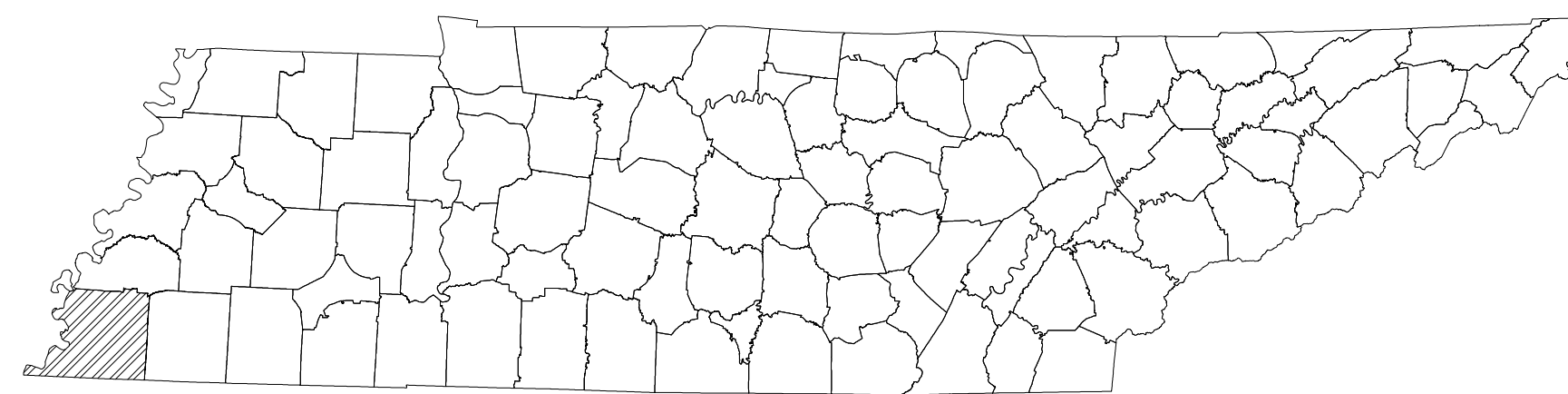
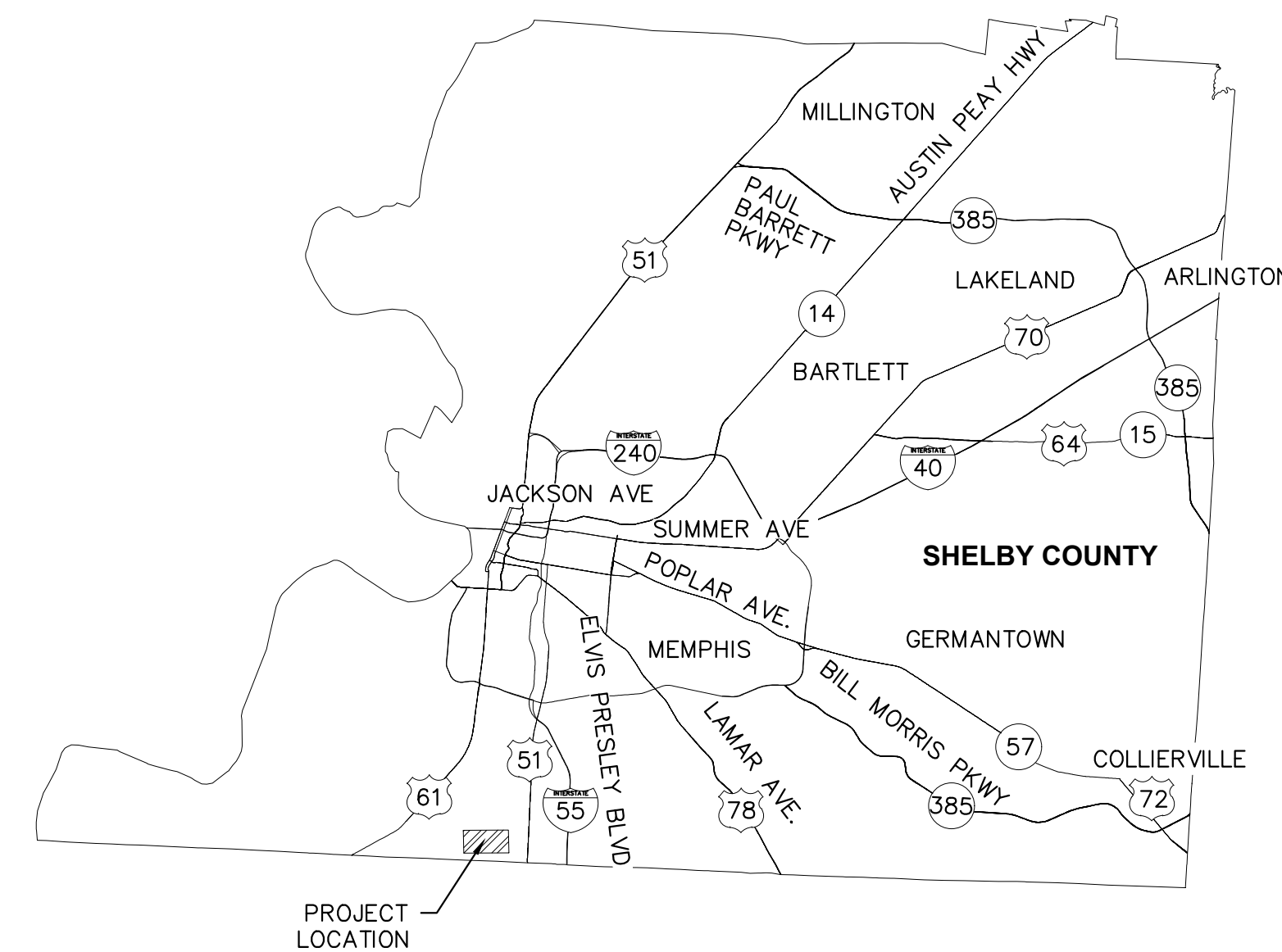


# 277 WINDSOR LIFT STATION IMPROVEMENTS

SEWER ASSESSMENT & REHABILITATION PROGRAM (SARP 10)  
CITY OF MEMPHIS, TENNESSEE



STATE OF TENNESSEE:



#### INDEX OF DRAWINGS:

- G0.0 COVER SHEET
- G1.0 GENERAL NOTES
- C1.0 DEMOLITION AND SITE PLAN
- C1.1 EXISTING LS PLAN AND SECTION
- C1.2 PROPOSED LS PLAN AND SECTION
- E1.0 ELECTRICAL SITE PLAN
- T1.0 TRAFFIC CONTROL PLAN



ABES ENGINEERING, INC  
2500 MT. MORIAH RD. SUITE H229  
MEMPHIS, TN 38115  
901 340-3011



All inquiries regarding this drawing(s) shall be made to ABES ENGINEERING.

**SANITARY SEWER NOTES:**

1. LOCATION OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND ARE NOT NECESSARILY ALL OF SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITY COMPANY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES AND/OR UNDERGROUND STRUCTURES PRIOR TO THE INITIATION OF ANY CONSTRUCTION. CONTRACTOR SHALL ALSO ASSUME FULL RESPONSIBILITY FOR DAMAGE TO ANY UTILITIES ENCOUNTERED WITHIN CONSTRUCTION PERIMETERS. FOR SITE LOCATIONS OF EXISTING UTILITIES INVOLVING M.L.G.&W., SOUTH CENTRAL BELL, TEXAS GAS COMPANY, AND/OR CITY OF MEMPHIS SEWER, PLEASE CALL 811.
2. CONTRACTOR SHALL ENSURE UNINTERRUPTED SEWER SERVICE ON EXISTING SEWER AND SERVICE CONNECTIONS BY PROVIDING AMPLE TEMPORARY WASTEWATER PUMPING AND/OR BYPASSING.
3. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES.
4. CONTRACTOR SHALL NOTIFY THE CITY OF MEMPHIS CONSTRUCTION INSPECTION OFFICE AT 636-2462 A MINIMUM OF 24 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION.
5. ALL AREAS IN CUT OR FILL WHERE VEGETATION HAS BEEN REMOVED SHALL BE SEEDED, MULCHED, FERTILIZED, AND/OR SODDED AS REQUIRED TO PREVENT EROSION.
6. THE CONTRACTOR SHALL VERIFY EXISTING DATA AND REPORT ANY SIGNIFICANT DISCREPANCIES TO THE ENGINEER.
7. ALL SANITARY SEWER TO BE CONSTRUCTED AS PER CITY OF MEMPHIS STANDARD CONSTRUCTION SPECIFICATIONS. SANITARY SEWER SERVICE CONNECTIONS TO BE INSTALLED AS PER CITY OF MEMPHIS STANDARD SST-16.
8. ALL SEWER MANHOLE LIDS IN OPEN AREAS ARE TO BE CONSTRUCTED 1.5' ABOVE PROPOSED GRADE. IN BACKYARDS, MANHOLE LIDS ARE TO BE 1.5' ABOVE INITIAL GRADE, 0.5' ABOVE FINAL GRADE.
9. ALL SANITARY SEWER, INCLUDING SERVICE CONNECTIONS, WHICH HAS LESS THAN 1.5' CLEARANCE (OUTSIDE OF PIPES) WITH DRAINAGE OR IN FILLED AREAS SHALL BE CLASS 50 D.I.P. OR CONCRETE ENCASED, 10' MINIMUM BOTH SIDES OF CROSSING. ALL DUCTILE IRON PIPE (D.I.P) SHALL BE POLYETHYLENE LINED OR SHALL BE TREATED WITH PROTECTO 401 OR APPROVED EQUIVALENT.
10. THE CITY OF MEMPHIS SHALL HAVE INGRESS/EGRESS RIGHTS TO USE PRIVATE DRIVES AND YARDS FOR THE PURPOSE OF MAINTAINING ALL PUBLIC SEWER LINES AND SHALL BEAR NO RESPONSIBILITY FOR THE MAINTENANCE OF SAID PRIVATE DRIVES, FENCES AND YARDS.
11. NO TREES, SHRUBS, PERMANENT STRUCTURES, OR OTHER UTILITIES (EXCEPT FOR CROSSINGS) WILL BE ALLOWED WITHIN SANITARY SEWER EASEMENT. NO OTHER UTILITIES OR SERVICES MAY OCCUPY SANITARY SEWER EASEMENTS IN PRIVATE DRIVES AND YARDS EXCEPT FOR CROSSINGS.
12. ALL SANITARY SEWER MANHOLES IN REVERSE CROWN STREETS, ALLEYS, OR DRIVES (PUBLIC OR PRIVATE) SHALL BE PROVIDED WITH GASKETS AND PLUGS FOR PICK HOLES TO PREVENT DRAINAGE INFLOW INTO SEWER SYSTEM.
13. THE CONTRACTOR SHALL PROVIDE ADEQUATE AND EFFECTIVE EROSION CONTROL AS NECESSARY TO PREVENT ANY SILTATION INTO EXISTING DRAINAGE SYSTEM AND/OR ADJACENT PROPERTIES.
14. TRACER WIRE SHALL BE INSTALLED ALONG THE LENGTH OF ALL SEWER PIPES, SERVICE CONNECTIONS, MANHOLES AND STUBS PER STANDARD CONSTRUCTION SPECIFICATIONS AND STANDARD DETAIL (SST-17).

**DEMOLITION NOTES:**

1. THE CONTRACTOR SHALL REMOVE ALL UNDERGROUND UTILITIES AND ANY OTHER ITEMS IN ACCORDANCE WITH THE TDEC AND THE TECHNICAL SPECIFICATIONS. THE CONTRACTOR SHALL STRICTLY FOLLOW ALL CITY, STATE, AND FEDERAL GUIDELINES FOR REMOVAL AND DISPOSAL OF THESE FACILITIES.
2. ALL BUILDING, CONCRETE, ASPHALT PAVEMENT, AND GRANULAR SUBBASE SHALL BE REMOVED FULL DEPTH PER THE DIRECTION OF THE GEOTECHNICAL ENGINEER. ALL SHALL BE DISPOSED IN ACCORDANCE WITH ALL CITY, STATE AND FEDERAL REGULATIONS.
3. CONTRACTOR SHALL REMOVE & REPAIR PAVEMENT AS REQUIRED FOR UTILITY CONSTRUCTION INCLUDING BUT NOT LIMITED TO : IRRIGATION SLEEVES, SITE LIGHTNING CONDUITS, WATER LINES, SANITARY SEWER LINES, STORM DRAINAGE LINES, ETC. CONTRACTOR HAS AN OPTION TO BORE CONDUITS.
4. PRIOR TO COMMENCING ANY UTILITY WORK, CONTRACTOR SHALL NOTIFY ANY SURROUNDING PROPERTY OWNERS WHO MAY EXPERIENCE A DISRUPTION IN SERVICE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MODIFYING ANY EXISTING IRRIGATION SYSTEM TO ACCOMMODATE PARTS OF THAT EXISTING SYSTEM THAT ARE REMOVED, ABANDONED OR DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL ALSO MODIFY ANY EXISTING IRRIGATION SYSTEM TO ACCOMMODATE NEW AREAS OF LANDSCAPING. ANY IRRIGATION SLEEVES SHALL BE INSTALLED PRIOR TO PAVING AND BACKFILLED PROPERLY BY THE SITE CONTRACTOR.
6. THE CONTRACTOR SHALL ENSURE ADEQUATE ACCESS IS PROVIDED DURING ALL PHASES OF CONSTRUCTION. COORDINATE WITH THE PROJECT MANAGER.
7. WHEN REMOVING UTILITIES, CONTRACTOR SHALL GROUT AND SEAL ANY STRUCTURES THAT ARE TO REMAIN PER LOCAL REGULATIONS.
8. UTILITIES SHOWN ARE LOCATED BY FIELD SURVEY AND RECORD DRAWINGS. ADDITIONAL UNDERGROUND UTILITIES WILL BE ENCOUNTERED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE ANY INACTIVE STRUCTURE & ALERT ENGINEER OF ANY ACTIVE, UNMAPPED STRUCTURES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION OF UTILITY DEMOLITION & RELOCATION.
10. CONTRACTOR SHALL NOT INTERRUPT DRAINAGE FROM ADJACENT PROPERTIES AND PUBLIC RIGHT-OF-WAYS.
11. ALL PUMPS, MOTORS, VALVES ETC REMOVED SHALL BE RETURNED TO MEMPHIS WTCS DEPARTMENT. CONTACT JAMES GREENLEE AT 901-636-0237 FOR FURTHER DIRECTIONS.

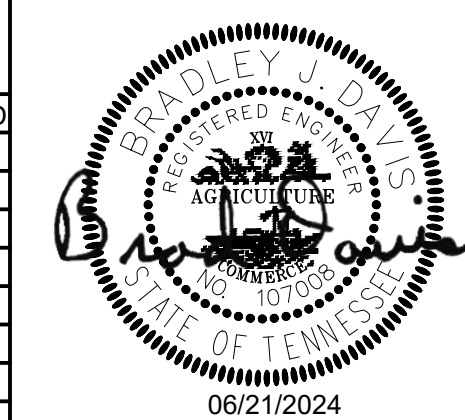
**GENERAL NOTES:**

1. AT ALL CROSSINGS OF EXISTING UTILITIES, THE CONTRACTOR SHALL FIELD LOCATE BY POST HOLEING OR OTHER APPROPRIATE METHODS, THE HORIZONTAL AND VERTICAL LOCATION ALL EXISTING UTILITIES.
2. ALL SEWER TRENCHES SHALL BE PROPERLY BACKFIELD AT THE END OF EACH WORK DAY.
3. ALL DISTURBED AREAS SHALL BE SEEDED (WITH A SEASONAL MIX) AND COVERED WITH STRAW AT THE END OF EACH WEEK (AT A MINIMUM) OR MORE FREQUENTLY, AS CONDITIONS DICTATE, IN ADDITION TO EROSION CONTROLS REFERENCED ON PLANS.
4. ALL DISTURBED LAWN AREAS SHALL BE SODDED. MATCH EXISTING SOD TYPE.
5. CONTRACTOR IS FULLY RESPONSIBLE FOR DAMAGES OF EXISTING UTILITIES, AND PUBLIC/PRIVATE INFRASTRUCTURE AND PROPERTY.

**EROSION CONTROL NOTES:**

1. CONSTRUCTION ENTRANCES (TO THE OFFICE OR LAY DOWN AREA, AND TO WORK AREAS ) TO BE A MINIMUM 6" DEPTH T.D.O.T. NO. 1 OR NO. 2 STONE.
2. INSTALL WATTLES OR SILT FENCE AS DICTATED ON THE EROSION CONTROL PLANS. SEE DETAILS FOR MORE INFORMATION.
3. ALL STOCK PILE AREAS TO BE PROTECTED BY A COMBINATION OF WATTLES AND SILT FENCE.
4. INSTALL INLET PROTECTION DEVICES AT STORM INLETS PRIOR TO CONSTRUCTION. SEE PLANS FOR LOCATIONS.
5. ALL NEWLY CUT OR FILL AREAS LACKING ADEQUATE VEGETATION SHALL BE FERTILIZED, MULCHED, SEEDED, AND /OR SODDED TO EFFECTIVELY CONTROL EROSION.
6. A SPECIFIC INDIVIDUAL SHALL BE DESIGNATED TO BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROLS ON EACH PROJECT SITE.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SOIL EROSION CONTROL MEASURES AS NOTED ON THE PLANS AND AS REQUESTED BY THE OWNER DURING THE CONSTRUCTION, AND AS NECESSARY TO PREVENT THE SEDIMENT FROM LEAVING THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SATISFYING THE REQUIREMENTS OF THE STATE OF TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK. ALL SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE CONTRACT SO AS TO PREVENT ANY SEDIMENTATION FROM WASHING OFF THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHTS-OF-WAY. SEDIMENT FENCE SHALL BE INSTALLED AS DIRECTED. THE CONTRACTOR SHALL MAINTAIN A LOG OF ALL MAINTENANCE ACTIVITIES FOR THE EROSION ELEMENTS AS REQUIRED BY THE STATE OF TENNESSEE DEPARTMENT OF WATER POLLUTION CONTROL.
8. A COPY OF THE EROSION CONTROL PLAN MUST BE AVAILABLE ON SITE FOR THE DWPC INSPECTOR ON REQUEST.
9. EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONAL BEFORE EARTH MOVING OPERATIONS BEGIN, AND MUST BE CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. TEMPORARY MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORK DAY, BUT MUST BE REPLACED AT THE END OF THE WORK DAY OR PRIOR TO RAINFALL EVENTS.
10. ALL CONTROL MEASURES SHALL BE CHECKED AND STATE REQUIREMENTS FOR MAINTENANCE AND REPAIRS SHALL BE MADE AS NECESSARY. DURING PROLONGED RAINFALL, DAILY CHECKING AND REPAIRING IS NECESSARY. THE PERMITTEE SHALL MAINTAIN RECORDS OF INSPECTION CHECKS, MAINTENANCE, AND REPAIRS.
11. THIS PLAN HAS BEEN REVIEWED AND APPEARS TO BE ADEQUATE. IF SEWER PIPE INSTALLATION BY BORE DOES NOT PROVIDE FOR EFFECTIVE SEDIMENT CONTROL AND EROSION PROTECTION, ADDITIONAL MEASURES WILL BE REQUIRED.
12. IF PUMPING IS REQUIRED, SEDIMENT LADEN WATER IS NOT TO BE DISCHARGED INTO THE STORM DRAIN OR THE STREET.

REVISIONS		
DATE	DESCRIPTIONS	APPROVED



**WINDSOR LIFT STATION IMPROVEMENTS**  
 DEVELOPER: SARP 10  
 ENGINEER: ABES ENGINEERING

SEWER BASIN: HL-01

G1.0

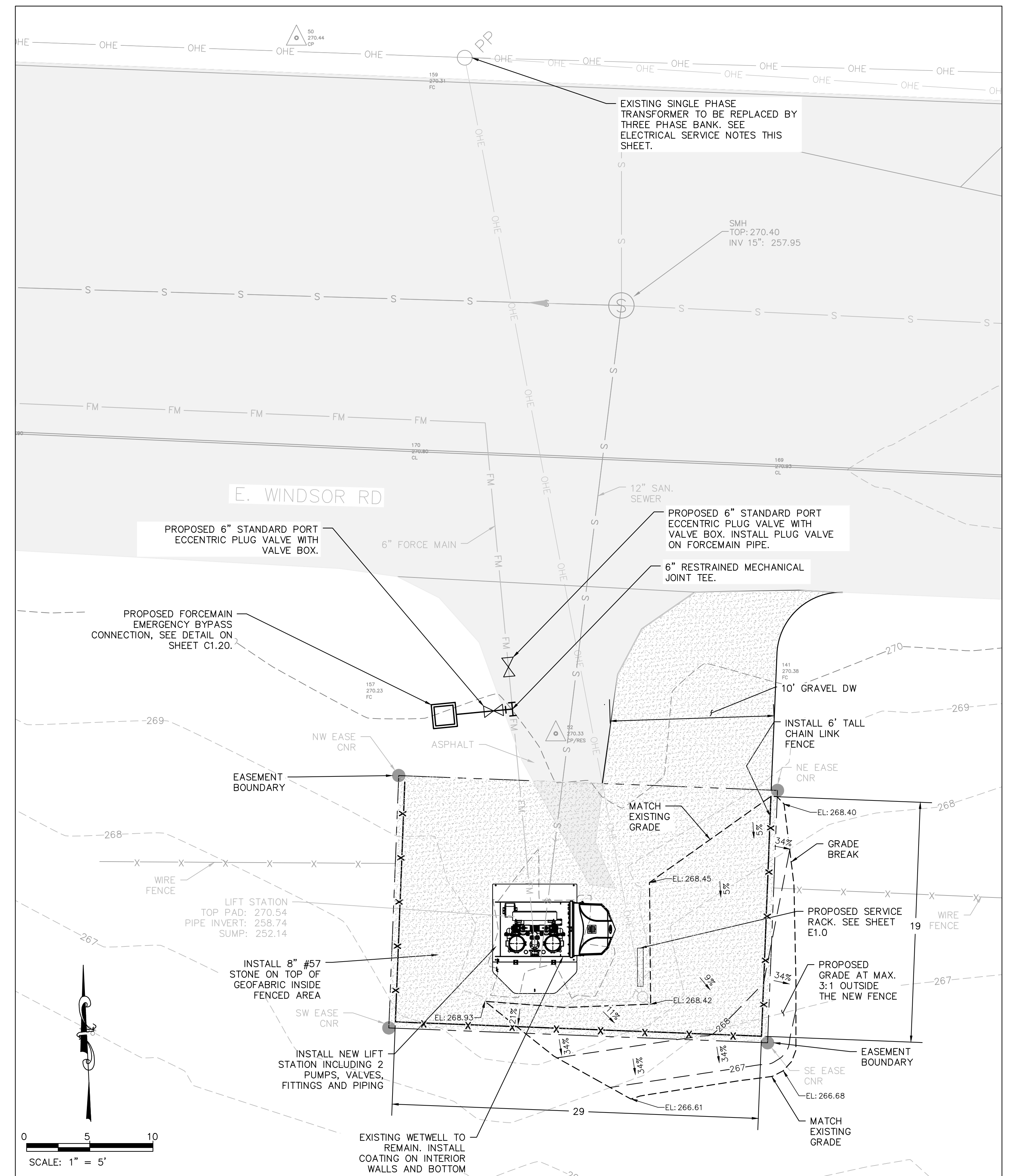
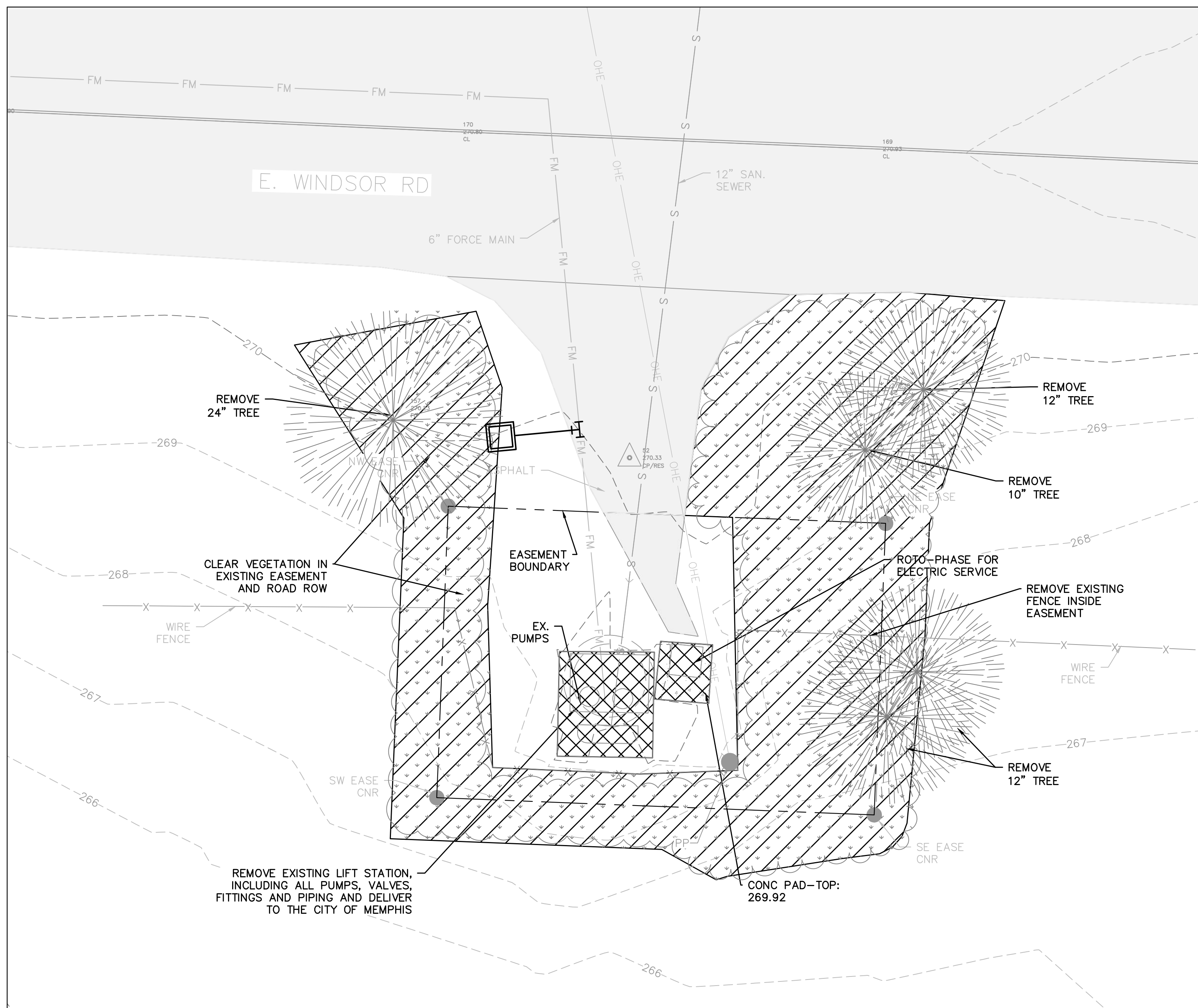
SHEET 1 OF 1  
 DIVISION OF ENGINEERING

**GENERAL NOTES**

277 WINDSOR ROAD  
 MEMPHIS, TENNESSEE

SURVEY BY: WES ASHWORTH, RLS DATE: 08/21 PROJECT NO: PN 280-21-002  
 DESIGN BY: BRAD DAVIS, PE DATE: 12/21 SCALE: NTS  
 REVIEWED

DEPUTY CITY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_ CITY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



**LEGEND**

**EXISTING**

- POWER POLE
- TREE
- SANITARY SEWER
- FORCE MAIN
- OVERHEAD ELECTRIC
- FENCE
- MAJOR CONTOURS
- MINOR CONTOURS
- CONCRETE
- ASPHALT
- VEGETATION

**PROPOSED**

- SANITARY SEWER
- FENCE
- GRAVEL

**DEMOLITION**

- REMOVE VEGETATION
- REMOVE LIFT STATION AND ROTO-PHASE

**DEMOLITION PLAN**

**ELECTRICAL SERVICES NOTES:**

- CONTRACTOR TO CONTACT MLGW AND INITIATE A SERVICE REQUEST TO CHANGE THE SERVICE FROM SINGLE PHASE TO THREE PHASE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE TIMING OF THE SERVICE CHANGEOVER TO THREE PHASE WITH MLGW.

**EXISTING FORCEMAIN NOTE:**

- CONTRACTOR TO LOCATE AND VERIFY EXISTING FORCE MAIN ROUTING AT START OF CONSTRUCTION AND NOTIFY ENGINEER OF ANY ISSUES

**SPECIAL FLOOD HAZARD STATEMENT:**

THIS IS TO CERTIFY THAT BY GRAPHIC DETERMINATION THE ABOVE PLATTED PROPERTY IS NOT IN A SPECIAL FLOOD HAZARD AREA (SFHA) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD. THE SUBJECT PROPERTY IS SHOWN IN A FEMA ZONE X (NO SHADING ON FEMA MAP); AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO THE FEMA/FIRM MAP NUMBER 47157C0560F WITH AN EFFECTIVE DATE OF SEPTEMBER 28, 2007.

**APPROVED FOR CONSTRUCTION:**

THE DOCUMENT BEARING THIS STAMP HAS BEEN RECEIVED AND REVIEWED BY THE CITY OF MEMPHIS DIVISION OF ENGINEERING UNDER AUTHORITY DELEGATED BY THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION DIVISION OF WATER RESOURCES. IT IS HEREBY APPROVED FOR CONSTRUCTION BY THE CITY ENGINEER AS EVIDENCED BY HIS SIGNATURE IN THE TITLE BLOCK BELOW.

APPROVAL EXPIRES 1 YEAR FROM APPROVAL DATE BELOW, THIS APPROVAL SHALL NOT BE CONSTRUED AS CREATING A PRESUMPTION OF CORRECT OPERATION OR AS WARRANTING BY THE CITY ENGINEER THAT THE APPROVED FACILITIES WILL REACH THE DESIRED GOALS.

**PROJECT BENCHMARKS**

**CITY BENCHMARK:**

#1061 IS LOCATED AT 575 WINDSOR ROAD. 40' S OF CENTERLINE WINDSOR ROAD, 33' W. OF CENTERLINE GRAVEL D/WAY TO TVA STATION "FREEPORT," 41' E. OF A H/WALL AND 33' N. OF A H/WALL. ELEVATION : 300.89

**SITE TBM:**

TEMPORARY BENCHMARK (T.B.M.) - TOP OF SMH IN CENTER OF WINDSOR NORTH OF LIFT STATION. ELEVATION=270.40 (NAVD88)

NOTE: BEFORE THE BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE SITE DATUM WITH ALL SITE TBMS AND IMMEDIATELY REPORT IN WRITING ANY DISCREPANCIES TO THE ENGINEER.

REVISIONS		
DATE	DESCRIPTIONS	APPROVED



**WINDSOR LIFT STATION IMPROVEMENTS**

DEVELOPER: SARP 10  
ENGINEER: ABES ENGINEERING

SEWER BASIN: HL-01

C1.0

SHEET 1 OF 1  
DIVISION OF ENGINEERING

## DEMOLITION AND SITE PLAN

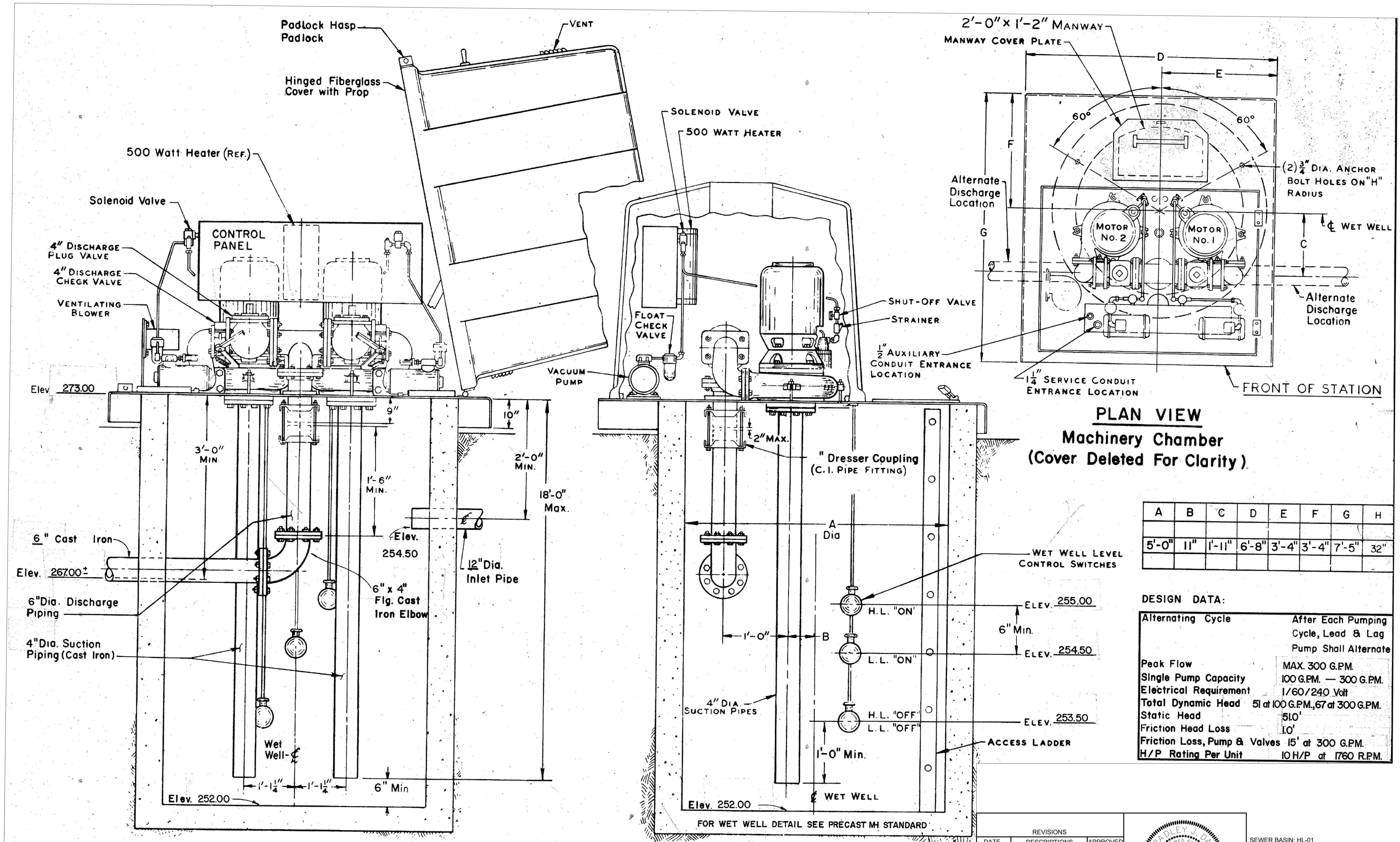
277 WINDSOR ROAD  
MEMPHIS, TENNESSEE

SURVEY BY: WES ASHWORTH, RLS DATE: 08/21 PROJECT NO: 280-21-002  
DESIGN BY: BRAD DAVIS, PE DATE: 12/21 SCALE: SHOWN  
REVIEWED

DEPUTY CITY ENGINEER DATE CITY ENGINEER DATE

All inquiries regarding this drawing(s) shall be made to ABES ENGINEERING.





**SECTIONAL ELEVATION**

**CROSS SECTION**

**PLAN VIEW  
Machinery Chamber  
(Cover Deleted For Clarity)**

A	B	C	D	E	F	G	H
5'-0"	11"	1'-11"	6'-8"	3'-4"	3'-4"	7'-5"	32"

**DESIGN DATA:**

Alternating Cycle	After Each Pumping Cycle, Lead & Lag Pump Shall Alternate
Peak Flow	MAX 300 G.P.M.
Single Pump Capacity	100 G.P.M. — 300 G.P.M.
Electrical Requirement	1/60/240 Volt
Total Dynamic Head	51 at 100 G.P.M., 67 at 300 G.P.M.
Static Head	51.0'
Friction Head Loss	10'
Friction Loss, Pump & Valves	15' at 300 G.P.M.
H/P Rating Per Unit	10H/P at 1760 R.P.M.

REVISIONS		
DATE	DESCRIPTIONS	APPROVED



SEWER BASIN: HL-01 C1.1

SHEET 1 OF 1  
DIVISION OF ENGINEERING

**EXISTING LS PLAN AND SECTION**

277 WINDSOR ROAD  
MEMPHIS, TENNESSEE

SURVEY BY: WES ASHWORTH, RLS DATE: 08/21 PROJECT NO: 280-21-002  
 DESIGN BY: BRAD DAVIS, PE DATE: 12/21 SCALE/TMS  
 REVIEWED

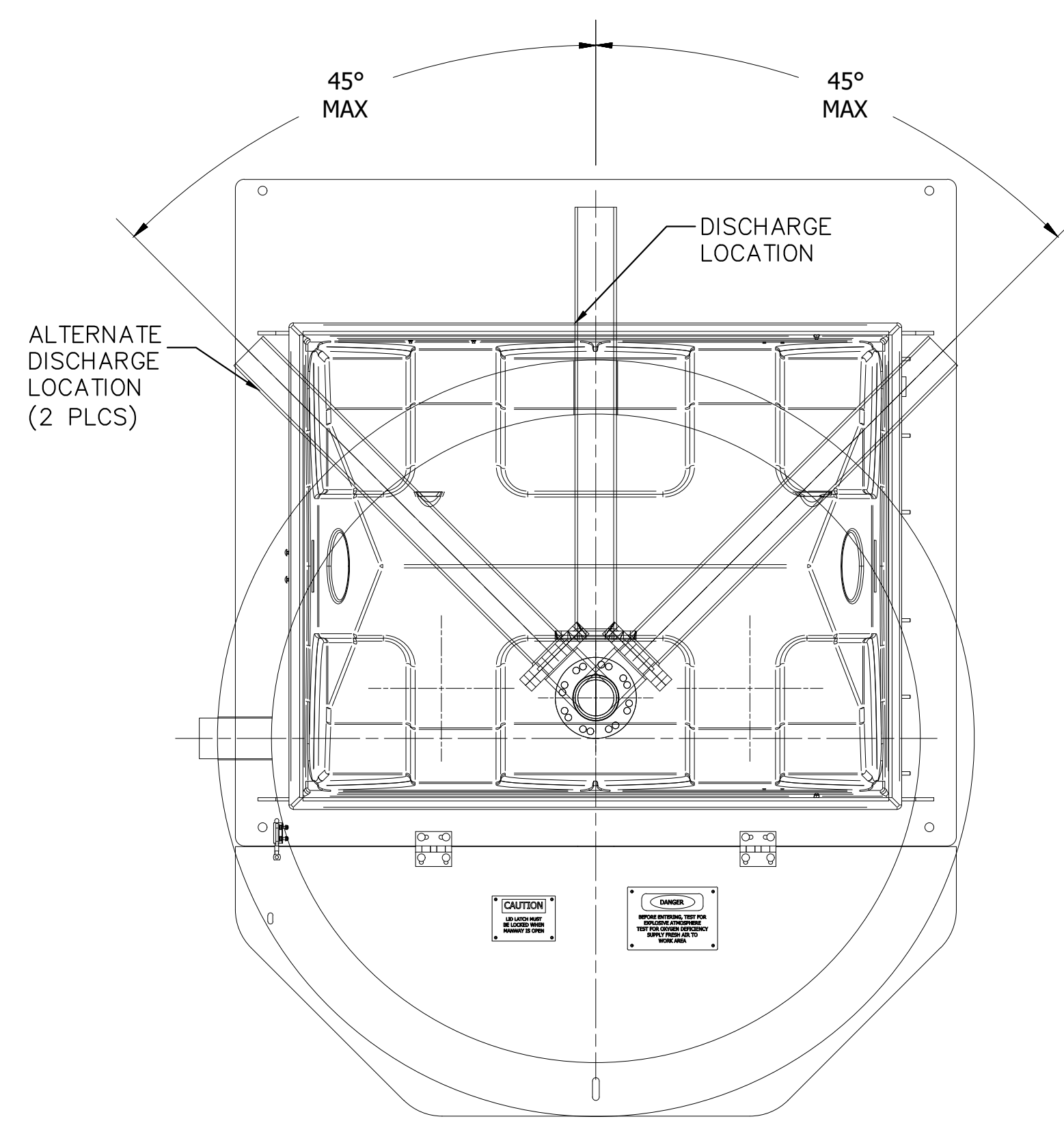
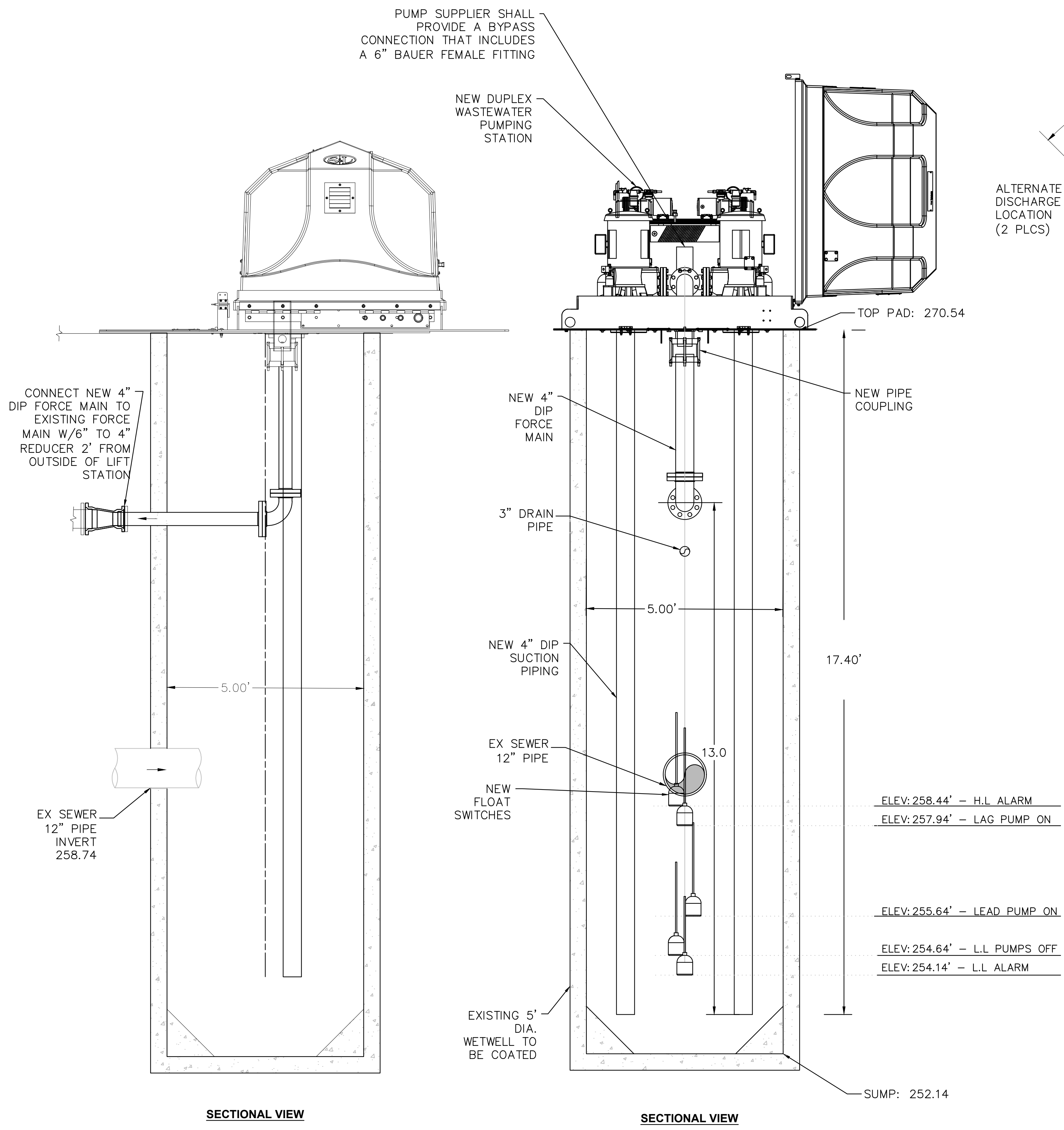
DEPUTY CITY ENGINEER DATE CITY ENGINEER DATE

WINDSOR LIFT STATION IMPROVEMENTS  
 DEVELOPER: SARP 10  
 ENGINEER: ABES ENGINEERING

All inquiries regarding this drawing(s) shall be made to ABES ENGINEERING.



All inquiries regarding this drawing(s) shall be made to ABES ENGINEERING.



PLAN VIEW

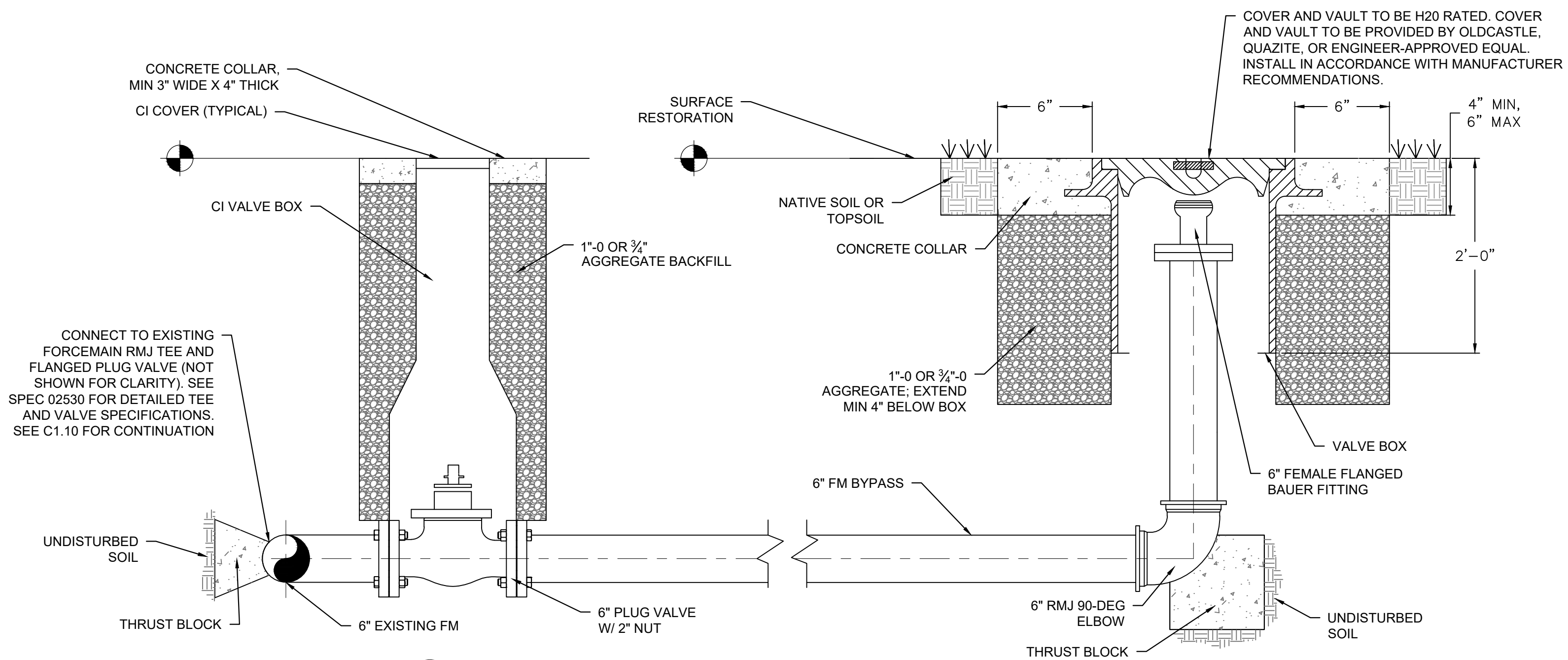
- NOTES:
1. IF THE END OF DISCHARGE LINE IS BELOW THE ELEVATION OF THE DISCHARGE LINE AT THE POINT OF LEAVING THE WET WELL, A PRIMING LOOP MAY BE REQUIRED.
  2. PROVIDE 45° SLOPE IN WET WELL AS REQUIRED.
  3. VOLUME BETWEEN L.L. ON AND PUMPS OFF SHOULD BE EQUAL TO, OR GREATER THAN, THE PUMPING RATE PER MINUTE.
  4. U.S. CUSTOMARY CONDUIT COUPLING SIZES SHOWN. ALTERNATE METRIC SIZES ARE AVAILABLE. CONSULT FACTORY.
  5. ALL PIPES TO BE LINED DIP.

- LIFT STATION REHAB NOTES:
- EXISTING 5" DIAMETER PRECAST CONCRETE WET WELL TO REMAIN.
  - REMOVE GREASE CAP IF STATION HAS ACCUMULATED GREASE.
  - REMOVE AND REPLACE EXISTING PIPING, VALVES, AND APPURTENANCES.
  - CLEAN AND COAT EXISTING WET WELL: THE TOP COAT APPLIED SHALL BE AN APPROVED POLYMER BASED POLYURETHANE, A GEOPOLYMER, OR A HIGH-BUILD SOLVENT FREE EPOXY PRODUCT IN CONJUNCTION WITH A HIGH-STRENGTH CEMENTITIOUS REPAIR/PATCH/BASE COAT. THE FOLLOWING PRODUCTS ARE ACCEPTABLE AND APPROVED. SPECTRASHIELD LINER SYSTEMS, OBIC ARMOR 1000, VORTEX STRUCTURE GUARD, GEOKRETE GEOPOLYMER BY QUADDEX, OR ECOCAST.
  - TWO NEW PUMPS:  
100 GPM AT 51' TDH; TWO 7.5HP MOTORS AT 1,760 RPM

APPROVED FOR CONSTRUCTION:

THE DOCUMENT BEARING THIS STAMP HAS BEEN RECEIVED AND REVIEWED BY THE CITY OF MEMPHIS DIVISION OF ENGINEERING UNDER AUTHORITY DELEGATED BY THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION DIVISION OF WATER RESOURCES. IT IS HEREBY APPROVED FOR CONSTRUCTION BY THE CITY ENGINEER AS EVIDENCED BY HIS SIGNATURE IN THE TITLE BLOCK BELOW.

APPROVAL EXPIRES 1 YEAR FROM APPROVAL DATE BELOW, THIS APPROVAL SHALL NOT BE CONSTRUED AS CREATING A PRESUMPTION OF CORRECT OPERATION OR AS WARRANTING BY THE CITY ENGINEER THAT THE APPROVED FACILITIES WILL REACH THE DESIRED GOALS.



FORCEMAIN EMERGENCY BYPASS CONNECTION DETAIL

REVISIONS		
DATE	DESCRIPTIONS	APPROVED



WINDSOR LIFT STATION IMPROVEMENTS  
 DEVELOPER: SARP 10  
 ENGINEER: ABES ENGINEERING

SEWER BASIN: HL-01

SHEET 1 OF 1  
 DIVISION OF ENGINEERING

**PROPOSED LS PLAN AND SECTION**

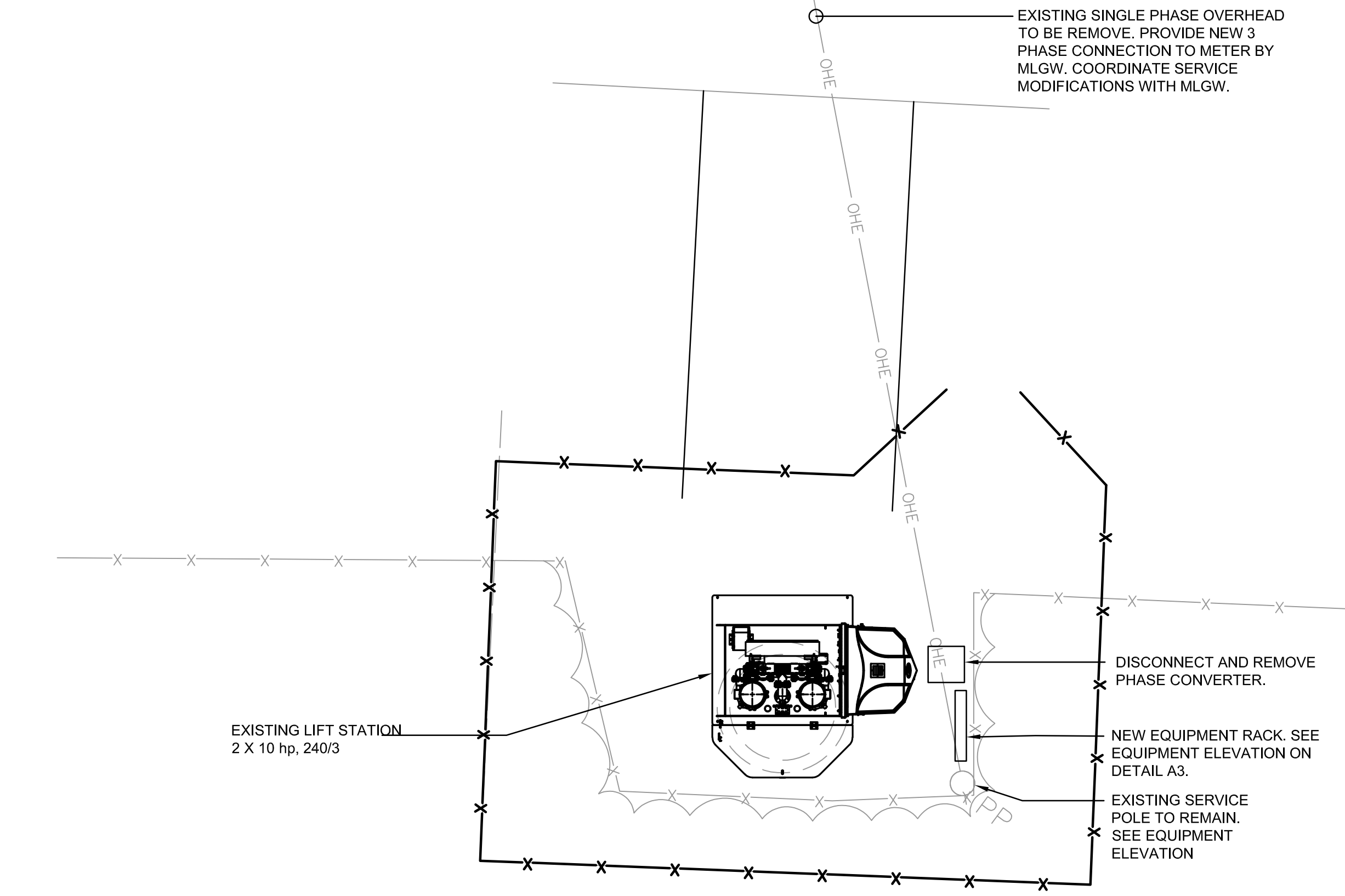
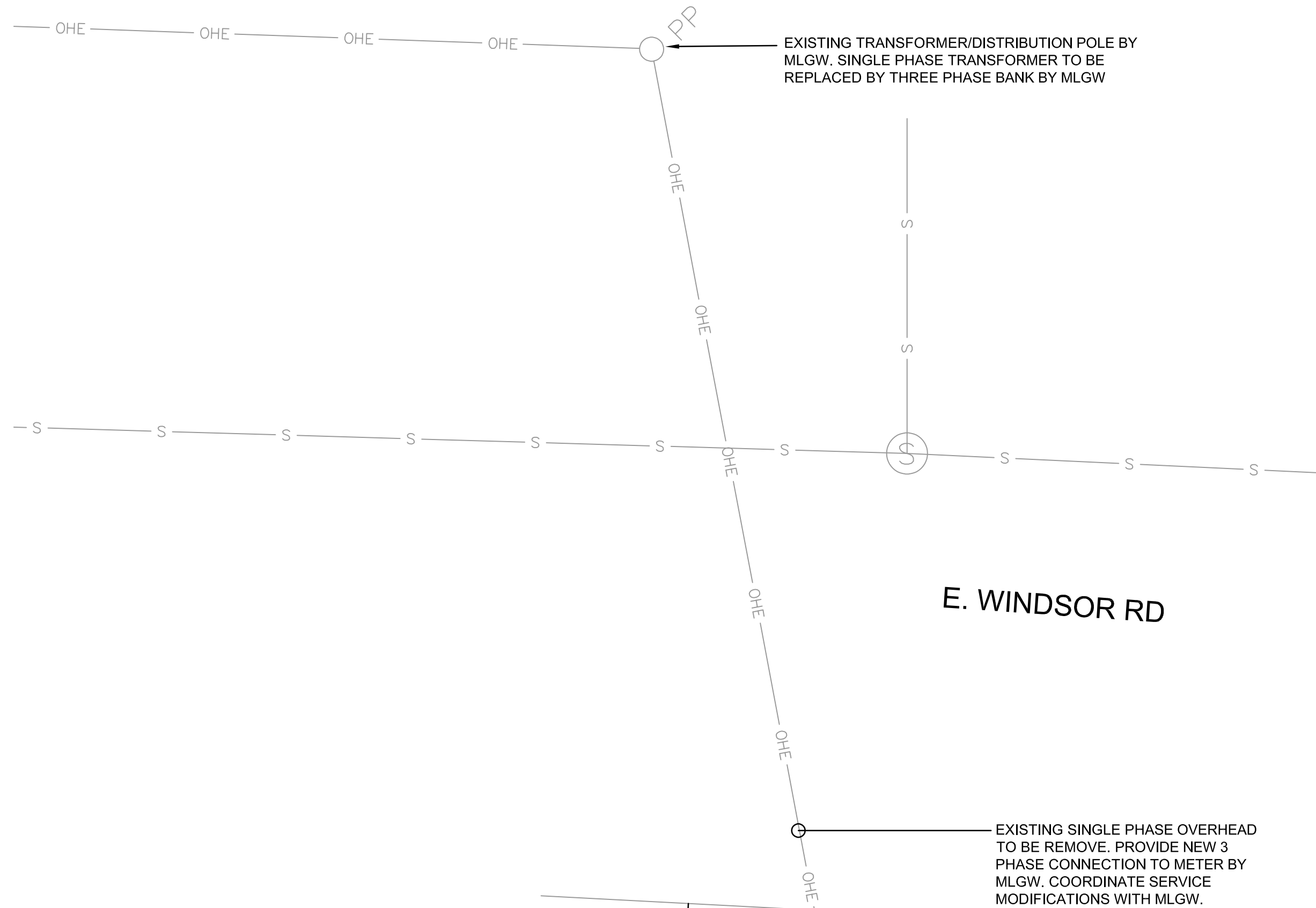
277 WINDSOR ROAD  
 MEMPHIS, TENNESSEE

SURVEY BY: WES ASHWORTH, RLS DATE: 08/21 PROJECT NO: 280-21-002  
 DESIGN BY: BRAD DAVIS, PE DATE: 12/21 SCALE: NTS  
 REVIEWED

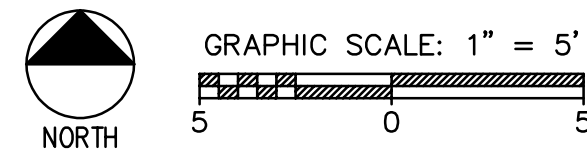
DEPUTY CITY ENGINEER DATE CITY ENGINEER DATE

C1.2

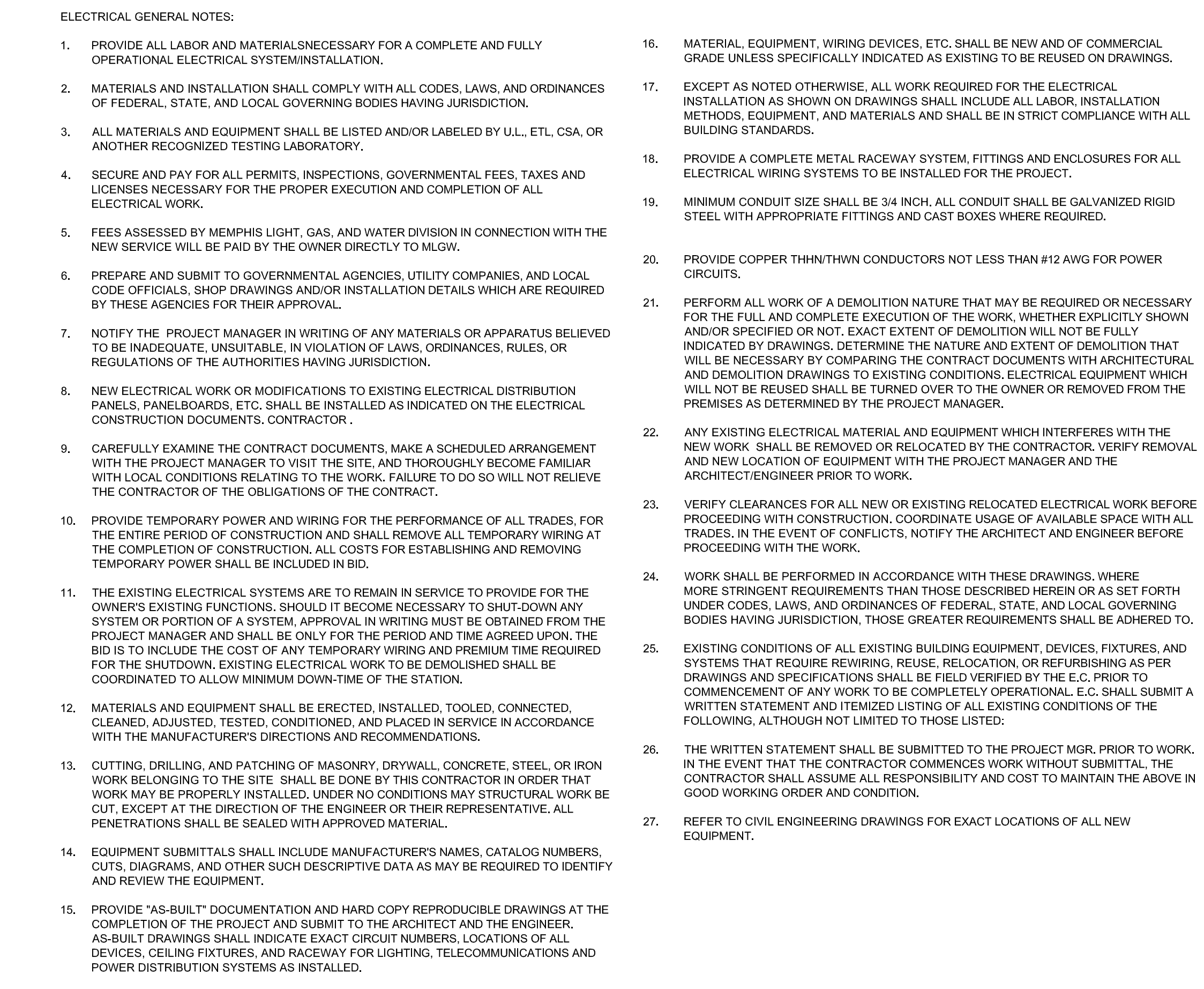




**D1 ELECTRICAL SITE PLAN**



**A3 EQUIPMENT ELEVATION**  
1/2" = 1'-0"



**C3 ELECTRICAL GENERAL NOTES**  
N.T.S.

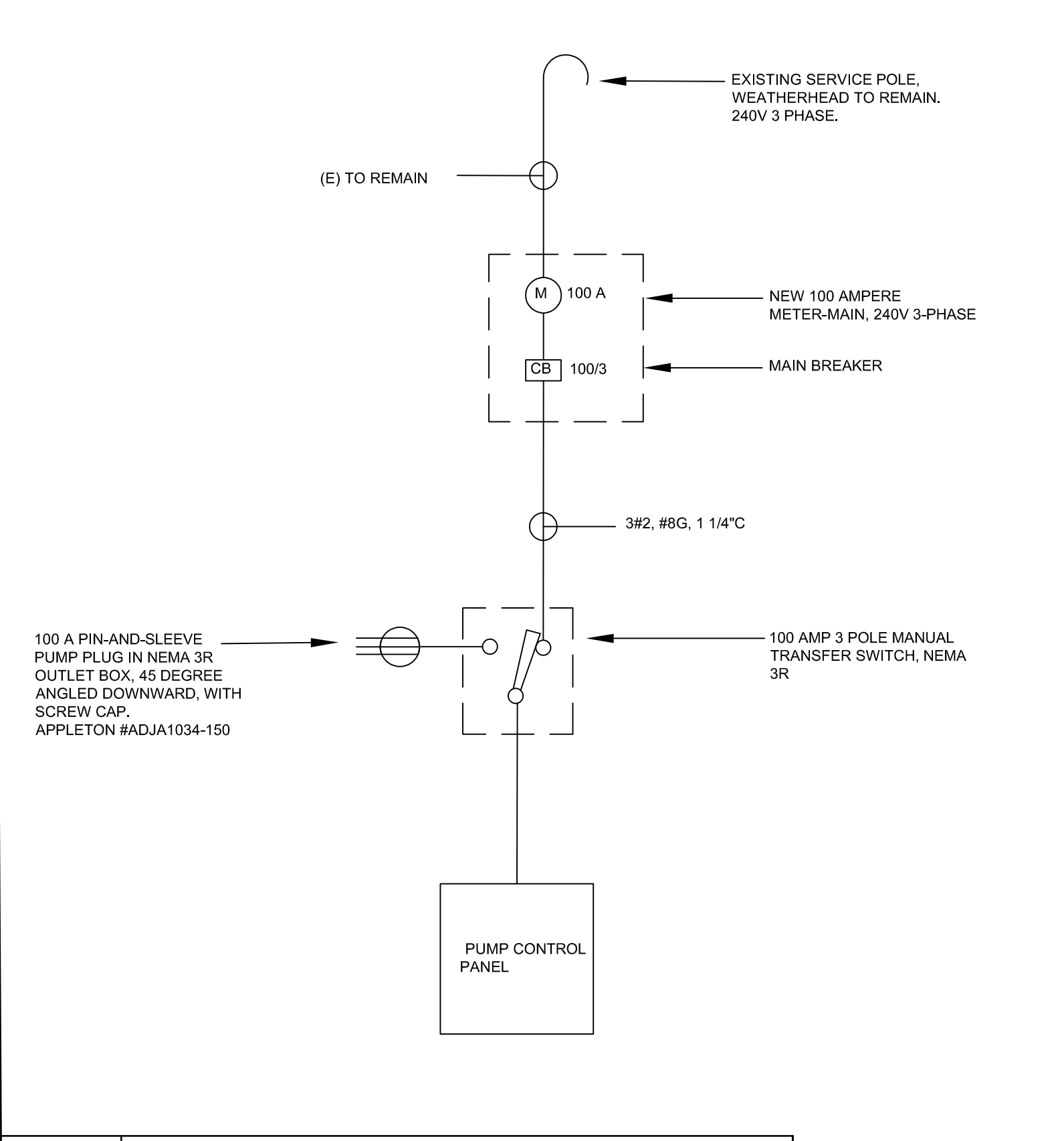
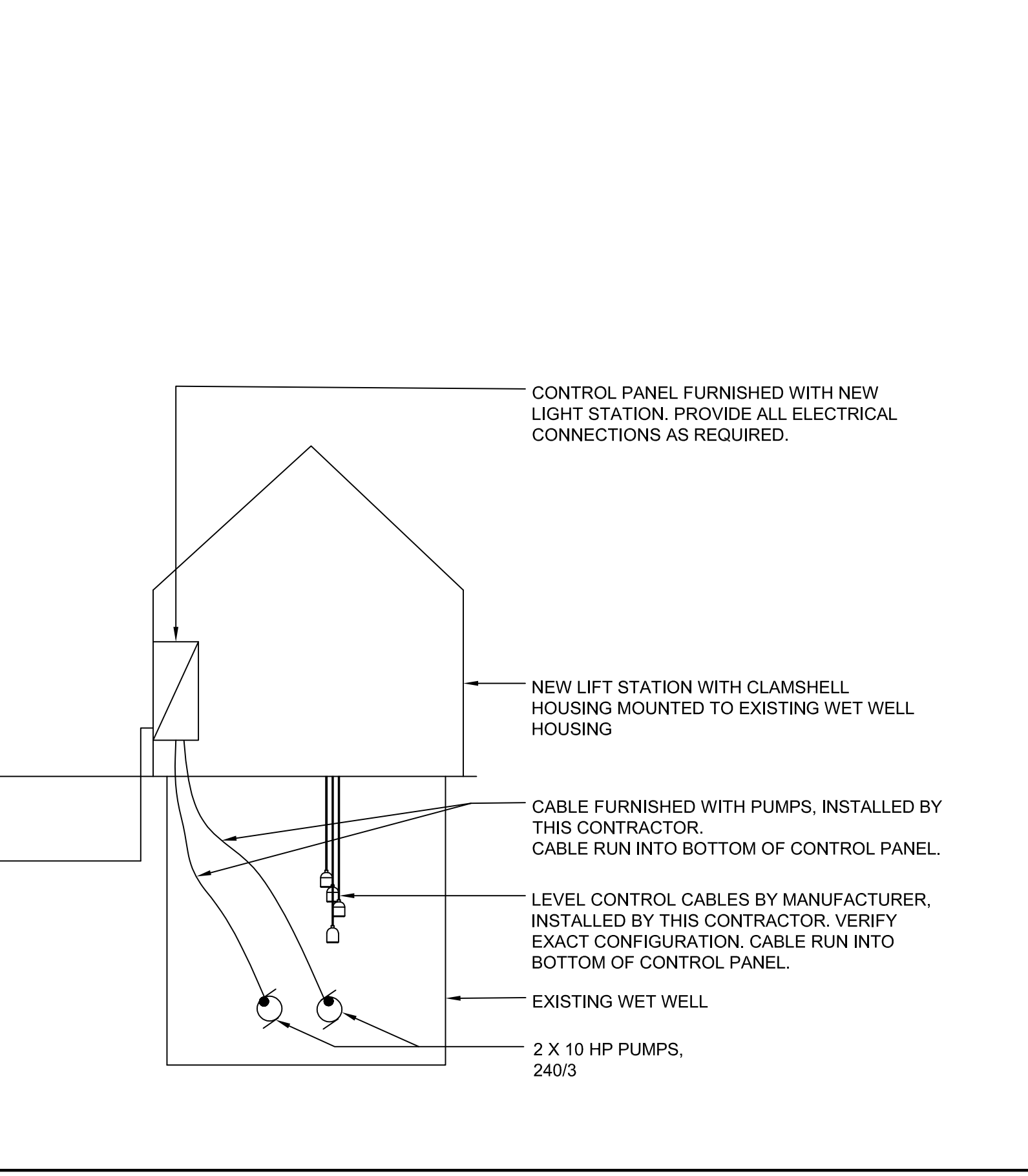
- ELECTRICAL GENERAL NOTES:
1. PROVIDE ALL LABOR AND MATERIALS NECESSARY FOR A COMPLETE AND FULLY OPERATIONAL ELECTRICAL SYSTEM INSTALLATION.
  2. MATERIALS AND INSTALLATION SHALL COMPLY WITH ALL CODES, LAWS, AND ORDINANCES OF FEDERAL, STATE, AND LOCAL GOVERNING BODIES HAVING JURISDICTION.
  3. ALL MATERIALS AND EQUIPMENT SHALL BE LISTED AND/OR LABELED BY U.L., E.T.L., CSA, OR ANOTHER RECOGNIZED TESTING LABORATORY.
  4. SECURE AND PAY FOR ALL PERMITS, INSPECTIONS, GOVERNMENTAL FEES, TAXES AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF ALL ELECTRICAL WORK.
  5. FEES ASSESSED BY MEMPHIS LIGHT, GAS, AND WATER DIVISION IN CONNECTION WITH THE NEW SERVICE WILL BE PAID BY THE OWNER DIRECTLY TO MLGW.
  6. PREPARE AND SUBMIT TO GOVERNMENTAL AGENCIES, UTILITY COMPANIES, AND LOCAL CODE OFFICIALS, SHOP DRAWINGS AND/OR INSTALLATION DETAILS WHICH ARE REQUIRED BY THESE AGENCIES FOR THEIR APPROVAL.
  7. NOTIFY THE PROJECT MANAGER IN WRITING OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES, OR REGULATIONS OF THE AUTHORITIES HAVING JURISDICTION.
  8. NEW ELECTRICAL WORK OR MODIFICATIONS TO EXISTING ELECTRICAL DISTRIBUTION PANELS, PANELBOARDS, ETC. SHALL BE INSTALLED AS INDICATED ON THE ELECTRICAL CONSTRUCTION DOCUMENTS, CONTRACTOR.
  9. CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, MAKE A SCHEDULED ARRANGEMENT WITH THE PROJECT MANAGER TO VISIT THE SITE, AND THOROUGHLY BECOME FAMILIAR WITH LOCAL CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
  10. PROVIDE TEMPORARY POWER AND WIRING FOR THE PERFORMANCE OF ALL TRADES, FOR THE ENTIRE PERIOD OF CONSTRUCTION AND SHALL REMOVE ALL TEMPORARY WIRING AT THE COMPLETION OF CONSTRUCTION. ALL COSTS FOR ESTABLISHING AND REMOVING TEMPORARY POWER SHALL BE INCLUDED IN BID.
  11. THE EXISTING ELECTRICAL SYSTEMS ARE TO REMAIN IN SERVICE TO PROVIDE FOR THE OWNER'S EXISTING FUNCTIONS. SHOULD IT BECOME NECESSARY TO SHUT-DOWN ANY SYSTEM OR PORTION OF A SYSTEM, APPROVAL IN WRITING MUST BE OBTAINED FROM THE PROJECT MANAGER AND SHALL BE ONLY FOR THE PERIOD AND TIME AGREED UPON. THE BID IS TO INCLUDE THE COST OF ANY TEMPORARY WIRING AND PREMIUM TIME REQUIRED FOR THE SHUTDOWN. EXISTING ELECTRICAL WORK TO BE DEMOLISHED SHALL BE COORDINATED TO ALLOW MINIMUM DOWNTIME OF THE STATION.
  12. MATERIALS AND EQUIPMENT SHALL BE ERECTED, INSTALLED, TOOLED, CONNECTED, CLEANED, ADJUSTED, TESTED, CONDITIONED, AND PLACED IN SERVICE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.
  13. CUTTING, DRILLING, AND PATCHING OF MASONRY, DRYWALL, CONCRETE, STEEL, OR IRON WORK BELONGING TO THE SITE SHALL BE DONE BY THIS CONTRACTOR IN ORDER THAT WORK MAY BE PROPERLY INSTALLED. UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTION OF THE ENGINEER OR THEIR REPRESENTATIVE. ALL PENETRATIONS SHALL BE SEALED WITH APPROVED MATERIAL.
  14. EQUIPMENT SUBMITTALS SHALL INCLUDE MANUFACTURER'S NAMES, CATALOG NUMBERS, CUTS, DIAGRAMS, AND OTHER SUCH DESCRIPTIVE DATA AS MAY BE REQUIRED TO IDENTIFY AND REVIEW THE EQUIPMENT.
  15. PROVIDE "AS-BUILT" DOCUMENTATION AND HARD COPY REPRODUCIBLE DRAWINGS AT THE COMPLETION OF THE PROJECT AND SUBMIT TO THE ARCHITECT AND THE ENGINEER. AS-BUILT DRAWINGS SHALL INDICATE EXACT CIRCUIT NUMBERS, LOCATIONS OF ALL DEVICES, CEILING FIXTURES, AND RACEWAY FOR LIGHTING, TELECOMMUNICATIONS AND POWER DISTRIBUTION SYSTEMS AS INSTALLED.
  16. MATERIAL, EQUIPMENT, WIRING DEVICES, ETC. SHALL BE NEW AND OF COMMERCIAL GRADE UNLESS SPECIFICALLY INDICATED AS EXISTING TO BE REUSED ON DRAWINGS.
  17. EXCEPT AS NOTED OTHERWISE, ALL WORK REQUIRED FOR THE ELECTRICAL INSTALLATION AS SHOWN ON DRAWINGS SHALL INCLUDE ALL LABOR, INSTALLATION METHODS, EQUIPMENT, AND MATERIALS AND SHALL BE IN STRICT COMPLIANCE WITH ALL BUILDING STANDARDS.
  18. PROVIDE A COMPLETE METAL RACEWAY SYSTEM, FITTINGS AND ENCLOSURES FOR ALL ELECTRICAL WIRING SYSTEMS TO BE INSTALLED FOR THE PROJECT.
  19. MINIMUM CONDUIT SIZE SHALL BE 3/4 INCH. ALL CONDUIT SHALL BE GALVANIZED RIGID STEEL WITH APPROPRIATE FITTINGS AND CAST BOXES WHERE REQUIRED.
  20. PROVIDE COPPER THIRNTHWN CONDUCTORS NOT LESS THAN #12 AWG FOR POWER CIRCUITS.
  21. PERFORM ALL WORK OF A DEMOLITION NATURE THAT MAY BE REQUIRED OR NECESSARY FOR THE FULL AND COMPLETE EXECUTION OF THE WORK, WHETHER EXPLICITLY SHOWN AND/OR SPECIFIED OR NOT. EXACT EXTENT OF DEMOLITION WILL NOT BE FULLY INDICATED BY DRAWINGS. DETERMINE THE NATURE AND EXTENT OF DEMOLITION THAT WILL BE NECESSARY BY COMPARING THE CONTRACT DOCUMENTS WITH ARCHITECTURAL AND DEMOLITION DRAWINGS TO EXISTING CONDITIONS. ELECTRICAL EQUIPMENT WHICH WILL NOT BE REUSED SHALL BE TURNED OVER TO THE OWNER OR REMOVED FROM THE PREMISES AS DETERMINED BY THE PROJECT MANAGER.
  22. ANY EXISTING ELECTRICAL MATERIAL AND EQUIPMENT WHICH INTERFERES WITH THE NEW WORK SHALL BE REMOVED OR RELOCATED BY THE CONTRACTOR. VERIFY REMOVAL AND NEW LOCATION OF EQUIPMENT WITH THE PROJECT MANAGER AND THE ARCHITECT/ENGINEER PRIOR TO WORK.
  23. VERIFY CLEARANCES FOR ALL NEW OR EXISTING RELOCATED ELECTRICAL WORK BEFORE PROCEEDING WITH CONSTRUCTION. COORDINATE USAGE OF AVAILABLE SPACE WITH ALL TRADES. IN THE EVENT OF CONFLICTS, NOTIFY THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE WORK.
  24. WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE DRAWINGS, WHERE MORE STRINGENT REQUIREMENTS THAN THOSE DESCRIBED HEREIN OR AS SET FORTH UNDER CODES, LAWS, AND ORDINANCES OF FEDERAL, STATE, AND LOCAL GOVERNING BODIES HAVING JURISDICTION, THOSE GREATER REQUIREMENTS SHALL BE ADHERED TO.
  25. EXISTING CONDITIONS OF ALL EXISTING BUILDING EQUIPMENT, DEVICES, FIXTURES, AND SYSTEMS THAT REQUIRE REWIRING, REUSE, RELOCATION, OR REFURBISHING AS PER DRAWINGS AND SPECIFICATIONS SHALL BE FIELD VERIFIED BY THE E.C. PRIOR TO COMMENCEMENT OF ANY WORK TO BE COMPLETELY OPERATIONAL. E.C. SHALL SUBMIT A WRITTEN STATEMENT AND ITEMIZED LISTING OF ALL EXISTING CONDITIONS OF THE FOLLOWING, ALTHOUGH NOT LIMITED TO THOSE LISTED:
    26. THE WRITTEN STATEMENT SHALL BE SUBMITTED TO THE PROJECT MGR. PRIOR TO WORK. IN THE EVENT THAT THE CONTRACTOR COMMENCES WORK WITHOUT SUBMITTAL, THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY AND COST TO MAINTAIN THE ABOVE IN GOOD WORKING ORDER AND CONDITION.
    27. REFER TO CIVIL ENGINEERING DRAWINGS FOR EXACT LOCATIONS OF ALL NEW EQUIPMENT.

**C5 ONE LINE DIAGRAM**  
N.T.S.



**C3 ELECTRICAL GENERAL NOTES**  
N.T.S.

- ELECTRICAL GENERAL NOTES:
16. MATERIAL, EQUIPMENT, WIRING DEVICES, ETC. SHALL BE NEW AND OF COMMERCIAL GRADE UNLESS SPECIFICALLY INDICATED AS EXISTING TO BE REUSED ON DRAWINGS.
  17. EXCEPT AS NOTED OTHERWISE, ALL WORK REQUIRED FOR THE ELECTRICAL INSTALLATION AS SHOWN ON DRAWINGS SHALL INCLUDE ALL LABOR, INSTALLATION METHODS, EQUIPMENT, AND MATERIALS AND SHALL BE IN STRICT COMPLIANCE WITH ALL BUILDING STANDARDS.
  18. PROVIDE A COMPLETE METAL RACEWAY SYSTEM, FITTINGS AND ENCLOSURES FOR ALL ELECTRICAL WIRING SYSTEMS TO BE INSTALLED FOR THE PROJECT.
  19. MINIMUM CONDUIT SIZE SHALL BE 3/4 INCH. ALL CONDUIT SHALL BE GALVANIZED RIGID STEEL WITH APPROPRIATE FITTINGS AND CAST BOXES WHERE REQUIRED.
  20. PROVIDE COPPER THIRNTHWN CONDUCTORS NOT LESS THAN #12 AWG FOR POWER CIRCUITS.
  21. PERFORM ALL WORK OF A DEMOLITION NATURE THAT MAY BE REQUIRED OR NECESSARY FOR THE FULL AND COMPLETE EXECUTION OF THE WORK, WHETHER EXPLICITLY SHOWN AND/OR SPECIFIED OR NOT. EXACT EXTENT OF DEMOLITION WILL NOT BE FULLY INDICATED BY DRAWINGS. DETERMINE THE NATURE AND EXTENT OF DEMOLITION THAT WILL BE NECESSARY BY COMPARING THE CONTRACT DOCUMENTS WITH ARCHITECTURAL AND DEMOLITION DRAWINGS TO EXISTING CONDITIONS. ELECTRICAL EQUIPMENT WHICH WILL NOT BE REUSED SHALL BE TURNED OVER TO THE OWNER OR REMOVED FROM THE PREMISES AS DETERMINED BY THE PROJECT MANAGER.
  22. ANY EXISTING ELECTRICAL MATERIAL AND EQUIPMENT WHICH INTERFERES WITH THE NEW WORK SHALL BE REMOVED OR RELOCATED BY THE CONTRACTOR. VERIFY REMOVAL AND NEW LOCATION OF EQUIPMENT WITH THE PROJECT MANAGER AND THE ARCHITECT/ENGINEER PRIOR TO WORK.
  23. VERIFY CLEARANCES FOR ALL NEW OR EXISTING RELOCATED ELECTRICAL WORK BEFORE PROCEEDING WITH CONSTRUCTION. COORDINATE USAGE OF AVAILABLE SPACE WITH ALL TRADES. IN THE EVENT OF CONFLICTS, NOTIFY THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE WORK.
  24. WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE DRAWINGS, WHERE MORE STRINGENT REQUIREMENTS THAN THOSE DESCRIBED HEREIN OR AS SET FORTH UNDER CODES, LAWS, AND ORDINANCES OF FEDERAL, STATE, AND LOCAL GOVERNING BODIES HAVING JURISDICTION, THOSE GREATER REQUIREMENTS SHALL BE ADHERED TO.
  25. EXISTING CONDITIONS OF ALL EXISTING BUILDING EQUIPMENT, DEVICES, FIXTURES, AND SYSTEMS THAT REQUIRE REWIRING, REUSE, RELOCATION, OR REFURBISHING AS PER DRAWINGS AND SPECIFICATIONS SHALL BE FIELD VERIFIED BY THE E.C. PRIOR TO COMMENCEMENT OF ANY WORK TO BE COMPLETELY OPERATIONAL. E.C. SHALL SUBMIT A WRITTEN STATEMENT AND ITEMIZED LISTING OF ALL EXISTING CONDITIONS OF THE FOLLOWING, ALTHOUGH NOT LIMITED TO THOSE LISTED:
    26. THE WRITTEN STATEMENT SHALL BE SUBMITTED TO THE PROJECT MGR. PRIOR TO WORK. IN THE EVENT THAT THE CONTRACTOR COMMENCES WORK WITHOUT SUBMITTAL, THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY AND COST TO MAINTAIN THE ABOVE IN GOOD WORKING ORDER AND CONDITION.
    27. REFER TO CIVIL ENGINEERING DRAWINGS FOR EXACT LOCATIONS OF ALL NEW EQUIPMENT.



**C5 ONE LINE DIAGRAM**  
N.T.S.

REVISIONS		
DATE	DESCRIPTIONS	APPROVED

**E1.0**

SEWER BASIN: HL01

SHEET 1 OF 1  
DIVISION OF ENGINEERING

### ELECTRICAL SITE PLAN

277 WINDSOR ROAD  
MEMPHIS, TENNESSEE

SURVEY BY: WES ASHWORTH, RLS DATE: 08/21 PROJECT NO: PN 280-21-01  
DESIGN BY: RICKY YANG 08/22 SCALE: AS SHOWN

REVIEWED

DEPUTY CIVIL ENGINEER      DATE      CITY ENGINEER      DATE

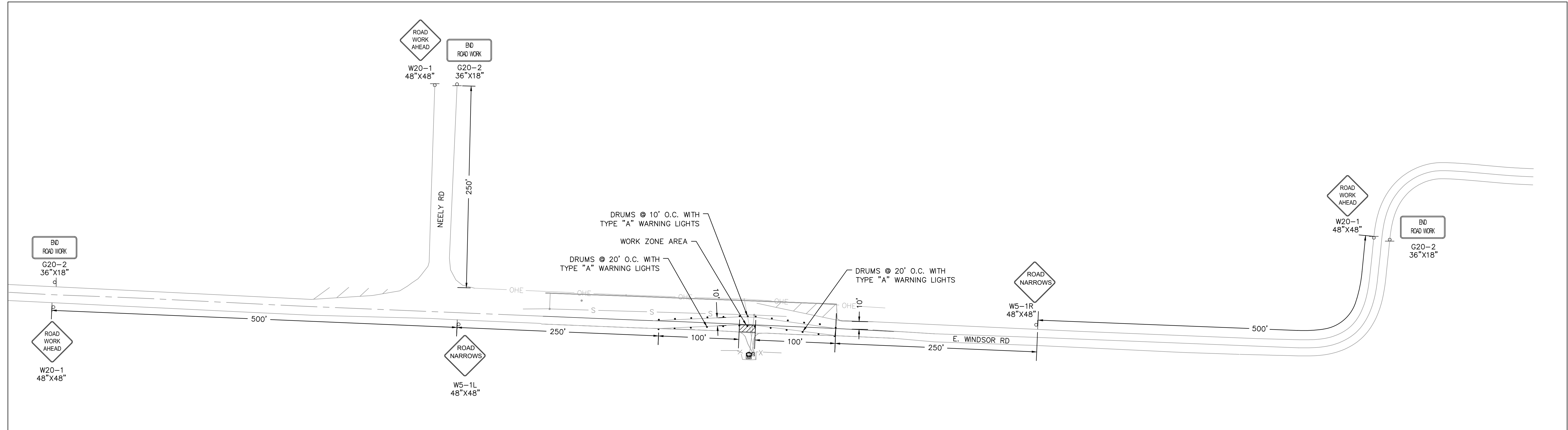
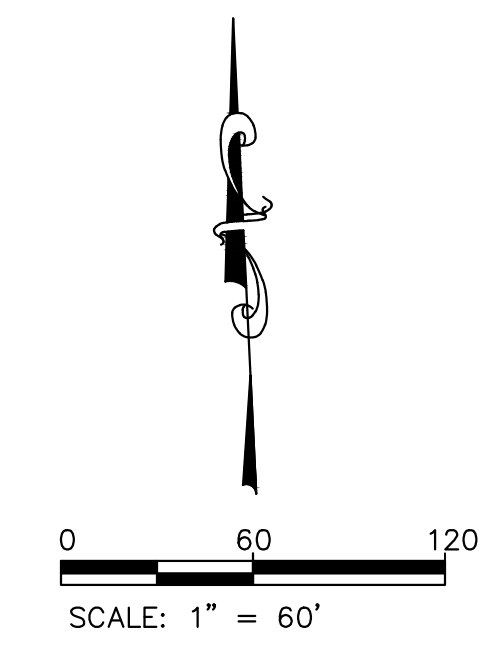
All inquiries regarding this drawing(s) shall be made to ABES ENGINEERING.



**NOTE:**  
 FLEXIBLE DRUMS AND TYPE III BARRICADES AS SHOWN FOR EASTBOUND AND WESTBOUND TRAFFIC SHALL NOT BE INSTALLED CONCURRENTLY.  
 DRUMS AND BARRICADE INSTALLATION SHALL BE IN CONJUNCTION WITH THE PORTION OF ROADWAY BEING DISRUPTED WITH PIPELINE INSTALLATION.

THE TRAFFIC CONTROL SHOWN IS THE MINIMUM REQUIRED. THE CONTRACTOR SHALL INCLUDE THE ANY ADDITIONAL TRAFFIC CONTROL NECESSARY FOR CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER. ADDITIONAL TRAFFIC CONTROL MEASURES SHALL BE APPROVED BY THE CITY OF MEMPHIS AND ENGINEER.

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	WORK ZONE
	FLEXIBLE DRUMS (CHANNELIZING)
	SIGN (CONSTRUCTION)
	TRAFFIC FLOW
	FLAGGER



**TRAFFIC CONTROL PLAN**

**TRAFFIC CONTROL NOTES:**

- CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE APPROPRIATE TRAFFIC CONTROL DEVICES IN ACCORDING WITH THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".
- CONTRACTOR SHALL BE REQUIRED TO NOTIFY THE CITY OF MEMPHIS A MINIMUM OF 24 HOURS PRIOR TO COMMENCING CONSTRUCTION OR IMPLEMENTING A TRAFFIC CONTROL PLAN. ALL TRAFFIC CONTROL DEVICES MUST BE IN PLACE BEFORE CONSTRUCTION ACTIVITY BEGINS.
- ACCESS TO ADJACENT PROPERTIES MUST BE MAINTAINED AT ALL TIMES.
- SIDE STREETS, DRIVEWAY ACCESS, AND SAFE PEDESTRIAN WAYS SHALL BE MAINTAINED AT ALL TIMES.
- THE CONTRACTOR SHALL BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THE RIGHT-OF-WAY OR WITH TEN (10) FEET OF THE EDGE OF PAVEMENT WHICHEVER IS LESS, WHEN THE LANE IS OPEN TO TRAFFIC, UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIER INSTALLED FOR OTHER PURPOSES. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO BE PARKED WITHIN THE RIGHT-OF-WAY OR WITHIN THIRTY (30 FT) OF AN OPEN TRAFFIC LANE WHICHEVER IS LESS, AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE.
- CONTRACTOR SHALL USE PLASTIC DRUMS WITH TYPE "C" WARNING LIGHTS TO SEPARATE TRAFFIC FROM THE CONSTRUCTION AREA.
- DRUMS WITH TYPE "C" WARNING LIGHTS SHALL DELINEATE THE EDGE OF PAVEMENT THROUGH THE ENTIRE CONSTRUCTION AREA. IF THE DRUMS STAY OVERNIGHT, TYPE "A" WARNING LIGHTS ARE REQUIRED.
- CONTRACTOR SHALL COVER ALL EXISTING SIGNS THAT CONFLICT WITH TRAFFIC CONTROL PLAN SIGNS OR DEVICES DURING CONSTRUCTION AND THEY SHALL REMAIN DURING THAT CONSTRUCTION AND UNTIL SUCH TIME THAT NO CONFLICT EXIST.
- CONTRACTOR SHALL INSTALL TEMPORARY "NO PARKING SIGNS" AS REQUIRED WITHIN THE TRAFFIC CONTROL AREA.
- TWO-WAY TRAFFIC SHALL BE MAINTAINED ON STREETS AT ALL TIMES.
- ONLY ONE PHASE OF THE TRAFFIC CONTROL SHALL BE ACTIVE AT ANY ONE TIME.
- ALL TEMPORARY OR PERMANENT TRAVELED SURFACES SHALL BE INSPECTED DAILY BY THE INSPECTOR (INCLUDING WEEKENDS) AND NECESSARY PATCHING OR REFINISHING PERFORMED.
- CHANNELIZING DEVICES SHALL BE REMOVED TO THE EDGE OF PAVEMENT AT THE END OF EACH WORK DAY. NO CLOSURE SHALL BE IN EFFECT FROM 4:00 P.M UNTIL 9:00 A.M.
- WORK WITHIN THE ROADWAY SHALL BE CONDUCTED BETWEEN 9:00 A.M AND 4:00 P.M AND THE ROADWAY SHALL BE COMPLETELY OPEN TO TRAFFIC AT OTHER TIMES AND ALL INAPPROPRIATE SIGN SHALL BE COVERED OR REMOVED.
- CONTRACTOR SHALL CONTACT ALL APPROPRIATE AGENCIES BEFORE CLOSING ANY ROADWAYS.
- AT NO TIME SHALL A ONE WAY SECTION BE LEFT OPEN UNATTENDED. WHERE TWO FLAGGERS ARE REQUIRED AND IN CIRCUMSTANCES WHERE ONLY ONE LANE OF TRAFFIC IS OPEN AND THERE IS NO CLEAR LINE OF SIGHT FROM ONE END OF CONSTRUCTION AREA TO THE OTHER, THE CONTRACTOR SHALL PROVIDE RADIO COMMUNICATION OR OTHER APPROPRIATE MEANS OF ESTABLISHING CONTROL OF TRAFFIC.
- ANY TIME FLAGGER IS NOT PRESENT TO CONTROL TRAFFIC, TWO TRAFFIC LANES MUST BE OPEN TO MAINTAIN TWO-WAY TRAFFIC AND ALL INAPPROPRIATE SIGNS SHALL BE COVERED OR REMOVED.
- ALL FLAGGERS SHALL BE EQUIPPED WITH A STOP/SLOW PADDLE.
- IF CONSTRUCTION ACTIVITIES REQUIRE OVER-NIGHT CLOSURE OF ANY PORTION OF THE ROADWAY, A REVISED TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO AND APPROVED BY THE CITY.

TRAFFIC CONTROL DURATION = 1 WEEK  
 DESIGN SPEED = 35 MPH

REVISIONS		
DATE	DESCRIPTIONS	APPROVED



**WINDSOR LIFT STATION IMPROVEMENTS**  
 DEVELOPER: SARP 10  
 ENGINEER: ABES ENGINEERING

SEWER BASIN: HL-01 T1.0

SHEET 1 OF 1  
 DIVISION OF ENGINEERING

### TRAFFIC CONTROL PLAN

277 WINDSOR ROAD  
 MEMPHIS, TENNESSEE

SURVEY BY: DATE: 08/21 PROJECT NO: 280-21-002  
 DESIGN BY: BRAD DAVIS, PE DATE: 12/21 SCALE: SHOWN  
 REVIEWED DATE: 12/21

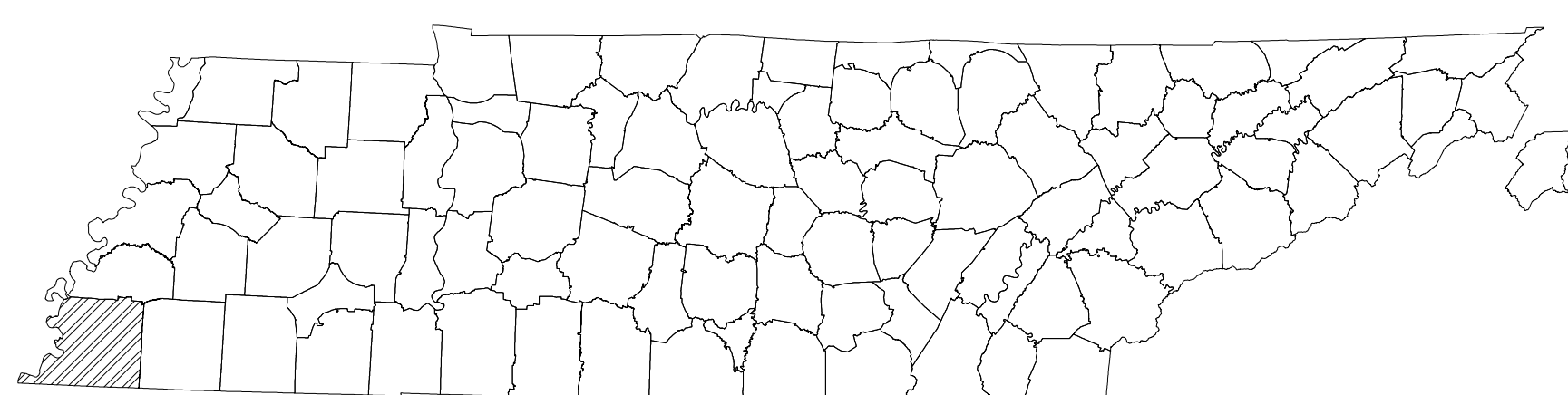
DEPUTY CITY ENGINEER DATE CITY ENGINEER DATE

All inquiries regarding this drawing(s) shall be made to ABES ENGINEERING.

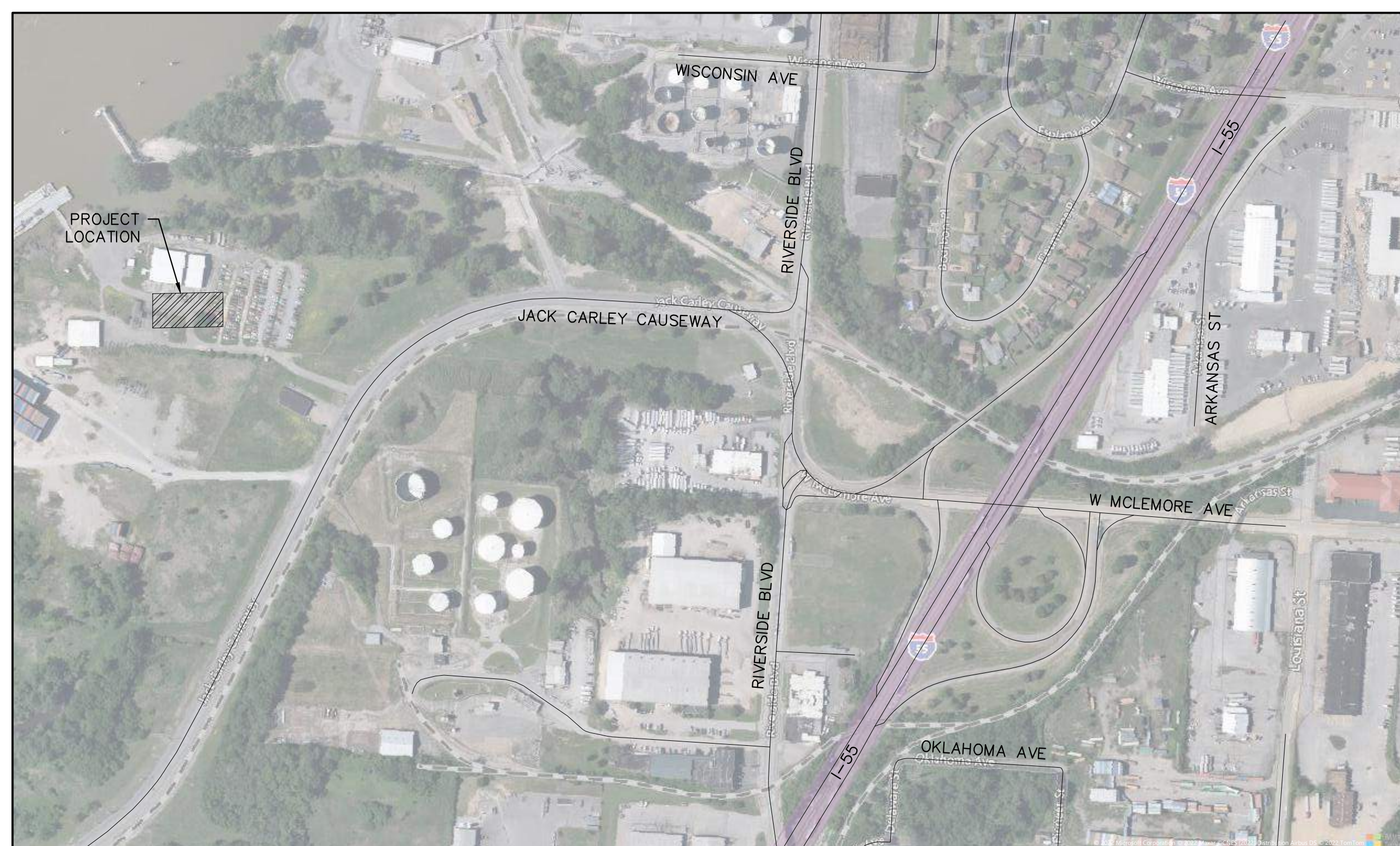
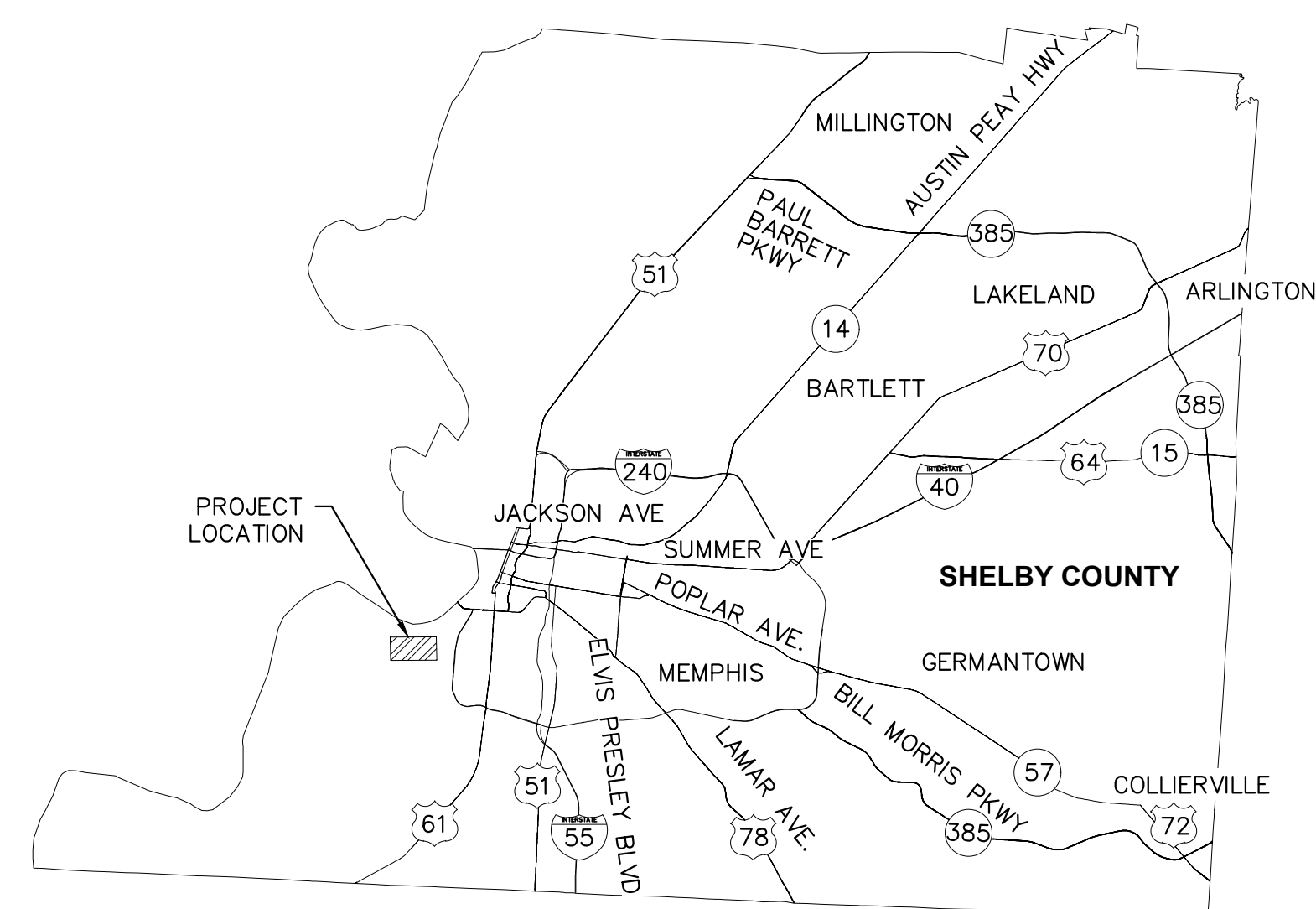


# 482 J. CARLEY LIFT STATION IMPROVEMENTS

SEWER ASSESSMENT & REHABILITATION PROGRAM (SARP 10)  
CITY OF MEMPHIS, TENNESSEE



STATE OF TENNESSEE:



**INDEX OF DRAWINGS:**

- G0.0 COVER SHEET
- G1.0 GENERAL NOTES
- C1.0 DEMOLITION AND SITE PLAN
- C1.1 EXISTING LS PLAN AND SECTION
- C1.2 PROPOSED LS PLAN AND SECTION
- C1.3 LS WORKING PLATFORM
- E0.1 ELECTRICAL LEGEND AND NOTES
- E1.0 ELECTRICAL SITE PLAN AND RISER DIAGRAM



ABES ENGINEERING, INC  
2500 MT. MORIAH RD. SUITE H229  
MEMPHIS, TN 38115  
901 340-3011



All inquiries regarding this drawing(s) shall be made to ABES ENGINEERING.

**SANITARY SEWER NOTES:**

1. LOCATION OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND ARE NOT NECESSARILY ALL OF SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITY COMPANY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES AND/OR UNDERGROUND STRUCTURES PRIOR TO THE INITIATION OF ANY CONSTRUCTION. CONTRACTOR SHALL ALSO ASSUME FULL RESPONSIBILITY FOR DAMAGE TO ANY UTILITIES ENCOUNTERED WITHIN CONSTRUCTION PERIMETERS. FOR SITE LOCATIONS OF EXISTING UTILITIES INVOLVING M.L.G.&W., SOUTH CENTRAL BELL, TEXAS GAS COMPANY, AND/OR CITY OF MEMPHIS SEWER, PLEASE CALL 811.
2. CONTRACTOR SHALL ENSURE UNINTERRUPTED SEWER SERVICE ON EXISTING SEWER AND SERVICE CONNECTIONS BY PROVIDING AMPLE TEMPORARY WASTEWATER PUMPING AND/OR BYPASSING.
3. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES.
4. CONTRACTOR SHALL NOTIFY THE CITY OF MEMPHIS CONSTRUCTION INSPECTION OFFICE AT 636-2462 A MINIMUM OF 24 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION.
5. ALL AREAS IN CUT OR FILL WHERE VEGETATION HAS BEEN REMOVED SHALL BE SEEDED, MULCHED, FERTILIZED, AND/OR SODDED AS REQUIRED TO PREVENT EROSION.
6. THE CONTRACTOR SHALL VERIFY EXISTING DATA AND REPORT ANY SIGNIFICANT DISCREPANCIES TO THE ENGINEER.
7. ALL SANITARY SEWER TO BE CONSTRUCTED AS PER CITY OF MEMPHIS STANDARD CONSTRUCTION SPECIFICATIONS. SANITARY SEWER SERVICE CONNECTIONS TO BE INSTALLED AS PER CITY OF MEMPHIS STANDARD SST-16.
8. ALL SEWER MANHOLE LIDS IN OPEN AREAS ARE TO BE CONSTRUCTED 1.5' ABOVE PROPOSED GRADE. IN BACKYARDS, MANHOLE LIDS ARE TO BE 1.5' ABOVE INITIAL GRADE, 0.5' ABOVE FINAL GRADE.
9. ALL SANITARY SEWER, INCLUDING SERVICE CONNECTIONS, WHICH HAS LESS THAN 1.5' CLEARANCE (OUTSIDE OF PIPES) WITH DRAINAGE OR IN FILLED AREAS SHALL BE CLASS 50 D.I.P. OR CONCRETE ENCASED, 10' MINIMUM BOTH SIDES OF CROSSING. ALL DUCTILE IRON PIPE (D.I.P) SHALL BE POLYETHYLENE LINED OR SHALL BE TREATED WITH PROTECTO 401 OR APPROVED EQUIVALENT.
10. THE CITY OF MEMPHIS SHALL HAVE INGRESS/EGRESS RIGHTS TO USE PRIVATE DRIVES AND YARDS FOR THE PURPOSE OF MAINTAINING ALL PUBLIC SEWER LINES AND SHALL BEAR NO RESPONSIBILITY FOR THE MAINTENANCE OF SAID PRIVATE DRIVES, FENCES AND YARDS.
11. NO TREES, SHRUBS, PERMANENT STRUCTURES, OR OTHER UTILITIES (EXCEPT FOR CROSSINGS) WILL BE ALLOWED WITHIN SANITARY SEWER EASEMENT. NO OTHER UTILITIES OR SERVICES MAY OCCUPY SANITARY SEWER EASEMENTS IN PRIVATE DRIVES AND YARDS EXCEPT FOR CROSSINGS.
12. ALL SANITARY SEWER MANHOLES IN REVERSE CROWN STREETS, ALLEYS, OR DRIVES (PUBLIC OR PRIVATE) SHALL BE PROVIDED WITH GASKETS AND PLUGS FOR PICK HOLES TO PREVENT DRAINAGE INFLOW INTO SEWER SYSTEM.
13. THE CONTRACTOR SHALL PROVIDE ADEQUATE AND EFFECTIVE EROSION CONTROL AS NECESSARY TO PREVENT ANY SILTATION INTO EXISTING DRAINAGE SYSTEM AND/OR ADJACENT PROPERTIES.
14. TRACER WIRE SHALL BE INSTALLED ALONG THE LENGTH OF ALL SEWER PIPES, SERVICE CONNECTIONS, MANHOLES AND STUBS PER STANDARD CONSTRUCTION SPECIFICATIONS AND STANDARD DETAIL (SST-17).

**DEMOLITION NOTES:**

1. THE CONTRACTOR SHALL REMOVE ALL UNDERGROUND UTILITIES AND ANY OTHER ITEMS IN ACCORDANCE WITH THE TDEC AND THE TECHNICAL SPECIFICATIONS. THE CONTRACTOR SHALL STRICTLY FOLLOW ALL CITY, STATE, AND FEDERAL GUIDELINES FOR REMOVAL AND DISPOSAL OF THESE FACILITIES.
2. ALL BUILDING, CONCRETE, ASPHALT PAVEMENT, AND GRANULAR SUBBASE SHALL BE REMOVED FULL DEPTH PER THE DIRECTION OF THE GEOTECHNICAL ENGINEER. ALL SHALL BE DISPOSED IN ACCORDANCE WITH ALL CITY, STATE AND FEDERAL REGULATIONS.
3. CONTRACTOR SHALL REMOVE & REPAIR PAVEMENT AS REQUIRED FOR UTILITY CONSTRUCTION INCLUDING BUT NOT LIMITED TO : IRRIGATION SLEEVES, SITE LIGHTNING CONDUITS, WATER LINES, SANITARY SEWER LINES, STORM DRAINAGE LINES, ETC. CONTRACTOR HAS AN OPTION TO BORE CONDUITS.
4. PRIOR TO COMMENCING ANY UTILITY WORK, CONTRACTOR SHALL NOTIFY ANY SURROUNDING PROPERTY OWNERS WHO MAY EXPERIENCE A DISRUPTION IN SERVICE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MODIFYING ANY EXISTING IRRIGATION SYSTEM TO ACCOMMODATE PARTS OF THAT EXISTING SYSTEM THAT ARE REMOVED, ABANDONED OR DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL ALSO MODIFY ANY EXISTING IRRIGATION SYSTEM TO ACCOMMODATE NEW AREAS OF LANDSCAPING. ANY IRRIGATION SLEEVES SHALL BE INSTALLED PRIOR TO PAVING AND BACKFILLED PROPERLY BY THE SITE CONTRACTOR.
6. THE CONTRACTOR SHALL ENSURE ADEQUATE ACCESS IS PROVIDED DURING ALL PHASES OF CONSTRUCTION. COORDINATE WITH THE PROJECT MANAGER.
7. WHEN REMOVING UTILITIES, CONTRACTOR SHALL GROUT AND SEAL ANY STRUCTURES THAT ARE TO REMAIN PER LOCAL REGULATIONS.
8. UTILITIES SHOWN ARE LOCATED BY FIELD SURVEY AND RECORD DRAWINGS. ADDITIONAL UNDERGROUND UTILITIES WILL BE ENCOUNTERED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE ANY INACTIVE STRUCTURE & ALERT ENGINEER OF ANY ACTIVE, UNMAPPED STRUCTURES.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION OF UTILITY DEMOLITION & RELOCATION.
10. CONTRACTOR SHALL NOT INTERRUPT DRAINAGE FROM ADJACENT PROPERTIES AND PUBLIC RIGHT-OF-WAYS.
11. ALL PUMPS, MOTORS, VALVES ETC REMOVED SHALL BE RETURNED TO MEMPHIS WTCS DEPARTMENT. CONTACT JAMES GREENLEE AT 901-636-0237 FOR FURTHER DIRECTIONS.

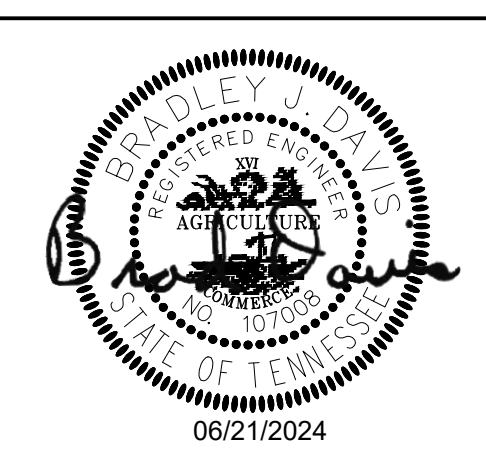
**GENERAL NOTES:**

1. AT ALL CROSSINGS OF EXISTING UTILITIES, THE CONTRACTOR SHALL FIELD LOCATE BY POST HOLEING OR OTHER APPROPRIATE METHODS, THE HORIZONTAL AND VERTICAL LOCATION ALL EXISTING UTILITIES.
2. ALL SEWER TRENCHES SHALL BE PROPERLY BACKFIELD AT THE END OF EACH WORK DAY.
3. ALL DISTURBED AREAS SHALL BE SEEDED (WITH A SEASONAL MIX) AND COVERED WITH STRAW AT THE END OF EACH WEEK (AT A MINIMUM) OR MORE FREQUENTLY, AS CONDITIONS DICTATE, IN ADDITION TO EROSION CONTROLS REFERENCED ON PLANS.
4. ALL DISTURBED LAWN AREAS SHALL BE SODDED. MATCH EXISTING SOD TYPE.
5. CONTRACTOR IS FULLY RESPONSIBLE FOR DAMAGES OF EXISTING UTILITIES, AND PUBLIC/PRIVATE INFRASTRUCTURE AND PROPERTY.

**EROSION CONTROL NOTES:**

1. CONSTRUCTION ENTRANCES (TO THE OFFICE OR LAY DOWN AREA, AND TO WORK AREAS ) TO BE A MINIMUM 6" DEPTH T.D.O.T. NO. 1 OR NO. 2 STONE.
2. INSTALL WATTLES OR SILT FENCE AS DICTATED ON THE EROSION CONTROL PLANS. SEE DETAILS FOR MORE INFORMATION.
3. ALL STOCK PILE AREAS TO BE PROTECTED BY A COMBINATION OF WATTLES AND SILT FENCE.
4. INSTALL INLET PROTECTION DEVICES AT STORM INLETS PRIOR TO CONSTRUCTION. SEE PLANS FOR LOCATIONS.
5. ALL NEWLY CUT OR FILL AREAS LACKING ADEQUATE VEGETATION SHALL BE FERTILIZED, MULCHED, SEEDED, AND /OR SODDED TO EFFECTIVELY CONTROL EROSION.
6. A SPECIFIC INDIVIDUAL SHALL BE DESIGNATED TO BE RESPONSIBLE FOR EROSION AND SEDIMENT CONTROLS ON EACH PROJECT SITE.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SOIL EROSION CONTROL MEASURES AS NOTED ON THE PLANS AND AS REQUESTED BY THE OWNER DURING THE CONSTRUCTION, AND AS NECESSARY TO PREVENT THE SEDIMENT FROM LEAVING THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SATISFYING THE REQUIREMENTS OF THE STATE OF TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK. ALL SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE CONTRACT SO AS TO PREVENT ANY SEDIMENTATION FROM WASHING OFF THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHTS-OF-WAY. SEDIMENT FENCE SHALL BE INSTALLED AS DIRECTED. THE CONTRACTOR SHALL MAINTAIN A LOG OF ALL MAINTENANCE ACTIVITIES FOR THE EROSION ELEMENTS AS REQUIRED BY THE STATE OF TENNESSEE DEPARTMENT OF WATER RESOURCES.
8. A COPY OF THE EROSION CONTROL PLAN MUST BE AVAILABLE ON SITE FOR THE DWPC INSPECTOR ON REQUEST.
9. EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONAL BEFORE EARTH MOVING OPERATIONS BEGIN, AND MUST BE CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. TEMPORARY MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORK DAY, BUT MUST BE REPLACED AT THE END OF THE WORK DAY OR PRIOR TO RAINFALL EVENTS.
10. ALL CONTROL MEASURES SHALL BE CHECKED AND STATE REQUIREMENTS FOR MAINTENANCE AND REPAIRS SHALL BE MADE AS NECESSARY. DURING PROLONGED RAINFALL, DAILY CHECKING AND REPAIRING IS NECESSARY. THE PERMITTEE SHALL MAINTAIN RECORDS OF INSPECTION CHECKS, MAINTENANCE, AND REPAIRS.
11. THIS PLAN HAS BEEN REVIEWED AND APPEARS TO BE ADEQUATE. IF SEWER PIPE INSTALLATION BY BORE DOES NOT PROVIDE FOR EFFECTIVE SEDIMENT CONTROL AND EROSION PROTECTION, ADDITIONAL MEASURES WILL BE REQUIRED.
12. IF PUMPING IS REQUIRED, SEDIMENT LADEN WATER IS NOT TO BE DISCHARGED INTO THE STORM DRAIN OR THE STREET.

REVISIONS		
DATE	DESCRIPTIONS	APPROVED



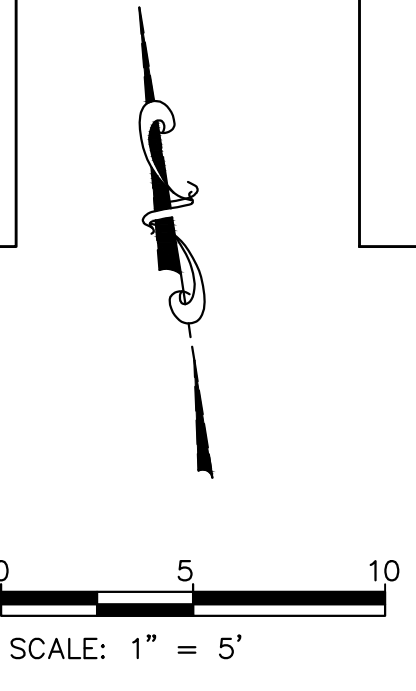
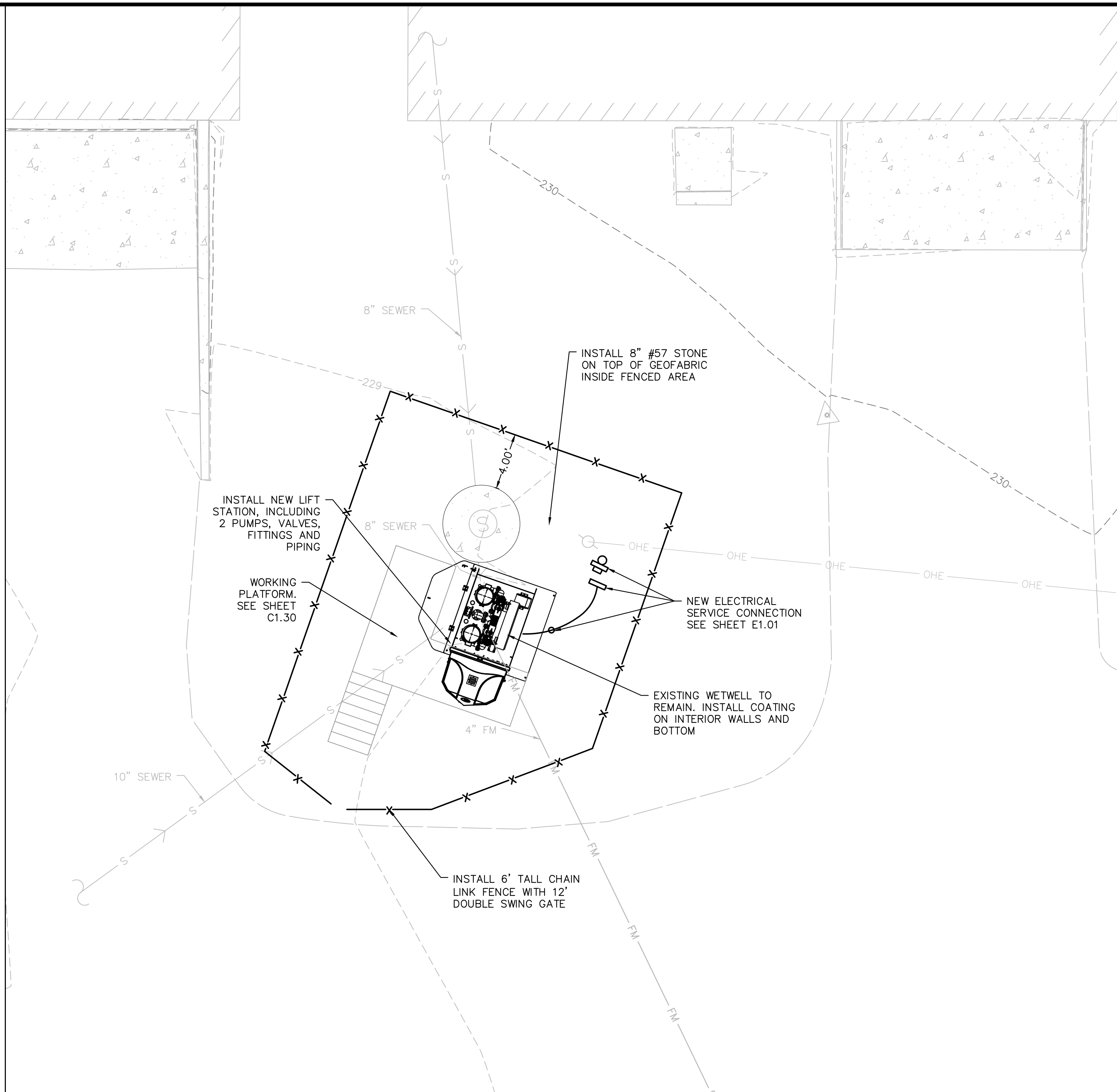
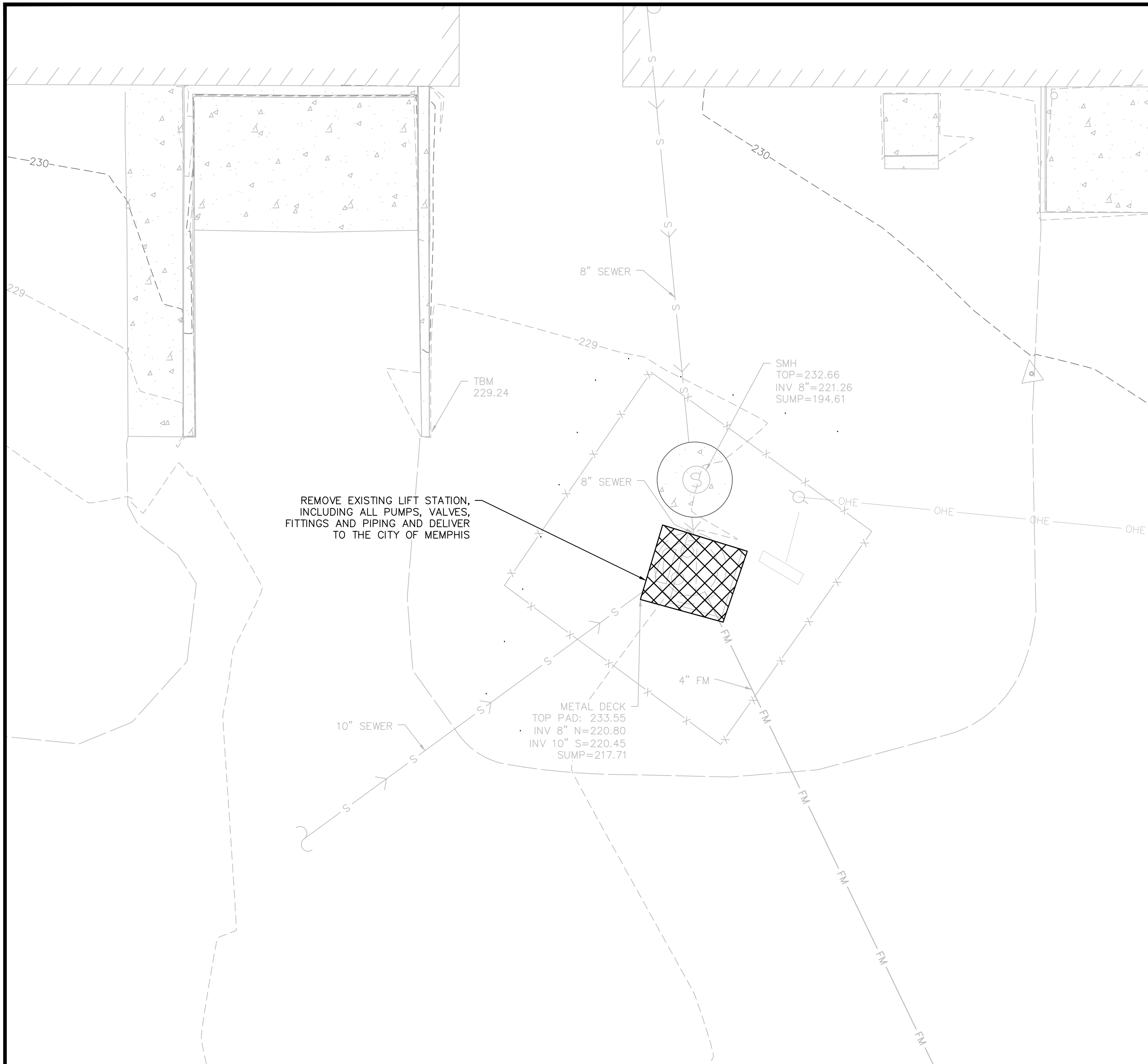
**J. CARLEY LIFT STATION IMPROVEMENTS**  
 DEVELOPER: SARP 10  
 ENGINEER: ABES ENGINEERING

SEWER BASIN: PI-01 G1.0

SHEET 1 OF 1  
 DIVISION OF ENGINEERING  
**GENERAL NOTES**  
 482 JACK CARLEY ROAD  
 MEMPHIS, TENNESSEE

SURVEY BY: WES ASHWORTH, RLS DATE: 08/21 PROJECT NO:280-21-001  
 DESIGN BY: BRAD DAVIS, PE DATE: 12/21 SCALE: SHOWN  
 REVIEWED

DEPUTY CITY ENGINEER \_\_\_\_\_ DATE CITY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_



**LEGEND**

- EXISTING**
- POWER POLE
  - SEWER MANHOLE
  - CONTROL POINT
  - FORCE MAIN
  - OVERHEAD ELECTRIC
  - FENCE
  - MAJOR CONTOURS
  - MINOR CONTOURS
  - CONCRETE
  - ASPHALT
  - BUILDING
  - EXISTING SANITARY SEWER
  - FENCE
- PROPOSED**
- REMOVE LIFT STATION

**DEMOLITION PLAN**

**EXISTING FORCEMAIN:**  
CONTRACTOR TO LOCATE AND VERIFY EXISTING FORCE MAIN ROUTING AT START OF CONSTRUCTION AND NOTIFY ENGINEER OF ANY ISSUES

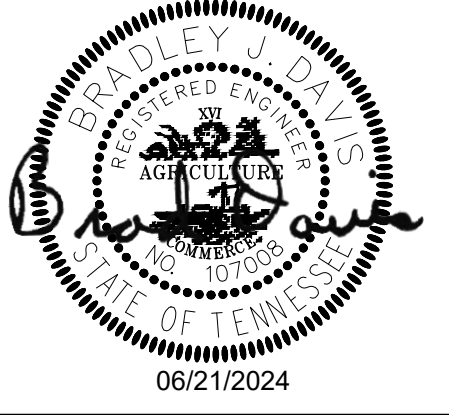
**SPECIAL FLOOD HAZARD STATEMENT:**  
THIS IS TO CERTIFY THAT BY GRAPHIC DETERMINATION THE ABOVE PLATTED PROPERTY IS NOT IN A SPECIAL FLOOD HAZARD AREA (SFHA) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD. THE SUBJECT PROPERTY IS SHOWN IN A FEMA ZONE X (NO SHADING ON FEMA MAP). AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO THE FEMA/FIRM MAP NUMBER 47157C0560F WITH AN EFFECTIVE DATE OF SEPTEMBER 28, 2007.

**PROJECT BENCHMARKS**  
**CITY BENCHMARK:**  
#675 LOCATED ON PRESIDENTS ISLAND AT JACK CARLEY & WEST TRIGG AVE IN AN ISLAND, 11' E. OF E. CURB OF JACK CARLEY, 2' W. OF P/POLE #139332, 10' W. OF W. RAIL OF R.R. ELEVATION : 247.85  
**SITE TBM:**  
TEMPORARY BENCHMARK (T.B.M.) - TOP OF RETAINING WALL SOUTH OF SOUTHEAST CORNER OF THE WESTERN MOST BUILDING. ELEVATION=229.24 (NAVD88)  
NOTE: BEFORE THE BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE SITE DATUM WITH ALL SITE TBMS AND IMMEDIATELY REPORT IN WRITING ANY DISCREPANCIES TO THE ENGINEER.

**SITE PLAN**

**APPROVED FOR CONSTRUCTION:**  
THE DOCUMENT BEARING THIS STAMP HAS BEEN RECEIVED AND REVIEWED BY THE CITY OF MEMPHIS DIVISION OF ENGINEERING UNDER AUTHORITY DELEGATED BY THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION DIVISION OF WATER RESOURCES. IT IS HEREBY APPROVED FOR CONSTRUCTION BY THE CITY ENGINEER AS EVIDENCED BY HIS SIGNATURE IN THE TITLE BLOCK BELOW.  
APPROVAL EXPIRES 1 YEAR FROM APPROVAL DATE BELOW. THIS APPROVAL SHALL NOT BE CONSTRUED AS CREATING A PRESUMPTION OF CORRECT OPERATION OR AS WARRANTING BY THE CITY ENGINEER THAT THE APPROVED FACILITIES WILL REACH THE DESIRED GOALS.

REVISIONS		
DATE	DESCRIPTIONS	APPROVED



SEWER BASIN: PI-01 C1.0

SHEET 1 OF 1  
DIVISION OF ENGINEERING

## DEMOLITION AND SITE PLAN

482 JACK CARLEY ROAD  
MEMPHIS, TENNESSEE

SURVEY BY: WES ASHWORTH, RLS DATE: 08/21 PROJECT NO:280-21-001  
DESIGN BY: BRAD DAVIS, PE DATE: 12/21 SCALE: SHOWN  
REVIEWED

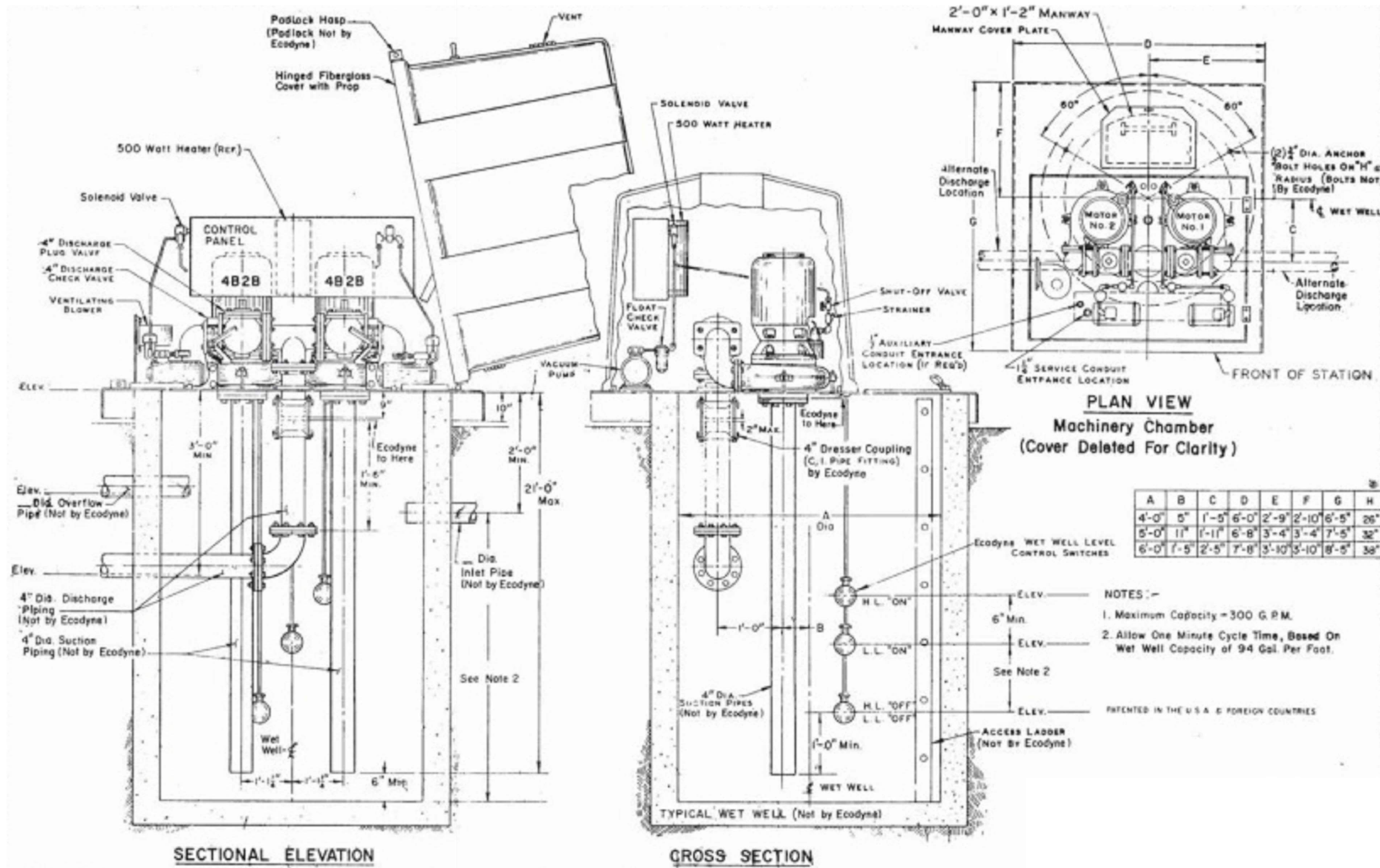
DEPUTY CITY ENGINEER DATE CITY ENGINEER DATE

**J. CARLEY LIFT STATION IMPROVEMENTS**  
DEVELOPER: SARP 10  
ENGINEER: ABES ENGINEERING

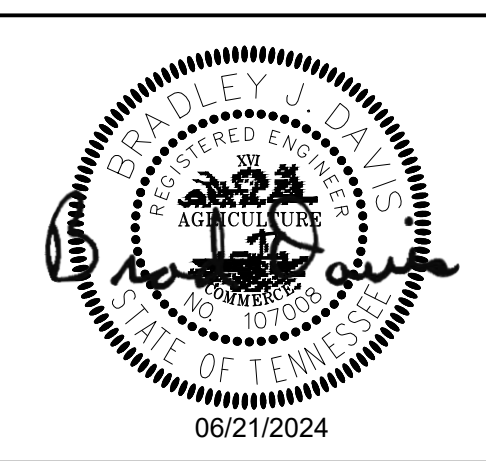
All inquiries regarding this drawing(s) shall be made to ABES ENGINEERING.



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REVISIONS		
DATE	DESCRIPTIONS	APPROVED



SEWER BASIN: PI-01

SHEET 1 OF 1  
DIVISION OF ENGINEERING

**EXISTING LS PLAN AND SECTION**

482 JACK CARLEY ROAD  
MEMPHIS, TENNESSEE

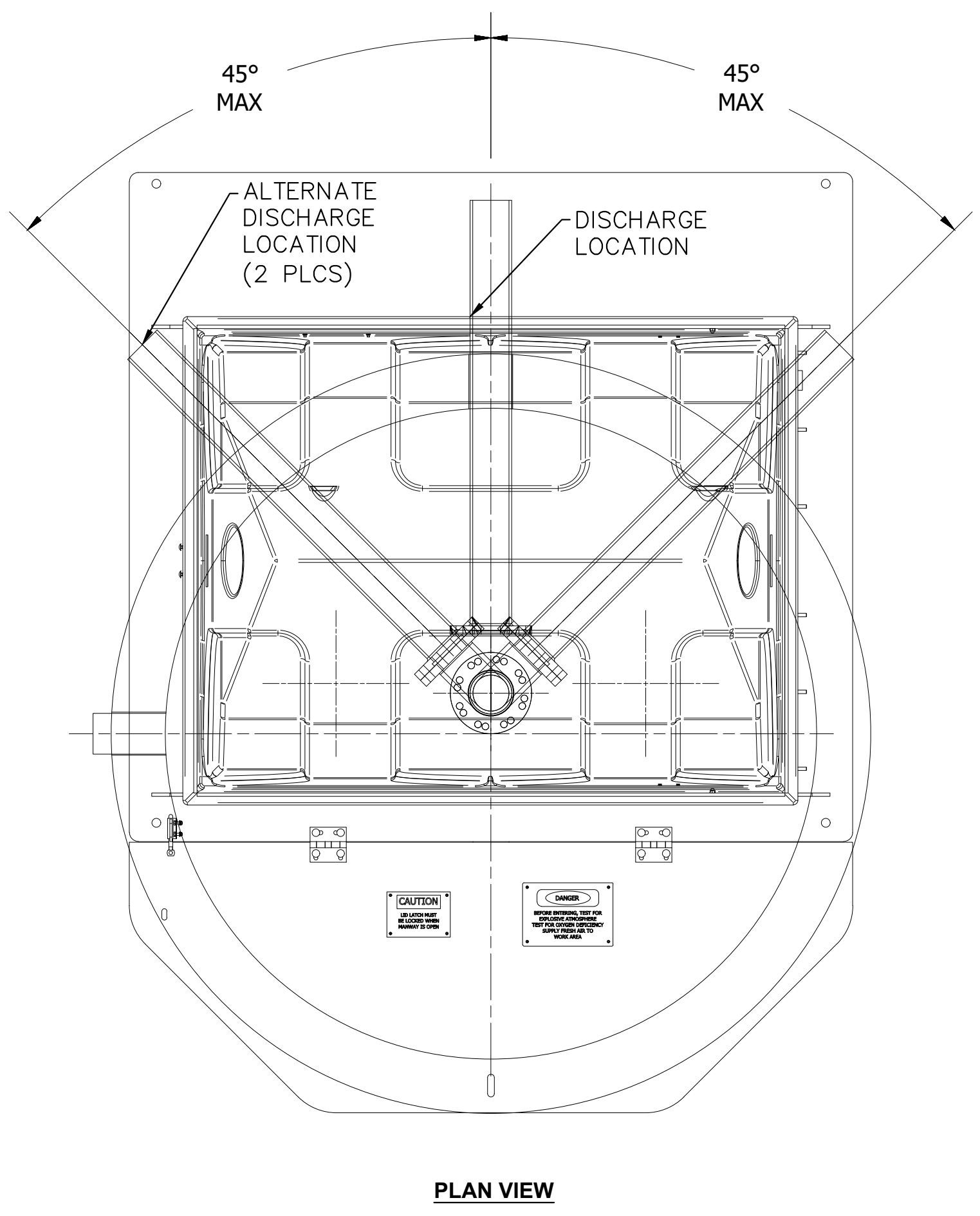
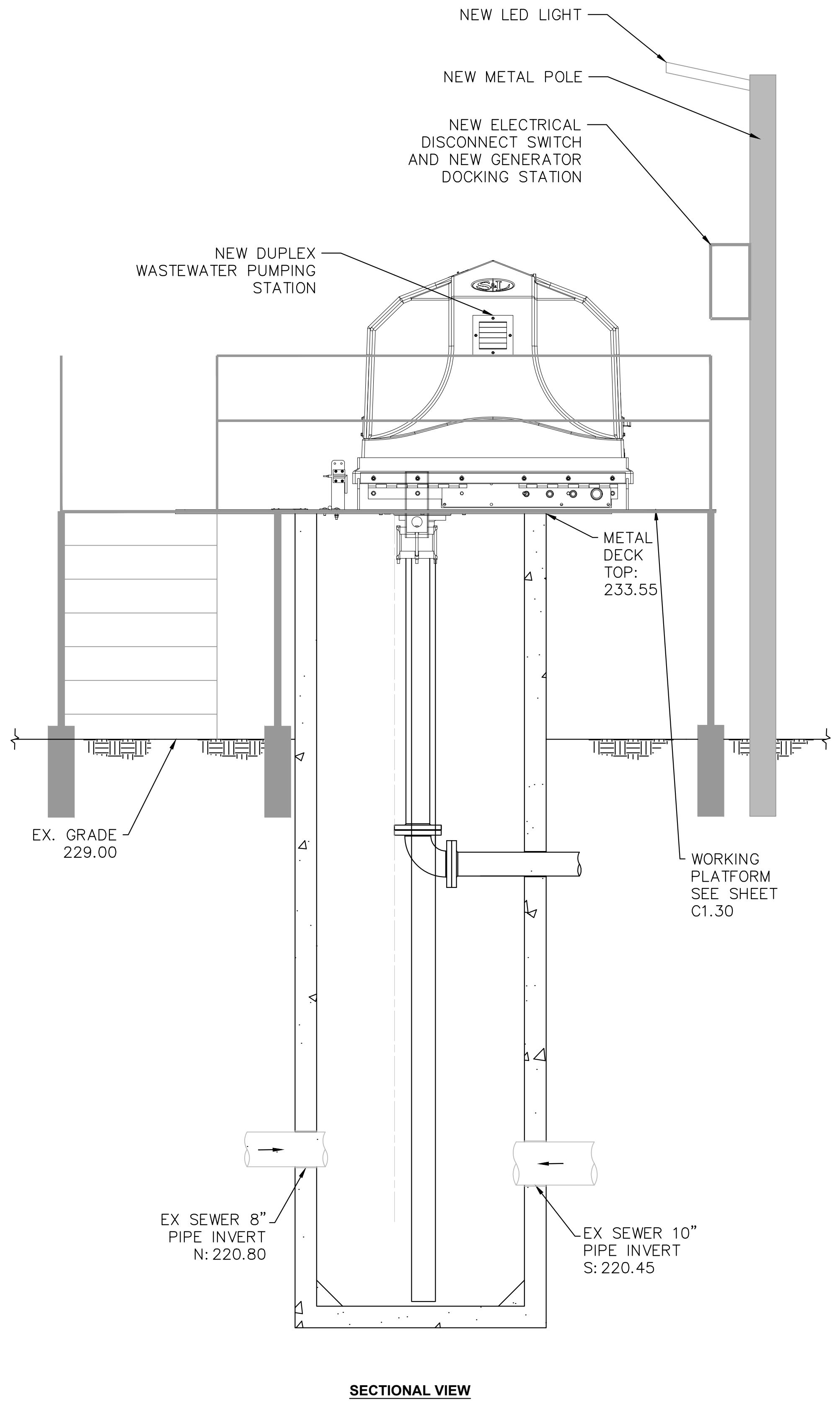
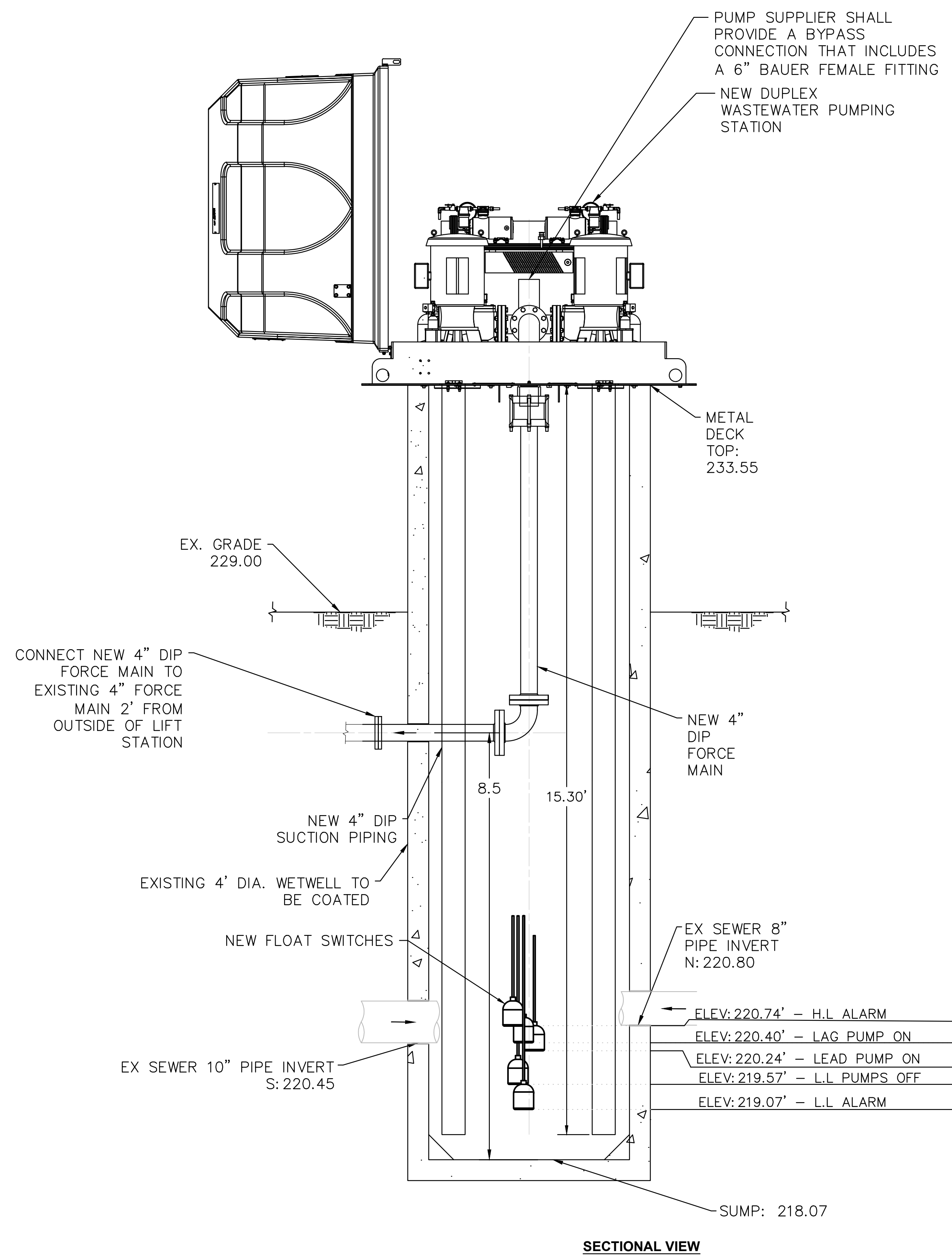
SURVEY BY: WES ASHWORTH, RLS DATE: 08/21 PROJECT NO: 280-21-001  
DESIGN BY: BRAD DAVIS, PE DATE: 12/21 SCALE: NTS  
REVIEWED

DEPUTY CITY ENGINEER DATE CITY ENGINEER DATE

J. CARLEY LIFT STATION IMPROVEMENTS  
DEVELOPER: SARP 10  
ENGINEER: ABES ENGINEERING



All inquiries regarding this drawing(s) shall be made to ABES ENGINEERING.



- NOTES:
1. IF THE END OF DISCHARGE LINE IS BELOW THE ELEVATION OF THE DISCHARGE LINE AT THE POINT OF LEAVING THE WET WELL, A PRIMING LOCK LOOP MAY BE REQUIRED.
  2. PROVIDE 45° SLOPE IN WET WELL AS REQUIRED.
  3. VOLUME BETWEEN L.L. ON AND PUMPS OFF SHOULD BE EQUAL TO, OR GREATER THAN, THE PUMPING RATE PER MINUTE.
  4. U.S. CUSTOMARY CONDUIT COUPLING SIZES SHOWN. ALTERNATE METRIC SIZES ARE AVAILABLE. CONSULT FACTORY.
  5. ALL PIPES TO BE DIP.

**LIFT STATION REHAB NOTES:**

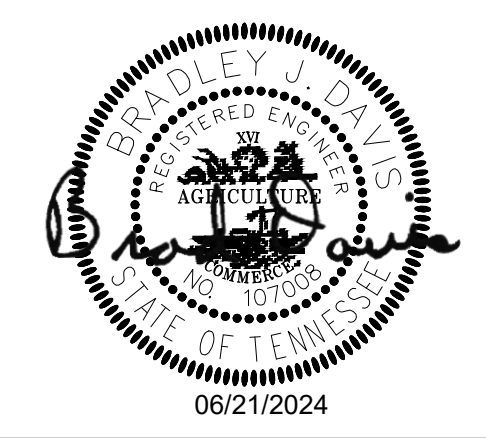
- EXISTING 4" DIA. PRECAST CONCRETE WET WELL TO REMAIN.
- REMOVE GREASE CAP IF STATION HAS ACCUMULATED GREASE.
- REMOVE AND REPLACE EXISTING PIPING, VALVES, AND APPURTENANCES.
- CLEAN AND COAT EXISTING WET WELL: THE TOP COAT APPLIED SHALL BE AN APPROVED POLYMER BASED POLYURETHANE, A GEOPOLYMER, OR A HIGH-BUILD SOLVENT FREE EPOXY PRODUCT IN CONJUNCTION WITH A HIGH-STRENGTH CEMENTITIOUS REPAIR/PATCH/BASE COAST. THE FOLLOWING PRODUCTS ARE ACCEPTABLE AND APPROVED. SPECTRASHIELD LINER SYSTEMS, OBIC ARMOR 1000, VORTEX STRUCTURE GUARD, GEOKRETE GEOPOLYMER BY QUADDEX, OR ECOCAST.
- TWO NEW PUMPS:  
80 GPM AT 40' TDH; TWO 5HP MOTORS AT 1,170 RPM

**APPROVED FOR CONSTRUCTION:**

THE DOCUMENT BEARING THIS STAMP HAS BEEN RECEIVED AND REVIEWED BY THE CITY OF MEMPHIS DIVISION OF ENGINEERING UNDER AUTHORITY DELEGATED BY THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION DIVISION OF WATER RESOURCES. IT IS HEREBY APPROVED FOR CONSTRUCTION BY THE CITY ENGINEER AS EVIDENCED BY HIS SIGNATURE IN THE TITLE BLOCK BELOW.

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REVISIONS		
DATE	DESCRIPTIONS	APPROVED



**J. CARLEY LIFT STATION IMPROVEMENTS**  
 DEVELOPER: SARP 10  
 ENGINEER: ABES ENGINEERING

SEWER BASIN: PI-01 C1.2

SHEET 1 OF 1  
 DIVISION OF ENGINEERING

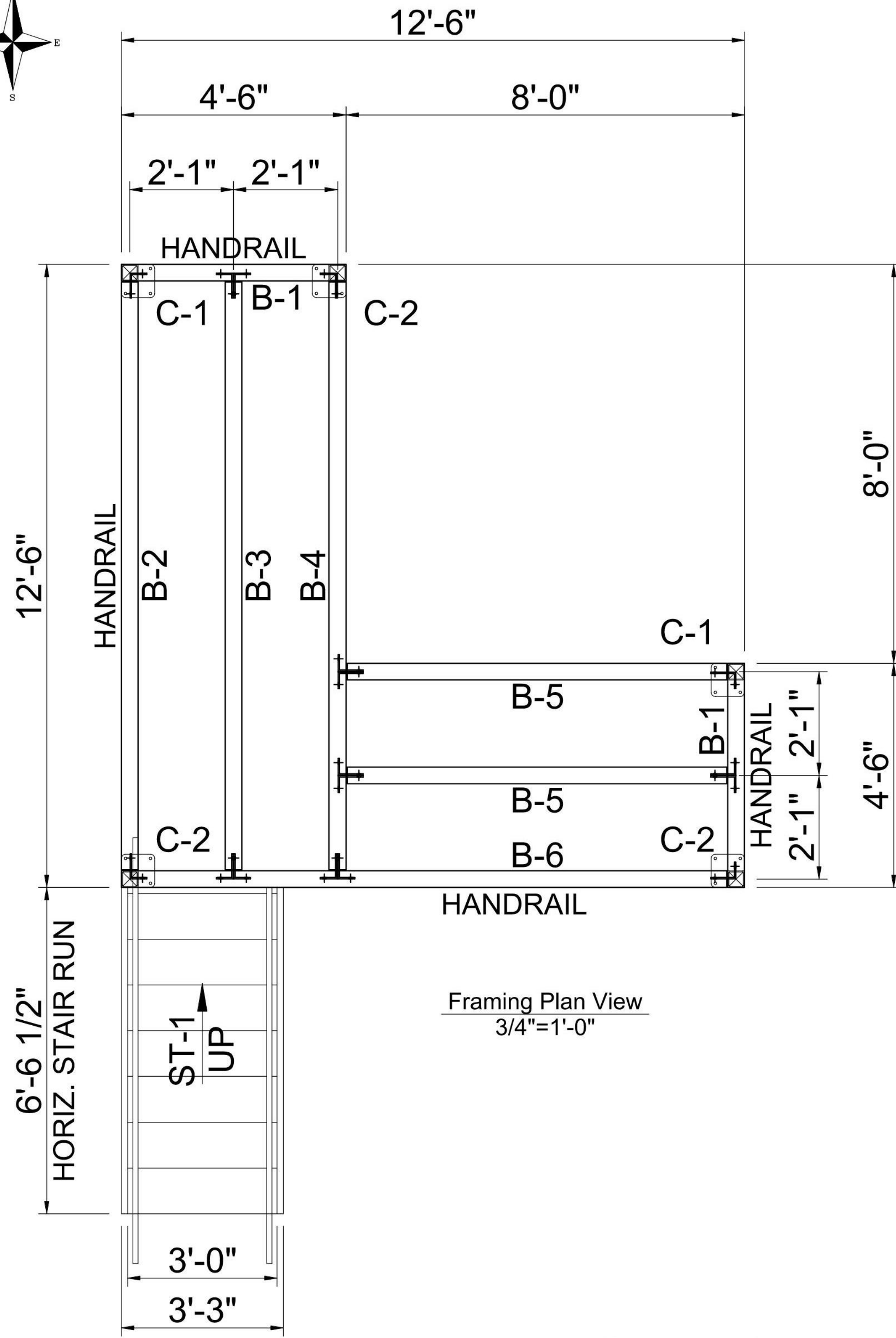
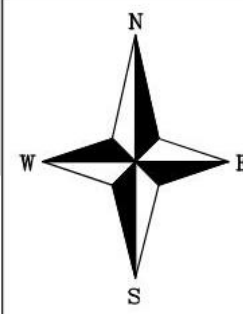
**PROPOSED LS PLAN AND SECTION**

482 JACK CARLEY ROAD  
 MEMPHIS, TENNESSEE

SURVEY BY: WES ASHWORTH, RLS DATE: 08/21 PROJECT NO: 280-21-001  
 DESIGN BY: BRAD DAVIS, PE DATE: 12/21 SCALE: NTS  
 REVIEWED

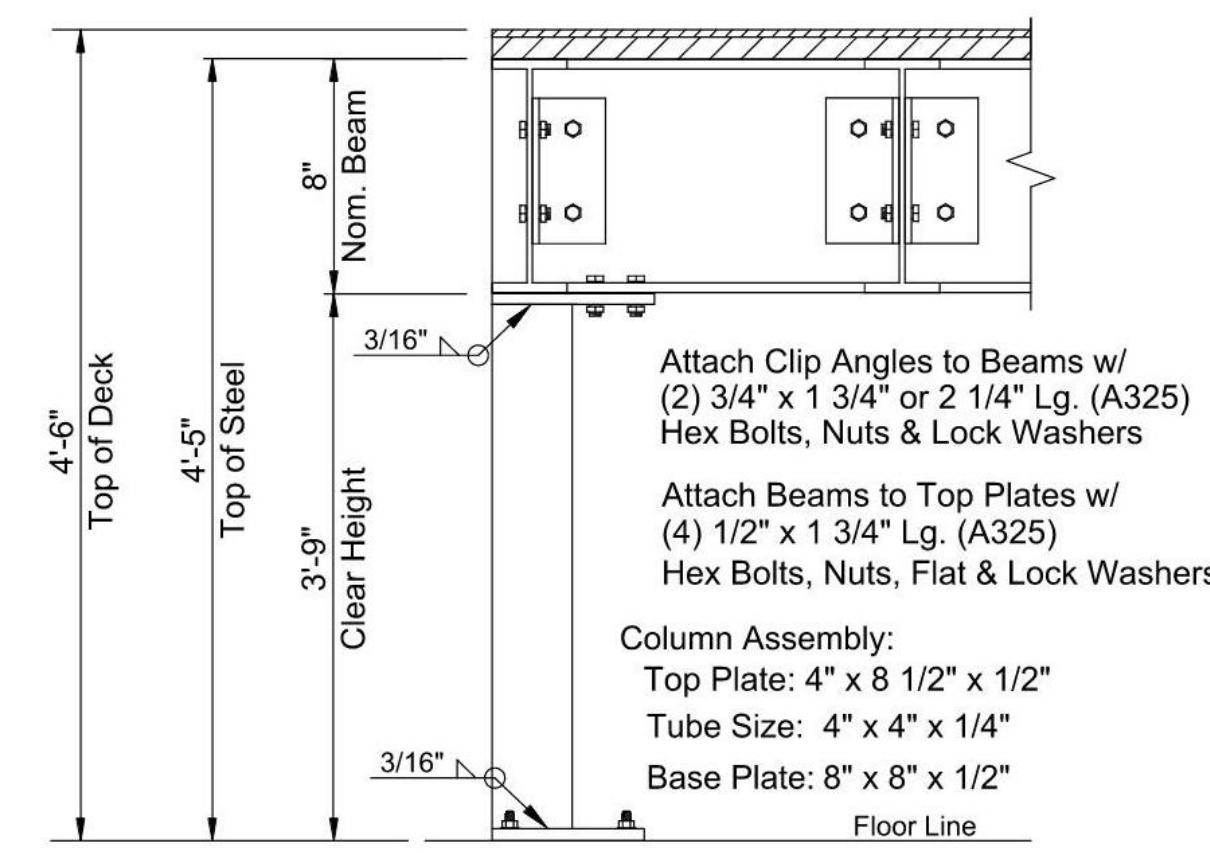
DEPUTY CITY ENGINEER \_\_\_\_\_ DATE CITY ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_





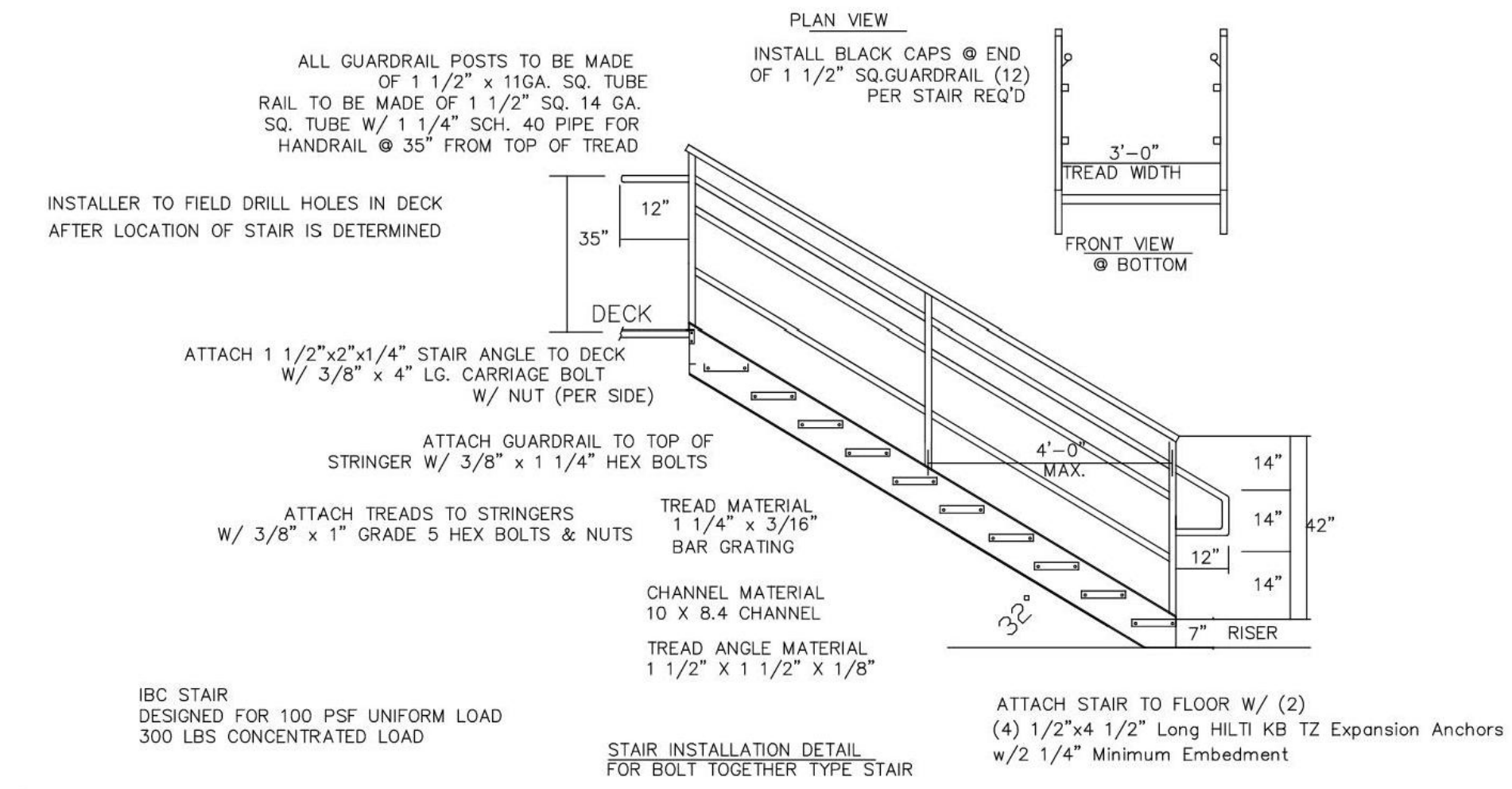
Framing Plan View  
3/4"=1'-0"

**Platform Dimension: Per Drawing**  
 Deflection: L/360  
 Load Rating: 125 PSF  
 Deck Height: 4'-6"  
 Clear Height: 3'-9"  
 Column Size: 4" Structural Steel Tube  
 Support Beam: 8" Beam  
 Deck Beam: 8" Beam  
 Stairway: Iea 36" OSHA Stairway  
 Railing: 31 Lineal Feet of 2-Rail Handrail w/ Kick Plate  
 Decking Layer 1: 1" x 1/8" Bar-Grate  
 Hardware: Included  
 Finish: Galvanized



Typical Column Detail

Attach columns to floor w/  
 (4) 1/2" x 4 1/2" Long HILTI KB TZ Expansion Anchors  
 w/ 2 1/4" Minimum Embedment or Equal



Specifications for Material (When Needed)

All Structural Steel shall conform to the latest issue of the American Institute of Steel Construction Standards titled "Specification for the Design, Fabrication & Erection of Structural Steel for Building." All Structural Bolts Shall be A-325 and meet the "Specifications for Structural Joints using A.S.T.M. A-325 or A-490 Bolts.	Bar Grating shall meet the Requirements of the Load Tables for "Steel Grating-Type W-19," as Specified in "Metal Bar Grating Manual" (Latest Edition), Published by the National Association of Architectural Metal Manufacturers. Anchor Bolts shall be "Hilti Kwik Bolts" or approved equal. Diameter shall be as specified.	Steel for Columns and Handrail shall be Cold Formed and Meet A.S.T.M. Specification A500, Grade B, with a Yield Strength of 46,000 P.S.I. Steel for Beams shall have a Minimum Yield Strength of 50,000 P.S.I., and meet Requirements of A.S.T.M. Specification A992.	Bar Joist shall meet the Requirements of "Standard Specifications for Open Web Steel Joist "K" Series, as adopted by the Steel Joist Institute. All holes at Structural Connections are to be at least 1/16" larger than the Diameter of the Bolt.	Corrugated Metal Sub-Floor shall meet the Requirements of the Load Tables for "Wide Rib Deck Type BW36 Roof Deck," as specified by the American Iron & Steel Institute, as Specified by the Steel Deck Institute. All Welds To Be E 71 OR Better.
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**Design Specifications**

Deck Height: 4'-6"	Clear Height: 3'-9"
Maximum Uniform Load Allowable: 125 p.s.f.	Maximum Vertical Deflection: L/360
Seismic Design Category: D	Type of Use: Equipment Platform
Decking Layer 1: 1" x 1/8" Bar Grating	Decking Layer 2: N/A
Decking Layer 3: N/A	Deck Supplied By: Kab Tech, Inc.
Guardrail: Number of Rails Req'd: 2 Rail	Linear Feet of Guardrail: 31' L/F
Engineering Seals Required: Yes	Engineering Calcs Required: No

**Floor Load:**

Maximum Load: 3,173 lb.	Base Plate: 8" x 8" x 1/2"	Floor Load: 50 p.s.i.
-------------------------	----------------------------	-----------------------

**Stair:**

Stair: ST-1	Quantity: 1	Code: IBC	Type of Treads: 1 1/4" Bar Grating
Stair Width: 3'-0"	Stair Height: 4'-6"	No. of Treads: 7	Horizontal Run: 6'-6 1/2"
Riser Height: 6 3/4"	Guardrail: 3 Rail	Type of Stair: Open Tread & Riser	

**Paint:**

Beams: Galvanized	Bar Joists: N/A
Columns: Galvanized	Stairs: Galvanized
Guardrail: Galvanized	Stair Guardrail: Galvanized
Decking: Galvanized	B-Deck: N/A

**Note:**

- The Customer is responsible to assure that the requirements of local building codes are met.
- Existing Floor Slab or Footing foundation design is by Others Column Loads are show above.
- The Customer is responsible to assure that Drawing Dimensions are verified against actual Job Site Conditions
- The Customer is responsible to obtain Permits, if required

Approval of this drawing, signed by a Customer's Authorized Representative, shall constitute a final interpretation of all other documents relating to the subject matter with all enclosed drawings  
**Final Fabrication cannot proceed until ALL signed Drawings are received by Kab Tech, Inc.**  
 Approval is based on acceptance of Dimensions and Height Only.  
 Design Components and Spacing of Structural Members may vary.

**Drawing Approval:**

Drawings:  Approved  Approved as Noted  Revise & Resubmit

Approved By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Company: \_\_\_\_\_ Position: \_\_\_\_\_  
 Job Site Supervisor: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Lift Equipment Supplied By: \_\_\_\_\_  
 Installation of Material By: \_\_\_\_\_  
 Note: The above signature has reviewed and approves these Drawings

**Field Measurements:**

Field Checked By:  Kab Tech  Others Name: \_\_\_\_\_  
 Company: \_\_\_\_\_ Date: \_\_\_\_\_

**Erector's Notes:**

- Review Drawings carefully before start of installation.
- Briding must be completely installed before placing any construction loads on bar joist.
- All Structural Bolts must be tightened to a minimum of 80 ft. lb. of torque.
- Anchor Bolts must have a Minimum Embedment of 2 1/4".
- Columns & Framing must be Plumb and Square.
- Remove all trash from Ground Floor and Deck Surface.

**Erector's Note**  
 Any Modifications to this structure Must be Approved by Kab Tech, Inc. in writing.

**General Notes:**

This Drawing is loaned with the expressed agreement that the Drawing & Information herein contained are the property of Kab Tech, Inc. & will not be reproduced, copied or otherwise disposed of, directly or indirectly. And this Drawing will not be used in whole or in part to assist in making, or furnishing any information for the making of drawings, print or other reproductions hereof, or for the making of apparatus of parts thereof, except upon written permission of Kab Tech, Inc., specific to each case.

Approval of this Drawing by the Customer's Authorized Representative shall constitute a final interpretation of all other Documents relating to the subject matter of this Drawing. The acceptance of this Drawing will be construed as acceptance of the foregoing agreement.

Rev	Description	Date	Revised By	Checked By

**Kab Tech, Inc.**

Drawn By: A.R.S.	Jack Carley
Scale: As Noted	Memphis, TN
Date: 7-5-2022	KABTech Corp.
Checked By: FHB	
Quote: .	Drawing Number: .
	Sheet: 1 of 1

**NOTES:**

- CONTRACTOR WILL PROVIDE STAMPED DRAWINGS OF WORK PLATFORM AS A SUBMITTAL DURING CONSTRUCTION. THE PLATFORM WILL MEET THE MINIMUM STANDARDS DESCRIBED HERE, AS WELL AS OSHA STANDARDS. THE FIT OF THE UNIT PLUS THE FOUNDATIONS FOR THE UNIT WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- PLATFORM VENDOR SHALL BE KAB TECH CORP. OR APPROVED EQUAL.

REVISIONS		
DATE	DESCRIPTIONS	APPROVED

**J. CARLEY LIFT STATION IMPROVEMENTS**  
 DEVELOPER: SARP 10  
 ENGINEER: ABES ENGINEERING

SEWER BASIN: PI-01

SHEET 1 OF 1  
 DIVISION OF ENGINEERING

**LS WORKING PLATFORM**

482 JACK CARLEY ROAD  
 MEMPHIS, TENNESSEE

SURVEY BY: WES ASHWORTH, RLS DATE: 08/21 PROJECT NO: 280-21-001  
 DESIGN BY: BRAD DAVIS, PE DATE: 12/21 SCALE: NTS  
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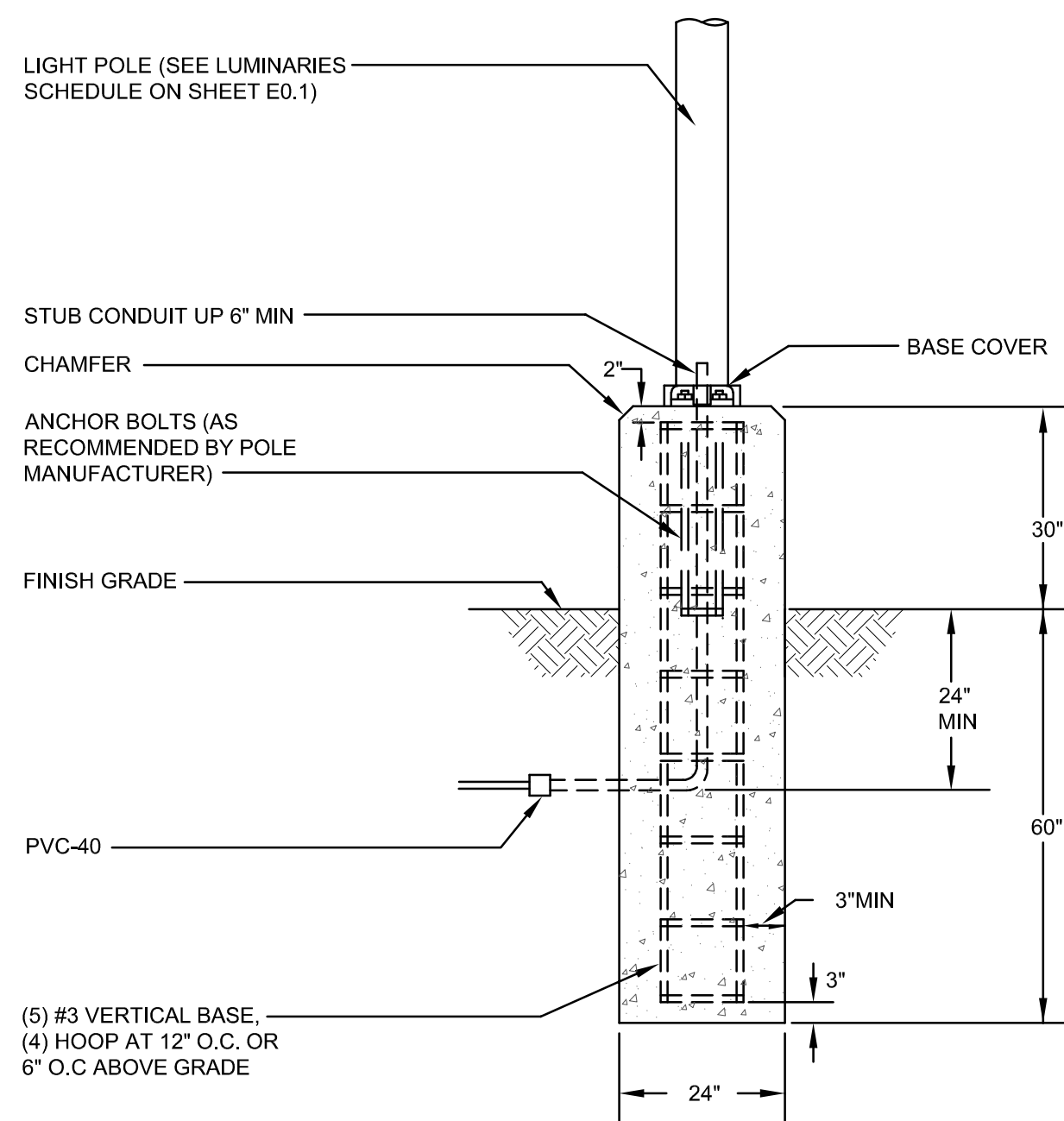
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SYMBOL	DESCRIPTION
	AREA LIGHT
	WIRE IN CONDUIT RUN OVERHEAD - CONCEALED IN OR ABOVE CEILING OR EXPOSED ON STRUCTURE.
	WIRE IN CONDUIT RUN CONCEALED BELOW FLOOR, IN WALL, OR BELOW GRADE.
	INDICATES GROUNDING CONDUCTOR.
	DUPLEX RECEPTACLE, GROUND FAULT CIRCUIT INTERRUPTING TYPE.
	HARD CONNECTION TO EQUIPMENT.
	PUMP MOTOR
	CONDUIT SEALING FITTING, 'EYSF' TYPE

**ABBREVIATIONS**

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
C	COUNTER HEIGHT
CL	CENTERLINE
CO	CONDUIT ONLY (EMPTY)
G	GROUND
HID	HIGH INTENSITY DISCHARGE
IC	INTERRUPTING CAPACITY
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
MTD	MOUNTED
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT FOR DIVISION 26
N.T.S	NOT TO SCALE
NO	NORMALLY OPEN
OC	ON CENTER
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
WR	WEATHER RESISTANT

**B1 ELECTRICAL LEGEND**  
N.T.S.



**C1 POLE BASE DETAIL**  
N.T.S.

**ELECTRICAL GENERAL NOTES:**

- PROVIDE LABOR AND MATERIALS NECESSARY FOR A COMPLETE AND FULLY OPERATIONAL ELECTRICAL SYSTEM INSTALLATION.
- MATERIALS AND INSTALLATION SHALL COMPLY WITH ALL CODES, LAWS, AND ORDINANCES OF FEDERAL, STATE, AND LOCAL GOVERNING BODIES HAVING JURISDICTION.
- ALL MATERIALS AND EQUIPMENT SHALL BE LISTED AND/OR LABELED BY U.L., E.T.L., CSA, OR ANOTHER RECOGNIZED TESTING LABORATORY.
- SECURE AND PAY FOR ALL PERMITS, INSPECTIONS, GOVERNMENTAL FEES, TAXES AND LICENSES NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF ALL ELECTRICAL WORK.
- FEES ASSESSED BY MEMPHIS LIGHT, GAS, AND WATER DIVISION IN CONNECTION WITH THE NEW SERVICE WILL BE PAID BY THE OWNER DIRECTLY TO MLGW.
- PREPARE AND SUBMIT TO GOVERNMENTAL AGENCIES, UTILITY COMPANIES, AND LOCAL CODE OFFICIALS, SHOP DRAWINGS AND/OR INSTALLATION DETAILS WHICH ARE REQUIRED BY THESE AGENCIES FOR THEIR APPROVAL.
- NOTIFY THE PROJECT MANAGER IN WRITING OF ANY MATERIALS OR APPARATUS BELIEVED TO BE INADEQUATE, UNSUITABLE, IN VIOLATION OF LAWS, ORDINANCES, RULES, OR REGULATIONS OF THE AUTHORITIES HAVING JURISDICTION.
- NEW ELECTRICAL WORK OR MODIFICATIONS TO EXISTING ELECTRICAL DISTRIBUTION PANELS, PANELBOARDS, ETC. SHALL BE INSTALLED AS INDICATED ON THE ELECTRICAL CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL EQUIPMENT TO BE INSTALLED INDICATING ELEVATIONS, AND ALL DIMENSIONS FOR APPROVAL OF THE ENGINEER PRIOR TO INSTALLATION. CODE REQUIRED CLEARANCES IN FRONT OF ALL ELECTRICAL EQUIPMENT SHALL BE MAINTAINED AT ALL TIMES.
- CAREFULLY EXAMINE THE CONTRACT DOCUMENTS, MAKE A SCHEDULED ARRANGEMENT WITH THE PROJECT MANAGER TO VISIT THE SITE, AND THOROUGHLY BECOME FAMILIAR WITH LOCAL CONDITIONS RELATING TO THE WORK. FAILURE TO DO SO WILL NOT RELIEVE THE CONTRACTOR OF THE OBLIGATIONS OF THE CONTRACT.
- PROVIDE TEMPORARY POWER AND WIRING FOR THE PERFORMANCE OF ALL TRADES FOR THE ENTIRE PERIOD OF CONSTRUCTION AND SHALL REMOVE ALL TEMPORARY WIRING AT THE COMPLETION OF CONSTRUCTION. ALL COSTS FOR ESTABLISHING AND REMOVING TEMPORARY POWER SHALL BE INCLUDED IN BID.
- THE EXISTING ELECTRICAL SYSTEMS ARE TO REMAIN IN SERVICE TO PROVIDE FOR THE OWNER'S EXISTING FUNCTIONS. SHOULD IT BECOME NECESSARY TO SHUT-DOWN ANY SYSTEM OR PORTION OF A SYSTEM, APPROVAL IN WRITING MUST BE OBTAINED FROM THE PROJECT MANAGER AND SHALL BE ONLY FOR THE PERIOD AND TIME AGREED UPON. THE BID IS TO INCLUDE THE COST OF ANY TEMPORARY WIRING AND PREMIUM TIME REQUIRED FOR THE SHUTDOWN. EXISTING ELECTRICAL WORK TO BE DEMOLISHED SHALL BE COORDINATED TO ALLOW MINIMUM DOWN-TIME OF THE STATION.
- MATERIALS AND EQUIPMENT SHALL BE ERECTED, INSTALLED, TOOLED, CONNECTED, CLEANED, ADJUSTED, TESTED, CONDITIONED, AND PLACED IN SERVICE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS AND RECOMMENDATIONS.
- CUTTING, DRILLING, AND PATCHING OF MASONRY, DRYWALL, CONCRETE, STEEL, OR IRON WORK BELONGING TO THE SITE SHALL BE DONE BY THIS CONTRACTOR IN ORDER THAT WORK MAY BE PROPERLY INSTALLED. UNDER NO CONDITIONS MAY STRUCTURAL WORK BE CUT, EXCEPT AT THE DIRECTION OF THE ENGINEER OR THEIR REPRESENTATIVE. ALL PENETRATIONS SHALL BE SEALED WITH APPROVED MATERIAL.
- EQUIPMENT SUBMITTALS SHALL INCLUDE MANUFACTURER'S NAMES, CATALOG NUMBERS, CUTS, DIAGRAMS, AND OTHER SUCH DESCRIPTIVE DATA AS MAY BE REQUIRED TO IDENTIFY AND REVIEW THE EQUIPMENT.
- PROVIDE "AS-BUILT" DOCUMENTATION AND HARD COPY REPRODUCIBLE DRAWINGS AT THE COMPLETION OF THE PROJECT AND SUBMIT TO THE ARCHITECT AND THE ENGINEER. AS-BUILT DRAWINGS SHALL INDICATE EXACT CIRCUIT NUMBERS, LOCATIONS OF ALL DEVICES, CEILING FIXTURES, AND RACEWAY FOR LIGHTING, TELECOMMUNICATIONS AND POWER DISTRIBUTION SYSTEMS AS INSTALLED.
- MATERIAL, EQUIPMENT, WIRING DEVICES, ETC. SHALL BE NEW AND OF COMMERCIAL GRADE UNLESS SPECIFICALLY INDICATED AS EXISTING TO BE REUSED ON DRAWINGS.
- EXCEPT AS NOTED OTHERWISE, ALL WORK REQUIRED FOR THE ELECTRICAL INSTALLATION AS SHOWN ON DRAWINGS SHALL INCLUDE ALL LABOR, INSTALLATION METHODS, EQUIPMENT, AND MATERIALS AND SHALL BE IN STRICT COMPLIANCE WITH ALL BUILDING STANDARDS.
- PROVIDE A COMPLETE METAL RACEWAY SYSTEM, FITTINGS AND ENCLOSURES FOR ALL ELECTRICAL WIRING SYSTEMS TO BE INSTALLED FOR THE PROJECT.
- MINIMUM CONDUIT SIZE SHALL BE 3/4 INCH. ALL CONDUIT SHALL BE GALVANIZED RIGID STEEL WITH APPROPRIATE FITTINGS AND CAST BOXES WHERE REQUIRED.
- PROVIDE COPPER THHN/THWN CONDUCTORS NOT LESS THAN #12 AWG FOR POWER CIRCUITS.
- PROVIDE A NEW TYPEWRITTEN PANEL DIRECTORY FOR EACH PANEL AT THE COMPLETION OF THE PROJECT. EACH CIRCUIT BREAKER SHALL BE LABELED TO IDENTIFY LOAD TYPE AND LOCATION.
- PERFORM ALL WORK OF A DEMOLITION NATURE THAT MAY BE REQUIRED OR NECESSARY FOR THE FULL AND COMPLETE EXECUTION OF THE WORK. WHETHER EXPLICITLY SHOWN AND/OR SPECIFIED OR NOT, EXACT EXTENT OF DEMOLITION WILL NOT BE FULLY INDICATED BY DRAWINGS. DETERMINE THE NATURE AND EXTENT OF DEMOLITION THAT WILL BE NECESSARY BY COMPARING THE CONTRACT DOCUMENTS WITH ARCHITECTURAL AND DEMOLITION DRAWINGS TO EXISTING CONDITIONS. ELECTRICAL EQUIPMENT WHICH WILL NOT BE REUSED SHALL BE TURNED OVER TO THE OWNER OR REMOVED FROM THE PREMISES AS DETERMINED BY THE PROJECT MANAGER.
- ANY EXISTING ELECTRICAL MATERIAL AND EQUIPMENT WHICH INTERFERES WITH THE NEW WORK SHALL BE REMOVED OR RELOCATED BY THE CONTRACTOR. VERIFY REMOVAL AND NEW LOCATION OF EQUIPMENT WITH THE PROJECT MANAGER AND THE ARCHITECT/ENGINEER PRIOR TO WORK.
- VERIFY CLEARANCES FOR ALL NEW OR EXISTING RELOCATED ELECTRICAL WORK BEFORE PROCEEDING WITH CONSTRUCTION. COORDINATE USAGE OF AVAILABLE SPACE WITH ALL TRADES. IN THE EVENT OF CONFLICTS, NOTIFY THE ARCHITECT AND ENGINEER BEFORE PROCEEDING WITH THE WORK.
- WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE DRAWINGS, WHERE MORE STRINGENT REQUIREMENTS THAN THOSE DESCRIBED HEREIN OR AS SET FORTH UNDER CODES, LAWS, AND ORDINANCES OF FEDERAL, STATE, AND LOCAL GOVERNING BODIES HAVING JURISDICTION, THOSE GREATER REQUIREMENTS SHALL BE ADHERED TO.
- EXISTING CONDITIONS OF ALL EXISTING BUILDING EQUIPMENT, DEVICES, FIXTURES, AND SYSTEMS THAT REQUIRE REWIRING, REUSE, RELOCATION, OR REFURBISHING AS PER DRAWINGS AND SPECIFICATIONS SHALL BE FIELD VERIFIED BY THE E.C. PRIOR TO COMMENCEMENT OF ANY WORK TO BE COMPLETELY OPERATIONAL. E.C. SHALL SUBMIT A WRITTEN STATEMENT AND ITEMIZED LISTING OF ALL EXISTING CONDITIONS OF THE FOLLOWING, ALTHOUGH NOT LIMITED TO THOSE LISTED:
- THE WRITTEN STATEMENT SHALL BE SUBMITTED TO THE PROJECT MGR. PRIOR TO WORK. IN THE EVENT THAT THE CONTRACTOR COMMENCES WORK WITHOUT SUBMITTAL, THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY AND COST TO MAINTAIN THE ABOVE IN GOOD WORKING ORDER AND CONDITION.
- REFER TO CIVIL ENGINEERING DRAWINGS FOR EXACT LOCATIONS OF ALL NEW EQUIPMENT

**D2 ELECTRICAL GENERAL NOTES**  
N.T.S.

**SITE LUMINAIRE SCHEDULE**

MARK	DESCRIPTION	MANUFACTURER / MODEL	LUMEN	ELECTRICAL	CONTROL	MOUNTING	REMARKS
A	LED AREA LUMINAIRE	DSX1-LED-P4-30K-70CRI-13M4MVOLT-RPA-0DBXD	15383	124W	TIMER SWITCH	20' ROUND STRAIGHT STEEL POLE	

**NOTE:**

MANUFACTURER'S TRADE NAMES OR CATALOG NUMBERS USED IN THIS SCHEDULE DENOTE TYPE, SIZE, QUALITY, AND DESIGN OF EQUIPMENT REQUIRED. THIS CONTRACTOR IS FREE TO OFFER SUBSTITUTIONS FOR CONSIDERATION AS EQUAL; HOWEVER, HE SHALL BE PREPARED TO FURNISH SPECIFIED MATERIALS WHERE SUBSTITUTIONS ARE NOT APPROVED. WHEN SUBSTITUTIONS REQUESTS ARE PROVIDED TO THE ENGINEER FOR APPROVAL, THE CONTRACTOR SHALL PROVIDE PHOTOMETRIC CALCULATIONS, FOR EACH SPACE, TO THE ENGINEER FOR REVIEW. THE CALCULATIONS SHALL BE PERFORMED WITH VISUAL 2016 LIGHTING SOFTWARE. THE ELECTRONIC VISUAL FILE SHALL BE SUBMITTED WITH THE PROPOSED LIGHTING FIXTURE DATA SHEETS.

**D1 LUMINAIRE SCHEDULE**  
N.T.S.

REVISIONS		
DATE	DESCRIPTIONS	APPROVED



**E0.1**

SEWER BASIN: P101

SHEET 1 OF 2  
DIVISION OF ENGINEERING

**ELECTRICAL LEGEND AND NOTES**

482 JACK CARLEY CAUSEWAY  
MEMPHIS, TENNESSEE

SURVEY BY: WES ASHWORTH, RLS DATE: 08/21 PROJECT NO: PN 280-21-01  
DESIGN BY: RICKY YANG 06/22 SCALE: N.T.S.

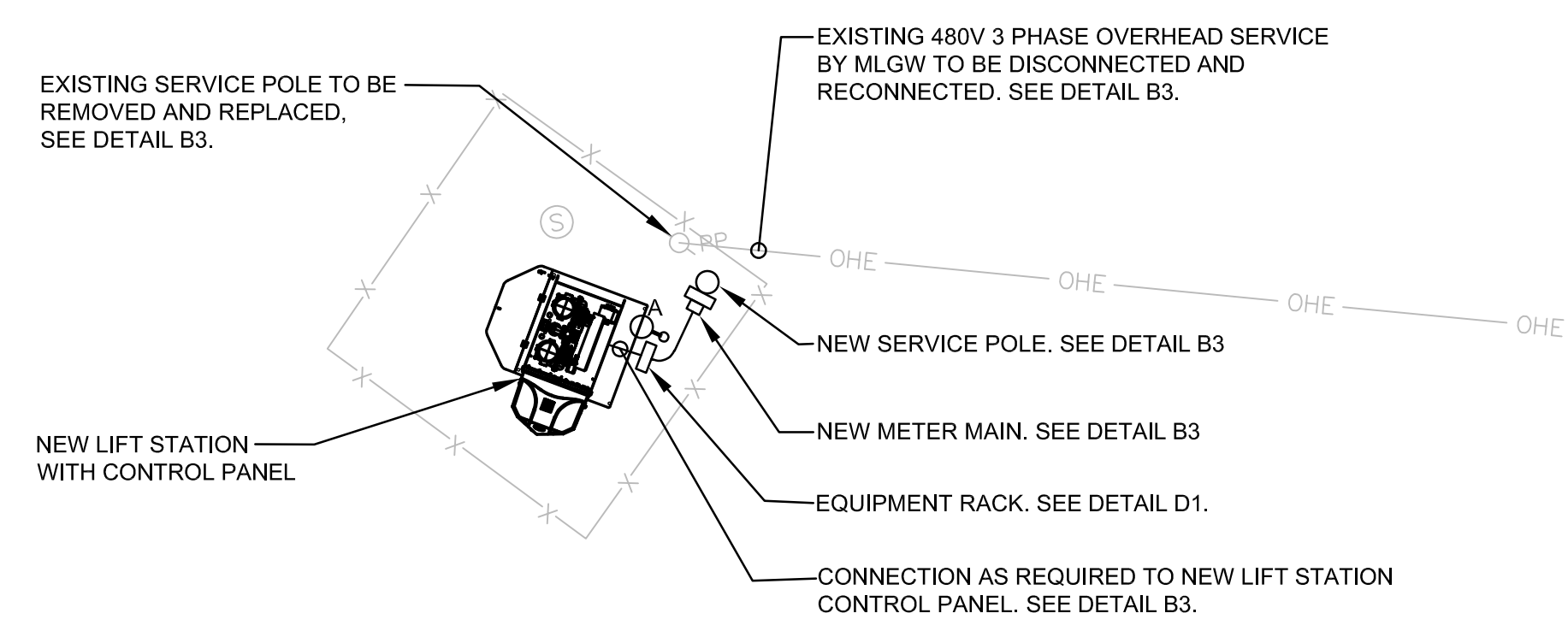
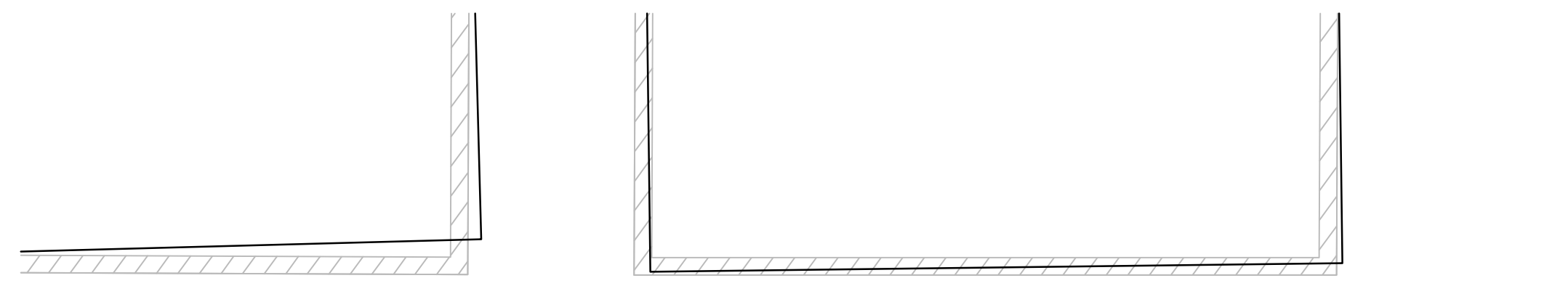
REVIEWED

482 J. CARLEY LIFT STATION IMPROVEMENTS  
DEVELOPER: SARP 10  
ENGINEER: ABES ENGINEERING

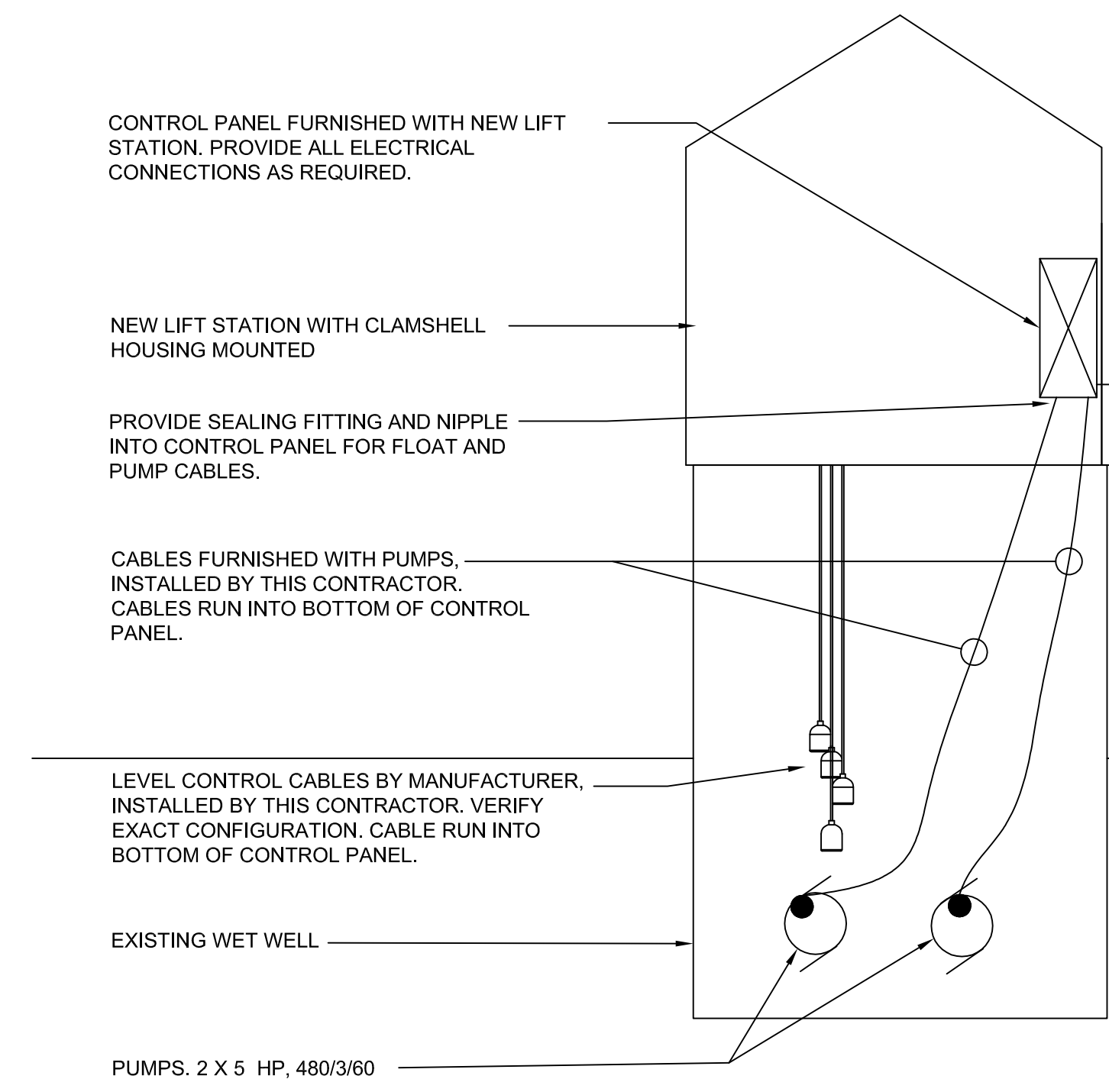
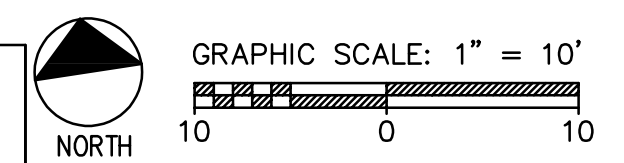
DEPUTY CIVIL ENGINEER DATE CITY ENGINEER DATE

All inquiries regarding this drawing(s) shall be made to ABES ENGINEERING.

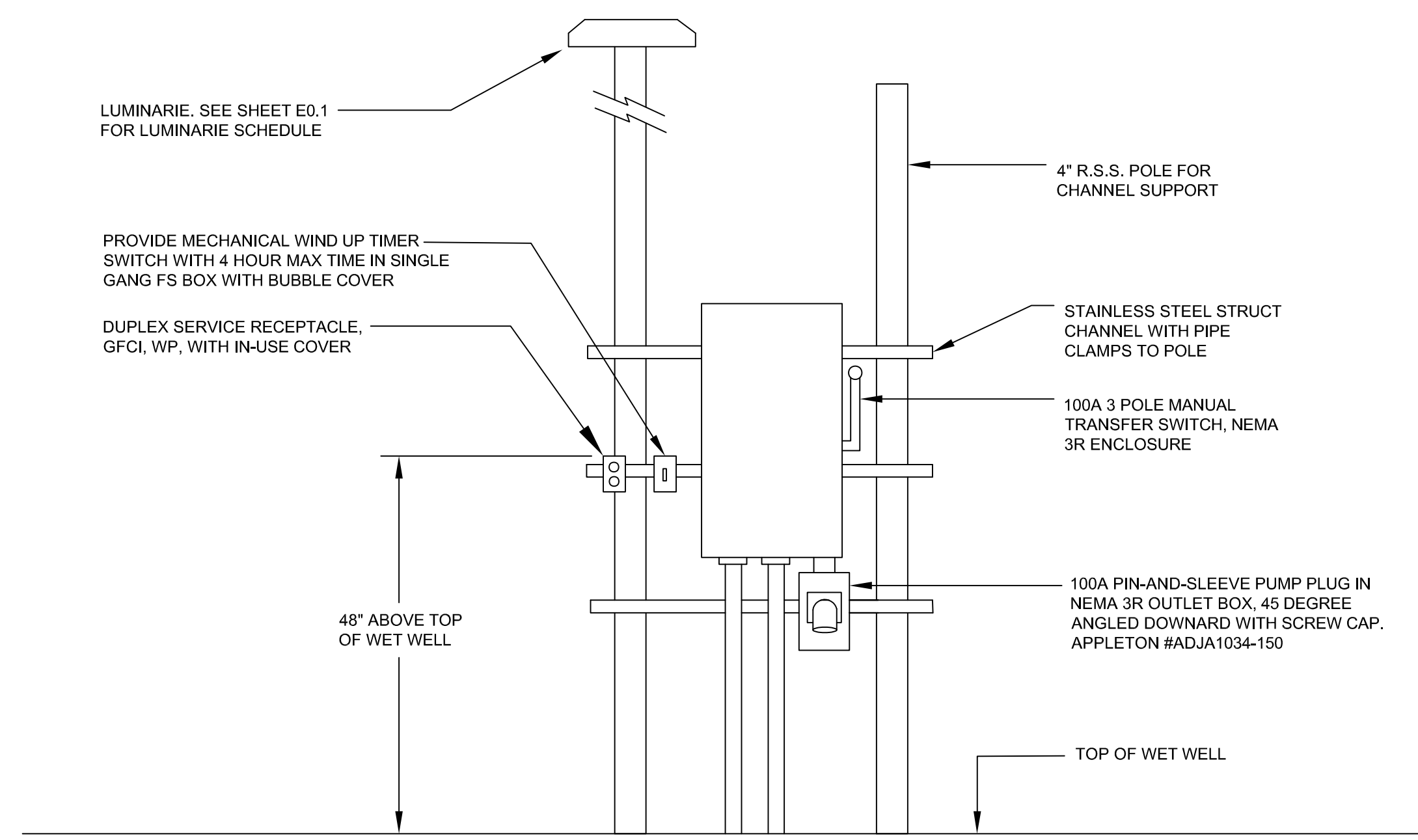
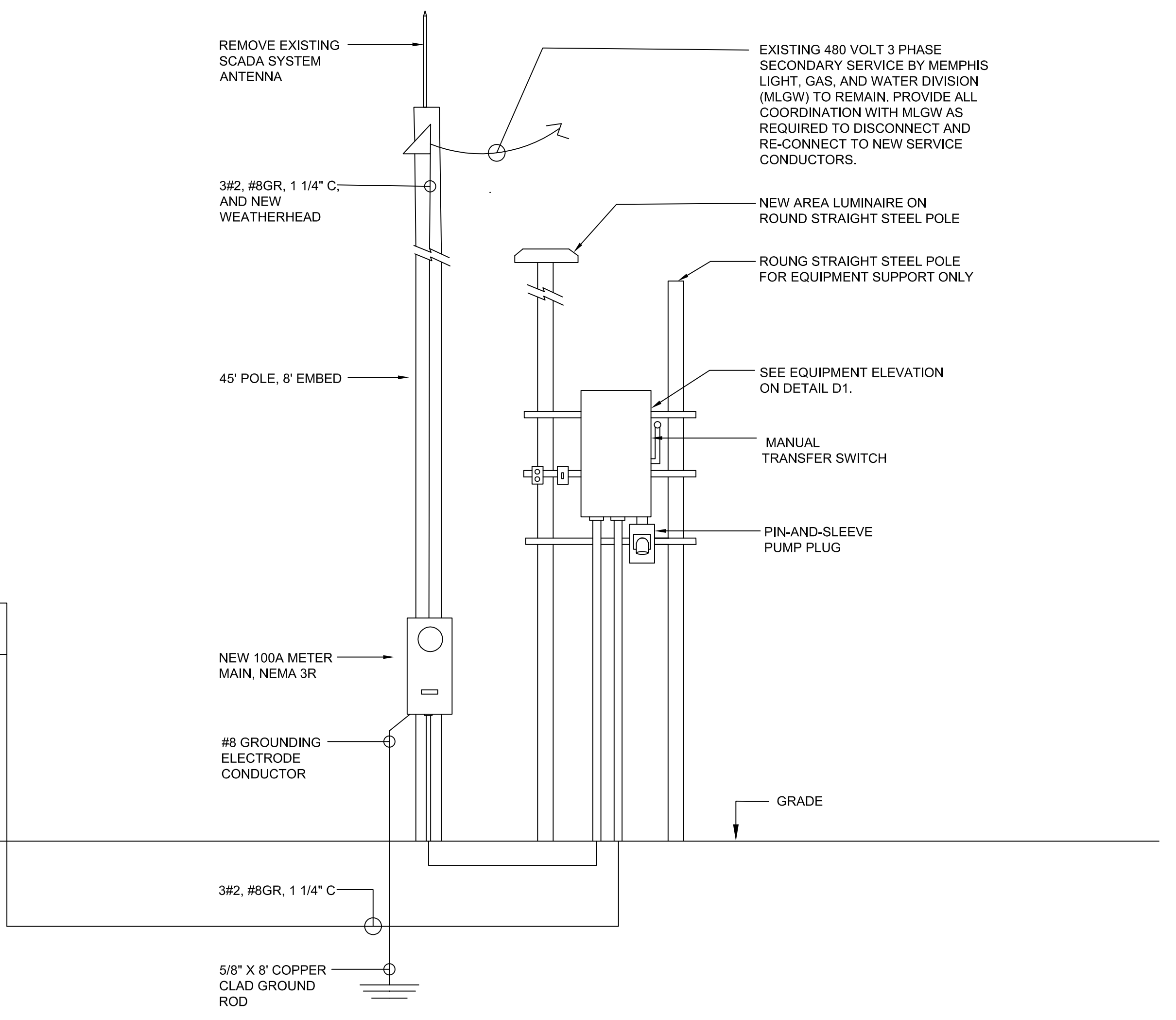




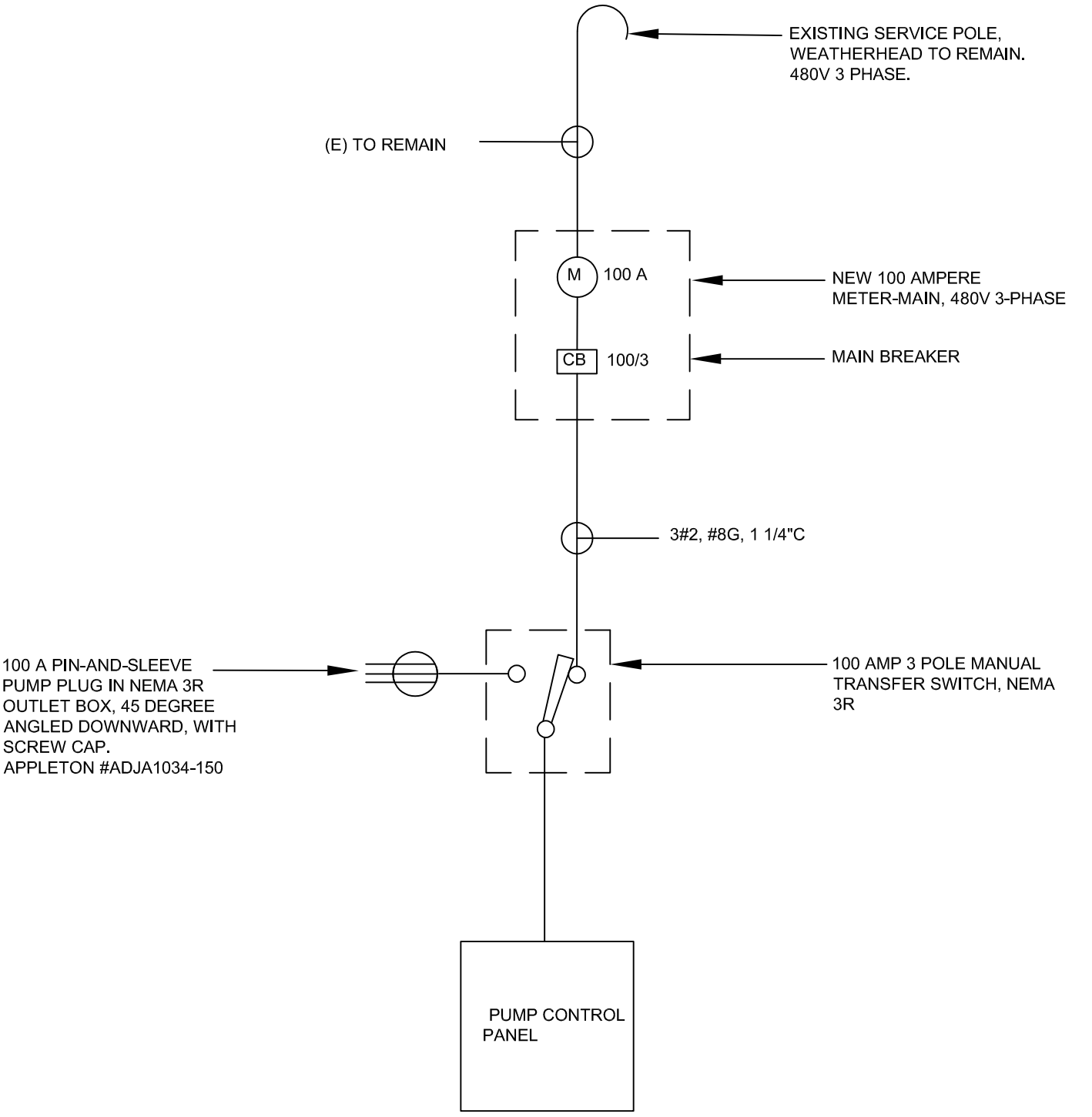
**B1** ELECTRICAL SITE PLAN  
1" = 10'-0"



**B3** WET WELL POWER AND CONTROL CABLE ARRANGEMENT  
1/2" = 1'-0"



**D1** EQUIPMENT ELEVATION  
3/4" = 1'-0"



**D3** ONE LINE DIAGRAM  
N.T.S.

REVISIONS		
DATE	DESCRIPTIONS	APPROVED



**E1.0**

SEWER BASIN: P101

SHEET 2 OF 2

DIVISION OF ENGINEERING

**ELECTRICAL SITE PLAN & ONE LINE DIAGRAM**

482 JACK CARLEY CAUSEWAY  
MEMPHIS, TENNESSEE

SURVEY BY: WES ASHWORTH, RLS DATE: 08/21 PROJECT NO: PN 280-21-01  
DESIGN BY: RICKY YANG 06/22 SCALE: AS SHOWN

REVIEWED

DEPUTY CIVIL ENGINEER DATE CITY ENGINEER DATE

**482 J. CARLEY LIFT STATION IMPROVEMENTS**

DEVELOPER: SARP 10  
ENGINEER: ABES ENGINEERING

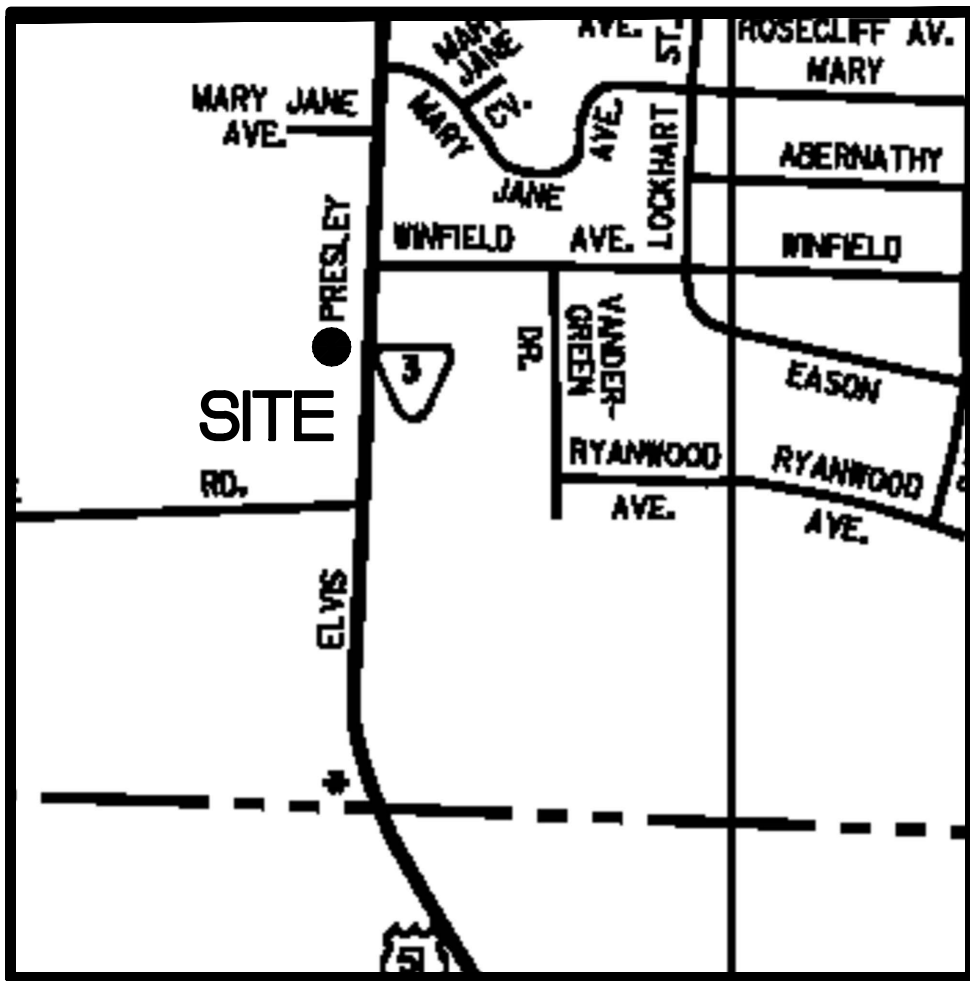
All inquiries regarding this drawing(s) shall be made to ABES ENGINEERING.

JANUARY, 2023  
REVISED MAY, 2024

# LIFT STATION REHAB DESIGN SARP10

## 5545 ELVIS PRESLEY BLVD

SCHEDULE OF DRAWINGS	
SH.	TITLE
1	COVER
2	EXISTING CONDITIONS & DEMOLITION PLAN
3	SITE PLAN
3A	FORCE MAIN PLAN & PROFILE
4	PUMP DETAILS
5	PUMP DETAILS
6	SEWER DETAILS
7	SITE DETAILS



VICINITY MAP  
N.T.S.



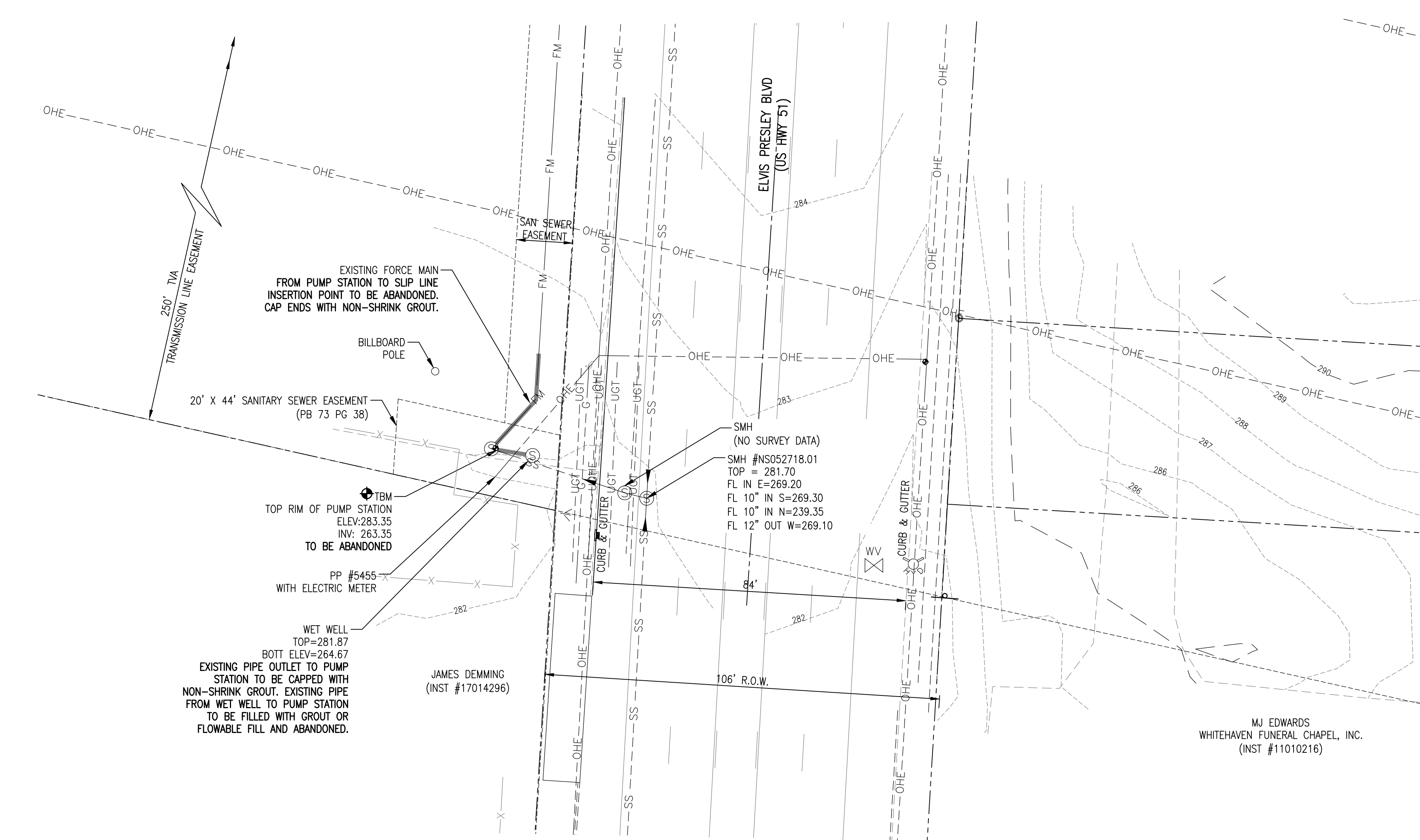
Pickering Firm, Inc.  
 Facility Design • Civil Engineering • Surveying •  
 Transportation • Natural / Water Resources  
 6363 Poplar Avenue, Suite 300  
 Memphis, TN 38119  
 901.726.0810

THE PLANS, IDEAS AND DESIGNS SHOWN ON THIS DRAWING ARE THE PROPERTY OF THE ENGINEER. DESIGNED SOLELY FOR THIS CONTRACT. THIS PLAN SHALL NOT BE USED, WHOLE OR IN PART, FOR ANY PURPOSE FOR WHICH IT WAS NOT INTENDED WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.





0 10 20 40  
1 INCH = 20 FEET



LEGEND			
	EXISTING FIRE HYDRANT		EXISTING UNDERGROUND ELECTRIC
	EXISTING POWER POLE		EXISTING OVERHEAD ELECTRIC
	EXISTING GUY POLE		EXISTING UNDERGROUND FIBER OPTIC
	EXISTING MAILBOX		EXISTING UNDERGROUND GAS LINE
	EXISTING SIGN		EXISTING WATER LINE
	EXISTING GAS VALVE		EXISTING DRAIN LINE
	EXISTING WATER VALVE		EXISTING TELEPHONE LINE
	EXISTING WATER METER		EXISTING UNDERGROUND OIL LINE
	EXISTING ROW MARKER		FORCE MAIN
	EXISTING ELECTRIC TRANSFORMER		SANITARY SEWER
	EXISTING TELEPHONE PEDESTAL		SEWER MANHOLE

**FLOOD NOTE:**  
THIS IS TO CERTIFY THAT BY GRAPHIC DETERMINATION THE ABOVE PLATTED PROPERTY IS IN A "ZONE X" NO SHADING (AREA DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD ACCORDING TO THE FEMA/FIRM MAP NUMBER 47157C0415F WITH AN EFFECTIVE DATE OF SEPTEMBER 28, 2007).

**PROJECT BENCHMARKS**  
**CITY BENCHMARK:**  
#310 IS LOCATED AT 6464-24 HIGHWAY 51 & MARY JANE AVENUE. CITY MONUMENT IS LOCATED AT THE NORTHWEST CORNER, AT BACK OF CURB, 3' WEST OF ER ON MARY JANE AVENUE SIDE. ELEVATION: 298.11  
**SITE TBM #1**  
TOP RIM OF LIFT STATION AS SHOWN. ELEVATION: 283.15  
**NOTE:** BEFORE THE BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE SITE DATUM WITH ALL SITE TBMS AND IMMEDIATELY REPORT IN WRITING ANY DISCREPANCIES TO THE ENGINEER.

**PICKERING FIRM INCORPORATED UNDERGROUND UTILITIES DISCLAIMER:**  
INFORMATION REGARDING THE REPUTED PRESENCE, SIZE, CHARACTER AND LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES RELATED TO UNDERGROUND UTILITIES IS SHOWN HEREON. THERE IS NO CERTAINTY OF THE ACCURACY OF THIS INFORMATION AND IT SHALL BE CONSIDERED IN THAT LIGHT BY THOSE USING THIS DRAWING. THE LOCATION AND ARRANGEMENT OF UNDERGROUND UTILITIES AND STRUCTURES RELATED TO UNDERGROUND UTILITIES SHOWN HEREON MAY BE INACCURATE AND UTILITIES AND STRUCTURES RELATED TO UNDERGROUND UTILITIES NOT SHOWN MAY BE ENCOUNTERED. THE OWNER, HIS EMPLOYEES, HIS CONSULTANTS AND HIS CONTRACTORS SHALL HEREBY DISTINCTLY UNDERSTAND THAT THE ENGINEER IS NOT RESPONSIBLE FOR THE CORRECTNESS OR SUFFICIENCY OF THIS INFORMATION REGARDING THE UNDERGROUND UTILITIES AND STRUCTURES RELATED TO UNDERGROUND UTILITIES SHOWN HEREON.

**NOTE:**  
CONTRACTOR TO LOCATE AND VERIFY FORCE MAIN ROUTING AT START OF CONSTRUCTION AND NOTIFY ENGINEER OF ANY ISSUES.

**NOTE:**  
REMOVE ALL EXISTING PUMP STATION COMPONENTS ONCE NEW STATION IS OPERATIONAL AND ABANDON IN PLACE PER DETAIL ON SHEET 6.  
CAP ALL PIPE CONNECTIONS WITH NON-SHRINK GROUT.

- GENERAL NOTES:**
1. AT ALL CROSSINGS OF EXISTING UTILITIES, THE CONTRACTOR SHALL FIELD LOCATE BY APPROPRIATE METHODS, THE HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES.
  2. ALL SEWER TRENCHES SHALL BE PROPERLY BACKFILLED OR COVERED AT THE END OF EACH WORK DAY.
  3. ALL DISTURBED AREAS SHALL BE SEEDED (WITH A SEASONAL MIX) AND COVERED WITH STRAW AT THE END OF EACH WEEK (AT A MINIMUM) OR MORE FREQUENTLY, AS CONDITIONS DICTATE, IN ADDITION TO EROSION CONTROLS REFERENCED ON PLANS.
  4. ALL DISTURBED LAWN AREAS SHALL BE SODDED. MATCH EXISTING SOD TYPE.
  5. CONTRACTOR IS FULLY RESPONSIBLE FOR DAMAGES TO EXISTING UTILITIES, AND PUBLIC/PRIVATE INFRASTRUCTURE AND PROPERTY.

- DEMOLITION NOTES:**
1. THE CONTRACTOR SHALL REMOVE ALL UNDERGROUND UTILITIES AND ANY OTHER ITEMS IN ACCORDANCE WITH THE TDEC AND THE TECHNICAL SPECIFICATIONS. THE CONTRACTOR SHALL STRICTLY FOLLOW ALL CITY, STATE, AND FEDERAL GUIDELINES FOR REMOVAL AND DISPOSAL OF THESE FACILITIES.
  2. ALL BUILDING, CONCRETE, ASPHALT PAVEMENT, AND GRANULAR SUBBASE SHALL BE REMOVED FULL DEPTH PER THE DIRECTION OF THE PROJECT ENGINEER AND SARP10 PROJECT MANAGER. ALL MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL CITY, STATE AND FEDERAL REGULATIONS.
  3. CONTRACTOR SHALL REMOVE & REPAIR PAVEMENT AS REQUIRED FOR UTILITY CONSTRUCTION INCLUDING BUT NOT LIMITED TO: IRRIGATION SLEEVES, SITE LIGHTING CONDUITS, WATER LINES, SANITARY SEWER LINES, STORM DRAINAGE LINES, ETC. CONTRACTOR HAS OPTION TO BORE CONDUITS.
  4. PRIOR TO COMMENCING ANY UTILITY WORK, CONTRACTOR SHALL NOTIFY ANY SURROUNDING PROPERTY OWNERS WHO MAY EXPERIENCE A DISRUPTION IN SERVICE.
  5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MODIFYING ANY EXISTING IRRIGATION SYSTEM TO ACCOMMODATE PARTS OF THAT EXISTING SYSTEM THAT ARE REMOVED, ABANDONED OR DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL ALSO MODIFY ANY EXISTING IRRIGATION SYSTEM TO ACCOMMODATE NEW AREAS OF LANDSCAPING. ANY IRRIGATION SLEEVES SHALL BE INSTALLED PRIOR TO PAVING AND BACKFILLED PROPERLY BY THE SITE CONTRACTOR.
  6. THE CONTRACTOR SHALL ENSURE ADEQUATE ACCESS IS PROVIDED DURING ALL PHASES OF CONSTRUCTION. COORDINATE WITH THE PROJECT MANAGER.
  7. WHEN REMOVING UTILITIES, CONTRACTOR SHALL GROUT AND SEAL ANY STRUCTURES THAT ARE TO REMAIN PER LOCAL REGULATIONS.
  8. UTILITIES SHOWN ARE LOCATED BY FIELD SURVEY AND RECORD DRAWINGS. ADDITIONAL UNDERGROUND UTILITIES WILL BE ENCOUNTERED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE ANY INACTIVE STRUCTURES & ALERT THE ENGINEER OF ANY ACTIVE, UNMAPPED STRUCTURES.
  9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION OF UTILITY DEMOLITION & RELOCATION.
  10. CONTRACTOR SHALL NOT INTERRUPT DRAINAGE FROM ADJACENT PROPERTIES AND PUBLIC RIGHT-OF-WAYS.

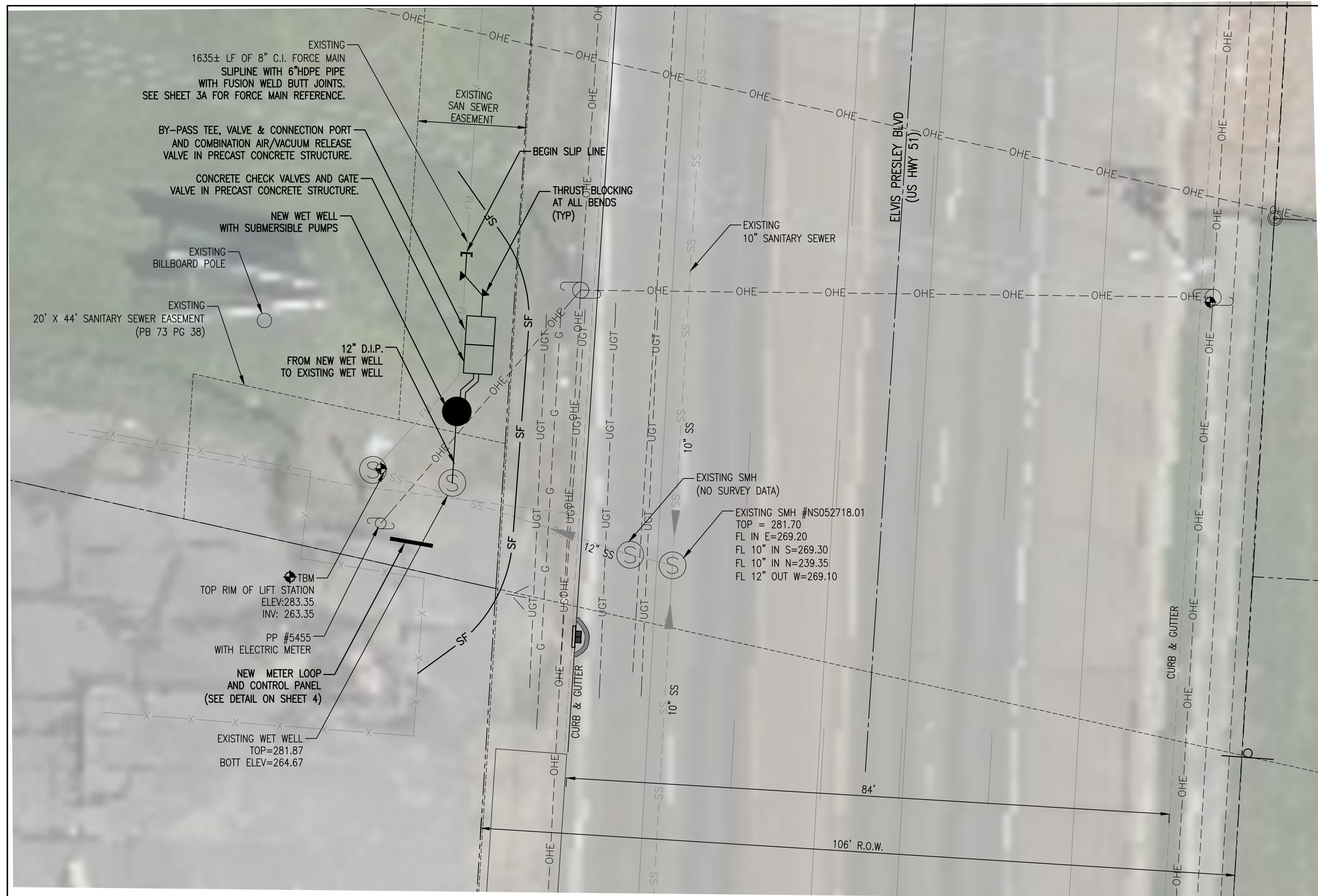
REVISION		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE



SHEET 1 OF 1  
DIVISION OF ENGINEERING  
**EXISTING CONDITIONS & DEMOLITION PLAN**  
**5545 Elvis Presley Blvd**  
MEMPHIS, TENNESSEE  
SURVEY: PFI DATE: NOV, 2018 PROJECT NO.: 24699.04  
DESIGN BY: PFI DATE: JAN, 2023 BOOK: 1688  
DRAWN BY: PFI DATE: JAN, 2023 SCALE: 1" = 20'  
REVIEWED  
DEPUTY CITY ENGINEER DATE CITY ENGINEER DATE

**LIFT STATION REHAB DESIGN**  
DEVELOPER: SARP10  
ENGINEER: PICKERING FIRM, INC.





**1 SEWER PLAN**  
1" = 10'

- EROSION AND SEDIMENTATION CONTROL NOTES:**
- ALL NEWLY CUT AND/OR FILLED AREAS LACKING ADEQUATE VEGETATION SHALL BE SEEDED AS REQUIRED TO EFFECTIVELY PREVENT SOIL EROSION.
  - SILT FENCES AND OTHER BEST MANAGEMENT PRACTICES SHALL BE USED AS SHOWN AND AS DIRECTED BY THE ENGINEER TO CONTROL SOIL EROSION.
  - THE CONTRACTOR SHALL PROVIDE AND MAINTAIN EROSION CONTROL DURING CONSTRUCTION BY THE PLACEMENT OF SILT FENCES AND OTHER BEST MANAGEMENT PRACTICES WHERE NECESSARY TO PREVENT DOWNSTREAM SILTATION OF ANY DITCHES, PIPES, DRAINAGE STRUCTURES, OR ADJACENT PROPERTIES. THE CONTROLS SHOWN ON THE PLAN ARE THE MINIMUM REQUIRED AND THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL EROSION CONTROL AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
  - THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE TDEC STORM WATER CONSTRUCTION GENERAL PERMIT FOR ALL EROSION CONTROL DURING CONSTRUCTION ACTIVITIES.
  - THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING EROSION CONTROL DEVICES AND REPORTING ANY MAINTENANCE AS REQUIRED BY THE TDEC STORM WATER CONSTRUCTION GENERAL PERMIT DURING CONSTRUCTION ACTIVITIES.
  - PROVISIONS SHALL BE MADE TO PROTECT DOWNSTREAM WATERCOURSES (I.E., STORM SEWER SYSTEMS, DITCHES, WETLANDS, ETC.) FROM SEDIMENT RUNOFF DEVELOPED FROM THE CONSTRUCTION PROCESS. PROVISIONS INCLUDE, BUT ARE NOT LIMITED TO, STRUCTURAL CONTROLS SUCH AS SILT FENCING, GEOTEXTILE FABRIC PROTECTION OF STORM SEWERS, HAY BALES, DIKES AND SANDBAG BERMS; AND/OR VEGETATION CONTROLS SUCH AS SEEDING OR EXISTING VEGETATIVE BUFFER STRIPS (MINIMUM 25 FEET WIDE).
  - PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL INSTALL EROSION AND SEDIMENTATION CONTROLS AT LOCATIONS SHOWN ON PLANS.
  - CONTRACTOR SHALL PERFORM STREET CLEANING ON ROADS AND STREETS ADJACENT TO THE PROJECT WHICH ARE USED AS ACCESS ROUTES FOR CONSTRUCTION TRAFFIC IF NECESSARY. WASHING OF STREETS IS PROHIBITED.
  - LOCATE FUEL/MATERIAL STORAGE AREAS AWAY FROM STORM WATER CONVEYANCE SYSTEMS. USE A MINIMUM 60 MIL POLYETHYLENE LINER UNDER ABOVE GROUND STORAGE TANKS. USE 2 FOOT HIGH BERMS AROUND FUEL STORAGE AREAS.
  - CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL ENVIRONMENTAL LAWS.
  - CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF FUELS, MATERIALS AND CONTAMINATED EXCAVATIONS IN A LEGALLY APPROVED MANNER.
  - AT A MINIMUM, STRUCTURAL CONTROLS SHOULD BE INSPECTED TWICE EVERY CALENDAR WEEK AT LEAST 72 HOURS APART. THE INSPECTOR, APPROVED BY THE OWNER, SHALL HAVE AN ACTIVE CERTIFICATION BY COMPLETING THE "FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL LEVEL 1" COURSE. A COPY OF THE CERTIFICATION SHALL BE KEPT ONSITE, SHOULD CONTROLS BECOME INEFFECTIVE, NECESSARY REPAIRS SHALL BE PERFORMED TO RETURN THE INTEGRITY OF THE STRUCTURAL CONTROLS.
  - EQUIPMENT STAGING AREA TO BE DESIGNATED BY CONTRACTOR AND APPROVED BY OWNER PRIOR TO CONSTRUCTION.
  - SEDIMENT WILL BE REMOVED FROM THE UPSTREAM FACE OF THE SILT FENCE WHEN IT REACHES A MAXIMUM DEPTH OF 50% OF THE FENCE'S CAPACITY. THE FENCE WILL BE REPLACED AS NECESSARY TO MAINTAIN A BARRIER.
  - TEMPORARY SEEDING MAY BE REQUIRED IN ADDITION TO PERMANENT SEEDING TO ASSIST IN COMPLYING WITH THE CONSTRUCTION GENERAL PERMIT.

- CITY OF MEMPHIS SANITARY SEWER CONSTRUCTION NOTES**
- THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND NOT NECESSARILY ALL OF SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITY COMPANY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES AND/OR UNDERGROUND STRUCTURES PRIOR TO THE INITIATION OF ANY CONSTRUCTION. CONTRACTOR SHALL ALSO ASSUME FULL RESPONSIBILITY FOR DAMAGE TO ANY UTILITIES ENCOUNTERED WITHIN THE CONSTRUCTION PERIMETERS. THE SITE LOCATION FOR EXISTING UTILITIES INVOLVING MLG&W, SOUTH CENTRAL BELL, AND/OR TEXAS GAS COMPANY, CALL 1-800-351-1111. FOR SEWER LOCATION CAL 901-636-8025.
  - CONTRACTOR SHALL ENSURE UNINTERRUPTED SEWER SERVICE ON EXISTING SEWER AND SERVICE CONNECTIONS BY PROVIDING AMPLE TEMPORARY WASTEWATER PUMPING AND/OR BYPASSING.
  - CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES.
  - CONTRACTOR SHALL NOTIFY THE CITY OF MEMPHIS CONSTRUCTION INSPECTION OFFICE AT 636-2462 A MINIMUM OF 24 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
  - ALL AREAS IN CUT OR FILL WHERE VEGETATION HAS BEEN REMOVED SHALL BE SEEDED, MULCHED, FERTILIZED, AND/OR SODDED TO PREVENT EROSION.
  - THE CONTRACTOR SHALL VERIFY EXISTING DATA AND REPORT ANY SIGNIFICANT DISCREPANCIES TO THE ENGINEER.
  - ALL SANITARY SEWER TO BE CONSTRUCTED AS PER CITY OF MEMPHIS STANDARD CONSTRUCTION SPECIFICATIONS. SANITARY SEWER SERVICE CONNECTIONS TO BE INSTALLED AS PER CITY OF MEMPHIS STANDARD SST-16.
  - ALL SEWER MANHOLE LIDS IN OPEN AREAS ARE TO BE CONSTRUCTED 1.5' ABOVE PROPOSED GRADE. IN BACKYARDS, MANHOLE LIDS ARE TO BE 1.5' ABOVE INITIAL GRADE, 0.5' ABOVE FINISHED GRADE.
  - ALL SANITARY SEWER, INCLUDING SEWER CONNECTIONS, WHICH HAS LESS THAN 1.5 CLEARANCE (OUTSIDE OF PIPES) WITH DRAINAGE OR IN FILLED AREAS SHALL BE CLASS 50 D.I.P. OR CONCRETE ENCASED, 10' MINIMUM BOTH SIDES OF CROSSING. ALL DUCTILE IRON PIPE (D.I.P.) SHALL BE POLYETHYLENE LINED OR SHALL BE TREATED WITH PROTECTO 401 OR APPROVED EQUIVALENT.
  - THEY CITY OF MEMPHIS SHALL HAVE INGRESS/EGRESS RIGHTS TO USE PRIVATE DRIVES AND YARDS FOR THE PURPOSE OF MAINTAINING ALL PUBLIC SEWER LINES AND SHALL BEAR NO RESPONSIBILITY FOR THE MAINTENANCE OF SAID PRIVATE DRIVES AND YARDS.
  - NO TREES, SHRUBS, PERMANENT STRUCTURES, OR OTHER UTILITIES (EXCEPT FOR CROSSINGS) WILL BE ALLOWED WITHIN THE SANITARY SEWER EASEMENT. NO OTHER UTILITIES OR SERVICES MAY OCCUPY SANITARY SEWER EASEMENTS IN PRIVATE DRIVES AND YARDS EXCEPT FOR CROSSINGS.
  - ALL SANITARY SEWER MANHOLES IN REVERSE CROWN STREETS, ALLEYS, OR DRIVES (PUBLIC OR PRIVATE) SHALL BE PROVIDED WITH GASKETS AND PLUGS FOR PICK HOLES TO PREVENT DRAINAGE INFLOW INTO THE SEWER SYSTEM.
  - THE CONTRACTOR SHALL PROVIDE ADEQUATE AND EFFECTIVE EROSION CONTROL AS NECESSARY TO PREVENT ANY SILTATION INTO THE EXISTING DRAINAGE SYSTEM AND/OR ADJACENT PROPERTIES.

**FLOOD NOTE:**  
THIS IS TO CERTIFY THAT BY GRAPHIC DETERMINATION THE ABOVE PLATTED PROPERTY IS IN A "ZONE X" NO SHADING (AREA DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD ACCORDING TO THE FEMA/FIRM MAP NUMBER 47157C0290F WITH AN EFFECTIVE DATE OF SEPTEMBER 28, 2007.

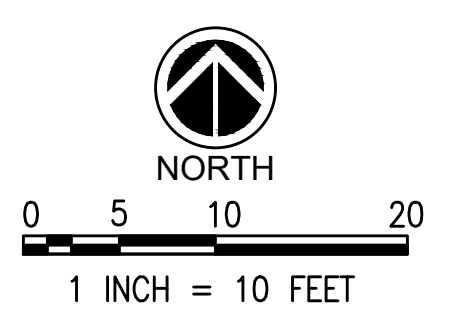
**PROJECT BENCHMARKS**  
**CITY BENCHMARK:**  
#310 IS LOCATED AT 6464-24 HIGHWAY 51 & MARY JANE AVENUE. CITY MONUMENT IS LOCATED AT THE NORTHWEST CORNER, AT BACK OF CURB, 3' WEST OF ER ON MARY JANE AVENUE SIDE. ELEVATION: 298.11  
**SITE TBM #1:**  
TOP RIM OF LIFT STATION AS SHOWN. ELEVATION: 283.15  
**NOTE:** BEFORE THE BEGINNING OF CONSTRUCTION, THE CONTRACTOR SHALL FIELD VERIFY THE SITE DATUM WITH ALL SITE TBMS AND IMMEDIATELY REPORT IN WRITING ANY DISCREPANCIES TO THE ENGINEER.

**PICKERING FIRM INCORPORATED UNDERGROUND UTILITIES DISCLAIMER:**  
INFORMATION REGARDING THE REPUTED PRESENCE, SIZE, CHARACTER AND LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES RELATED TO UNDERGROUND UTILITIES IS SHOWN HEREON. THERE IS NO CERTAINTY OF THE ACCURACY OF THIS INFORMATION AND IT SHALL BE CONSIDERED IN THAT LIGHT BY THOSE USING THIS DRAWING. THE LOCATION AND ARRANGEMENT OF UNDERGROUND UTILITIES AND STRUCTURES RELATED TO UNDERGROUND UTILITIES SHOWN HEREON MAY BE INACCURATE AND UTILITIES AND STRUCTURES RELATED TO UNDERGROUND UTILITIES NOT SHOWN MAY BE ENCOUNTERED. THE OWNER, HIS EMPLOYEES, HIS CONSULTANTS AND HIS CONTRACTORS SHALL HEREBY DISTINCTLY UNDERSTAND THAT THE ENGINEER IS NOT RESPONSIBLE FOR THE CORRECTNESS OR SUFFICIENCY OF THIS INFORMATION REGARDING THE UNDERGROUND UTILITIES AND STRUCTURES RELATED TO UNDERGROUND UTILITIES SHOWN HEREON.

**GENERAL NOTES:**

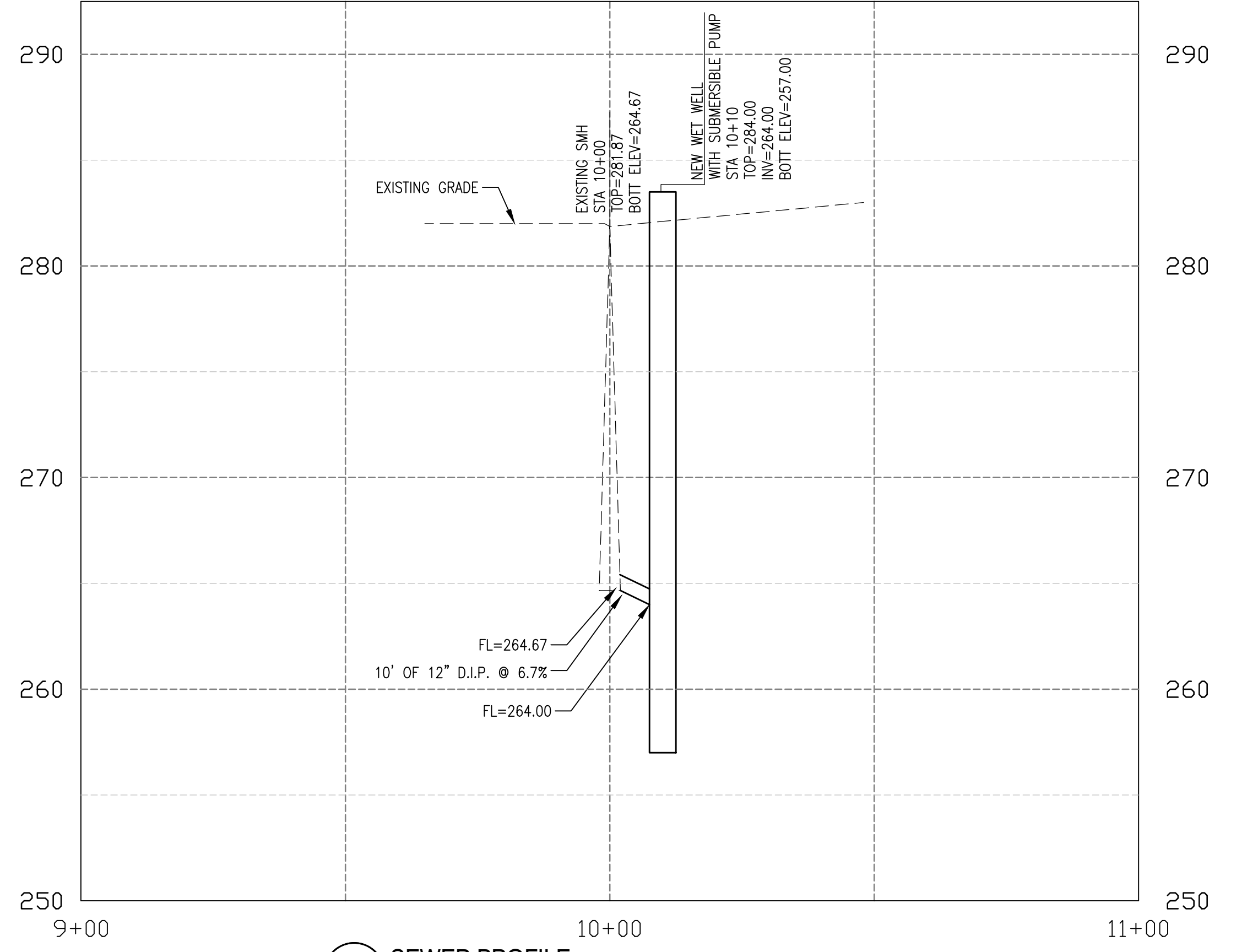
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- ALL SEWER TRENCHES SHALL BE PROPERLY BACKFILLED AT THE END OF EACH WORK DAY.
- ALL DISTURBED AREAS SHALL BE SEEDED (WITH A SEASONAL MIX) AND COVERED WITH STRAW AT THE END OF EACH WEEK (AT A MINIMUM) OR MORE FREQUENTLY, AS CONDITIONS DICTATE, IN ADDITION TO EROSION CONTROLS REFERENCED ON PLANS.
- ALL DISTURBED LAWN AREAS SHALL BE SODDED. MATCH EXISTING SOD TYPE.
- CONTRACTOR IS FULLY RESPONSIBLE FOR DAMAGES TO EXISTING UTILITIES, AND PUBLIC/PRIVATE INFRASTRUCTURE AND PROPERTY.

LEGEND	
SF	SILT FENCE BARRIER
(Symbol)	STRAW WATTLE



**NOTE:** SEE SHEET 7 FOR EROSION CONTROL DETAILS.

LEGEND			
(Symbol)	EXISTING FIRE HYDRANT	(Symbol)	EXISTING UNDERGROUND ELECTRIC
(Symbol)	EXISTING POWER POLE	(Symbol)	EXISTING OVERHEAD ELECTRIC
(Symbol)	EXISTING GUY POLE	(Symbol)	EXISTING UNDERGROUND FIBER OPTIC
(Symbol)	EXISTING MAILBOX	(Symbol)	EXISTING UNDERGROUND GAS LINE
(Symbol)	EXISTING SIGN	(Symbol)	EXISTING WATER LINE
(Symbol)	EXISTING GAS VALVE	(Symbol)	EXISTING DRAIN LINE
(Symbol)	EXISTING WATER VALVE	(Symbol)	EXISTING TELEPHONE LINE
(Symbol)	EXISTING WATER METER	(Symbol)	EXISTING UNDERGROUND OIL LINE
(Symbol)	EXISTING ROW MARKER	(Symbol)	FORCE MAIN
(Symbol)	EXISTING ELECTRIC TRANSFORMER	(Symbol)	SANITARY SEWER
(Symbol)	EXISTING TELEPHONE PEDESTAL	(Symbol)	SEWER MANHOLE



**2 SEWER PROFILE**  
1" = 20' H 1" = 5' V

REVISION		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE



SEWER BASIN: NS-5  
SHEET 1 OF 1  
DIVISION OF ENGINEERING

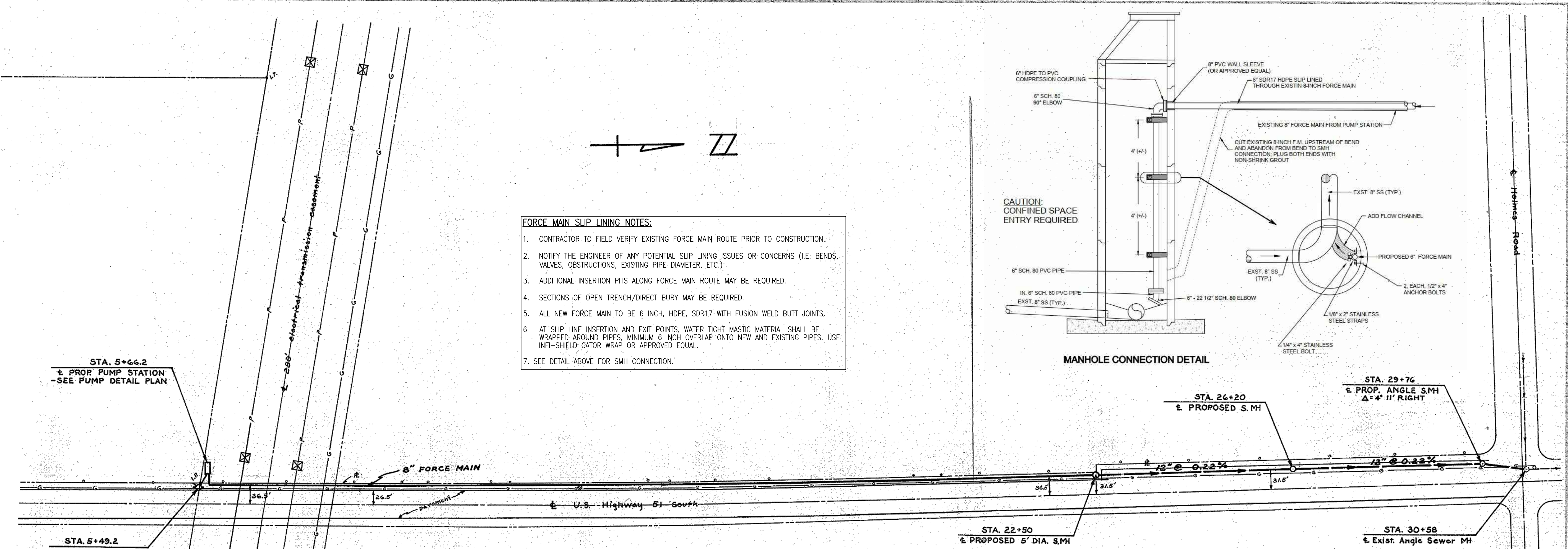
**SEWER PLAN**  
**5545 Elvis Presley Blvd**  
MEMPHIS, TENNESSEE

SURVEY: PFI DATE: NOV, 2018 PROJECT NO.: 24699.04  
DESIGN BY: PFI DATE: JAN, 2023 BOOK: 1688  
DRAWN BY: PFI DATE: JAN, 2023 SCALE: AS NOTED

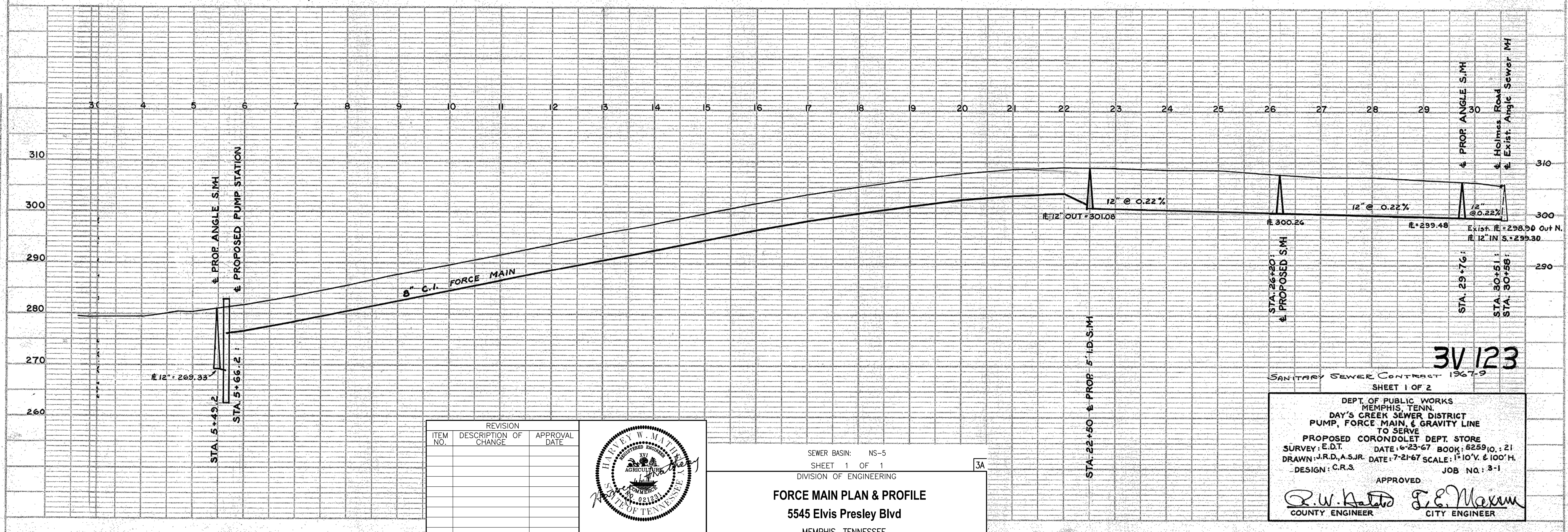
REVIEWED  
DEPUTY CITY ENGINEER DATE CITY ENGINEER DATE

**LIFT STATION REHAB DESIGN**  
DEVELOPER: SARP10  
ENGINEER: PICKERING FIRM, INC.





- FORCE MAIN SLIP LINING NOTES:**
1. CONTRACTOR TO FIELD VERIFY EXISTING FORCE MAIN ROUTE PRIOR TO CONSTRUCTION.
  2. NOTIFY THE ENGINEER OF ANY POTENTIAL SLIP LINING ISSUES OR CONCERNS (I.E. BENDS, VALVES, OBSTRUCTIONS, EXISTING PIPE DIAMETER, ETC.)
  3. ADDITIONAL INSERTION PITS ALONG FORCE MAIN ROUTE MAY BE REQUIRED.
  4. SECTIONS OF OPEN TRENCH/DIRECT BURY MAY BE REQUIRED.
  5. ALL NEW FORCE MAIN TO BE 6 INCH, HDPE, SDR17 WITH FUSION WELD BUTT JOINTS.
  6. AT SLIP LINE INSERTION AND EXIT POINTS, WATER TIGHT MASTIC MATERIAL SHALL BE WRAPPED AROUND PIPES, MINIMUM 6 INCH OVERLAP ONTO NEW AND EXISTING PIPES. USE INF1-SHIELD GATOR WRAP OR APPROVED EQUAL.
  7. SEE DETAIL ABOVE FOR SMH CONNECTION.



DATE	BY
DATE	BY
DATE	BY
DATE	BY

ITEM NO.	REVISION DESCRIPTION OF CHANGE	APPROVAL DATE



SEWER BASIN: NS-5  
 SHEET 1 OF 1  
 DIVISION OF ENGINEERING  
**FORCE MAIN PLAN & PROFILE**  
 5545 Elvis Presley Blvd  
 MEMPHIS, TENNESSEE  
 SURVEY: PFI DATE: NOV, 2018 PROJECT NO.: 24699.04  
 DESIGN BY: PFI DATE: JAN, 2023 BOOK: 1688  
 DRAWN BY: PFI DATE: JAN, 2023 SCALE: AS NOTED

**APPROVED**  
*R.W. Maxam* COUNTY ENGINEER  
*J.E. Maxam* CITY ENGINEER

3V/123  
 SANITARY SEWER CONTRACT 1967-9  
 SHEET 1 OF 2

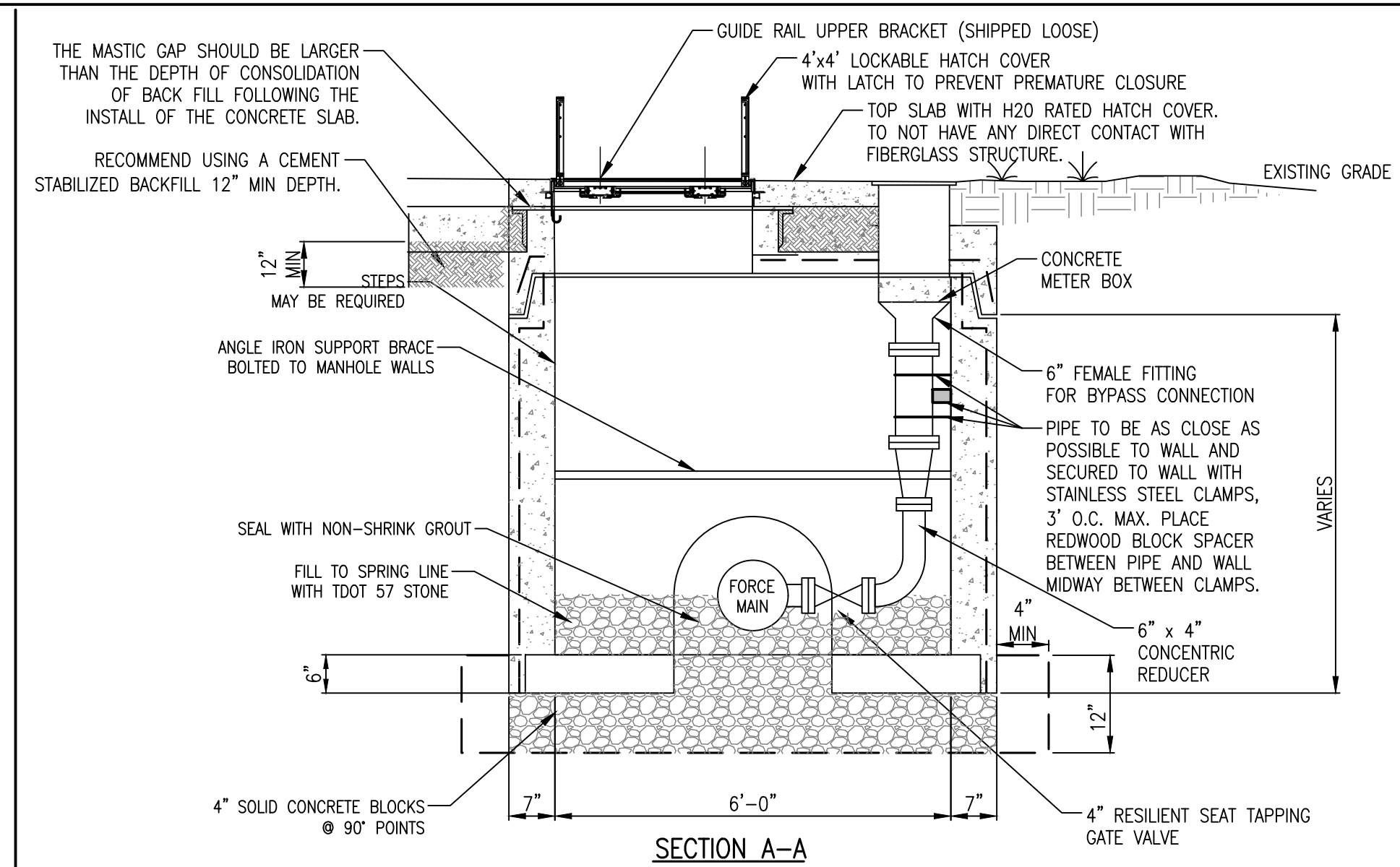
K:\MEMPHIS\PROJECTS\SEWER PLANING - May 20, 2024

Printed in U.S.A.  
 On REPERAL Trading Cloth

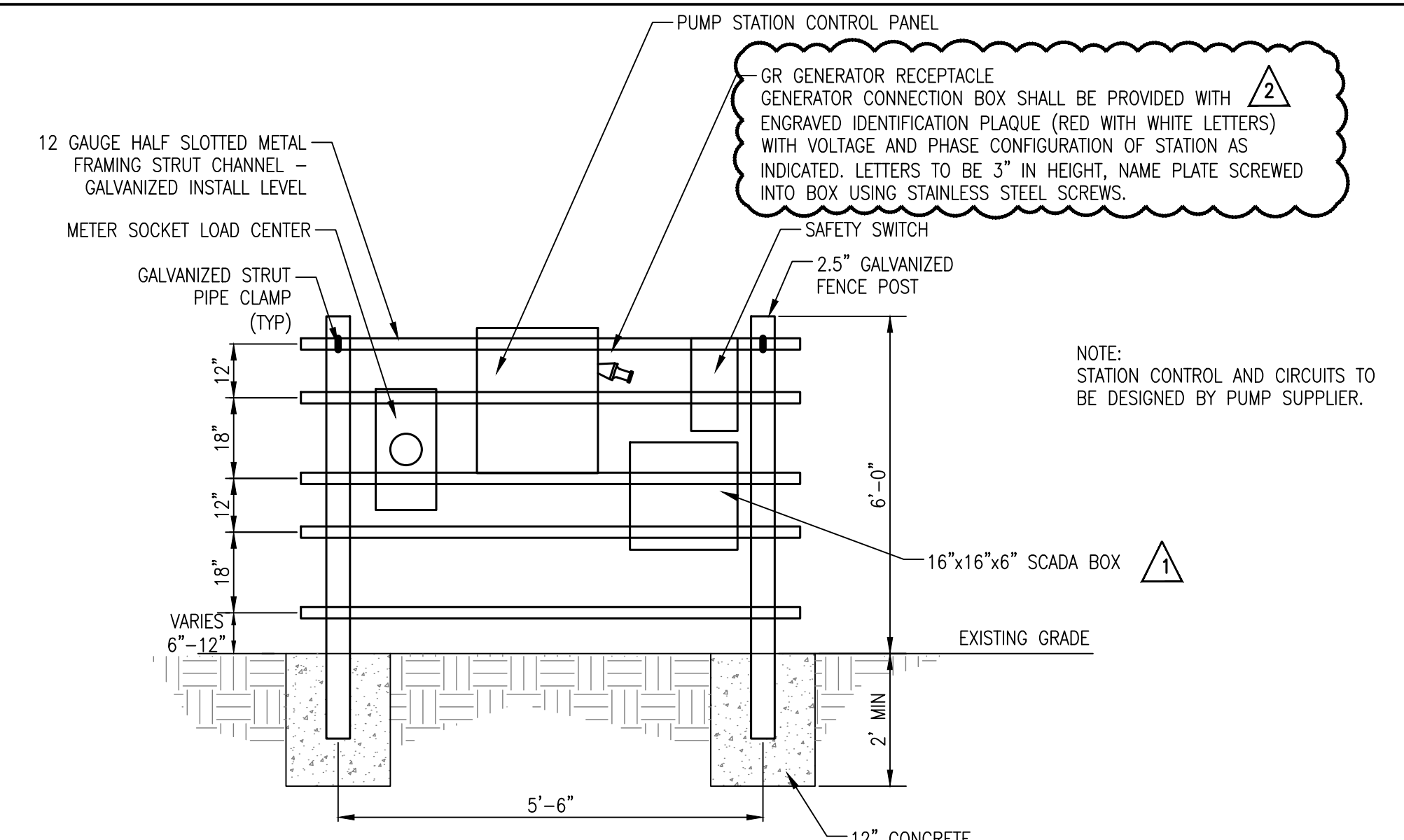
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 On REPERAL Trading Cloth

BASIN NO.	FILE FOLDER	SHEET NO.
NS-5A	750	30



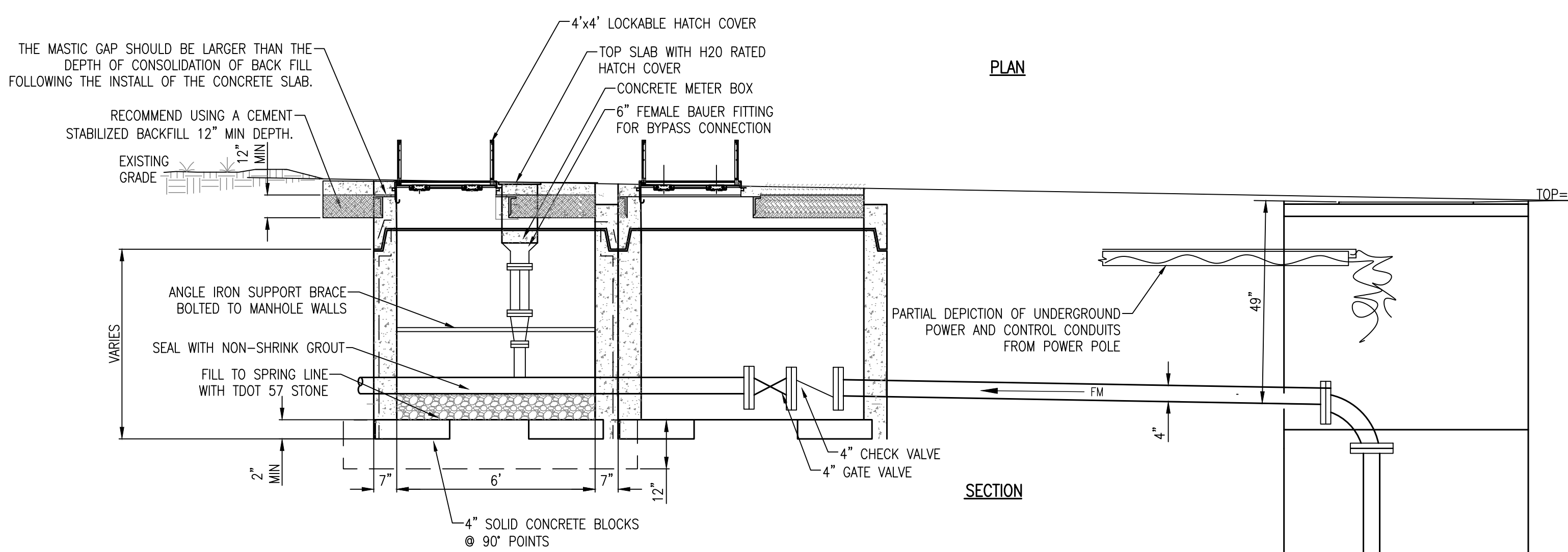
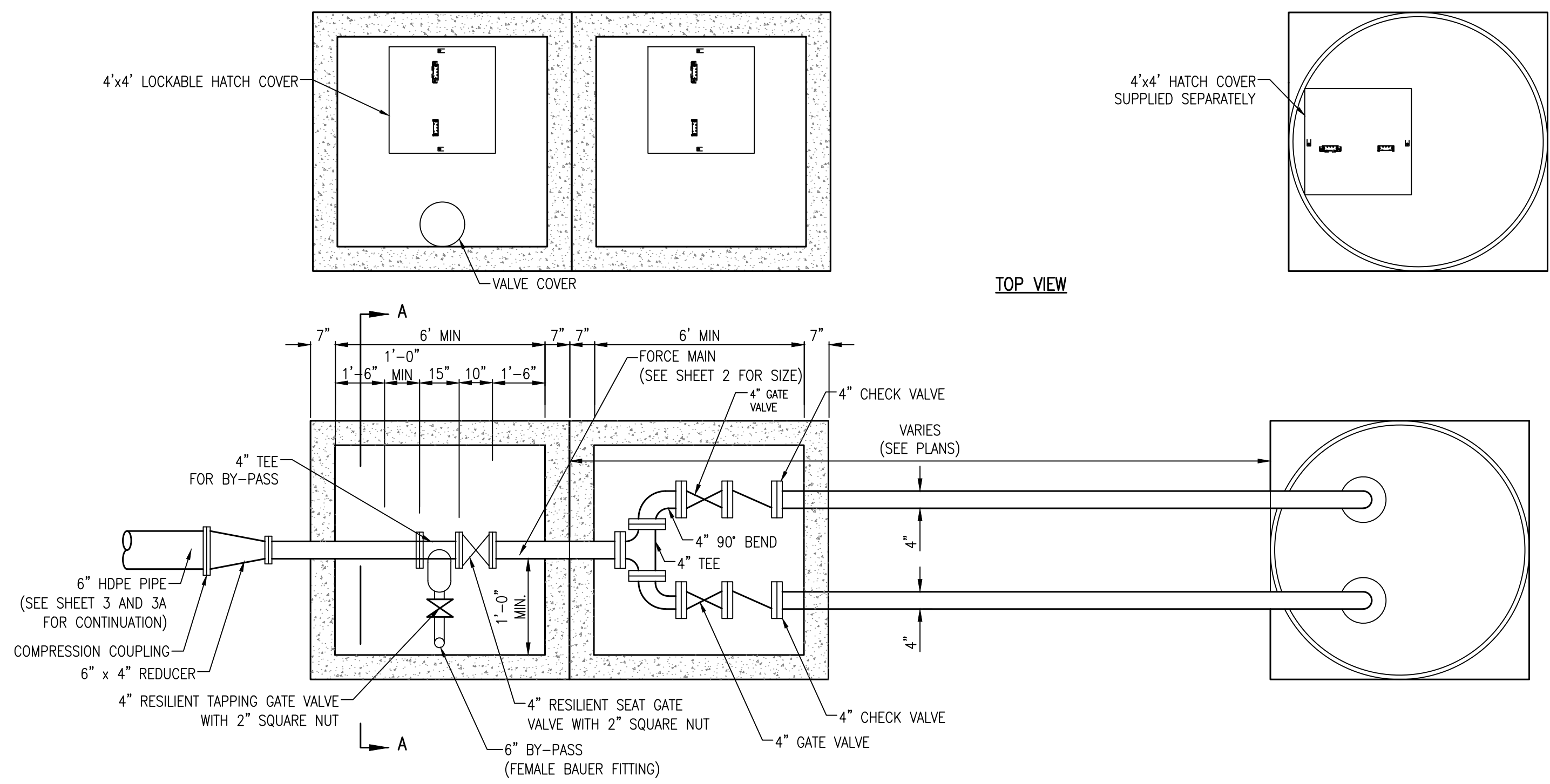


**BY-PASS TEE STRUCTURE**  
NOT TO SCALE

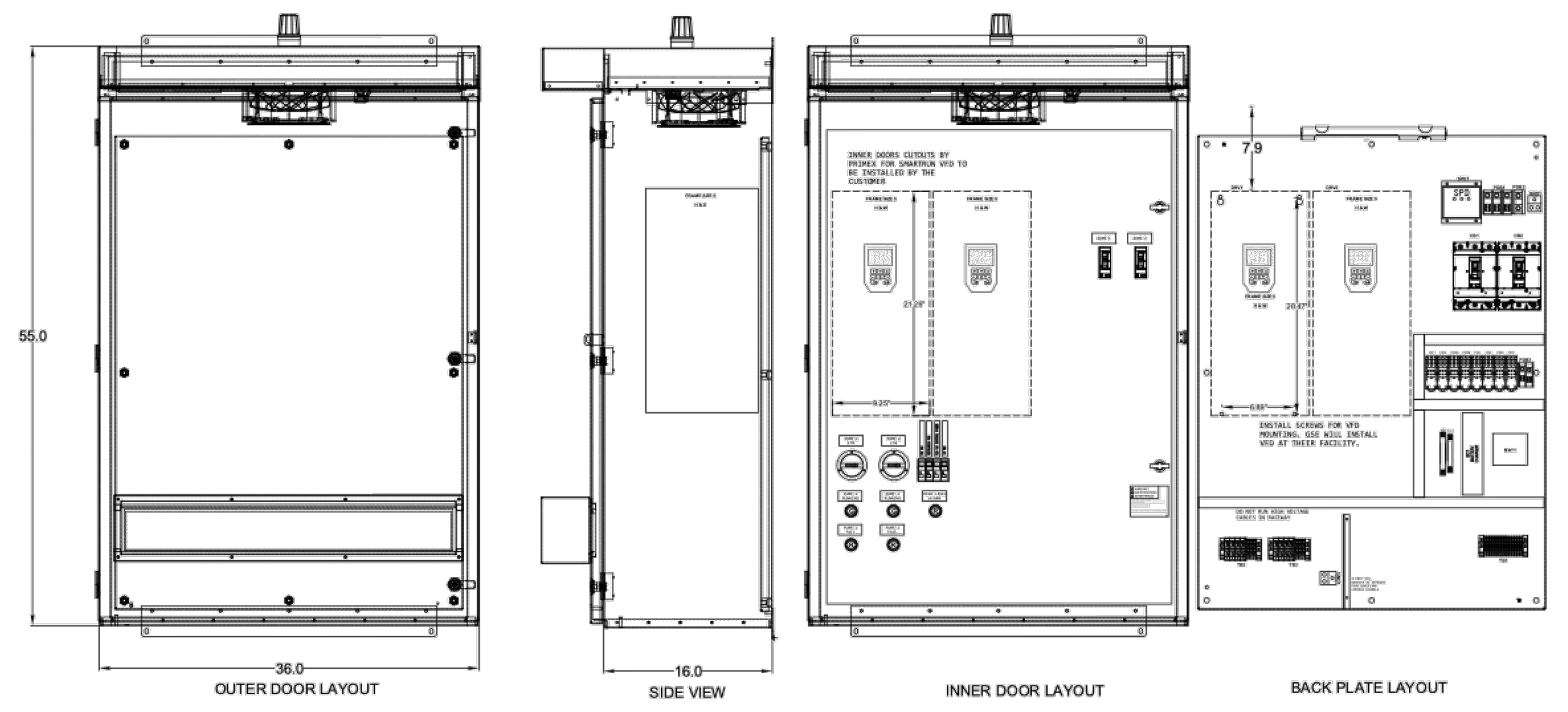


**CONTROL PANEL STAND**  
NOT TO SCALE

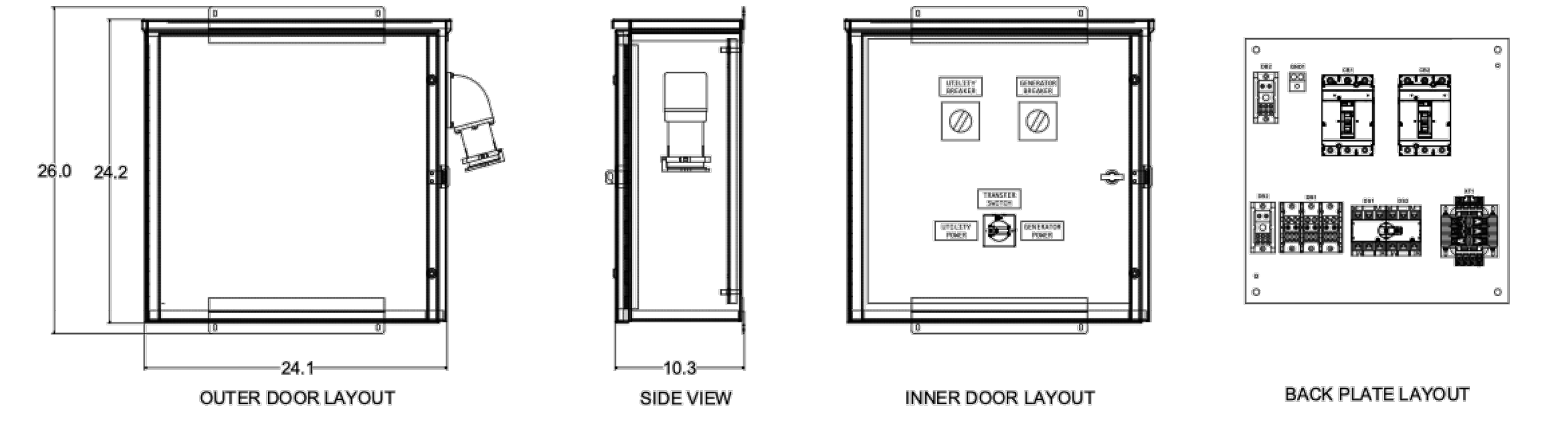
- NOTES:**
1. CONCRETE SHALL BE 4,000 PSI COMPRESSIVE STRENGTH, MIN.
  2. ALL REINFORCING SHALL MEET THE REQUIREMENTS OF CURRENT ASTM SPEC A-615.
  3. MANHOLE SECTIONS SHALL MEET THE REQUIREMENTS OF CURRENT ASTM SPEC C-478.
  4. TAPERED JOINT WITH O-RING GASKET SHALL MEET THE REQUIREMENTS OF ASTM SPECS C-361 AND C-443.
  5. CAST MANHOLE SECTION INTO BASE 2" OR DEPTH OF JOINT, WHICHEVER IS DEEPER.
  6. JOINT CONFIGURATION MAY BE CAST BELL-UP OR SPIGOT UP.
  7. SIZE DOGHOUSE OPENINGS 4" MIN. AND 8" MAX. LARGER THAN PIPE O.D.
  8. ALL AIR RELEASE PIPING SHALL BE BRASS.
  9. FOR FORCE MAIN SMALLER THAN 6", EXCEPT DUCTILE IRON, CLAMP THE AIR/VACUUM RELEASE VALVE TO THE ANGLE IRON SUPPORT BRACE.
  10. CAST BASE ON FIRM, UNDISTURBED SOIL.
  11. STANDARD PRECAST BASE SECTION MAY BE USED FOR NEW FORCE MAIN CONSTRUCTION. BED STANDARD BASE ON MIN. 6" TDOT No. 21A CORE HOLES FOR PIPE MIN. 4" LARGER THAN PIPE O.D..
- CONFORM TO THIS DETAIL FOR ALL OTHER REFERENCES.



**BY-PASS TEE AND VALVE BOX**  
NOT TO SCALE



**CONTROL PANEL LAYOUT**



**TRANSFER SWITCH PANEL LAYOUT**

- NOTE:**
1. STATION CONTROL AND CIRCUITS SHOWN FOR REFERENCE. FINAL DESIGN BY PUMP SUPPLIER.
  2. SITE VOLTAGE TO BE VERIFIED BY THE BIDDING CONTRACTOR. THE RESPONSIBILITY TO PROVIDE ANCILLARY EQUIPMENT TO ALLOW CONNECTION OF THE PROPOSED PUMPING EQUIPMENT WITH THE AVAILABLE SITE VOLTAGE SHALL BE BORNE BY THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE THE SITE VOLTAGE WITH THE PUMPING SYSTEM SUPPLIER AND SHALL BE VERIFIED PRIOR TO RELEASING THE EQUIPMENT TO MANUFACTURER.

**CONTROL PANEL AND TRANSFER SWITCH**  
NOT TO SCALE

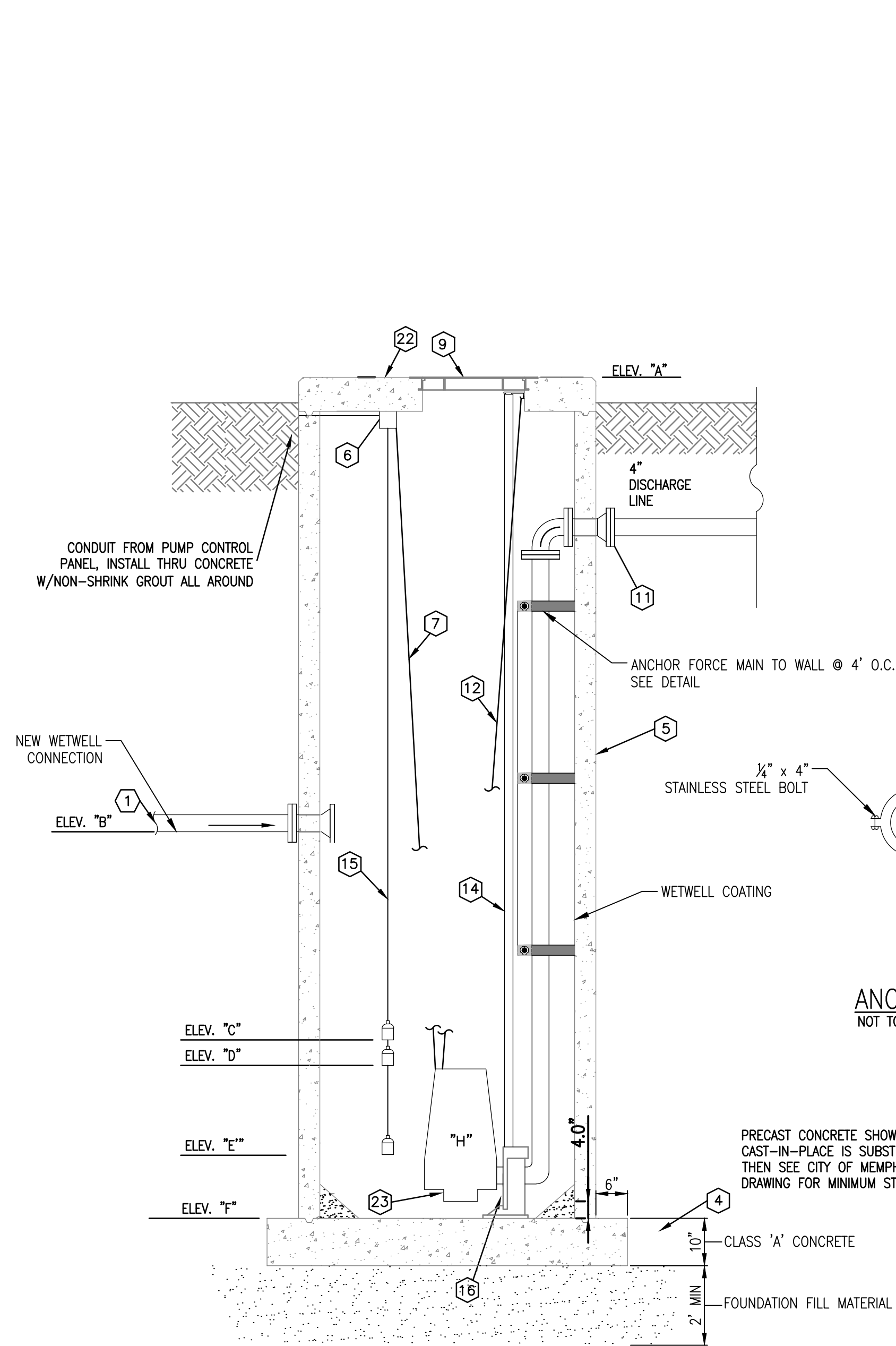
REVISION		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE
1	REVISED CONTROL PANEL STAND	05/20/2024
2	GENERATOR CONNECTION	01/21/2025



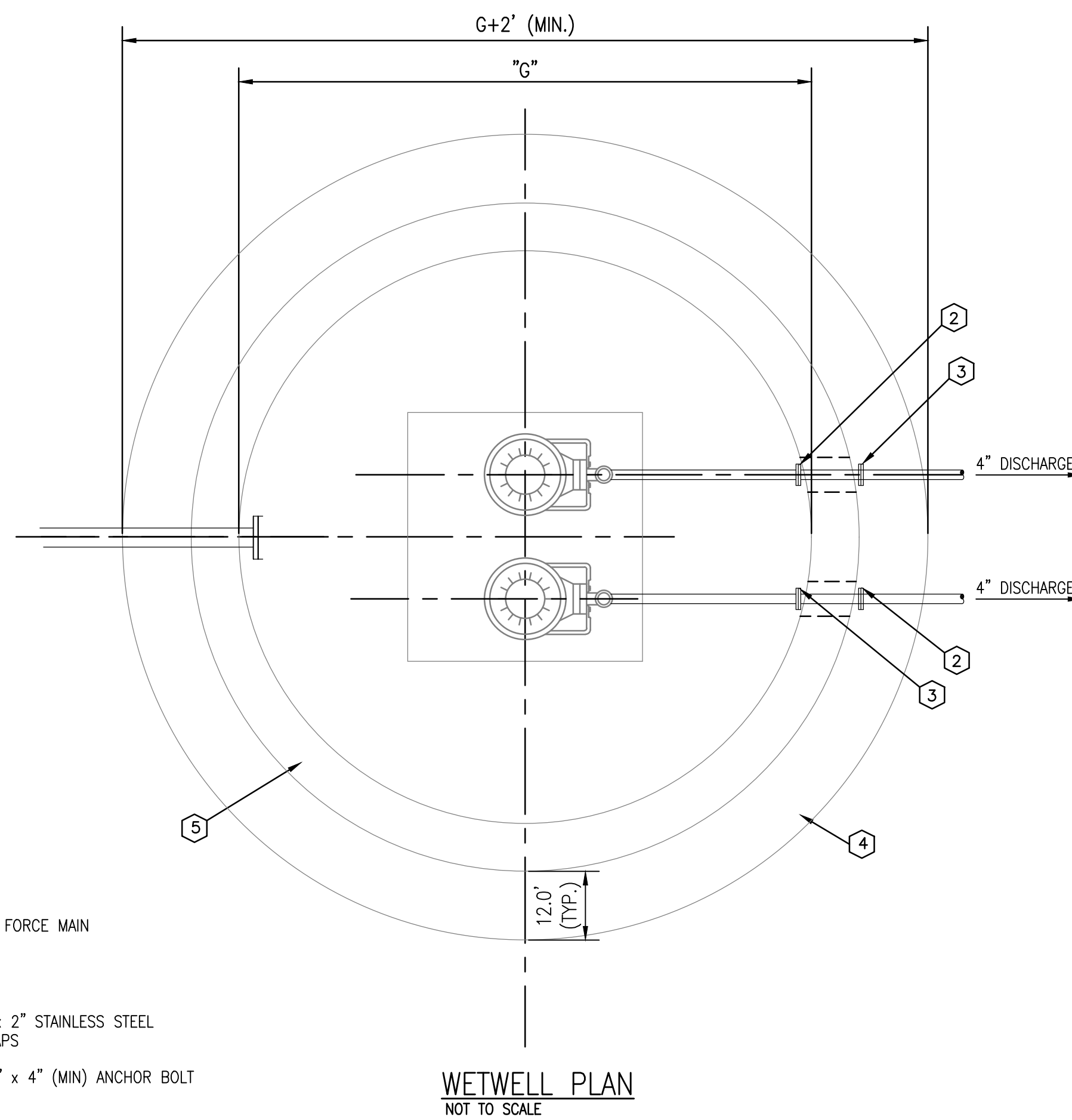
**LIFT STATION REHAB DESIGN**  
DEVELOPER: SARP10  
ENGINEER: PICKERING FIRM, INC.

SHEET 1 OF 1  
DIVISION OF ENGINEERING  
**PUMP DETAILS**  
5545 Elvis Presley Blvd  
MEMPHIS, TENNESSEE  
DATE: NOV, 2018  
DATE: JAN, 2023  
DATE: JAN, 2023  
PROJECT NO.: 24699.04  
BOOK: 1688  
SCALE: N.T.S.  
REVIEWED  
DEPUTY CITY ENGINEER      DATE      CITY ENGINEER      DATE

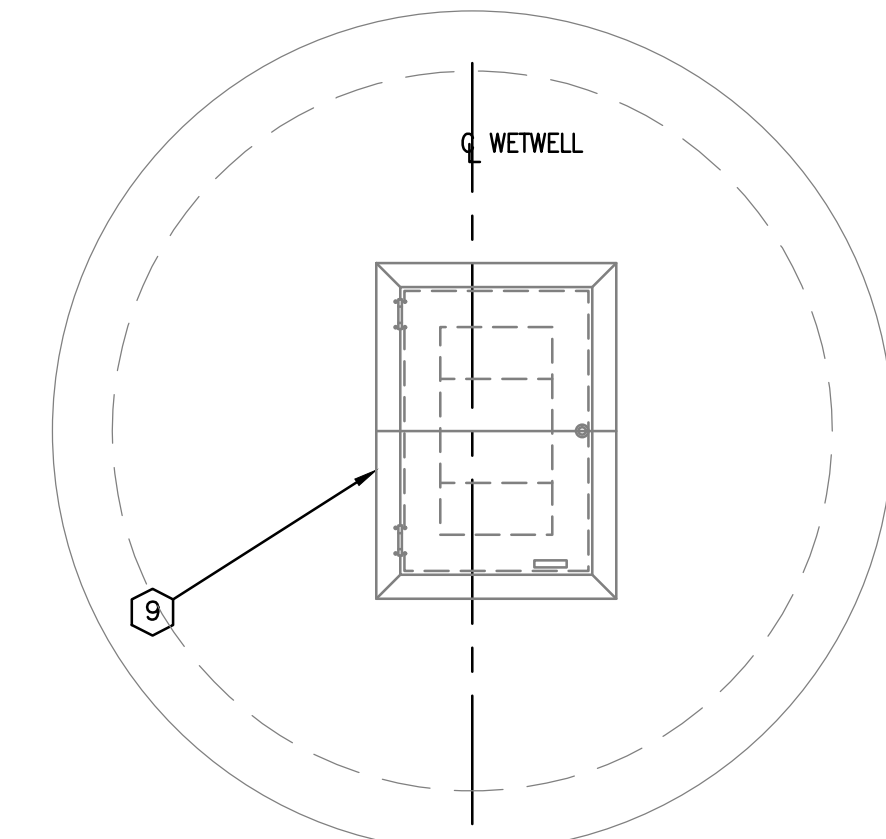




ELEVATION



WETWELL PLAN  
NOT TO SCALE

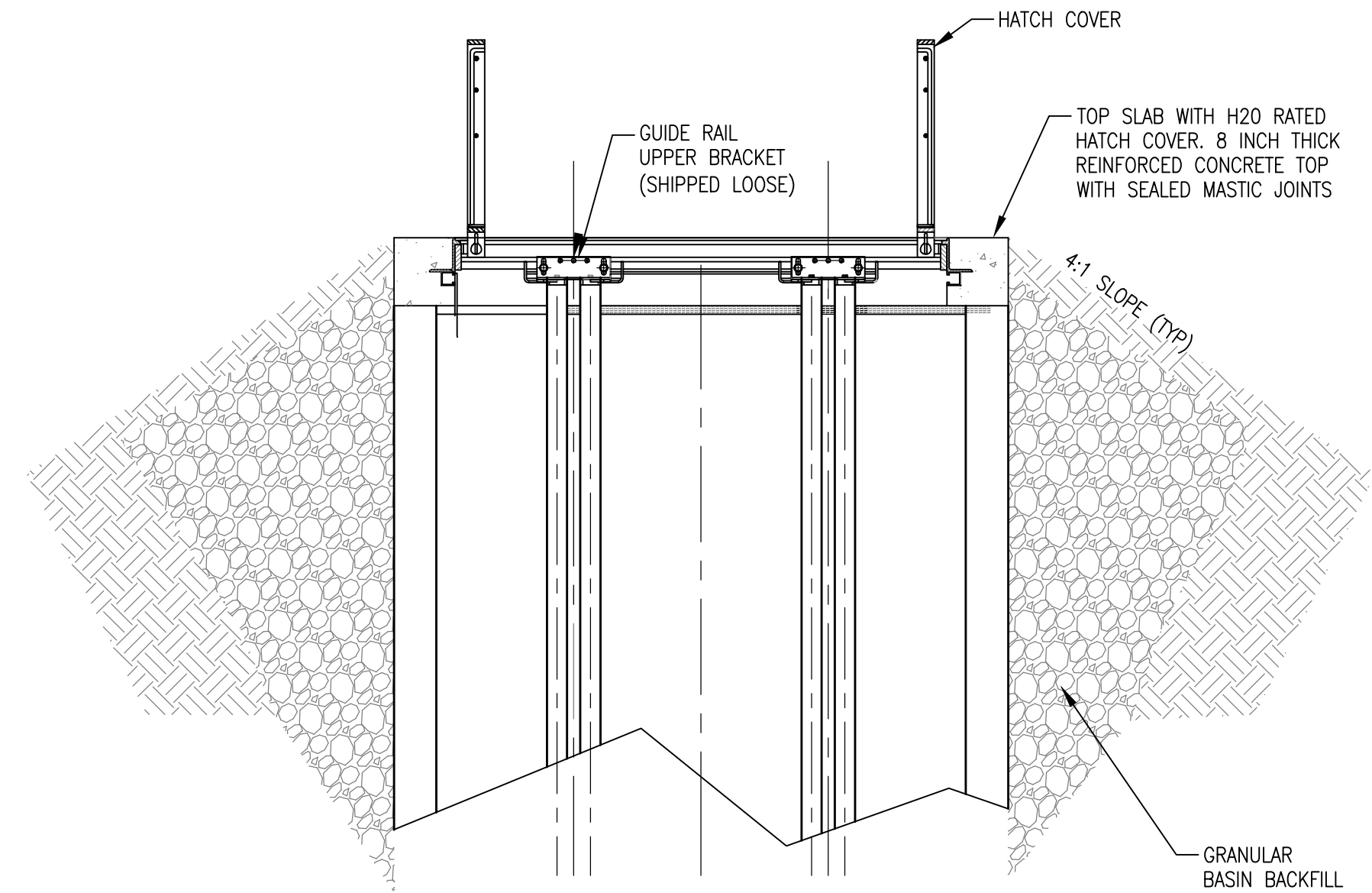


WETWELL AND VALVE VAULT TOP PLAN  
NOT TO SCALE

ANCHOR DETAIL  
NOT TO SCALE

MATERIAL AND EQUIPMENT SCHEDULE

- 1 INCOMING GRAVITY SEWER PIPE, LOCATIONS MAY VARY.
- 2 NEOPRENE PIPE GASKET.
- 3 NON-SHRINK GROUT ALL AROUND PIPE.
- 4 10" THICK, 4000 PSI PRECAST CONCRETE BASE SECTION WITH MONOLITHIC PRECAST CONCRETE RISER. PRECAST CONCRETE AND REINFORCING SHALL CONFORM TO ASTM C-478 AND CITY OF MEMPHIS STANDARDS.
- 5 5'x 5' WETWELL W/8" THICK, 4000 PSI PRECAST CONCRETE RISER SECTION CONFORMING TO ASTM C-478. JOINTS SHALL BE COMPLETELY SEALED TO PREVENT LEAKING, INSIDE AND OUTSIDE OF CONCRETE WETWELL. RISER WALLS SHALL BE COATED WITH 2 COATS OF COAL TAR EPOXY.
- 6 JUNCTION BOX FOR LEVEL CONTROLS AND POWER CABLE.
- 7 PUMP POWER CABLE.
- 8 NOT USED.
- 9 2 - 24"x36" MINIMUM CLEAR OPENING WITH SINGLE LEAF, GASKETED, SERRATED, ALUMINUM ACCESS COVER. COVER SHALL BE PROVIDED WITH LOCKABLE LEAF, CONTROL CABLE HOLDER AND LEAF LOCKING OPEN ARM. CONTRACTOR SHALL VERIFY OPENING SIZE AND LOCATION REQUIREMENTS WITH PUMP MANUFACTURER.
- 10 NOT USED.
- 11 FLG.-FLG.-M.J. WALL PIPE WITH LEAK PROOF, NON-SHRINK GROUT ALL AROUND.
- 12 STAINLESS STEEL LIFTING CABLE OR CHAIN.
- 13 NOT USED.
- 14 S.S. GUIDE RAILS AS PER PUMP MANUFACTURER. (2 RAILS PER PUMP REQUIRED). INSTALL INTERMEDIATE WALL BRACKETS AS REQUIRED BY MANUFACTURER.
- 15 MERCURY LEVEL CONTROL SWITCHES, SEE SPECIFICATION.
- 16 AUTOMATIC DISCHARGE CONNECTION.
- 17 HEAVY DUTY S.S. ANCHOR BOLTS WITH VIBRATION DAMPERS. (TYPICAL EACH PUMP). 3/4" OR 1/2" AS REQUIRED BY MANUFACTURER.
- 18 NOT USED.
- 19 PORTABLE HOIST WITH 3/8" S.S. CABLE AND CLEVIS TYPE HOOK. HOIST SHALL BE CAPABLE OF LIFTING 300 LB. PUMPS COMPLETELY OUT OF WETWELL.
- 20 GATE VALVE .
- 21 CHECK VALVE.
- 22 8" PRECAST TOP SLAB CONFORMING TO ASTM 478.
- 23 SEE PUMP NOTES



SEWER MANHOLE HATCH DETAIL  
NOT TO SCALE

PUMPING STATION DATA (DRYWELL)

DESCRIPTION	
"A" TOP OF DRYWELL	284.00
"B" INVERT INCOMING PIPE	264.00 (MAX)
"C" HIGH ALARM/LAG PUMP ON	262.00
"D" PUMP "ON"	261.00
"E" PUMP OFF	259.00
"F" BOTTOM	257.00
"G" WETWELL DIA	5.0'
"H" NON-CLOG SUBMER. PUMPS	10.2 HP (2 REQ'D)

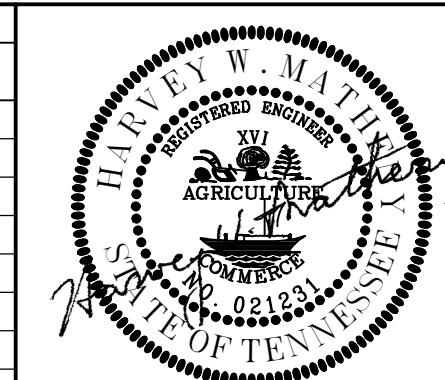
1 PUMP MODEL: WILCO EMU FA10.51E; FK17.1-4/16K-Ex  
230 VAC, 3-PHASE 275 GPM, 40' TDH

A1 PUMP STATION  
NOT TO SCALE

LIFT STATION REPLACEMENT NOTES:

- ALL PIPES TO BE D.I.P.
- CLEAN AND COAT WETWELL WITH A 2-COAT EPOXY-MODIFIED-MORTAR LINING AND HYBRID EPOXY COATING PER MANUFACTURER'S RECOMMENDATIONS. COVER EXPOSED REBAR WITH COMPATIBLE PRIMER AND MORTAR AND SEAL ANY LEAKS WITH HYDRAULIC CEMENT.

REVISION	DESCRIPTION OF CHANGE	APPROVAL DATE
1	PUMP STATION	05/20/2024



01/13/2023

LIFT STATION REHAB DESIGN

DEVELOPER: SARP10  
ENGINEER: PICKERING FIRM, INC.

SHEET 1 OF 1  
DIVISION OF ENGINEERING

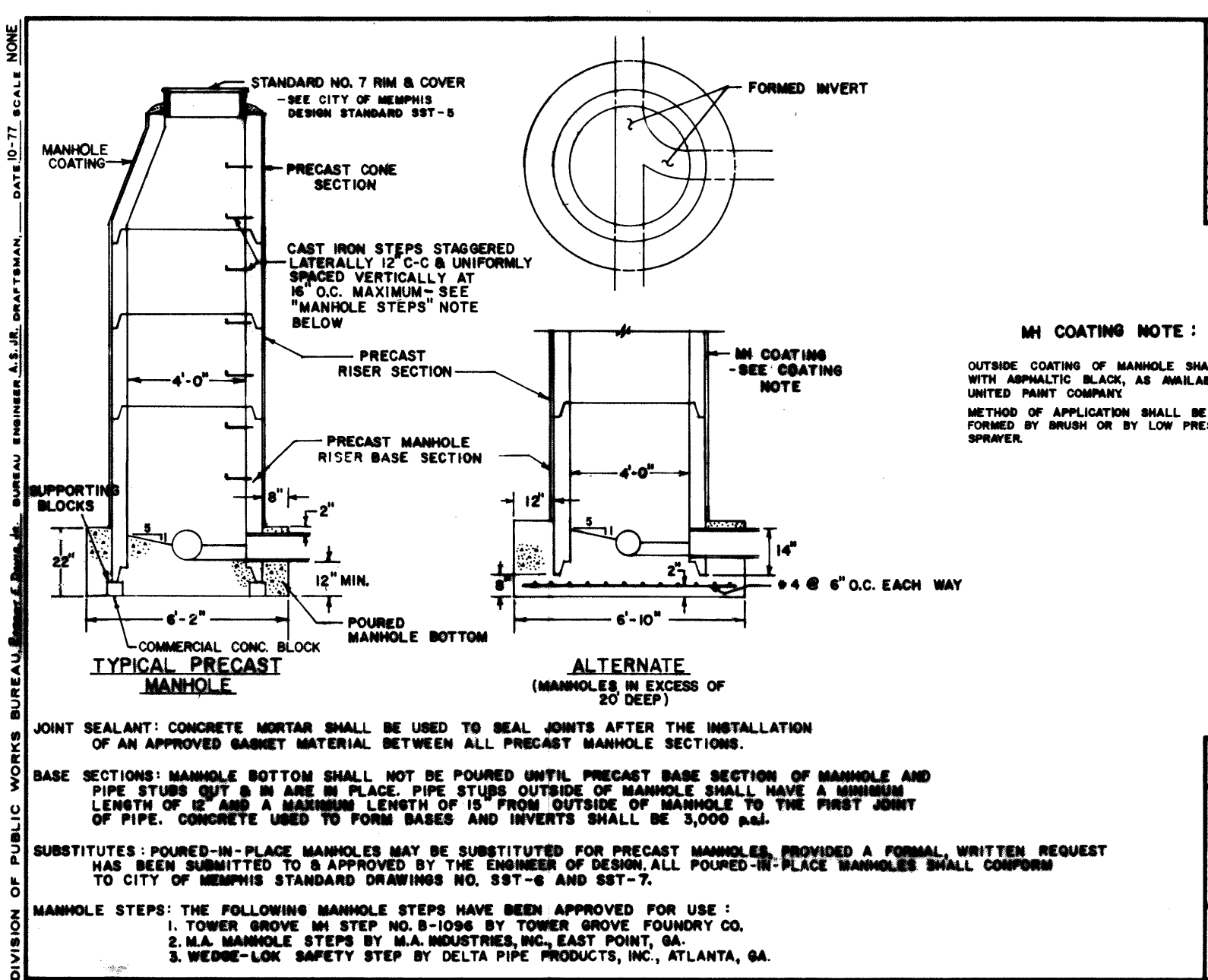
PUMP DETAILS  
5545 Elvis Presley Blvd

MEMPHIS, TENNESSEE

SURVEY: PFI DATE: NOV, 2018 PROJECT NO.: 24699.04  
DESIGN BY: PFI DATE: JAN, 2023 BOOK: 1688  
DRAWN BY: PFI DATE: JAN, 2023 SCALE: N.T.S.

REVIEWED

DEPUTY CITY ENGINEER DATE CITY ENGINEER DATE



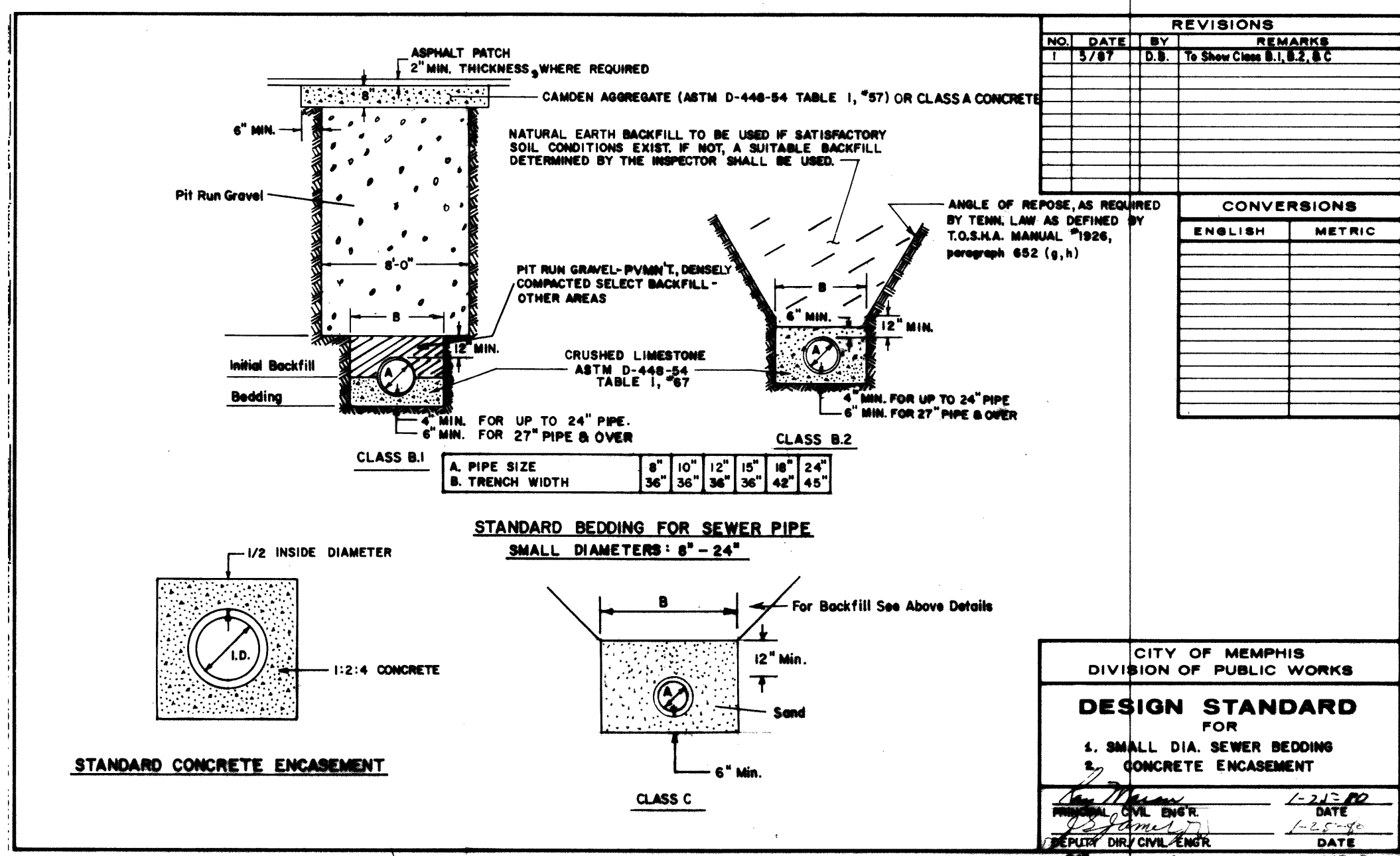
REVISIONS			
NO.	DATE	BY	REMARKS

CONVERSIONS	
ENGLISH	METRIC

CITY OF MEMPHIS DIVISION OF PUBLIC WORKS	
<b>DESIGN STANDARD</b>	
FOR PRECAST SANITARY MANHOLE	
DESIGNED BY: <i>Robert Anderson</i>	DATE: 11-13-77
CHECKED BY: <i>John J. Smith</i>	DATE: 11-13-77
DESIGNED BY: <i>John J. Smith</i>	DATE: 11-13-77
CHECKED BY: <i>John J. Smith</i>	DATE: 11-13-77
DWG. NO. SST-1	



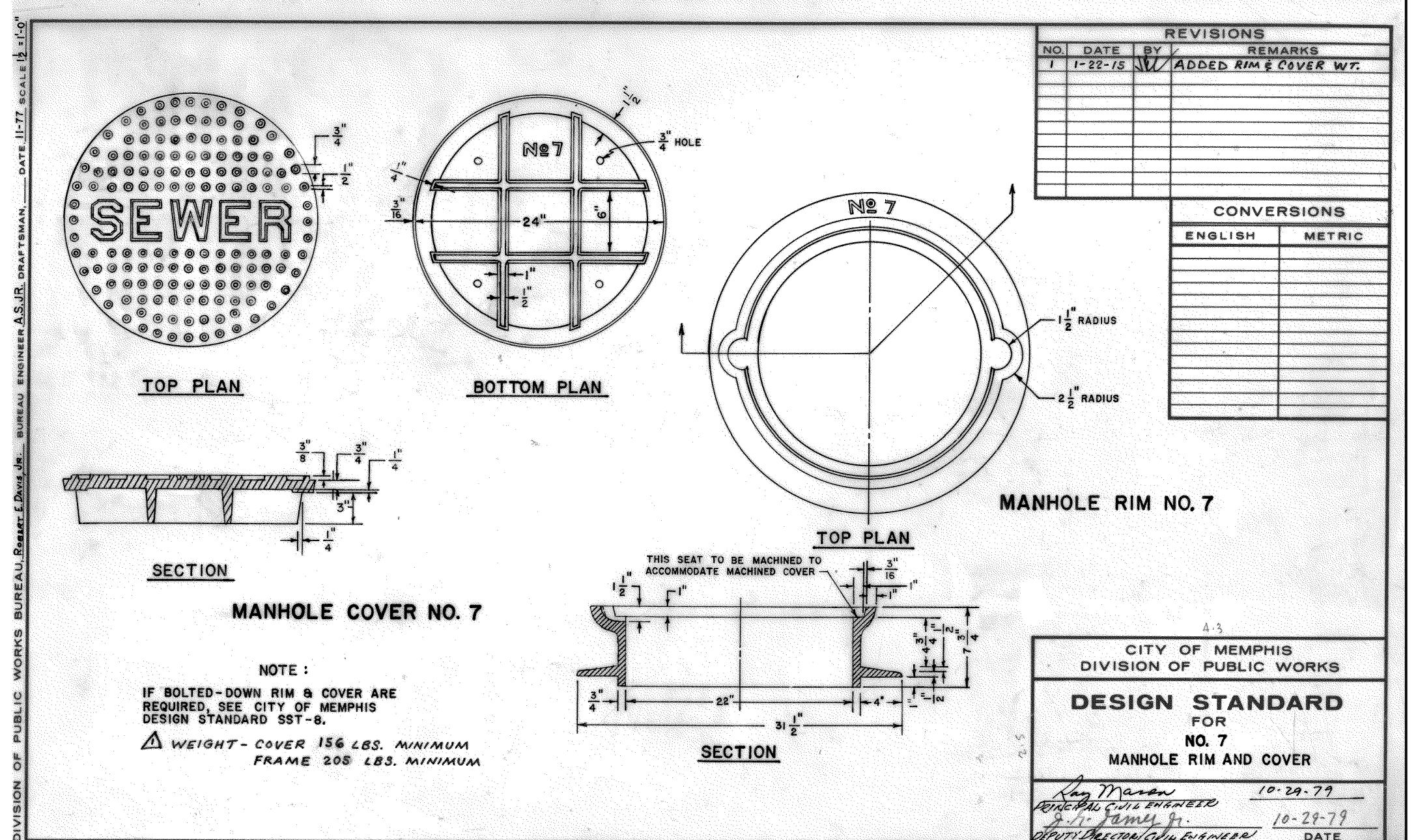
REVISIONS			
NO.	DATE	BY	REMARKS
1	11-17-77	J.S.	To Show Class B.1, B.2, C.

CONVERSIONS	
ENGLISH	METRIC

CITY OF MEMPHIS DIVISION OF PUBLIC WORKS	
<b>DESIGN STANDARD</b>	
FOR SMALL DIA. SEWER BEDDING CONCRETE ENCASEMENT	
DESIGNED BY: <i>Robert Anderson</i>	DATE: 11-13-77
CHECKED BY: <i>John J. Smith</i>	DATE: 11-13-77
DESIGNED BY: <i>John J. Smith</i>	DATE: 11-13-77
CHECKED BY: <i>John J. Smith</i>	DATE: 11-13-77
DWG. NO. SST-2	



REVISIONS			
NO.	DATE	BY	REMARKS
1	1-22-78	J.S.	ADDED RIM & COVER WT.

CONVERSIONS	
ENGLISH	METRIC

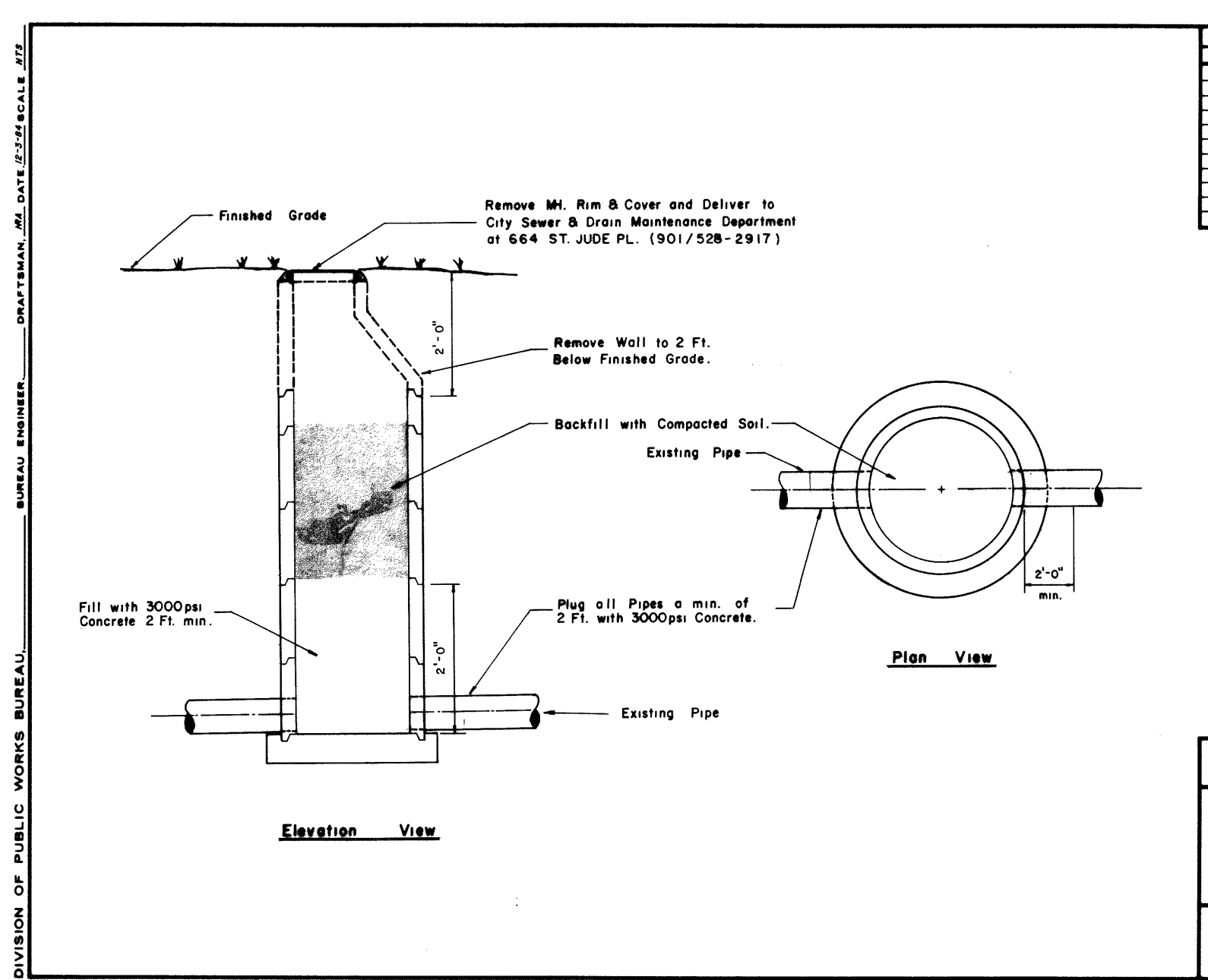
  

CITY OF MEMPHIS DIVISION OF PUBLIC WORKS	
<b>DESIGN STANDARD</b>	
FOR NO. 7 MANHOLE RIM AND COVER	
DESIGNED BY: <i>Robert Anderson</i>	DATE: 10-29-79
CHECKED BY: <i>John J. Smith</i>	DATE: 10-29-79
DESIGNED BY: <i>John J. Smith</i>	DATE: 10-29-79
CHECKED BY: <i>John J. Smith</i>	DATE: 10-29-79
DWG. NO. SST-3	

1 PRECAST SANITARY MANHOLE  
NOT TO SCALE

2 SMALL DIA. SEWER BEDDING &  
CONCRETE ENCASEMENT DETAIL  
NOT TO SCALE

3 No. 7 MANHOLE RIM AND COVER  
NOT TO SCALE



REVISIONS			
NO.	DATE	BY	REMARKS

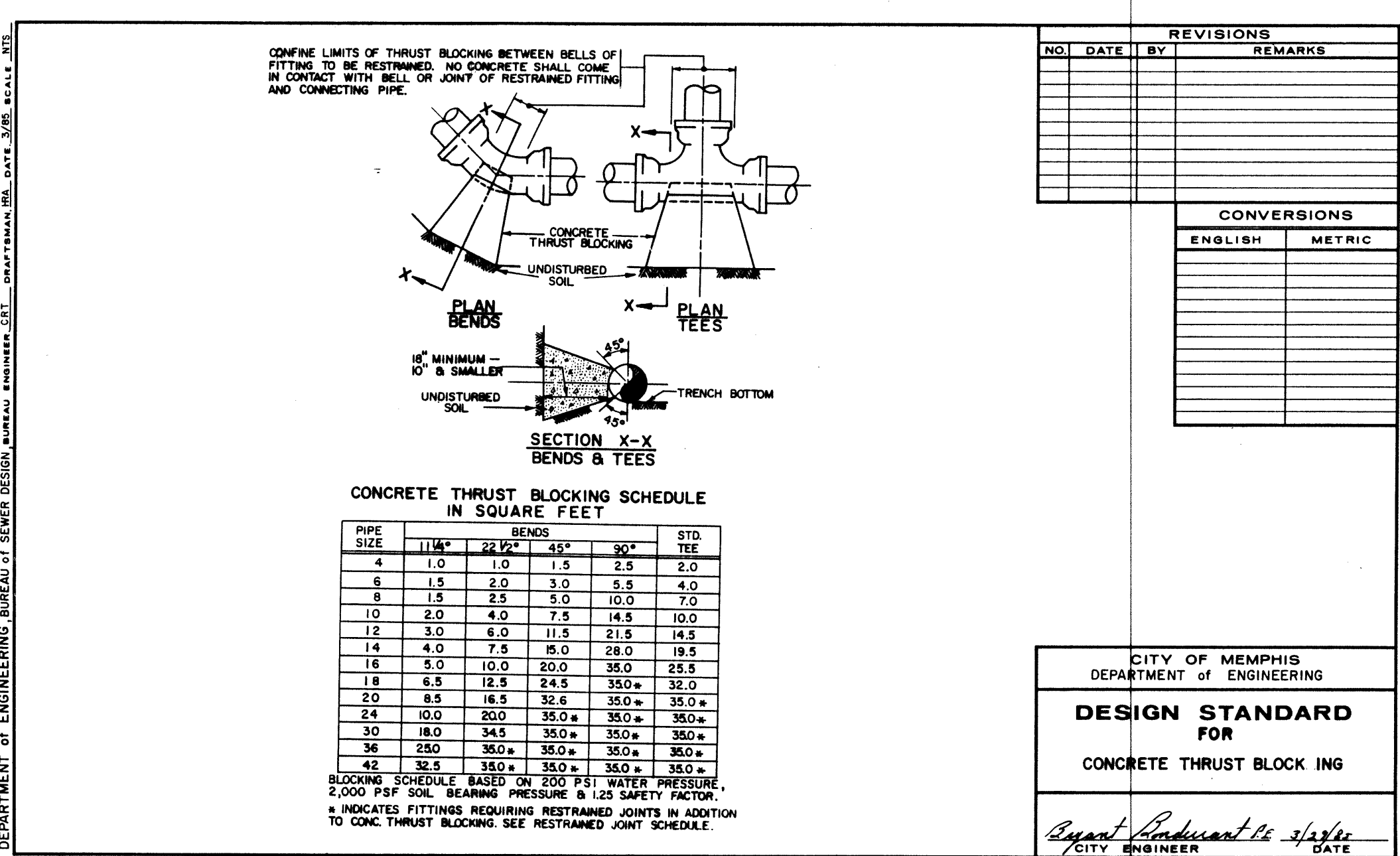
  

CONVERSIONS	
ENGLISH	METRIC

CITY OF MEMPHIS DIVISION OF PUBLIC WORKS	
<b>DESIGN STANDARD</b>	
FOR ABANDONED MANHOLES	
DESIGNED BY: <i>Robert Anderson</i>	DATE: 11-13-77
CHECKED BY: <i>John J. Smith</i>	DATE: 11-13-77
DESIGNED BY: <i>John J. Smith</i>	DATE: 11-13-77
CHECKED BY: <i>John J. Smith</i>	DATE: 11-13-77
DWG. NO. SST-4	

6 ABANDONED MANHOLE AND WETWELL DETAIL  
NOT TO SCALE



REVISIONS			
NO.	DATE	BY	REMARKS

CONVERSIONS	
ENGLISH	METRIC

CITY OF MEMPHIS DEPARTMENT OF ENGINEERING	
<b>DESIGN STANDARD</b>	
FOR CONCRETE THRUST BLOCKING	
DESIGNED BY: <i>Robert Anderson</i>	DATE: 11-13-77
CHECKED BY: <i>John J. Smith</i>	DATE: 11-13-77
DESIGNED BY: <i>John J. Smith</i>	DATE: 11-13-77
CHECKED BY: <i>John J. Smith</i>	DATE: 11-13-77
DWG. NO. SST-12	

6 CONCRETE THRUST BLOCKING  
NOT TO SCALE

REVISION		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE

SHEET 1 OF 1  
DIVISION OF ENGINEERING

**SEWER DETAILS**  
5545 Elvis Presley Blvd  
MEMPHIS, TENNESSEE

01/13/2023

SURVEY: PFI  
DATE: NOV, 2018  
DESIGN BY: PFI  
DATE: JAN, 2023  
DRAWN BY: PFI  
DATE: JAN, 2023

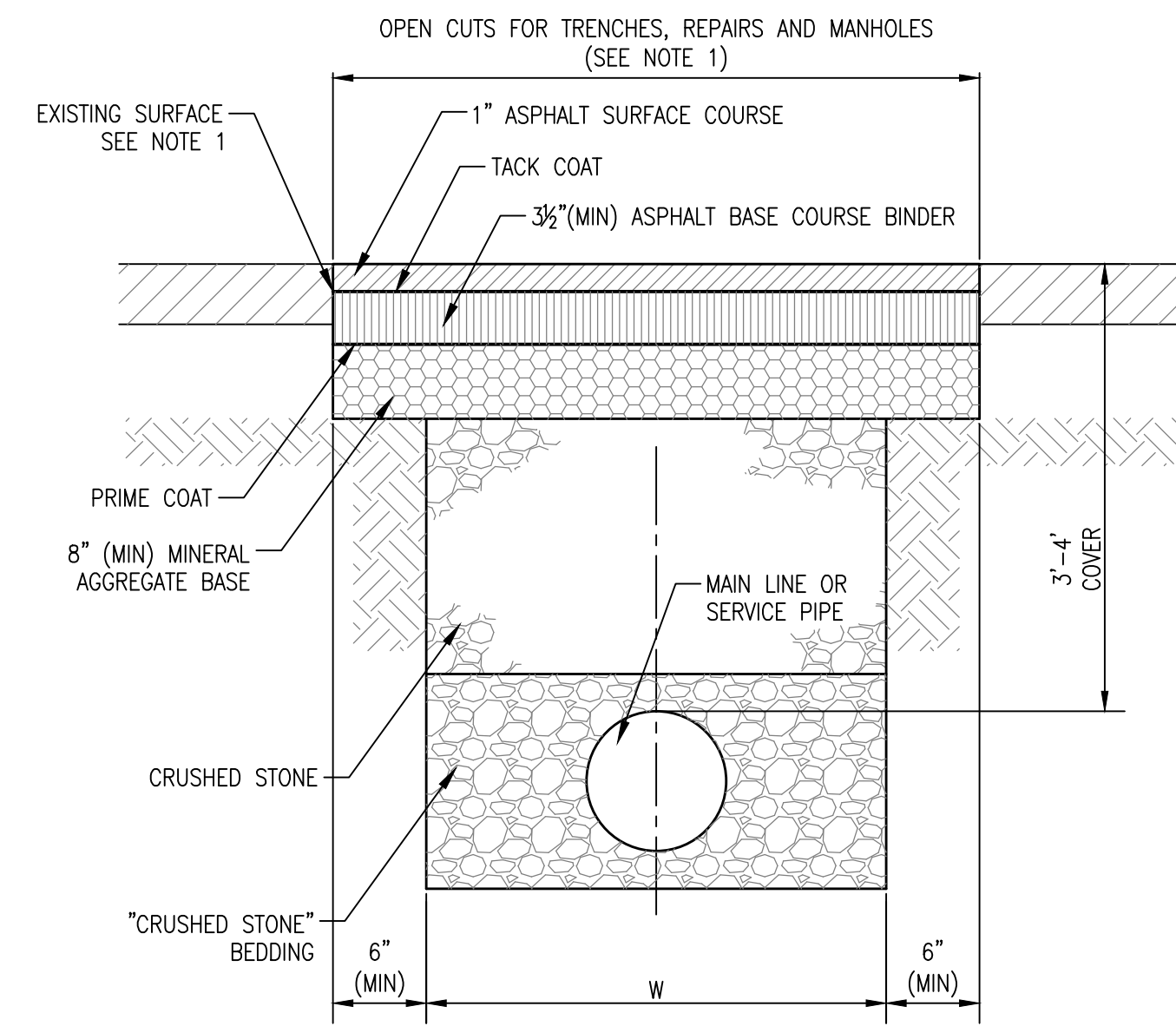
PROJECT NO.: 24699.04  
BOOK: 1688  
SCALE: N.T.S.

REVIEWED  
DEPUTY CITY ENGINEER      DATE      CITY ENGINEER      DATE

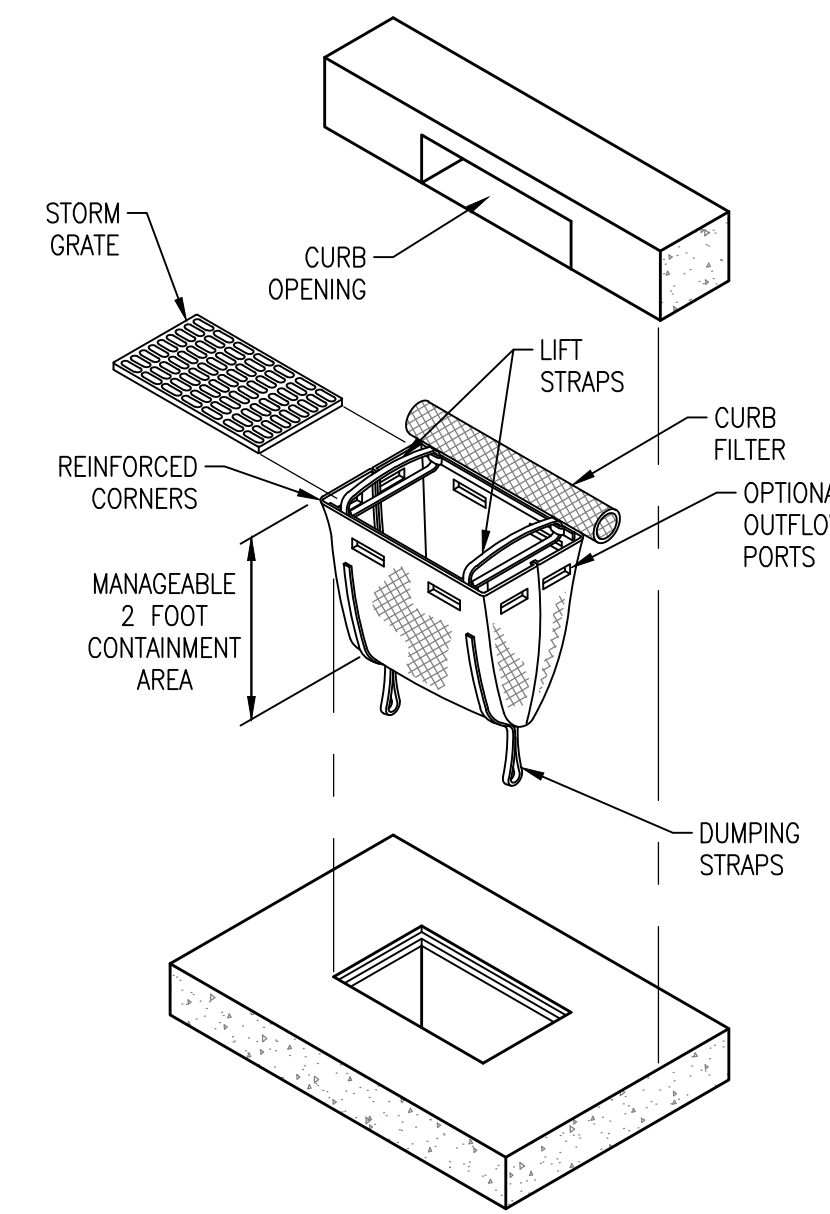


**NOTES:**

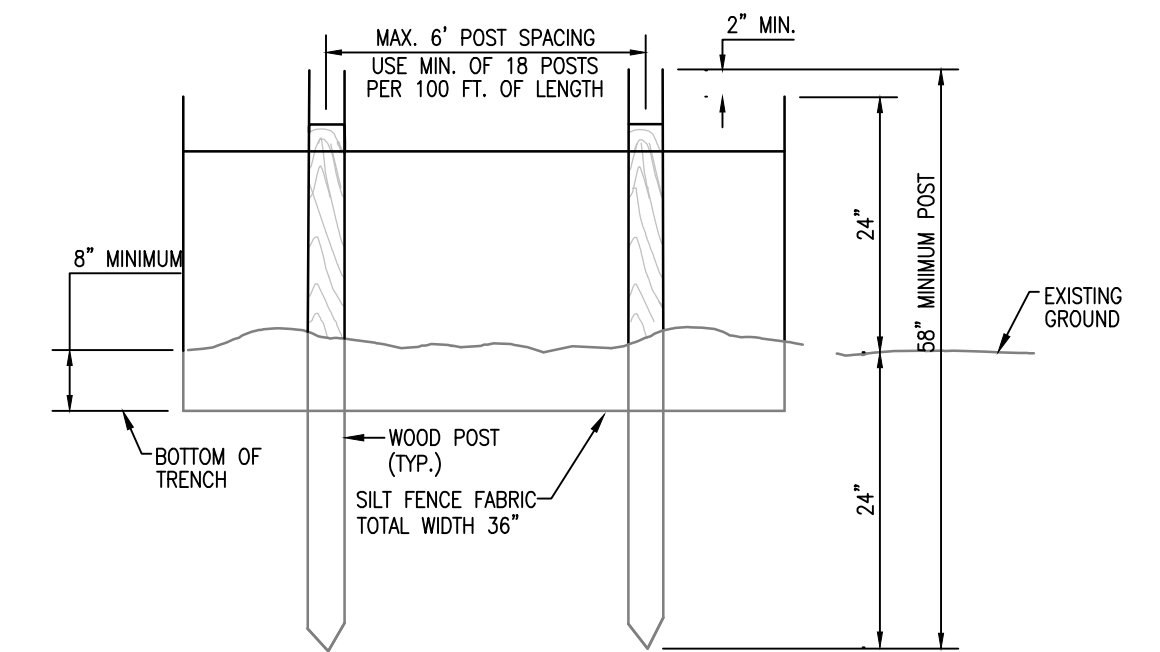
- EXISTING SURFACE TO BE CLEAN, STRAIGHT LINES PARALLEL AND PERPENDICULAR TO THE FLOW OF TRAFFIC.
- DO NOT CONSTRUCT PATCHES WITH ANGLED SIDES AND/OR IRREGULAR SHAPES.
- ALL REPAIRS SHALL BE FULL LANE WIDTH.
- FOR PATCHES IN ASPHALT, A TACK COAT SHALL BE APPLIED TO ALL EDGES OF ASPHALT BEFORE PLACING NEW PAVEMENT.
- AFTER PLACING THE NEW ASPHALT, ALL SEAMS (JOINTS BETWEEN THE NEW AND OLD PAVEMENTS) SHALL BE SEALED WITH ASPHALT TACK COAT OR RUBBERIZED MATERIAL.
- PATCHES SHALL HAVE A SMOOTH LONGITUDINAL GRADE AND CROSS SLOPE THAT MATCHED THE EXISTING ROADWAY.



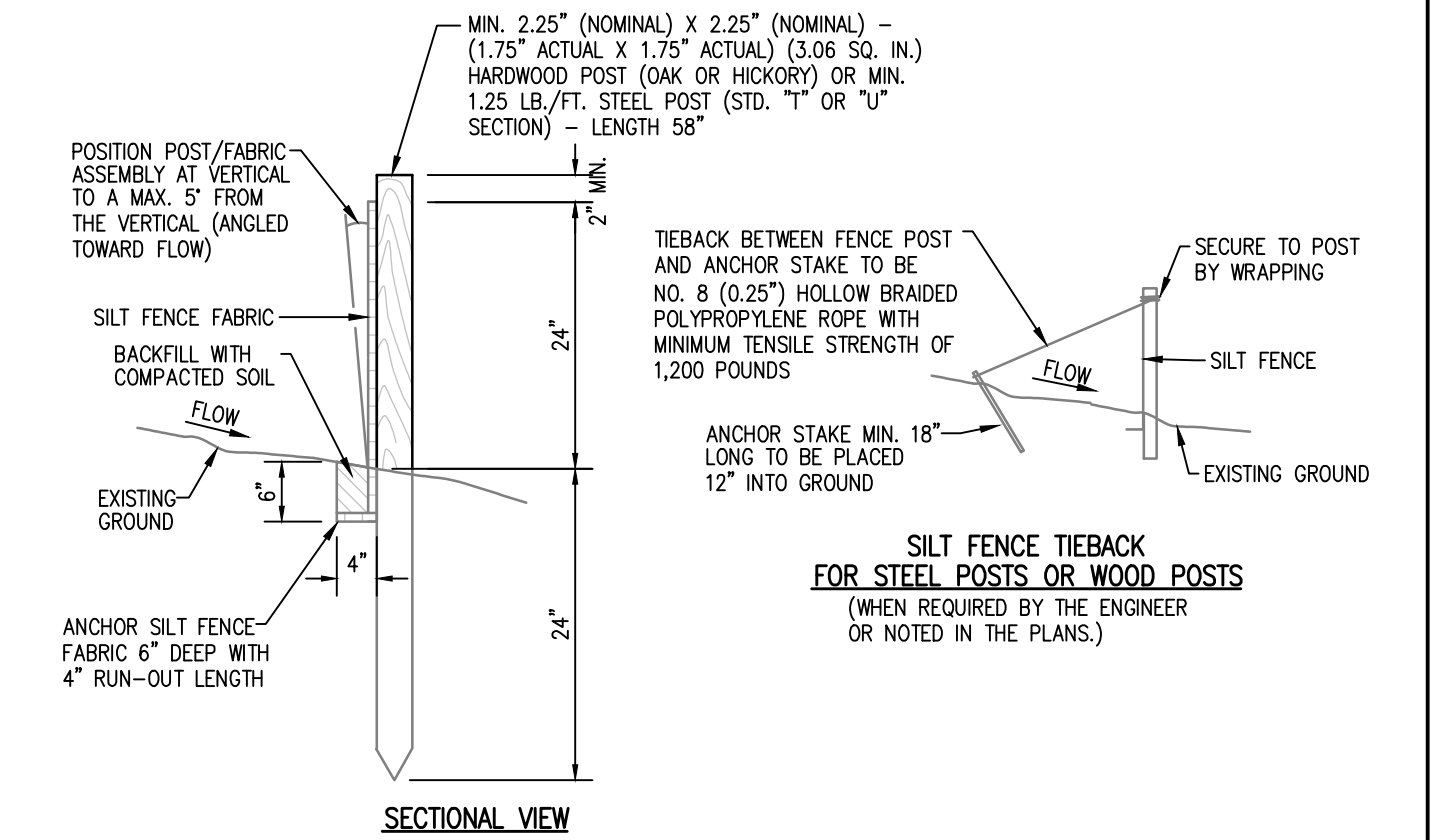
**2 TYPICAL ASPHALT PAVEMENT REPLACEMENT**  
NOT TO SCALE



**4 CURB INLET PROTECTION-SILT SACK**  
NOT TO SCALE

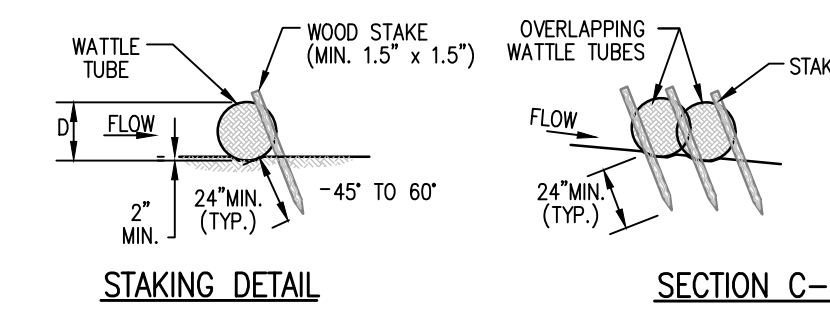


**ELEVATION VIEW**

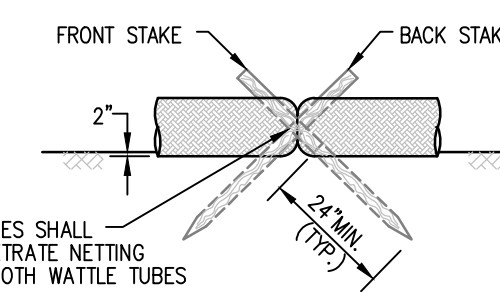


**SECTIONAL VIEW**

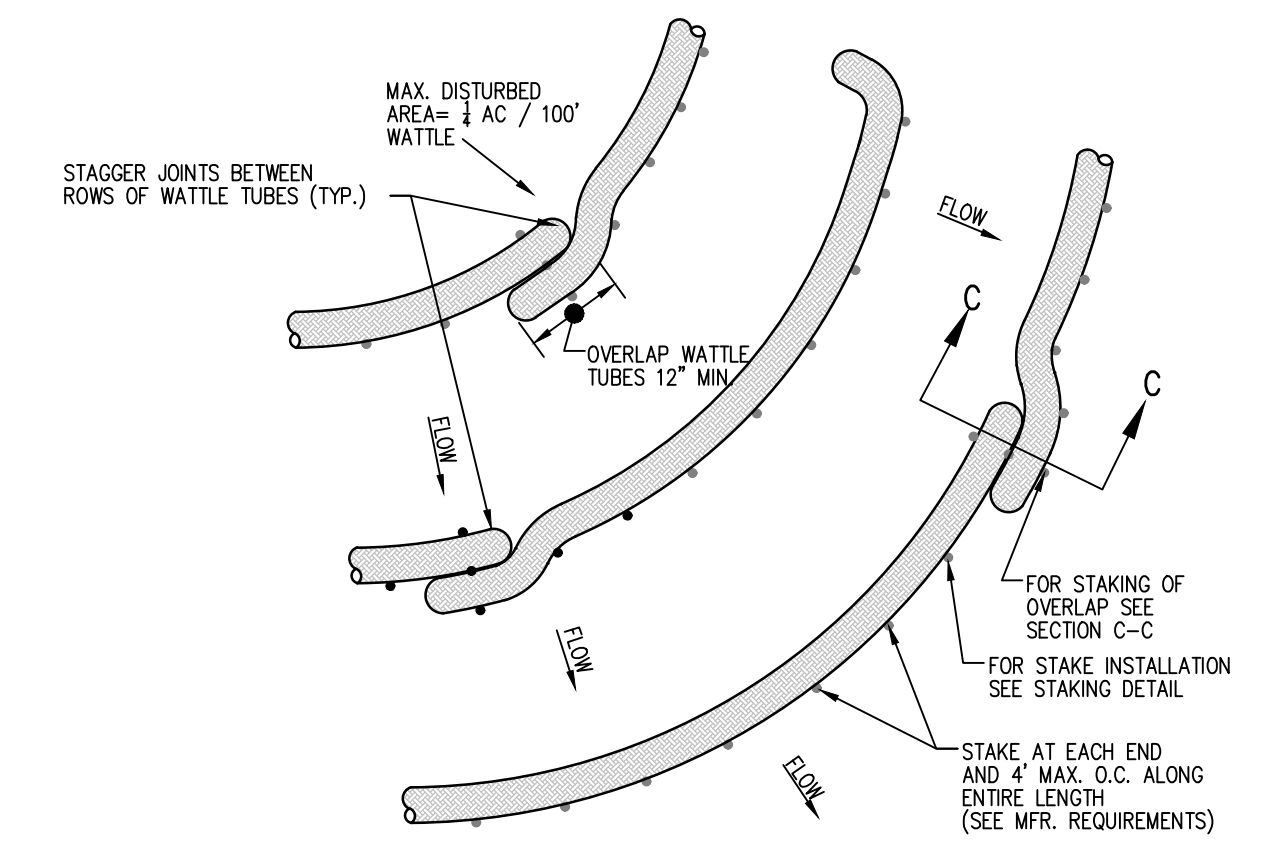
**5 SILT FENCE**  
NOT TO SCALE



**STAKING DETAIL**



**JOINT STAKING DETAIL**



**PLAN VIEW FOR SLOPE APPLICATION**

**8 TUBES AND WATTLES**  
NOT TO SCALE

REVISION		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE



**LIFT STATION REHAB DESIGN**  
DEVELOPER: SARP10  
ENGINEER: PICKERING FIRM, INC.

SHEET 1 OF 1  
DIVISION OF ENGINEERING  
**SITE DETAILS**  
**5545 Elvis Presley Blvd**  
MEMPHIS, TENNESSEE  
SURVEY: PFI DATE: NOV, 2018 PROJECT NO.: 24699.04  
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