDUCER
	RADAR LEVEL TRANSDUCER
	PRIMARY ELEMENT PRESSURE PROBE LEVEL TRANSMITTER
	BUBBLER LEVEL TUBE ELEMENT
	CONDUCTIVE LEVEL PROBE
	FLOAT SWITCH
VALVES	
	VALVE - OTHER IN-LINE TYPE NOT OTHERWISE IDENTIFIED
	THREE-WAY VALVE
	BALL VALVE
	GLOBE VALVE
	PINCH VALVE
	GATE VALVE
	NEEDLE VALVE
VALVES	
	DIAPHRAGM VALVE
	BUTTERFLY VALVE
	CHECK VALVE WITH FLOW DIRECTION
	PLUG VALVE
	PRESSURE-REDUCING REGULATOR INTERNAL PRESSURE TAP
	BACK PRESSURE REGULATOR INTERNAL PRESSURE TAP
	PRESSURE-REDUCING REGULATOR EXTERNAL PRESSURE TAP
	BACK PRESSURE REGULATOR EXTERNAL PRESSURE TAP

VALVES	
	SOLENOID ACTUATED VALVE
	"X" AIR CYLINDER P AIR CYLINDER O OIL CYLINDER H HYDRAULIC CYLINDER E ELECTRIC MOTOR S SOLENOID VALVE
	MANUAL VALVE
MISC PROCESS SYMBOLS	
	ANNULAR TYPE SEAL
	CHEMICAL INJECTION POINT
	STRAINER
	DRAIN
	NORMAL OPERATING LEVEL
	UV CHAMBER
	FLOW STRAIGHTENER
	LOAD CELL
	SPRAY NOZZLE
	BLIND FLANGE
	FLANGE
	DIAPHRAGM SEAL
	PRESSURE RELIEF (OUT)
	VACUUM RELIEF (IN)
GATES	
	SLUICE/SLIDE GATE
	FLOW CONTROL GATE
MOTORS	
	VARIABLE SPEED MOTOR
	CONSTANT SPEED MOTOR
PUMPS, BLOWERS AND MISC EQUIPMENT	
	CENTRIFUGAL BLOWER
	CENTRIFUGAL PUMP
	DIAPHRAGM PUMP AND MOTOR
	PROGRESSIVE CAVITY PUMP
	SUBMERSIBLE PUMP
	POSITIVE DISPLACEMENT BLOWER

PUMPS, BLOWERS AND MISC EQUIPMENT	
	MIXER/FLOCCULATOR/AERATOR
	VERTICAL PUMP-1 USED WHEN DISCHARGE LINE IS IN WETWELL
	VERTICAL PUMP-2 USED WHEN DISCHARGE LINE IS EXPOSED.
	VERTICAL PUMP SHAFT USED WHEN INTAKE OF PUMP IS ENCASED.
	SUBMERSIBLE MIXER
	COMPRESSOR
	HEAT EXCHANGER
	FEED PUMP
	GRINDER/MACERATOR
	METERING PUMP
	PLUNGER PUMP
PUMPS, BLOWERS AND MISC EQUIPMENT	
	PERISTALTIC METERING PUMP
	CENTRIFUGE
	PULSATION DAMPENERS
	TURBO BLOWER

PUMPS, BLOWERS AND MISC EQUIPMENT	
	ROTARY SCREEN
CONTROL ENCLOSURE, INSTRUMENTS AND SCADA	
DIGITAL/ANALOG INSTRUMENT	
	AAA SA TAG (REFER TO TABLE)
	BBB LOOP NUMBER
	CCC LOOP NUMBER SUB
	D DIVISION NUMBER
	P POWER REQUIREMENT
	XXX DESCRIPTION (USED ON PANEL INSTRUMENTS)
	YY CHEMICAL
	ZZZ LOCATION
	DIGITAL/ANALOG INSTRUMENT -LOCATED IN THE FIELD -NOT INSIDE OF PANEL -VISIBLE AT FIELD LOCATION -NORMALLY OPERATOR ACCESSIBLE
	DIGITAL/ANALOG INSTRUMENT -LOCATED ON PANEL -VISIBLE TO OPERATOR -NORMALLY OPERATOR ACCESSIBLE
	DIGITAL/ANALOG INSTRUMENT -LOCATED INSIDE PANEL -NOT VISIBLE TO OPERATOR -NORMALLY NOT ACCESSIBLE
DISPLAY (INDICATION/CONTROLLER)	
	AAA SA TAG (REFER TO TABLE)
	BBB LOOP NUMBER
	CCC LOOP NUMBER SUB
	XXX DESCRIPTION
	DIGITAL/ANALOG INSTRUMENT -LOCATED IN THE FIELD -NOT INSIDE OF PANEL -VISIBLE AT FIELD LOCATION -NORMALLY OPERATOR ACCESSIBLE
	DIGITAL/ANALOG INSTRUMENT -LOCATED ON PANEL -VISIBLE TO OPERATOR -NORMALLY OPERATOR ACCESSIBLE
	DIGITAL/ANALOG INSTRUMENT -LOCATED INSIDE PANEL -NOT VISIBLE TO OPERATOR -NORMALLY NOT ACCESSIBLE
CONTROL ENCLOSURE AND SCADA	
	DIGITAL INPUT
	DIGITAL OUTPUT
	ANALOG INPUT
	ANALOG OUTPUT
	SURGE SUPPRESSOR
	OPTO ISOLATOR
	SIGNAL CONVERTER/ ISOLATOR *r - (INPUT/OUTPUT) *DEFINED AS FOLLOWS: E - VOLTAGE I - CURRENT P - PNEUMATIC PD- PULSE DURATION H - HYDRAULIC O - ELECTROMAGNETIC, SONIC R - RESISTANCE (ELECTRIC)

CONTROL ENCLOSURE, INSTRUMENTS AND SCADA		
<p>PLC/RTU LOGIC</p> <p>FUNCTION SYMBOLS AND ABBREVIATIONS</p> <ul style="list-style-type: none"> <li>F PROPORTIONAL GAIN OR ATTENUATE (INPUT/OUTPUT)</li> <li>-F REVERSE PROPORTIONAL GAIN OR ATTENUATE (INPUT/OUTPUT)</li> <li>Z SUMMING</li> <li>ΣA AVERAGING</li> <li>Δ SUBTRACTING</li> <li>√ EXTRACT SQUARE ROOT</li> <li>← DIVIDE</li> <li>X MULTIPLY</li> <li>S INTEGRATE</li> <li>+ BIAS POSITIVE</li> <li>- BIAS NEGATIVE</li> <li>F(x) NONLINEAR OR UNSPECIFIED FUNCTION</li> <li>&gt; HIGH SELECT</li> <li>&lt; LOW SELECT</li> <li>↑ HIGH LIMIT</li> <li>↓ LOW LIMIT</li> </ul>		
INSTRUMENT (COMMON HOUSING)	INSTRUMENT (SEPARATOR HOUSING)	INSTRUMENT (PART OF MAJOR EQUIPMENT)
GENERAL NOTES:		
<ol style="list-style-type: none"> <li>THIS IS A GENERAL LEGEND SHEET, SOME SYMBOLS AND ABBREVIATIONS MAY NOT APPLY TO THIS SPECIFIC PROJECT.</li> <li>THIS LEGEND APPLIES TO INSTRUMENTATION DIAGRAMS ONLY AND MAY DIFFER FROM LEGENDS FOR OTHER SHEETS.</li> <li>IN GENERAL THIS LEGEND SHEET AND THE INSTRUMENTATION DIAGRAMS ARE BASED ON INTERNATIONAL SOCIETY OF AUTOMATION, STANDARDS FOR PRACTICES FOR INSTRUMENTATION, STANDARD SS.1 SOME MODIFICATIONS, ADDITIONS AND ALTERATIONS HAVE BEEN MADE AS REQUIRED TO ACCOMMODATE THE PROJECT REQUIREMENTS.</li> <li>SOME PROCESS ITEMS, SUCH AS EQUIPMENT SOLATION VALVES, BYPASS LINES, ETC., WHICH ARE NOT CRITICAL FOR AN UNDERSTANDING OF THE INSTRUMENTATION AND CONTROL FUNCTIONS ARE NOT SHOWN ON THE INSTRUMENTATION SHEETS.</li> <li>SEE ELECTRICAL SHEETS AND SPECIFICATIONS FOR ADDITIONAL CONTROL AND INTERLOCK REQUIREMENTS FOR EQUIPMENT NOT SHOWN OR NOT PROVIDED BY THE INSTRUMENTATION SUPPLIER.</li> <li>IN THE EVENT OF DISCREPANCY BETWEEN THE PROCESS &amp; INSTRUMENTATION DIAGRAMS AND THE LOOP DIAGRAMS, THE INFORMATION FROM THE LOOP DIAGRAMS SHALL BE USED.</li> </ol>		
HAND SWITCH ABBREVIATIONS		
HOA	HAND/OFF/AUTO	
HOR	HAND/OFF/REMOTE	
LOC	LOCAL/OFF/COMPUTER	
LOR	LOCAL/OFF/REMOTE	
LOS	LOCKOUT STOP	
OSC	OPEN/STOP/CLOSE	
RSL	RAISE/STOP/LOWER	
L/C	LOCAL/COMPUTER	
L/R	LOCAL/REMOTE	
O/C	OPEN/CLOSE	
S/S	START/STOP	
A/M	AUTO/MANUAL	
H/C	HAND/COMPUTER	
PB	PUSHBUTTON	

NO.	DATE	REVISIONS	APP.

**BENCH MARK**  
A BRASS DISC STAMPED "RM 070215" LOCATED AT THE END OF YAUPON HOLLY LANE AT ITS INTERSECTION WITH EASTERN REDBUD LANE, ON TOP OF A "B-B" INLET AT THE NORTHWEST CORNER OF THE INTERSECTION.  
ELEVATION = 64.76 FEET NAVD 88 (2001 ADJUSTMENT)

**T.B.M. "A"**  
A CHISELED SQUARE ON THE BULL NOSE OF THE ESPLANADE LOCATED ON WEST LAKE HOUSTON PARKWAY APPROXIMATELY 970 FEET NORTH OF THE CENTERLINE INTERSECTION OF SUMMER LAKE RANCH DRIVE AND WEST LAKE HOUSTON PARKWAY.  
ELEVATION = 55.34 FEET NAVD 88 (2001 ADJUSTMENT)

**T.B.M. "B"**  
A CHISELED SQUARE ON TOP OF A "B-B" INLET AT THE SOUTHWEST CORNER OF THE INTERSECTION OF SUMMER LAKE RANCH DRIVE AND WEST LAKE HOUSTON PARKWAY.  
ELEVATION = 53.67 FEET NAVD 88 (2001 ADJUSTMENT)

**100-YEAR FLOOD PLAIN**  
ACCORDING TO MAP NO. 48201C0510L OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S (FEMA) FLOOD INSURANCE RATE MAP (FIRM) FOR HARRIS COUNTY, TEXAS AND INCORPORATED AREAS, DATED JUNE 18, 2007, THE SUBJECT TRACT IS SITUATED WITHIN UNSHADED ZONE "X", DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN (500-YEAR FLOOD).

**NOTICE:**  
FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811

VERIFICATION OF PRIVATE UTILITY LINES

CenterPoint Energy natural gas utilities shown. (Site services lines are not shown). This signature not to be used for conflict verification. Signature valid for six months.

CenterPoint Energy / UNDERGROUND Electrical Facilities Verification Only. (This signature verifies existing underground facilities - not to be used for conflict verification.) Signature valid for six months.

Approved by AT&T Texas / SWBT underground conduit facilities only. Signature valid for one year.

**KGI** Kalluri Group, Inc. TPBE Registration No. F-665  
16300 Katy Freeway, Suite 172  
Houston, Texas 77094  
Phone: (713)-365-9288  
PROJECT 4285

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY: \_\_\_\_\_  
DATE: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
SURVEYED BY: \_\_\_\_\_  
FB NO. XXXXXX

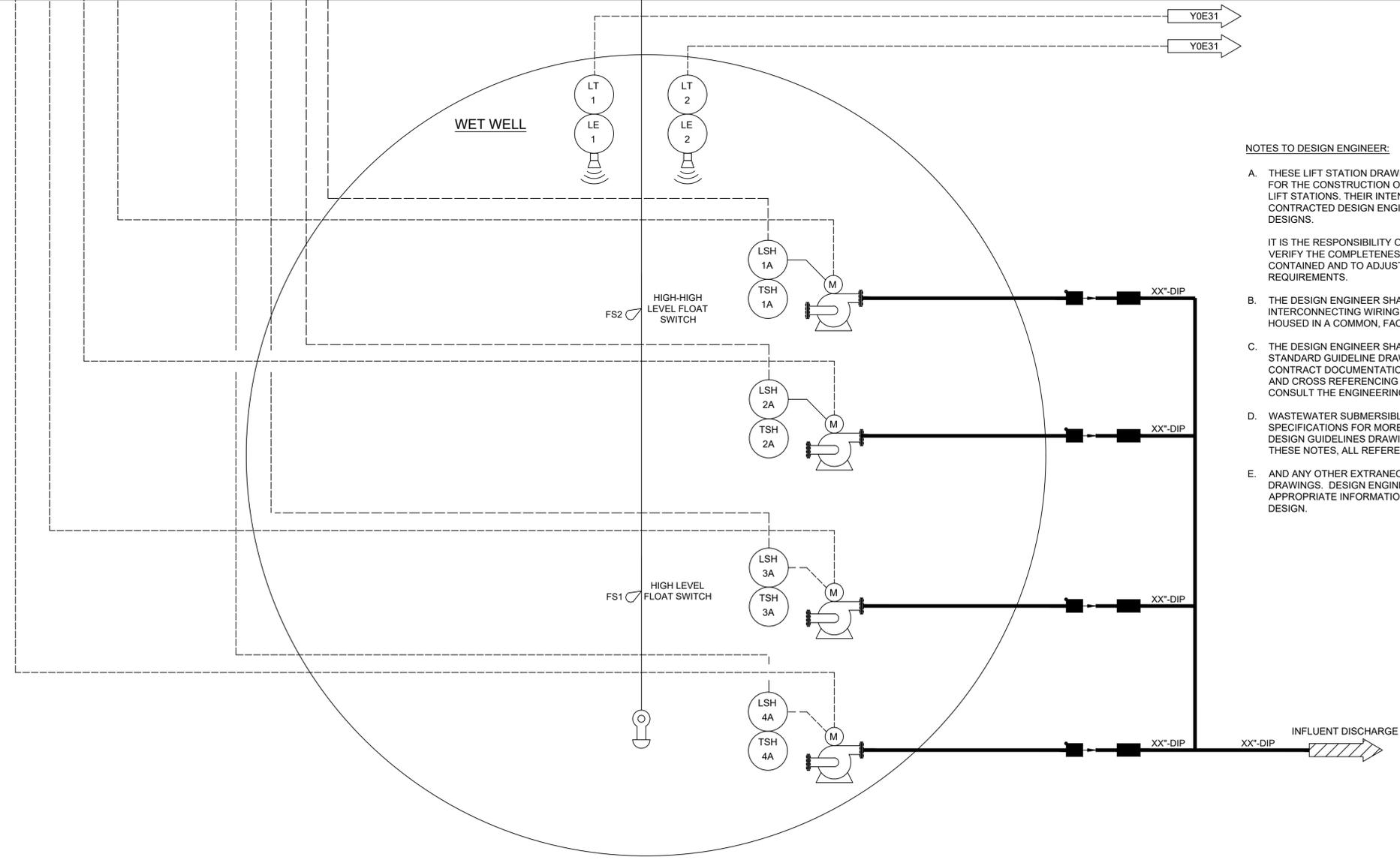
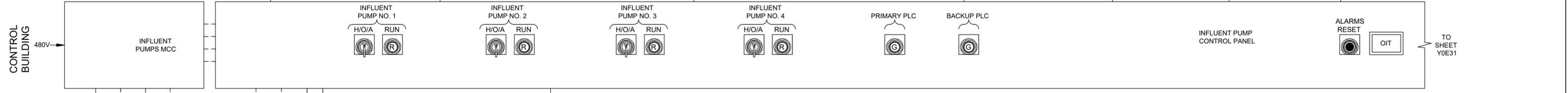
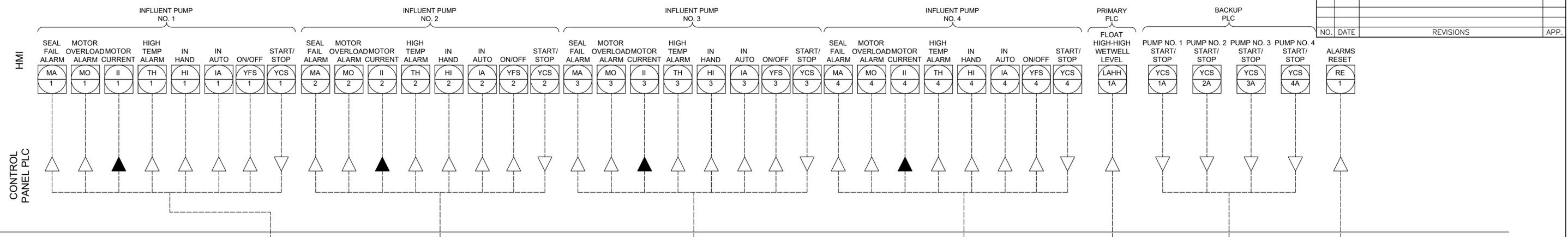
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
INSTRUMENTATION  
LEGENDS & SYMBOLS  
SHEET 1

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 0-1-01	
SHEET NO. OF XX	





- NOTES TO DESIGN ENGINEER:**
- A. THESE LIFT STATION DRAWINGS ARE CONSIDERED TO BE DESIGN GUIDELINES FOR THE CONSTRUCTION OF CITY OF HOUSTON WASTEWATER SUBMERSIBLE LIFT STATIONS. THEIR INTENDED USE IS AS A FRAMEWORK FOR THE CONTRACTED DESIGN ENGINEER IN DEVELOPING SPECIFIC LIFT STATION DESIGNS.
  - IT IS THE RESPONSIBILITY OF THE CONTRACTED DESIGN ENGINEER TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION HEREIN CONTAINED AND TO ADJUST ACCORDING TO PROJECT SPECIFIC REQUIREMENTS.
  - B. THE DESIGN ENGINEER SHALL DELETE TERMINAL DESIGNATION AND INTERCONNECTING WIRING BETWEEN PANELS WHEN BOTH PANELS ARE HOUSED IN A COMMON, FACTORY PRE-WIRED ENCLOSURE.
  - C. THE DESIGN ENGINEER SHALL INCORPORATE ONLY THE NECESSARY STANDARD GUIDELINE DRAWINGS AND DETAILS INTO HIS PROJECT CONTRACT DOCUMENTATION PACKAGE, AND SHALL ADJUST PAGE NUMBERS AND CROSS REFERENCING ACCORDINGLY. THE DESIGN ENGINEER SHALL CONSULT THE ENGINEERING DESIGN MANUAL FOR
  - D. WASTEWATER SUBMERSIBLE LIFT STATIONS AND MASTER CONSTRUCTION SPECIFICATIONS FOR MORE INFORMATION PERTINENT TO THESE STANDARD DESIGN GUIDELINES DRAWINGS. THE DESIGN ENGINEER SHALL REMOVE THESE NOTES, ALL REFERENCES TO THESE NOTES.
  - E. AND ANY OTHER EXTRANEIOUS INFORMATION FROM THE DESIGN GUIDELINE DRAWINGS. DESIGN ENGINEER SHALL PROVIDE ANY NOTES OR OTHER APPROPRIATE INFORMATION NECESSARY TO COMPLETE THE LIFT STATION DESIGN.

**KGI** TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

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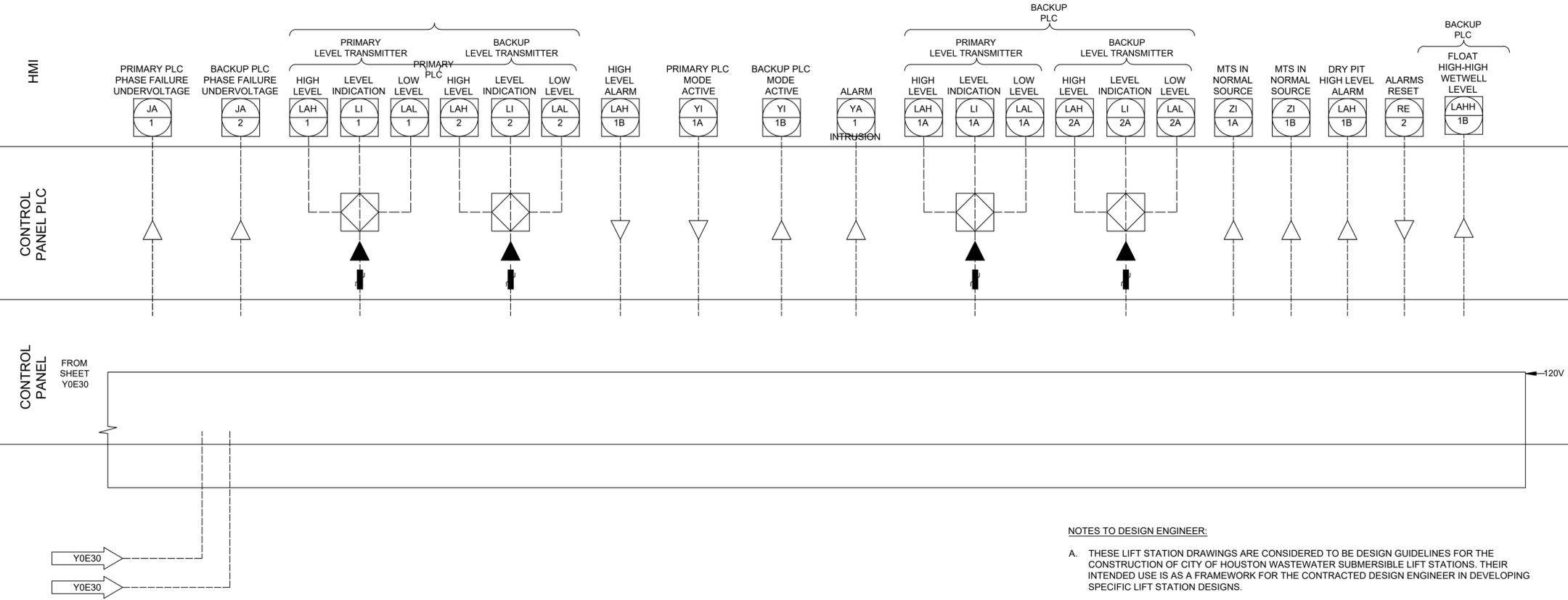
**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
 LIFT STATION REHABILITATION  
 INSTRUMENTATION**

**DRY WEATHER STATION  
 P&ID SHEET I**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 1-I-01	
SHEET NO. XXX OF XX	

NO.	DATE	REVISIONS	APP.



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  - D. THE DESIGN ENGINEER SHALL CONSULT THE ENGINEERING DESIGN MANUAL FOR WASTEWATER SUBMERSIBLE LIFT STATIONS AND MASTER CONSTRUCTION SPECIFICATIONS FOR MORE INFORMATION PERTINENT TO THESE STANDARD DESIGN GUIDELINES DRAWINGS.
  - E. THE DESIGN ENGINEER SHALL REMOVE THESE NOTES, ALL REFERENCES TO THESE NOTES, AND ANY OTHER EXTRANEIOUS INFORMATION FROM THE DESIGN GUIDELINE DRAWINGS. DESIGN ENGINEER SHALL PROVIDE ANY NOTES OR OTHER APPROPRIATE INFORMATION NECESSARY TO COMPLETE THE LIFT STATION DESIGN.
  - F. THE DESIGN ENGINEER SHALL REMOVE THIS SHEET AND REPLACE WITH STANDBY GENERATOR SET SHEET P0G11 IF A PERMANENT STANDBY GENERATOR IS PROPOSED FOR THIS LIFT STATION.

**KGI**  TBPE Registration No. F-665  
 Kalluri Group, Inc. 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS  
**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
 INSTRUMENTATION  
**DRY WEATHER STATION**  
**P&ID SHEET 2**

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DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 1-1-02	
SHEET NO. XXX OF XX	

**NAMEPLATE SCHEDULE**

DESIGNATION	ENGRAVED	DESIGNATION	ENGRAVED
N1	PUMP STATION DESIGNATION	N8	NOT USED.
N2	PUMP NO. 1	N9	NOT USED.
N3	PUMP NO. 2	N10	PROGRAMMING SCREEN
N4	PUMP NO. 3	N11	NOT USED.
N5	PUMP NO. 4	N12	PRIMARY PLC
N6	NOT USED.	N13	BACKUP PLC
N7	NOT USED.	N14	MOTOR DATA HORSEPOWER (OUTPUT) ..... RPM AT FULL LOAD ..... TIME RATING ..... FREQUENCY ..... NUMBER OF PHASES ..... MODEL NUMBER ..... RATED VOLTAGE ..... SERVICE FACTOR ..... FULL LOAD AMPS ..... INSULATION CLASS ..... NEMA DESIGN LETTER ..... TEMPERATURE RISE ..... NEMA FRAME SIZE ..... DATE OF MANUFACTURE ..... THERMO PROTECTION (IF REQUIRED) -- MOISTURE PROTECTION (IF REQUIRED)-

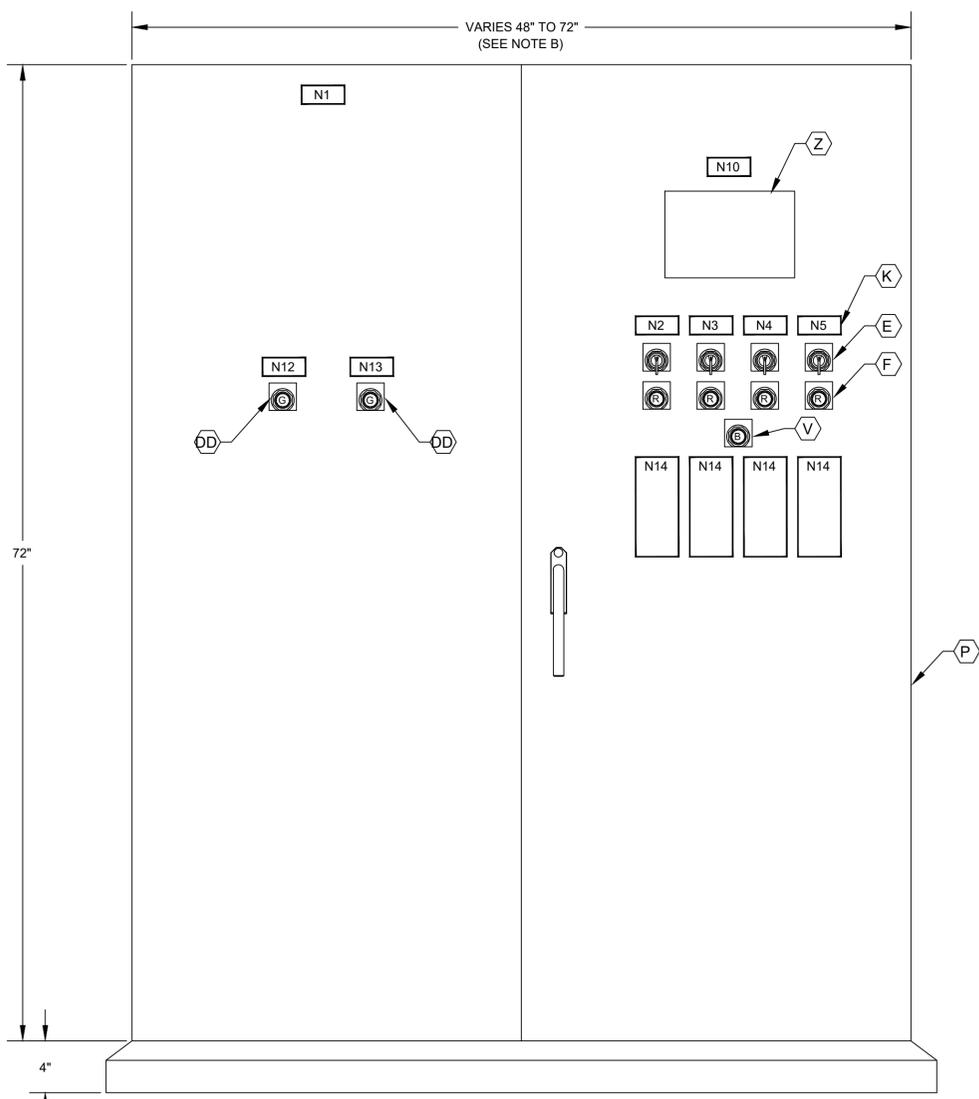
NO.	DATE	REVISIONS	APP.

EQUIPMENT AND DEVICE SCHEDULE		
ITEM	QUANTITY	DESCRIPTION
A	1	SINGLE CHANNEL INTRINSICALLY SAFE RELAY
B	2	ANALOG SIGNAL ISOLATOR
C	4	PUMP PROTECTION MODULE
D	*	NOT USED
E	4	HAND-OFF-AUTO SWITCH, 3 POSITION, HEAVY-DUTY OIL TIGHT WITH 2 SETS OF CONTACT BLOCKS (PUMP CONTROL)
F	4	INDICATING LIGHT, HEAVY DUTY, OILTIGHT, RED, 24 VDC, LED, WITH "RUN" LEGEND
G	*	NOT USED.
H	1	SWITCH FOR CABINET LIGHT, 120V, 20A, SPST
I	2	DUPLEX RECEPTACLE, 120V, 20A, 2 WIRE, GROUNDED, GFCI TYPE
J	1	24" LED STRIP LIGHT 120V SUITABLE FOR ZERO DEGREE OPERATION
K	*	NAMEPLATES, SEE SPECIFICATIONS (SEE NAMEPLATE SCHEDULE)
L	2	PROGRAMMABLE LOGIC CONTROLLER WITH EXPANSION UNIT
M	*	CONTROL RELAY 24VDC RELAY WITH THREE FORM C CONTACTS AND 11 PIN SOCKET BASE
N	-	NOT USED
O	-	NOT USED
P	1	NEMA 12 GASKETED STEEL ENCLOSURES WITHOUT VENTS 72" H X 20" D X WIDTH AS REQUIRED
Q	*	TERMINAL BLOCK
R	1	WIRE DUCT 2" WIDE X 2" DEEP MINIMUM
S	1	GROUND BUS
T	1	COMMUNICATION ETHERNET SWITCH
U	9	CARTRIDGE
V	1	PUSHBUTTON, BLACK WITH RESET LEGEND
W	-	NOT USED
X	*	FUSED TERMINAL BLOCKS
Y	1	POWER SURGE PROTECTOR - CONTROL POWER
Z	1	PROGRAMMING SCREEN (OIT)
AA	*	120VAC SYSTEM FUSES
BB	1	120VAC - 24VDC POWER SUPPLY, 5A
CC	*	NOT USED
DD	2	INDICATING LIGHT, HEAVY DUTY, OILTIGHT, GREEN, 24VDC, LED WITH "BACKUP PLC" & "PRIMARY PLC" LEGEND
EE	2	ANALOG I/O SURGE SUPPRESSOR
FF	-	NOT USED

\* - AS SCHEDULED

- NOTES TO DESIGN ENGINEER:**
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  - B. THE DESIGN ENGINEER SHALL SELECT THE APPROPRIATE CONTROL PANEL WIDTH (SEE DEVICE RATINGS SCHEDULE ON Z0E16).
  - C. THE DESIGN ENGINEER SHALL INCORPORATE ONLY THE NECESSARY STANDARD GUIDELINE DRAWINGS AND DETAILS INTO HIS PROJECT CONTRACT DOCUMENTATION PACKAGE, AND SHALL ADJUST PAGE NUMBERS AND CROSS REFERENCING ACCORDINGLY.
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- NOTES:**
1. NAMEPLATES SHALL BE MOUNTED TO PANELS USING STAINLESS STEEL HARDWARE.
  2. REFER SPECIFICATIONS FOR ALL PANEL COMPONENTS.



**CONTROL CABINET  
FRONT DOOR ELEVATION**

**KGI** TBPE Registration No. F-665  
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 Houston, Texas 77094  
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JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY: \_\_\_\_\_  
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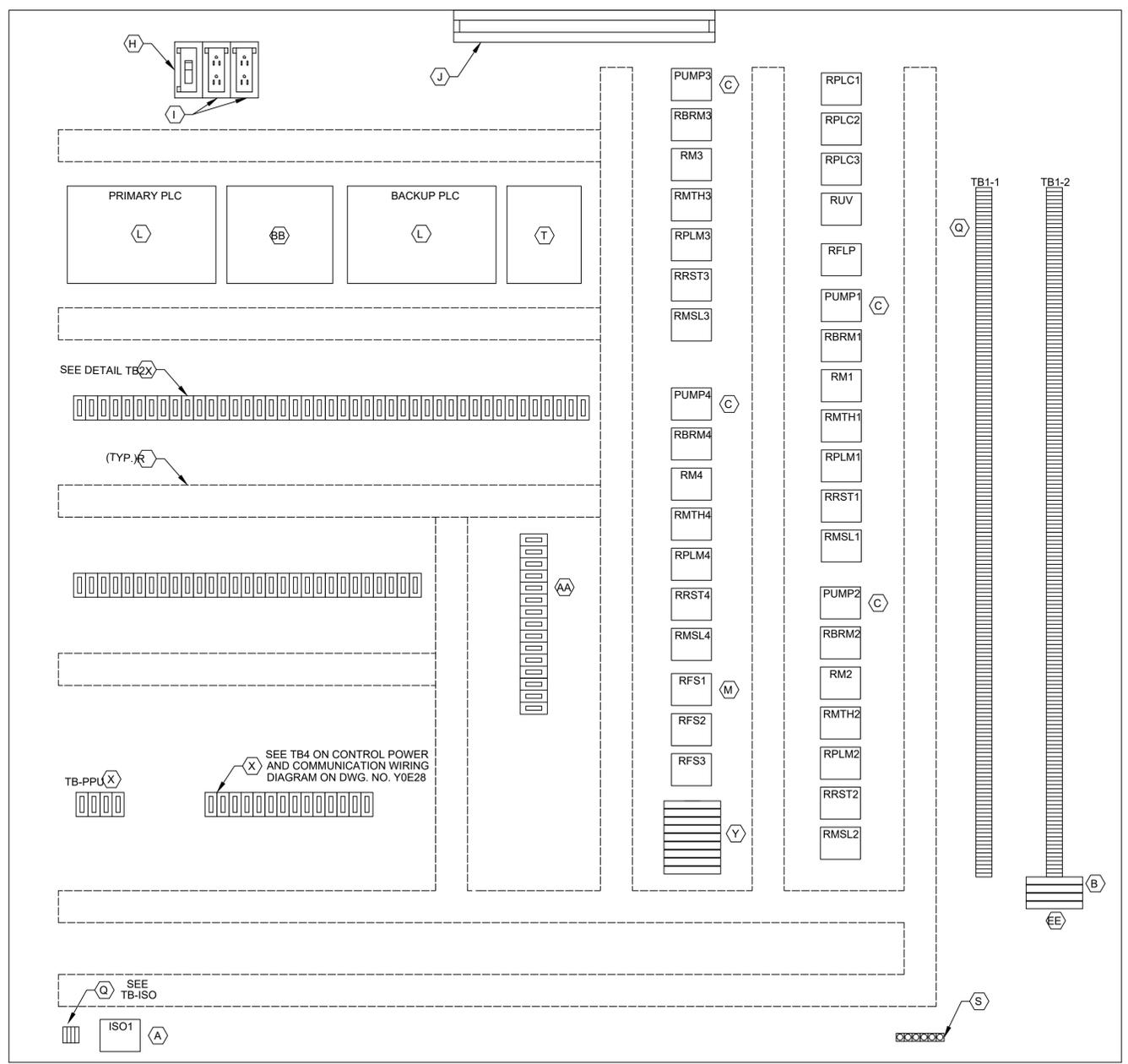
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
LIFT STATION REHABILITATION  
INSTRUMENTATION  
CONTROL CABINET  
EQUIPMENT LAYOUT &  
SCHEDULE**

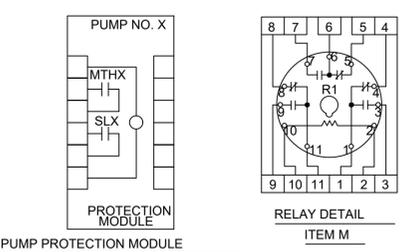
WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 1-1-03	
SHEET NO. OF XX	

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CONTROL PANEL  
ELEVATION

LEGEND	
TAG	DESCRIPTION
RMTH	MOTOR HIGH TEMPERATURE ALARM RELAY
RPLMP	PLC PUMP RUN RELAY
RRST	PUMP RESET AUX RELAY
RPLC	PLC MODE AUX RELAY
RM	PUMP RUN AUX RELAY
RUV	UNDER VOLTAGE RELAY
RBRM	BACKUP SYSTEM RUN RELAY
ISO	INTRINSICALLY SAFE RELAY
RFS	PUMP RUN FLOAT SWITCH RELAY
RMSL	MOTOR SEAL LEAK ALARM RELAY
RFLP	FLOAT LOCKOUT PUMP RELAY



PUMP PROTECTION MODULE  
DETAIL, ITEM C  
NOTE: REPLACE "X" WITH APPROPRIATE PUMP NO.

NOTES TO DESIGN ENGINEER:

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- B. THE DESIGN ENGINEER SHALL SELECT THE APPROPRIATE CONTROL PANEL WIDTH (SEE DEVICE RATINGS SCHEDULE ON Z0E16).
- C. THE DESIGN ENGINEER SHALL INCORPORATE ONLY THE NECESSARY STANDARD GUIDELINE DRAWINGS AND DETAILS INTO HIS PROJECT CONTRACT DOCUMENTATION PACKAGE, AND SHALL ADJUST PAGE NUMBERS AND CROSS REFERENCING ACCORDINGLY.
- D. THE DESIGN ENGINEER SHALL CONSULT THE ENGINEERING DESIGN MANUAL FOR WASTEWATER SUBMERSIBLE LIFT STATIONS AND MASTER CONSTRUCTION SPECIFICATIONS FOR MORE INFORMATION PERTINENT TO THESE STANDARD DESIGN GUIDELINES DRAWINGS.
- E. THE DESIGN ENGINEER SHALL REMOVE THESE NOTES, ALL REFERENCES TO THESE NOTES, AND ANY OTHER EXTRANEOUS INFORMATION FROM THE DESIGN GUIDELINE DRAWINGS. DESIGN ENGINEER SHALL PROVIDE ANY NOTES OR OTHER APPROPRIATE INFORMATION NECESSARY TO COMPLETE THE LIFT STATION DESIGN.

- NOTES:
- SEE SHEET Y0E21 FOR EQUIPMENT SCHEDULE.

L1A	36A	100
L1N	37A	112
SPARE	50	113
3	54	114
3N	52	115
SPARE	52A	117
49	52A	118
50	54A	119
51	L+	120
52	M	121
53	35B	SPARE
54	38B	121
1004	41B	200
1	44B	212
24V-	SPARE	213
24V-	SPARE	214
SPARE	47B	215
2	50B	217
11	53B	218
1001	13B	219
1001A	13AB	220
12	B	221
1003	L+	SPARE
1003A	M	300
34	14B	312
3N	14AB	313
19	14GB	314
20	119	315
102	SPARE	317
103	L+	318
3P1	M	319
109	13	320
110	13A	321
112	13G	SPARE
116	14	400
117	14A	412
120	14G	413
121	1M	414
122	2M	415
123	1L	417
124	3	418
125	30	419
126	32	420
127	34	421
SPARE	37	1500
SPARE	38	1501
SPARE	41	1503
202	41	1504
203	33B	
3P2	45	
209	18B	
210	SPARE	
212	SPARE	
216		
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**KGI** Kalluri Group, Inc. TBPE Registration No. F-665  
16300 Katy Freeway, Suite 172  
Houston, Texas 77094  
Phone: (713)-365-9288  
PROJECT 4285

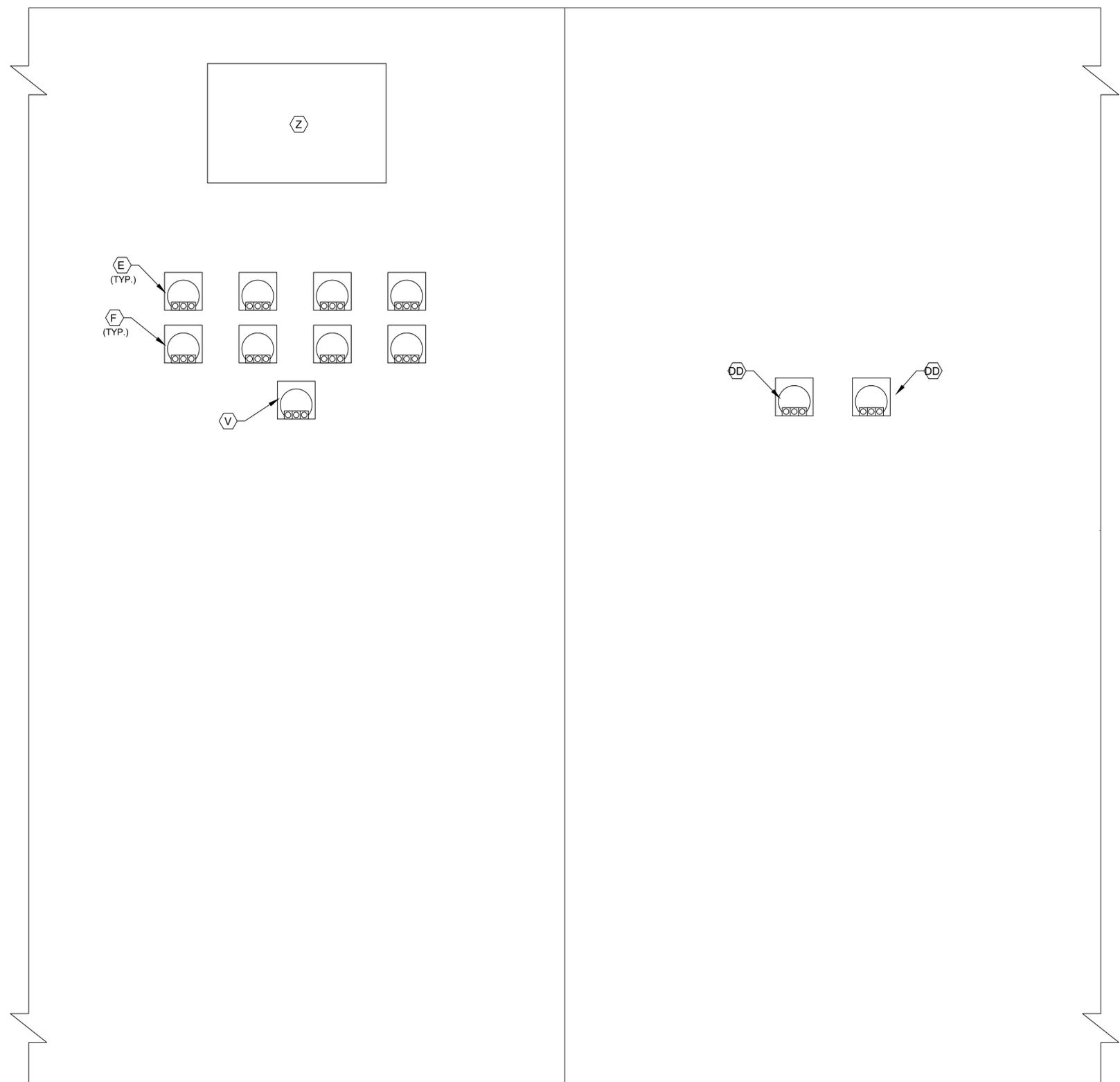
**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

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DESIGNED BY:	
DRAWN BY:	
SURVEYED BY:	
FB NO. XXXXXX	

**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS  
**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
INSTRUMENTATION  
**CONTROL CABINET**  
**EQUIPMENT LAYOUT**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 1-1-04	
SHEET NO. OF XX	

NO.	DATE	REVISIONS	APP.



CONTROL CABINET  
BACK DOOR ELEVATION

**NOTES TO DESIGN ENGINEER:**

- A. THESE LIFT STATION DRAWINGS ARE CONSIDERED TO BE DESIGN GUIDELINES FOR THE CONSTRUCTION OF CITY OF HOUSTON WASTEWATER SUBMERSIBLE LIFT STATIONS. THEIR INTENDED USE IS AS A FRAMEWORK FOR THE CONTRACTED DESIGN ENGINEER IN DEVELOPING SPECIFIC LIFT STATION DESIGNS.  
  
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- D. THE DESIGN ENGINEER SHALL CONSULT THE ENGINEERING DESIGN MANUAL FOR WASTEWATER SUBMERSIBLE LIFT STATIONS AND MASTER CONSTRUCTION SPECIFICATIONS FOR MORE INFORMATION PERTINENT TO THESE STANDARD DESIGN GUIDELINES DRAWINGS.
- E. THE DESIGN ENGINEER SHALL REMOVE THESE NOTES, ALL REFERENCES TO THESE NOTES, AND ANY OTHER EXTRANEIOUS INFORMATION FROM THE DESIGN GUIDELINE DRAWINGS. DESIGN ENGINEER SHALL PROVIDE ANY NOTES OR OTHER APPROPRIATE INFORMATION NECESSARY TO COMPLETE THE LIFT STATION DESIGN.

**NOTES:**

- 1. SEE SHEET Y0E21 FOR EQUIPMENT SCHEDULE.

**KGI**  TBPE Registration No. F-665  
 Kalluri Group, Inc. 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

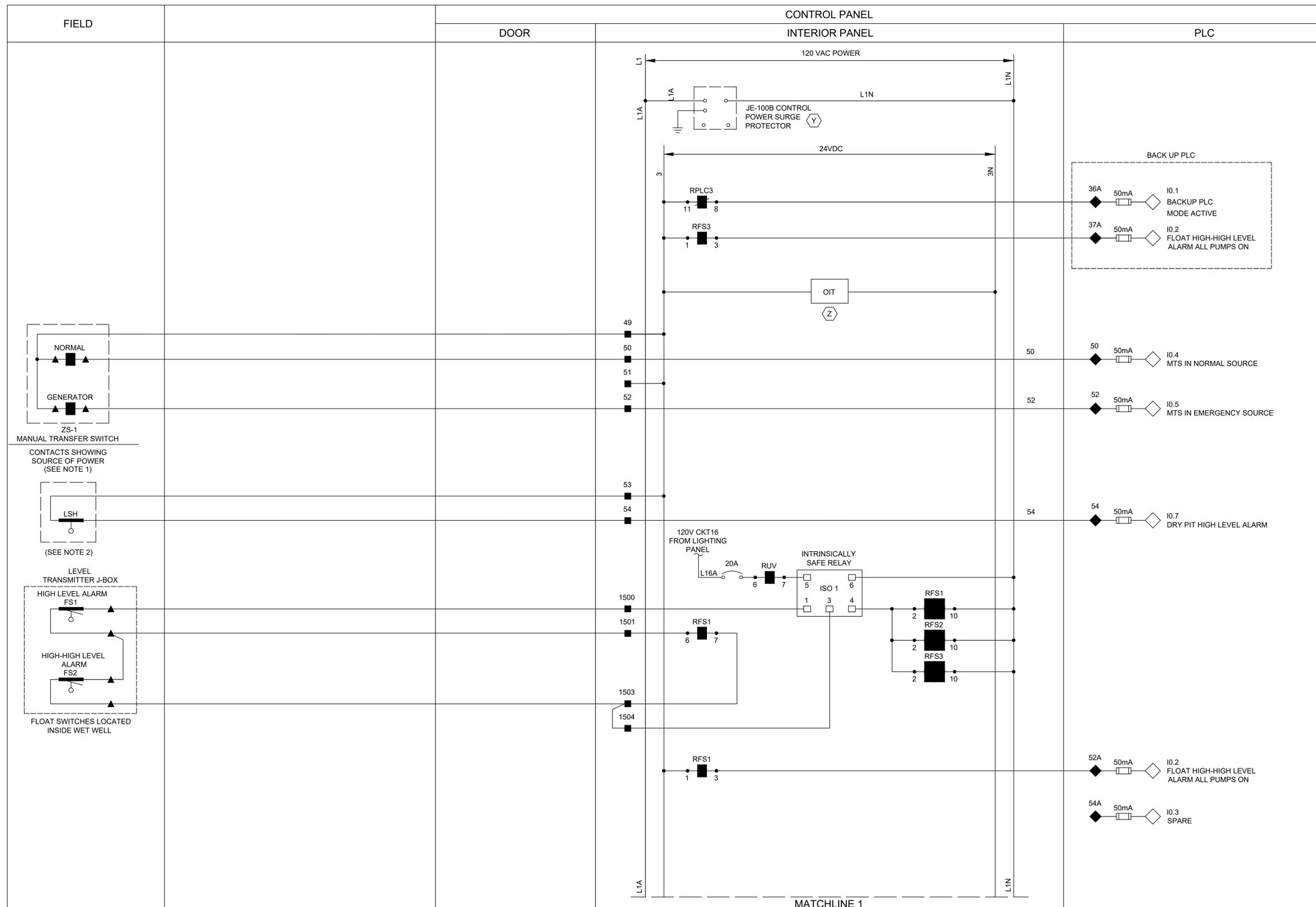
**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

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SURVEYED BY:	
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
LIFT STATION REHABILITATION  
INSTRUMENTATION  
CONTROL CABINET  
BACK DOOR ELEVATION**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 1-1-05	
SHEET NO. OF XX	



- LEGEND**
- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
  - \* DEVICE OR FIELD TERMINAL LOCATED REMOTE
  - DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
  - FIELD TERMINAL LOCATED AT CONTROL PANEL
  - ▲ REMOTE TERMINAL
  - DEVICE TERMINAL NO.
  - ◆ PLC INTERFACE TERMINAL

NO.	DATE	REVISIONS	APP.

- NOTES TO DESIGN ENGINEER:**
- THESE LIFT STATION DRAWINGS ARE CONSIDERED TO BE DESIGN GUIDELINES FOR THE CONSTRUCTION OF CITY OF HOUSTON WASTEWATER SUBMERSIBLE LIFT STATIONS. THEIR INTENDED USE IS AS A FRAMEWORK FOR THE CONTRACTED DESIGN ENGINEER IN DEVELOPING SPECIFIC LIFT STATION DESIGNS.
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  - THE DESIGN ENGINEER SHALL REMOVE THIS SHEET AND REPLACE WITH STANDBY GENERATOR SET SHEET P0612 IF A PERMANENT STANDBY GENERATOR IS PROPOSED FOR THIS LIFT STATION.

- NOTES:**
- PROVIDE MANUAL TRANSFER SWITCH DRY CONTACT.
  - DRY/WET PIT APPLICATION ONLY.
  - ALL FLOAT CONTROL CIRCUIT WIRES COLOR SHALL BE YELLOW.

**KGI** TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

**QUIDDITY**  
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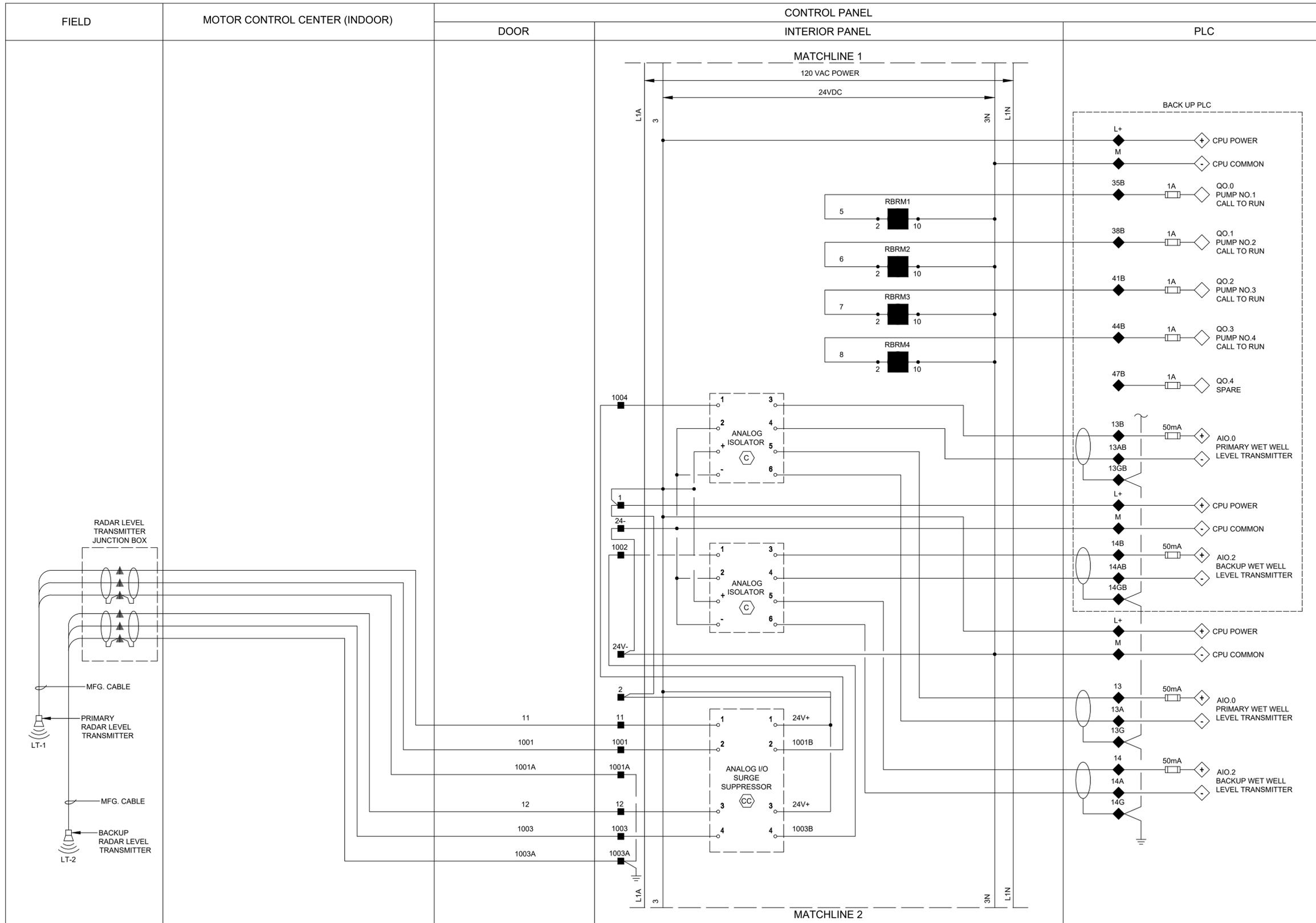
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
LIFT STATION REHABILITATION  
INSTRUMENTATION  
CONTROL PANEL  
CONTROL WIRING  
DIAGRAM - I

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 1-I-06	
SHEET NO. OF XX	



- LEGEND**
- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
  - \* DEVICE OR FIELD TERMINAL LOCATED REMOTE
  - DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
  - FIELD TERMINAL LOCATED AT CONTROL PANEL
  - ▲ REMOTE TERMINAL
  - DEVICE TERMINAL NO.
  - ◆ PLC INTERFACE TERMINAL

NO.	DATE	REVISIONS	APP.

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**KGI** TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

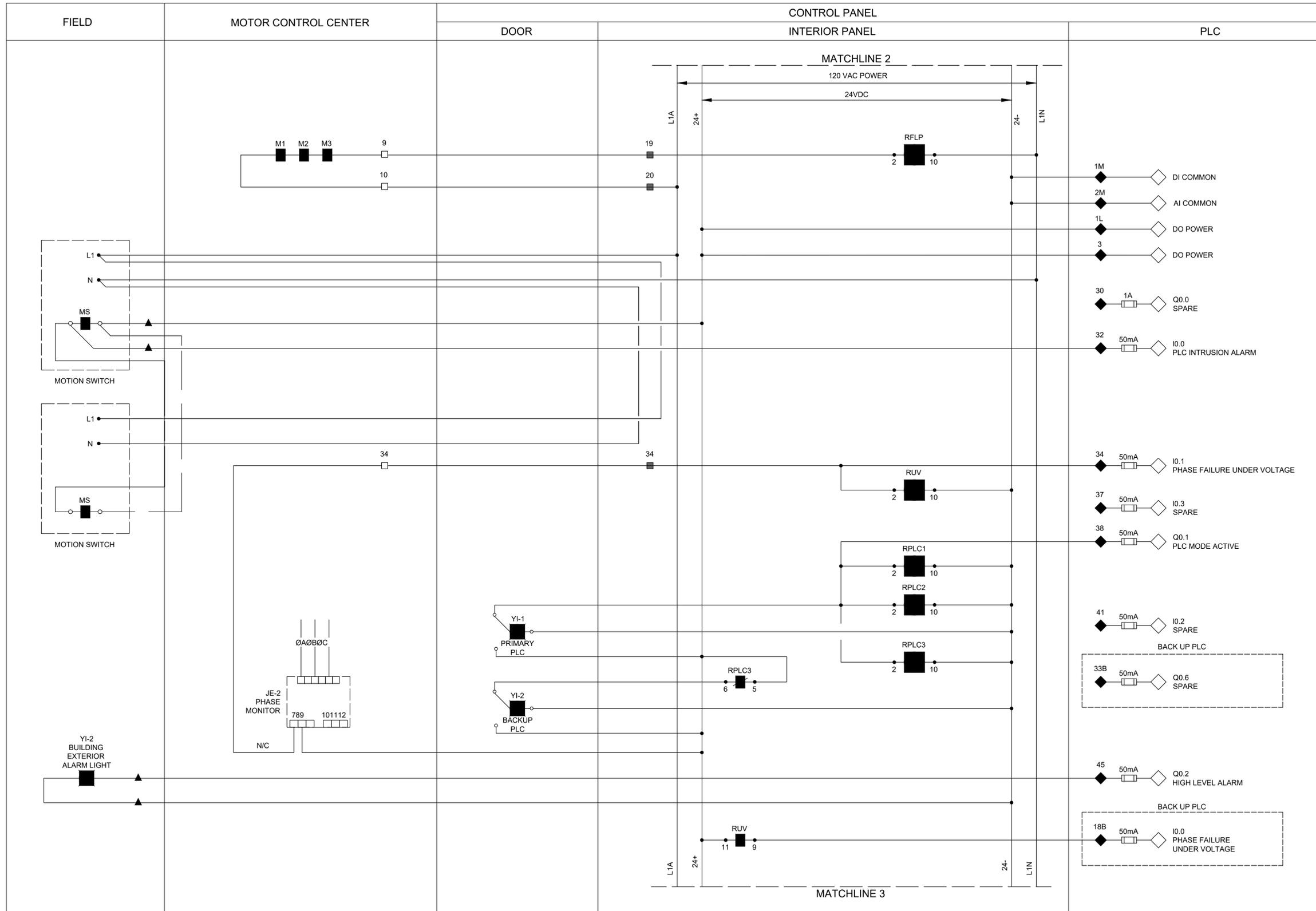
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DATE:	
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DRAWN BY:	
SURVEYED BY:	
FB NO. XXXXXX	

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
 LIFT STATION REHABILITATION  
 INSTRUMENTATION  
 CONTROL PANEL  
 CONTROL WIRING  
 DIAGRAM - II**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 1-1-07	
SHEET NO. OF XX	



**LEGEND**

- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
- \* DEVICE OR FIELD TERMINAL LOCATED REMOTE
- DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
- FIELD TERMINAL LOCATED AT CONTROL PANEL
- ▲ REMOTE TERMINAL
- DEVICE TERMINAL NO.
- ◆ PLC INTERFACE TERMINAL

NO.	DATE	REVISIONS	APP.

**NOTES TO DESIGN ENGINEER:**

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**KGI** TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
**Kalluri Group, Inc.** PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

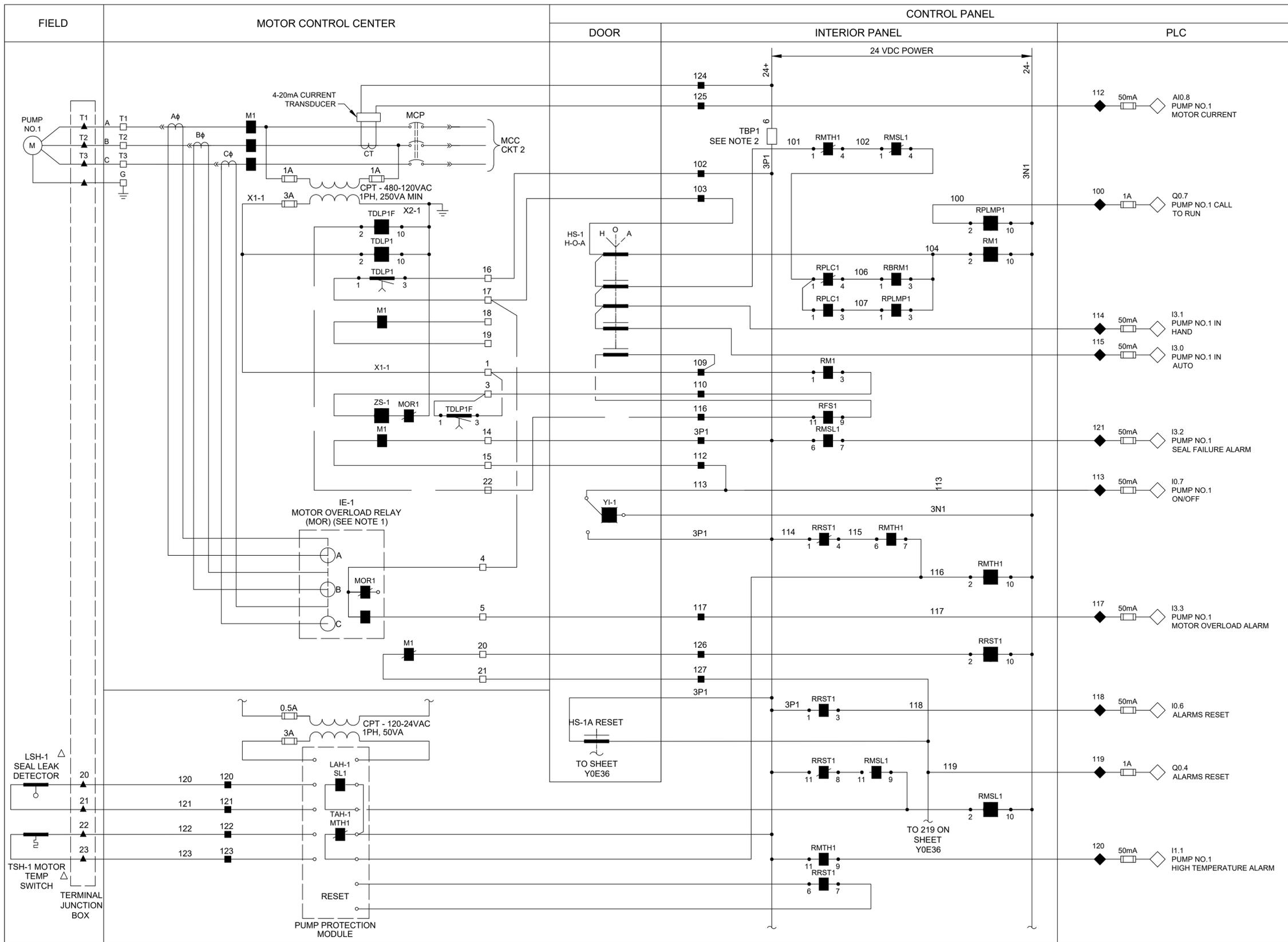
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SURVEYED BY:	
FB NO. XXXXXX	

**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
 LIFT STATION REHABILITATION  
 INSTRUMENTATION  
 CONTROL PANEL  
 CONTROL WIRING  
 DIAGRAM - III**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 1-1-08	
SHEET NO. OF XX	



- LEGEND**
- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
  - \* DEVICE OR FIELD TERMINAL LOCATED REMOTE
  - DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
  - FIELD TERMINAL LOCATED AT CONTROL PANEL
  - ▲ REMOTE TERMINAL
  - DEVICE TERMINAL NO.
  - ◆ PLC INTERFACE TERMINAL

NO.	DATE	REVISIONS	APP.

- NOTES TO DESIGN ENGINEER:**
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- NOTES:**
1. MOTOR OVERLOAD RELAY OUTPUT CONTACT SHOWN NORMALLY CLOSED WHEN RELAY IS DE-ENERGIZED, OPEN WHEN ENERGIZED, AND CLOSED WHEN IN ALARM. VERIFY OPERATION OF RELAY PROVIDED AND ADJUST CONNECTION OF RMOR AUXILIARY RELAYS.
  2. FUSED TERMINAL ON TERMINAL BLOCK TB4 SEE CONTROL POWER AND COMMUNICATION WIRING DIAGRAM DRAWING NO. Y0E28.
  3. ALL FLOAT CONTROL CIRCUIT WIRES COLOR SHALL BE YELLOW.

**KGI** Kalluri Group, Inc.  
 TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

DESIGNED BY: \_\_\_\_\_

DRAWN BY: \_\_\_\_\_

SURVEYED BY: \_\_\_\_\_

FB NO. XXXXXX

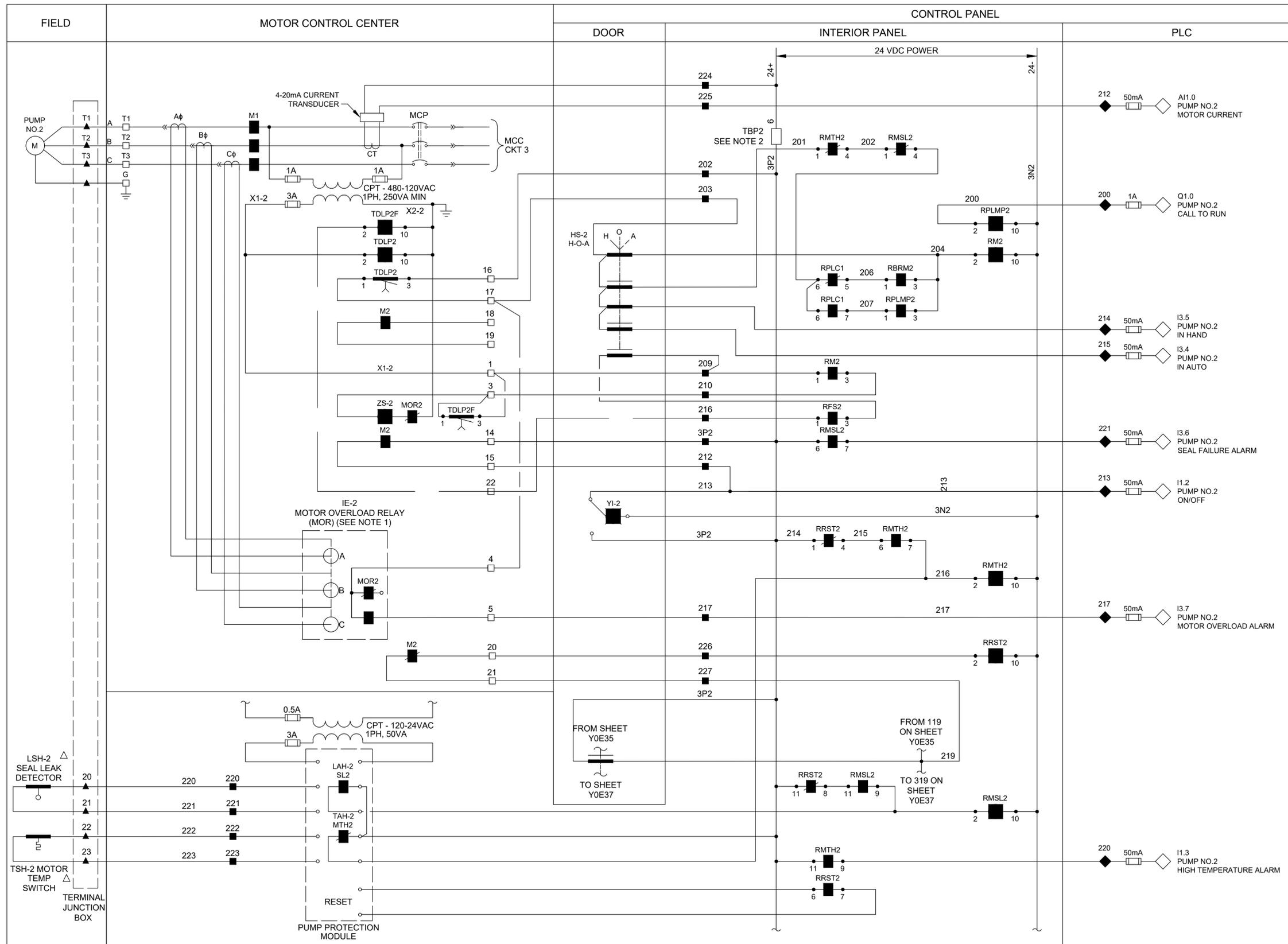
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
 LIFT STATION REHABILITATION  
 INSTRUMENTATION

**PUMP 1 CONTROL**  
 WIRING DIAGRAM

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 1-1-09	
SHEET NO. OF XX	



- LEGEND**
- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
  - \* DEVICE OR FIELD TERMINAL LOCATED REMOTE
  - DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
  - FIELD TERMINAL LOCATED AT CONTROL PANEL
  - ▲ REMOTE TERMINAL
  - DEVICE TERMINAL NO.
  - ◆ PLC INTERFACE TERMINAL

NO.	DATE	REVISIONS	APP.

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  - FUSED TERMINAL ON TERMINAL BLOCK TB4 SEE CONTROL POWER AND COMMUNICATION WIRING DIAGRAM DRAWING NO. Y0E28.
  - ALL FLOAT CONTROL CIRCUIT WIRES COLOR SHALL BE YELLOW.

**KGI** Kalluri Group, Inc. TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

**QUIDDITY**  
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JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

DESIGNED BY: \_\_\_\_\_

DRAWN BY: \_\_\_\_\_

SURVEYED BY: \_\_\_\_\_

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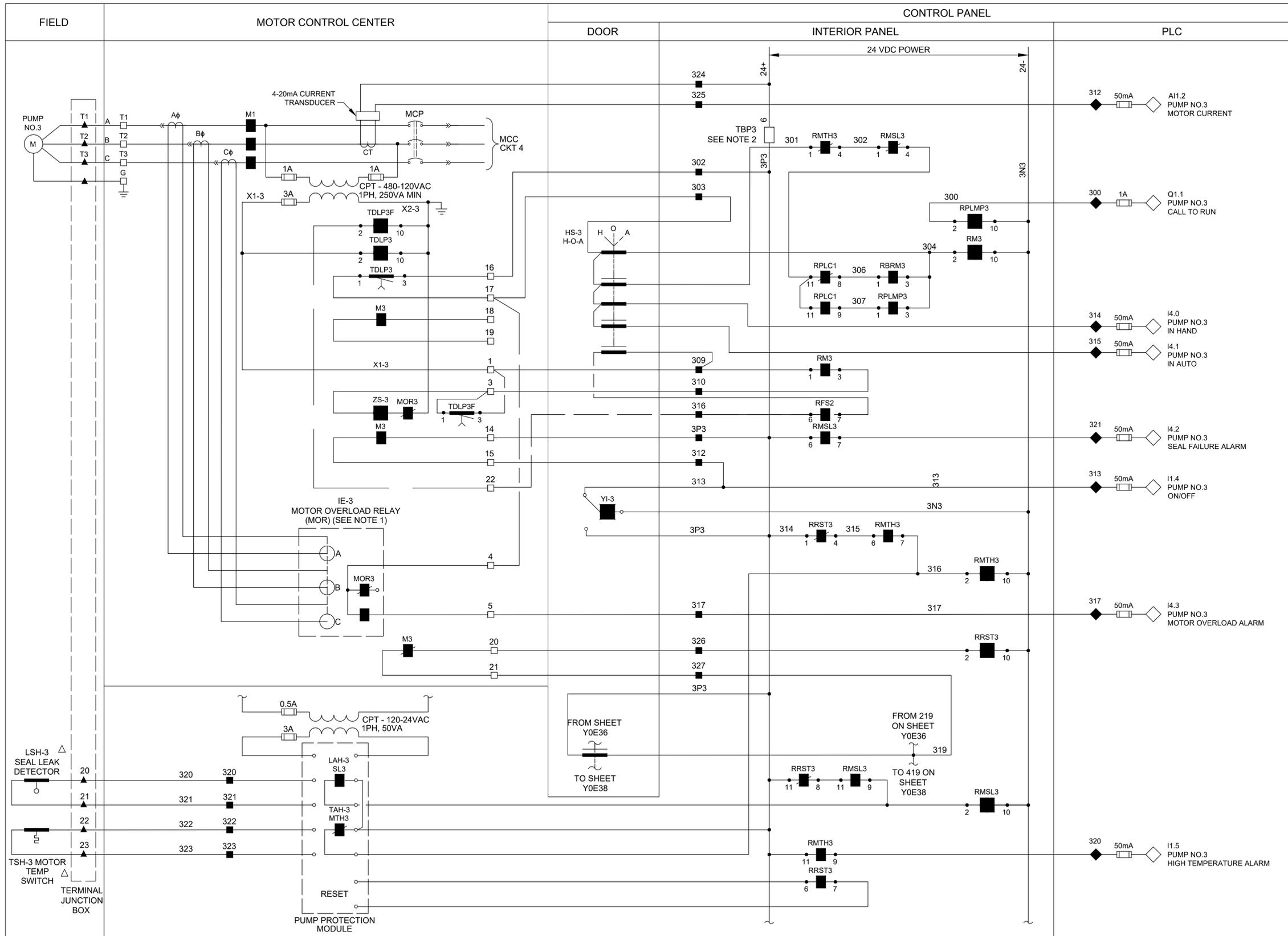
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
 LIFT STATION REHABILITATION  
 INSTRUMENTATION

**PUMP 2 CONTROL**  
 WIRING DIAGRAM

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 1-1-10	
SHEET NO. OF XX	



- LEGEND**
- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
  - \* DEVICE OR FIELD TERMINAL LOCATED REMOTE
  - DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
  - FIELD TERMINAL LOCATED AT CONTROL PANEL
  - ▲ REMOTE TERMINAL
  - DEVICE TERMINAL NO.
  - ◆ PLC INTERFACE TERMINAL

NO.	DATE	REVISIONS	APP.

- NOTES TO DESIGN ENGINEER:**
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  - IT IS THE RESPONSIBILITY OF THE CONTRACTED DESIGN ENGINEER TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION HEREIN CONTAINED AND TO ADJUST ACCORDING TO PROJECT SPECIFIC REQUIREMENTS.
  - THE DESIGN ENGINEER SHALL DELETE TERMINAL DESIGNATION AND INTERCONNECTING WIRING BETWEEN PANELS WHEN BOTH PANELS ARE HOUSED IN A COMMON, FACTORY PRE-WIRED ENCLOSURE.
  - THE DESIGN ENGINEER SHALL INCORPORATE ONLY THE NECESSARY STANDARD GUIDELINE DRAWINGS AND DETAILS INTO HIS PROJECT CONTRACT DOCUMENTATION PACKAGE, AND SHALL ADJUST PAGE NUMBERS AND CROSS REFERENCING ACCORDINGLY.
  - THE DESIGN ENGINEER SHALL CONSULT THE ENGINEERING DESIGN MANUAL FOR WASTEWATER SUBMERSIBLE LIFT STATIONS AND MASTER CONSTRUCTION SPECIFICATIONS FOR MORE INFORMATION PERTINENT TO THESE STANDARD DESIGN GUIDELINES DRAWINGS.
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- NOTES:**
- MOTOR OVERLOAD RELAY OUTPUT CONTACT SHOWN NORMALLY CLOSED WHEN RELAY IS DE-ENERGIZED, OPEN WHEN ENERGIZED, AND CLOSED WHEN IN ALARM. VERIFY OPERATION OF RELAY PROVIDED AND ADJUST CONNECTION OF RMOR AUXILIARY RELAYS.
  - FUSED TERMINAL ON TERMINAL BLOCK TB4 SEE CONTROL POWER AND COMMUNICATION WIRING DIAGRAM DRAWING NO. Y0E28.
  - ALL FLOAT CONTROL CIRCUIT WIRES COLOR SHALL BE YELLOW.

**KGI** Kalluri Group, Inc. TBPE Registration No. F-665  
16300 Katy Freeway, Suite 172  
Houston, Texas 77094  
Phone: (713)-365-9288  
PROJECT 4285

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY: \_\_\_\_\_  
DATE: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
SURVEYED BY: \_\_\_\_\_  
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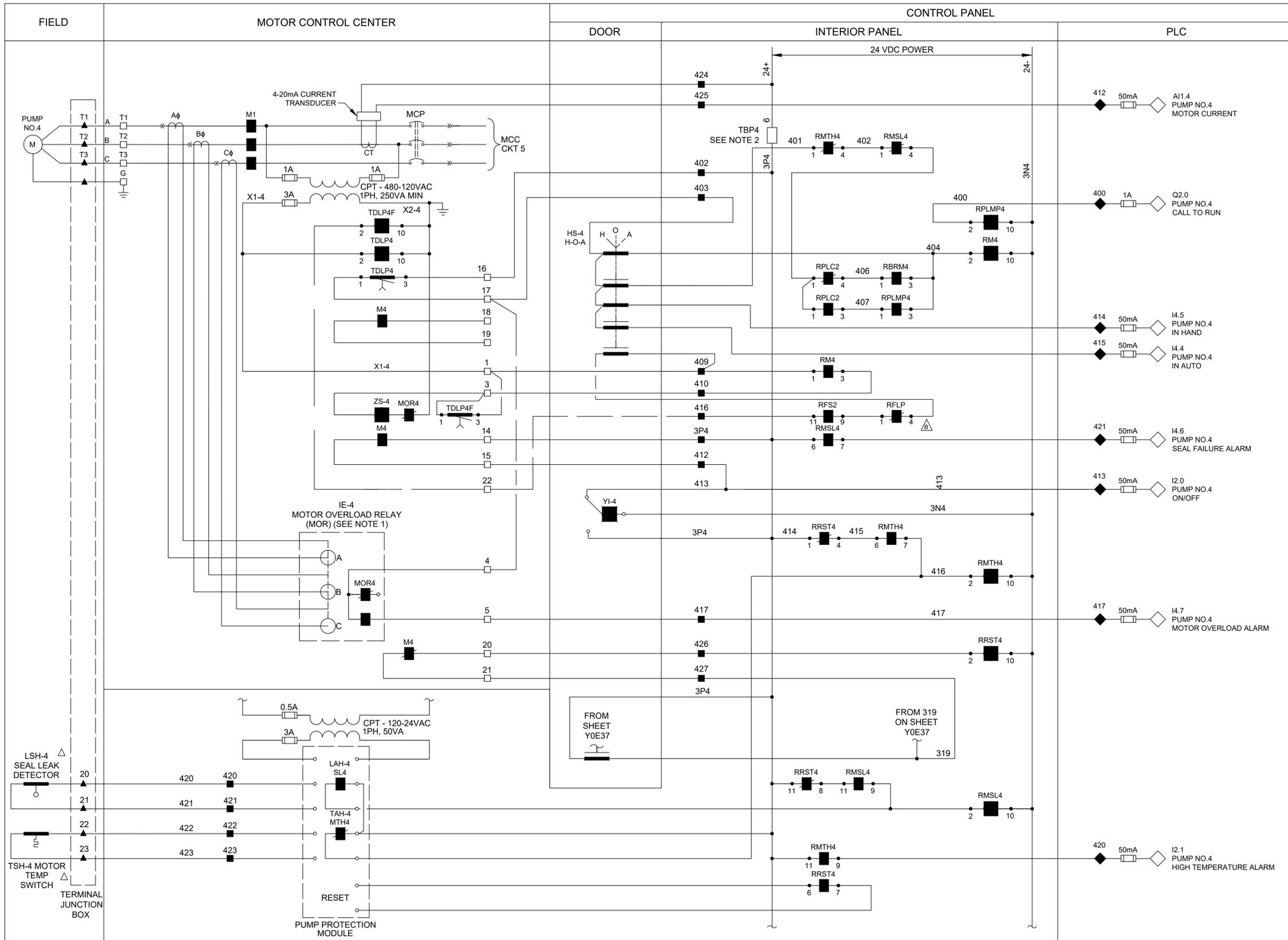
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JANUARY 19, 2026  
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
LIFT STATION REHABILITATION  
INSTRUMENTATION**

**PUMP 3 CONTROL  
WIRING DIAGRAM**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 1-1-11	
SHEET NO. OF XX	



- LEGEND**
- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
  - \* DEVICE OR FIELD TERMINAL LOCATED REMOTE
  - DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
  - FIELD TERMINAL LOCATED AT CONTROL PANEL
  - ▲ REMOTE TERMINAL
  - DEVICE TERMINAL NO.
  - ◆ PLC INTERFACE TERMINAL

NO.	DATE	REVISIONS	APP.

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**KGI** Kalluri Group, Inc. TBPE Registration No. F-665  
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Phone: (713)-365-9288  
PROJECT 4285

**QUIDDITY**  
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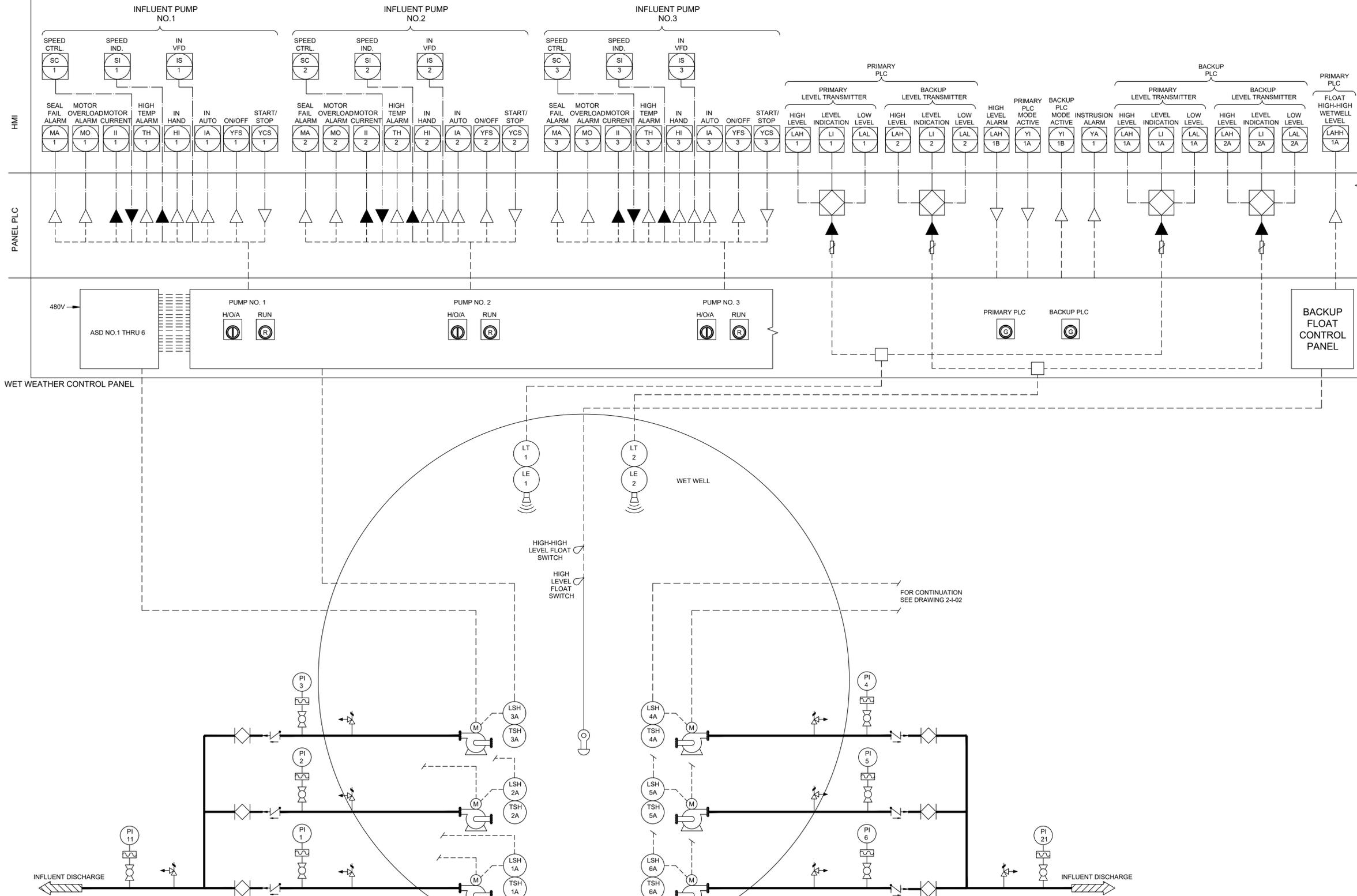
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
LIFT STATION REHABILITATION  
INSTRUMENTATION

**PUMP 4 CONTROL**  
WIRING DIAGRAM

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 1-1-12	
SHEET NO. OF XX	



NO.	DATE	REVISIONS	APP.

**NOTICE:**  
 FOR YOUR SAFETY, YOU ARE REQUIRED BY TEXAS LAW TO CALL 811 AT LEAST 48 HOURS BEFORE YOU DIG SO THAT UNDERGROUND LINES CAN BE MARKED. THIS SIGNATURE DOES NOT FULFILL YOUR OBLIGATION TO CALL 811

VERIFICATION OF PRIVATE UTILITY LINES	
Date:	
<small>CenterPoint Energy natural gas utilities shown. (Site services lines are not shown). This signature not to be used for conflict verification. Signature valid for six months.</small>	
Date:	
<small>CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY. (This signature verifies existing underground facilities - not to be used for conflict verification.) Signature valid for six months.</small>	
Date:	
<small>Approved by AT&amp;T Texas / SWBT underground conduit facilities only. Signature valid for one year.</small>	

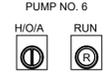
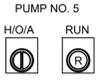
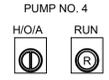
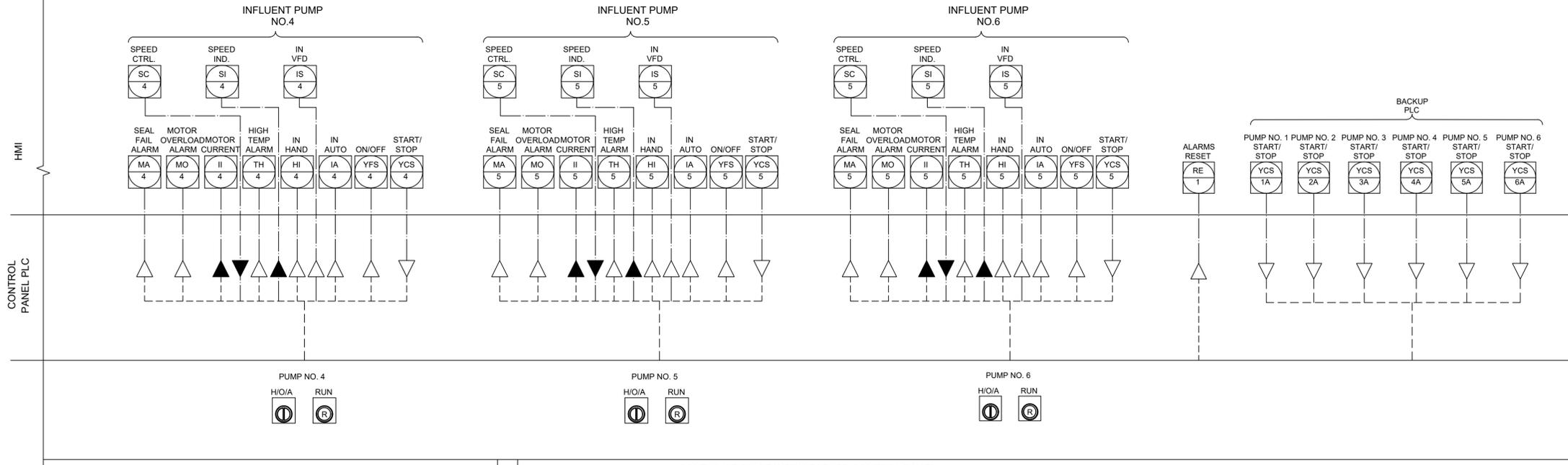
**KGI**  **Kalluri Group, Inc.**  
 TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS  
**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
 INSTRUMENTATION  
**WET WEATHER STATION**  
**P&ID SHEET 1**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-1-01	
SHEET NO. OF XX	



CONTINUATION OF WET WEATHER CONTROL PANEL

CONTINUATION FROM DRAWING 2-I-1

NO.	DATE	REVISIONS	APP.

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CenterPoint Energy natural gas utilities shown.  
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 Signature Valid for six months.

Date: \_\_\_\_\_

CenterPoint Energy / UNDERGROUND Electrical Facilities Verification ONLY.  
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Date: \_\_\_\_\_

Approved by AT&T Texas / SWBT underground conduit facilities only.  
Signature valid for one year.

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 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

DESIGNED BY: \_\_\_\_\_

DRAWN BY: \_\_\_\_\_

SURVEYED BY: \_\_\_\_\_

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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
 INSTRUMENTATION

**WET WEATHER STATION**  
**P&ID SHEET 2**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-I-02	
SHEET NO. OF XX	

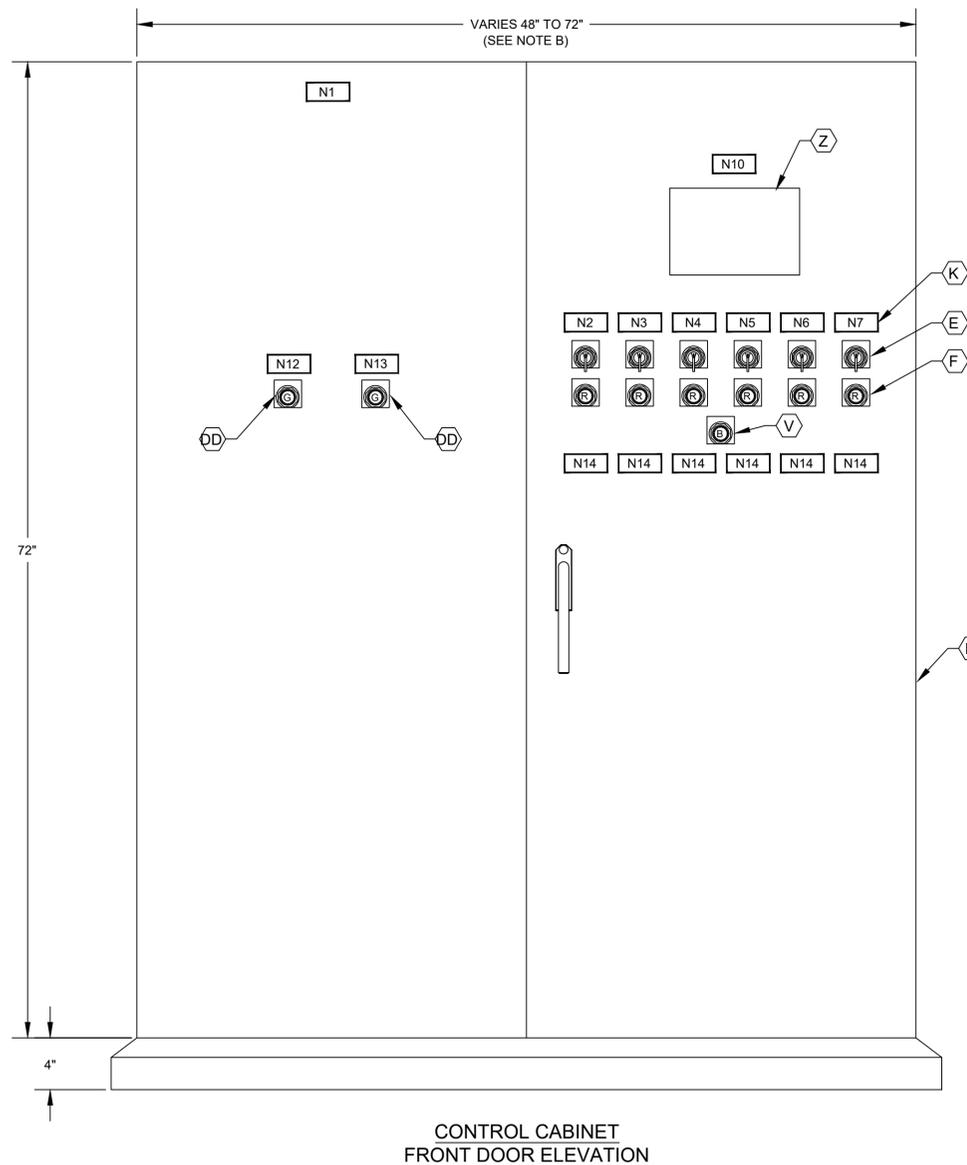
NO.	DATE	REVISIONS	APP.

EQUIPMENT AND DEVICE SCHEDULE		
ITEM	QUANTITY	DESCRIPTION
A	1	SINGLE CHANNEL INTRINSICALLY SAFE RELAY
B	2	ANALOG SIGNAL ISOLATOR
C	6	PUMP PROTECTION MODULE
D	*	NOT USED
E	6	HAND-OFF-AUTO SWITCH, 3 POSITION, HEAVY-DUTY OIL TIGHT WITH 2 SETS OF CONTACT BLOCKS (PUMP CONTROL)
F	6	INDICATING LIGHT, HEAVY DUTY, OILTIGHT, RED, 24 VDC, LED, WITH "RUN" LEGEND
G	*	NOT USED.
H	1	SWITCH FOR CABINET LIGHT, 120V, 20A, SPST
I	2	DUPLEX RECEPTACLE, 120V, 20A, 2 WIRE, GROUNDED, GFCI TYPE
J	1	24" LED STRIP LIGHT 120V SUITABLE FOR ZERO DEGREE OPERATION.
K	*	NAMEPLATES, SEE SPECIFICATIONS (SEE NAMEPLATE SCHEDULE)
L	2	PROGRAMMABLE LOGIC CONTROLLER WITH EXPANSION UNIT
M	*	CONTROL RELAY 24VDC RELAY WITH THREE FORM C CONTACTS AND 11 PIN SOCKET BASE
N	-	NOT USED
O	-	NOT USED
P	1	NEMA 12 GASKETED STEEL ENCLOSURES WITHOUT VENTS 72" H X 20" D X WIDTH AS REQUIRED
Q	*	TERMINAL BLOCK
R	1	WIRE DUCT 2" WIDE X 2" DEEP MINIMUM
S	1	GROUND BUS
T	1	COMMUNICATION ETHERNET SWITCH
U	9	CARTRIDGE
V	1	PUSHBUTTON, BLACK WITH RESET LEGEND
W	-	NOT USED
X	*	FUSED TERMINAL BLOCKS
Y	1	POWER SURGE PROTECTOR - CONTROL POWER
Z	1	PROGRAMMING SCREEN (OIT)
AA	*	120VAC SYSTEM FUSES
BB	1	120VAC - 24VDC POWER SUPPLY, 5A
CC	*	NOT USED
DD	2	INDICATING LIGHT, HEAVY DUTY, OILTIGHT, GREEN, 24VDC, LED WITH "BACKUP PLC" & "PRIMARY PLC" LEGEND
EE	2	ANALOG I/O SURGE SUPPRESSOR
FF	-	NOT USED

\* - AS SCHEDULED

**NAMEPLATE SCHEDULE**

DESIGNATION	ENGRAVED	DESIGNATION	ENGRAVED
N1	PUMP STATION DESIGNATION	N8	NOT USED.
N2	PUMP NO. 1	N9	NOT USED.
N3	PUMP NO. 2	N10	PROGRAMMING SCREEN
N4	PUMP NO. 3	N11	NOT USED.
N5	PUMP NO. 4	N12	PRIMARY PLC
N6	PUMP NO. 5	N13	BACKUP PLC
N7	PUMP NO. 6	N14	MOTOR DATA HORSEPOWER (OUTPUT) ----- RPM AT FULL LOAD ----- TIME RATING ----- FREQUENCY ----- NUMBER OF PHASES ----- MODEL NUMBER ----- RATED VOLTAGE ----- SERVICE FACTOR ----- FULL LOAD AMPS ----- INSULATION CLAS ----- NEMA DESIGN LETTER ----- TEMPERATURE RISE ----- NEMA FRAME SIZE ----- DATE OF MANUFACTURE ----- THERMO PROTECTION (IF REQUIRED) -- MOISTURE PROTECTION (IF REQUIRED)-



**CONTROL CABINET  
FRONT DOOR ELEVATION**

**NOTES TO DESIGN ENGINEER:**

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**NOTES:**

- 1. NAMEPLATES SHALL BE MOUNTED TO PANELS USING STAINLESS STEEL HARDWARE.
- 2. REFER SPECIFICATIONS FOR ALL PANEL COMPONENTS.

**KGI** TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

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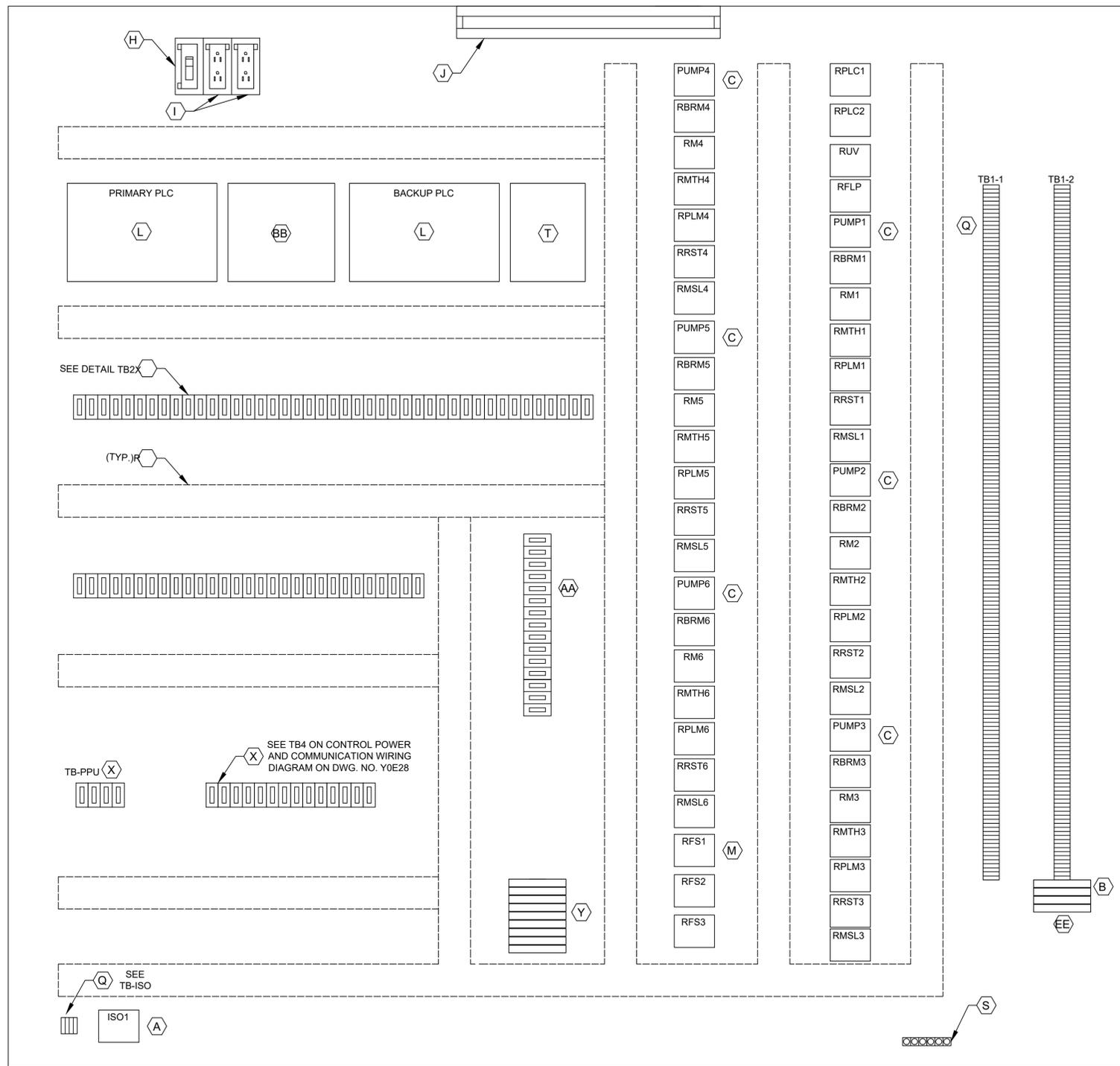
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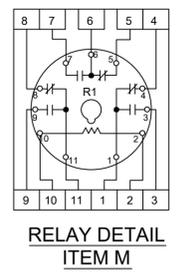
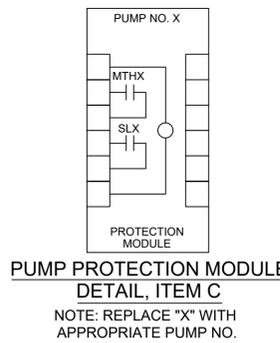
**SCOTT STREET NO. 1  
 LIFT STATION REHABILITATION  
 INSTRUMENTATION  
 CONTROL CABINET  
 EQUIPMENT LAYOUT &  
 SCHEDULE**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-1-03	
SHEET NO. OF XX	



CONTROL PANEL ELEVATION

LEGEND	
TAG	DESCRIPTION
RMTH	MOTOR HIGH TEMPERATURE ALARM RELAY
RPLMP	PLC PUMP RUN RELAY
RRST	PUMP RESET AUX RELAY
RPLC	PLC MODE AUX RELAY
RM	PUMP RUN AUX RELAY
RUV	UNDER VOLTAGE RELAY
RBRM	BACKUP SYSTEM RUN RELAY
ISO	INTRINSICALLY SAFE RELAY
RFS	PUMP RUN FLOAT SWITCH RELAY
RMSL	MOTOR SEAL LEAK ALARM RELAY
RFLP	FLOAT LOCKOUT PUMP RELAY



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NOTES:

- 1. SEE SHEET Y0E21 FOR EQUIPMENT SCHEDULE.

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DETAIL TB-ISO

DETAIL TB1-1

DETAIL TB1-2

DETAIL TB1-2

DETAIL TB2

DETAIL TB2

DETAIL TB2

NO.	DATE	REVISIONS	APP.

**KGI** **Kalluri Group, Inc.**  
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FB NO. XXXXXX

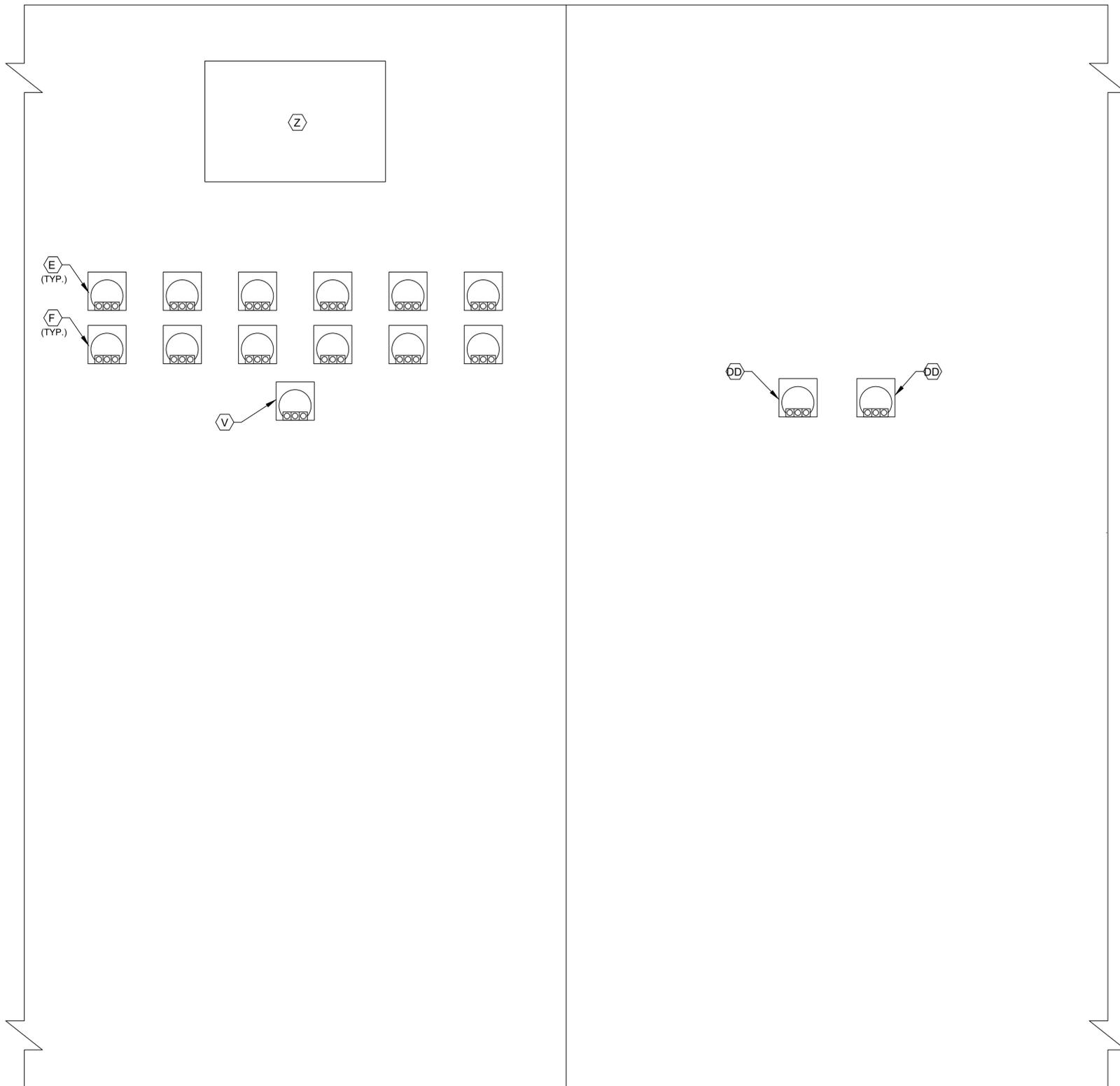
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
 INSTRUMENTATION  
**CONTROL CABINET**  
**EQUIPMENT LAYOUT**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-1-04	
SHEET NO. OF XX	

NO.	DATE	REVISIONS	APP.



**CONTROL CABINET  
BACK DOOR ELEVATION**

**NOTES TO DESIGN ENGINEER:**

- A. THESE LIFT STATION DRAWINGS ARE CONSIDERED TO BE DESIGN GUIDELINES FOR THE CONSTRUCTION OF CITY OF HOUSTON WASTEWATER SUBMERSIBLE LIFT STATIONS. THEIR INTENDED USE IS AS A FRAMEWORK FOR THE CONTRACTED DESIGN ENGINEER IN DEVELOPING SPECIFIC LIFT STATION DESIGNS.
- IT IS THE RESPONSIBILITY OF THE CONTRACTED DESIGN ENGINEER TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION HEREIN CONTAINED AND TO ADJUST ACCORDING TO PROJECT SPECIFIC REQUIREMENTS.
- B. THE DESIGN ENGINEER SHALL SELECT THE APPROPRIATE CONTROL PANEL WIDTH (SEE DEVICE RATINGS SCHEDULE ON Z0E17).
- C. THE DESIGN ENGINEER SHALL INCORPORATE ONLY THE NECESSARY STANDARD GUIDELINE DRAWINGS AND DETAILS INTO HIS PROJECT CONTRACT DOCUMENTATION PACKAGE, AND SHALL ADJUST PAGE NUMBERS AND CROSS REFERENCING ACCORDINGLY.
- D. THE DESIGN ENGINEER SHALL CONSULT THE ENGINEERING DESIGN MANUAL FOR WASTEWATER SUBMERSIBLE LIFT STATIONS AND MASTER CONSTRUCTION SPECIFICATIONS FOR MORE INSTRUCTIONS AND INFORMATION PERTINENT TO THESE STANDARD DESIGN GUIDELINES DRAWINGS.
- E. THE DESIGN ENGINEER SHALL REMOVE THESE NOTES, ALL REFERENCES TO THESE NOTES, AND ANY OTHER EXTRANEOUS INFORMATION FROM THE DESIGN GUIDELINE DRAWINGS. DESIGN ENGINEER SHALL PROVIDE ANY NOTES OR OTHER APPROPRIATE INFORMATION NECESSARY TO COMPLETE THE LIFT STATION DESIGN.

**NOTES:**

- 1. SEE SHEET Y0E21 FOR EQUIPMENT SCHEDULE.

**KGI**  TBPE Registration No. F-665  
 Kalluri Group, Inc. 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

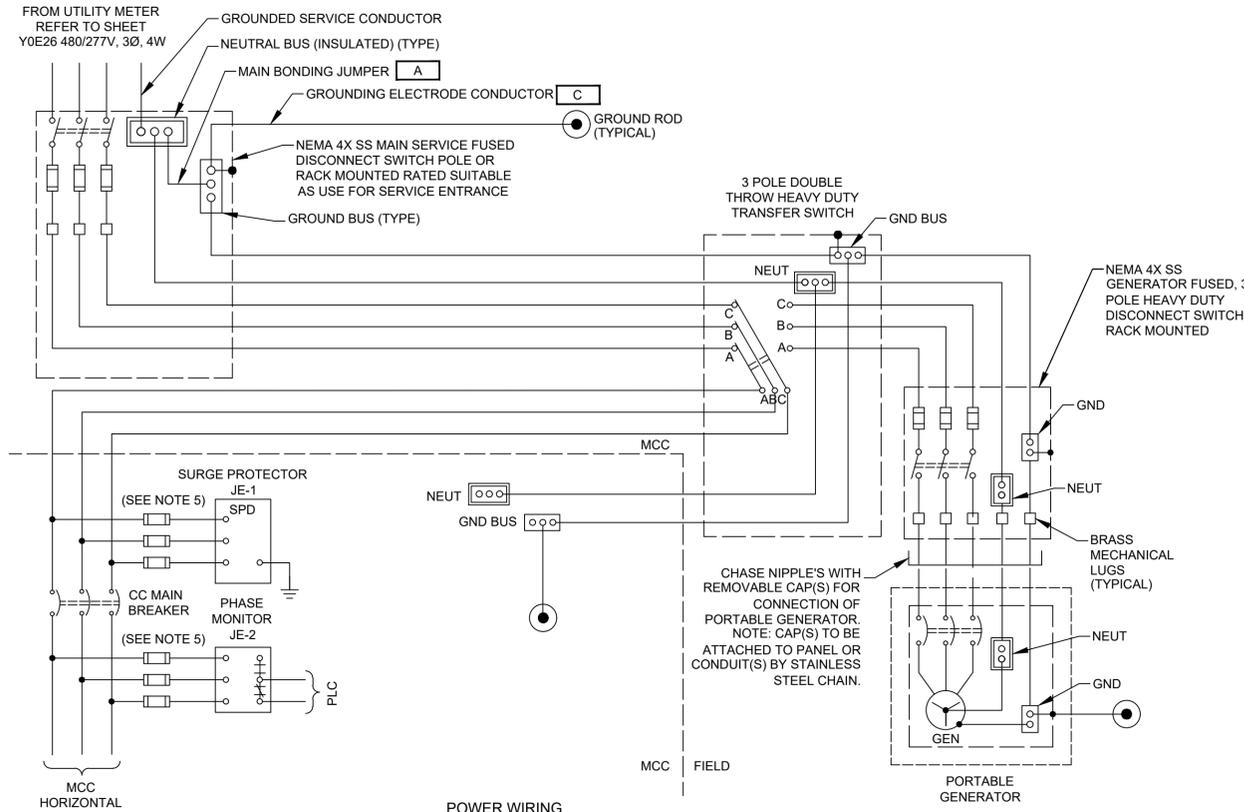
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

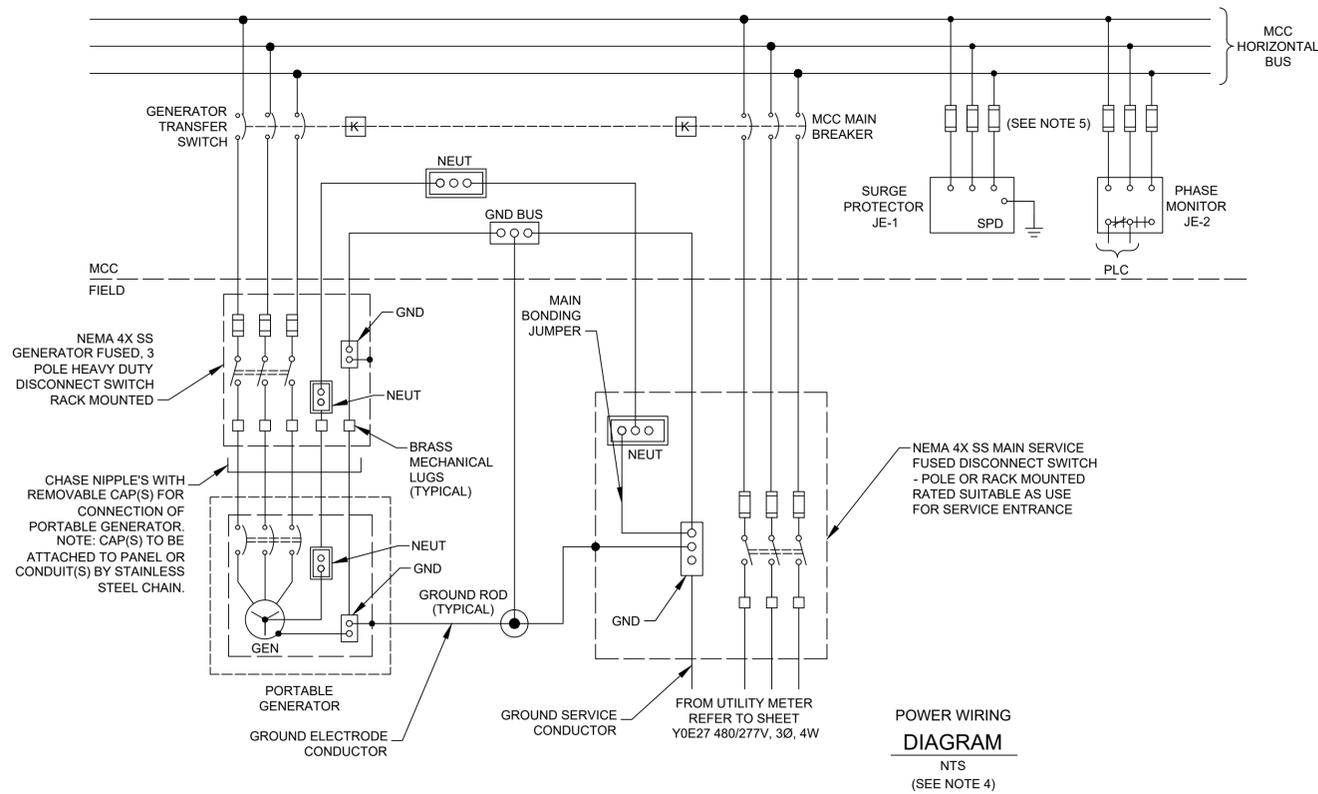
**SCOTT STREET NO. 1  
LIFT STATION REHABILITATION  
INSTRUMENTATION**

**CONTROL CABINET  
BACK DOOR ELEVATION**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-1-05	
SHEET NO. OF XX	



POWER WIRING  
DIAGRAM  
NTS  
(SEE NOTE 3)



POWER WIRING  
DIAGRAM  
NTS  
(SEE NOTE 4)

NOTES TO DESIGN ENGINEER:

- THESE LIFT STATION DRAWINGS ARE CONSIDERED TO BE DESIGN GUIDELINES FOR THE CONSTRUCTION OF CITY OF HOUSTON WASTEWATER SUBMERSIBLE LIFT STATIONS. THEIR INTENDED USE IS AS A FRAMEWORK FOR THE CONTRACTED DESIGN ENGINEER IN DEVELOPING SPECIFIC LIFT STATION DESIGNS.
- IT IS THE RESPONSIBILITY OF THE CONTRACTED DESIGN ENGINEER TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION HEREIN CONTAINED AND TO ADJUST ACCORDING TO PROJECT SPECIFIC REQUIREMENTS.
- UNLESS OTHERWISE INDICATED, ALL DEVICES WITHOUT FURTHER DESIGNATION ARE LOCATED AT THE MOTOR CONTROL CENTER (MCC).
- THE DESIGN ENGINEER SHALL INCORPORATE ONLY THE NECESSARY STANDARD GUIDELINE DRAWINGS AND DETAILS INTO HIS PROJECT CONTRACT DOCUMENTATION PACKAGE, AND SHALL ADJUST PAGE NUMBERS AND CROSS REFERENCING ACCORDINGLY.
- THE DESIGN ENGINEER SHALL CONSULT THE ENGINEERING DESIGN MANUAL FOR WASTEWATER SUBMERSIBLE LIFT STATIONS AND MASTER CONSTRUCTION SPECIFICATIONS FOR MORE INFORMATION PERTINENT TO THESE STANDARD DESIGN GUIDELINES DRAWINGS.
- THE DESIGN ENGINEER SHALL REMOVE THESE NOTES, ALL REFERENCES TO THESE NOTES, AND ANY OTHER EXTRANEIOUS INFORMATION FROM THE DESIGN GUIDELINE DRAWINGS. DESIGN ENGINEER SHALL PROVIDE ANY NOTES OR OTHER APPROPRIATE INFORMATION NECESSARY TO COMPLETE THE LIFT STATION DESIGN.
- THE DESIGN ENGINEER SHALL REMOVE THIS SHEET AND REPLACE WITH STANDBY GENERATOR SET SHEET P0G05 OR P0G06 IF A PERMANENT STANDBY GENERATOR IS PROPOSED FOR THIS LIFT STATION.

NOTES:

- UNLESS OTHERWISE INDICATED, ALL DEVICES WITHOUT FURTHER DESIGNATION ARE LOCATED AT THE MOTOR CONTROL CENTER (MCC).
- REFER TO SPEC SECTION 16120 LOW-VOLTAGE WIRES AND CABLES FOR CONDUCTOR COLOR CODE.
- REFER TO Y0E26.
- REFER TO Y0E27.
- PROVIDE FUSE SIZE ACCORDING TO MANUFACTURER'S REQUIREMENTS.

NO.	DATE	REVISIONS	APP.

**KGI**  TBPE Registration No. F-665  
 Kalluri Group, Inc. 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

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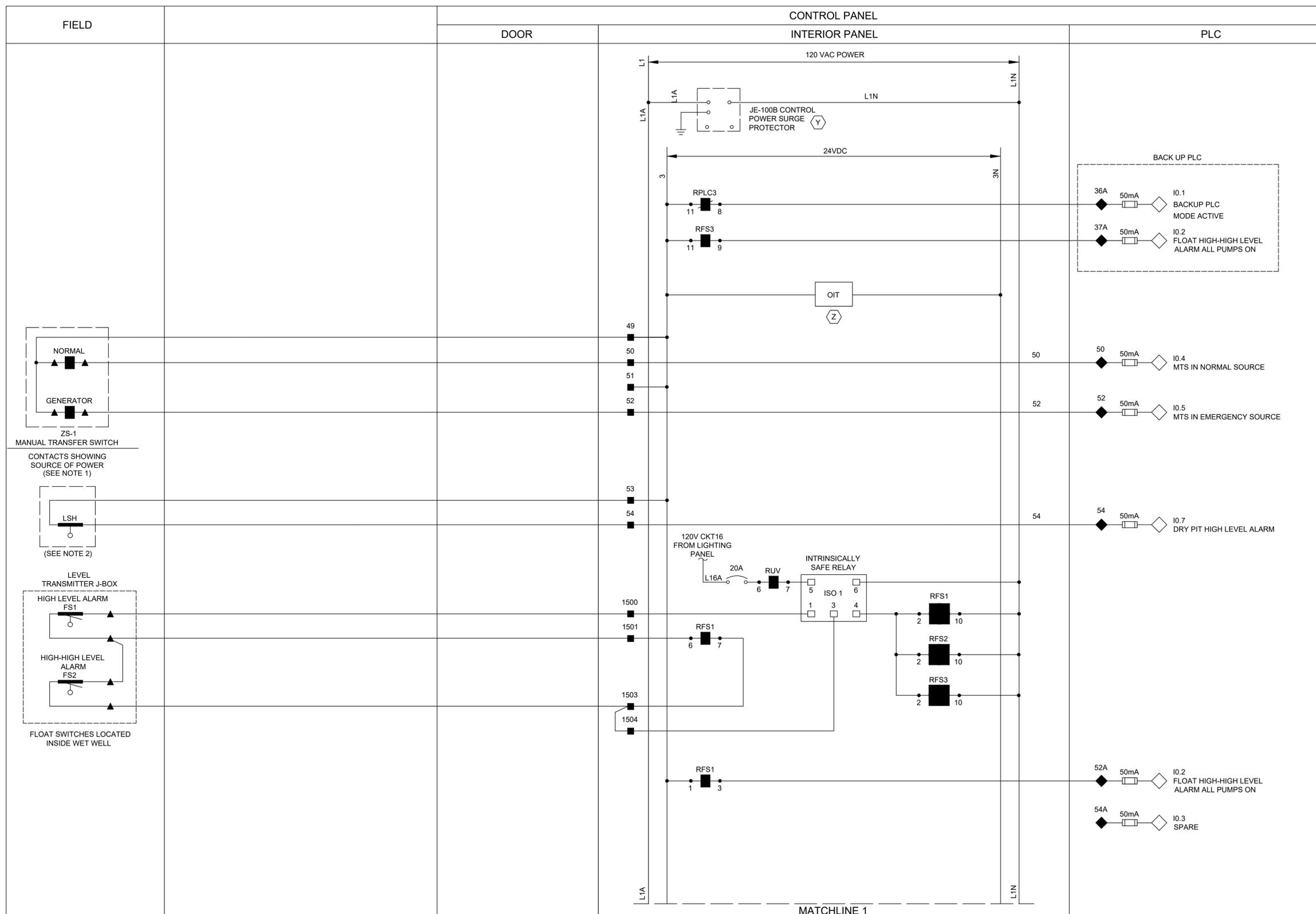
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
 LIFT STATION REHABILITATION  
 INSTRUMENTATION  
 CONTROL INCOMING  
 POWER THREE LINE  
 DIAGRAM**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-1-06	
SHEET NO. OF XX	



- LEGEND**
- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
  - \* DEVICE OR FIELD TERMINAL LOCATED REMOTE
  - DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
  - FIELD TERMINAL LOCATED AT CONTROL PANEL
  - ▲ REMOTE TERMINAL
  - DEVICE TERMINAL NO.
  - ◆ PLC INTERFACE TERMINAL

NO.	DATE	REVISIONS	APP.

**NOTES TO DESIGN ENGINEER:**

- A. THESE LIFT STATION DRAWINGS ARE CONSIDERED TO BE DESIGN GUIDELINES FOR THE CONSTRUCTION OF CITY OF HOUSTON WASTEWATER SUBMERSIBLE LIFT STATIONS. THEIR INTENDED USE IS AS A FRAMEWORK FOR THE CONTRACTED DESIGN ENGINEER IN DEVELOPING SPECIFIC LIFT STATION DESIGNS.
- IT IS THE RESPONSIBILITY OF THE CONTRACTED DESIGN ENGINEER TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION HEREIN CONTAINED AND TO ADJUST ACCORDING TO PROJECT SPECIFIC REQUIREMENTS.
- B. THE DESIGN ENGINEER SHALL DELETE TERMINAL DESIGNATION AND INTERCONNECTING WIRING BETWEEN PANELS WHEN BOTH PANELS ARE HOUSED IN A COMMON, FACTORY PRE-WIRED ENCLOSURE.
- C. THE DESIGN ENGINEER SHALL INCORPORATE ONLY THE NECESSARY STANDARD GUIDELINE DRAWINGS AND DETAILS INTO HIS PROJECT CONTRACT DOCUMENTATION PACKAGE, AND SHALL ADJUST PAGE NUMBERS AND CROSS REFERENCING ACCORDINGLY.
- D. THE DESIGN ENGINEER SHALL CONSULT THE ENGINEERING DESIGN MANUAL FOR WASTEWATER SUBMERSIBLE LIFT STATIONS AND MASTER CONSTRUCTION SPECIFICATIONS FOR MORE INFORMATION PERTINENT TO THESE STANDARD DESIGN GUIDELINES DRAWINGS.
- E. THE DESIGN ENGINEER SHALL REMOVE THESE NOTES, ALL REFERENCES TO THESE NOTES, AND ANY OTHER EXTRANEOUS INFORMATION FROM THE DESIGN GUIDELINE DRAWINGS.
- F. DESIGN ENGINEER SHALL PROVIDE ANY NOTES OR OTHER APPROPRIATE INFORMATION NECESSARY TO COMPLETE THE LIFT STATION DESIGN.
- G. THE DESIGN ENGINEER SHALL REMOVE THIS SHEET AND REPLACE WITH STANDBY GENERATOR SET SHEET P0612 IF A PERMANENT STANDBY GENERATOR IS PROPOSED FOR THIS LIFT STATION.

**NOTES:**

1. PROVIDE MANUAL TRANSFER SWITCH DRY CONTACT.
2. DRY/WET PIT APPLICATION ONLY.
3. ALL FLOAT CONTROL CIRCUIT WIRES COLOR SHALL BE YELLOW.

**KGI** TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
 PROJECT 4285

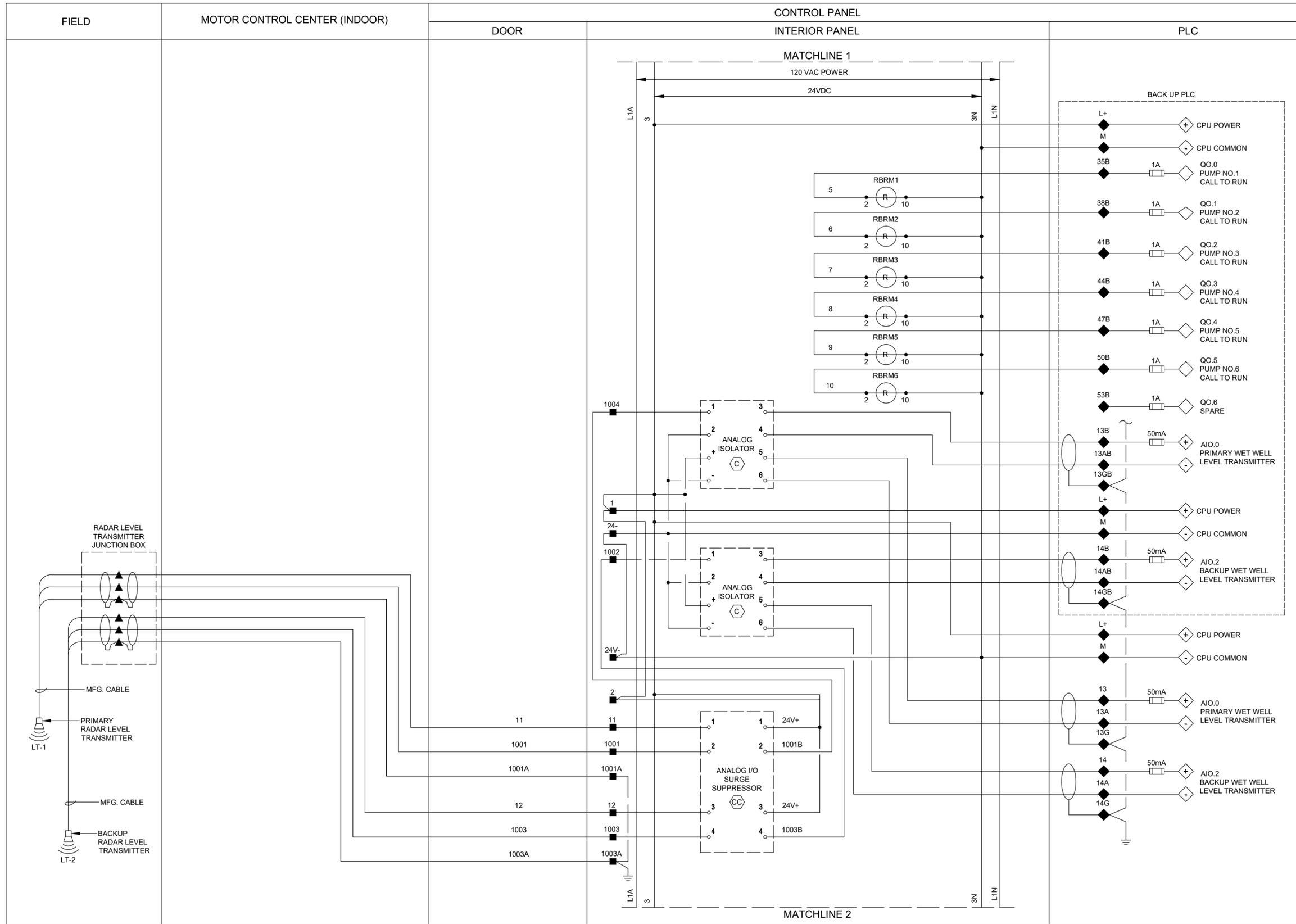
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
 LIFT STATION REHABILITATION  
 INSTRUMENTATION  
 CONTROL PANEL  
 CONTROL WIRING  
 DIAGRAM - I

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-1-07	
SHEET NO. OF XX	



- LEGEND**
- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
  - \* DEVICE OR FIELD TERMINAL LOCATED REMOTE
  - DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
  - FIELD TERMINAL LOCATED AT CONTROL PANEL
  - ▲ REMOTE TERMINAL
  - DEVICE TERMINAL NO.
  - ◆ PLC INTERFACE TERMINAL

NO.	DATE	REVISIONS	APP.

- NOTES TO DESIGN ENGINEER:**
- THESE LIFT STATION DRAWINGS ARE CONSIDERED TO BE DESIGN GUIDELINES FOR THE CONSTRUCTION OF CITY OF HOUSTON WASTEWATER SUBMERSIBLE LIFT STATIONS. THEIR INTENDED USE IS AS A FRAMEWORK FOR THE CONTRACTED DESIGN ENGINEER IN DEVELOPING SPECIFIC LIFT STATION DESIGNS.
  - IT IS THE RESPONSIBILITY OF THE CONTRACTED DESIGN ENGINEER TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION HEREIN CONTAINED AND TO ADJUST ACCORDING TO PROJECT SPECIFIC REQUIREMENTS.
  - THE DESIGN ENGINEER SHALL DELETE TERMINAL DESIGNATION AND INTERCONNECTING WIRING BETWEEN PANELS WHEN BOTH PANELS ARE HOUSED IN A COMMON, FACTORY PRE-WIRED ENCLOSURE.
  - THE DESIGN ENGINEER SHALL INCORPORATE ONLY THE NECESSARY STANDARD GUIDELINE DRAWINGS AND DETAILS INTO HIS PROJECT CONTRACT DOCUMENTATION PACKAGE, AND SHALL ADJUST PAGE NUMBERS AND CROSS REFERENCING ACCORDINGLY.
  - THE DESIGN ENGINEER SHALL CONSULT THE ENGINEERING DESIGN MANUAL FOR WASTEWATER SUBMERSIBLE LIFT STATIONS AND MASTER CONSTRUCTION SPECIFICATIONS FOR MORE INFORMATION PERTINENT TO THESE STANDARD DESIGN GUIDELINES DRAWINGS.
  - THE DESIGN ENGINEER SHALL REMOVE THESE NOTES, ALL REFERENCES TO THESE NOTES, AND ANY OTHER EXTRANEIOUS INFORMATION FROM THE DESIGN GUIDELINE DRAWINGS. DESIGN ENGINEER SHALL PROVIDE ANY NOTES OR OTHER APPROPRIATE INFORMATION NECESSARY TO COMPLETE THE LIFT STATION DESIGN.

**KGI** TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
**Kalluri Group, Inc.** PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

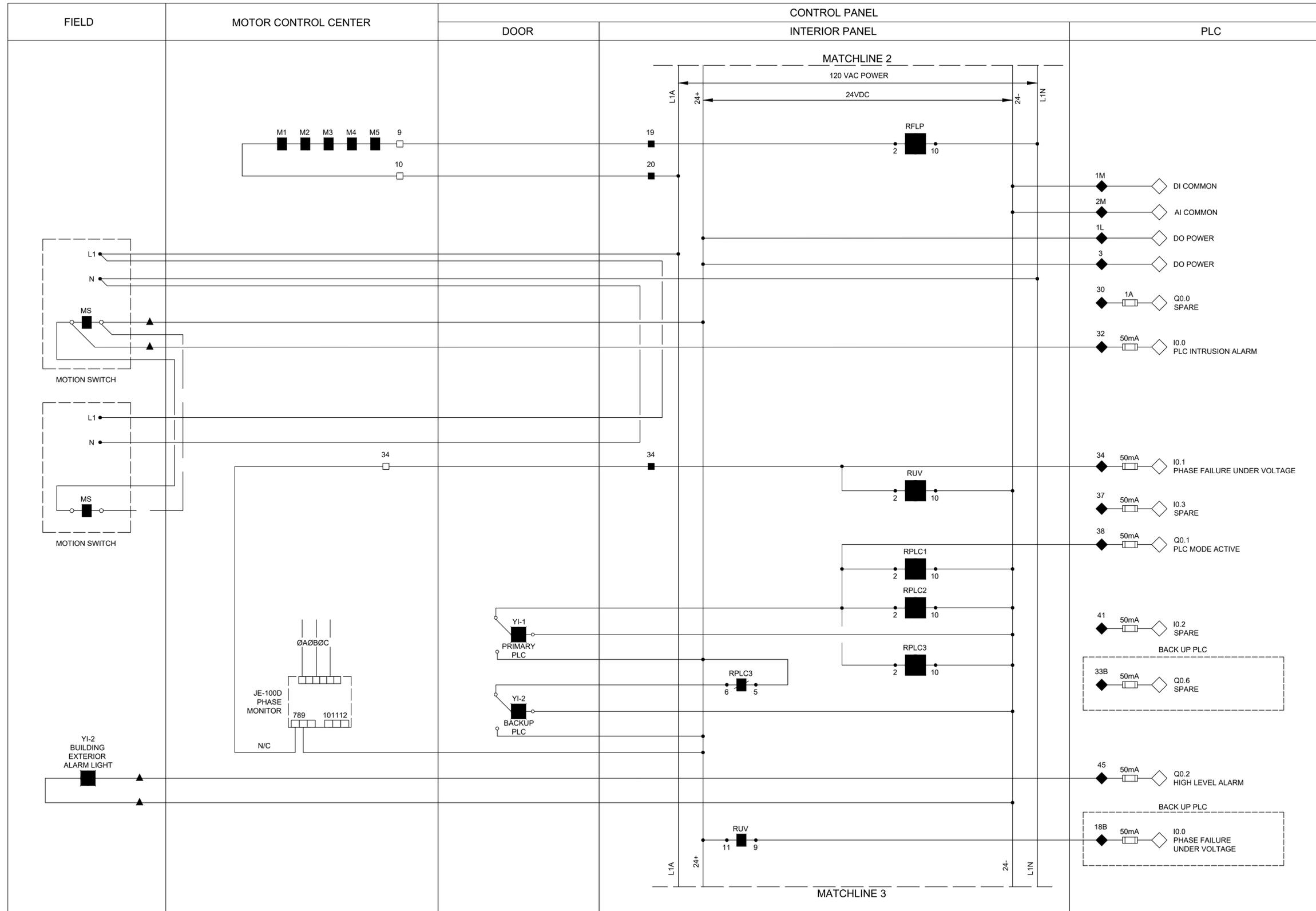
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
 INSTRUMENTATION  
**CONTROL PANEL**  
**CONTROL WIRING**  
**DIAGRAM - II**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-1-08	
SHEET NO. OF XX	



NO.	DATE	REVISIONS	APP.

- NOTES TO DESIGN ENGINEER:**
- THESE LIFT STATION DRAWINGS ARE CONSIDERED TO BE DESIGN GUIDELINES FOR THE CONSTRUCTION OF CITY OF HOUSTON WASTEWATER SUBMERSIBLE LIFT STATIONS. THEIR INTENDED USE IS AS A FRAMEWORK FOR THE CONTRACTED DESIGN ENGINEER IN DEVELOPING SPECIFIC LIFT STATION DESIGNS.
  - IT IS THE RESPONSIBILITY OF THE CONTRACTED DESIGN ENGINEER TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION HEREIN CONTAINED AND TO ADJUST ACCORDING TO PROJECT SPECIFIC REQUIREMENTS.
  - THE DESIGN ENGINEER SHALL DELETE TERMINAL DESIGNATION AND INTERCONNECTING WIRING BETWEEN PANELS WHEN BOTH PANELS ARE HOUSED IN A COMMON, FACTORY PRE-WIRED ENCLOSURE.
  - THE DESIGN ENGINEER SHALL INCORPORATE ONLY THE NECESSARY STANDARD GUIDELINE DRAWINGS AND DETAILS INTO HIS PROJECT CONTRACT DOCUMENTATION PACKAGE, AND SHALL ADJUST PAGE NUMBERS AND CROSS REFERENCING ACCORDINGLY.
  - THE DESIGN ENGINEER SHALL CONSULT THE ENGINEERING DESIGN MANUAL FOR WASTEWATER SUBMERSIBLE LIFT STATIONS AND MASTER CONSTRUCTION SPECIFICATIONS FOR MORE INFORMATION PERTINENT TO THESE STANDARD DESIGN GUIDELINES DRAWINGS.
  - THE DESIGN ENGINEER SHALL REMOVE THESE NOTES, ALL REFERENCES TO THESE NOTES, AND ANY OTHER EXTRANEOUS INFORMATION FROM THE DESIGN GUIDELINE DRAWINGS. DESIGN ENGINEER SHALL PROVIDE ANY NOTES OR OTHER APPROPRIATE INFORMATION NECESSARY TO COMPLETE THE LIFT STATION DESIGN.

**KGI** TBPE Registration No. F-665  
 16300 Katy Freeway, Suite 172  
 Houston, Texas 77094  
 Phone: (713)-365-9288  
**Kalluri Group, Inc.** PROJECT 4285

**QUIDDITY**  
 Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
 6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

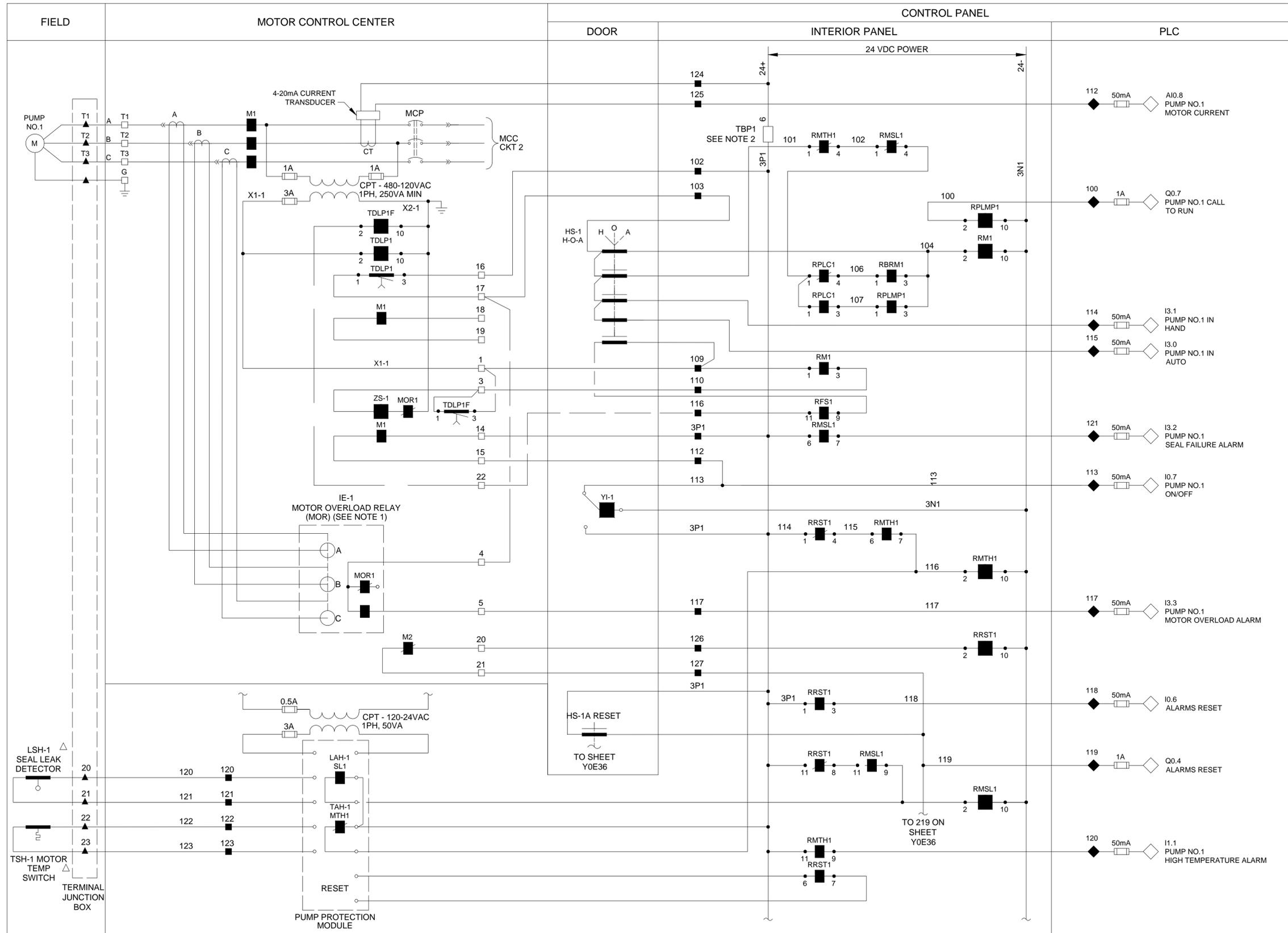
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
**LIFT STATION REHABILITATION**  
 INSTRUMENTATION  
**CONTROL PANEL**  
**CONTROL WIRING**  
**DIAGRAM - III**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-1-09	
SHEET NO. OF XX	



- LEGEND**
- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
  - \* DEVICE OR FIELD TERMINAL LOCATED REMOTE
  - DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
  - FIELD TERMINAL LOCATED AT CONTROL PANEL
  - ▲ REMOTE TERMINAL
  - DEVICE TERMINAL NO.
  - ◆ PLC INTERFACE TERMINAL

NO.	DATE	REVISIONS	APP.

- NOTES TO DESIGN ENGINEER:**
- THESE LIFT STATION DRAWINGS ARE CONSIDERED TO BE DESIGN GUIDELINES FOR THE CONSTRUCTION OF CITY OF HOUSTON WASTEWATER SUBMERSIBLE LIFT STATIONS. THEIR INTENDED USE IS AS A FRAMEWORK FOR THE CONTRACTED DESIGN ENGINEER IN DEVELOPING SPECIFIC LIFT STATION DESIGNS.
  - IT IS THE RESPONSIBILITY OF THE CONTRACTED DESIGN ENGINEER TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION HEREIN CONTAINED AND TO ADJUST ACCORDING TO PROJECT SPECIFIC REQUIREMENTS.
  - THE DESIGN ENGINEER SHALL DELETE TERMINAL DESIGNATION AND INTERCONNECTING WIRING BETWEEN PANELS WHEN BOTH PANELS ARE HOUSED IN A COMMON, FACTORY PRE-WIRED ENCLOSURE.
  - THE DESIGN ENGINEER SHALL INCORPORATE ONLY THE NECESSARY STANDARD GUIDELINE DRAWINGS AND DETAILS INTO HIS PROJECT CONTRACT DOCUMENTATION PACKAGE, AND SHALL ADJUST PAGE NUMBERS AND CROSS REFERENCING ACCORDINGLY.
  - THE DESIGN ENGINEER SHALL CONSULT THE ENGINEERING DESIGN MANUAL FOR WASTEWATER SUBMERSIBLE LIFT STATIONS AND MASTER CONSTRUCTION SPECIFICATIONS FOR MORE INFORMATION PERTINENT TO THESE STANDARD DESIGN GUIDELINES DRAWINGS.
  - THE DESIGN ENGINEER SHALL REMOVE THESE NOTES, ALL REFERENCES TO THESE NOTES, AND ANY OTHER EXTRANEOUS INFORMATION FROM THE DESIGN GUIDELINE DRAWINGS. DESIGN ENGINEER SHALL PROVIDE ANY NOTES OR OTHER APPROPRIATE INFORMATION NECESSARY TO COMPLETE THE LIFT STATION DESIGN.

- NOTES:**
- MOTOR OVERLOAD RELAY OUTPUT CONTACT SHOWN NORMALLY CLOSED WHEN RELAY IS DE-ENERGIZED, OPEN WHEN ENERGIZED, AND CLOSED WHEN IN ALARM. VERIFY OPERATION OF RELAY PROVIDED AND ADJUST CONNECTION OF RMOR AUXILIARY RELAYS.
  - FUSED TERMINAL ON TERMINAL BLOCK TB4 SEE CONTROL POWER AND COMMUNICATION WIRING DIAGRAM DRAWING NO. Y0E28.
  - ALL FLOAT CONTROL CIRCUIT WIRES COLOR SHALL BE YELLOW.

**KGI** Kalluri Group, Inc. TBPE Registration No. F-665  
16300 Katy Freeway, Suite 172  
Houston, Texas 77094  
Phone: (713)-365-9288  
PROJECT 4285

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Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01      DATE: 1/19/2026

APPROVED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

DESIGNED BY: \_\_\_\_\_

DRAWN BY: \_\_\_\_\_

SURVEYED BY: \_\_\_\_\_

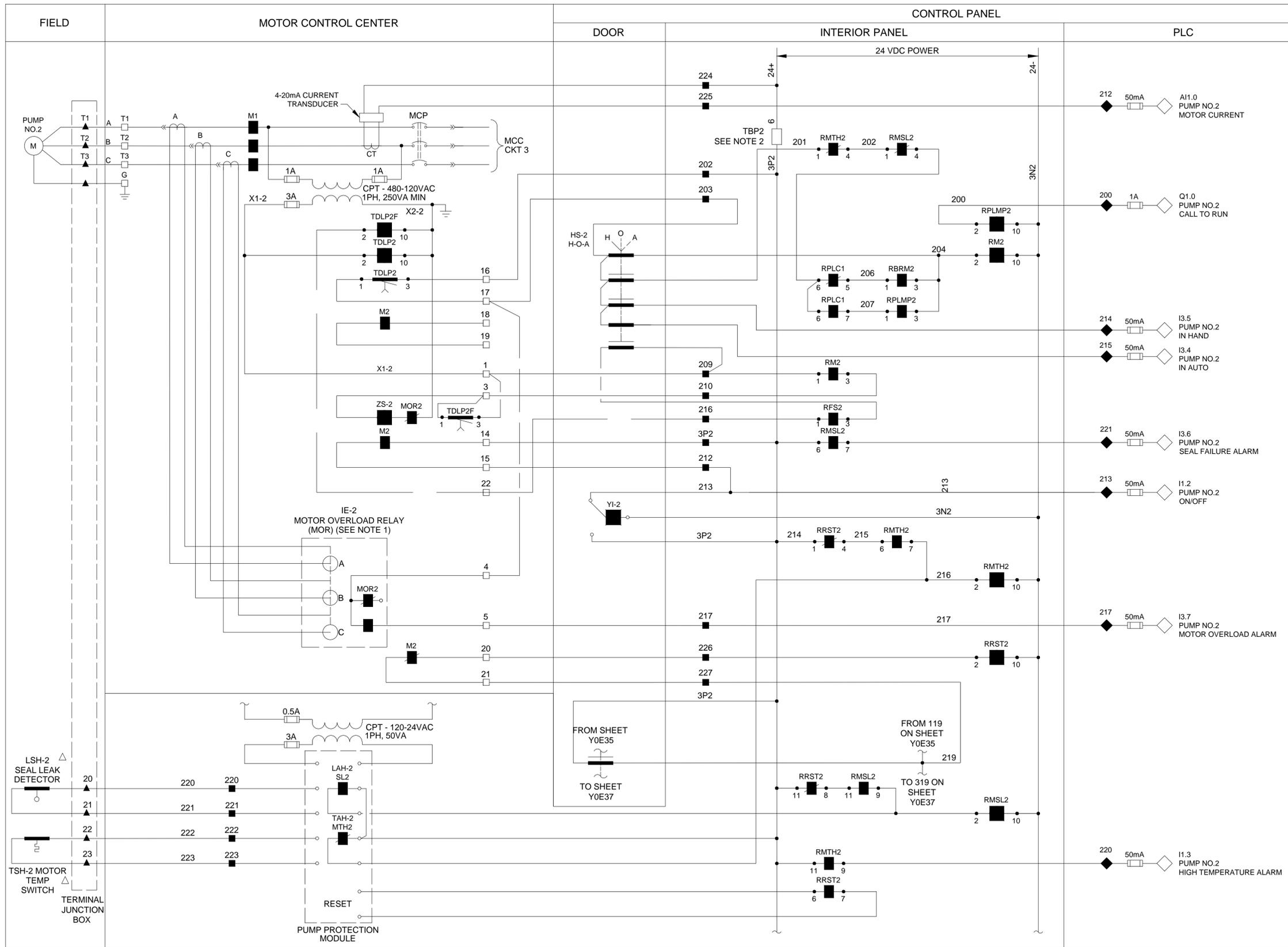
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
LIFT STATION REHABILITATION  
INSTRUMENTATION  
PUMP 1 CONTROL  
WIRING DIAGRAM**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-1-10	
SHEET NO. OF XX	



- LEGEND**
- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
  - \* DEVICE OR FIELD TERMINAL LOCATED REMOTE
  - DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
  - FIELD TERMINAL LOCATED AT CONTROL PANEL
  - ▲ REMOTE TERMINAL
  - DEVICE TERMINAL NO.
  - ◆ PLC INTERFACE TERMINAL

NO.	DATE	REVISIONS	APP.

- NOTES TO DESIGN ENGINEER:**
- A. THESE LIFT STATION DRAWINGS ARE CONSIDERED TO BE DESIGN GUIDELINES FOR THE CONSTRUCTION OF CITY OF HOUSTON WASTEWATER SUBMERSIBLE LIFT STATIONS. THEIR INTENDED USE IS AS A FRAMEWORK FOR THE CONTRACTED DESIGN ENGINEER IN DEVELOPING SPECIFIC LIFT STATION DESIGNS.
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  - B. THE DESIGN ENGINEER SHALL DELETE TERMINAL DESIGNATION AND INTERCONNECTING WIRING BETWEEN PANELS WHEN BOTH PANELS ARE HOUSED IN A COMMON, FACTORY PRE-WIRED ENCLOSURE.
  - C. THE DESIGN ENGINEER SHALL INCORPORATE ONLY THE NECESSARY STANDARD GUIDELINE DRAWINGS AND DETAILS INTO HIS PROJECT CONTRACT DOCUMENTATION PACKAGE, AND SHALL ADJUST PAGE NUMBERS AND CROSS REFERENCING ACCORDINGLY.
  - D. THE DESIGN ENGINEER SHALL CONSULT THE ENGINEERING DESIGN MANUAL FOR WASTEWATER SUBMERSIBLE LIFT STATIONS AND MASTER CONSTRUCTION SPECIFICATIONS FOR MORE INFORMATION PERTINENT TO THESE STANDARD DESIGN GUIDELINES DRAWINGS.
  - E. THE DESIGN ENGINEER SHALL REMOVE THESE NOTES, ALL REFERENCES TO THESE NOTES, AND ANY OTHER EXTRANEOUS INFORMATION FROM THE DESIGN GUIDELINE DRAWINGS. DESIGN ENGINEER SHALL PROVIDE ANY NOTES OR OTHER APPROPRIATE INFORMATION NECESSARY TO COMPLETE THE LIFT STATION DESIGN.
- NOTES:**
1. MOTOR OVERLOAD RELAY OUTPUT CONTACT SHOWN NORMALLY CLOSED WHEN RELAY IS DE-ENERGIZED, OPEN WHEN ENERGIZED, AND CLOSED WHEN IN ALARM. VERIFY OPERATION OF RELAY PROVIDED AND ADJUST CONNECTION OF RMOR-AUXILIARY RELAYS.
  2. FUSED TERMINAL ON TERMINAL BLOCK TB4 SEE CONTROL POWER AND COMMUNICATION WIRING DIAGRAM DRAWING NO. Y0E28.
  3. ALL FLOAT CONTROL CIRCUIT WIRES COLOR SHALL BE YELLOW.

**KGI** Kalluri Group, Inc. TBPE Registration No. F-665  
16300 Katy Freeway, Suite 172  
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Phone: (713)-365-9288  
PROJECT 4285

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JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

DESIGNED BY: \_\_\_\_\_

DRAWN BY: \_\_\_\_\_

SURVEYED BY: \_\_\_\_\_

FB NO. XXXXXX

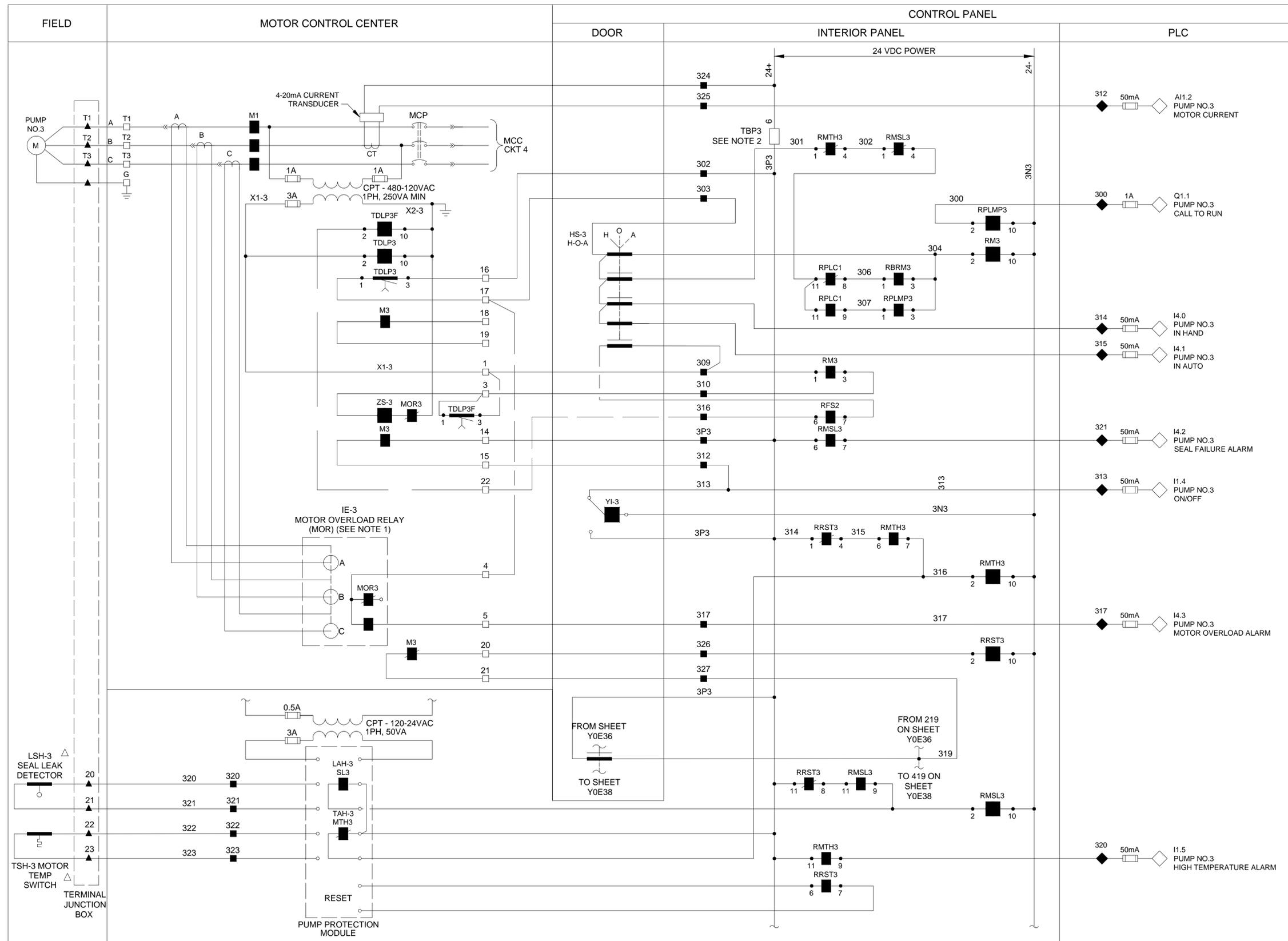
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
LIFT STATION REHABILITATION  
INSTRUMENTATION**

**PUMP 2 CONTROL  
WIRING DIAGRAM**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. <b>2-1-11</b>	
SHEET NO. OF XX	



- LEGEND**
- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
  - \* DEVICE OR FIELD TERMINAL LOCATED REMOTE
  - DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
  - FIELD TERMINAL LOCATED AT CONTROL PANEL
  - ▲ REMOTE TERMINAL
  - DEVICE TERMINAL NO.
  - ◆ PLC INTERFACE TERMINAL

NO.	DATE	REVISIONS	APP.

- NOTES TO DESIGN ENGINEER:**
- A. THESE LIFT STATION DRAWINGS ARE CONSIDERED TO BE DESIGN GUIDELINES FOR THE CONSTRUCTION OF CITY OF HOUSTON WASTEWATER SUBMERSIBLE LIFT STATIONS. THEIR INTENDED USE IS AS A FRAMEWORK FOR THE CONTRACTED DESIGN ENGINEER IN DEVELOPING SPECIFIC LIFT STATION DESIGNS.
  - IT IS THE RESPONSIBILITY OF THE CONTRACTED DESIGN ENGINEER TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION HEREIN CONTAINED AND TO ADJUST ACCORDING TO PROJECT SPECIFIC REQUIREMENTS.
  - B. THE DESIGN ENGINEER SHALL DELETE TERMINAL DESIGNATION AND INTERCONNECTING WIRING BETWEEN PANELS WHEN BOTH PANELS ARE HOUSED IN A COMMON, FACTORY PRE-WIRED ENCLOSURE.
  - C. THE DESIGN ENGINEER SHALL INCORPORATE ONLY THE NECESSARY STANDARD GUIDELINE DRAWINGS AND DETAILS INTO HIS PROJECT CONTRACT DOCUMENTATION PACKAGE, AND SHALL ADJUST PAGE NUMBERS AND CROSS REFERENCING ACCORDINGLY.
  - D. THE DESIGN ENGINEER SHALL CONSULT THE ENGINEERING DESIGN MANUAL FOR WASTEWATER SUBMERSIBLE LIFT STATIONS AND MASTER CONSTRUCTION SPECIFICATIONS FOR MORE INFORMATION PERTINENT TO THESE STANDARD DESIGN GUIDELINE DRAWINGS.
  - E. THE DESIGN ENGINEER SHALL REMOVE THESE NOTES, ALL REFERENCES TO THESE NOTES, AND ANY OTHER EXTRANEOUS INFORMATION FROM THE DESIGN GUIDELINE DRAWINGS. DESIGN ENGINEER SHALL PROVIDE ANY NOTES OR OTHER APPROPRIATE INFORMATION NECESSARY TO COMPLETE THE LIFT STATION DESIGN.

- NOTES:**
1. MOTOR OVERLOAD RELAY OUTPUT CONTACT SHOWN NORMALLY CLOSED WHEN RELAY IS DE-ENERGIZED, OPEN WHEN ENERGIZED, AND CLOSED WHEN IN ALARM. VERIFY OPERATION OF RELAY PROVIDED AND ADJUST CONNECTION OF RMOR AUXILIARY RELAYS.
  2. FUSED TERMINAL ON TERMINAL BLOCK T4 SEE CONTROL POWER AND COMMUNICATION WIRING DIAGRAM DRAWING NO. Y0E28.
  3. ALL FLOAT CONTROL CIRCUIT WIRES COLOR SHALL BE YELLOW.

**KGI** Kalluri Group, Inc. TBPE Registration No. F-665  
16300 Katy Freeway, Suite 172  
Houston, Texas 77094  
Phone: (713)-365-9288  
PROJECT 4285

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
6330 West Loop South, Suite 150 • Bellaire, TX 77401 • 713.777.5337

JOB NO: 00050-0099-01 DATE: 1/19/2026

APPROVED BY: \_\_\_\_\_  
DATE: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
SURVEYED BY: \_\_\_\_\_  
FB NO. XXXXXX

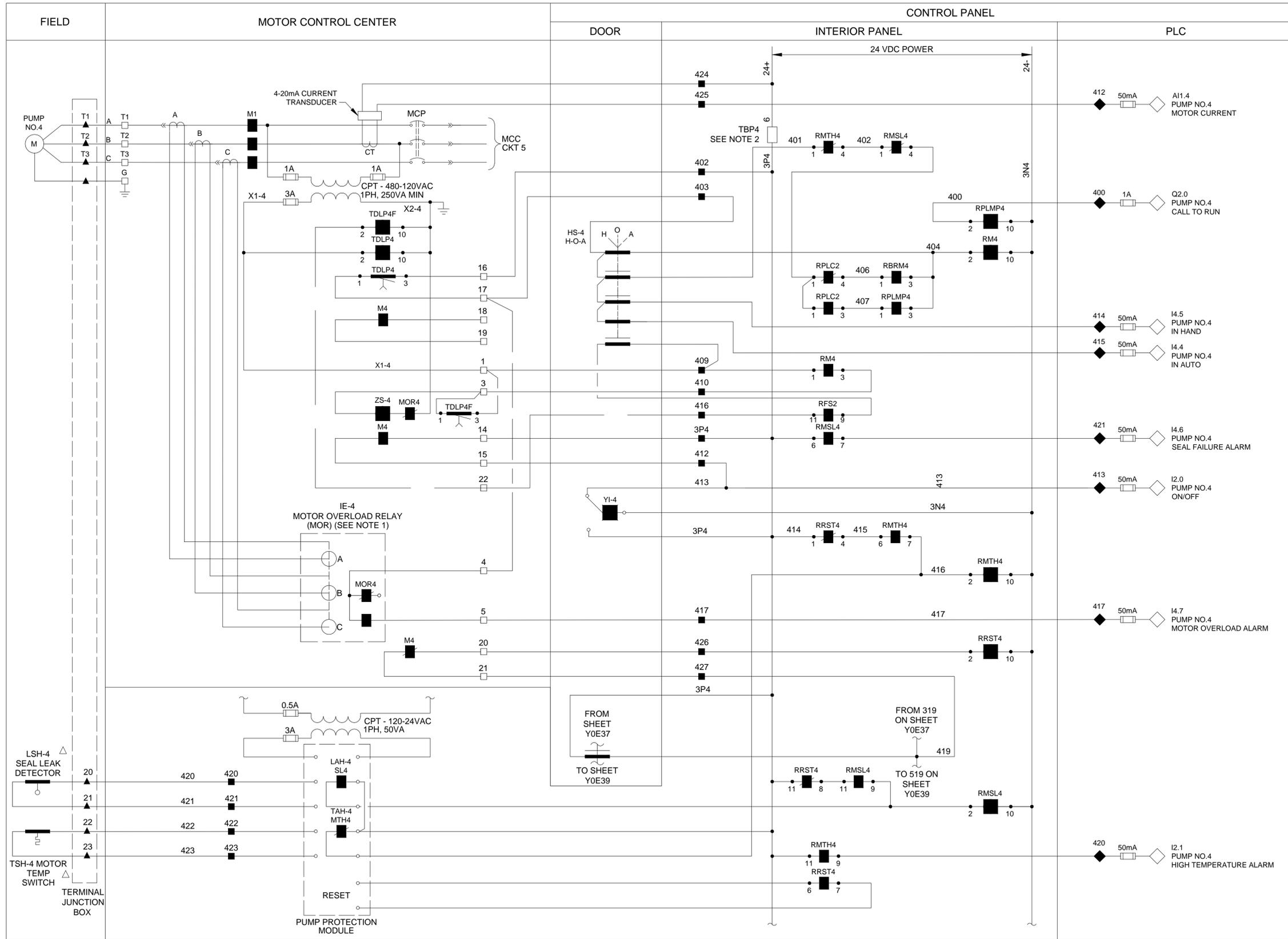
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JANUARY 19, 2026  
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1  
LIFT STATION REHABILITATION  
INSTRUMENTATION**

**PUMP 3 CONTROL  
WIRING DIAGRAM**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-1-12	
SHEET NO. OF XX	



- LEGEND**
- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
  - \* DEVICE OR FIELD TERMINAL LOCATED REMOTE
  - DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
  - FIELD TERMINAL LOCATED AT CONTROL PANEL
  - ▲ REMOTE TERMINAL
  - DEVICE TERMINAL NO.
  - ◆ PLC INTERFACE TERMINAL

NO.	DATE	REVISIONS	APP.

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  2. FUSED TERMINAL ON TERMINAL BLOCK TB4 SEE CONTROL POWER AND COMMUNICATION WIRING DIAGRAM DRAWING NO. Y0E28.
  3. ALL FLOAT CONTROL CIRCUIT WIRES COLOR SHALL BE YELLOW.

**KGI** Kalluri Group, Inc. TBPE Registration No. F-665  
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PROJECT 4285

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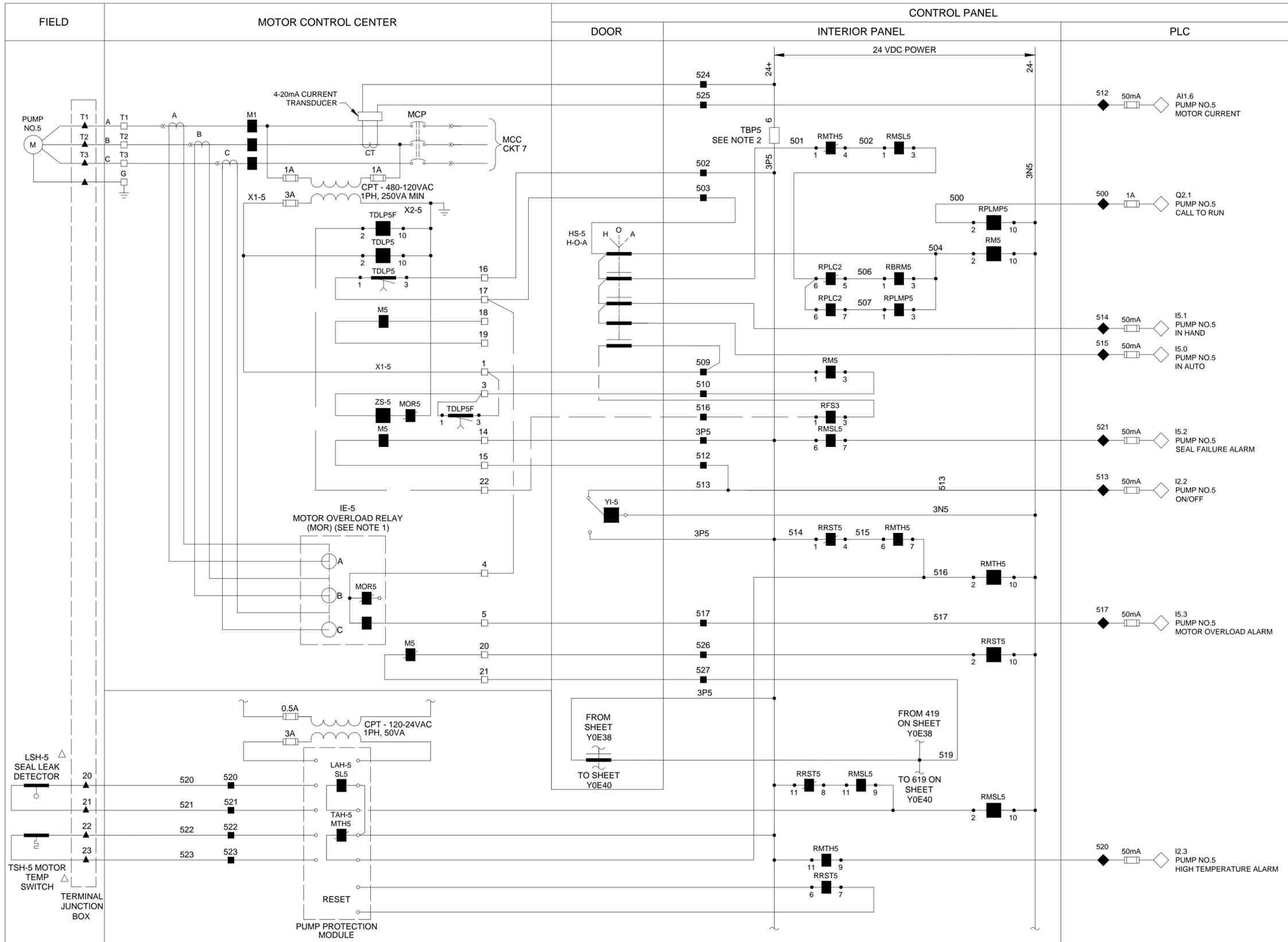
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**CITY OF HOUSTON**  
HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
LIFT STATION REHABILITATION  
INSTRUMENTATION

**PUMP 4 CONTROL**  
WIRING DIAGRAM

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-1-13	
SHEET NO. OF XX	



- LEGEND**
- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
  - \* DEVICE OR FIELD TERMINAL LOCATED REMOTE
  - DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
  - FIELD TERMINAL LOCATED AT CONTROL PANEL
  - ▲ REMOTE TERMINAL
  - DEVICE TERMINAL NO.
  - ◆ PLC INTERFACE TERMINAL

NO.	DATE	REVISIONS	APP.

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  3. ALL FLOAT CONTROL CIRCUIT WIRES COLOR SHALL BE YELLOW.

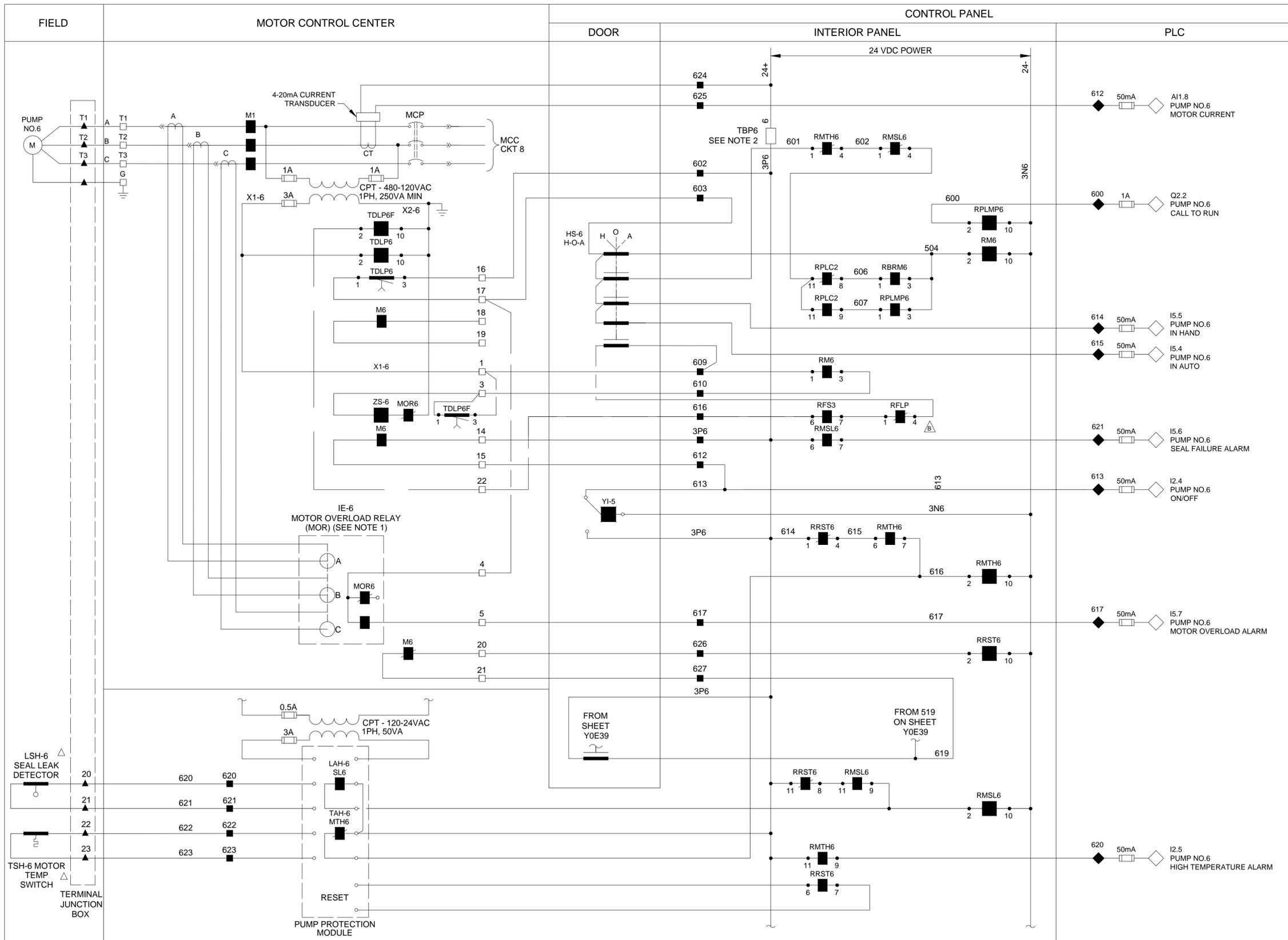
**KGI** Kalluri Group, Inc. TBPE Registration No. F-665  
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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS  
**SCOTT STREET NO. 1**  
 LIFT STATION REHABILITATION  
 INSTRUMENTATION  
**PUMP 5 CONTROL**  
 WIRING DIAGRAM

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
R-000267-127A-4	
DRAWING SCALE	
AS NOTED	
CITY OF HOUSTON PM	
TAHA LOTIA	
DWG NO. 2-1-14	
SHEET NO. OF XX	



- LEGEND**
- △ DEVICE OR FIELD TERMINAL LOCATED AT MOTOR
  - \* DEVICE OR FIELD TERMINAL LOCATED REMOTE
  - DEVICE OR FIELD TERMINAL LOCATED AT MCC/POWER PANEL
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  - FUSED TERMINAL ON TERMINAL BLOCK T84 SEE CONTROL POWER AND COMMUNICATION WIRING DIAGRAM DRAWING NO. Y0E28
  - ALL FLOAT CONTROL CIRCUIT WIRES COLOR SHALL BE YELLOW.

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**CITY OF HOUSTON**  
 HOUSTON PUBLIC WORKS

**SCOTT STREET NO. 1**  
 LIFT STATION REHABILITATION  
 INSTRUMENTATION

**PUMP 6 CONTROL WIRING DIAGRAM**

WBS NUMBER	FOR CITY OF HOUSTON USE ONLY
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CITY OF HOUSTON PM	
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