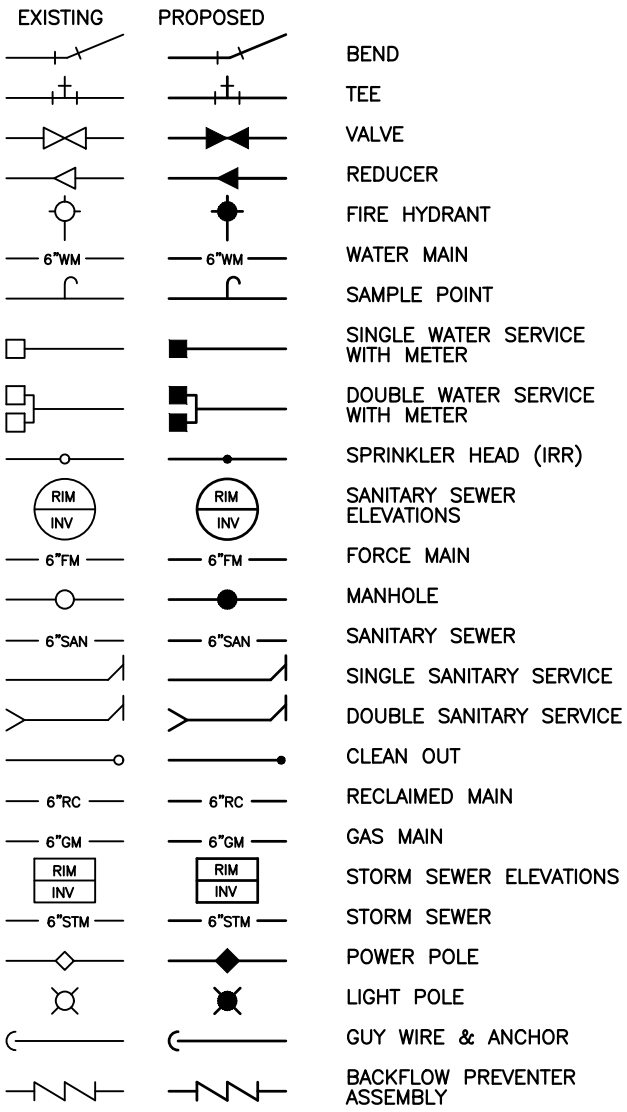


PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

Symbols

SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision A–15

DATE APPROVED: FEB 26, 2025

DRAWING No. 1

STANDARD WATER, RECLAIMED WATER AND SEWER SEPARATION STATEMENT

1. STORM SEWER, GRAVITY WASTEWATER, FORCE MAINS AND RECLAIMED WATER MAINS CROSSING UNDER POTABLE WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF TWELVE (12) INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE CROWN OF THE LOWER PIPE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED BETWEEN GRAVITY SEWER OR STORM SEWER, THE CROSSING SHALL BE ARRANGED SO THAT THE STORM/GRAVITY SEWER PIPE JOINTS AND POTABLE WATER MAIN JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING WITH NO LESS THAN SIX (6) FEET BETWEEN ANY TWO JOINTS, BOTH PIPES SHALL BE D.I.P., AND THE MINIMUM VERTICAL SEPARATION SHALL BE SIX (6) INCHES. WHERE THERE IS NO ALTERNATIVE TO STORM/WASTEWATER/FORCE MAIN/RECLAIMED WATER MAINS CROSSING OVER A POTABLE WATER MAIN, THE CRITERIA FOR MINIMUM TWELVE (12) INCH VERTICAL SEPARATION BETWEEN LINES AND JOINT ARRANGEMENT, AS STATED ABOVE, SHALL BE REQUIRED, AND BOTH PIPES SHALL BE D.I.P. IRRESPECTIVE OF SEPARATION, IN ALL OF THE ABOVE CASES D.I.P. IS NOT REQUIRED FOR STORM SEWER PIPE.

2. FORCE MAINS CROSSING RECLAIMED WATER MAINS OR STORM SEWER SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF TWELVE (12) INCHES BETWEEN THE OUTSIDE OF THE FORCE MAIN AND THE OUTSIDE OF THE RECLAIMED WATER MAIN OR STORM SEWER AND THE RECLAIMED WATER MAIN SHALL CROSS OVER THE FORCE MAIN.

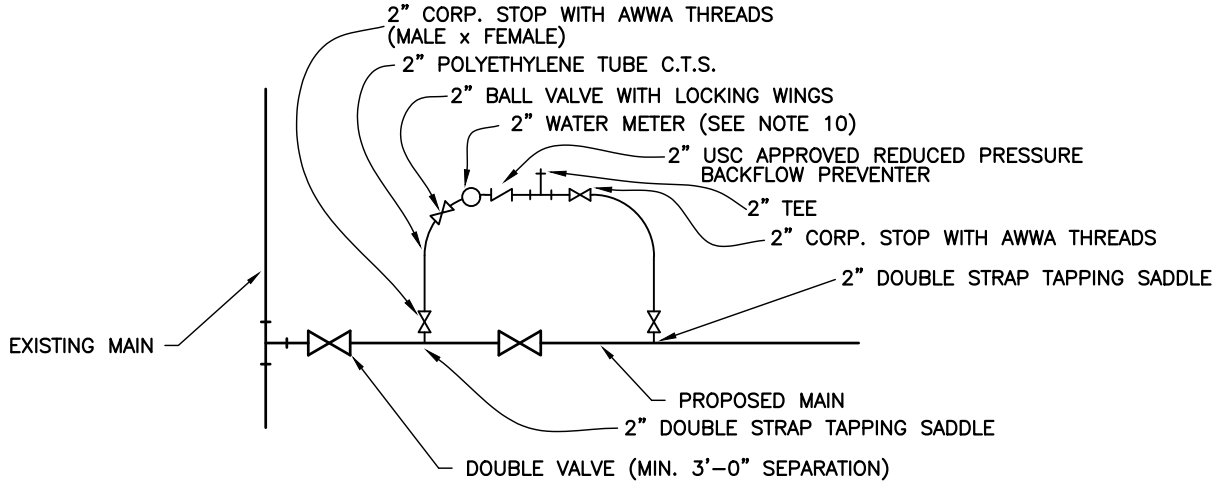
3. AT THE UTILITY CROSSING DESCRIBED IN ITEMS 1 AND 2 ABOVE, ONE FULL LENGTH OF DUCTILE IRON WATER MAIN PIPE SHALL BE CENTERED SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE JOINTS. WHERE THIS IS NOT POSSIBLE, JOINTS SHALL BE AT LEAST THREE (3) FEET FROM STORM SEWERS AND SIX (6) FEET FROM GRAVITY SEWER MAINS, FORCE MAINS AND RECLAIMED WATER MAINS.

4. SEWER SERVICE LATERALS SHALL CROSS UNDER WATER MAINS WITH A MINIMUM VERTICAL SEPARATION OF TWELVE (12) INCHES. IF (12") VERTICAL SEPARATION CANNOT BE MAINTAINED, THEN THE WATER MAIN SHALL BE D.I.P. AND THE SEWER SERVICE LATERAL SHALL BE C-900 SDR 18 OR BETTER AND THE MINIMUM SEPARATION SHALL BE SIX (6) INCHES. WHEN IT IS NOT POSSIBLE FOR THE WATER MAIN TO CROSS OVER THE SEWER SERVICE LATERAL A MINIMUM VERTICAL SEPARATION OF AT LEAST TWELVE (12) INCHES MUST BE MAINTAINED, THE WATER MAIN SHALL BE D.I.P. AND THE SEWER LATERAL SHALL BE C-900 SDR 18 OR BETTER.

5. MAINTAIN MINIMUM TEN (10) FEET HORIZONTAL DISTANCE BETWEEN POTABLE WATER MAIN OR FORCE MAIN, RECLAIMED WATER MAIN, STORM SEWER OR GRAVITY SEWER MAIN OR ON SITE SEWAGE DISPOSAL SYSTEMS. ADDITIONAL SEPARATION MAY BE REQUIRED AS OUTLINED IN SECTION II OF SUA STANDARDS.

NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. THIS METHOD SHALL BE COMPLIED WITH WHEN CONNECTING TO AN EXISTING WATER MAIN, (ONE THAT HAS ALREADY BEEN BACTERIOLOGICALLY CLEARED OR IS IN USE) WHETHER BY TEE AND VALVE OR BY CONTINUATION OF A PLUGGED STUB OUT WITH AN EXISTING GATE VALVE.
2. THESE REQUIREMENTS ARE BASED ON PALM BEACH COUNTY HEALTH DEPARTMENT REQUIREMENTS.
3. WHEN A TAPPING TEE AND VALVE IS INSTALLED, A PRESSURE/LEAKAGE TEST SHALL BE PERFORMED ON THE ASSEMBLY IN THE PRESENCE OF AN AUTHORIZED SUA REPRESENTATIVE PRIOR TO PERFORMING THE ACTUAL TAP.
4. DOUBLE VALVING PERMITS PHYSICAL CONNECTION TO AN EXISTING WATER MAIN WHEN USED IN CONJUNCTION WITH A BYPASS LINE.
5. A 2" BYPASS LINE (MAXIMUM) SHALL BE INSTALLED AS SHOWN BELOW PRIOR TO CANNON FLUSHING.
6. THE 2" TEE SHALL BE USED FOR FEEDING CHLORINE SOLUTION AND FOR ATMOSPHERIC VENT DURING PRESSURE/LEAKAGE TESTS.
7. UNDER NO CIRCUMSTANCES SHALL VALVES BE OPERATED WITHOUT AN AUTHORIZED SUA REPRESENTATIVE PRESENT.
8. ALL WATER MAINS SHALL BE FILLED WITH WATER UTILIZING JUMPER METER AND THEN BE THOROUGHLY CANNON FLUSHED IN ACCORDANCE WITH SEACOAST SPECIFICATIONS PRIOR TO PRESSURE/LEAKAGE TESTING. THE PROCEDURE SHALL BE DONE ONLY IN THE PRESENCE OF AN AUTHORIZED SUA REPRESENTATIVE.
9. FOLLOWING INITIAL CANNON FLUSHING, ALL WATER FOR PRESSURE/LEAKAGE TESTING AND BACTERIOLOGICAL CLEARANCES MUST BE DRAWN FROM THE BYPASS LINE WITH METER AND REDUCED PRESSURE BACKFLOW PREVENTER IN PLACE. THE 2" INCH WATER METER SHALL BE PROVIDED BY SUA UPON APPLICATION BY EITHER THE CONTRACTOR OR DEVELOPER. ALL WATER USED FOR THE CONSTRUCTION OF THE WATER AND SEWER MAINS SHALL BE PAID FOR BY THE ABOVE PARTIES PRIOR TO ANY SERVICE BEING PROVIDED. METER, BALL VALVE, REDUCED PRESSURE BACKFLOW PREVENTER AND TEE SHALL INSTALLED AT LEAST 18" ABOVE EXISTING GRADE, SUPPORTED, AND PROTECTED FROM DAMAGE. ANY DAMAGE SHALL BE APPLICANT'S RESPONSIBILITY AND SHALL BE CHARGED ACCORDINGLY.
10. EXCEPT DURING CANNON FLUSHING VALVES SHALL NOT BE OPENED UNTIL AFTER AN APPROVED PRESSURE/ LEAKAGE TEST, BACTERIOLOGICAL CLEARANCE, CERTIFICATION BY THE ENGINEER OF RECORD, RELEASE FROM THE PALM BEACH COUNTY HEALTH DEPARTMENT AND APPROVAL BY SUA.
11. DISINFECTION AND BACTERIOLOGICAL CLEARANCES SHALL COMPLY WITH CURRENT AWWA PROCEDURES, PALM BEACH COUNTY HEALTH DEPARTMENT, AND FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS.
12. CORP STOPS AND TAPPING SADDLES FOR THE JUMPER METER ARE TO BE TAPPED ON TOP OF THE WATER MAIN.



Tapping and Main Clearing Procedure

SEACOAST UTILITY AUTHORITY

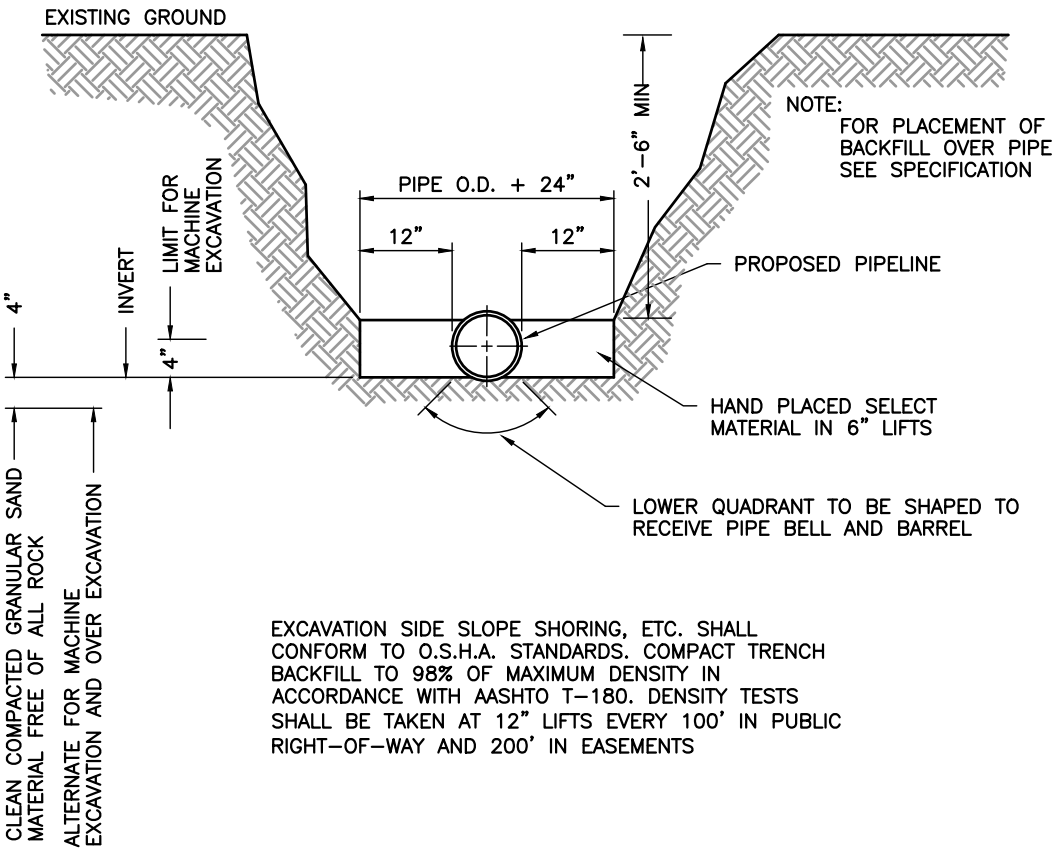
CONSTRUCTION STANDARDS AND DETAILS

Revision C-24

DATE APPROVED: FEB 26, 2025

DRAWING No. 3

(PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)



EXCAVATION SIDE SLOPE SHORING, ETC. SHALL CONFORM TO O.S.H.A. STANDARDS. COMPACT TRENCH BACKFILL TO 98% OF MAXIMUM DENSITY IN ACCORDANCE WITH AASHTO T-180. DENSITY TESTS SHALL BE TAKEN AT 12" LIFTS EVERY 100' IN PUBLIC RIGHT-OF-WAY AND 200' IN EASEMENTS

CONTRACTOR SHALL AT ALL TIMES COMPLY WITH THE REQUIREMENTS OF THE FLORIDA TRENCH SAFETY ACT.

Standard Trenching Procedure

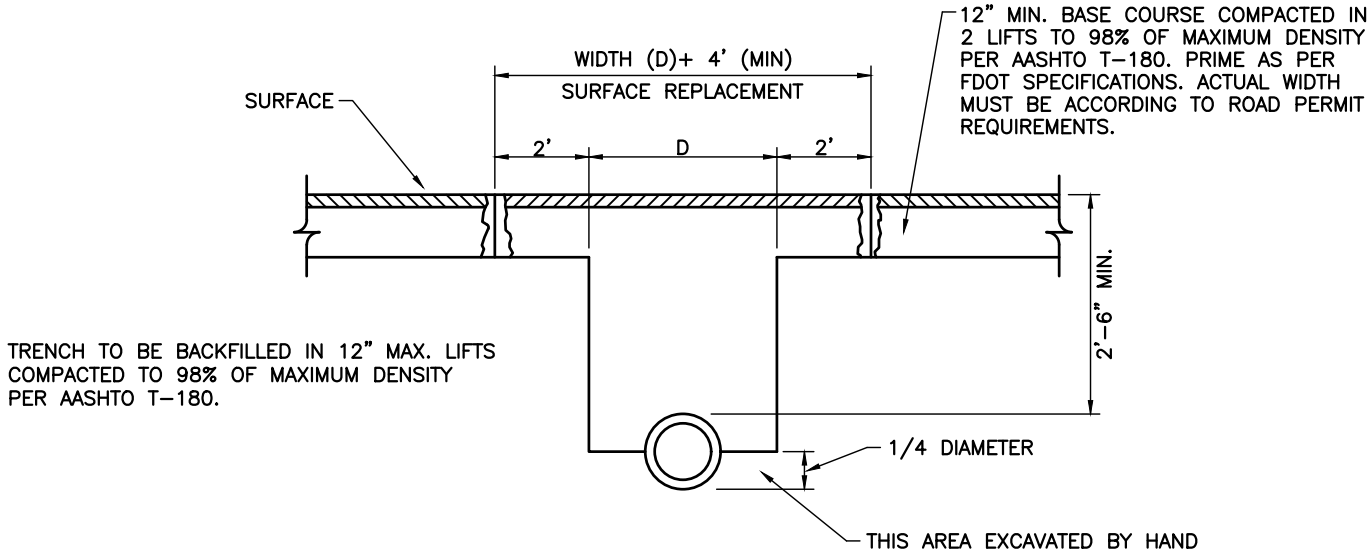
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision C-20

DATE APPROVED: FEB 26, 2025

DRAWING No. 4



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. REPLACED BASE MATERIAL OVER DITCH SHALL BE A MINIMUM OF TWICE THE THICKNESS OF THE ORIGINAL BASE.
2. BASE MATERIAL SHALL BE PLACED IN A MINIMUM OF 2 LIFTS AND THOROUGHLY ROLLED OR TAMPED TO 98% OF MAXIMUM DENSITY PER AASHTO T-180.
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
4. SURFACE MATERIAL SHALL BE CONSISTENT WITH EXISTING SURFACE, WITH ASPHALT A MINIMUM OF 2" THICK.
5. A MINIMUM OF TWO DENSITY TESTS SHALL BE TAKEN FOR EACH SIX (6") INCH LIFT OF SUBGRADE AND EACH OPEN CUT CROSSING. ROAD CROSSINGS GREATER THAN 24 FEET IN WIDTH SHALL REQUIRE ONE ADDITIONAL TEST SITE FOR EACH ADDITIONAL 12 FEET OF PAVEMENT. WHEN THE SPECIFIED COMPACTED BASE IS GREATER THAN SIX AND ONE-HALF (6 1/2") INCHES, THE BASE SHALL BE CONSTRUCTED IN TWO OR MORE COURSES. PROCTORS FOR MATERIALS USED IN BACKFILLING SHALL BE OBTAINED BY A CERTIFIED LABORATORY. DENSITY TESTS SHALL BE CONDUCTED BY A CERTIFIED LABORATORY. THE PERCENTAGE OF MAXIMUM DENSITY REQUIRED SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "THE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AT THE TIME THE PERMIT WAS ISSUED. ALL DENSITY TESTS SHALL BE COMPLETED AND ACCEPTED ON EACH LAYER PRIOR TO ADDITIONAL BACKFILLING. A COPY OF ALL COMPLETED AND ACCEPTED DENSITY TESTS SHALL BE FURNISHED TO SUA UPON REQUEST, BACKFILL COMPACTION SHALL BE 98% OF MAXIMUM DENSITY PER AASHTO T-180.
6. ANY DAMAGE TO TRAFFIC SIGNALIZATION EQUIPMENT SHALL BE REPAIRED BY THE PALM BEACH TRAFFIC DIVISION AT THE CONTRACTORS EXPENSE.
7. THESE SPECIFICATIONS MAY BE SUPERSEDED BY THE PERMITTING AGENCY.
8. TEMPORARY ASPHALT OR CONCRETE PATCH MUST BE APPLIED THE SAME DAY AS THE BACKFILL.
9. TRAFFIC AREAS OR WHERE SAFETY TO THE PUBLIC IS AT ISSUE A TEMPORARY ASPHALT OR CONCRETE PATCH MUST BE IMMEDIATELY PLACED.

Pavement Replacement

SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision A-15

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DRAWING No. 5

LENGTH OF PIPE RESTRAINT REQUIREMENTS AT ALL PIPE JOINTS

PIPE SIZE	90° BEND	45° BEND	22½° BEND	11¼° BEND	REDUCER	VALVE	DEAD END	TEE
4"	54'	54'	36'	36'	54'	72'	72'	72'
6"	54'	54'	36'	36'	54'	72'	72'	72'
8"	54'	54'	36'	36'	54'	72'	72'	72'
10"	54'	54'	36'	36'	54'	108'	108'	108'
12"	72'	72'	54'	54'	72'	108'	108'	108'
14"	72'	72'	54'	54'	72'	108'	108'	108'
16"	72'	72'	54'	54'	72'	154'	154'	154'
18"	72'	72'	54'	54'	72'	154'	154'	154'
20"	90'	90'	54'	54'	90'	154'	154'	154'
24"	90'	90'	54'	54'	90'	172'	172'	172'
30"	90'	90'	54'	54'	90'	180'	180'	180'
36"	90'	90'	54'	54'	90'	270'	270'	270'
42"	108'	108'	54'	54'	108'	270'	270'	270'
48"	108'	108'	54'	54'	108'	270'	270'	270'
54"	108'	108'	54'	54'	108'	270'	270'	270'

MINIMUM LENGTH OF PUSH ON JOINT PIPE WITH SPECIAL RESTRAINING GASKETS

NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. ALL BURIED PRESSURE MAINS SHALL INCLUDE A RESTRAINED JOINT SYSTEM. THE CONTRACTOR SHALL USE A DUCTILE IRON RESTRAINING SYSTEM AS MANUFACTURED BY EBAA IRON, INC. (MEGALUG) OR APPROVED EQUAL FOR ALL MECHANICAL JOINT FITTINGS AND LOCKING GASKETS FOR PUSH-ON JOINT PIPE.
2. RESTRAINING LENGTHS SHOWN ARE THE MINIMUM LENGTH REQUIRED BASED ON A TEST PRESSURE OF 150 P.S.I.G.
3. THRUST BLOCKS, IN ADDITION TO THE ABOVE OUTLINED RESTRAINTS, SHALL ALSO BE REQUIRED AT ALL TIE-INS TO EXISTING LINES, ALL TAPPING TEES ON EXISTING LINES, ALL NEW HYDRANTS, ALL ABOVE-GROUND ASSEMBLIES 3" AND LARGER AND MAINS GREATER THAN 12" IN DIAMETER.
4. FOR ALL C900 PVC PIPE. ADD A SAFETY FACTOR OF 1.1 TO THE ABOVE LENGTHS

Pipe Restraint Table

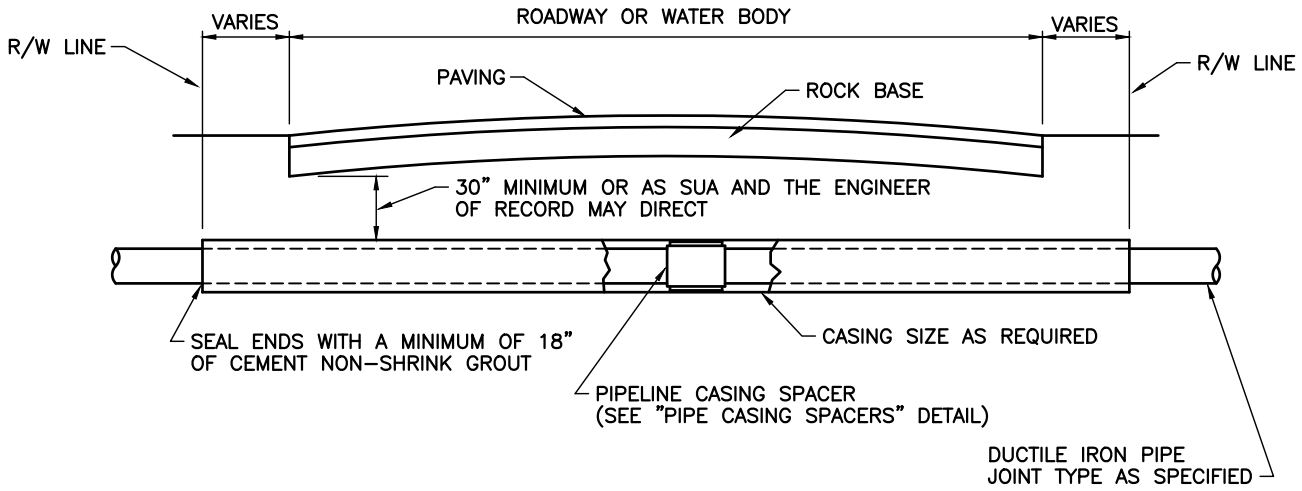
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D-23

DATE APPROVED: FEB 26, 2025

DRAWING No. 6



	NOMINAL PIPE SIZE	STEEL CASING	THICKNESS SCHEDULE
FAST GRIP OR FIELD LOK GASKET	4"	12"	.375
	6"	16"	.375
	8"	18"	.375
	10"	20"	.375
	12"	24"	.375
	14"	24"	.375
	16"	30"	.375
	18"	30"	.375
	20"	36"	.375
	24"	42"	.500
RESTRAINED MECHANICAL JOINT	30"	48"	.500
	36"	54"	.500
	42"	60"	.500
	48"	72"	.500

(PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

Steel Casing Installation

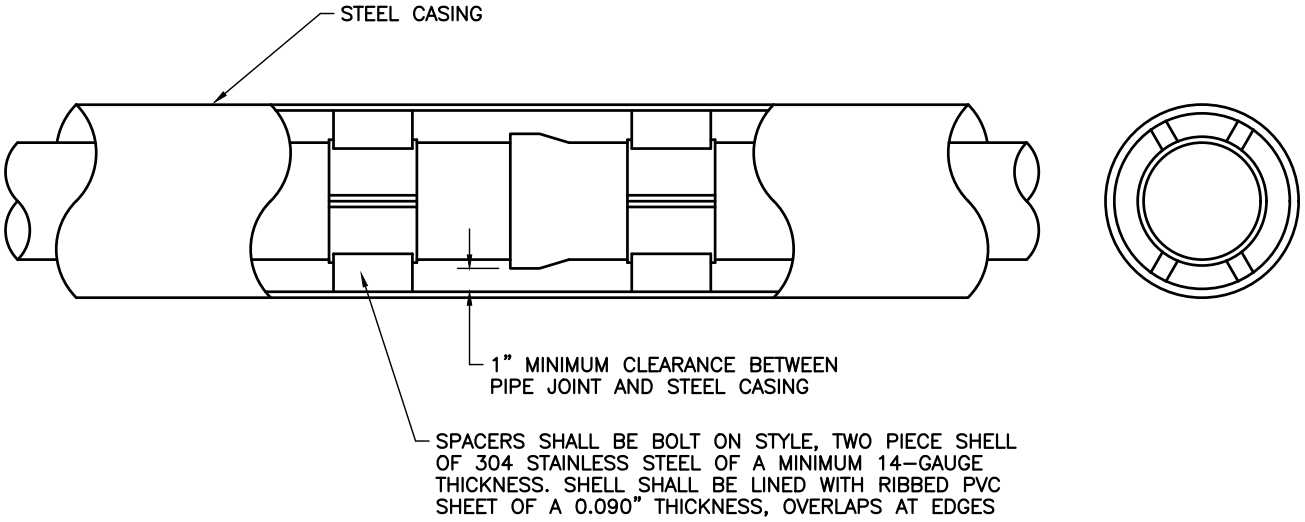
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision A-15

DATE APPROVED: FEB 26, 2025

DRAWING No. 7



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. CARRIER PIPE FOR 4" THROUGH 24" DIAMETER PIPE WITHIN CASING SHALL BE RESTRAINT GASKET.
2. RESTRAINED MECHANICAL JOINTS SHALL BE USED FOR PIPE 30" DIAMETER AND ABOVE AND SHALL HAVE FACTORY WELDED RETAINING RINGS. AMERICAN RESTRAINED JOINT PIPE OR APPROVED EQUAL MAY BE USED.
3. FOR PIPE DIAMETERS 4" THROUGH 12" INSTALL STAINLESS STEEL PIPE CASING SPACERS 5' OR LESS FROM EACH END OF PIPE BUT NOT MORE THAN 10' APART (2 PER PIPE). FOR PIPE DIAMETERS 14" AND LARGER INSTALL STAINLESS STEEL PIPE CASING SPACERS 5' OR LESS FROM EACH END OF PIPE AND ONE CENTERED ON PIPE (3 PER PIPE)(CASCADE MFG. CO. OR APPROVED EQUAL).
4. PIPE CASING SPACERS SHALL BE CENTER POSITIONED.
5. ALTERNATE METHODS OF PIPE SUPPORT WITHIN THE CASING MUST BE APPROVED BY SUA PRIOR TO INSTALLATION.
6. SEAL ANNULAR SPACE BETWEEN CASING AND PIPE WITH 18" MIN. OF NON-SHRINK GROUT MIX AND INSTALL RUBBER BOOT SEAL WITH STAINLESS STEEL BANDS AND CLAMPS

Pipe Casing Spacers

SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision B-20

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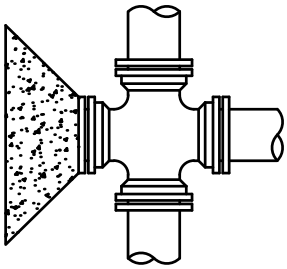
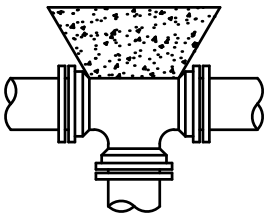
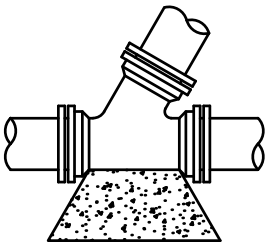
DRAWING No. 8



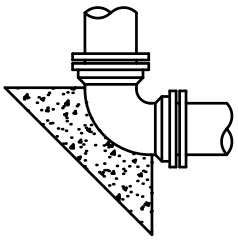
CROSS WITH PLUG



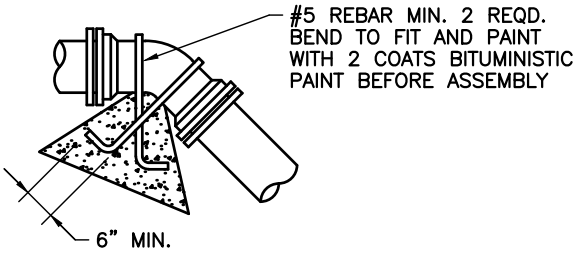
TEE



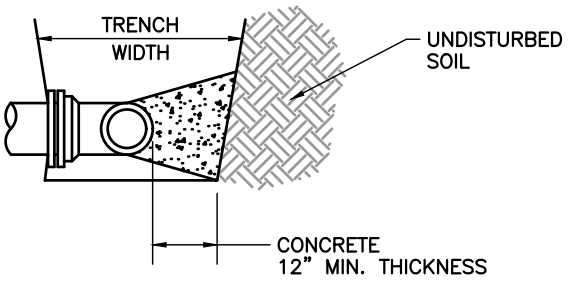
WYE



BEND



* DEADMAN



TYPICAL SECTION

ALL THRUST BLOCKS SHALL BE FORMED. LAID FORMS SHALL BE INSPECTED BY SUA PRIOR TO THE POURING OF CONCRETE AND SHALL ALSO BE INSPECTED BY SUA PRIOR TO COVERING. TYPICAL LOCATIONS WHICH REQUIRE CONCRETE THRUST BLOCKS, FOR PRESSURE MAINS FOUR INCHES (4") AND GREATER CONCRETE SHALL HAVE 2500 P.S.I. MINIMUM STRENGTH AT TWENTY EIGHT (28) DAYS AND BEAR AGAINST UNDISTURBED STABLE SOILS, AREA OF CONTACT SHALL BE GOVERNED BY PIPE SIZE, MAXIMUM PRESSURE IN PIPE, AND BEARING CAPACITY OF SOIL. PROTECT FITTINGS, BOLTS, ETC. BY COVERING WITH VISQUINE OR OTHER ACCEPTABLE MATERIAL. CONCRETE SHALL BE A MINIMUM OF TWELVE INCHES (12") THICK. THRUST BLOCKS SHALL NOT BE AN ALTERNATIVE TO RESTRAINING GUARDS OR RESTRAINING GASKETS. THRUST BLOCKS MAY BE USED WHERE A SECOND FORM OF RESTRAINT IS REQUIRED AND WHEN TYING INTO EXISTING WHERE NO OTHER ALTERNATIVE EXISTS.

(PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

PIPE	THRUST BLOCK SOIL BEARING AREA REQUIRED	PIPE	THRUST BLOCK SOIL BEARING AREA REQUIRED	REMARKS
4"	2.0 SQ. FT.	18"	30.0 SQ. FT.	VALUES ARE FOR 90° BEND, BASED ON 2000 P.S.F. SAFE BEARING LOAD AND PIPE PRESSURE OF 150 P.S.I. PLUS 33% SAFETY FACTOR FOR OTHER SOILS AND PRESSURES.
6"	4.0 SQ. FT.	20"	37.0 SQ. FT.	
8"	6.6 SQ. FT.	24"	53.0 SQ. FT.	
10"	10.0 SQ. FT.	27"	80.0 SQ. FT.	
12"	14.0 SQ. FT.	30"	98.0 SQ. FT.	
14"	18.0 SQ. FT.	36"	127.0 SQ. FT.	
16"	24.0 SQ. FT.			

* THE ENGINEER OF RECORD SHALL CALCULATE THE SIZE OF THE DEADMAN REQUIRED AS WELL AS ANY INSTALLATION WHICH IS NOT COVERED BY THE ABOVE.

Thrust Blocks

SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision B–23

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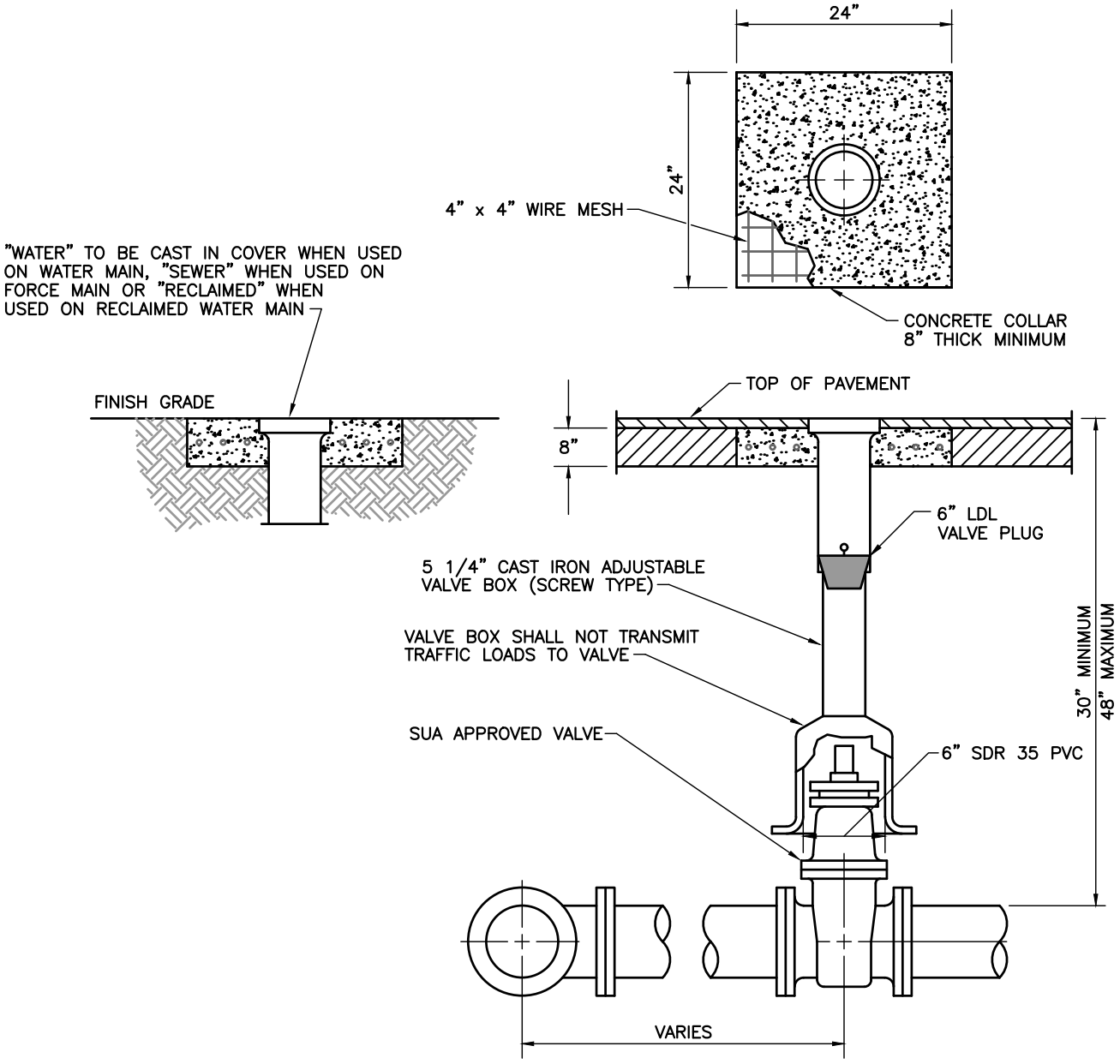
DRAWING No. 9



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. CONCRETE COLLAR MAY NOT BE REQUIRED IN PAVED AREAS IF PAVEMENT SURFACE IS FINISHED PRIOR TO FINAL INSPECTION AND VALVE BOX LID IS AT FINISHED GRADE.

2. WHEN VALVE IS DEEPER THAN 48" AN EXTENSION WILL BE REQUIRED TO BRING OPERATING NUT TO 24" OF FINISHED GRADE.

3. TWO OF THE FOLLOWING FORMS OF RESTRAINT SHALL BE USED WHEN PIPE IS GREATER THAN 12".
   A.) APPROVED MECHANICAL JOINT RESTRAINT (i.e. MEGALUG)
   B.) TIE RODS AND NUTS EQUAL IN DIA. TO TEE BOLTS AND NUTS, COATED WITH KOP–COAT 300–M OR APPROVED EQUAL.

4. 6" LDL VALVE PLUG BY USSI USA TO BE INSTALLED IN VALVE BOX. COLOR TO MATCH SERVICE TYPE. (BLUE – WATER, GREEN – SEWER, PURPLE – RECLAIMED)

Typical Underground Valve Installation

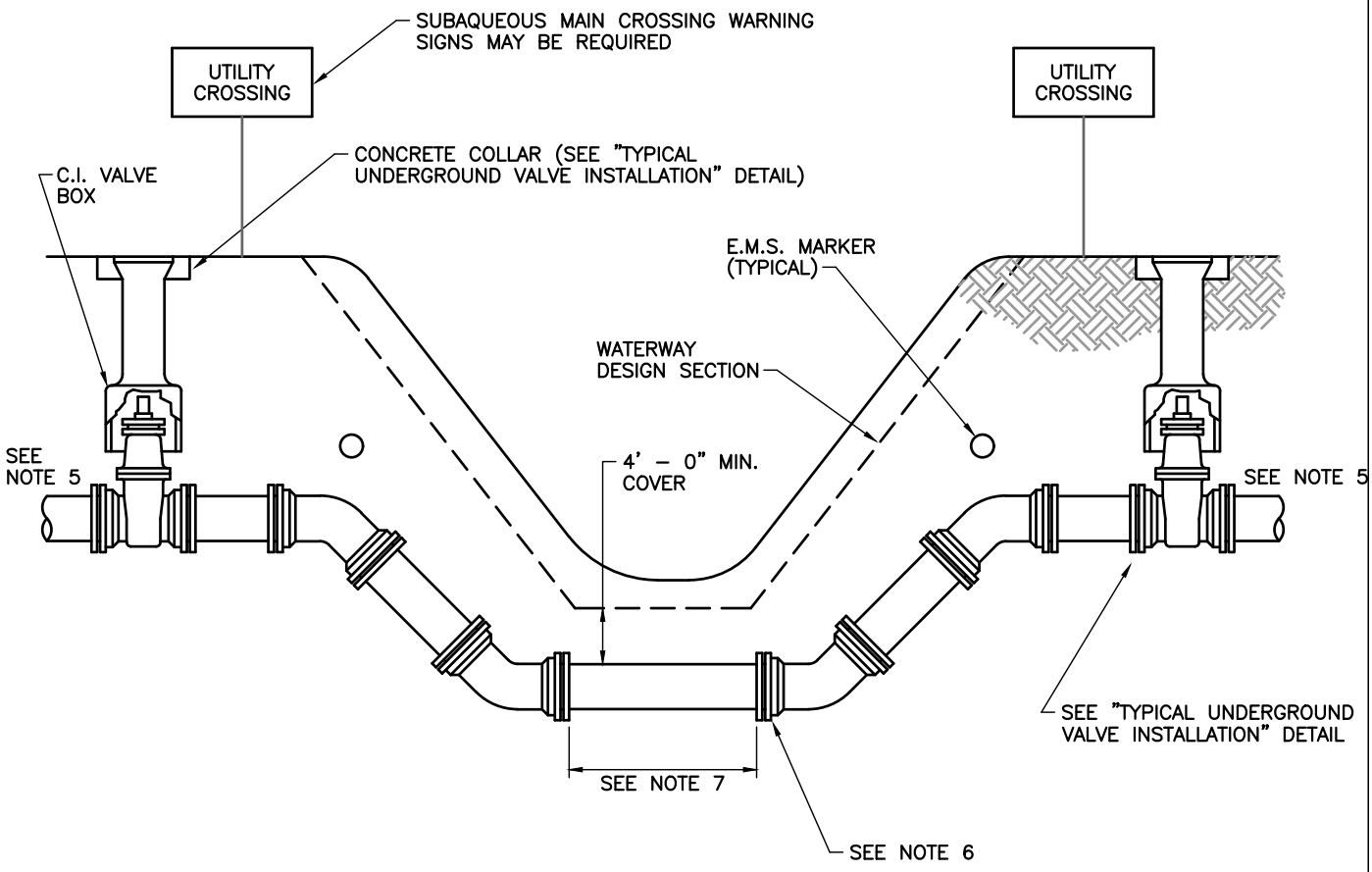
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision C–24

DATE APPROVED: FEB 26, 2025

DRAWING No. 10



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. AIR RELIEF VALVES MAY BE REQUIRED.
2. EXACT LOCATION AND NUMBER OF BLOWOFFS, VALVES, SIGNS, AND E.M.S. MARKERS TO BE DETERMINED IN THE FIELD BY A SUA REPRESENTATIVE.
3. IF WATERWAY IS NOT CUT TO THE DESIGN CROSS SECTION, THE 4'–0" MINIMUM COVER SHALL APPLY TO THE DEEPER SECTION, WHETHER EXISTING OR DESIGN.
4. PLUG VALVES MAY BE DELETED ON SOME FORCE MAIN INSTALLATIONS. ENGINEER OF RECORD SHALL OBTAIN WRITTEN PERMISSION FROM SUA TO DELETE PLUG VALVES.
5. PIPE SHALL BE RESTRAINED PER "PIPE RESTRAINT TABLE" DRAWING #6, ADDITIONAL RESTRAINT DISTANCES FOR C–900 PVC IS REQUIRED.
6. TWO OF THE FOLLOWING FORMS OF RESTRAINT SHALL BE USED FROM VALVE TO VALVE.
   A.) APPROVED MECHANICAL JOINT RESTRAINT. (i.e. MEGALUG)
   B.) TIE RODS AND NUTS EQUAL IN DIA. TO TEE BOLTS AND NUTS, COATED WITH KOP–COAT 300–M OR APPROVED EQUAL.
7. WHEN THIS DISTANCE EXCEEDS ONE LENGTH OF PIPE THIS DETAIL DOES NOT APPLY AND CLASS 56 DUCTILE IRON BALL & SOCKET PIPE SHALL BE USED FROM VALVE TO VALVE. DEFLECTION OF BALL & SOCKET PIPE NOT TO EXCEED 15°

Subaqueous Crossing

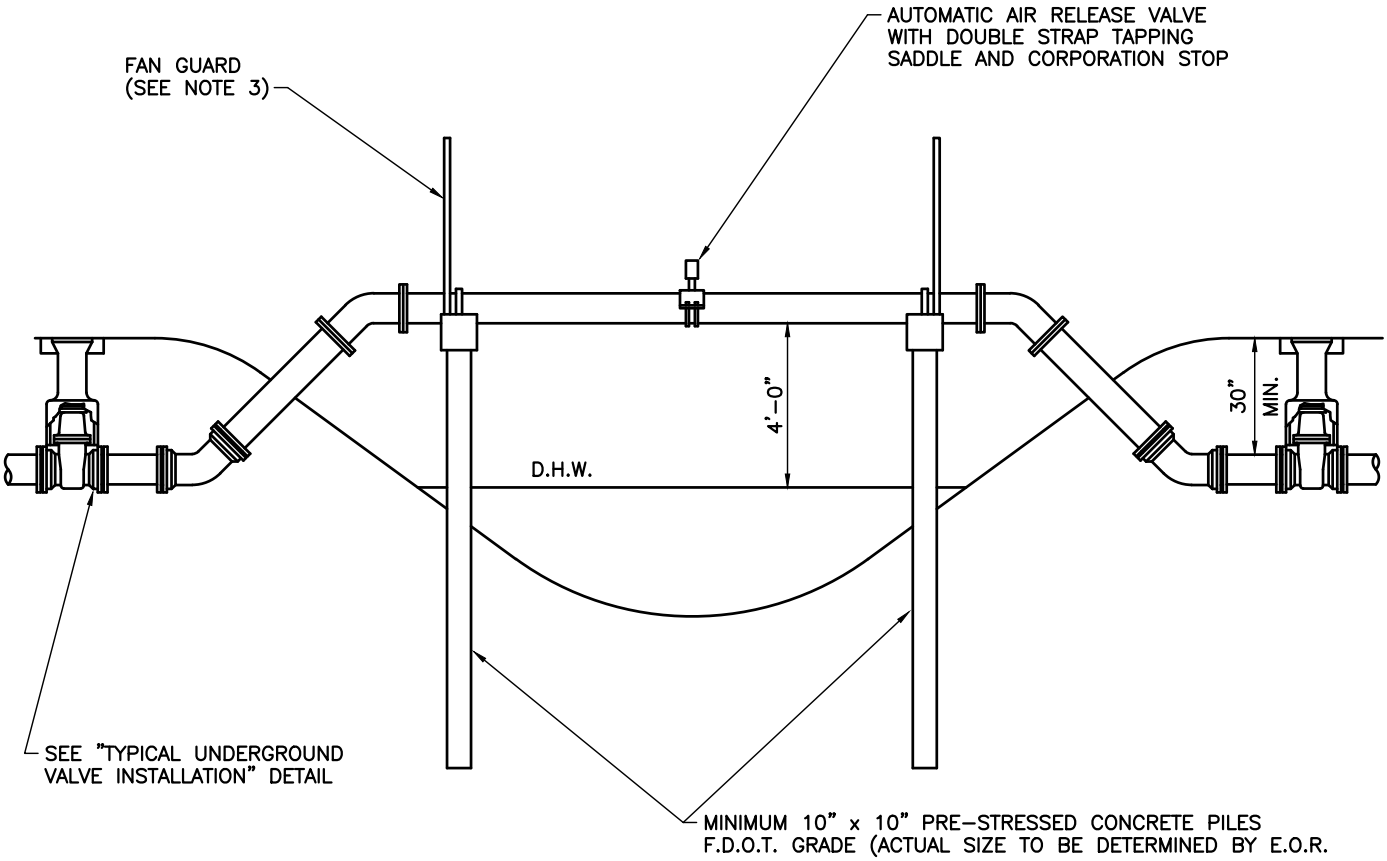
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision B–23

DATE APPROVED: FEB 26, 2025

DRAWING No. 11



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. ALL EXPOSED PIPE SHALL BE DUCTILE IRON WITH FLANGED FITTINGS. RETAINER GLANDS AND UNIFLANGE TYPE FITTINGS ARE NOT A SUBSTITUTE FOR FLANGED FITTINGS.
2. SPAN LENGTHS SHALL NOT EXCEED MANUFACTURER'S RECOMMENDATION AND SHALL BE IN ACCORDANCE WITH PERMITTING AGENCY REQUIREMENTS.
3. FAN GUARDS ARE REQUIRED. SEE "TYPICAL FAN GUARD" DRAWING #13.
4. PIPE SHALL BE CRADLED ON NEOPRENE, 1/2" THICK MINIMUM.
5. TIE-DOWN STRAPS SHALL FIT PROPERLY AND SECURE PIPE IN CRADLE.
6. PIPE CRADLE IN CAP SHALL CONTACT 1/2 CIRCUMFERENCE OF PIPE.
7. SHOW ULTIMATE CANAL SECTION AND RELEVANT ELEVATIONS AND DISTANCES ON PLANS.
8. PIPE SHALL BE RESTRAINED FOR A MINIMUM DISTANCE PER "PIPE RESTRAINT TABLE" DRAWING #6.
9. TWO OF THE FOLLOWING FORMS OF RESTRAINT SHALL BE USED ON ALL BELOW GRADE FITTINGS LARGER THAN 12"
   A.) APPROVED MECHANICAL JOINT RESTRAINT. (i.e. MEGALUG)
   B.) TIE ROD AND NUTS EQUAL IN DIA. TO TEE BOLTS AND NUTS, COATED WITH KOP-COAT 300-M OR APPROVED EQUAL.
   C.) THRUST BLOCKS - ADVANCE APPROVAL REQUIRED.
10. STAINLESS STEEL (316) REQUIRED FOR ALL STRAPS, SADDLES, FLANGE BOLTS, AND OTHER HARDWARE. ANTI-GALL COMPOUND TO BE USED WHEN ASSEMBLING STAINLESS STEEL NUTS AND BOLTS.
11. PILES SHALL BE SET A MINIMUM OF 10' INTO FIRM SOIL. LENGTH OF SPAN WILL DETERMINE NUMBER OF PILES REQUIRED.
12. AERIAL CROSSING TO BE FIELD COATED PER SUA SPECIFICATIONS. COLOR SHALL BE PER SUA SPECIFICATIONS.
13. ENGINEER SHALL BE REQUIRED TO DESIGN AND PROVIDE A DETAILED DRAWING OF PROPOSED PILE AND PILE CAP. THE DESIGN AND INSTALLATION SHALL MEET MANUFACTURERS RECOMMENDATION.

Canal Crossing

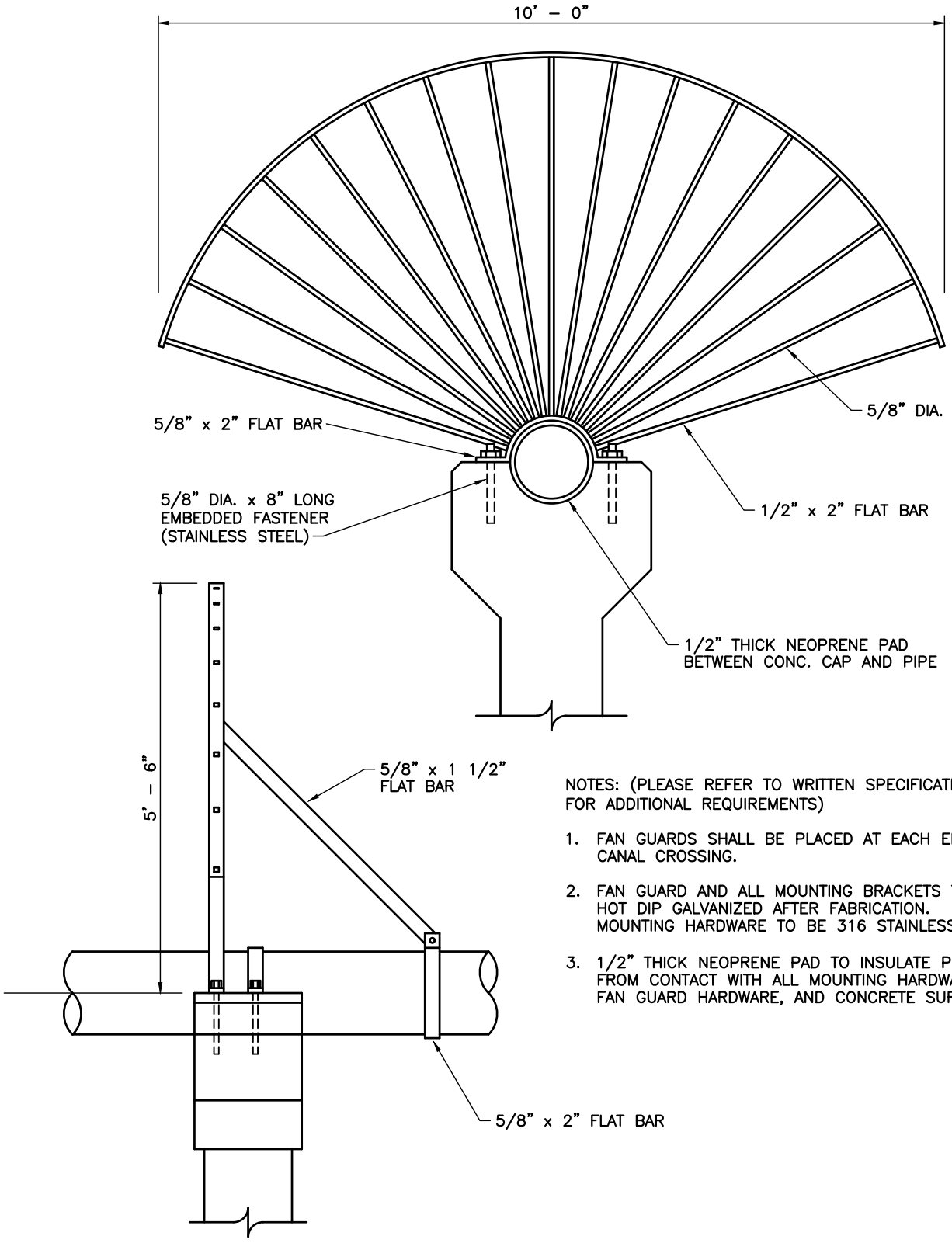
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D-23

DATE APPROVED: FEB 26, 2025

DRAWING No. 12



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. FAN GUARDS SHALL BE PLACED AT EACH END OF CANAL CROSSING.
2. FAN GUARD AND ALL MOUNTING BRACKETS TO BE HOT DIP GALVANIZED AFTER FABRICATION. MOUNTING HARDWARE TO BE 316 STAINLESS STEEL.
3. 1/2" THICK NEOPRENE PAD TO INSULATE PIPE FROM CONTACT WITH ALL MOUNTING HARDWARE, FAN GUARD HARDWARE, AND CONCRETE SURFACES.

Typical Fan Guard

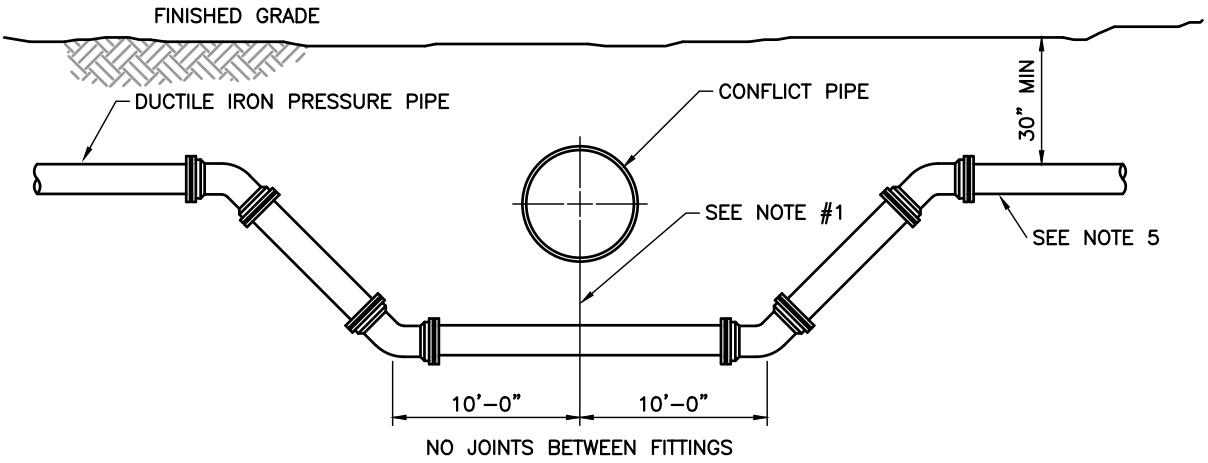
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

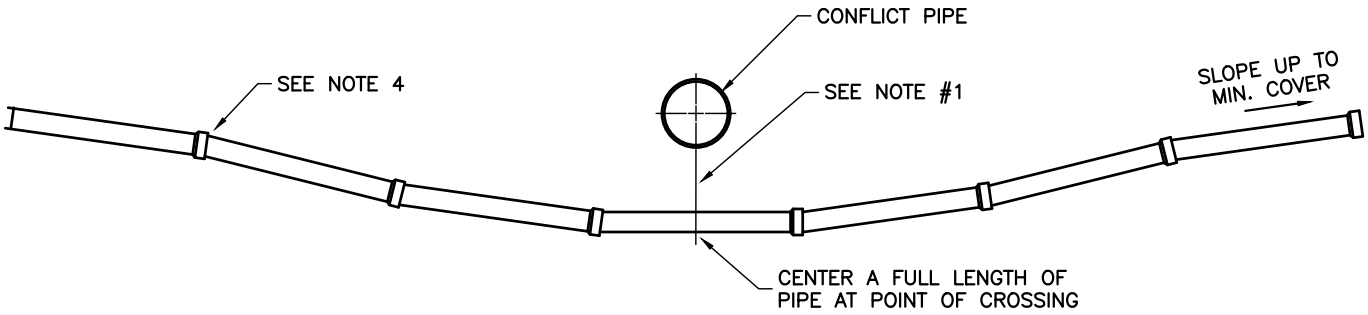
Revision D–23

DATE APPROVED: FEB 26, 2025

DRAWING No. 13



FITTING TYPE



DEFLECTION TYPE

NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. FOR VERTICAL SEPARATION SEE "WATER, RECLAIMED WATER AND SEWER SEPARATION STATEMENT" DRAWING #2.
2. ONE OF THE FOLLOWING FORMS OF RESTRAINT SHALL BE USED FROM FITTING TO FITTING FOR PIPE SIZES UP TO AND INCLUDING 12", FOR PIPE SIZES GREATER THAN 12" TWO FORMS OF RESTRAINT SHALL BE USED.
   A.) APPROVED MECHANICAL JOINT RESTRAINT. (i.e. MEGALUG)
   B.) TIE RODS AND NUTS EQUAL IN DIA. TO TEE BOLTS AND NUTS, COATED WITH KOP-COAT 300-M OR APPROVED EQUAL.
   C.) THRUST BLOCKS - ADVANCE APPROVAL BY SUA REQUIRED.
3. THE DEFLECTION TYPE CROSSING IS PREFERRED, BUT IN INSTANCES WHERE THE FITTING TYPE DEFLECTION IS USED, 22 1/2° BENDS ARE PREFERRED.
4. DEFLECTION SHALL NOT EXCEED 75% OF MANUFACTURERS RECOMMENDED MAXIMUM JOINT DEFLECTION.
5. PIPE SHALL BE RESTRAINED FOR EACH FITTING TYPE DEFLECTION PER "PIPE RESTRAINT TABLE" DETAIL.
6. ALL JOINTS IN DEFLECTIONS SHALL BE AS-BUILT ON THE RECORD DRAWINGS

Pressure Pipe Deflection

SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D-23

DATE APPROVED: FEB 26, 2025

DRAWING No. 14

INSTALLATION PROTOCOL

1. ALL PIPE IS TO BE LAID IN A CLEAN DRY TRENCH.

2. ALL MUCK AND UNSUITABLE MATERIALS ENCOUNTERED IN TRENCH BOTTOM SHALL BE REMOVED AND REPLACED WITH COMPACTED GRANULAR MATERIAL TO 98% OF MAXIMUM DENSITY PER AASHTO T-180. PROCTOR AND DENSITY TEST RESULTS SHALL BE SUBMITTED TO EOR WITH A COPY TO AUTHORITY.

3. ALL BACKFILL SHALL BE PLACED IN 12 INCH LIFTS AND COMPACTED BY MECHANICAL MEANS TO 98% OF MAXIMUM DENSITY PER AASHTO T-180 OR AS OTHERWISE REQUIRED BY THE PERMITTING AGENCY.

4. UTILITIES CROSSING ROAD RIGHT-OF-WAY SHALL BE INSTALLED PRIOR TO ROAD CONSTRUCTION AND BACKFILLED AND COMPACTED WITHIN RIGHT-OF-WAY LIMITS IN STRICT ACCORDANCE WITH THE DIRECTIONS OF THE EOR AND REQUIREMENTS OF ALL AGENCIES OF JURISDICTION.

5. EMBEDMENT MATERIALS BELOW PIPE SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION SYSTEM (U.S.C.S.) SOIL CLASSIFICATION CLASS I OR II AS NOTED IN ASTM D2321.

6. ALL LINES UNDER CONSTRUCTION SHALL BE PLUGGED WITH A WING PLUG, AND ALL PRESSURE PIPES ARE TO BE PLUGGED WITH A MECHANICAL PLUG OR CAP AT THE END OF THE WORKING DAY TO PREVENT GROUND WATER AND POTENTIAL CONTAMINANTS FROM ENTERING COMPLETED LINES AND LINES UNDER CONSTRUCTION.

7. ABOVE GROUND PIPING, INCLUDING BUT NOT LIMITED TO, AERIAL CROSSINGS, LIFT STATION PIPING, FIRE LINES, METER/BACKFLOW PREVENTION DEVICE ASSEMBLIES, ETC. SHALL BE FLANGED AND BE COATED IN ACCORDANCE WITH SECTION 2 OF SEACOAST UTILITY AUTHORITY CONSTRUCTION STANDARDS.
   THE FINISHED COAT OF PAINT SHALL BE GREEN IN COLOR FOR SANITARY SEWER, LAVENDER FOR RECLAIMED APPURTENANCES AND BLUE FOR POTABLE WATER APPURTENANCES.

8. ALL FLANGED PIPE SHALL BE CAULKED BETWEEN EACH FLANGE AND THREADS WITH SIKA 1 A URETHANE CAULK AFTER BLASTING AND PRIOR TO PRIMING.

9. ALL TIE RODS, BOLTS, NUTS, ETC. INSTALLED UNDERGROUND MUST BE COR TEN OR APPROVED EQUAL AND SHALL BE PAINTED WITH KOPPERS 300-M OR AN AUTHORITY APPROVED EQUAL. BRASS AND STAINLESS STEEL HARDWARE IS EXEMPT FROM THIS REQUIREMENT.

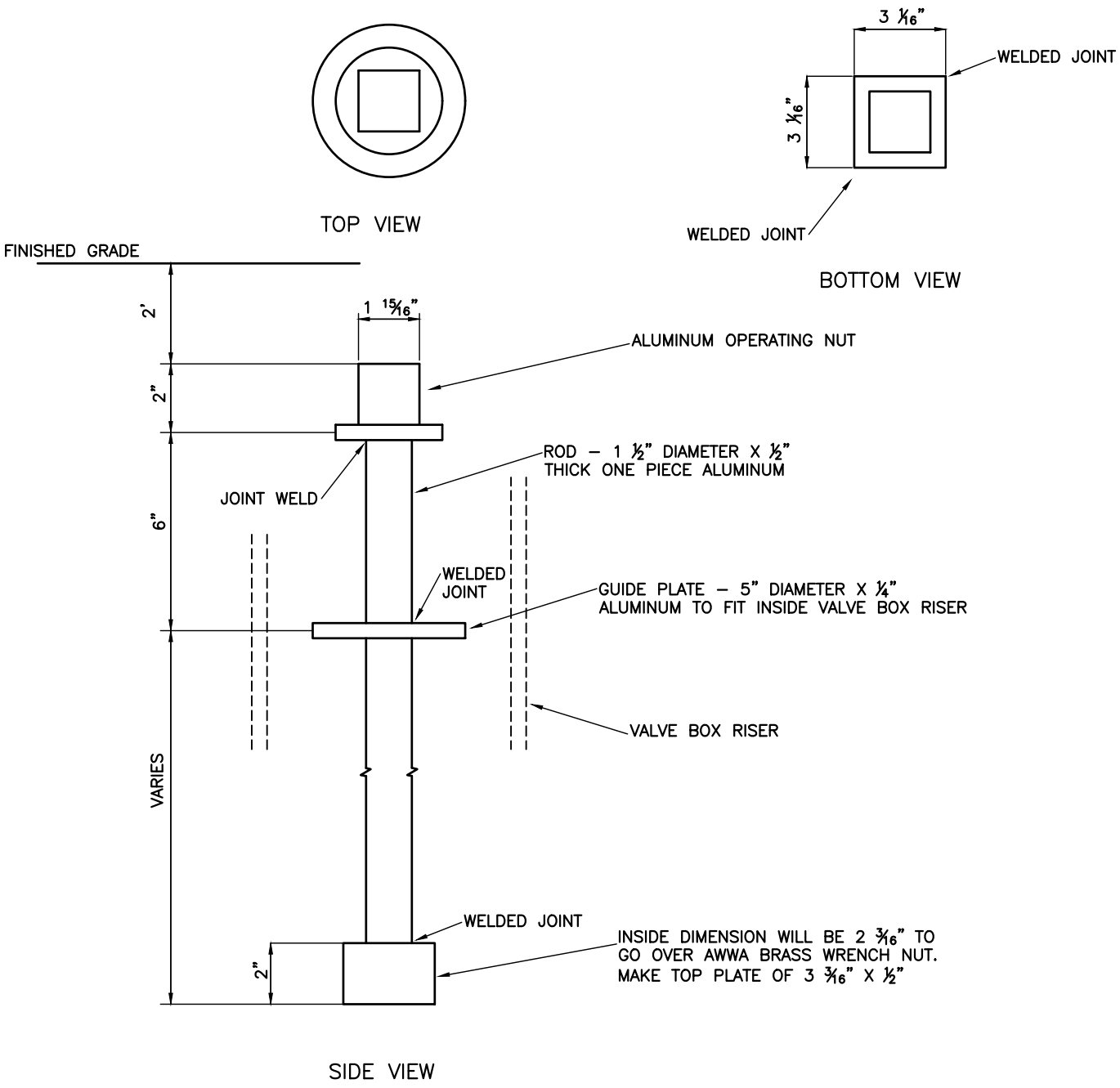
10. COATINGS AND LININGS DAMAGED DUE MISHANDLING OR OTHERWISE, MUST BE REPLACED. COATING AND LININGS DAMAGED DUE TO FIELD CUTTING SHALL BE REPAIRED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, CEMENT MORTAR AND POLYETHYLENE PIPE LININGS, PROTECTO 401, GALVANIZED COATINGS, PVC FENCE COATINGS AND OTHER TYPE COATINGS. APPROVAL MUST BE OBTAINED FROM AUTHORITY PRIOR TO PERFORMING COATING AND LINING REPAIRS. INSPECTIONS OF ALL REPAIRS ARE REQUIRED.

11. ALL STAINLESS STEEL NUTS, BOLTS AND HARDWARE REFERENCED IN THESE STANDARDS, SHALL BE SS 316 GRADE AND SHALL BE SO STAMPED BY THE MANUFACTURER TO VERIFY ALLOY. THE USE OF ANY OTHER STAINLESS STEEL ALLOY WILL REQUIRE SPECIFIC APPROVAL BY AUTHORITY. IN GENERAL, STAINLESS STEEL NUTS, BOLTS AND HARDWARE ARE REQUIRED IN AND AROUND LIFT STATIONS AND FOR FACILITIES INSTALLED OVER OR UNDER BRACKISH OR MARINE WATERS. THIS REQUIREMENT APPLIES TO FLANGE BOLTS AND NUTS ON FLANGED PIPING, MOUNTING BRACKETS, ALL THREAD ROD, ANCHOR BOLTS, WASHERS, CLAMPS AND OTHER MISCELLANEOUS HARDWARE. ANTI-GALLING COMPOUND ANTI-SEIZE LUBRICANT SHALL BE APPLIED TO THE THREADS OF ALL STAINLESS STEEL BOLTS PRIOR TO INSTALLATION.

    ANTI-SEIZE LUBRICANT SHALL BE GRAPHITE 50 ANTI-SEIZE BY LOCTITE CORPORATION, 1000 ANTI-SEIZE PASTE BY DOW CORNING OR 3M LUBE AND ANTI-SEIZE BY 3M.

12. ALL RUBBER AND SYNTHETIC ELASTOMERIC COMPONENTS OF PRODUCTS THAT COME IN CONTACT WITH POTABLE WATER SHALL BE MANUFACTURED WITH CHLORAMINE RESISTANT ELASTOMERS AND SHALL BEAR NSF APPROVAL.

13. ALL MAIN, INCLUDING FITTINGS, SHALL BE EASILY IDENTIFIABLE AS TO THEIR CONTENTS AND SHALL BE COLOR CODED OR MARKED USING THE UNIVERSAL COLOR CODE OF BLUE FOR WATER, GREEN FOR SEWER AND LAVENDER FOR RECLAIMED. PIPE STRIPED DURING MANUFACTURING OF THE PIPE SHALL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE, THAT ARE LOCATED AT NO GREATER THAN 90-DEGREE INTERVALS AROUND THE PIPE, AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE IS USED TO STRIPE PIPE DURING INSTALLATION OF THE PIPE, THE TAPE SHALL BE APPLIED IN A CONTINUOUS LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE; FOR PIPES WITH AN INTERNAL DIAMETER OF 24 INCHES OR GREATER, TAPE SHALL BE APPLIED IN CONTINUOUS LINES ALONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE.



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. EXTENSIONS ARE REQUIRED FOR VALVES EXTENDING FOR MORE THAN 4 FEET BELOW FINISHED GRADE.
2. ALL MATERIALS SHALL BE 6061 T–6 ALUMINUM.

Valve Extension

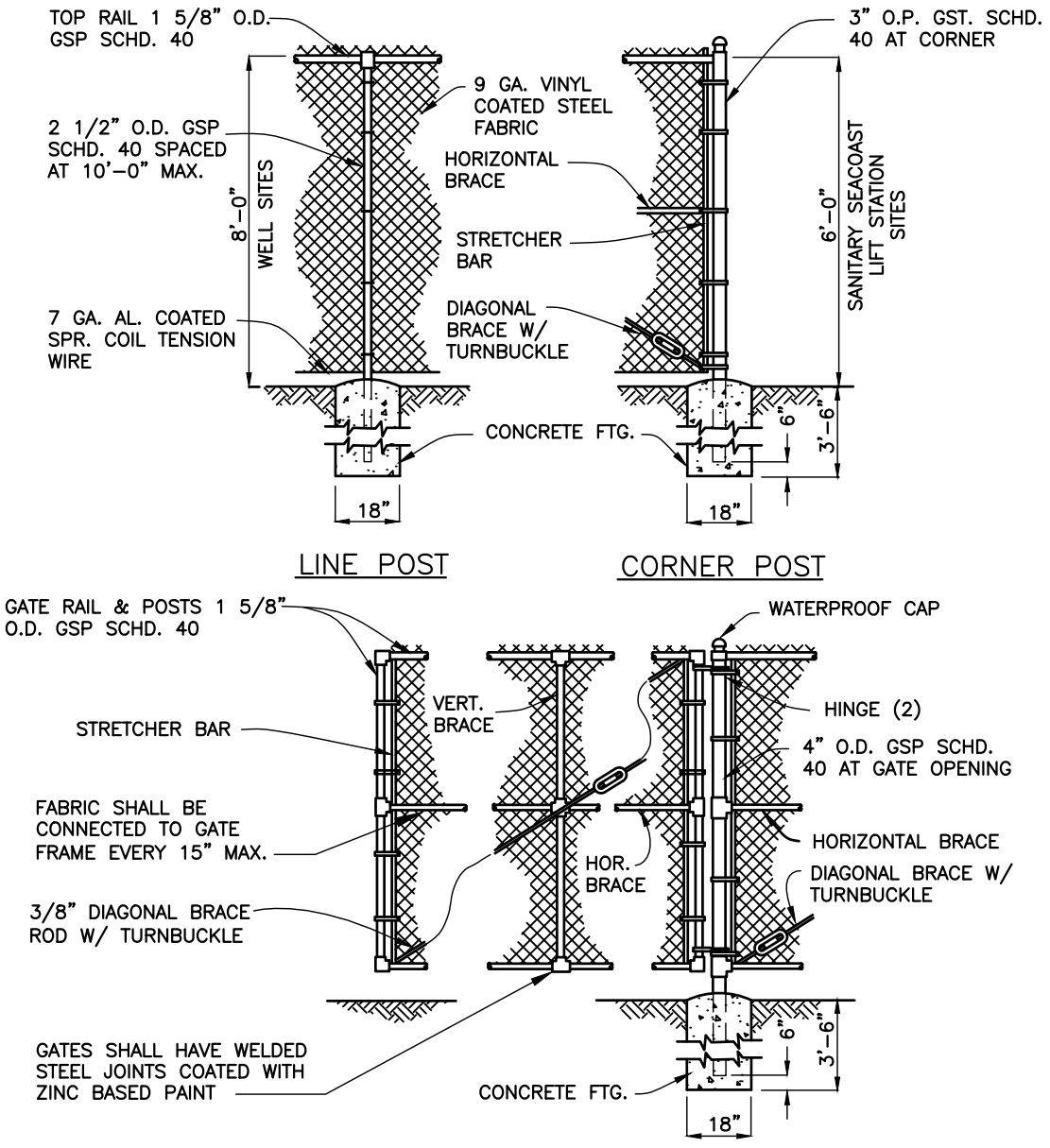
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision A–15

DATE APPROVED: FEB 26, 2025

DRAWING No. 16



NOTES:

1. GATE TO BE SIZED PER REQUIREMENTS.
2. VINYL COATED STEEL WOVEN WIRE FABRIC TO BE STRETCHED TAUT W/ STRETCHER BARS AND STRAPS AND FASTENED TOP & BOTTOM AND AT LINE POSTS WITH GALV. PIG RING TIES.
3. GATE TO BE SECURED OPEN WITH GATE STOP SET IN CONCRETE.
4. ALL RAILS, POSTS AND HARDWARE TO BE BLACK VINYL COATED.
5. WHERE POSTS COME IN CONTACT WITH CONCRETE THEY SHALL BE COATED WITH KOPPERS 300M OR APPROVED EQUAL.
6. GA. CALL-OUTS ARE FOR WIRE BEFORE VINYL COATING.
7. VERTICAL BLACK PVC FENCE SLATS REQUIRED.
8. TWISTED SIDE SHALL BE FACING GROUND WITH KNUCKLE SIDE FACING UP.

Fence Detail

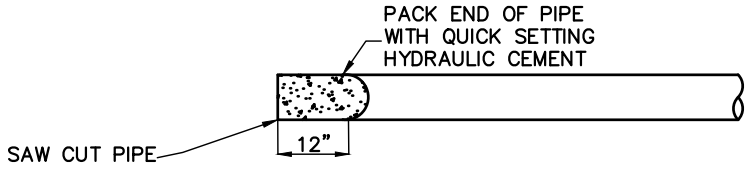
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

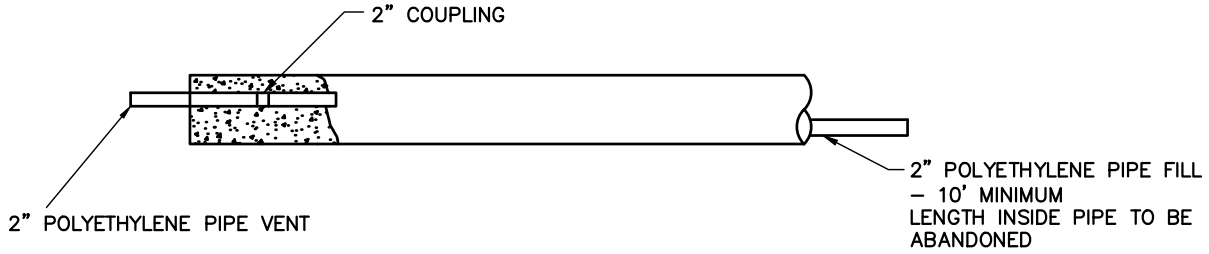
Revision C-24

DATE APPROVED: FEB 26, 2025

DRAWING No. 17



2" AND 3" PIPE



4" AND LARGER PIPE

NOTE: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. INSTALL 2" PIPE AT BOTH ENDS OF LINE TO BE ABANDONED. GROUT IN PLACE WITH QUICK SETTING HYDRAULIC CEMENT.
2. PUMP FLOWABLE GROUT FROM ONE END, OR INTERMEDIATE POINTS ALONG THE PIPELINE, UNTIL PIPE IS FILLED AS WITNESSED BY THE DISCHARGE FROM 2" PIPE(S). REMOVE 2" PIPE AND FILL WITH QUICK SETTING HYDRAULIC CEMENT.
3. MAXIMUM LENGTH OF PIPE TO BE GROUTED IS 300 LF
4. ALL PIPE GROUTED TO BE AS–BUILT AND SHOWN ON THE RECORD DRAWINGS

Pipe Abandonment

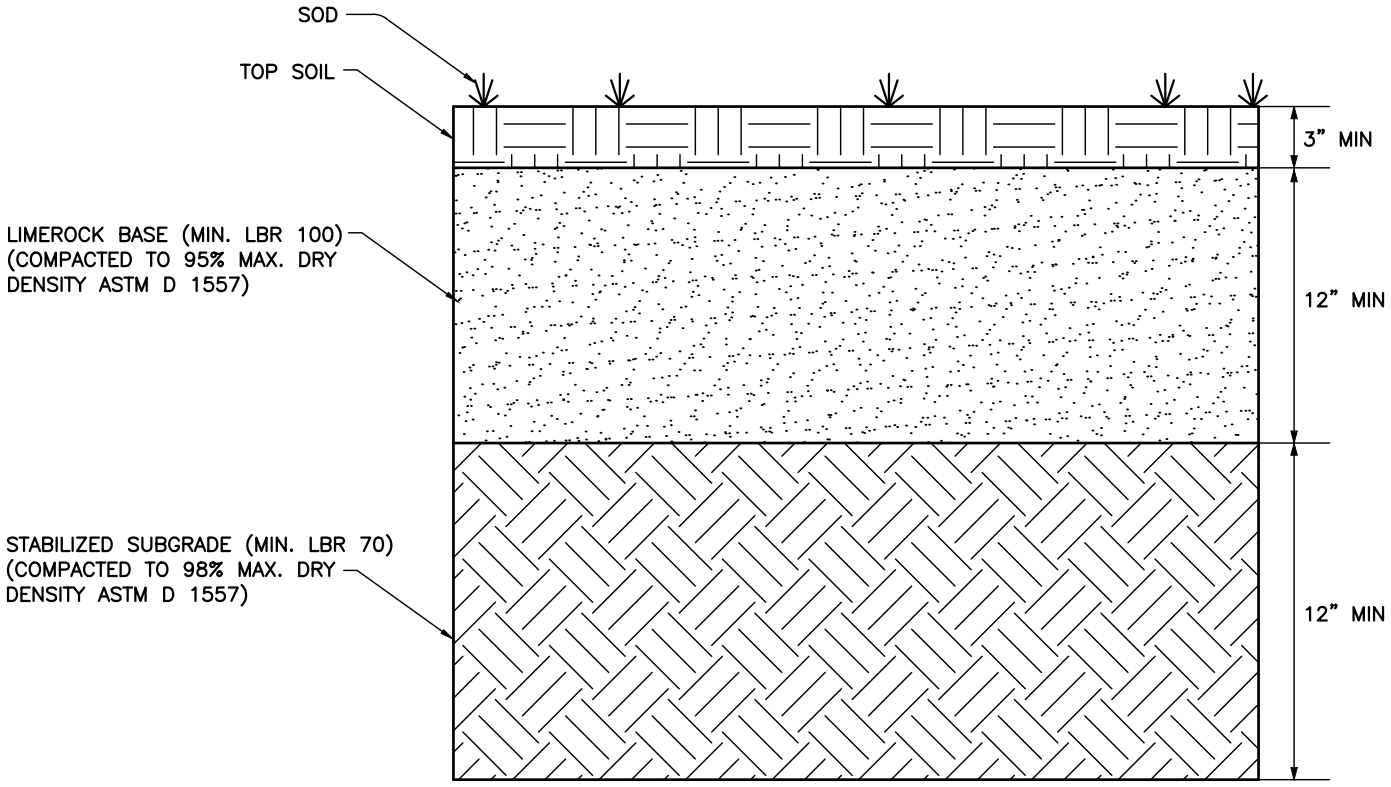
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision C–23

DATE APPROVED: FEB 26, 2025

DRAWING No. 18



Stabilized SUA Easement Section

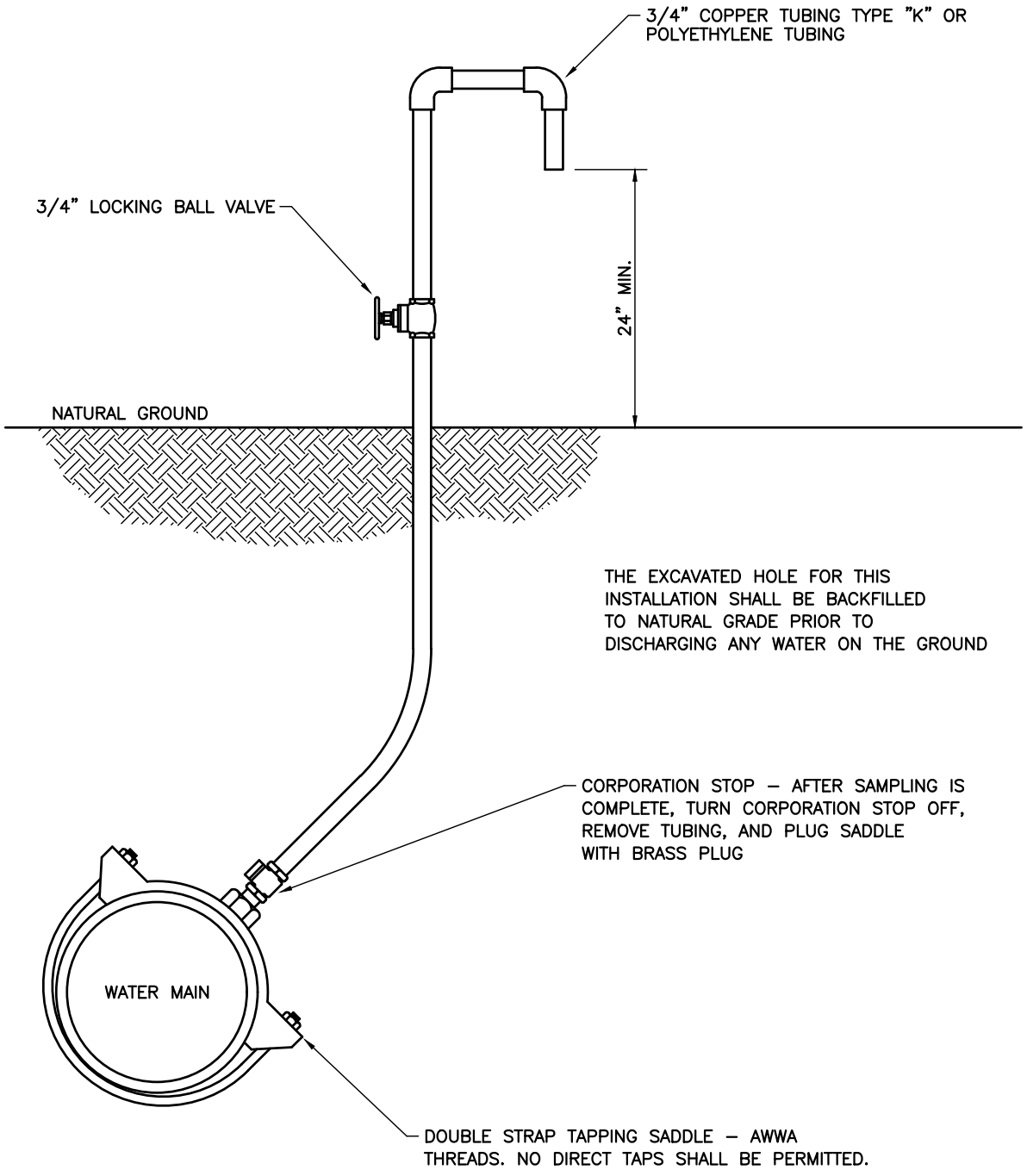
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision A–19

DATE APPROVED: FEB 26, 2025

DRAWING No. 19



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. WHERE POSSIBLE, SERVICE TAPS OR FIRE HYDRANTS (SEE "SAMPLE POINT – FIRE HYDRANT" DETAIL) SHALL BE USED AS SAMPLING POINTS.

Sample Point - In Line

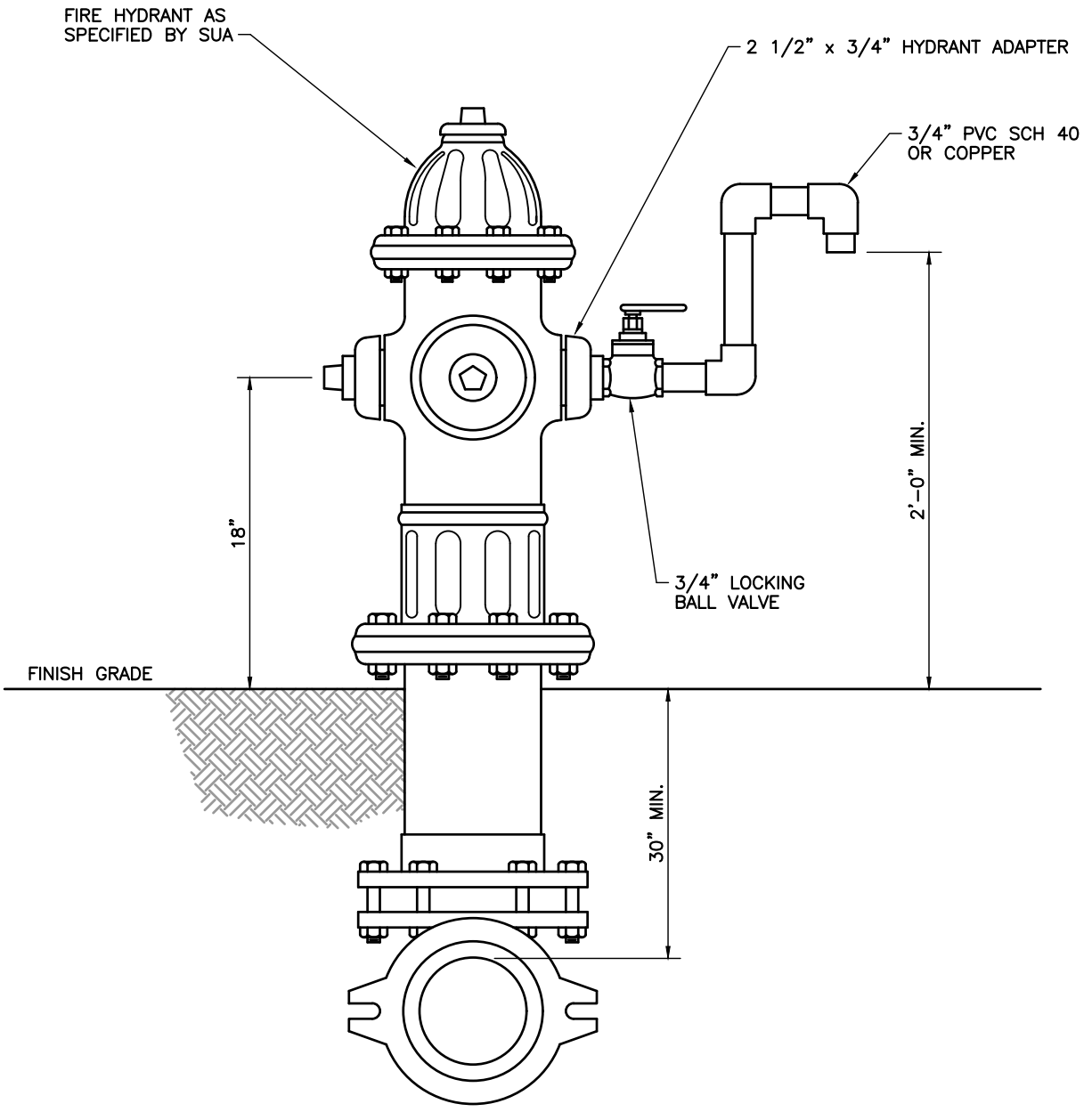
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision A–15

DATE APPROVED: FEB 26, 2025

DRAWING No. 20



PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

Sample Point - Fire Hydrant

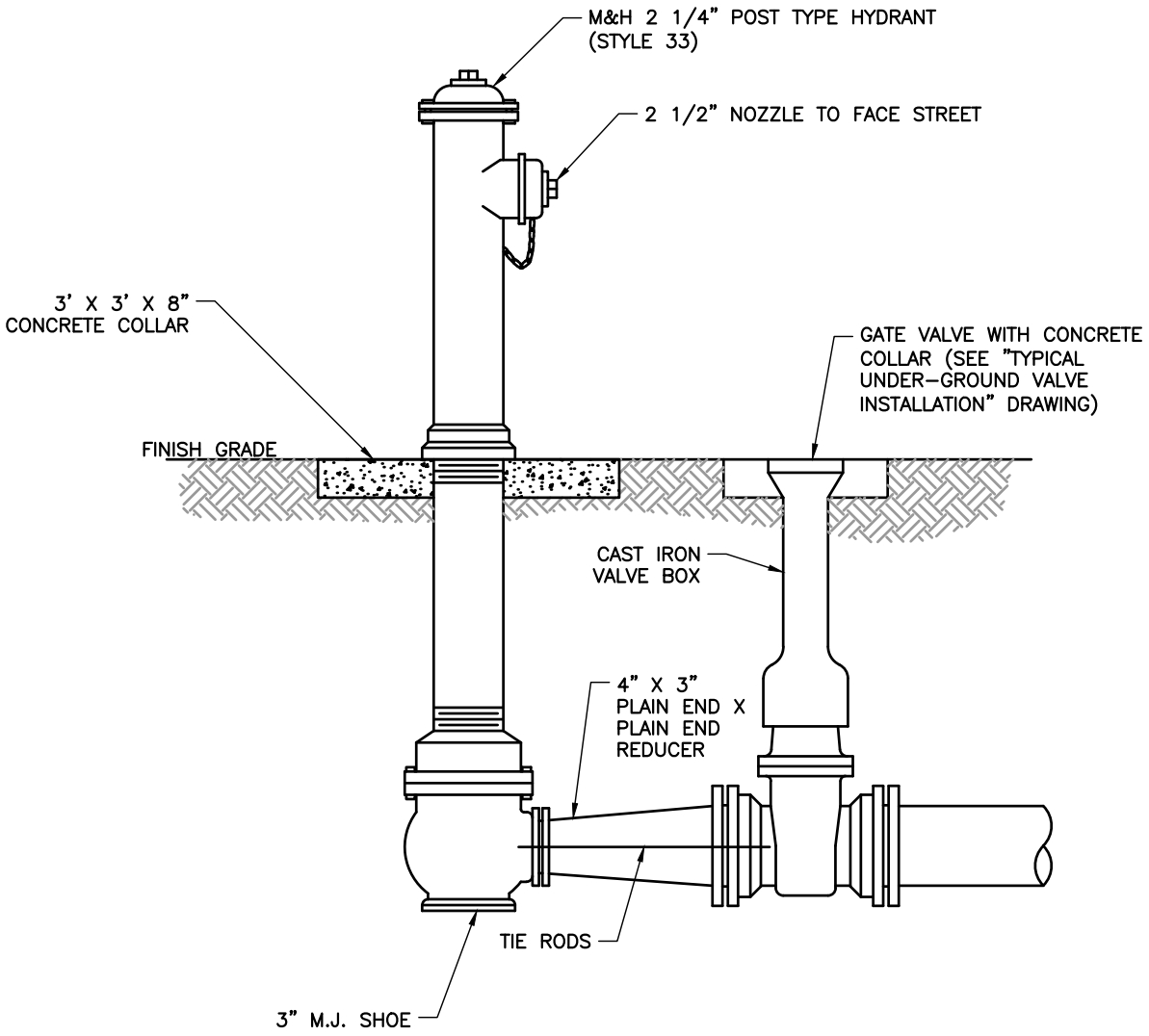
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision A–15

DATE APPROVED: FEB 26, 2025

DRAWING No. 21



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. MEGALUGS ARE NOT TO BE USED ON PLAIN END BY PLAIN END REDUCER.

Flushing Hydrant

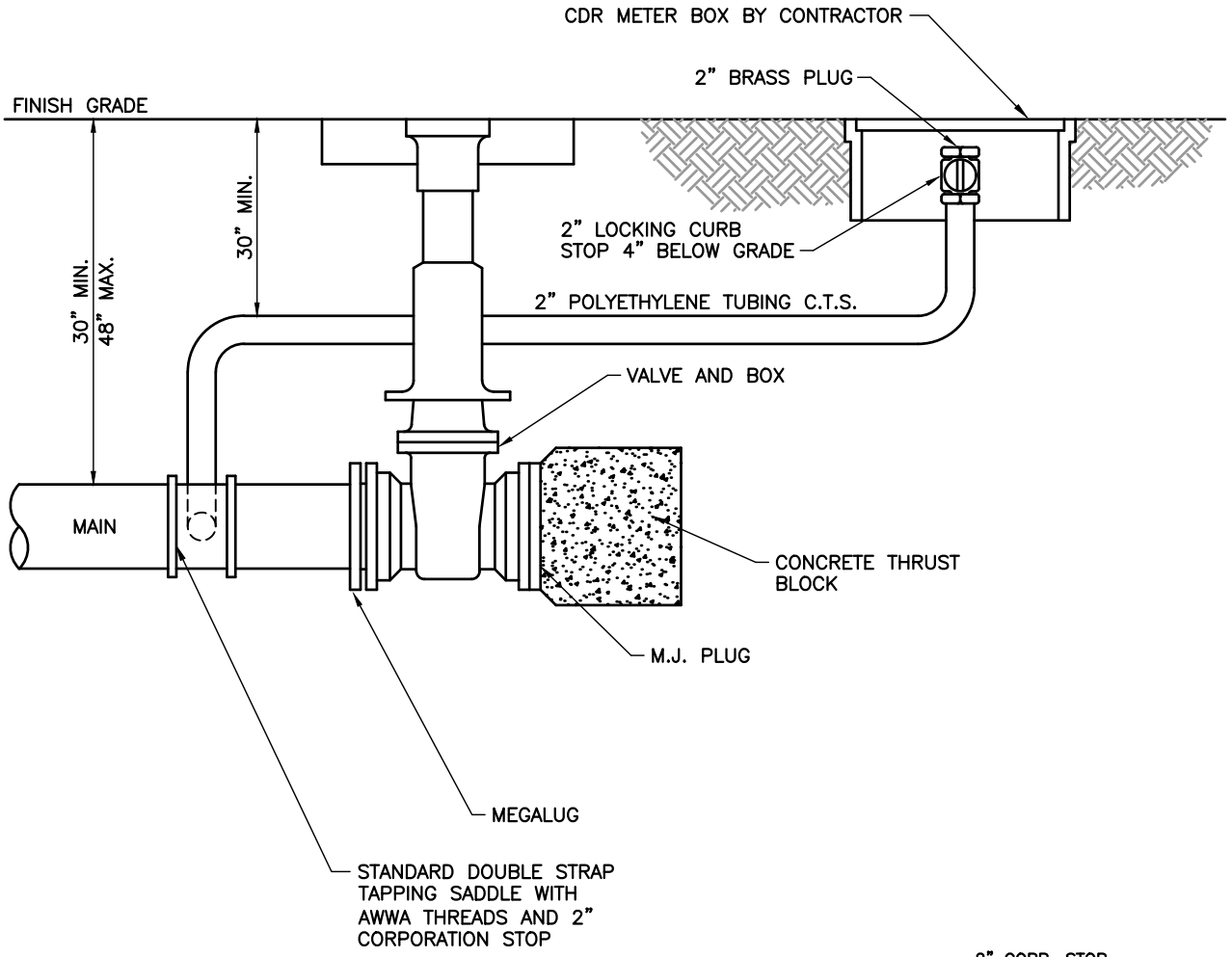
SEACOAST UTILITY AUTHORITY

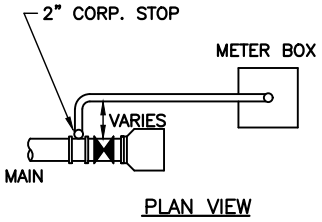
CONSTRUCTION STANDARDS AND DETAILS

Revision E-24

DATE APPROVED: FEB 26, 2025

DRAWING No. 22





PLAN VIEW

NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. TRAFFIC BEARING METER BOXES WILL BE REQUIRED IN ALL PAVED AREAS, AREAS WHICH MAY BE PAVED IN THE FUTURE, OR RIGHT OF WAY.
2. TUBING SHALL BE CONTINUOUS FROM CORPORATION STOP TO CURB STOP, NO FITTINGS SHALL BE PERMITTED.
3. PREVIOUS JOINTS SHALL BE RESTRAINED IN ACCORDANCE WITH "PIPE RESTRAINT TABLE" DRAWING.

Temporary Blow Off with Restraint Block

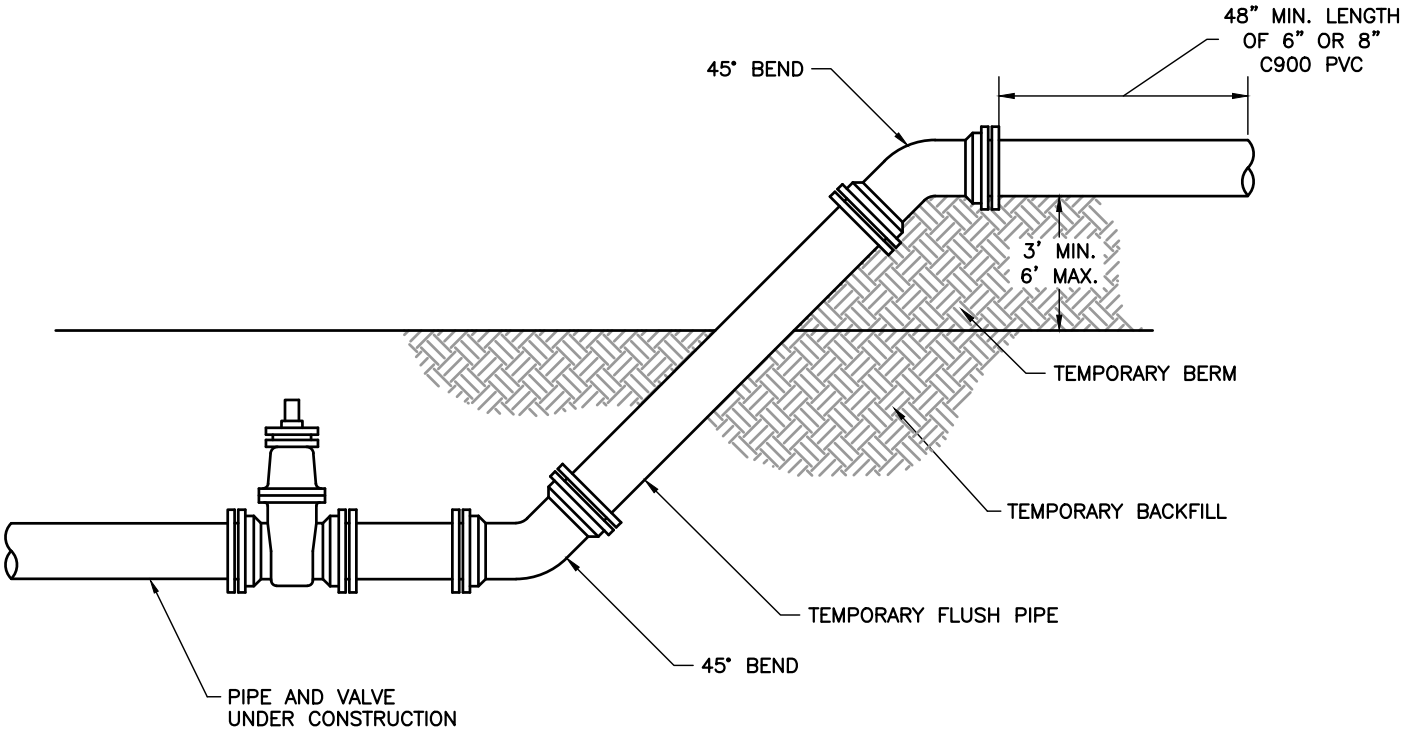
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D-23

DATE APPROVED: FEB 26, 2025

DRAWING No. 23



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. UPON COMPLETION OF THE PIPE INSTALLATION FOR ANY SECTION, THE MAINS SHALL BE CANNON FLUSHED TO REMOVE DIRT AND ANY OTHER FOREIGN MATTER BY ACHIEVING A MINIMUM VELOCITY OF 2.5 FEET PER SECOND IN THE PIPE. TEMPORARY FITTINGS, PIPE, ETC. MAY BE NEEDED TO FACILITATE CANNON FLUSHING.
2. INSTALL A 45° BEND AND ASSOCIATED PIPING AS SHOWN TO DIRECT THE FLUSHING WATER AWAY FROM THE IMMEDIATE WORK AREA, EXERCISE DUE CARE TO ENSURE THAT THE WATER USED IN FLUSHING DOES NOT CAUSE A NUISANCE OR CAUSE PROPERTY DAMAGE.
3. BENDS AND PIPING SHALL BE THE SAME SIZE AS THE LINE TO BE FLUSHED.
4. PRIOR TO THE ACTUAL LINE FLUSHING OPERATION, THE CONTRACTOR SHALL PROPERLY NOTIFY SUA OF SUCH INTENDED WATER USE.
5. NO EXISTING VALVES SHALL BE TURNED ON OR OFF, EXCEPT BY AUTHORIZED SUA PERSONNEL.
6. FLUSHING SHALL NOT BE ACCOMPLISHED WITHOUT THE ACTUAL PRESENCE OF AN SUA REPRESENTATIVE.
7. AFTER THE LINE UNDER CONSTRUCTION HAS BEEN SUCCESSFULLY FLUSHED THE CONTRACTOR SHALL REMOVE THE TEMPORARY PIPING ARRANGEMENT AND PROCEED WITH THE REMAINING CONSTRUCTION AS SPECIFIED.
8. SPECIAL PROCEDURES ARE REQUIRED FOR CLEANING AND FLUSHING PIPE LARGER THAN 12".
9. IF THE MAIN IS GREATER THAN 8", THE FLUSH PIPE SHALL BE REDUCED TO 8". IF THE PIPE IS BEING PIGGED, THEN THE REDUCTION IS NOT REQUIRED.

Cannon Flushing Procedure

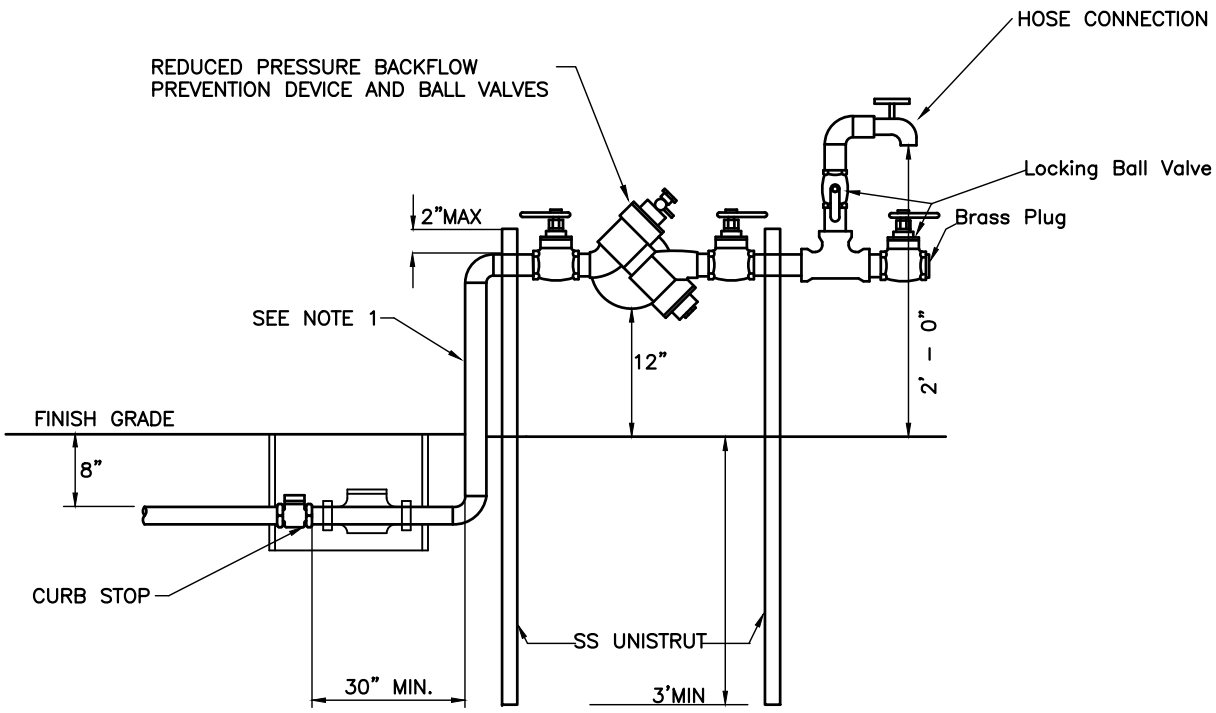
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D-24

DATE APPROVED: FEB 26, 2025

DRAWING No. 24



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. BOTH RISERS SHALL BE TYPE "K" COPPER TUBING (HARD DRAWN) WITH COPPER/BRASS SOLDER FITTINGS AND ADAPTERS. ONLY LEAD FREE SOLDER AND FLUX SHALL BE PERMITTED.

2. BACKFLOW PREVENTION DEVICE SHALL BE SUPPORTED AT BOTH RISERS WITH SS UNISTRUT AS SHOWN ABOVE. RISERS TO BE SECURED TO ANGLE WITH TYPE 304 SST MOUNTING HARDWARE AND NEOPRENE INSULATORS.

3. BACKFLOW DEVICE SHALL BE MINIMUM OF 3' FROM BACK OF CURB AND/OR SIDEWALK

4. APPROVED BACKFLOW PREVENTION DEVICES WITH SILICONE RUBBER SEAL RINGS OR DISCS; 3/4" TO 2"
   A.) AMES LF4000B
   B.) APOLLO RPLF 4A
   C.) WATTS LF919
   D.) ZURN 975XL2

Sampling / Flushing Station

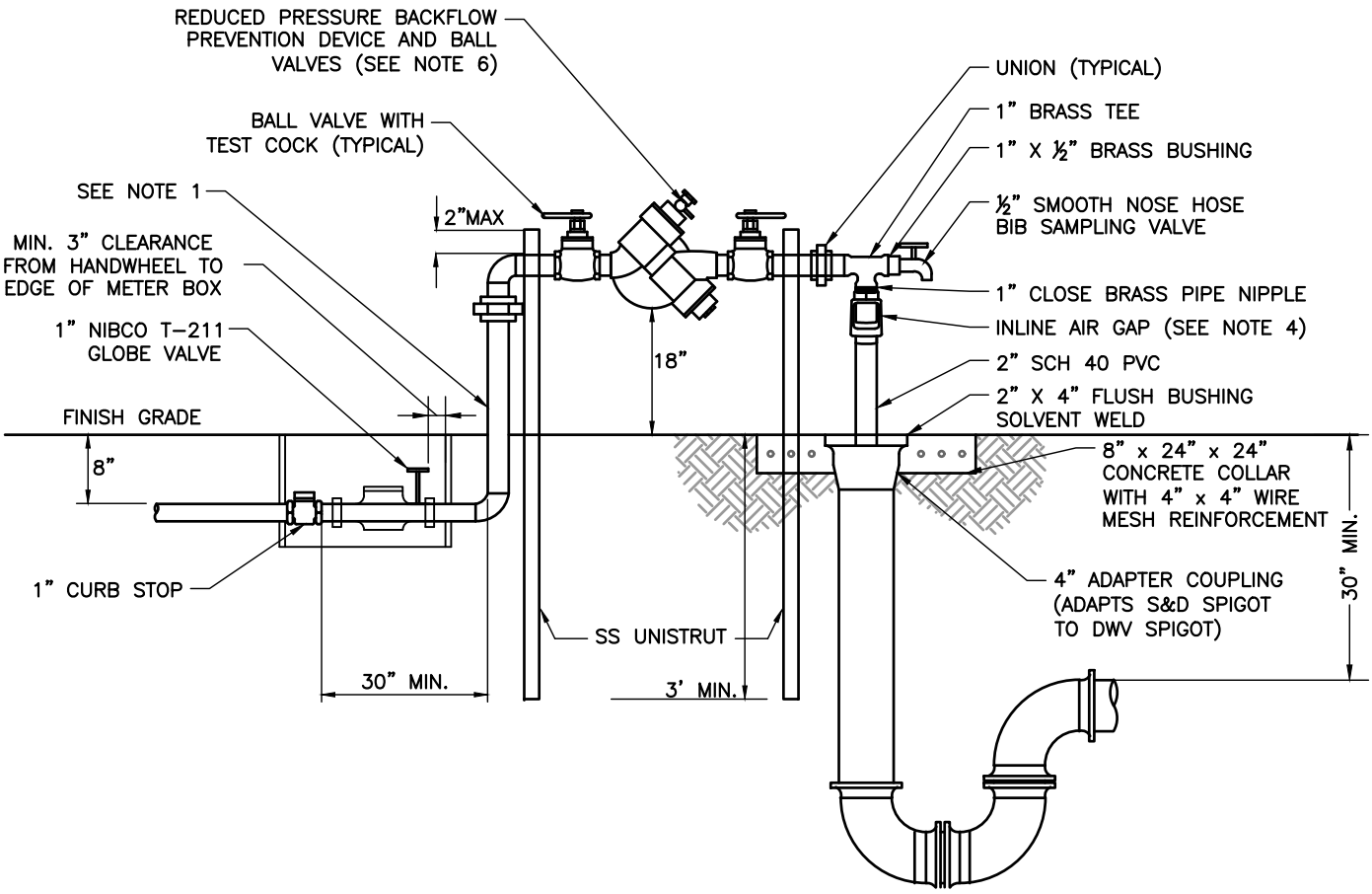
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D-23

DATE APPROVED: FEB 26, 2025

DRAWING No. 25a



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. COPPER PIPING SHALL BE TYPE "K" COPPER TUBING (HARD DRAWN) WITH COPPER/BRASS SOLDER FITTINGS AND ADAPTERS. ONLY LEAD FREE SOLDER AND FLUX SHALL BE PERMITTED.
2. BACKFLOW PREVENTION DEVICE SHALL BE SUPPORTED AT BOTH RISERS WITH A MINIMUM OF 2 – 1 5/8" STAINLESS STEEL UNISTRUTS. RISERS TO BE SECURED TO UNISTRUT WITH 304 STAINLESS STEEL MOUNTING HARDWARE AND 1/4" NEOPRENE INSULATORS BETWEEN ALL DISSIMILAR METALS.
3. BACKFLOW DEVICE SHALL BE MINIMUM OF 3' FROM BACK OF CURB AND/OR SIDEWALK.
4. ET120–001 1" X 2" INLINE AIR GAP WITH THREADED INLET OR APPROVED EQUAL.
5. TEST COCK REQUIRED ON THE UPSTREAM SIDE OF THE INLET VALVE.
6. APPROVED BACKFLOW PREVENTION DEVICE WITH SILICONE RUBBER SEAL RINGS OR DISCS; 1"
   A.) AMES LF4000B
   B.) APOLLO RPLF 4A
   C.) WATTS LF919
   D.) ZURN 975XL2

Sampling / Flushing Station with Discharge to Sanitary Sewer

SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

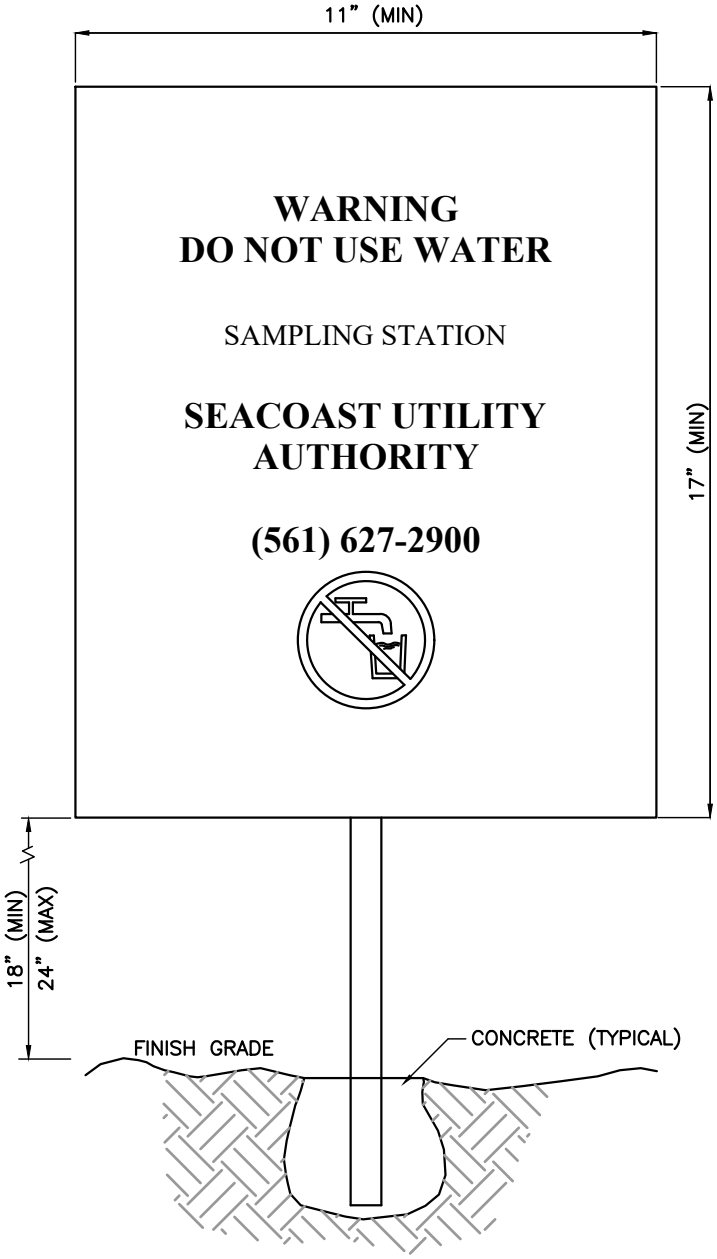
Revision B–24

DATE APPROVED: FEB 26, 2025

DRAWING No. 25b

NOTE: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. MOUNT SIGN TO HOT DIPPED GALVANIZED STANDARD U–CHANNEL SIGN POST WITH STAINLESS STEEL HARDWARE.
2. SIGN SHALL BE .080 GAUGE ALUMINUM, WITH UV RESISTANT POLYURETHANE COATING.
3. COLOR SHALL BE WHITE LETTERS ON DARK BLUE BACKGROUND. COLORS MAY VARY WITH PRIOR APPROVAL OF SUA.



Sampling / Flushing Water Sign

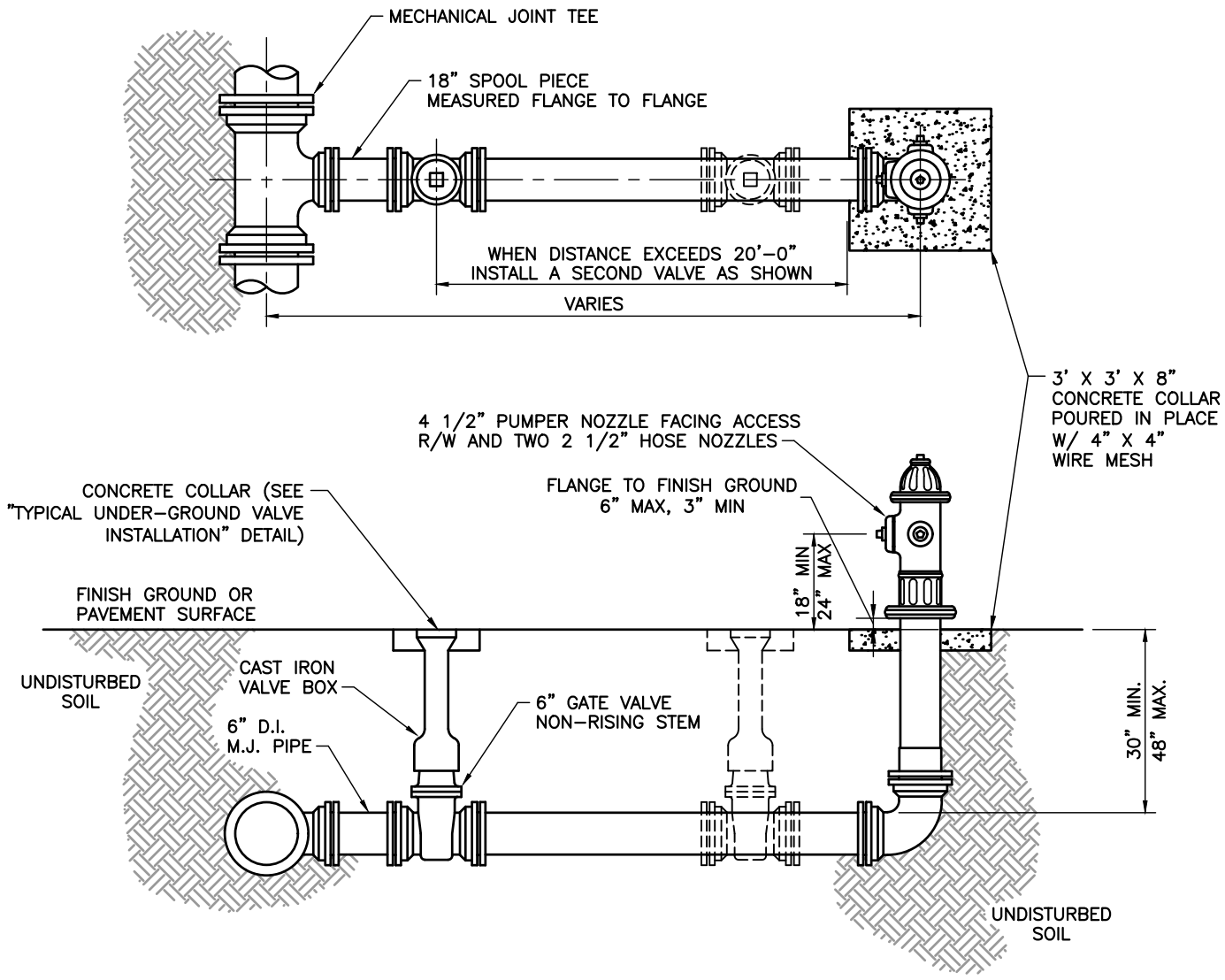
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D–23

DATE APPROVED: FEB 26, 2025

DRAWING No. 25c



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. DRAINS OR WEEP HOLES ON HYDRANT BARREL SHALL BE PLUGGED.
2. FIRE HYDRANT SHALL BE INSTALLED PLUMB AND TRUE.
3. REFER TO EXHIBIT "D" SHOP SPECIFICATION LIST FOR ACCEPTABLE FIRE HYDRANTS.
4. TWO OF THE FOLLOWING FORMS OF RESTRAINT SHALL BE USED WHEN PIPE IS GREATER THAN 12".
   A) APPROVED MECHANICAL JOINT RESTRAINT (i.e. MEGALUG)
   B) TIE RODS AND NUTS EQUAL IN DIA. TO TEE BOLTS AND NUTS, COATED WITH KOP-COAT 300-M OR APPROVED EQUAL.

Typical Fire Hydrant Installation

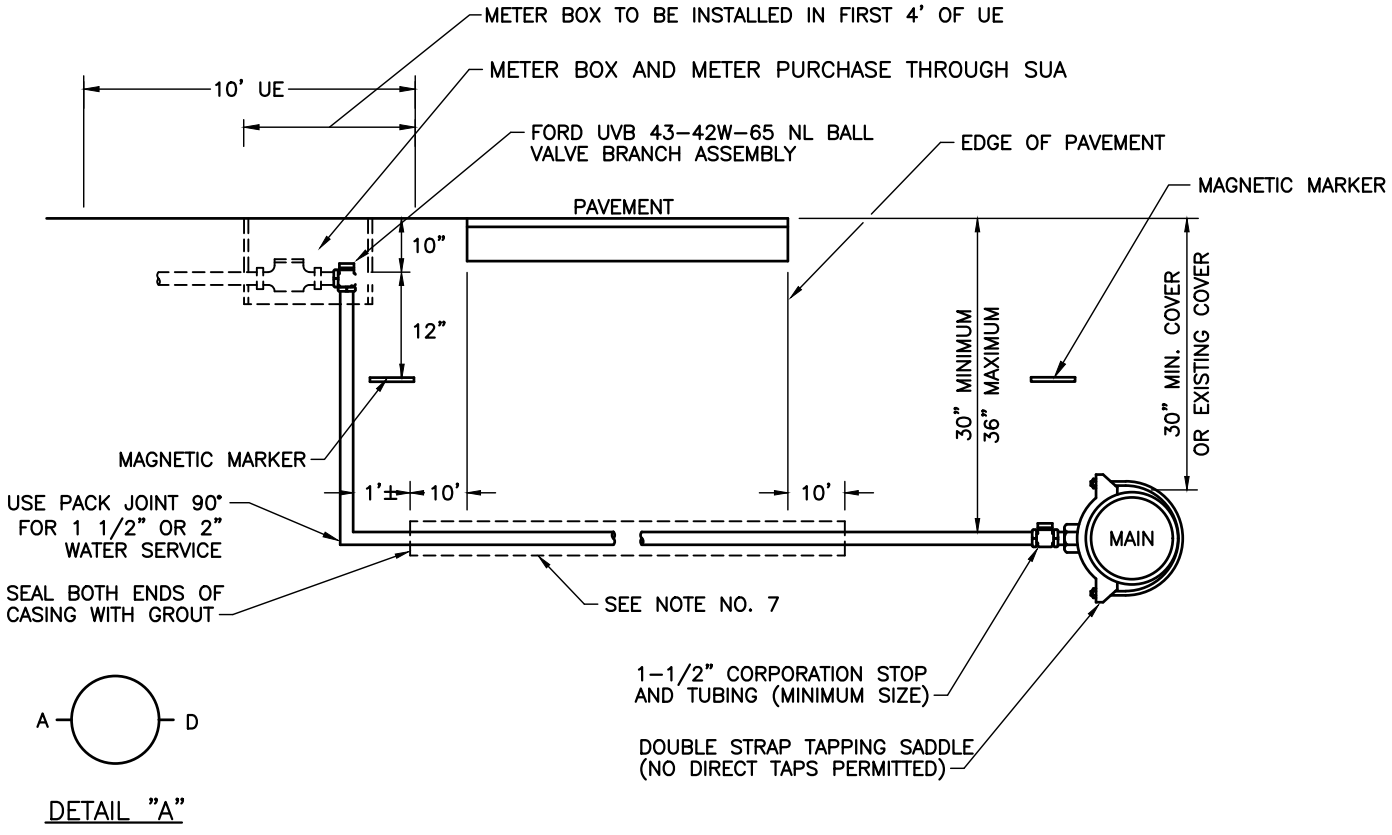
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D-24

DATE APPROVED: FEB 26, 2025

DRAWING No. 26



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. CASINGS SHALL BE REQUIRED FOR ALL LONG SIDE SERVICES.

2. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" OFFSET AND AT 90° FROM THE CENTERLINE AS SHOWN ON DETAIL "A".

3. WHERE NO SIDEWALK EXISTS, METER BOXES SHALL BE SET TO CONFORM TO FINISH GRADE.

4. COPPER TUBING SHALL BE TYPE "K" WITH COMPRESSION FITTINGS.

5. POLYETHYLENE TUBING SHALL BE SDR 9, COPPER TUBE SIZE.

6. TAPPING SADDLES AND CORPORATION STOPS SHALL HAVE AWWA INLET THREADS.

7. SERVICE CASING SHALL NOT BE INSTALLED BY WATER JETTING UNDER ROADWAY.

8. GALVANIZED SCHEDULE 40 CASING REQUIRED FOR ANY INSTALLATION REQUIRING A JACK AND BORE, SCHEDULE 40 PVC MAY BE USED FOR AN OPEN CUT INSTALLATION WITH THE APPROVAL OF SUA, CASING SHOULD EXTEND TEN (10) FEET BEYOND EDGE OF PAVEMENT AND SIZED AS FOLLOWS:
   - 1" SERVICE USE 2" CASING
   - 1 1/2" SERVICE USE 3" CASING
   - 2" SERVICE USE 4" CASING

Water Service Installation - Angle Meter Stop

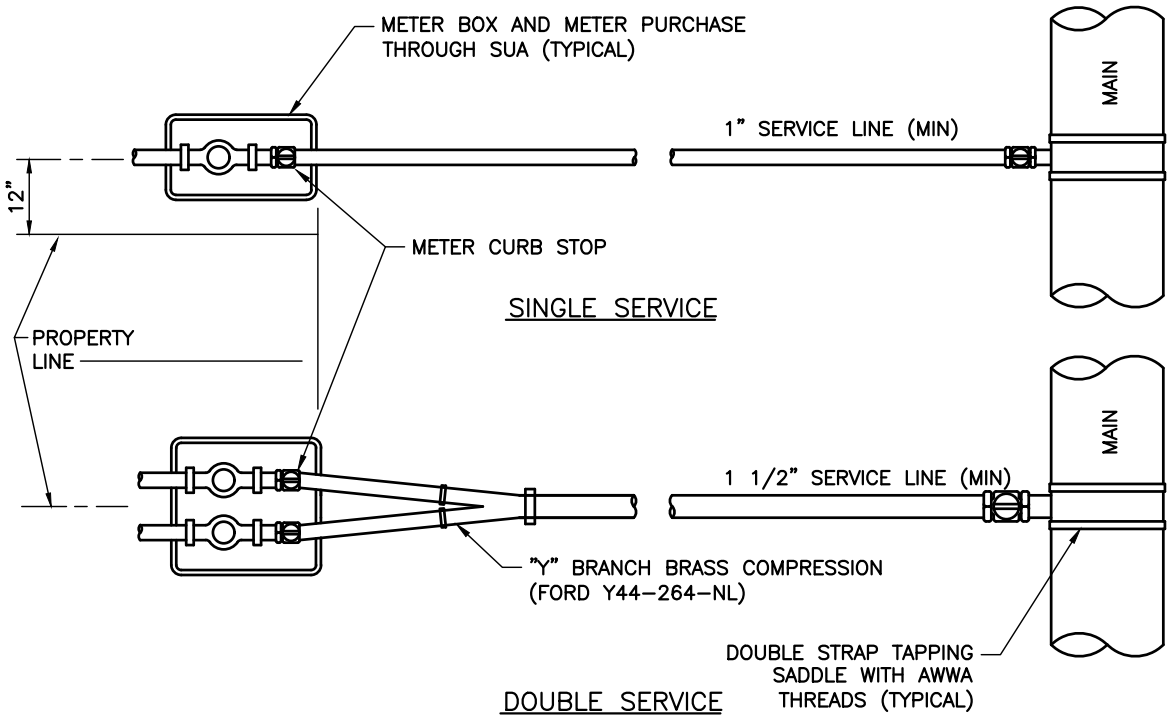
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D-24

DATE APPROVED: FEB 26, 2025

DRAWING No. 27



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. AUTHORIZED SERVICE LINE MATERIAL:
   A) TYPE "K" COPPER TUBING WITH COMPRESSION FITTINGS.
   B) POLYETHYLENE TUBING SDR 9, COPPER TUBE SIZE.

2. METER CURB STOP SHALL BE WITH LOCKING WINGS AND DRILLED METER NUT, 1" MINIMUM.

3. 1" METER CURB STOPS WITH 3/4" VALVES SHALL NOT BE PERMITTED.

4. MULTIPLE SERVICE/METER INSTALLATIONS OF MORE THAN 4 METERS PER SERVICE AND SERVICE LINES LARGER THAN 2" IN DIAMETER SHALL BE APPROVED ON AN INDIVIDUAL BASIS.

5. METER CURB STOPS 1 1/2" AND 2" IN SIZE SHALL BE PROVIDED WITH A METER FLANGE.

6. SERVICE LINE SHALL BE CONTINUOUS BETWEEN CORP STOP AND CURB STOP WITH THE EXCEPTION OF THE "Y" BRANCH.

7. SERVICE TAPS SHALL BE SPACED AT A MINIMUM DISTANCE OF 18 INCHES.

Typical Water Service

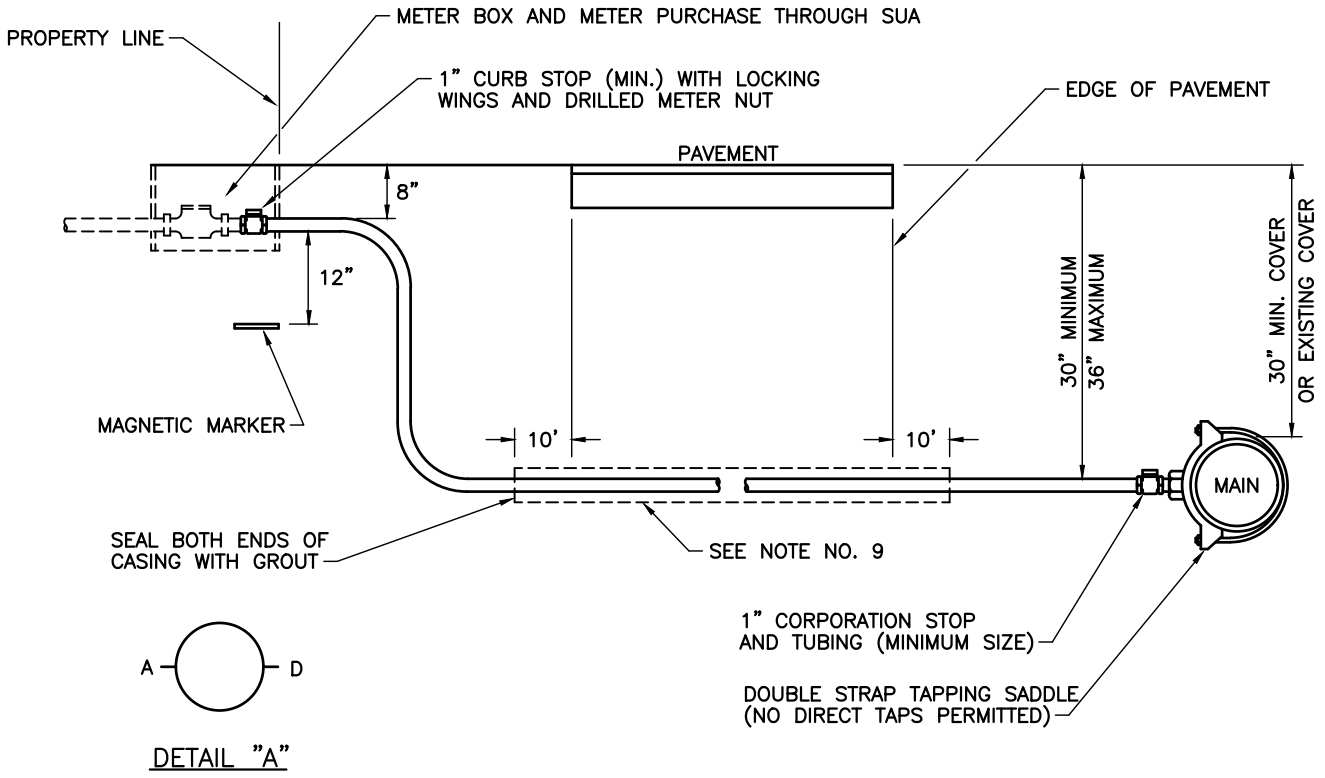
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision E-24

DATE APPROVED: FEB 26, 2025

DRAWING No. 28



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. CASINGS SHALL BE REQUIRED FOR ALL LONG SIDE SERVICES.
2. SUCCESSIVE TAPS ON THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" OFFSET AND AT 90° FROM THE CENTERLINE AS SHOWN ON DETAIL "A".
3. WHERE NO SIDEWALK EXISTS, METER BOXES SHALL BE SET TO CONFORM TO FINISH GRADE.
4. COPPER TUBING SHALL BE TYPE "K" WITH COMPRESSION FITTINGS.
5. POLYETHYLENE TUBING SHALL BE SDR 9, COPPER TUBE SIZE.
6. ROTATE THE CORPORATION STOP SO THAT THE OPERATING NUT IS ACTUATED FROM THE VERTICAL POSITION RATHER THAN THE HORIZONTAL POSITION.
7. BOTH COPPER AND POLYETHYLENE TUBING SERVICE LINES SHALL BE CONTINUOUS FROM CORPORATION STOP TO CURB STOP WITH NO FITTINGS IN BETWEEN.
8. TAPPING SADDLES AND CORPORATION STOPS SHALL HAVE AWWA INLET THREADS.
9. SERVICE CASING SHALL NOT BE INSTALLED BY WATER JETTING UNDER ROADWAY.
10. GALVANIZED SCHEDULE 40 CASING REQUIRED FOR ANY INSTALLATION REQUIRING A JACK AND BORE , SCHEDULE 40 PVC MAY BE USED FOR AN OPEN CUT INSTALLATION WITH THE APPROVAL OF SUA, CASING SHOULD EXTEND TEN (10) FEET BEYOND EDGE OF PAVEMENT AND SIZED AS FOLLOWS:
    A.) 1" SERVICE USE 2" CASING
    B.) 1 1/2" SERVICE USE 3" CASING
    C.) 2" SERVICE USE 4" CASING

Typical Water Service Installation

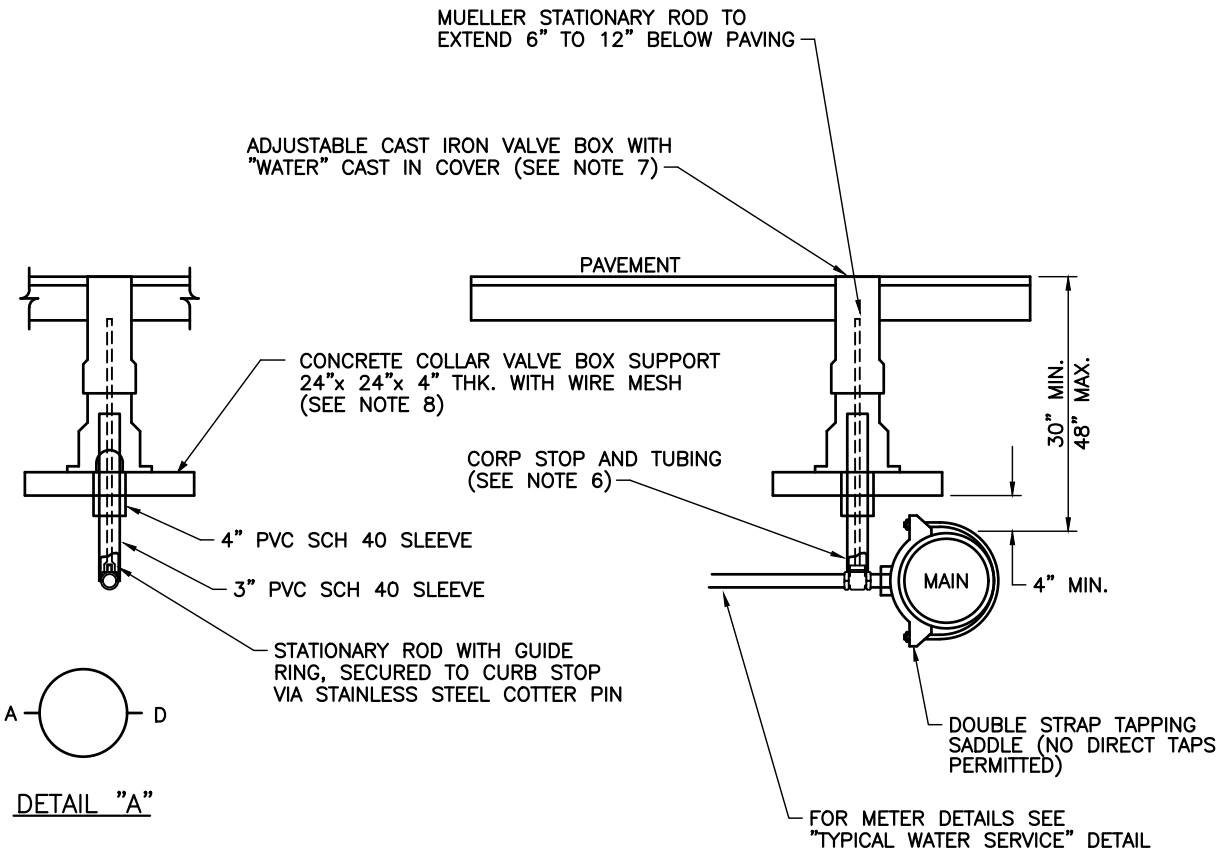
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision B–23

DATE APPROVED: FEB 26, 2025

DRAWING No. 29



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" OFFSET AND AT 90° FROM THE CENTERLINE AS SHOWN ON DETAIL "A".
2. COPPER TUBING SHALL BE TYPE "K" WITH COMPRESSION FITTINGS.
3. POLYETHYLENE TUBING SHALL BE SDR 9, COPPER TUBE SIZE.
4. BOTH COPPER AND POLYETHYLENE TUBING SERVICE LINES SHALL BE CONTINUOUS FROM CURB STOP TO ANGLE METER STOP WITH NO FITTINGS IN BETWEEN.
5. TAPPING SADDLES TO HAVE AWWA THREADS.
6. CORPORATION STOP AT THE MAIN TO HAVE MALE AWWA THREADS ON ONE SIDE AND BE COMPRESSION ON THE OTHER SIDE.
7. VALVE BOX SHALL BE 5 1/4" CAST IRON SCREW TYPE ADJUSTABLE.
8. CONCRETE COLLAR VALVE BOX SUPPORT TO BE PLACED ON COMPACTED SOIL TO SUPPORT VALVE BOX SO THAT A MINIMUM OF 4 INCHES EXISTS BETWEEN THE BOTTOM OF THE CONCRETE COLLAR AND THE TOP OF THE WATER MAIN.
9. FOR RESIDENTIAL APPLICATIONS MUST BE DESIGNATED ON THE APPROVED PLAN OR APPROVED IN ADVANCE BY SUA REPRESENTATIVE.

Water Service Tap Under Pavement

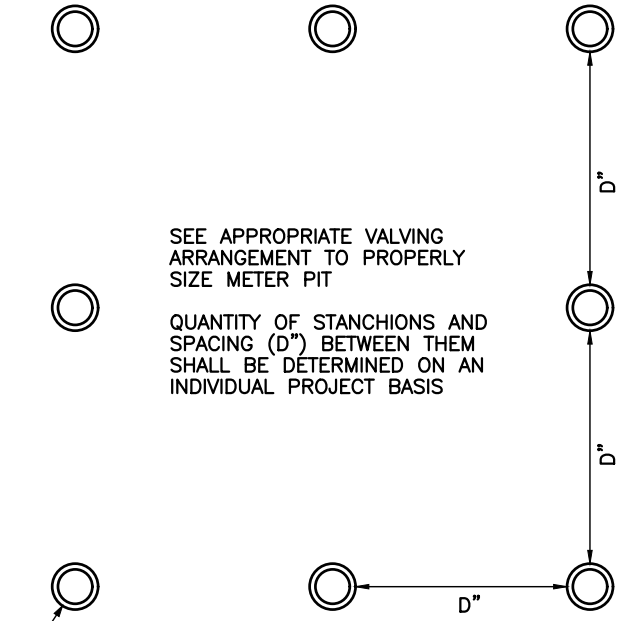
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision B–23

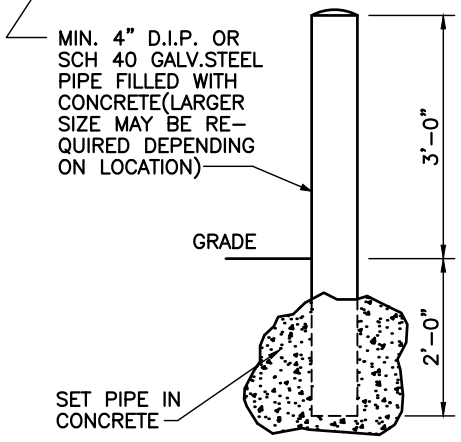
DATE APPROVED: FEB 26, 2025

DRAWING No. 30



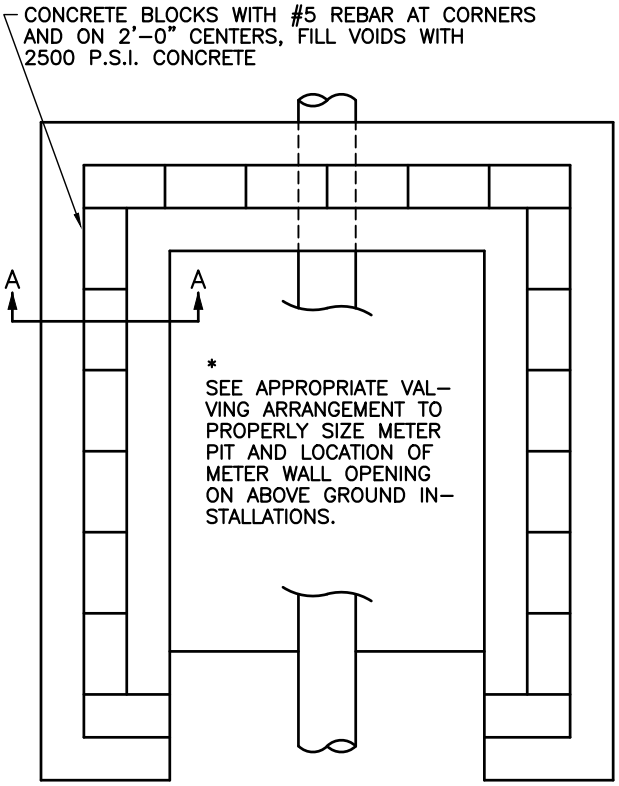
SEE APPROPRIATE VALVING ARRANGEMENT TO PROPERLY SIZE METER PIT

QUANTITY OF STANCHIONS AND SPACING (D") BETWEEN THEM SHALL BE DETERMINED ON AN INDIVIDUAL PROJECT BASIS

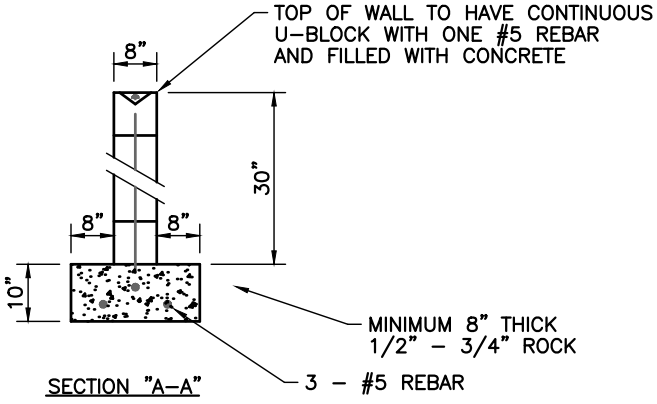


OPTION "A"

PROTECTIVE PIPE STANCHIONS



* SEE APPROPRIATE VALVING ARRANGEMENT TO PROPERLY SIZE METER PIT AND LOCATION OF METER WALL OPENING ON ABOVE GROUND INSTALLATIONS.



OPTION "B"

SCREENING WALL

* BACK FOOTER TO BE A MINIMUM OF 12" FROM PIPE ASSEMBLY AND SIDE WALLS TO BE A MINIMUM OF 36" FROM PIPE ASSEMBLY

Protective Enclosures for Above Ground Devices

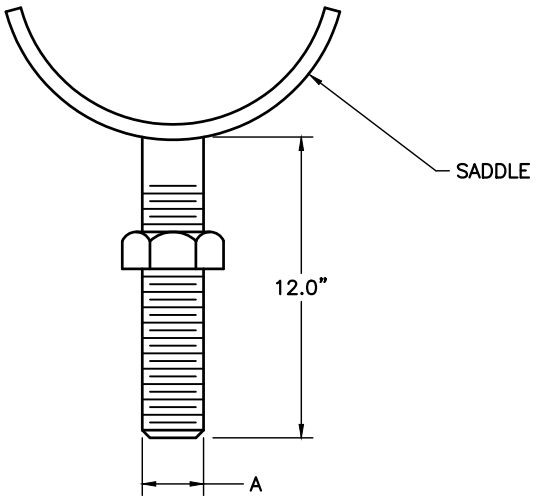
SEACOAST UTILITY AUTHORITY

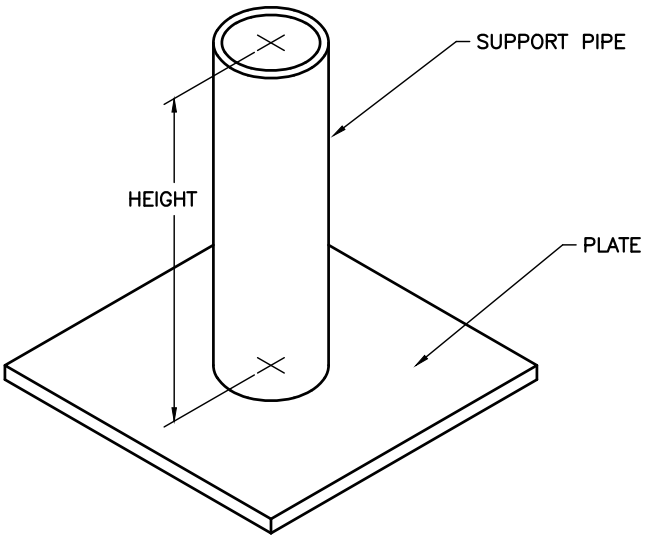
CONSTRUCTION STANDARDS AND DETAILS

Revision B-24

DATE APPROVED: FEB 26, 2025

DRAWING No. 31





PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

PIPE SIZE	A	SUPPORT PIPE	SADDLE	PLATE	HEIGHT
3"	3/4"	1"	1/4" x 2"	4" x 4"	1' – 0"
4"	3/4"	1"	1/4" x 2"	4" x 4"	1' – 0"
6"	3/4"	1"	1/4" x 2"	4" x 4"	1' – 0"
8"	3/4"	1"	1/4" x 2"	4" x 4"	1' – 0"
10"	1"	1 1/4"	3/8" x 3"	6" x 6"	1' – 0"
12"	1"	1 1/4"	3/8" x 3"	6" x 6"	1' – 0"
14"	1"	1 1/4"	3/8" x 3"	6" x 6"	1' – 0"
16"	1 1/4"	1 1/2"	1/2" x 3"	6" x 6"	1' – 0"
18"	1 1/4"	1 1/2"	1/2" x 3"	6" x 6"	1' – 0"

NOTE: ALL MATERIAL SHALL BE 316 STAINLESS STEEL

Pipe Support

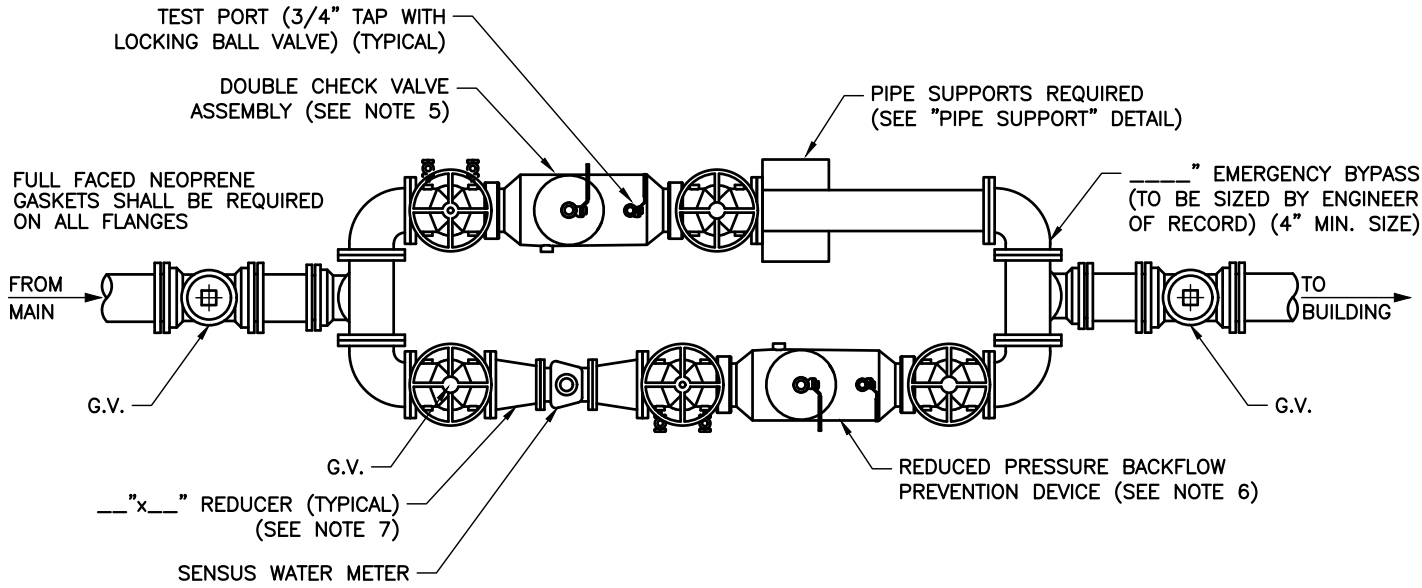
SEACOAST UTILITY AUTHORITY

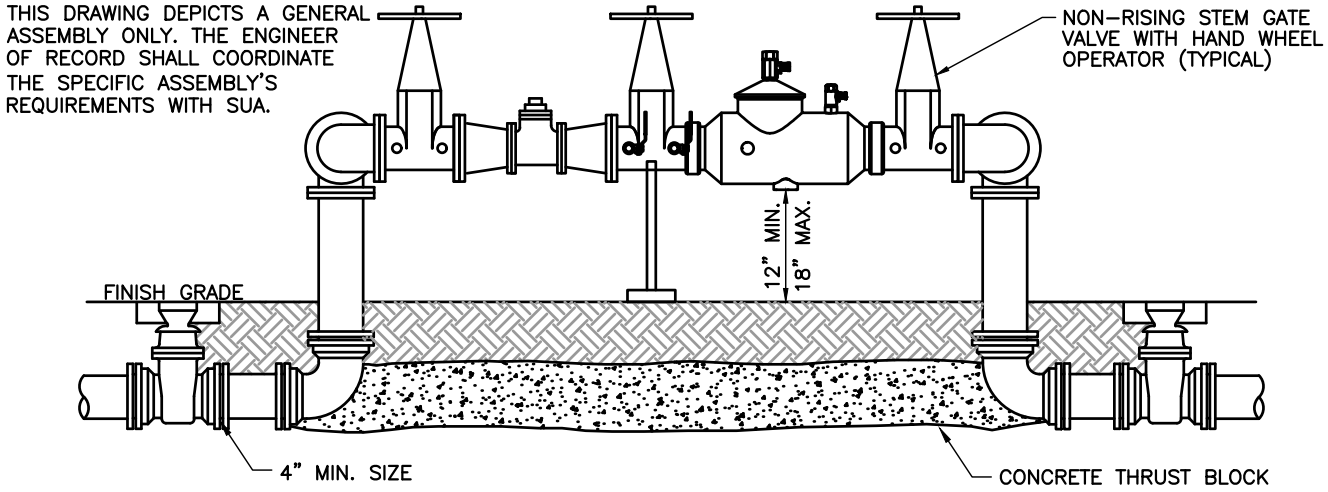
CONSTRUCTION STANDARDS AND DETAILS

Revision B–16

DATE APPROVED: FEB 26, 2025

DRAWING No. 32





NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR BYPASS DEVICE)

1. MECHANICAL JOINT FITTINGS SHALL BE REQUIRED UNDERGROUND AND FLANGED FITTINGS FOR ABOVE GROUND USE, NO UNIFLANGES PERMITTED.
2. PAINT THE ABOVE GROUND ASSEMBLY IN ACCORDANCE WITH SUA CONSTRUCTION STANDARD SECTION II, ITEM 7, AFTER MANUFACTURERS RECOMMENDED SURFACE PREP IS COMPLETED. DO NOT PAINT OVER NAME/SERIAL PLATE, STAINLESS STEEL OR BRASS FITTINGS.
3. WHEN PROTECTIVE PIPE STANCHIONS OR A SCREEN WALL IS REQUIRED, SEE "PROTECTIVE ENCLOSURES FOR ABOVE GROUND DEVICES" DETAIL.
4. 3" METER REQUIRES 4" BACKFLOW ASSEMBLY AND PIPING.
5. ALL TEST PORTS SHALL BE PLUGGED WITH BRASS PLUGS.
6. APPROVED REDUCED PRESSURE BACKFLOW PREVENTER WITH CHLORAMINE RESISTANT ELASTOMERS; 4" TO 8"
   A.) APOLLO RPLF 4A
   B.) ZURN 375AST
7. WHEN CONNECTING A METER DIRECTLY TO A GATE VALVE OF THE SAME SIZE AND A REDUCER IS NOT NEEDED, A 6" FLANGE-BY-FLANGE SPOOL PIECE IS REQUIRED ON THE INLET SIDE.

Meter and Backflow Assembly (3" and Larger)

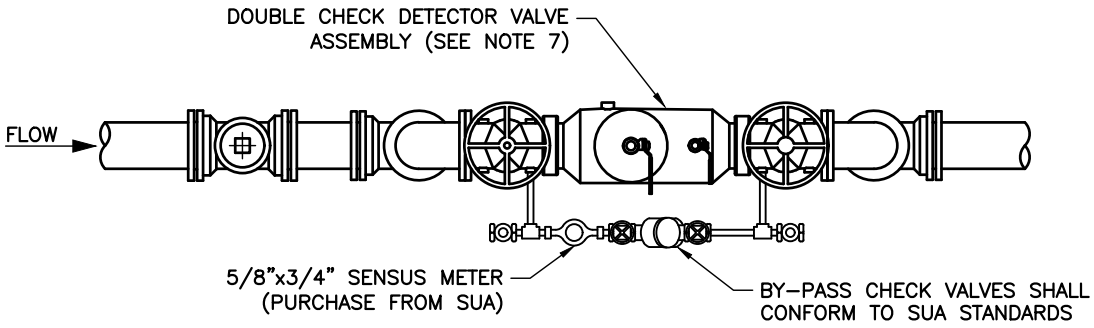
SEACOAST UTILITY AUTHORITY

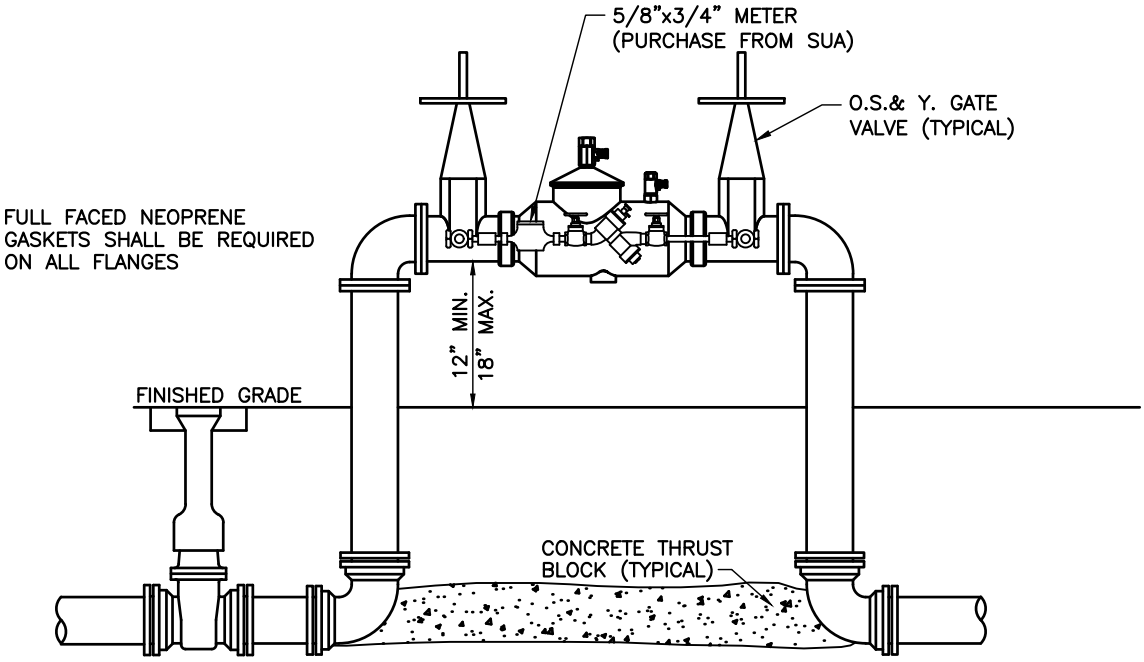
CONSTRUCTION STANDARDS AND DETAILS

Revision H-25

DATE APPROVED: FEB 26, 2025

DRAWING No. 33





NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. MECHANICAL JOINT FITTINGS SHALL BE REQUIRED UNDERGROUND AND FLANGED FITTINGS FOR ABOVE GROUND USE, NO UNIFLANGES PERMITTED.
2. PAINT THE ABOVE GROUND ASSEMBLY, INCLUDING ENTIRE LENGTH OF TIE RODS, IN ACCORDANCE WITH SUA CONSTRUCTION STANDARD SECTION II, ITEM 7, AFTER MANUFACTURERS RECOMMENDED SURFACE PREP IS COMPLETED. DO NOT PAINT OVER NAME/SERIAL PLATE, STAINLESS STEEL BODY OR BRASS FITTINGS.
3. WHEN PROTECTIVE PIPE STANCHIONS OR A SCREEN WALL IS REQUIRED, SEE "PROTECTIVE ENCLOSURES FOR ABOVE GROUND DEVICES" DETAIL.
4. SPECIAL FIRE PROTECTION SYSTEMS USING INTERNAL PUMPS, TANKS, ETC. SHALL BE REQUIRED TO USE APOLLO RPDALF4A OR ZURN 375ASTDA.
5. ALL TEST PORTS SHALL BE PLUGGED WITH BRASS PLUGS.
6. TWO OF THE FOLLOWING FORMS OF RESTRAINT SHALL BE USED WHEN PIPE IS GREATER THAN 12".
   A.) APPROVED MECHANICAL JOINT RESTRAINT (i.e. MEGALUG)
   B.) TIE RODS AND NUTS EQUAL IN DIA. TO TEE BOLTS AND NUTS, COATED WITH KOP-COAT 300-M OR APPROVED EQUAL.
7. APPROVED DOUBLE CHECK DETECTOR VALVE ASSEMBLIES WITH CHLORAMINE RESISTANT ELASTOMERS; 4" TO 8"
   A.) AMES DERINGER 30G
   B.) APOLLO DCDALF 4A
   C.) ZURN 350ASTDA

Above Ground Fireline

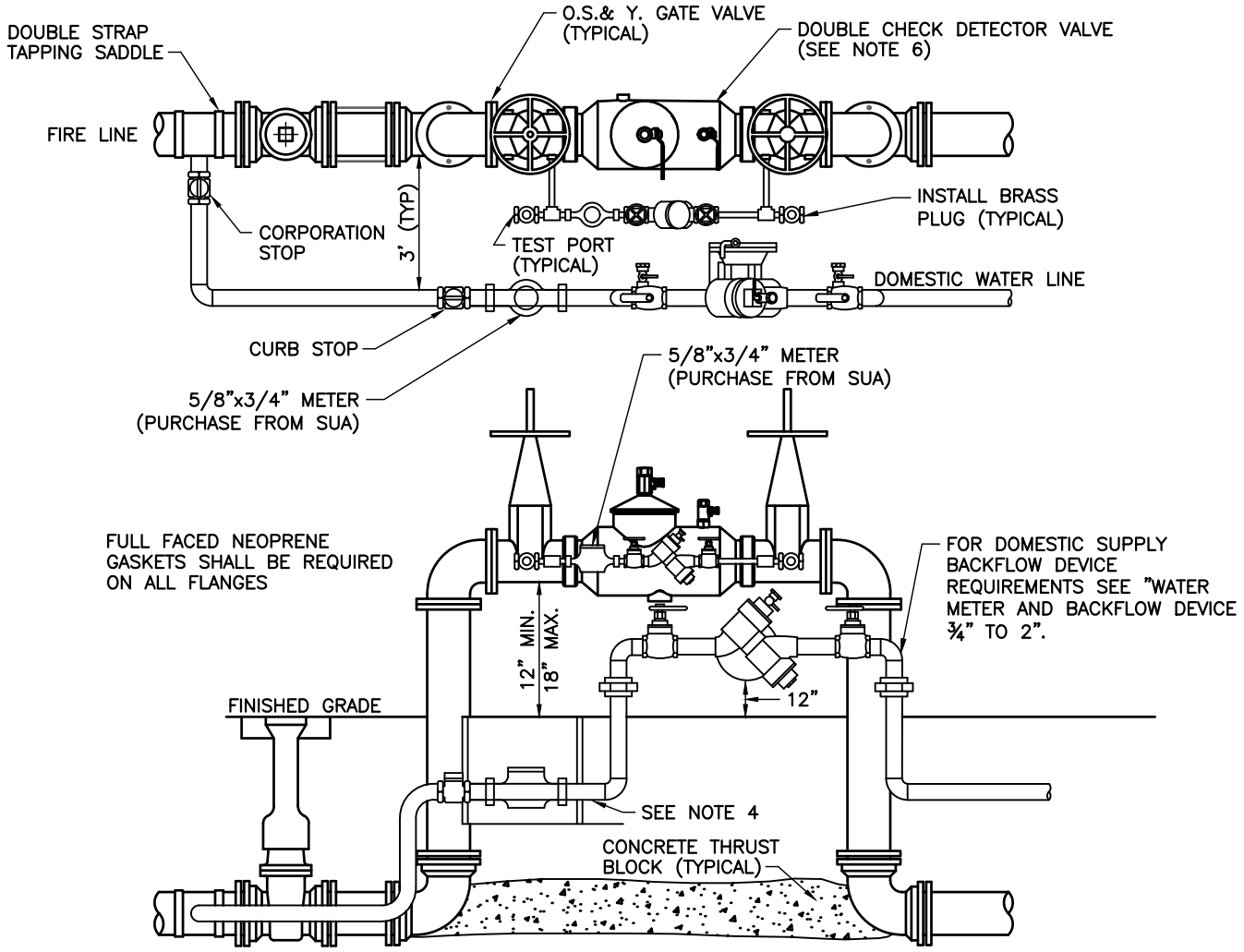
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision E-23

DATE APPROVED: FEB 26, 2025

DRAWING No. 34



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. MECHANICAL JOINT FITTINGS SHALL BE REQUIRED UNDERGROUND AND FLANGED FITTINGS FOR ABOVE GROUND USE, NO UNIFLANGES PERMITTED.

2. PAINT THE ABOVE GROUND ASSEMBLY, INCLUDING ENTIRE LENGTH OF TIE RODS, IN ACCORDANCE WITH SUA CONSTRUCTION STANDARD SECTION II, ITEM 7, AFTER MANUFACTURERS RECOMMENDED SURFACE PREP IS COMPLETED. DO NOT PAINT OVER NAME/SERIAL PLATE, STAINLESS STEEL BODY OR BRASS FITTINGS.

3. WHEN PROTECTIVE PIPE STANCHIONS OR SCREEN WALL IS REQUIRED, SEE "PROTECTIVE ENCLOSURES FOR ABOVE GROUND DEVICES" DETAIL.

4. TYPE "K" COPPER TUBING (SOFT DRAWN) OR POLYETHYLENE TUBING SDR 9 COPPER TUBING SIZE. (UNDERGROUND USE ONLY) IF DISTANCE BETWEEN METER AND RISER IS LESS THAN 6 FEET ONLY COPPER TUBING SHALL BE PERMITTED.

5. TWO OF THE FOLLOWING FORMS OF RESTRAINT SHALL BE USED WHEN PIPE IS GREATER THAN 12".
   A.) APPROVED MECHANICAL JOINT RESTRAINT (i.e. MEGALUG)
   B.) TIE RODS AND NUTS EQUAL IN DIA. TO TEE BOLTS AND NUTS, COATED WITH KOP–COAT 300–M OR APPROVED EQUAL.

6. APPROVED DOUBLE CHECK DETECTOR VALVE ASSEMBLIES WITH CHLORAMINE RESISTANT ELASTOMERS; 4" to 8"
   A.) AMES DERINGER 30G
   B.) APOLLO DCDALF 4A
   C.) ZURN 350ASTDA

Fireline with 1" to 2" Domestic Supply

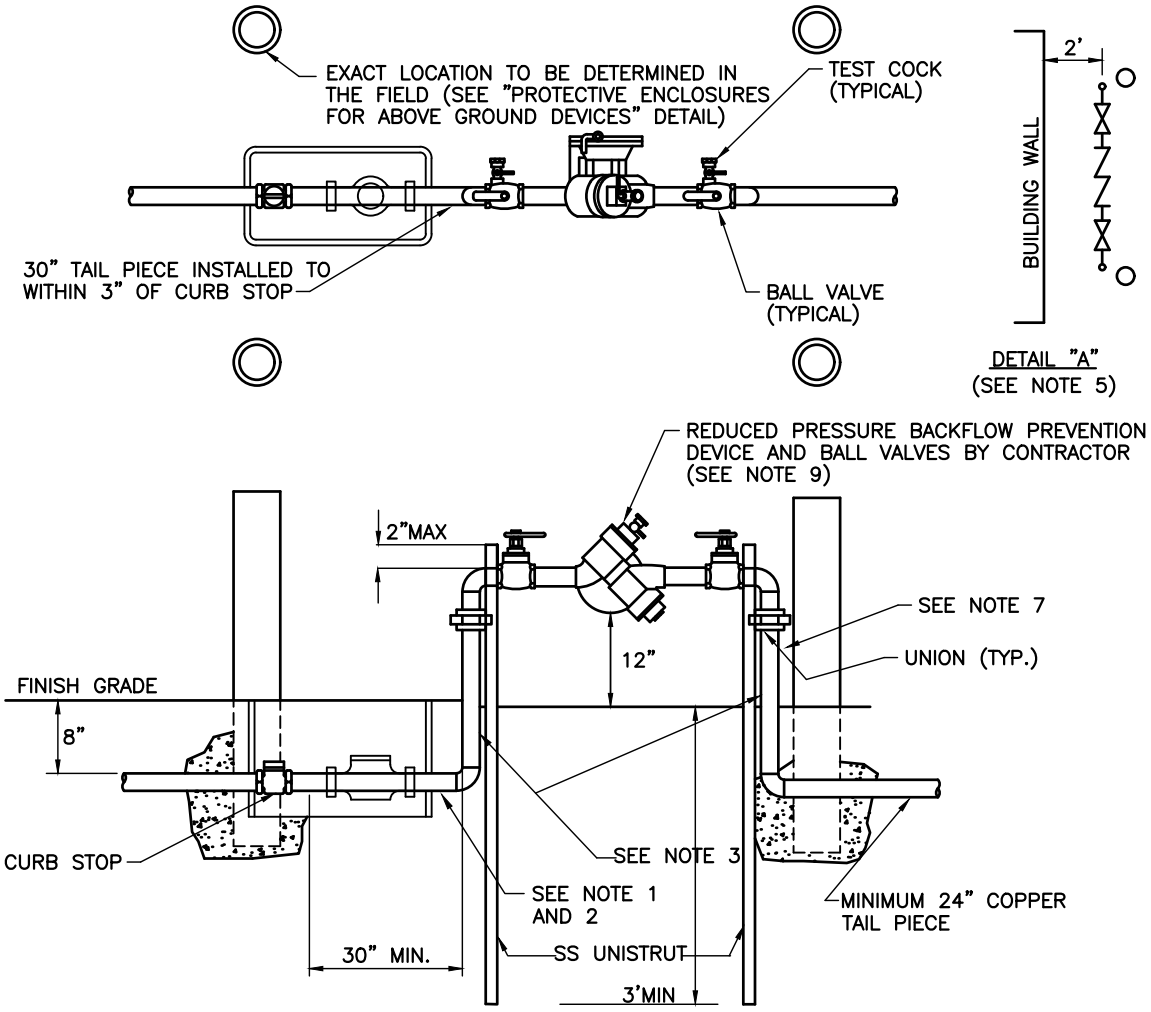
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D–23

DATE APPROVED: FEB 26, 2025

DRAWING No. 35



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. TYPE "K" COPPER TUBING (SOFT DRAWN) OR POLYETHYLENE TUBING SDR 9 COPPER TUBE SIZE.
2. IF THIS DISTANCE IS LESS THAN 6 FEET ONLY COPPER TUBING SHALL BE PERMITTED.
3. BOTH RISERS SHALL BE TYPE "K" COPPER TUBING (HARD DRAWN) WITH COPPER/BRASS SOLDER FITTINGS AND ADAPTERS. ONLY LEAD FREE PIPE, FITTINGS, VALVES, SOLDER AND FLUX SHALL BE PERMITTED.
4. 1 1/2" AND 2" METER STOPS SHALL BE EQUIPPED WITH LOCKING CAPS AND METER FLANGES.
5. WHEN THE DEVICE IS INSTALLED PARALLEL TO A BUILDING WALL THERE SHALL BE A MINIMUM OF 2' BETWEEN THE EDGE OF THE DEVICE AND THE BUILDING WALL.
6. BACKFLOW PREVENTION DEVICE SHALL BE EQUIPPED WITH BALL VALVES.
7. BACKFLOW PREVENTION DEVICE SHALL BE SUPPORTED AT BOTH RISERS WITH A MINIMUM OF 2 – 1 5/8" STAINLESS STEEL UNISTRUTS. RISERS TO BE SECURED TO UNISTRUT WITH 304 STAINLESS STEEL MOUNTING HARDWARE AND 1/4" NEOPRENE INSULATORS.
8. BACKFLOW DEVICES SHALL BE A MINIMUM OF 3' FROM BACK OF CURB.
9. APPROVED BACKFLOW PREVENTION DEVICES WITH SILICONE RUBBER SEAL RINGS OR DISCS; 3/4" TO 2"
   A.) AMES LF4000B
   B.) APOLLO RPLF 4A
   C.) WATTS LF919
   D.) ZURN 975XL2

Water Meter and Backflow Device 3/4" to 2"

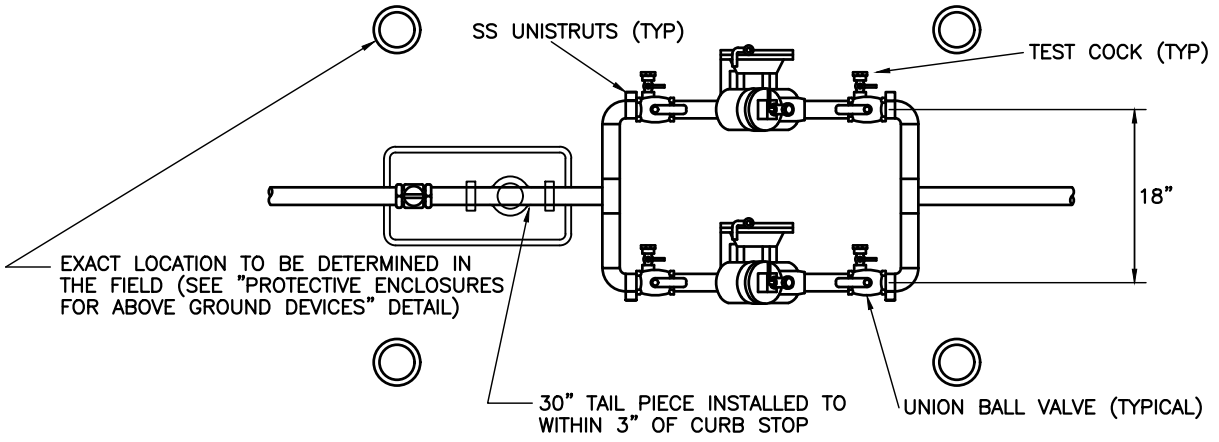
SEACOAST UTILITY AUTHORITY

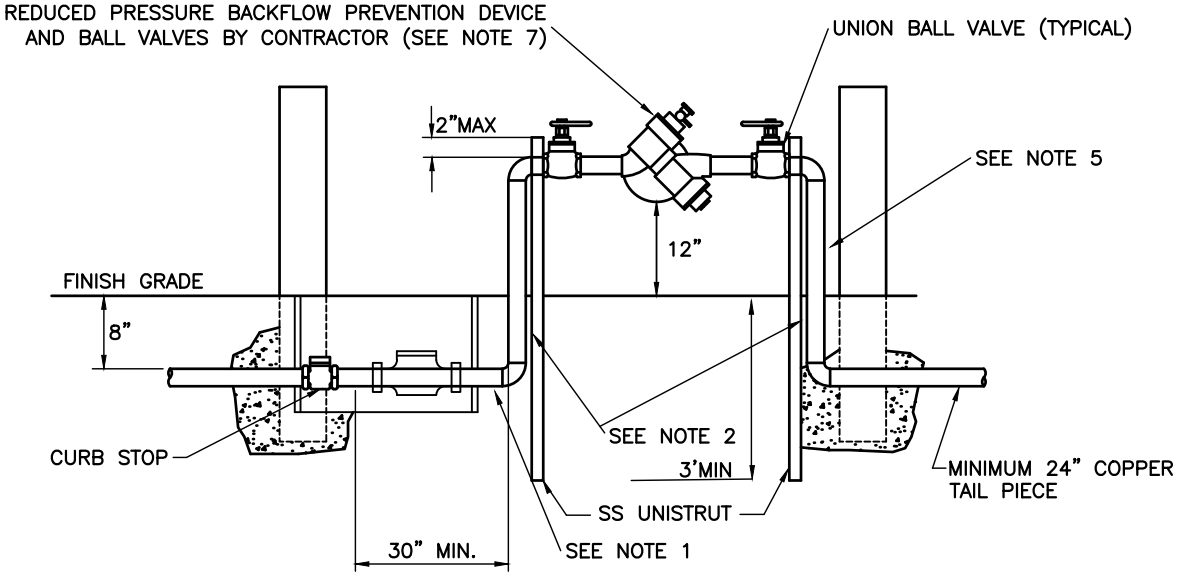
CONSTRUCTION STANDARDS AND DETAILS

Revision D–23

DATE APPROVED: FEB 26, 2025

DRAWING No. 36





NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. TYPE "K" COPPER TUBING (SOFT DRAWN) OR POLYETHYLENE TUBING SDR 9 COPPER TUBE SIZE. IF THIS DISTANCE IS LESS THAN 6 FEET ONLY COPPER TUBING SHALL BE PERMITTED.
2. BOTH RISERS SHALL BE TYPE "K" COPPER TUBING (HARD DRAWN) WITH COPPER/BRASS SOLDER FITTINGS AND ADAPTERS. ONLY LEAD FREE PIPE, FITTINGS, VALVES, SOLDER AND FLUX SHALL BE PERMITTED.
3. 1 1/2" AND 2" METER STOPS SHALL BE EQUIPPED WITH LOCKING CAPS AND METER FLANGES.
4. WHEN THE DEVICE IS INSTALLED PARALLEL TO A BUILDING WALL THERE SHALL BE A MINIMUM OF 2' BETWEEN THE EDGE OF THE DEVICE AND THE BUILDING WALL.
5. BACKFLOW PREVENTION DEVICE SHALL BE SUPPORTED AT BOTH RISERS WITH A MINIMUM OF 4 – 1 5/8" STAINLESS STEEL UNISTRUTS. RISERS TO BE SECURED TO UNISTRUT WITH 304 STAINLESS STEEL MOUNTING HARDWARE AND 1/4" NEOPRENE INSULATORS.
6. BACKFLOW DEVICES SHALL BE A MINIMUM OF 3' FROM BACK OF CURB.
7. APPROVED BACKFLOW PREVENTION DEVICES WITH SILICONE RUBBER SEAL RINGS OR DISCS; 3/4" TO 2" WITH UNION BALL VALVES
   A.) APOLLO RPLF 4A WITH UNION BALL VALVE OPTION
   B.) ZURN 975XL2U WITH UNION BALL VALVE OPTION

Water Meter and Dual Backflow Device 3/4" to 2"

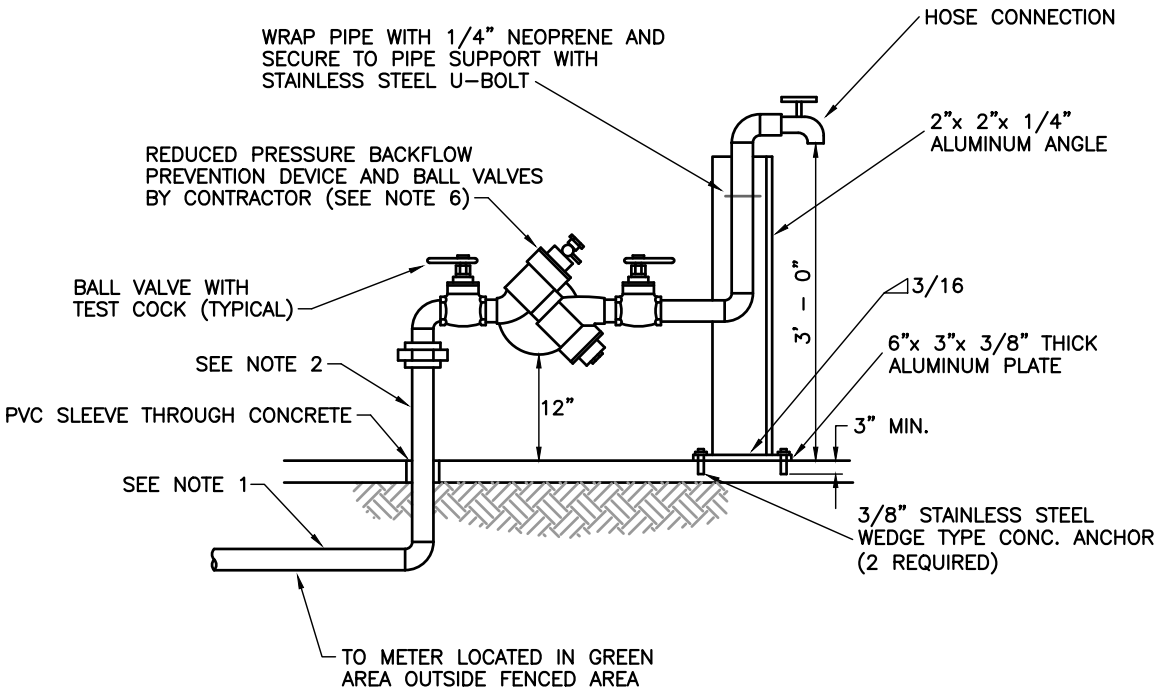
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D–23

DATE APPROVED: FEB 26, 2025

DRAWING No. 37



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. TYPE "K" COPPER TUBING (SOFT DRAWN).
2. BOTH RISERS SHALL BE TYPE "K" COPPER TUBING (HARD DRAWN) WITH COPPER/BRASS SOLDER FITTINGS AND ADAPTERS. ONLY LEAD FREE PIPE, FITTINGS, VALVES, SOLDER AND FLUX SHALL BE PERMITTED.
3. BACKFLOW PREVENTION DEVICE SHALL BE EQUIPPED WITH BALL VALVES.
4. FOR PLACEMENT OF BACKFLOW ASSEMBLY WITHIN FENCED AREA SEE "TYPICAL LIFT STATION SITE PLAN" DETAIL.
5. BACKFLOW PREVENTION DEVICE SHALL BE SUPPORTED AT BOTH RISERS WITH ALUMINUM ANGLE AS SHOWN ABOVE. RISERS TO BE SECURED TO ANGLE WITH TYPE 304 SST MOUNTING HARDWARE AND NEOPRENE INSULATORS.
6. APPROVED BACKFLOW PREVENTION DEVICES WITH SILICONE RUBBER SEAL RINGS OR DISCS; 3/4" TO 2"
   A.) AMES LF4000B
   B.) APOLLO RPLF 4A
   C.) WATTS LF919
   D.) ZURN 975XL2

Lift Station Backflow Preventer Assembly

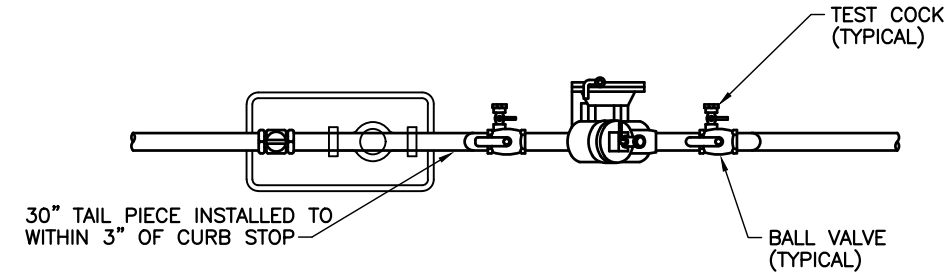
SEACOAST UTILITY AUTHORITY

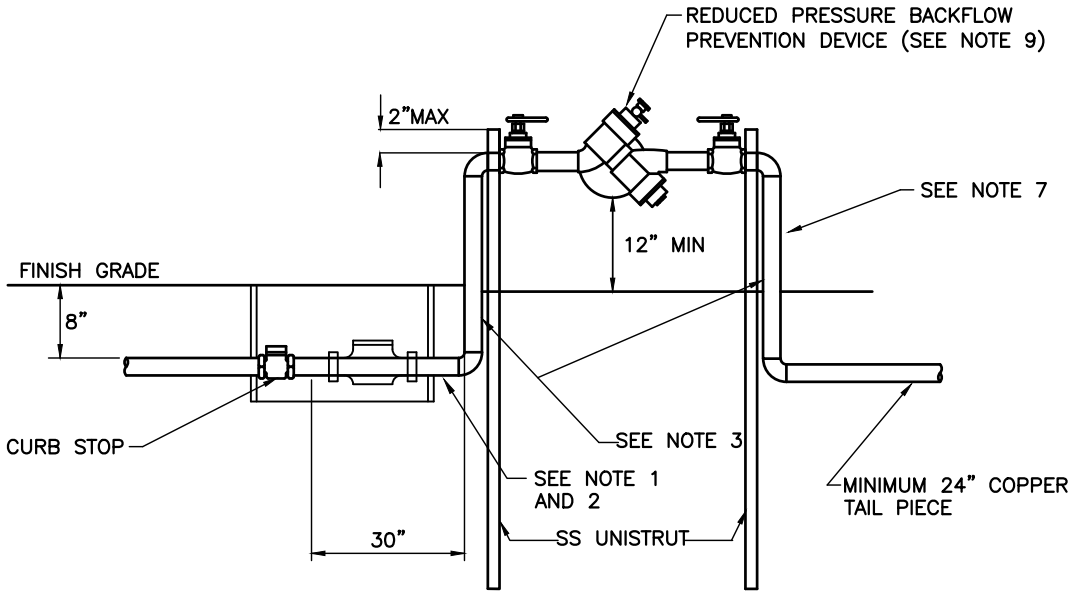
CONSTRUCTION STANDARDS AND DETAILS

Revision D-23

DATE APPROVED: FEB 26, 2025

DRAWING No. 38





NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. TYPE "K" COPPER TUBING (SOFT DRAWN) OR POLYETHYLENE TUBING SDR 9 COPPER TUBE SIZE.
2. IF THIS DISTANCE IS LESS THAN 6 FEET ONLY COPPER TUBING SHALL BE PERMITTED.
3. BOTH RISERS SHALL BE TYPE "K" COPPER TUBING (HARD DRAWN) WITH COPPER/BRASS SOLDER FITTINGS AND ADAPTERS. ONLY LEAD FREE PIPE, FITTINGS, VALVES, SOLDER AND FLUX SHALL BE PERMITTED.
4. 1 1/2" AND 2" METER STOPS SHALL BE EQUIPPED WITH LOCKING CAPS AND METER FLANGES.
5. WHEN THE DEVICE IS INSTALLED PARALLEL TO A BUILDING WALL THERE SHALL BE A MINIMUM OF 2' BETWEEN THE EDGE OF THE DEVICE AND THE BUILDING WALL.
6. BACKFLOW PREVENTION DEVICE SHALL BE EQUIPPED WITH BALL VALVES.
7. BACKFLOW PREVENTION DEVICE SHALL BE SUPPORTED AT BOTH RISERS WITH A MINIMUM OF 2 – 1 5/8" STAINLESS STEEL UNISTRUTS. RISERS TO BE SECURED TO UNISTRUT WITH 304 STAINLESS STEEL MOUNTING HARDWARE AND 1/4" NEOPRENE INSULATORS.
8. BACKFLOW DEVICES SHALL BE A MINIMUM OF 3' FROM BACK OF CURB.
9. APPROVED BACKFLOW PREVENTION DEVICES WITH SILICONE RUBBER SEAL RINGS OR DISCS; 3/4" to 2"
   A.) AMES LF4000B
   B.) APOLLO RPLF 4A
   C.) WATTS LF919
   D.) ZURN 975XL2

Private Auxiliary Water Supply Backflow Device

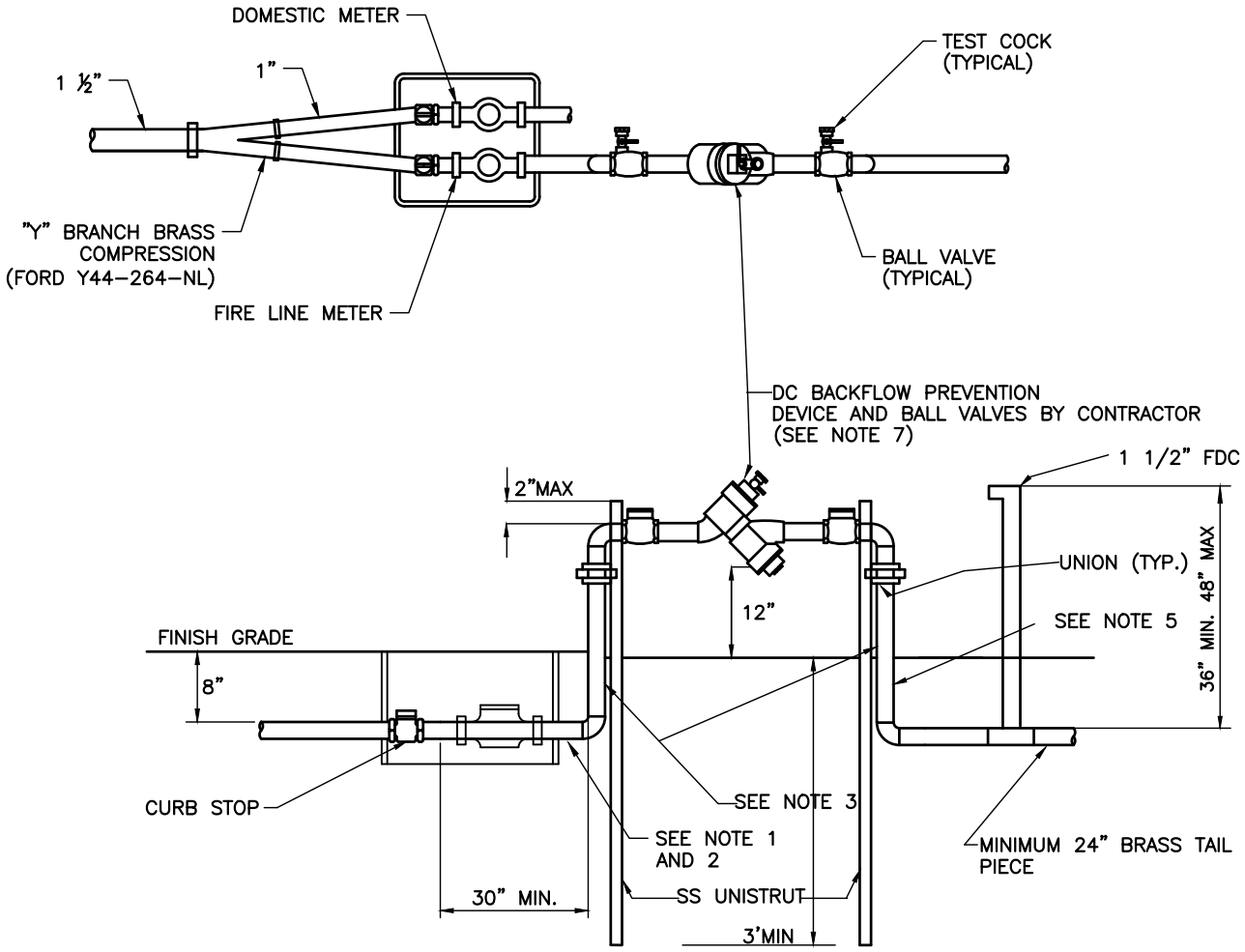
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision B–23

DATE APPROVED: FEB 26, 2025

DRAWING No. 39



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. TYPE "K" COPPER TUBING (SOFT DRAWN) OR POLYETHYLENE TUBING SDR 9 COPPER TUBE SIZE.
2. IF THIS DISTANCE IS LESS THAN 6 FEET ONLY COPPER TUBING SHALL BE PERMITTED.
3. BOTH RISERS SHALL BE TYPE "K" COPPER TUBING (HARD DRAWN) WITH COPPER/BRASS SOLDER FITTINGS AND ADAPTERS. ONLY LEAD FREE PIPE, FITTINGS, VALVES, SOLDER AND FLUX SHALL BE PERMITTED.
4. BACKFLOW PREVENTION DEVICE SHALL BE EQUIPPED WITH BALL VALVES.
5. BACKFLOW PREVENTION DEVICE SHALL BE SUPPORTED AT BOTH RISERS WITH A MINIMUM OF 2 – 1 5/8" STAINLESS STEEL UNISTRUTS. RISERS TO BE SECURED TO UNISTRUT WITH 304 STAINLESS STEEL MOUNTING HARDWARE AND 1/4" NEOPRENE INSULATORS BETWEEN ALL DISSIMILAR METALS.
6. BACKFLOW SIZE SHALL BE DETERMINED BY FIRE DEPARTMENT OF JURISDICTION.
7. APPROVED BACKFLOW PREVENTION DEVICES WITH SILICONE RUBBER SEAL RINGS OR DISCS; 3/4" TO 2
   A.) APOLLO DCLF 4A
   B.) WATTS LF719
   C.) ZURN 950XLT2

Single Family Residential Fire Line - Single Service (Short Side)

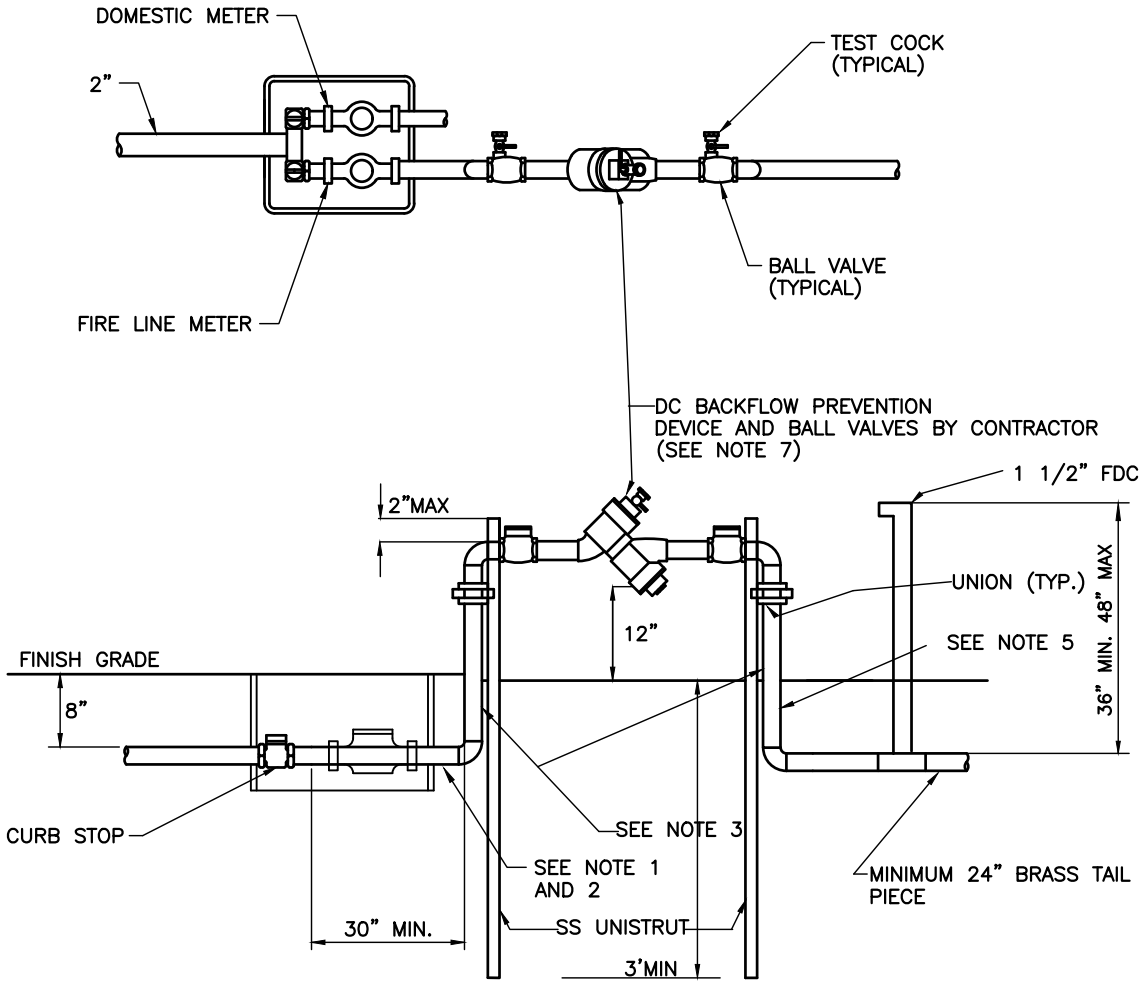
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D-24

DATE APPROVED: FEB 26, 2025

DRAWING No. 40



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. TYPE "K" COPPER TUBING (SOFT DRAWN) OR POLYETHYLENE TUBING SDR 9 COPPER TUBE SIZE.
2. IF THIS DISTANCE IS LESS THAN 6 FEET ONLY COPPER TUBING SHALL BE PERMITTED.
3. BOTH RISERS SHALL BE TYPE "K" COPPER TUBING (HARD DRAWN) WITH COPPER/BRASS SOLDER FITTINGS AND ADAPTERS. ONLY LEAD FREE PIPE, FITTINGS, VALVES, SOLDER AND FLUX SHALL BE PERMITTED.
4. BACKFLOW PREVENTION DEVICE SHALL BE EQUIPPED WITH BALL VALVES.
5. BACKFLOW PREVENTION DEVICE SHALL BE SUPPORTED AT BOTH RISERS WITH A MINIMUM OF 2 – 1 5/8" STAINLESS STEEL UNISTRUTS. RISERS TO BE SECURED TO UNISTRUT WITH 304 STAINLESS STEEL MOUNTING HARDWARE AND 1/4" NEOPRENE INSULATORS BETWEEN ALL DISSIMILAR METALS.
6. BACKFLOW SIZE SHALL BE DETERMINED BY FIRE DEPARTMENT OF JURISDICTION.
7. APPROVED BACKFLOW PREVENTION DEVICES WITH SILICONE RUBBER SEAL RINGS OR DISCS; 3/4" TO 2
   A.) APOLLO DCLF 4A
   B.) WATTS LF719
   C.) ZURN 950XLT2

Single Family Residential Fire Line - Single Service (Long Side)

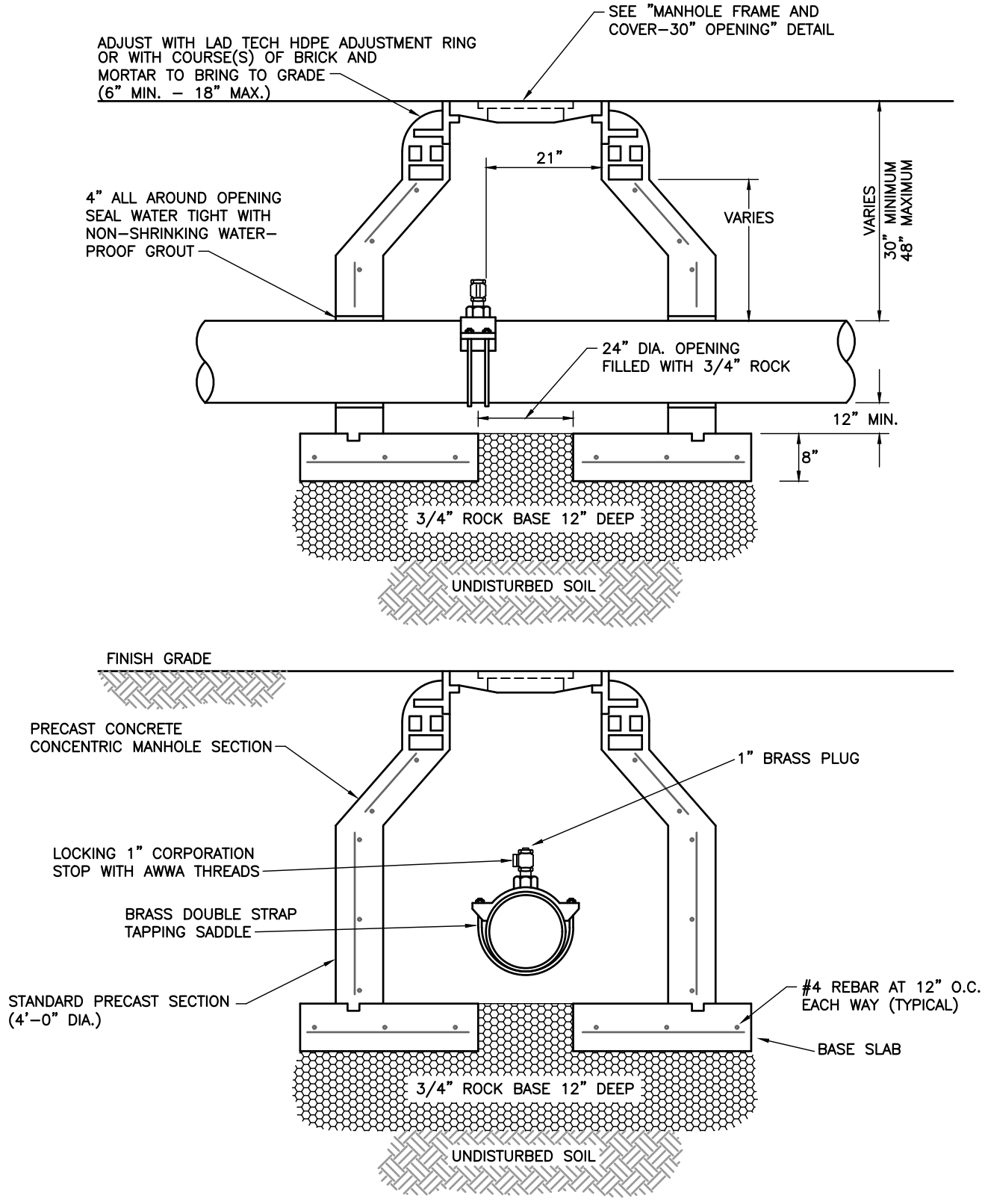
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision F–24

DATE APPROVED: FEB 26, 2025

DRAWING No. 41



PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

Manual Air Release Valve (Underground Water Main)

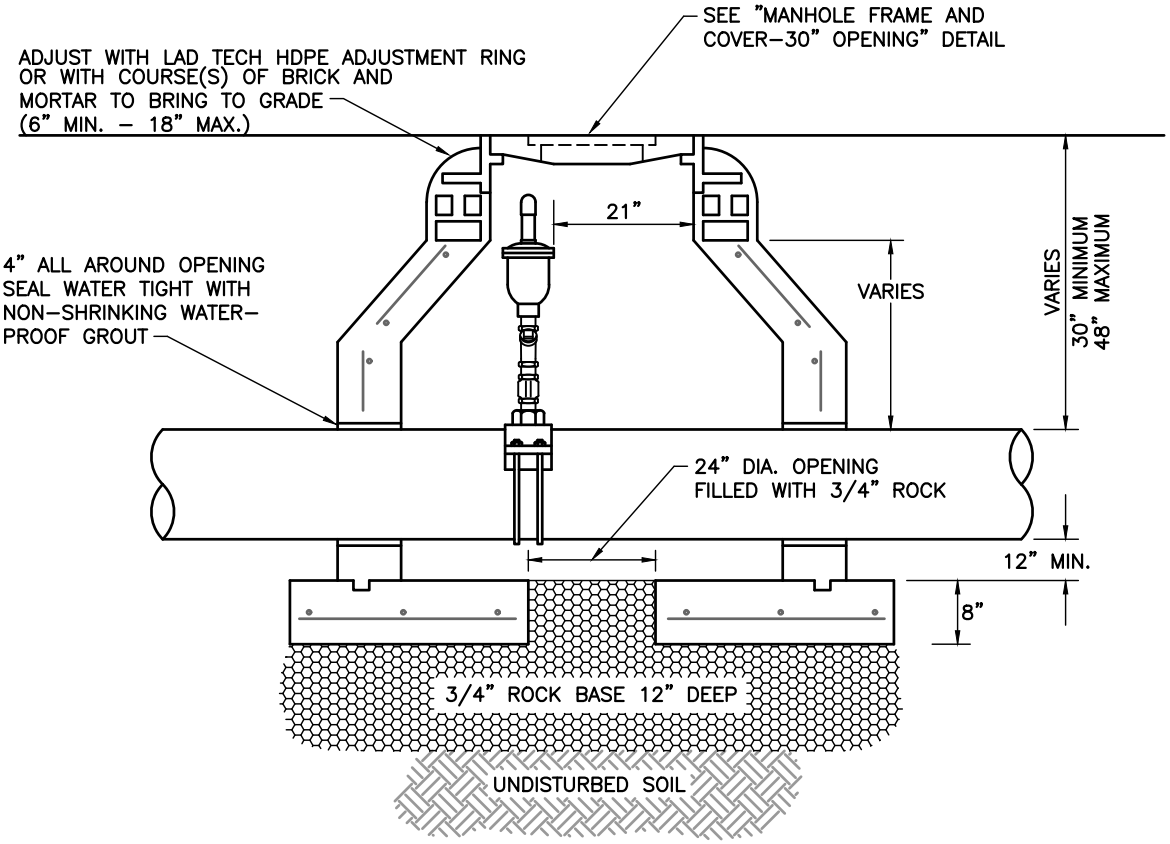
SEACOAST UTILITY AUTHORITY

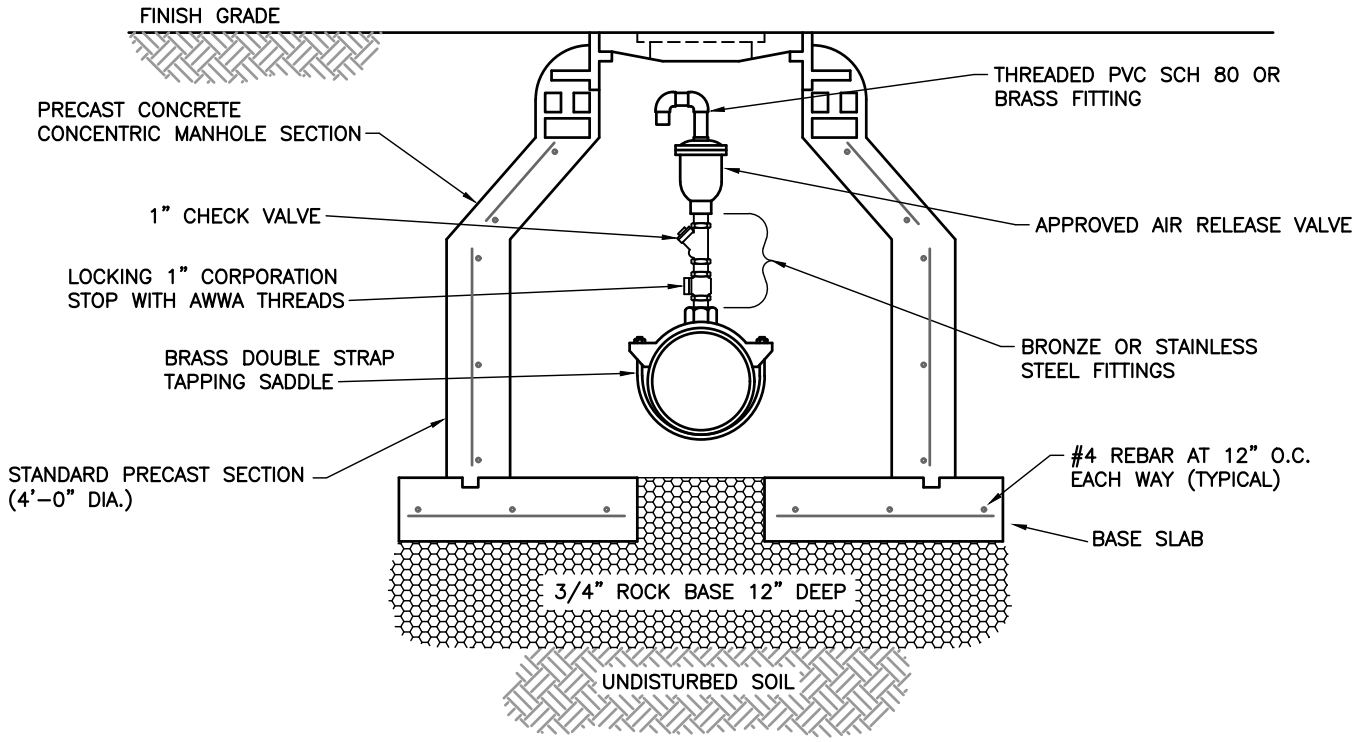
CONSTRUCTION STANDARDS AND DETAILS

Revision C–24

DATE APPROVED: FEB 26, 2025

DRAWING No. 42





PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

Automatic Air Release Valve (Underground Water Main)

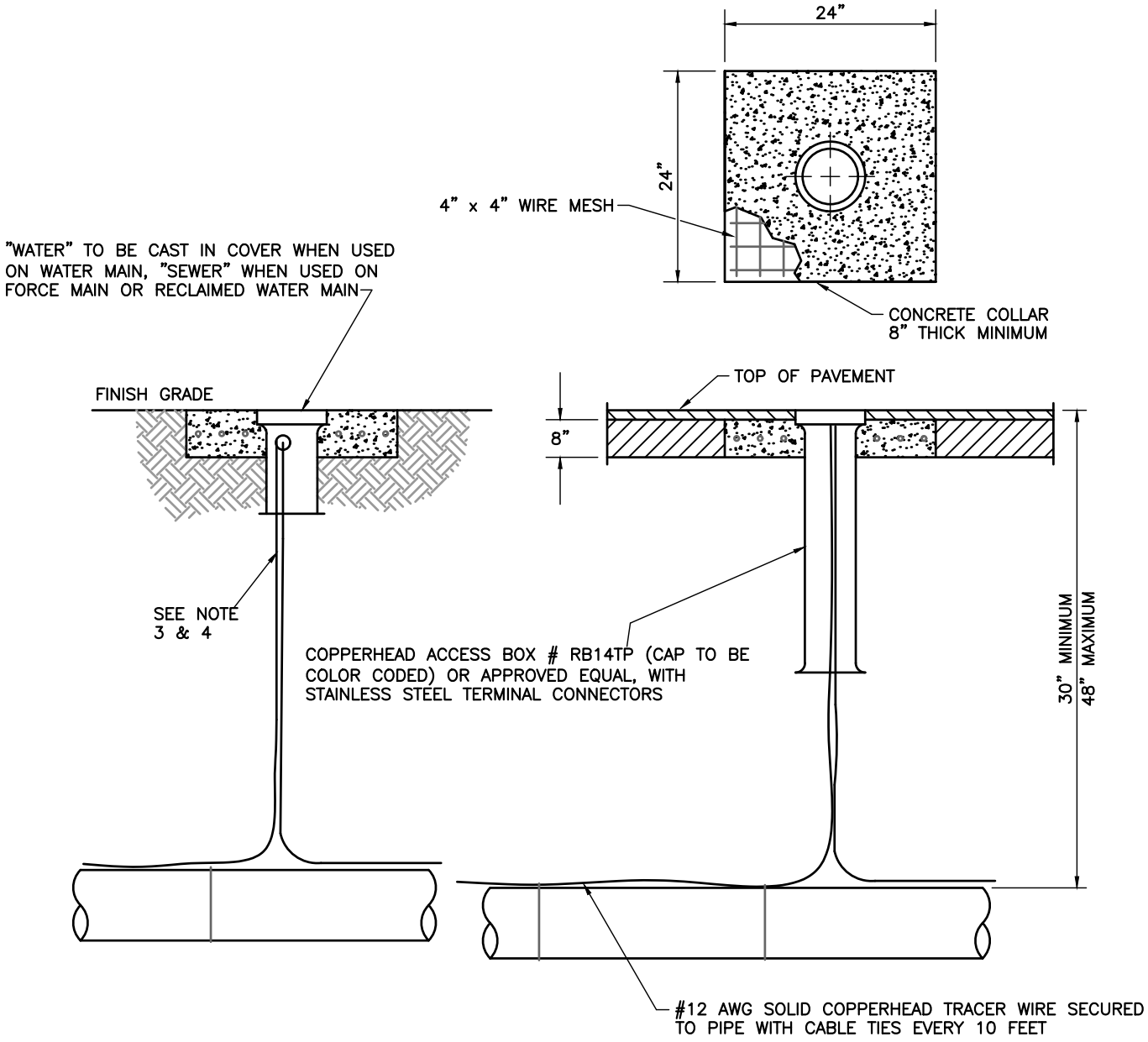
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D–24

DATE APPROVED: FEB 26, 2025

DRAWING No. 43



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. REQUIRED FOR HDD AND PVC MAINS AND AS DIRECTED BY SUA.
2. 800' MAXIMUM SPACING BETWEEN TURNER WIRE ACCESS BOXES
3. 1/2" X 8' COPPER CLAD GROUND RODS SHALL BE UTILIZED AT BOTH TERMINAL ENDS OF THE TRACER WIRE AND BE ACCESSIBLE
4. 1/2" X 20' COPPER CLAD GROUND ROD SHALL BE UTILIZED WHERE PIPE IS BELOW WATER TABLE.
5. IF A NEW VALVE BOX (DRAWING #10) IS IN THE VICINITY, THE TRACER WIRE ACCESS BOX MAY BE INCLUDED IN THE VALVE BOX COLLAR. NO SEPARATE CONCRETE COLLAR IS REQUIRED.

Tracer Wire Access Box

SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision E-24

DATE APPROVED: FEB 26, 2025

DRAWING No. 44

BLANK SPACE FOR FUTURE SUA DETAIL

Future Detail

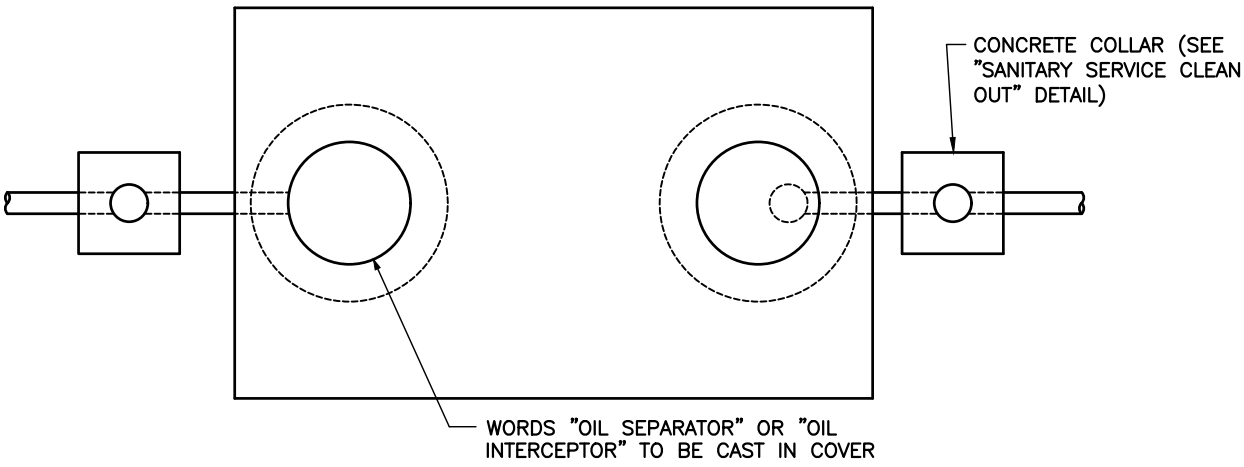
SEACOAST UTILITY AUTHORITY

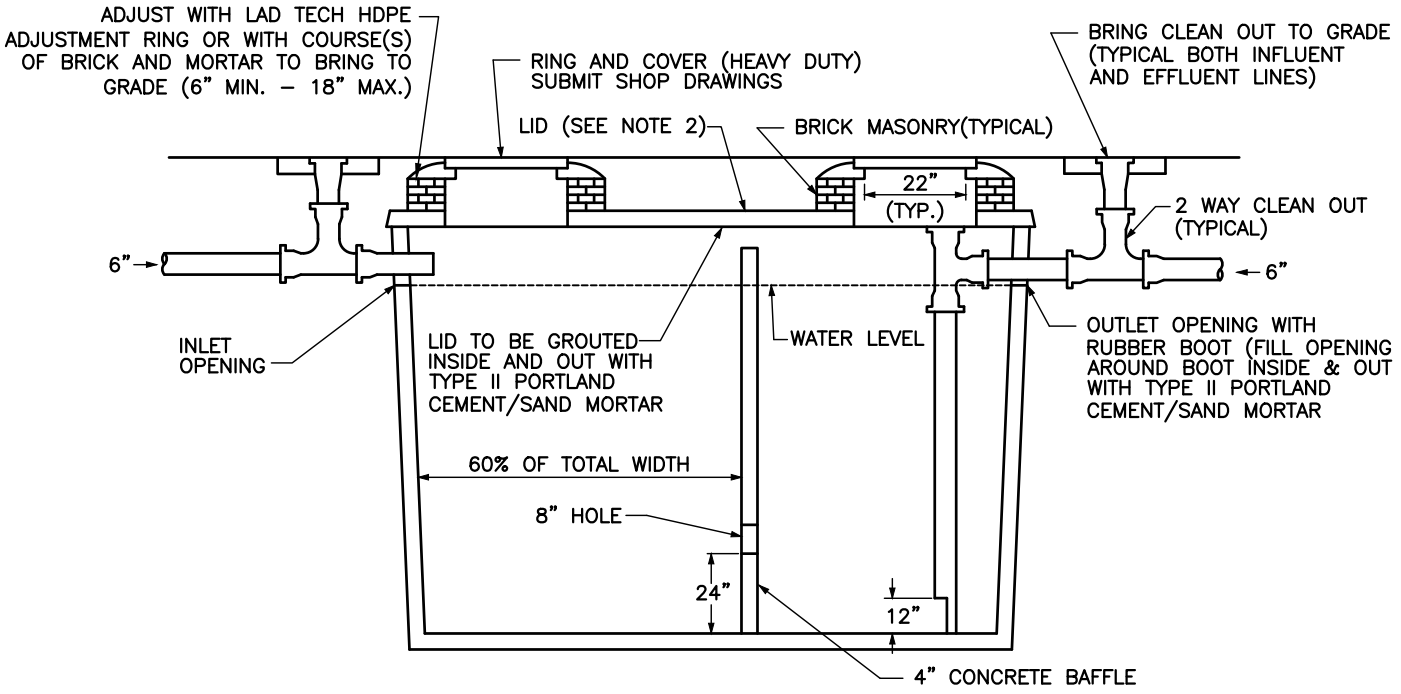
CONSTRUCTION STANDARDS AND DETAILS

Revision A–18

DATE APPROVED: FEB 26, 2025

DRAWING No. 45





NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. SHOP DRAWINGS FOR PRECAST TANKS SHALL BEAR THE FOLLOWING STATEMENT:"THIS CONCRETE STRUCTURE MEETS OR EXCEEDS ALL THE REQUIREMENTS FOR GREASE INTERCEPTORS/SEPTIC TANKS AS IN THE FLORIDA ADMINISTRATIVE CODE, CHAPTER 10D–6 AND 64E–6, AND SUA "SPECIFICATIONS AND STANDARDS". THE SHOP DRAWINGS (3 COPIES MINIMUM) SHALL THEN BE SIGNED AND SEALED BY THE ENGINEER OF RECORD AND FORWARDED TO SUA FOR APPROVAL.
2. LID TYPES:
   A) 4" REGULAR LID
   B) 8" TRAFFIC BEARING LID
3. INTERIOR PIPING SHALL BE SOLVENT WELD PVC PIPE.
4. ALL TANKS IN TRAFFIC AREA SHALL BE H20 WHEEL LOAD BEARING.
5. INSPECTION OF TANK REQUIRED BY SUA PRIOR TO PLACEMENT.
6. INSPECTION OF TANK REQUIRED BY SUA AFTER TANK IS PIPED.

Oil Separator

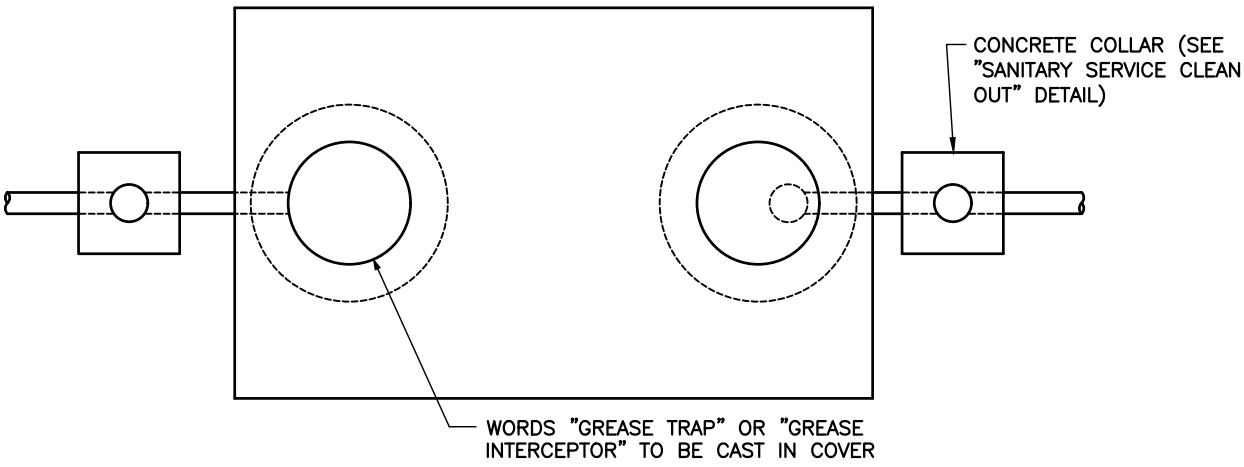
SEACOAST UTILITY AUTHORITY

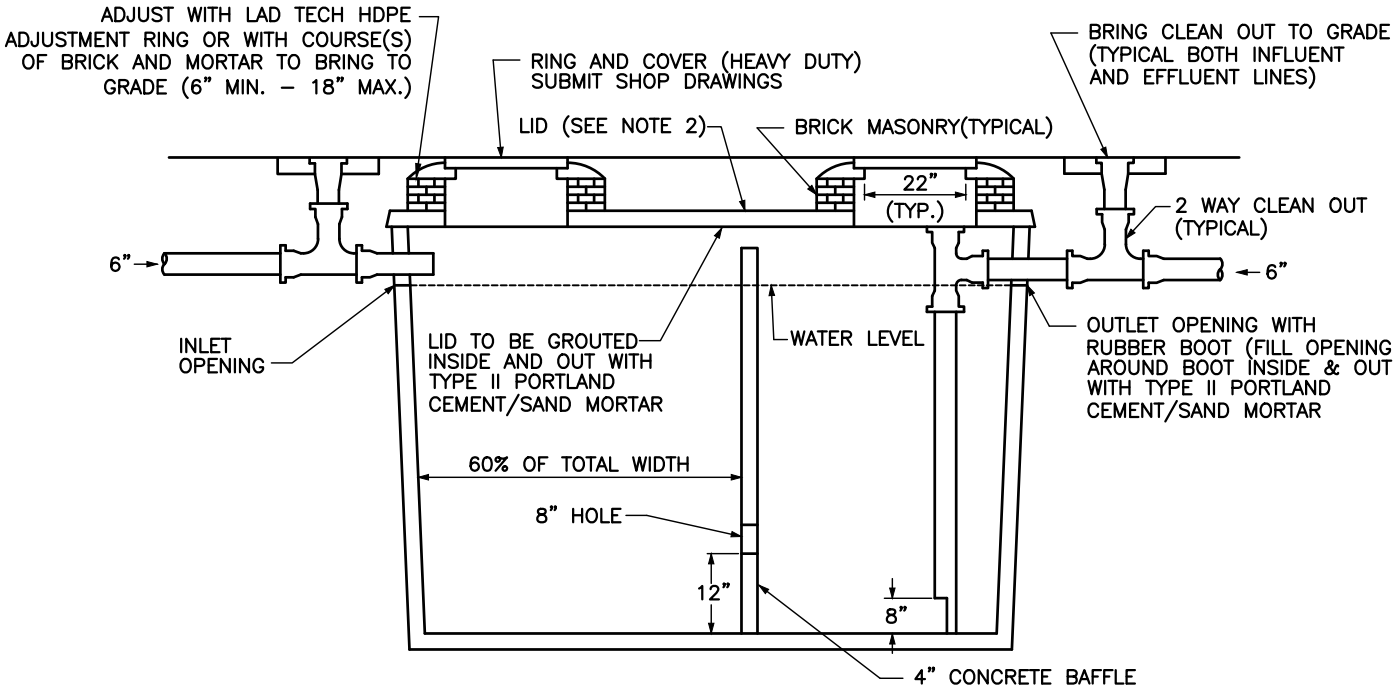
CONSTRUCTION STANDARDS AND DETAILS

Revision E–23

DATE APPROVED: FEB 26, 2025

DRAWING No. 46





NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. SHOP DRAWINGS FOR PRECAST TANKS SHALL BEAR THE FOLLOWING STATEMENT:"THIS CONCRETE STRUCTURE MEETS OR EXCEEDS ALL THE REQUIREMENTS FOR GREASE INTERCEPTORS/SEPTIC TANKS AS IN THE FLORIDA ADMINISTRATIVE CODE, CHAPTER 10D–6 AND 64E–6, AND SUA "SPECIFICATIONS AND STANDARDS". THE SHOP DRAWINGS (3 COPIES MINIMUM) SHALL THEN BE SIGNED AND SEALED BY THE ENGINEER OF RECORD AND FORWARDED TO SUA FOR APPROVAL.
2. LID TYPES:
   A) 4" REGULAR LID
   B) 8" TRAFFIC BEARING LID
3. ALL PIPING SHALL BE SOLVENT WELD PIPE.
4. ALL TANKS IN TRAFFIC AREA SHALL BE H20 WHEEL LOAD BEARING.
5. INSPECTION OF TANK REQUIRED BY SUA PRIOR TO PLACEMENT.
6. INSPECTION OF TANK REQUIRED BY SUA AFTER TANK IS PIPED.
7. TANKS IN SERIES SHALL HAVE BAFFLE IN LAST TANK ONLY.

Concrete Grease Interceptor

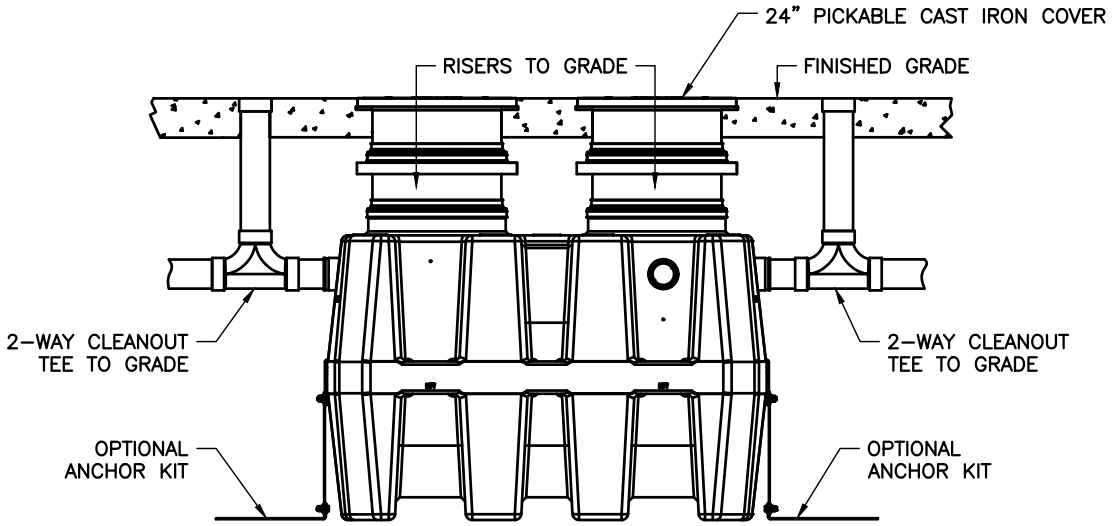
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

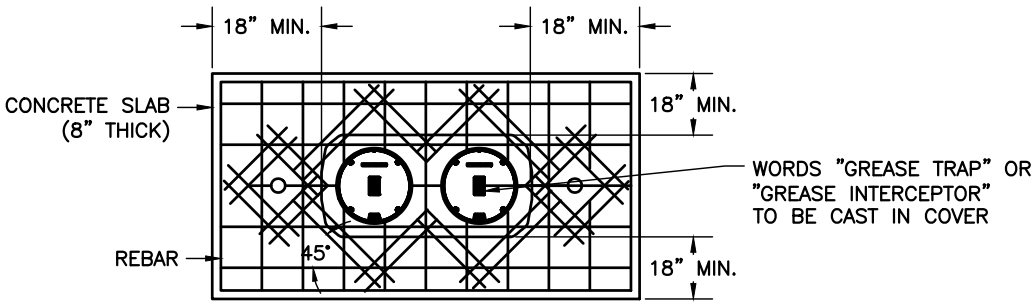
Revision D–20

DATE APPROVED: FEB 26, 2025

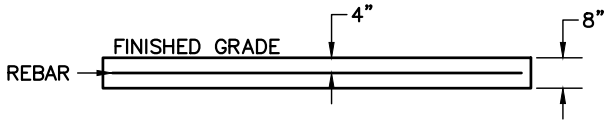
DRAWING No. 47



TOP VIEW



ELEVATION VIEW



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. ALL PIPING SHALL BE SOLVENT WELD PIPE.
2. ALL INTERCEPTORS IN TRAFFIC AREA SHALL BE H20 WHEEL LOAD BEARING.
3. INSPECTION OF INTERCEPTORS REQUIRED BY SUA PRIOR TO PLACEMENT.
4. INSPECTION OF INTERCEPTORS REQUIRED BY SUA AFTER TANK IS PIPED.

Polyethylene Grease Interceptor

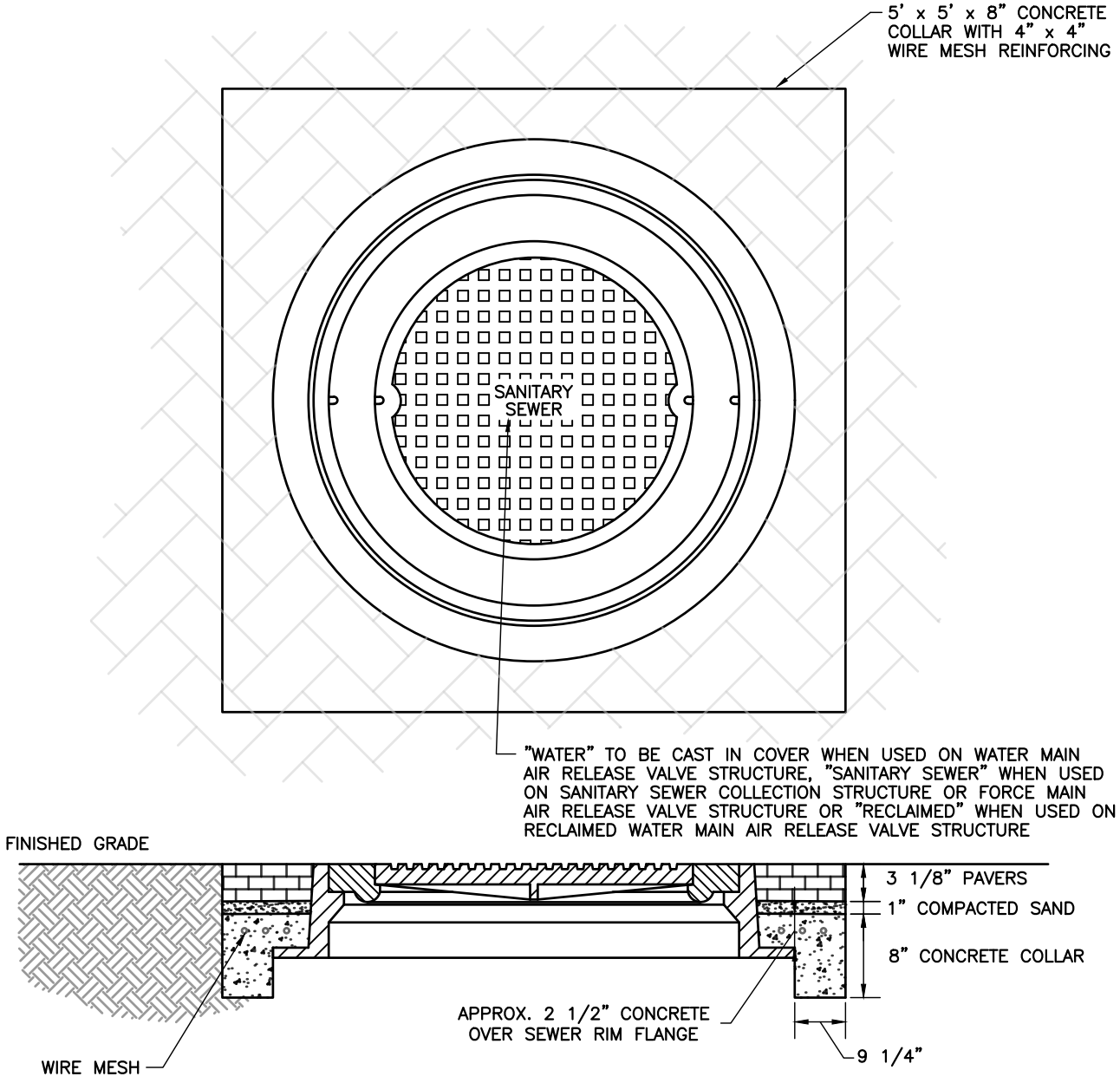
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision C-23

DATE APPROVED: FEB 26, 2025

DRAWING No. 48



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. ANY AREA DEEMED TO HAVE QUESTIONABLE DRAINAGE, A WATER TIGHT MANHOLE INSERT SUCH AS "SEWER GUARD" OR APPROVED EQUAL WILL BE REQUIRED.

2. APPROVED MANHOLES (DOUBLE COVER TYPE):
   A.) U.S. FOUNDRY MODEL No. 230-AB-M
   B.) VULCAN FOUNDRY MODEL No. VM-101

Manhole Frame and Cover (30" Opening) in Pavers

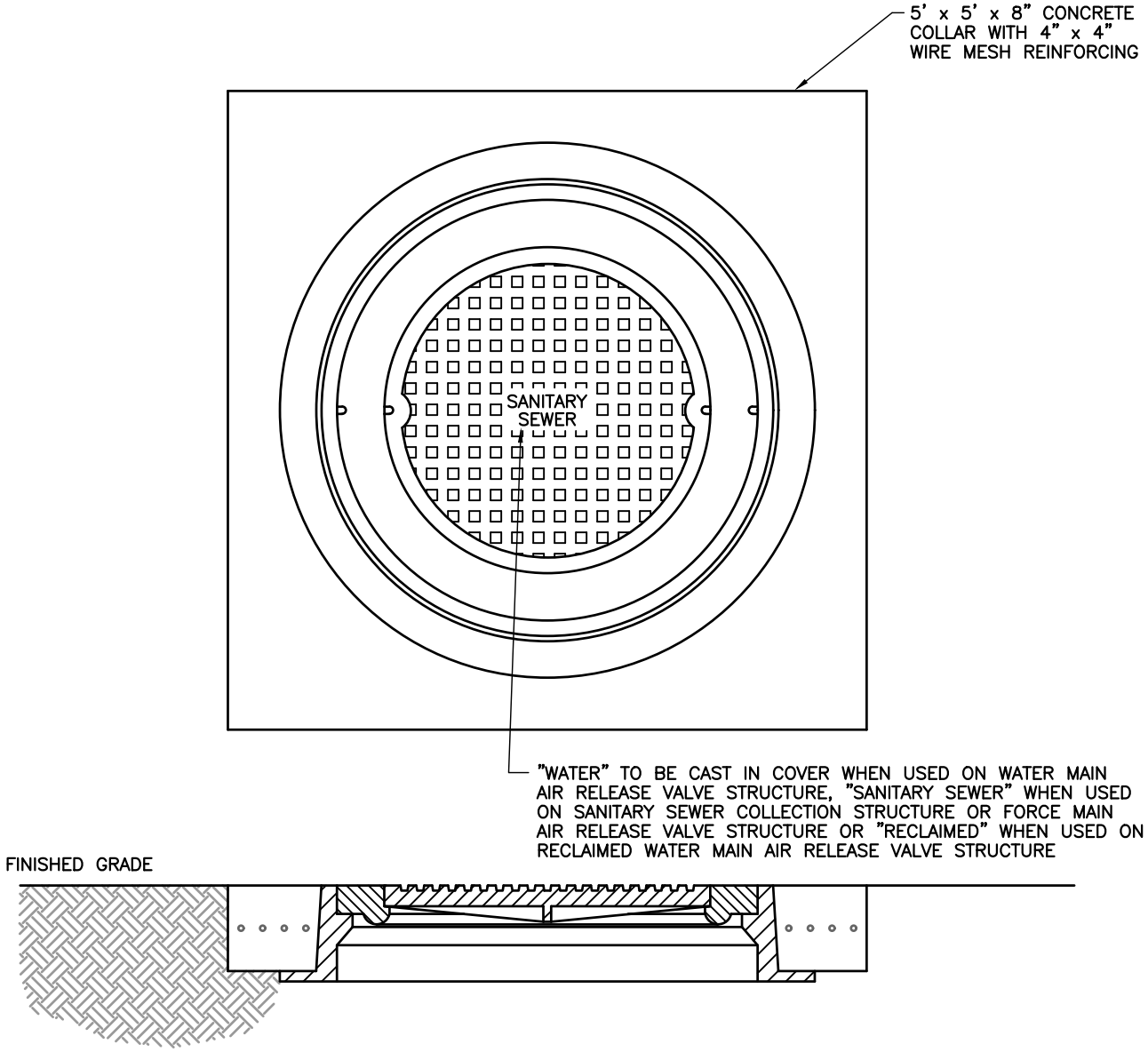
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision A-23

DATE APPROVED: FEB 26, 2025

DRAWING No. 49



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. IN GREEN AREAS OR ANY AREA DEEMED TO HAVE QUESTIONABLE DRAINAGE, A WATER TIGHT MANHOLE INSERT SUCH AS "SEWER GUARD" OR APPROVED EQUAL WILL BE REQUIRED.

2. APPROVED MANHOLES (DOUBLE COVER TYPE):
   A.) U.S. FOUNDRY MODEL No. 230–AB–M
   B.) VULCAN FOUNDRY MODEL No. VM–101

3. CONCRETE COLLAR IS REQUIRED ONLY WHEN MANHOLE IS OUT OF PAVEMENT.

Manhole Frame and Cover (30" Opening)

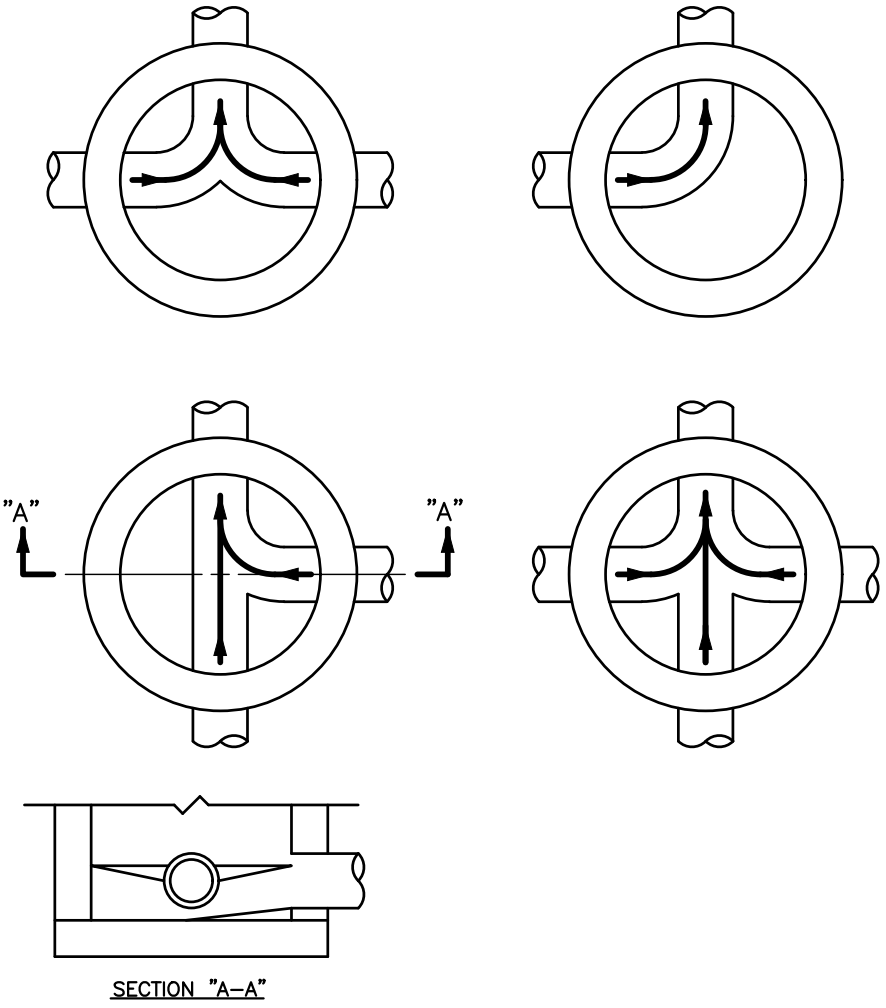
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision A–15

DATE APPROVED: FEB 26, 2025

DRAWING No. 50



SECTION "A–A"

NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS.
2. SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING FOR SMOOTH FLOWS.
3. CHANNELS FOR FUTURE CONSTRUCTIONS (STUBS) SHALL BE CONSTRUCTED, FILLED WITH SAND, AND COVERED WITH 1" OF MORTAR.
4. SLOPE MANHOLE ITSELF WITH A 1:2 SLOPE FROM MANHOLE WALL TO CHANNEL.
5. INVERT SHALL BE A MINIMUM OF 1/2 THE DIAMETER OF THE LARGEST PIPE OR 4" DEEP, WHICHEVER IS GREATER.

Flow Patterns for Invert Channels

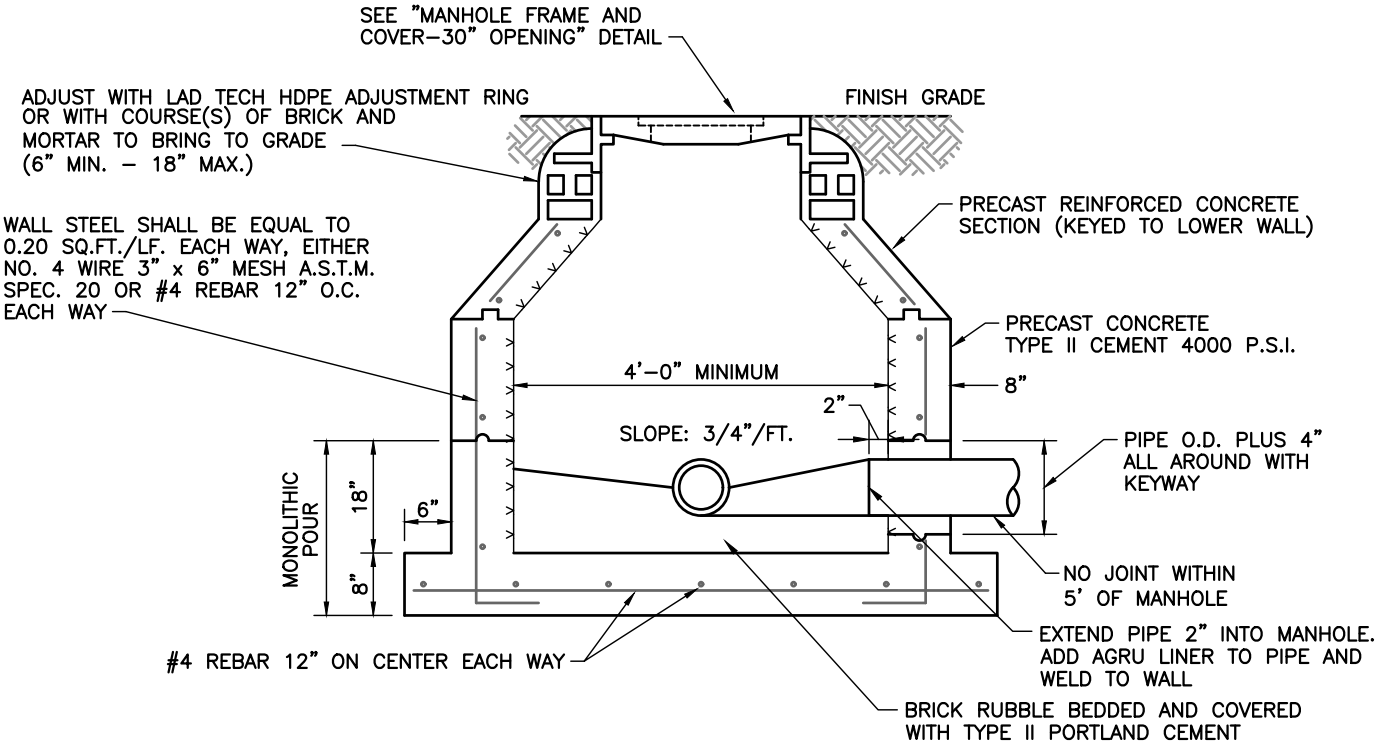
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision B–23

DATE APPROVED: FEB 26, 2025

DRAWING No. 51



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. MANHOLES SHALL CONFORM TO A.S.T.M. C478.(MIN.)
2. WALL REINFORCEMENTS A.S.T.M. DESIGNATION A185–64.(LATEST REVISION)(MIN.)
3. IF TWO CAGES OF WIRE MESH ARE USED, ONE SHALL BE POSITIONED 3" FROM THE INSIDE SURFACE AND ONE 3" FROM THE OUTSIDE SURFACE. IF A SINGLE CAGE OR REBAR IS USED, IT SHALL BE CENTERED WITHIN WALL THICKNESS. NO EXPOSED STEEL SHALL BE PERMITTED.
4. LIFT HOLES THROUGH PRECAST STRUCTURE ARE PERMITTED.
5. A MINIMUM OF SEVEN DAYS CURE TIME IS REQUIRED PRIOR TO DELIVERY.
6. ALL PIPE HOLES SHALL BE PRECAST OR CORE DRILLED. OVERSIZED HOLES WILL BE REJECTED.
7. ANY VISIBLE REINFORCING WIRE, STEEL OR HONEYCOMBS SHALL BE CAUSE FOR REJECTION.
8. SEE TECHNICAL SPECIFICATIONS FOR BEDDING REQUIREMENTS.
9. "RAM–NEK" OR APPROVED EQUAL AT ALL RISER JOINTS (1/2" THICK WITH WIDTH AT LEAST 1/2 THE WALL THICKNESS) WITH GROUT ON INSIDE AND OUTSIDE.
10. ALL OPENINGS SHALL BE SEALED USING ONLY TYPE II PORTLAND CEMENT/SAND MORTAR AND POTABLE WATER FOR MUD WORK ON JOINTS, LIFTING HOLES, INVERTS, ETC. WHEN AN ACCELERATOR IS NECESSARY, "ANTI HYDRO" IS THE ONLY PRODUCT APPROVED.
11. BRICK MASONRY CONSTRUCTION TO BE STUCCOED WITH 3/4" TYPE II CEMENT INSIDE AND OUTSIDE, AND INSIDE TO BE COATED WITH TWO COATS OF KOPPERS 300 OR APPROVED EQUAL.
12. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO FLOW STREAM, AND COATED WITH TWO COATS OF KOPPERS 300 OR APPROVED EQUAL
13. INTERIOR OF ALL SANITARY MANHOLES SHALL HAVE AGRU SURE GRIP CONCRETE PROTECTIVE LINER INSTALLED AT THE TIME OF MANUFACTURING. SEE "AGRU SURE GRIP LINER DETAILS" DRAWING FOR ADDITIONAL AGRU SURE GRIP REQUIREMENTS.

Standard Precast Manhole

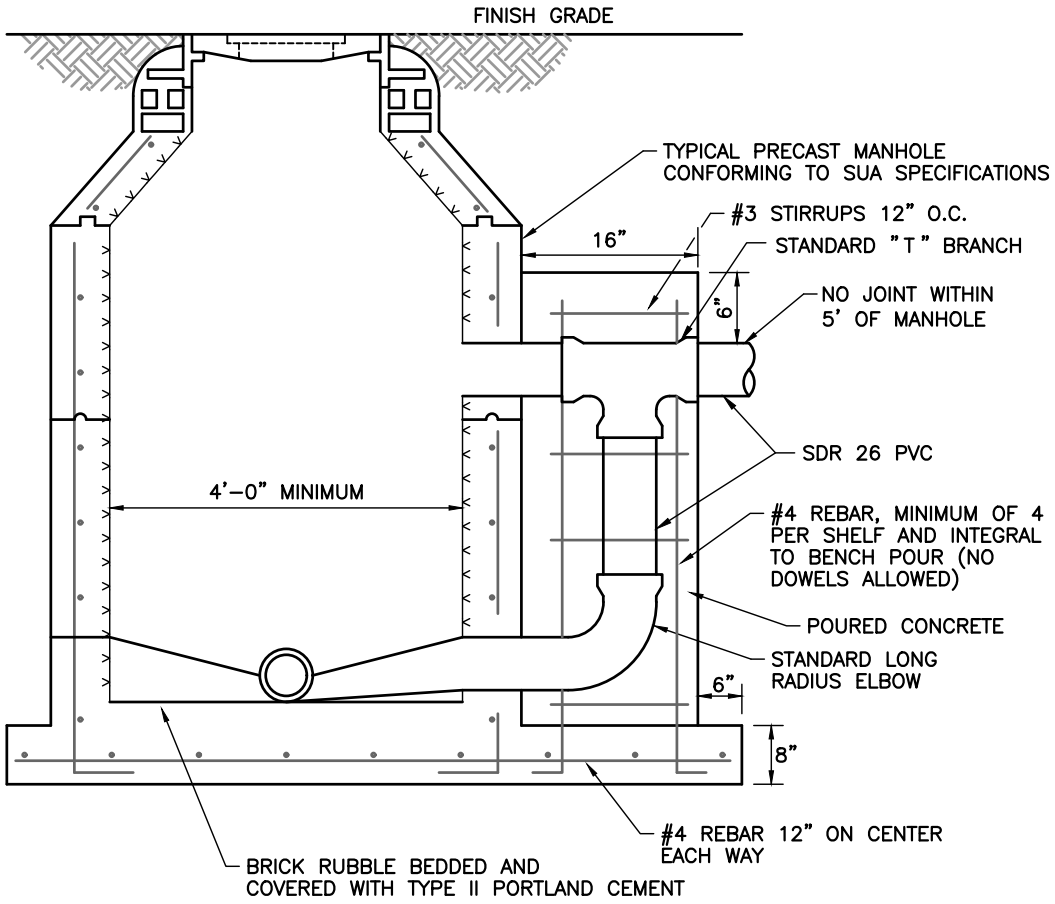
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision C–24

DATE APPROVED: FEB 26, 2025

DRAWING No. 52



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. CONCRETE ENCASEMENT FOR DROP CONNECTION TO BE FIELD POURED.
2. DROP CONNECTIONS SHALL BE REQUIRED WHENEVER AN INFLUENT SEWER IS LOCATED TWO (2) FEET OR MORE ABOVE THE MAIN INVERT CHANNEL.
3. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO FLOW STREAM.
4. WHEN PVC IS USED IN SANITARY SEWER LINES, SOLVENT TYPE JOINT PVC FITTINGS MAY BE UTILIZED IN THE DROP ASSEMBLY ONLY.
5. MINIMUM PIPE SIZE FOR DROP IS 8".
6. SEE "STANDARD PRECAST MANHOLE" DETAIL FOR ADDITIONAL REQUIREMENTS.

Precast Manhole - Drop Connection Type A

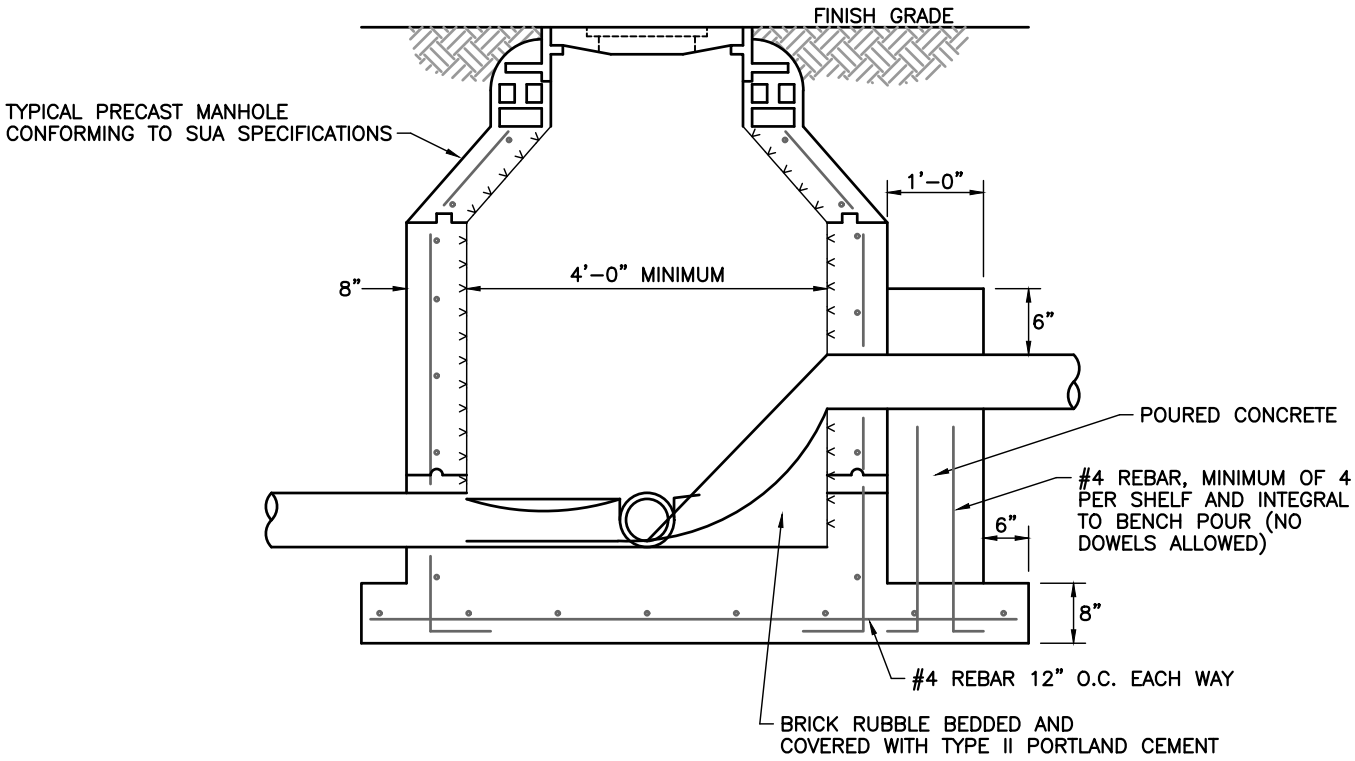
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision B-24

DATE APPROVED: FEB 26, 2025

DRAWING No. 53



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. INSIDE DROP TO BE USED WHEN DROP IS GREATER THAN 6 INCHES AND LESS THAN 24 INCHES.
2. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO FLOW STREAM.
3. CONSTRUCTION OF DROP SHALL PROVIDE AN OVERSIZED SLAB TO EXTEND UNDER THE DROP CONNECTION.
4. MINIMUM PIPE SIZE FOR DROP IS 8".
5. SEE "STANDARD PRECAST MANHOLE" DETAIL FOR ADDITIONAL REQUIREMENTS.

Precast Manhole - Drop Connection Type B

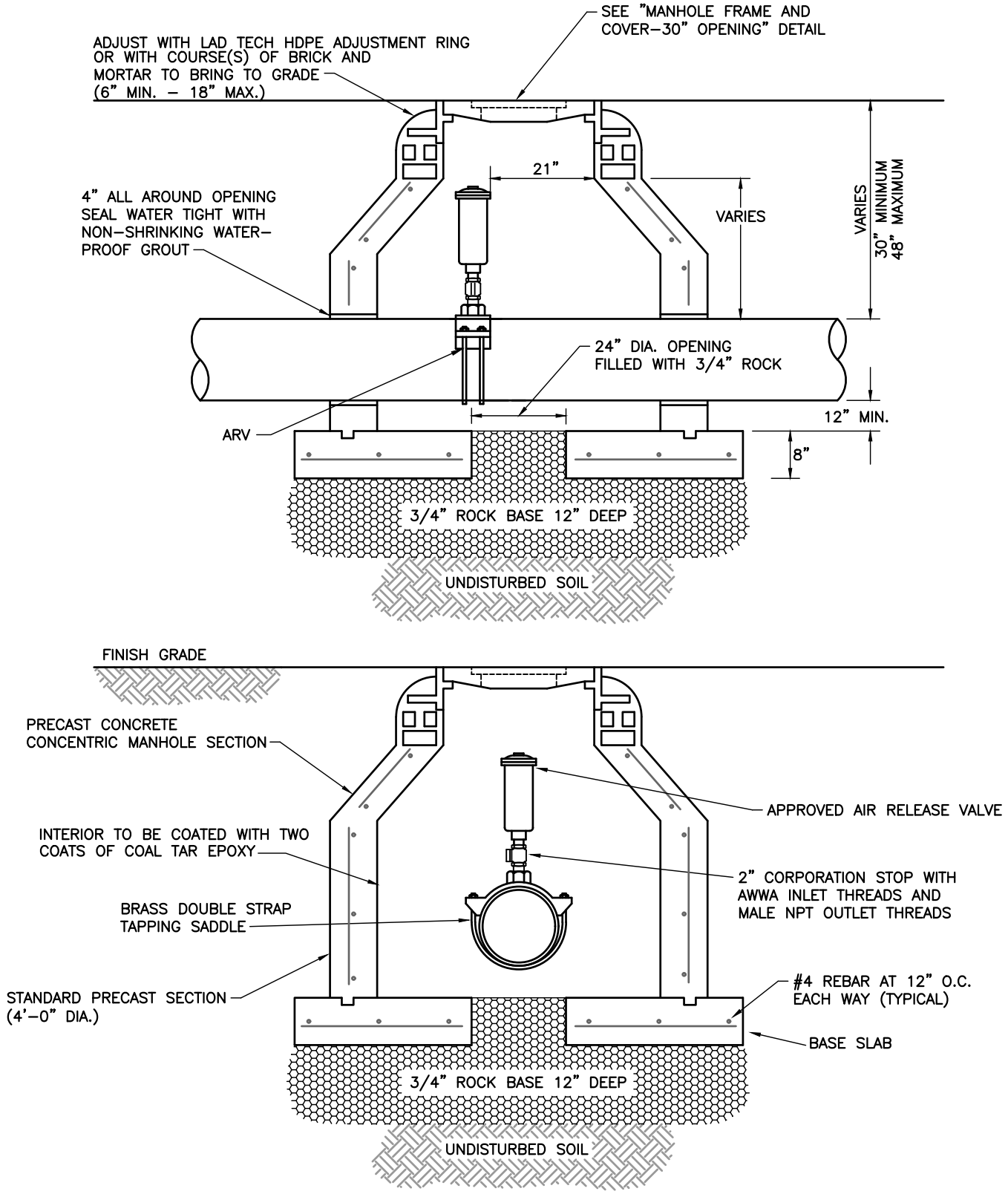
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision A–15

DATE APPROVED: FEB 26, 2025

DRAWING No. 54



PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

Air Release Valve (Underground Force Main)

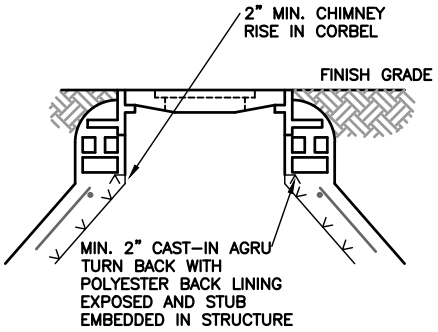
SEACOAST UTILITY AUTHORITY

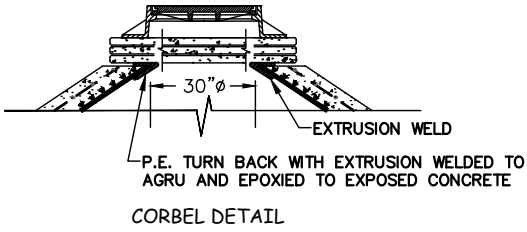
CONSTRUCTION STANDARDS AND DETAILS

Revision G–24

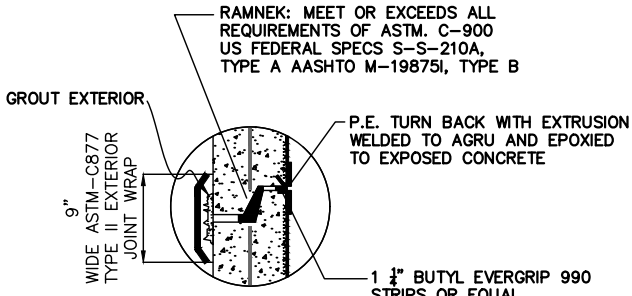
DATE APPROVED: FEB 26, 2025

DRAWING No. 55

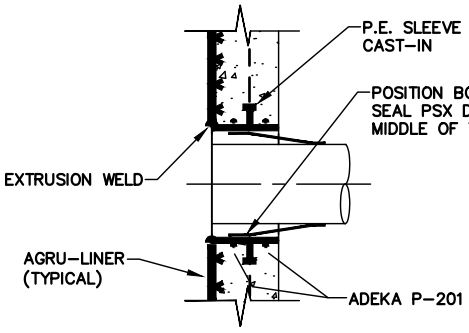




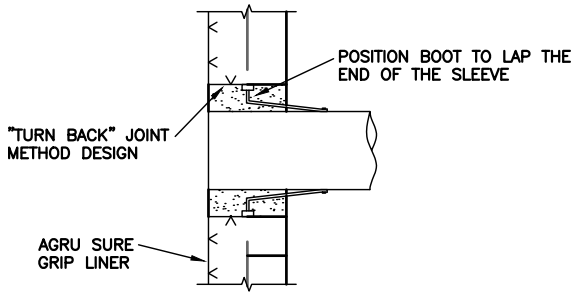
CORBEL DETAIL

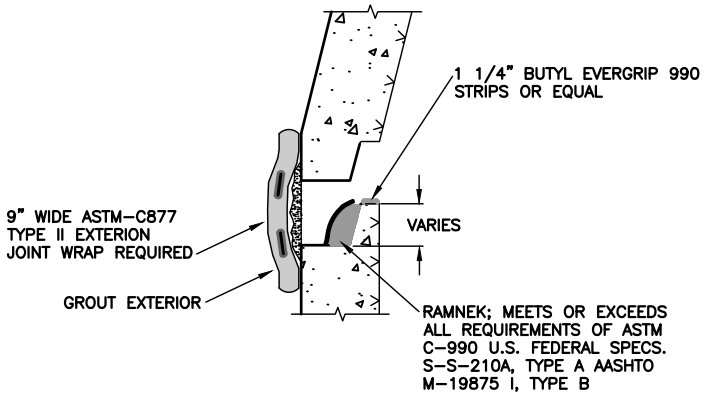


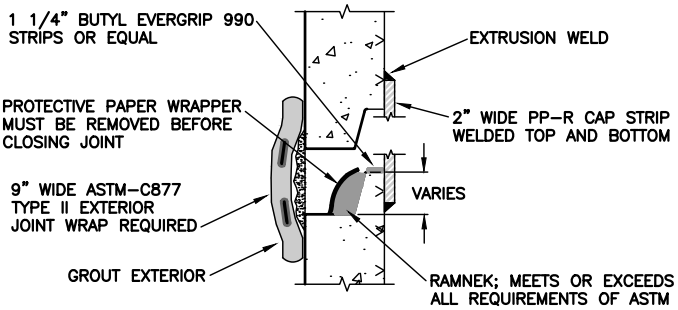
JOINT DETAIL

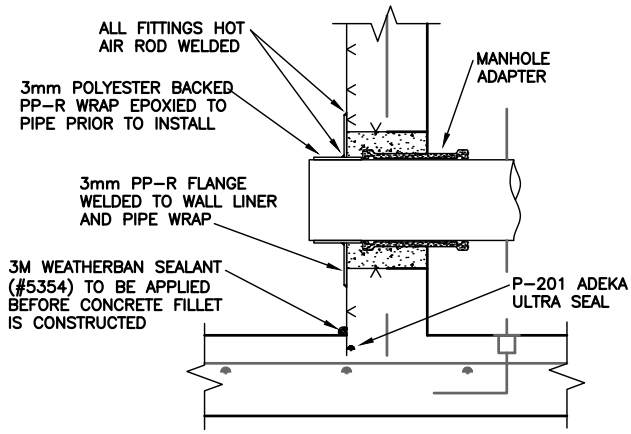


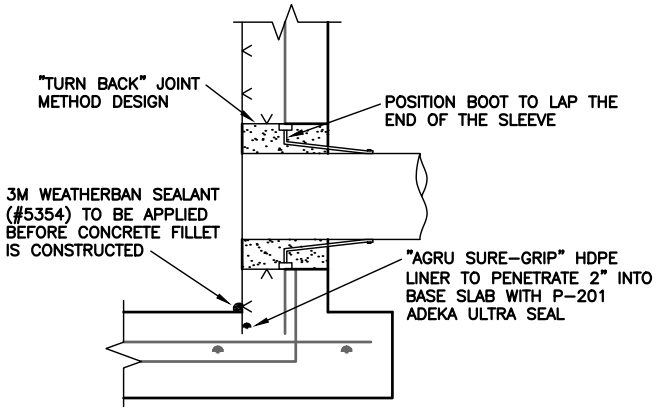
BOOT CONNECTION DETAIL











PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

Agru Sure Grip Liner Details

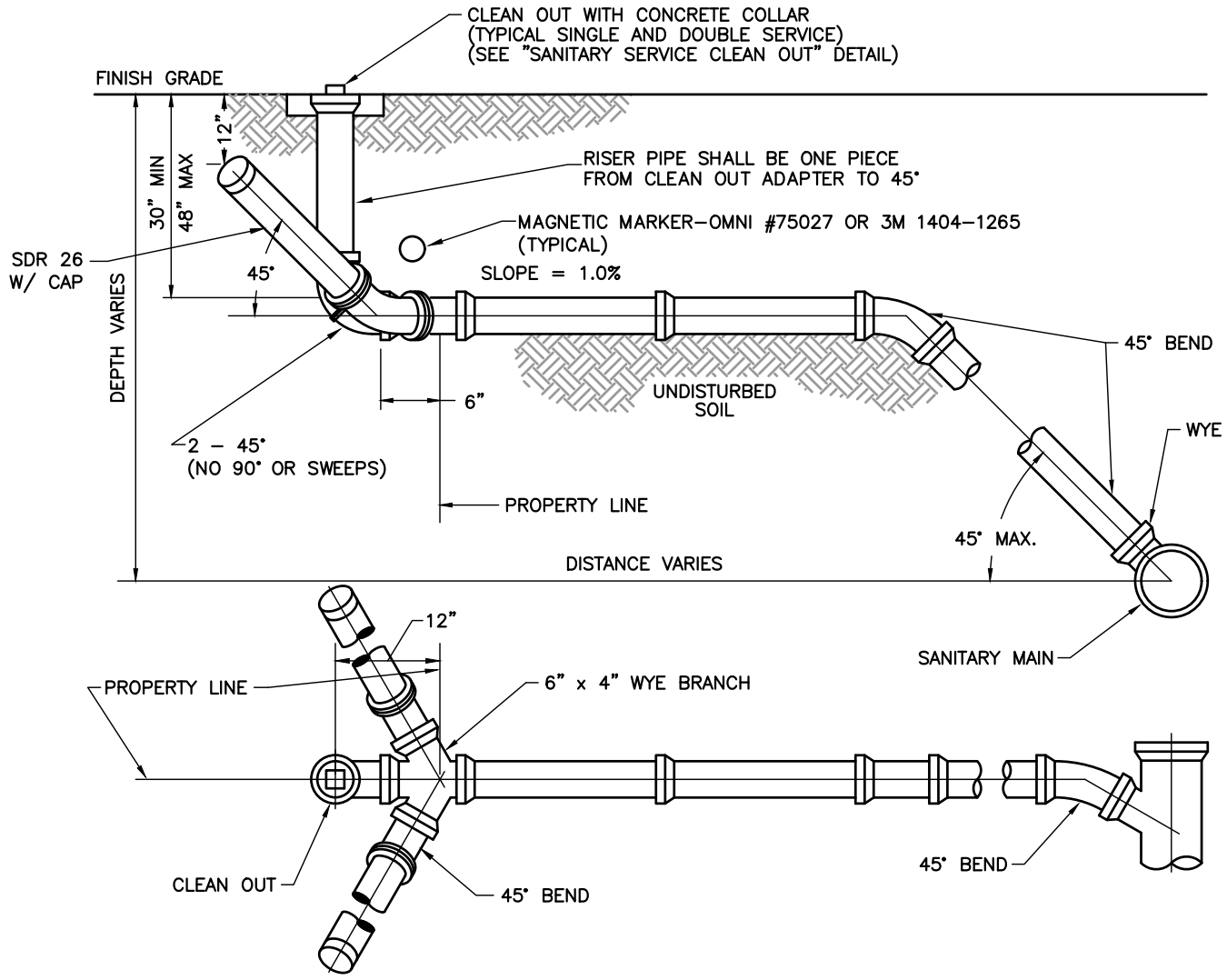
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision C-20

DATE APPROVED: FEB 26, 2025

DRAWING No. 56



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. THE END OF EACH SERVICE CONNECTION SHALL BE MARKED WITH A 2" x 2" TREATED WOOD STAKE AND AN E.M.S. SANITARY SEWER MARKER.
2. EACH SERVICE CONNECTION SHALL BE PLUGGED WATERTIGHT WITH AN APPROVED CAP OR PLUG.
3. CUT OFF BELL END WHEN USING FERNCO COUPLING FOR VCP (FOR EXISTING SERVICES ONLY)
4. FOR PVC INSTALLATIONS, CONNECT TO EXISTING "BELL END" AND CONNECT OPPOSITE END WITH PVC TO PVC KNOCK ON SLEEVE.
5. SOLIDLY TAMP BACKFILL AT LEAST ONE FOOT ABOVE TOP OF PIPE. SERVICES UNDER PAVED AREAS SHALL BE BACKFILLED TO THE SAME SPECIFICATIONS AS SHOWN ON "PAVEMENT REPLACEMENT" DETAIL.
6. CONTRACTOR SHALL MARK ON A CLEAN SET OF PLANS THE FINAL STATIONING OR DISTANCE AND DIRECTION FROM MANHOLE TO EACH SERVICE LATERAL AND GIVE TO ENGINEER FOR RECORD DRAWING PURPOSES.
7. ANY DEVIATION FROM THESE METHODS MUST BE APPROVED BY SUA.
8. THE USE OF UNNECESSARY FITTINGS ON THE CUSTOMERS LINE TO REDUCE EXCAVATION EFFORTS WILL BE CAUSE FOR REJECTION.
9. THE USE OF 90° SWEEPS ON THE CUSTOMERS LINE IN LIEU OF 45° BENDS WILL REQUIRE AN ADDITIONAL CLEAN OUT AS SHOWN ON "SANITARY SERVICE CLEAN OUT DETAIL". THE CLEAN OUT SHALL BE ON THE HOUSE SIDE OF THE TOP SWEEP WITHIN 2' OF THE SWEEP.

Sewer Service Connection (Wye Branch)

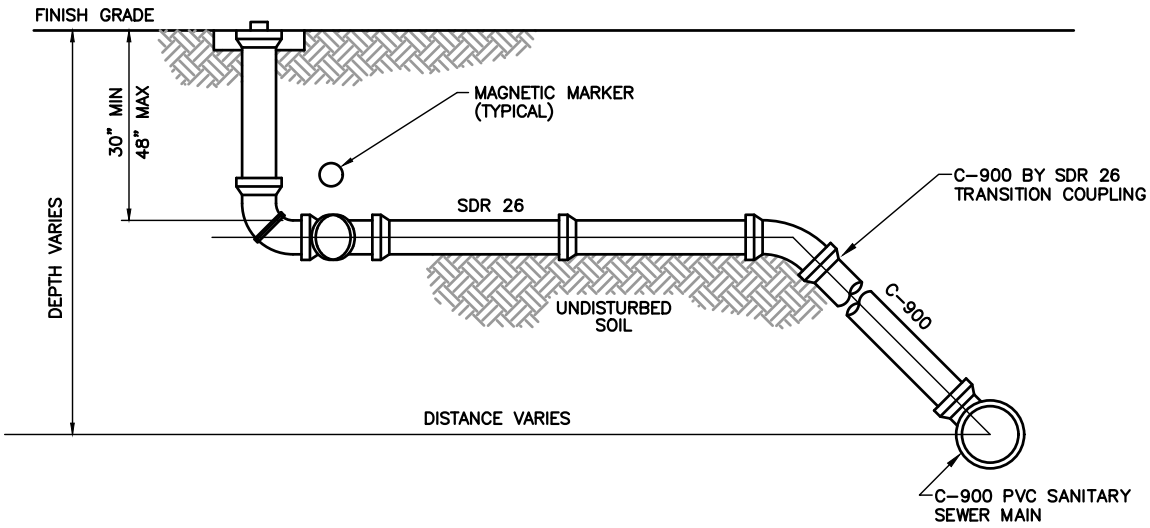
SEACOAST UTILITY AUTHORITY

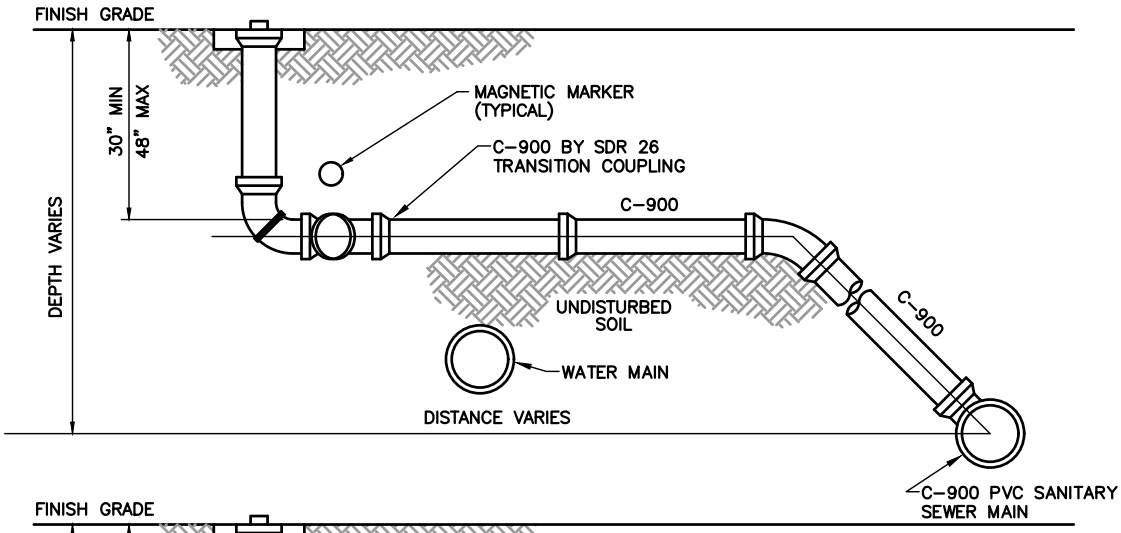
CONSTRUCTION STANDARDS AND DETAILS

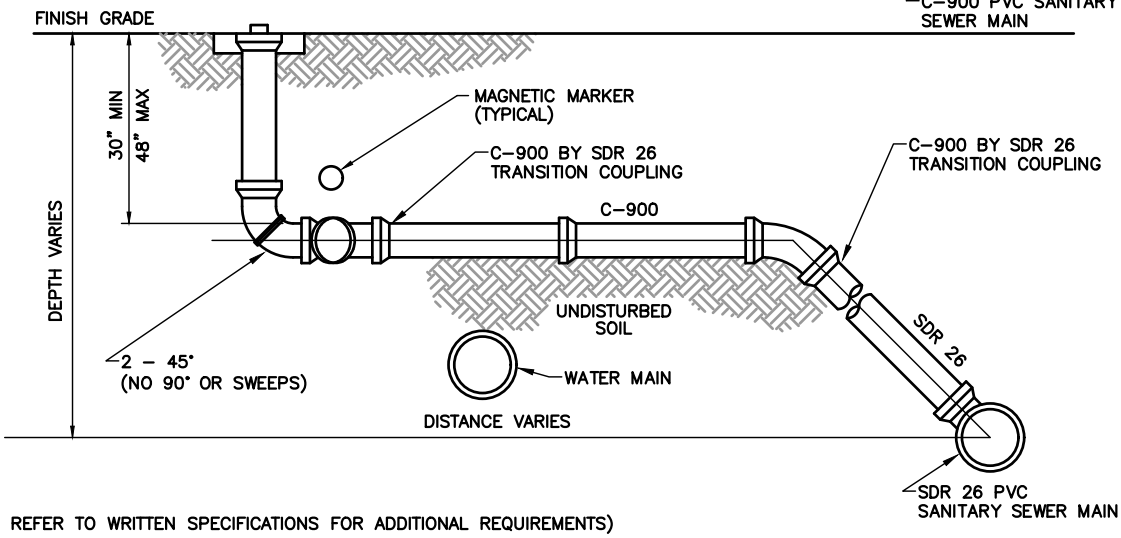
Revision C-24

DATE APPROVED: FEB 26, 2025

DRAWING No. 57







NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

SEWER SERVICE LATERALS SHALL CROSS UNDER WATER MAINS WITH A MINIMUM VERTICAL SEPARATION OF TWELVE (12) INCHES. IF 12" VERTICAL SEPARATION CANNOT BE MAINTAINED, THEN THE WATER MAIN SHALL BE D.I.P. AND THE SEWER SERVICE LATERAL SHALL BE C-900 SDR 18 OR BETTER AND THE MINIMUM SEPARATION SHALL BE SIX (6) INCHES. WHEN IT IS NOT POSSIBLE FOR THE WATER MAIN TO CROSS OVER THE SEWER SERVICE LATERAL A MINIMUM VERTICAL SEPARATION OF AT LEAST TWELVE (12) INCHES MUST BE MAINTAINED, THE WATER MAIN SHALL BE D.I.P. AND THE SEWER LATERAL SHALL BE C-900 SDR 18 OR BETTER.

C-900 Sewer Service Transition

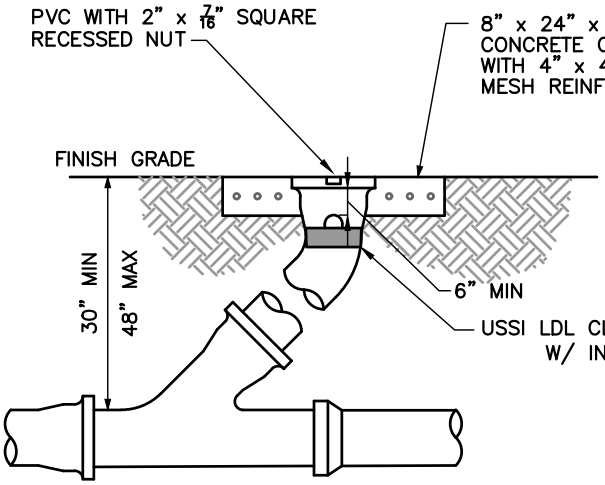
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision C-20

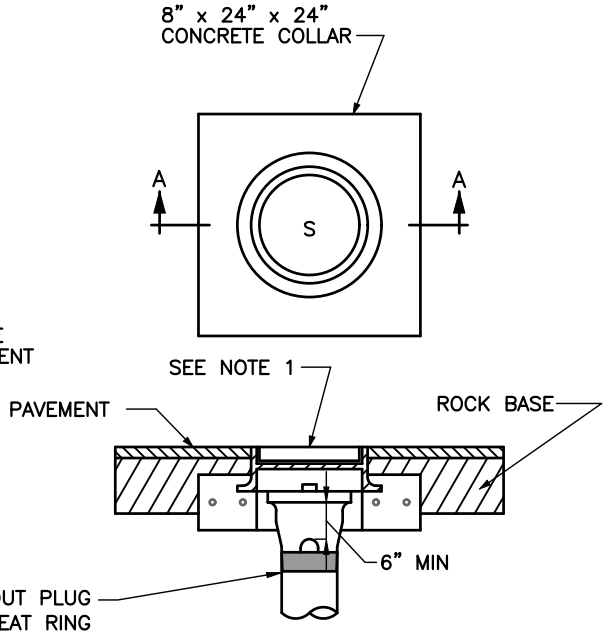
DATE APPROVED: FEB 26, 2025

DRAWING No. 58



SECTION "A–A"

CLEAN OUT IN GREEN AREA



SECTION "A–A"

CLEAN OUT IN VEHICULAR OR PEDESTRIAN TRAFFIC AREA

NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. U.S. FOUNDRY NO. 7621 REVERSIBLE HANDHOLE RING AND COVER OR APPROVED EQUAL SHALL BE USED, COVER TO BE CAST WITH "S" IN THE CENTER.
2. CLEAN OUT REQUIRED ON ALL SERVICES AT PROPERTY LINE OR EASEMENT LINE WHERE APPLICABLE.
3. STANDARD WYE SHALL BE USED AT CLEAN OUT.
4. USSI LDL GREEN CLEAN OUT PLUG TO BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION.

Sanitary Service Clean Out

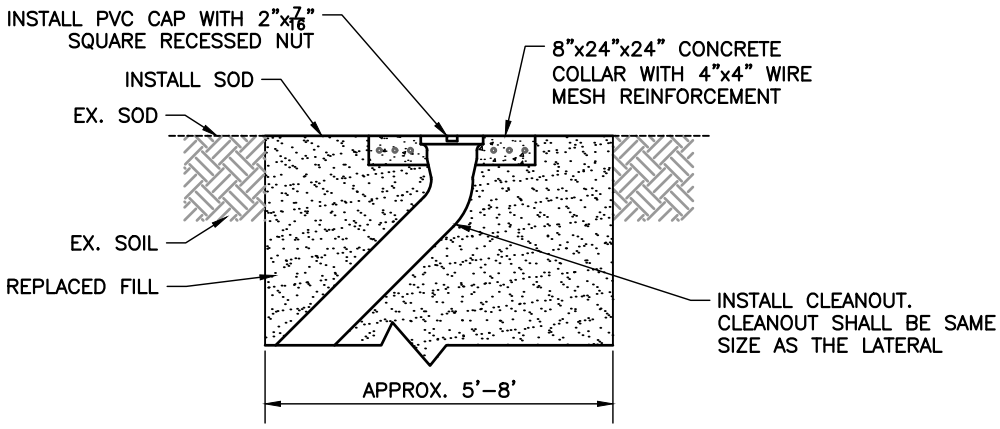
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

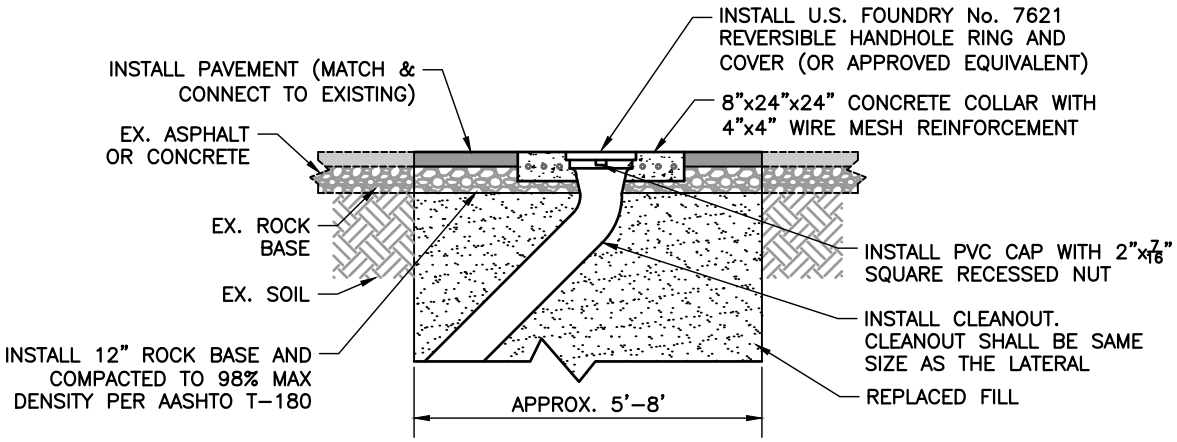
Revision D–24

DATE APPROVED: FEB 26, 2025

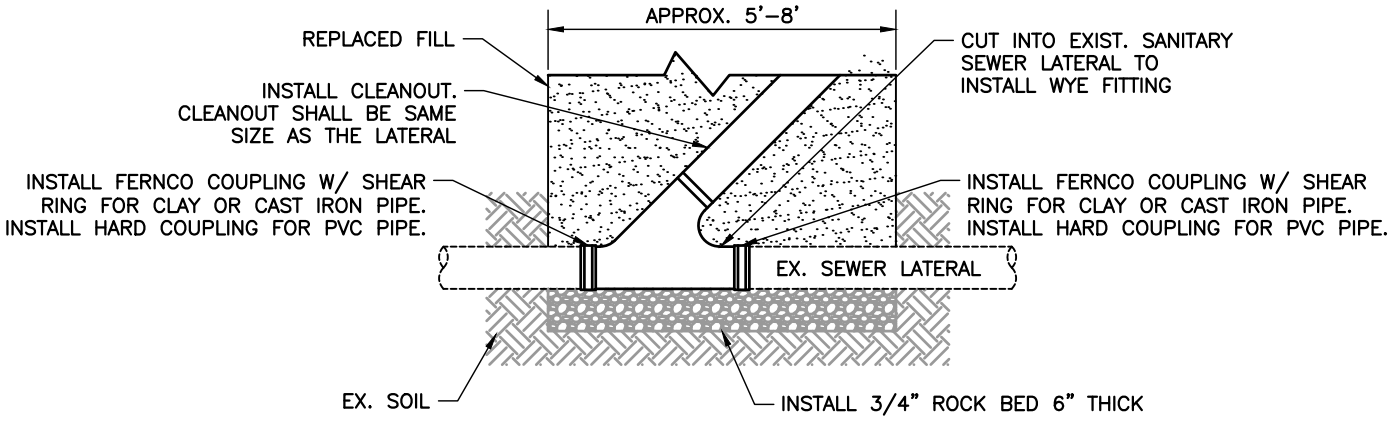
DRAWING No. 59



SODDED AREAS



PAVED AREAS



CONNECTION TO EXISTING SEWER LATERAL

NOTES:
1. EXCAVATION DEPTH VARIES WITH DEPTH OF EXISTING SEWER LATERAL AND EXISTING SURFACE ELEVATIONS.
2. CONCRETE COLLARS SHALL BE MATCHED TO EXISTING GRADES IN WORK AREA.

Clean Out Connection To Existing Lateral

SEACOAST UTILITY AUTHORITY

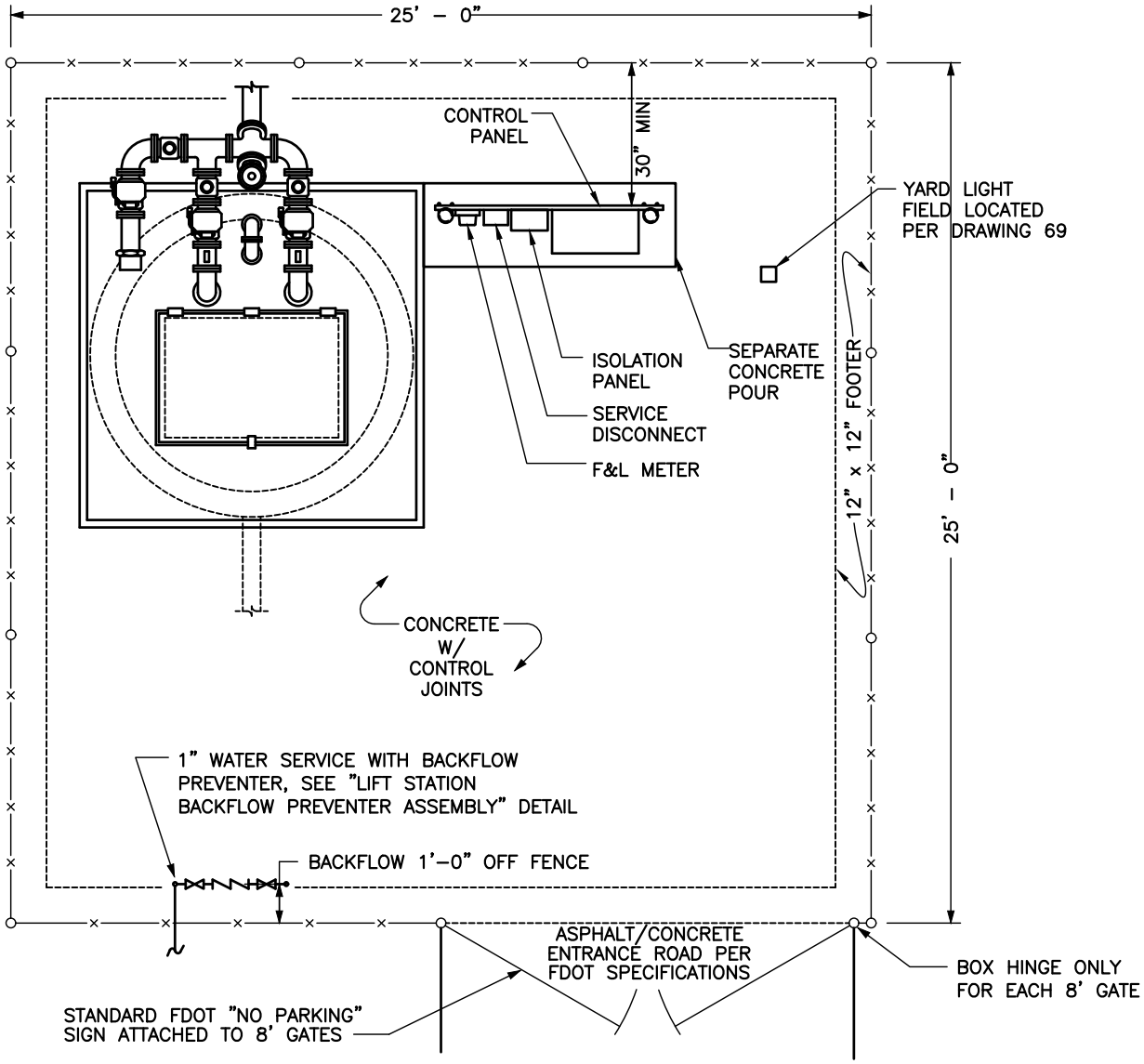
CONSTRUCTION STANDARDS AND DETAILS

Revision B-24

DATE APPROVED: FEB 26, 2025

DRAWING No. 60

THIS DRAWING DEPICTS A GENERAL SITE PLAN ONLY. THE ENGINEER OF RECORD SHALL COORDINATE THE SPECIFIC SITE PLAN REQUIREMENTS WITH SUA



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. COLLECTOR MANHOLE SHALL NOT BE PLACED IN TRAVEL LANE OR AREAS THAT WOULD LIMIT ACCESS.
2. GROUND COVER WITHIN FENCED AREA SHALL BE 6" THICK CONCRETE (4000psi) WITH A 12" x 12" FOOTER AND 6" x 6" WIRE MESH AND BE SLOPED IN SUCH A WAY TO PROMOTE RUNOFF AND PREVENT PUDDLES. FIBER CONCRETE SHALL NOT BE ALLOWED AS AN ALTERNATIVE TO WIRE MESH.
3. LANDSCAPING SHALL BE A MINIMUM OF 2' FROM FENCE. TREE PLACEMENT AND LANDSCAPING SHALL CONFORM TO SUA SETBACK REQUIREMENTS AND BE APPROVED BY SUA.
4. FENCE SHALL BE INSTALLED PER DRAWING 17.

Typical Lift Station Site Plan

SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision F–24

DATE APPROVED: FEB 26, 2025

DRAWING No. 61

BLANK SPACE FOR FUTURE SUA DETAIL

Future Detail

SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

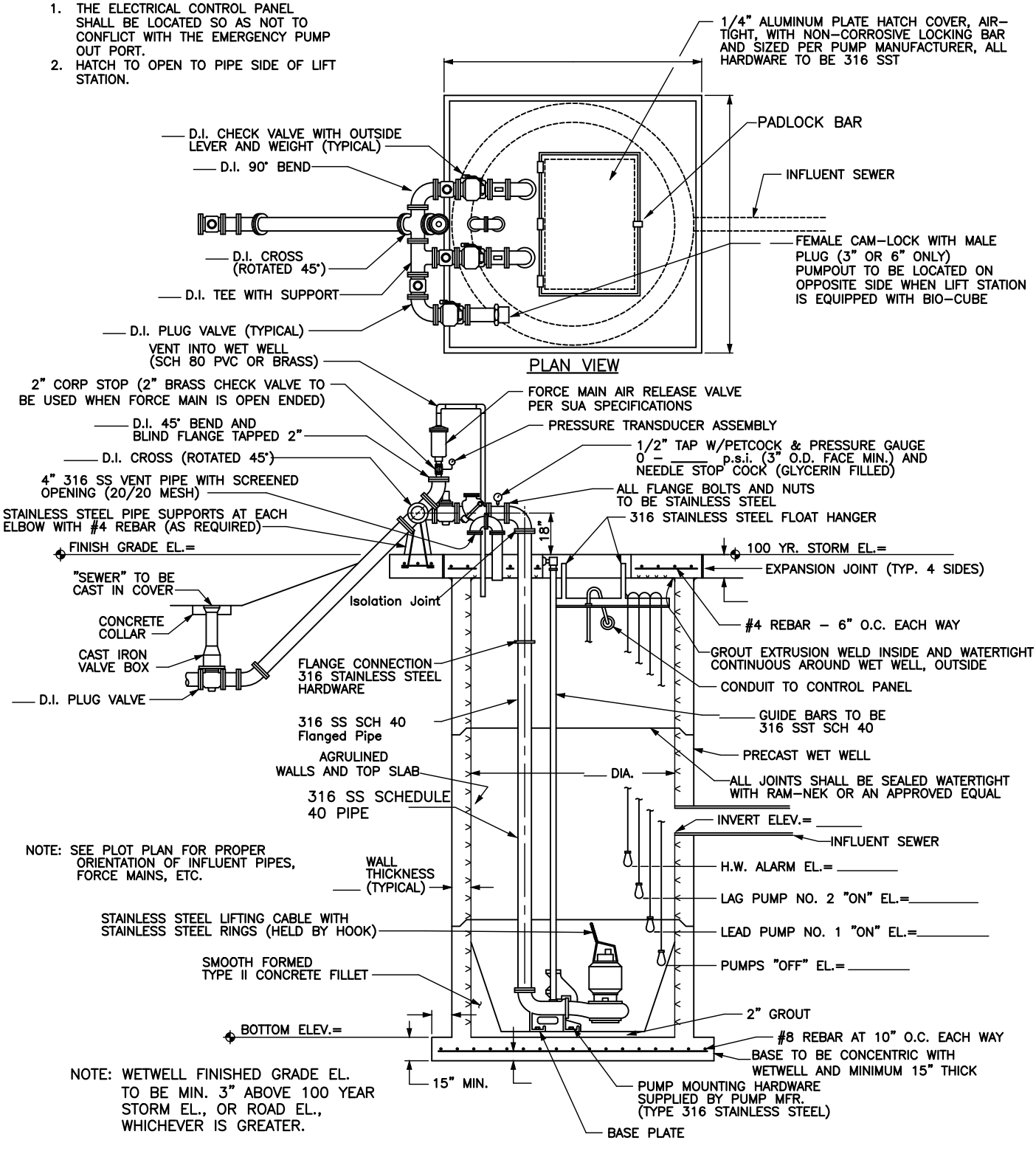
Revision G–24

DATE APPROVED: FEB 26, 2025

DRAWING No. 62

PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

NOTES:
1. THE ELECTRICAL CONTROL PANEL SHALL BE LOCATED SO AS NOT TO CONFLICT WITH THE EMERGENCY PUMP OUT PORT.
2. HATCH TO OPEN TO PIPE SIDE OF LIFT STATION.



SECTION THRU LIFT STATION

Lift Station Wetwell

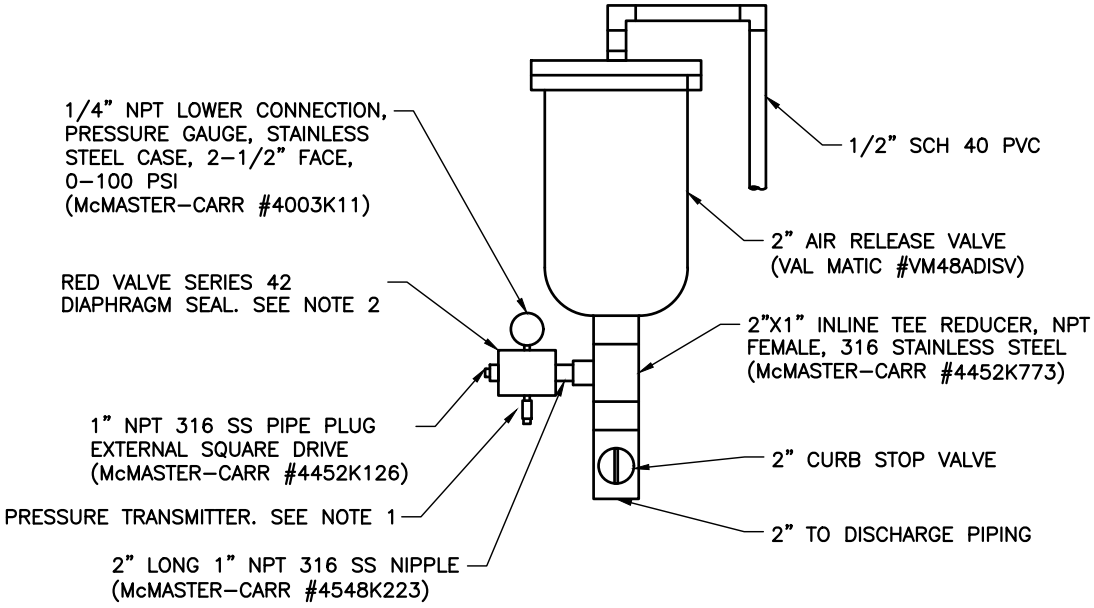
SEACOAST UTILITY AUTHORITY

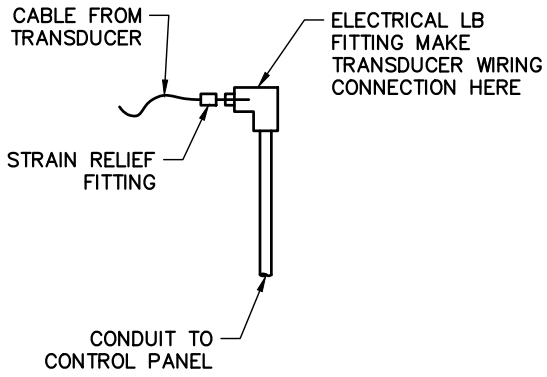
CONSTRUCTION STANDARDS AND DETAILS

Revision F-24

DATE APPROVED: FEB 26, 2025

DRAWING No. 63





NOTES:

1. WIKA PART NUMBER 52831470 WITH THE FOLLOWING ATTRIBUTES:

   MODEL S-20 PRESSURE TRANSMITTER
   0-100 PSIG RANGE
   4-20 mA OUTPUT
   1/4" NPT CONDUIT MALE, WITH CABLE OUTLET

2. SERIES 42 DIAPHRAGM SEAL
   A. 1" PROCESS CONNECTION
   B. 1/4" INSTRUMENT CONNECTION
   C. BODY 316 STAINLESS STEEL
   D. END CAP MATERIAL TO BE 316 STAINLESS STEEL
   E. SLEEVE-BUNA-N
   F. FILL ETHYLENE GLYCOL

Pressure Transducer

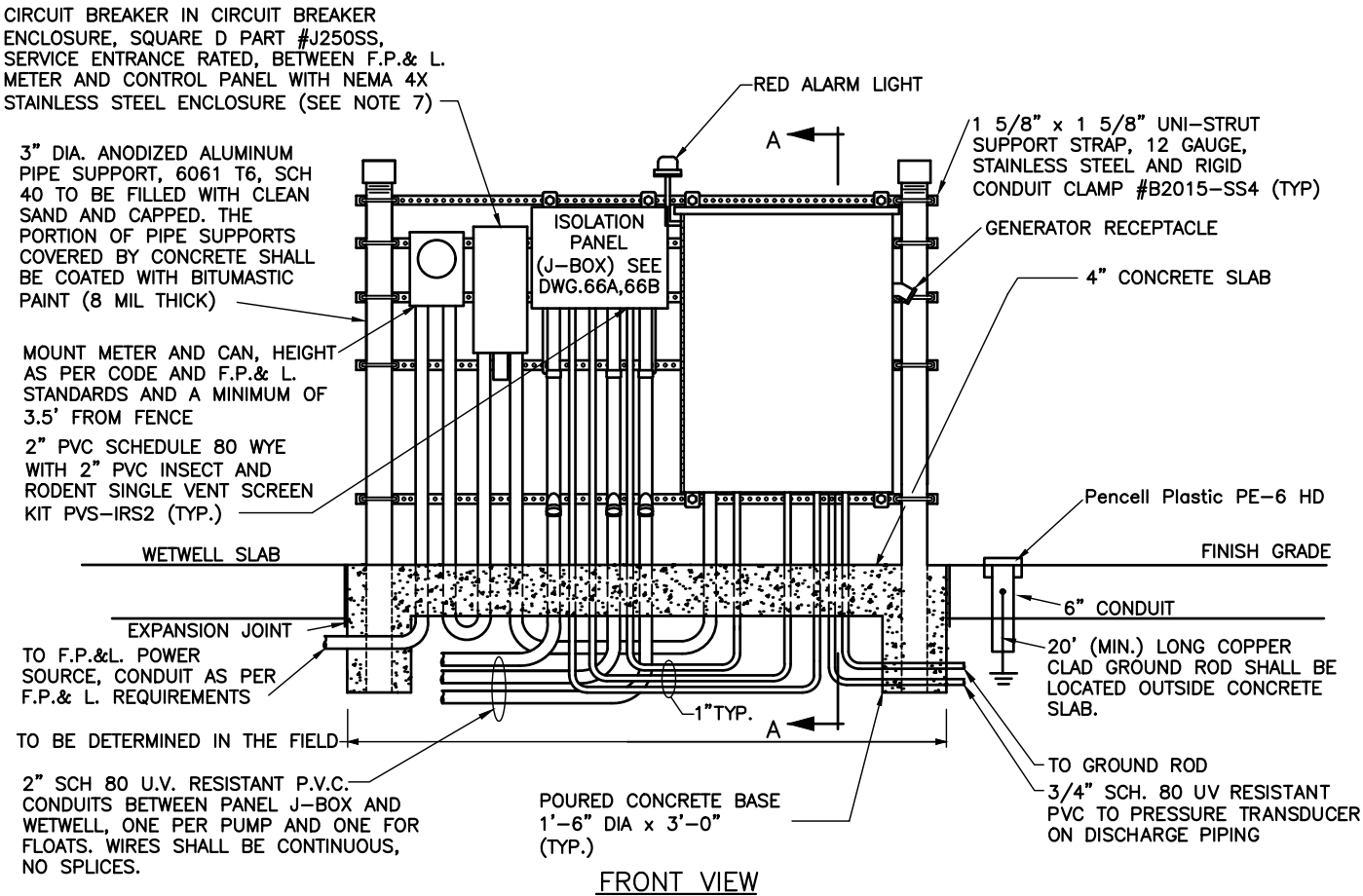
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision F-24

DATE APPROVED: FEB 26, 2025

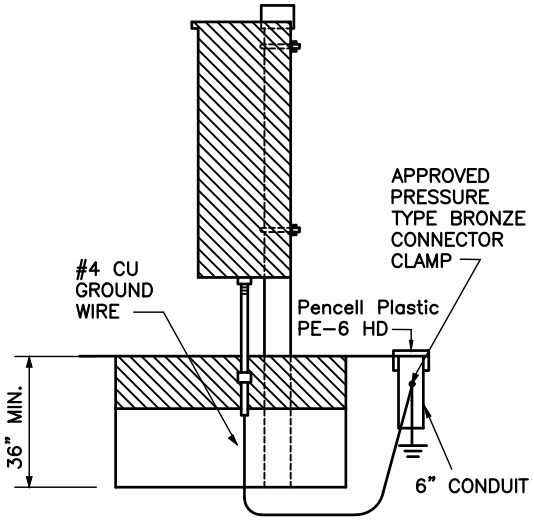
DRAWING No. 64



FRONT VIEW

NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. ALL CONDUIT SIZES INCLUDING F.P.& L. CONDUIT PER F.P.&L. REQUIREMENT SHALL BE SIZED FOR TWICE THE INSTALLED H.P. AMPACITY UNLESS OTHERWISE INDICATED.
2. ALL CONDUCTORS SHALL BE COPPER.
3. ALL CONDUIT OPENINGS IN J-BOX AND CONTROL PANEL SHALL BE SEALED AIR TIGHT.
4. CONDUITS BETWEEN CONTROL PANEL AND ISOLATION PANEL SHALL HAVE SEALING HUBS, APPLETON ES150-100 OR EQUIVALENT, AT THE ISOLATION PANEL.
5. CONTROL PANEL AND GROUND RODS TO BE UL LISTED COPPER CLAD STEEL ¾" THICK,
6. ALL PVC CONDUIT TO BE SCH 80 UV RESISTANT.
7. FOR LIFT STATIONS UP TO 150 AMP:
   (a.) H()L36###(C) – MOLDED CASE CIRCUIT BREAKER, 3 POLE, 600 VAC FRAME, ### = CURRENT RATING (15-150 AMP)
8. FOR LIFT STATIONS OVER 150 AMP:
   (a.) J()L36###(C) – MOLDED CASE CIRCUIT BREAKER, 3 POLE, 600 VAC FRAME, ### = CURRENT RATING (150-250 AMP)



SECTION "A-A"

Lift Station Control Panel (Single Door)

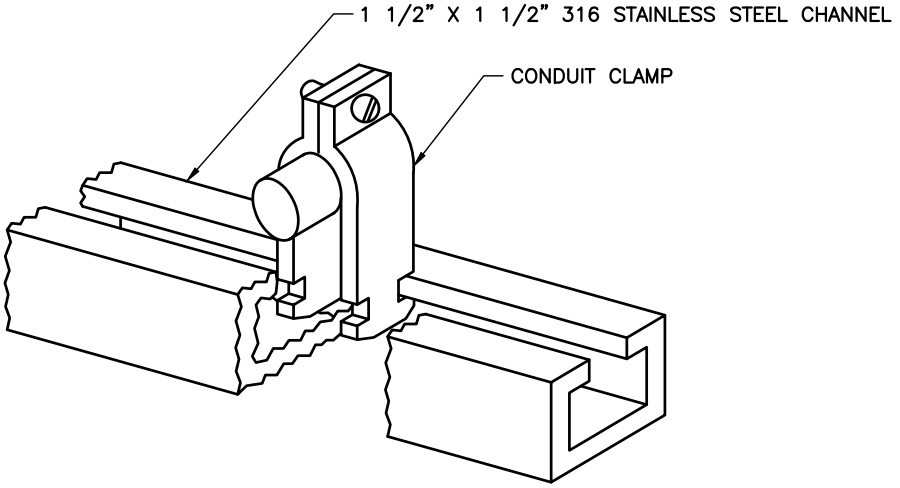
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision F-24

DATE APPROVED: FEB 26, 2025

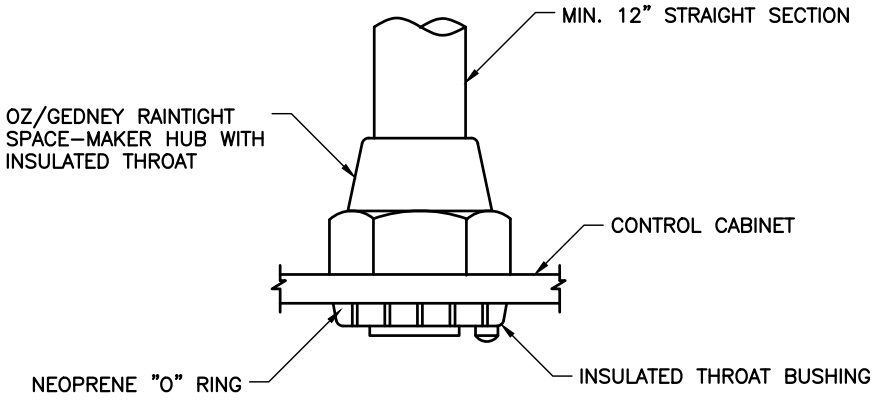
DRAWING No. 65a



NOTES:

1. THIS DETAIL TYPICAL FOR BOTH VERTICAL AND HORIZONTAL MOUNTING.
2. CHANNEL AND ALL SUPPORT DEVICES TO BE HOT 316 STAINLESS STEEL. FIELD COAT ALL CUTS, ETC TO MATCH.
3. CHANNELS TO BE SPACED 5' MAXIMUM.

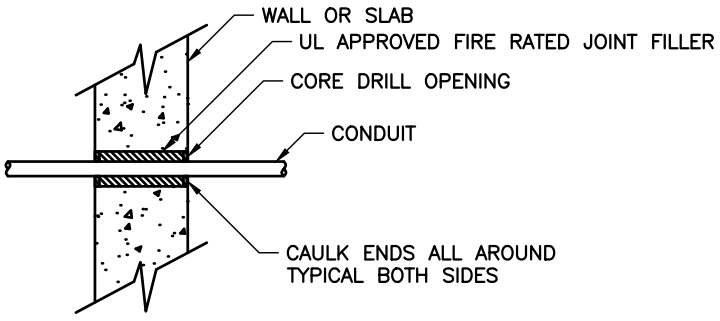
CONDUIT PIPE STRAP
MOUNTING DETAILS
CONDUIT SUPPORT



NOTES:

1. TYPICAL FOR ALL CONDUIT ENTRANCES INTO NEMA 3R, NEMA 4, OR NEMA 4X ENCLOSURES. ALUMINUM OR DIE CAST ZINC.

CONDUIT HUB



CONDUIT PENETRATION AT
WALL OR SLAB

Lift Station Conduit

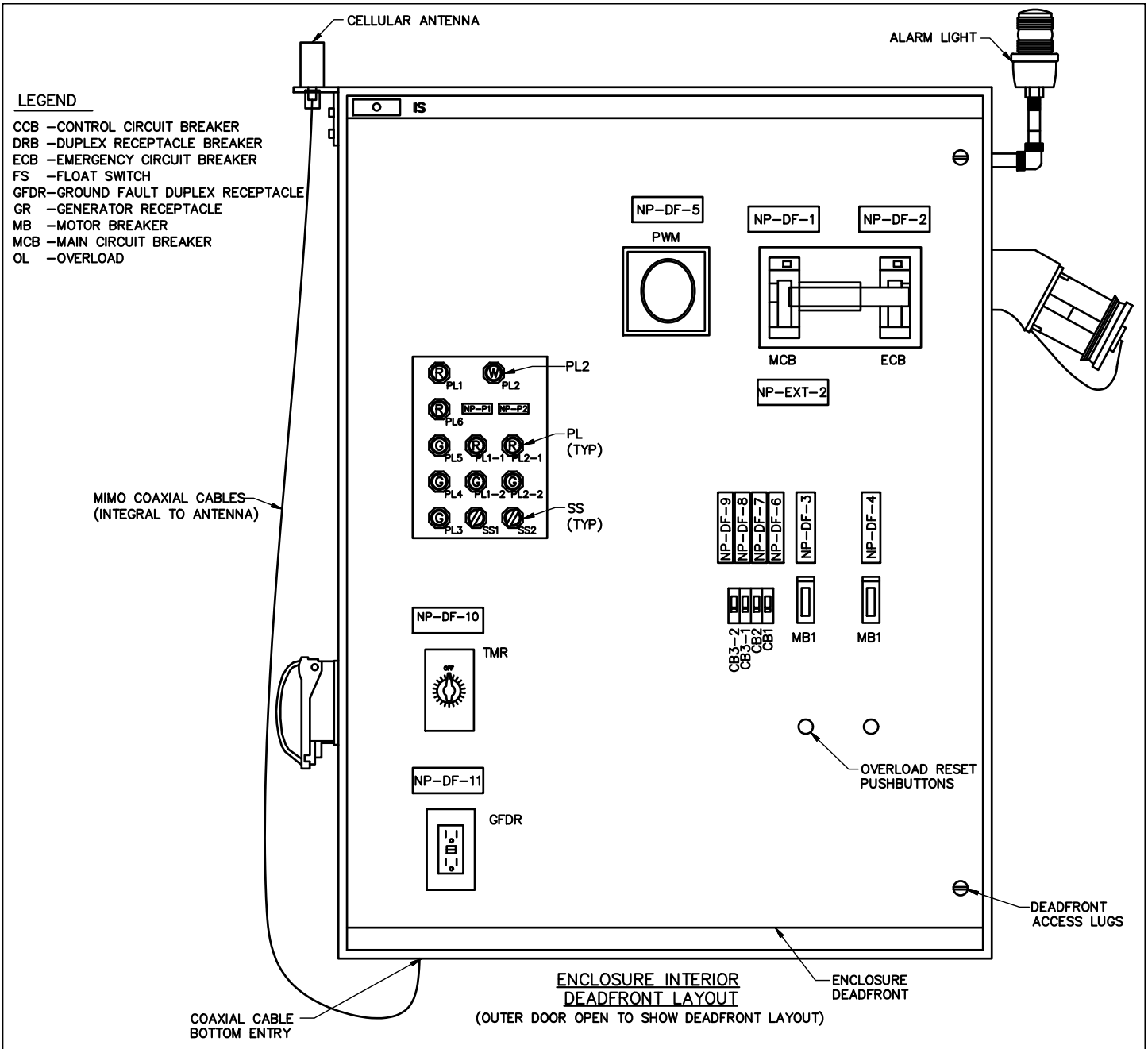
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision A-23

DATE APPROVED:
FEB 26, 2025

DRAWING No.
65b



ENCLOSURE INTERIOR
DEADFRONT LAYOUT
(OUTER DOOR OPEN TO SHOW DEADFRONT LAYOUT)

NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. MINIMUM ENCLOSURE 42x30x10.
2. LEAVE MINIMUM 6" SPACE AT BOTTOM OF ENCLOSURE.
3. U.L. LABEL, SERVICE ENTRANCE RATED.
4. CONTROL WIRE TO BE AWG 14 MINIMUM.
5. LAMINATED SCHEMATIC TO BE 11X17.
6. PROVIDE ADEQUATE SPACE FOR 12V DC BATTERY REPLACEMENT.
7. OUTER DOOR REMOVED TO SHOW DEAD FRONT LAYOUT.
8. NEMA TYPE 12M 316 S.S. ENCLOSURE WITH CONTINUOUS HINGE.
9. INCLUDES 3 PT. LATCH. (NOT SHOWN) AND DOOR STOPS ON OUTER DOOR AND DEAD FRONT.
10. ALL HARDWARE TYPE 316 S.S.
11. TYPICAL, ACTUAL LAYOUT MAY VARY WITH HORSEPOWER.
12. MOUNT RECEPTACLE IN GANG BOX TO PREVENT EXPOSURE OF LIVE CONDUCTORS AND CONTACTS.
13. 480/120 TRANSFORMER ONLY REQUIRED IN CONTROL PANELS WITH 480VAC SERVICE.

Lift Station Control Panel Dead Front Layout

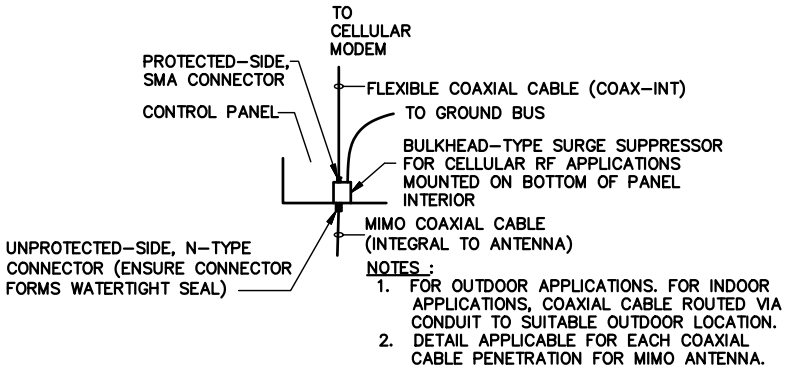
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision E–24

DATE APPROVED: FEB 26, 2025

DRAWING No. 65c



COAXIAL CABLE PANEL ENTRY DETAIL

NOT TO SCALE

NP*	NAMEPLATE TEXT
NP–EXT–1	DUPLEX LIFT STATION PANEL NO. 999 – 480V 3PH 20 HP (REVISE LIFT STATION NO., ELECTRICAL PARAMETERS, AND HORSEPOWER TO MATCH SPECIFIC LIFT STATION CRITERIA)
NP–EXT–2	WARNING: PANEL SUPPLIED WITH INTERNAL UPS. POWER MAY BE PRESENT UNTIL UPS IS SWITCHED TO THE OFF POSITION
NP–DF–1	MAIN BREAKER
NP–DF–2	GENERATOR BREAKER
NP–DF–3	PUMP NO. 1
NP–DF–4	PUMP NO. 2
NP–DF–5	3PH POWER MONITOR
NP–DF–6	CONTROL POWER
NP–DF–7	PANEL GFDR
NP–DF–8	EXTERNAL GFDR
NP–DF–9 / 10	SITE LIGHT
NP–DF–11	GFDR
NP–P1	PUMP NO. 1
NP–P2	PUMP NO. 2
PL1	FLOAT SEQUENCE FAULT
PL2	CONTROL POWER
PL3	OFF FLOAT
PL4	LEAD FLOAT
PL5	LAG FLOAT
PL6	HIGH LEVEL FLOAT
PL1–1, PL2–1	FAULT
PL1–2, PL2–2	RUNNING
SS1, SS2	HAND–OFF–AUTO

*NAMEPLATE LETTERING SHALL BE WHITE ON BLACK BACKGROUND

Lift Station Control Panel Dead Front Layout

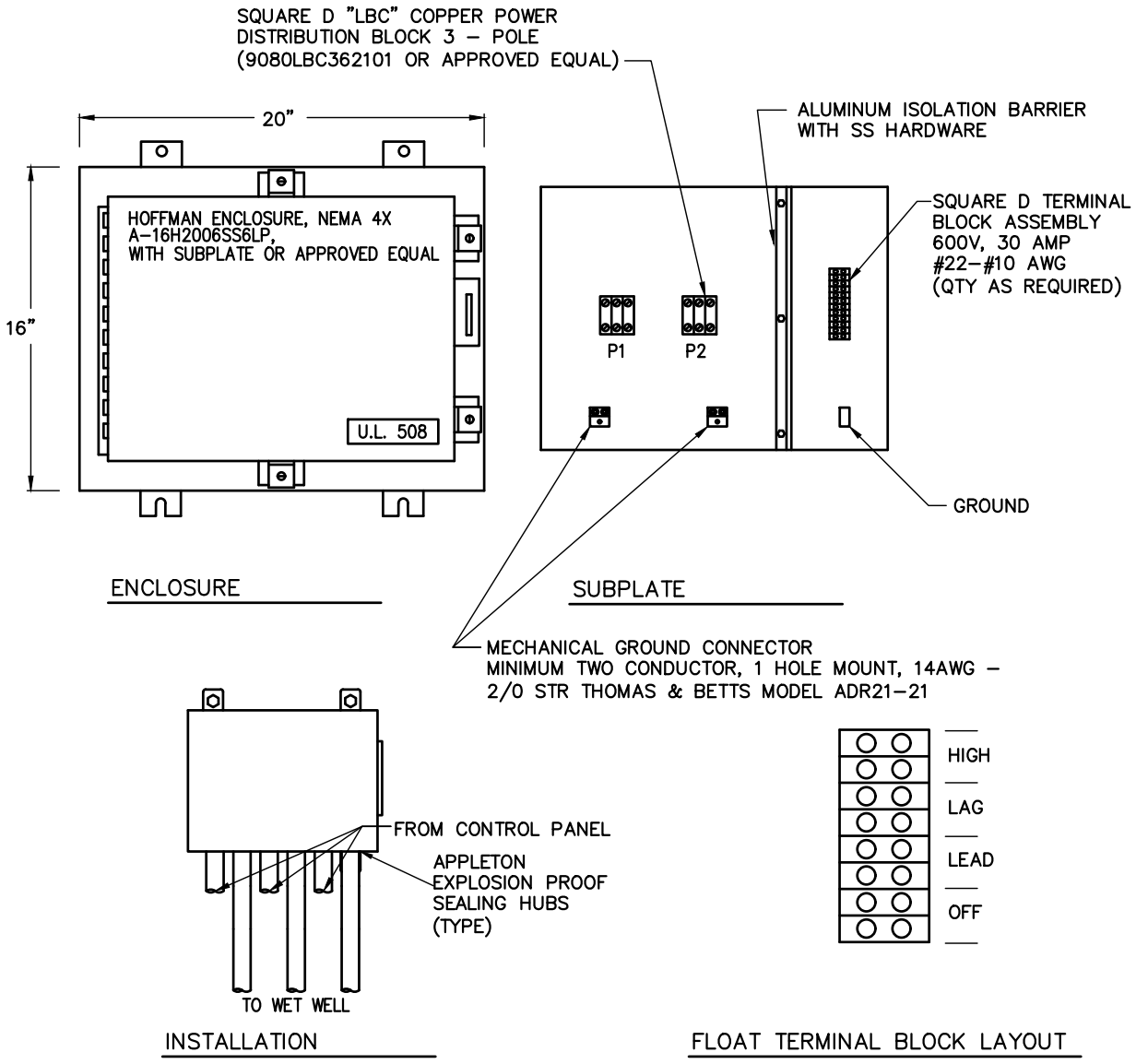
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision E–24

DATE APPROVED: FEB 26, 2025

DRAWING No. 65d



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. SHOWN FOR GENERAL ARRANGEMENT PROVIDE EQUIPMENT AS INDICATED PER NUMBER OF PUMPS.
2. JUNCTION BOX SHALL BE PROVIDED BY THE SAME MANUFACTURER AS THE CONTROL PANEL AND SHALL BE U.L. 508 LISTED.
3. ALL CONTROL CABLES SHALL HAVE A SERVICE LOOP WITHIN J BOX AND CONTROL PANEL.
4. JUNCTION BOX ENCLOSURE SHALL BE NEMA 4X AND MINIMUM 16"H x 20"W x 6"D.

Duplex Lift Station Control Panel J-Box

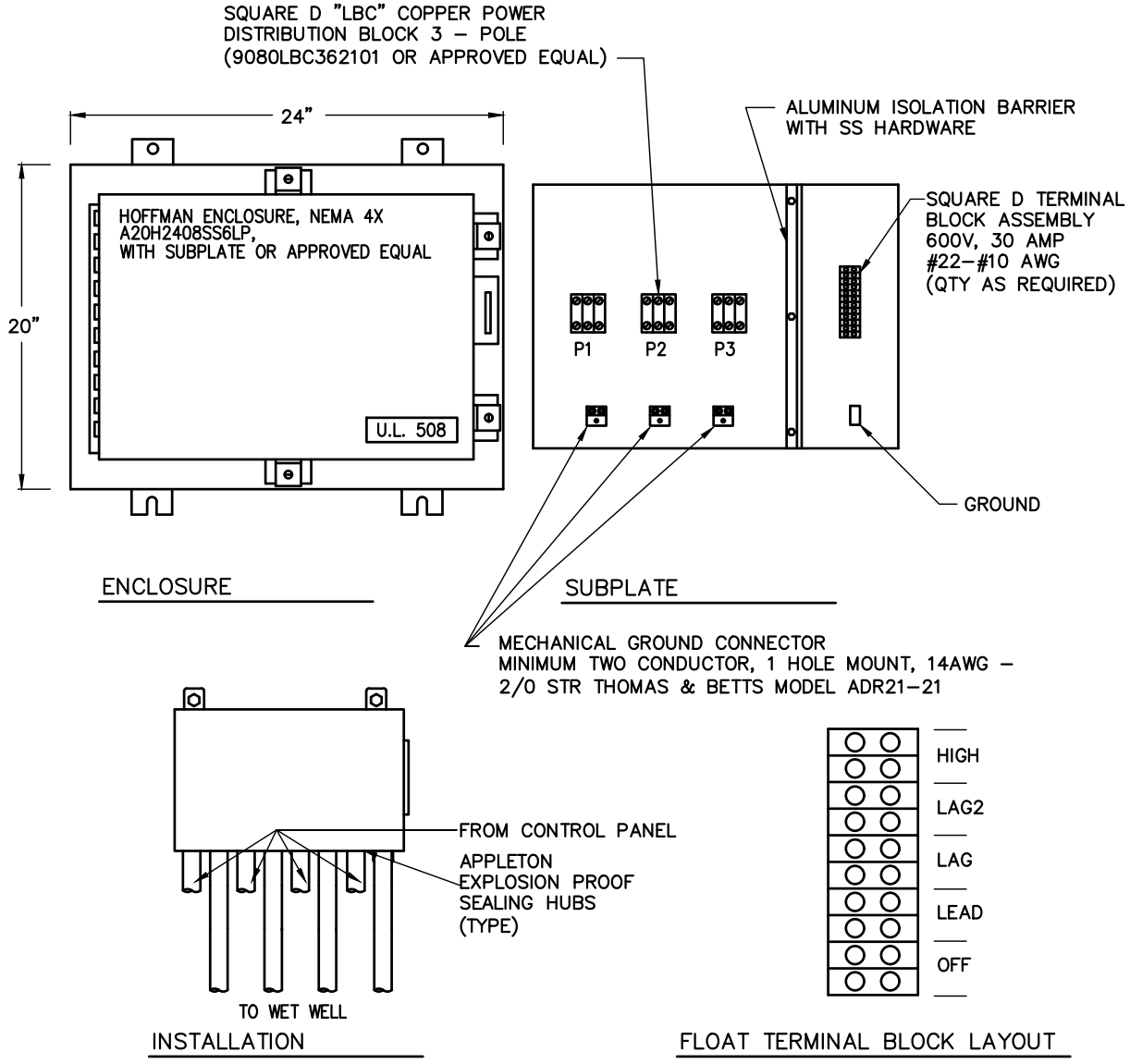
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision F–24

DATE APPROVED: FEB 26, 2025

DRAWING No. 66a



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. SHOWN FOR GENERAL ARRANGEMENT PROVIDE EQUIPMENT AS INDICATED PER NUMBER OF PUMPS.
2. JUNCTION BOX SHALL BE PROVIDED BY THE SAME MANUFACTURER AS THE CONTROL PANEL AND SHALL BE U.L. 508 LISTED.
3. ALL CONTROL CABLES SHALL HAVE A SERVICE LOOP WITHIN J BOX AND CONTROL PANEL.
4. JUNCTION BOX ENCLOSURE SHALL BE NEMA 4X 20"H x 24"W x 8"D.

Triplex Lift Station Control Panel J-Box

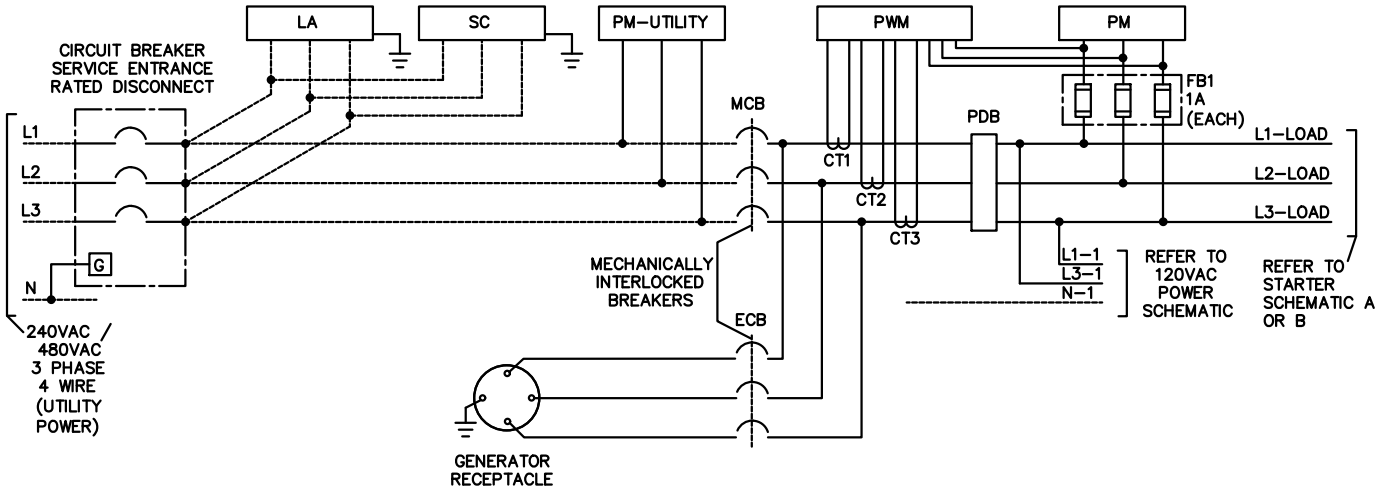
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

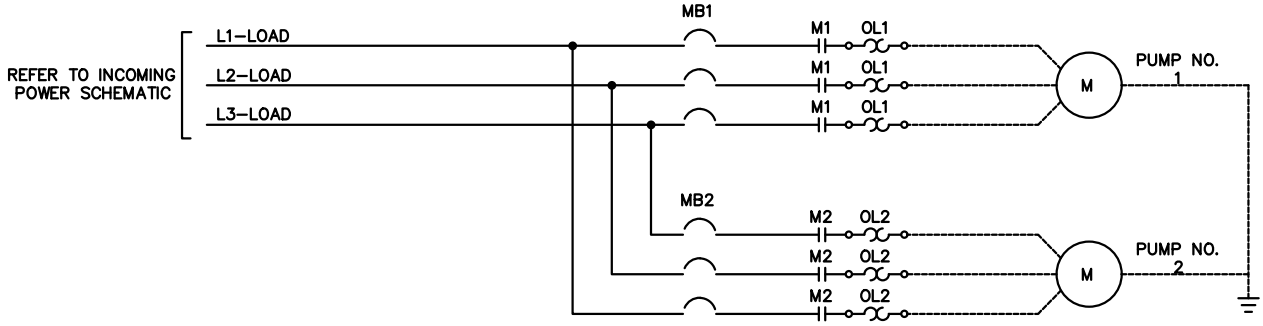
Revision F–24

DATE APPROVED: FEB 26, 2025

DRAWING No. 66b



INCOMING POWER



STARTER SCHEMATIC A

FOR USE WITH PUMP
MOTORS RATED LESS THAN
20 HP

Duplex Lift Station Control Panel Schematic - 230V/3PH

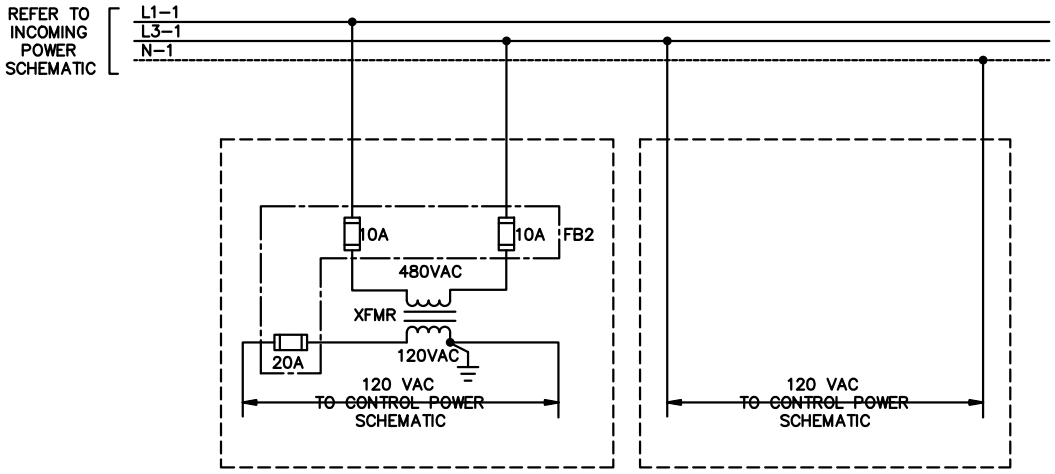
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

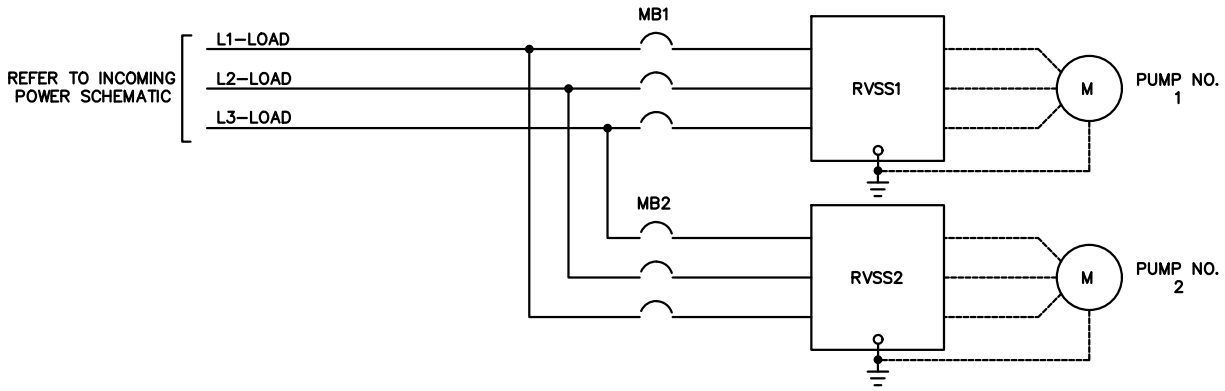
Revision D–24

DATE APPROVED:
FEB 26, 2025

DRAWING No.
67a



120 VAC POWER



STARTER SCHEMATIC B

FOR USE WITH PUMP MOTORS RATED 20 HP OR GREATER

Duplex Lift Station Control Panel Schematic - 230V/3PH

SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D-24

DATE APPROVED: FEB 26, 2025

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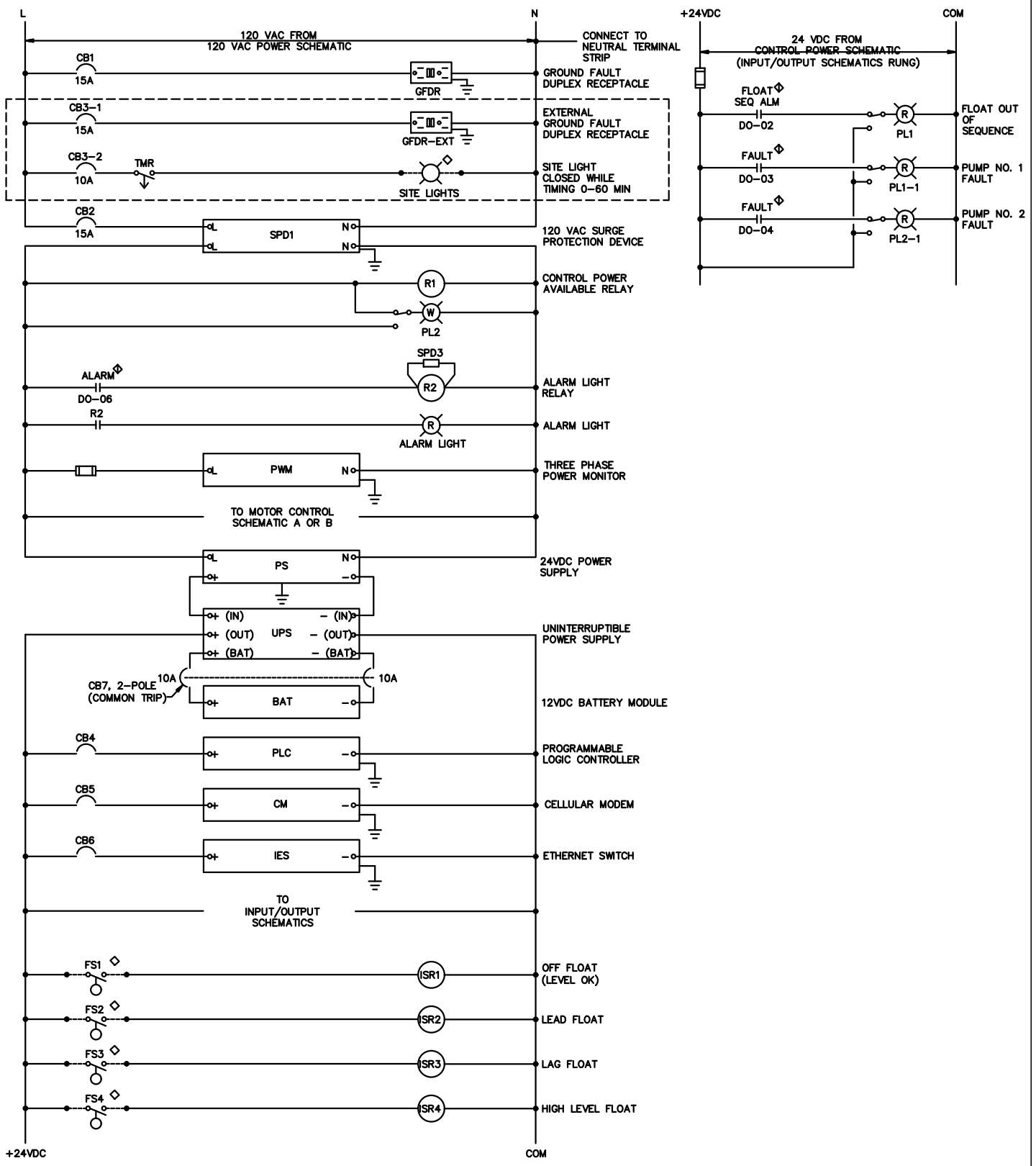

CONTROL POWER

Duplex Lift Station Control Panel Schematic - 230V/3PH

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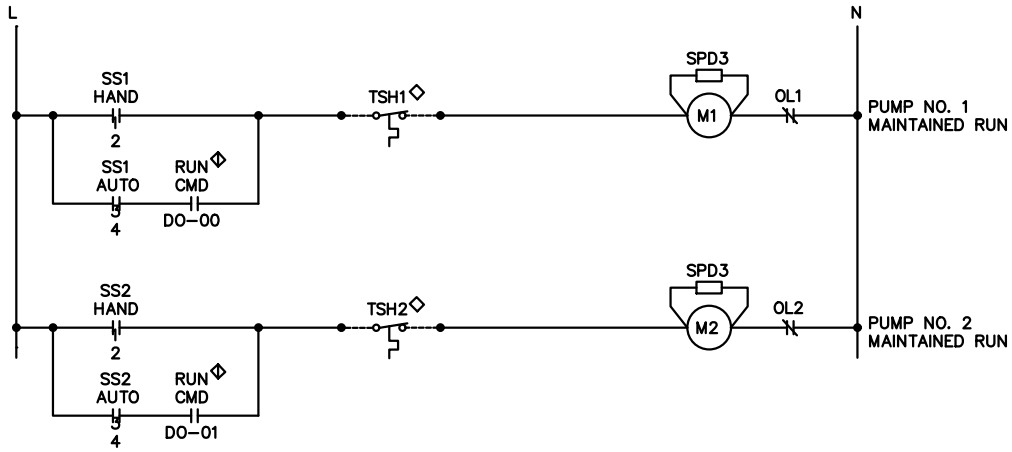
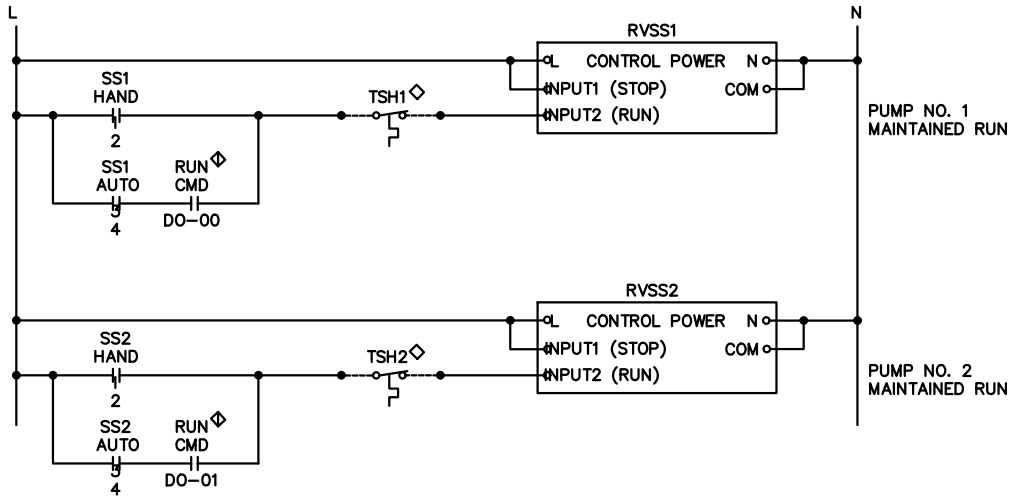
67c



MOTOR CONTROL SCHEMATIC A

FOR USE WITH PUMP
MOTORS RATED LESS THAN
20 HP



MOTOR CONTROL SCHEMATIC B

FOR USE WITH PUMP
MOTORS RATED 20 HP OR
GREATER

Duplex Lift Station Control Panel Schematic - 230V/3PH

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CONSTRUCTION STANDARDS AND DETAILS

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TYPICAL DUPLEX CONTROL PANEL BILL OF MATERIALS

ABBREV.	QTY	NAME	DESCRIPTION	MODEL	MFR
AL	1	ALARM LIGHT	STROBE ALARM LIGHT, 120VAC, NPT PIPE-MOUNT, RED	LP3P-120R	FEDERAL SIGNAL
BAT	1	BATTERY MODULE	12 VDC, 7 AH, BACKUP BATTERY MODULE	UZK12.071	PULS
CB1-CB3	A/R	CIRCUIT BREAKER	SINGLE POLE, 120 VAC CIRCUIT BREAKER	720QOU1##	SQUARE D
CB4-CB6	3	CIRCUIT BREAKER	SINGLE POLE, 24 VDC CIRCUIT BREAKER	M9F421##	SQUARE D
CB7	1	CIRCUIT BREAKER	DUAL POLE, 24 VDC CIRCUIT BREAKER, COMMON TRIP	M9F422##	SQUARE D
CA	1	CELLULAR ANTENNA	INDUSTRIAL MULTI-CARRIER 4G LTE CELLULAR ANTENNA, 617-960 MHz & 1.7-2.7 GHz, 3/4 dBi PEAK GAIN, MIMO (PRIMARY/DIVERSITY 4G LTE), INTEGRAL MIMO COAXIAL ANTENNA LEADS W/ SMA CONNECTORS; IP67-RATED, SMALL-FORM FACTOR, BRACKET-MOUNT	M17B OMNI MIMO 2 x 4G LTE (OR EQUAL)	ANTENNA GEAR (OR EQUAL)
CM	1	CELLULAR MODEM	INDUSTRIAL LTE (CELLULAR) GATEWAY, CAT 6 LTE-A PRO, 2 x MIMO SUPPORT, TYPE SMA CONNECTORS (PRIMARY/DIVERSITY), HSPA+, DIN RAIL MOUNTED, 1000BASE-T PORT	RV50X	SIERRA WIRELESS
COAX-INT	2	COAXIAL ANTENNA CABLE (INTERIOR APPLICATIONS)	PRE-TERMINATED LOW-LOSS RF CABLE FOR MOBILE/CELLULAR APPLICATIONS, SMA TYPE CONNECTORS, FLEXIBLE/JUMPER TYPE CONSTRUCTION	FSJ1-50A OR EQUAL	COMMSCOPE
CT1-CT3	3	CURRENT TRANSFORMERS	CURRENT TRANSFORMER; SECONDARY CURRENT NOT TO EXCEED 5 A	2SFT-101	WESCHLER
IS	1	INTRUSION SWITCH	SNAP-TYPE LIMIT SWITCH, INTRUSION DETECTION	9007AP221	SQUARE D
ECB	1	EMERGENCY CIRCUIT BREAKER	3 POLE, 600V CIRCUIT BREAKER; SIZED TO MEET ELECTRICAL REQUIREMENTS, AUXILIARY CONTACTS	HDL36###-AA, S29450	SQUARE D
ENCLOSURE	1	ENCLOSURE	WALL-MOUNTED, NEMA 4X, 316 S.S. CONSTRUCTION; HASP/STAPLE FOR PADLOCKING; EQUIP WITH INTERIOR DOCUMENT POCKET, DRIPSHIELD, GALVANIZED INTERIOR SUBPANEL, GALVANIZED DEADFRONT/SWINGOUT INTERIOR DOOR MINIMUM DIMENSIONS WITH ATL STARTERS (<20 HP): 48" H x 36" W x 12" D MINIMUM DIMENSIONS WITH RVSS (>=20 HP): 60" H x 36" W x 16" D	ATL STARTERS (< 20 HP): SCE-48H3612SS6LP A48H36123S6LP RVSS (>= 20 HP): SCE-60H3616SS6LP A60H3616SS6LP	SAGINAW CONTROL ENGINEERING, HOFFMAN
FB1, FB2	A/R	FUSES	FAST-ACTING FUSES, SIZED AS INDICATED OR AS REQUIRED BY EQUIPMENT	N/A	BUSSMANN
FB2, FB2	A/R	FUSE HOLDERS	FUSE HOLDERS	N/A	SQUARE D
GFDR	1	GROUND FAULT DUPLEX RECEPTACLE	MAINTENANCE/CONVENIENCE RECEPTACLE, 120 VAC, 15 A, GFCI	GFTR15SNAPW	HUBBELL
GFDR-EXT	A/R	GROUND FAULT DUPLEX RECEPTACLE	MAINTENANCE/CONVENIENCE RECEPTACLE, 120 VAC, 15 A, GFCI; WEATHER RESISTANT EXTRA DUTY WHILE-IN-USE COVER	DAP4BC-G0	PANDUIT
GND	1	GROUND BAR	GROUND TERMINAL STRIP WITH STAND-OFF KIT	UGB2/0-414-##, PK12GTA	PANDUIT, SQUARE D
GR	1	GENERATOR RECEPTACLE	GENERATOR RECEPTACLE, 4 POLE, 3 WIRE, REVERSED SERVICE	ADR1034RS W/ SPRING DOOR (100A), AR20034RS (200A)	APPELTON
GRH	1	GENERATOR RECEPTACLE HUB	GENERATOR RECEPTACLE ANGLE ADAPTER	AJA100 (100A), AJA200 (200A)	APPELTON
IES	1	INDUSTRIAL ETHERNET SWITCH	UNMANAGED ETHERNET SWITCH, FOUR 10/100BASE-T RJ-45 PORTS	N-TRON 104TX	RED LION
ISR1-4	4	INTRINSICALLY SAFE RELAY	INTRINSICALLY SAFE RELAY, CLASS 1 DIV 1, 1-CHANNEL, 10-125 VDC, 5A, DIN-RAIL	ISEUR1	MACROMATIC
LA	1	LIGHTNING ARRESTOR	600V, 3 PH LIGHTNING ARRESTOR	6671 SDSA3650	SQUARE D
MB1-MB2	2	MOTOR CIRCUIT BREAKER	3 POLE, 600V CIRCUIT BREAKER; SIZED TO MEET ELECTRICAL REQUIREMENTS, AUXILIARY CONTACTS	HDL36###-AA, S29450	SQUARE D
MCB	1	MAIN CIRCUIT BREAKER	3 POLE, 600V CIRCUIT BREAKER; SIZED TO MEET ELECTRICAL REQUIREMENTS	HDL#####	SQUARE D
MCB-INTLK	1	MECHANICAL BREAKER INTERLOCK	BREAKER INTERLOCK MECHANISM	N/A	N/A
NTL	1	NEUTRAL TERMINAL BLOCK	1 POLE POWER DISTRIBUTION BLOCK	9080LBA16####	SQUARE D
PDB	1	POWER DISTRIBUTION BLOCK	3 POLE POWER DISTRIBUTION BLOCK	9080LBA36####	SQUARE D
PLC	1	PROGRAMMABLE LOGIC CONTROLLER	MICRO 870 PLC, 24VDC INPUT POWER, INTEGRAL I/O -14 24VDC DISCRETE INPUTS, 10 RELAY OUTPUTS; 100BASE-T RJ-45 PORT, DNP3 PROTOCOL COMMUNICATION; W/ BUS TERMINATOR MODULE (END CAP). SLOT 1: REAL-TIME CLOCK PLUG-IN MODULE SLOT 2: 4-CHANNEL ANALOG INPUT PLUG-IN MODULE SLOT 3: NOT USED SLOT 4: MICRO 800EXPANSION I/O MODULE, 16-POINT DISCRETE INPUT, 24VDC	PLC: 2080-L70E-24QWBN END CAP: 2085-ECR SLOT 1: 2085-MEMBAK-RTC2 SLOT 2: 2080-IF4 SLOT 3: N/A SLOT 4: 2085-IQ16	ALLEN BRADLEY
PL	9	INDICATING LIGHT (24 VDC)	PROJECTING PUSH-TO-TEST INDICATING LIGHT, BLACK BEZEL, UNIVERSAL LED, 24VDC, 22mm BODY, NO/NC CONTACTS, COLOR AS INDICATED.	XB5AW23B5 (GREEN) XB5AW24B5 (RED)	SCHNEIDER ELECTRIC
PL2	1	INDICATING LIGHT (120 VAC)	PROJECTING PUSH-TO-TEST INDICATING LIGHT, BLACK BEZEL, UNIVERSAL LED, 110-120VAC, 22mm BODY, NO/NC CONTACTS, COLOR AS INDICATED.	XB5AW21G5 (WHITE)	SCHNEIDER ELECTRIC
PM, PM-UTILITY	2	PHASE MONITOR RELAY	UTILITY VOLTAGE 208 OR 240VAC: PHASE MONITOR RELAY, 11-PIN, 190-270VAC, 10A UTILITY VOLTAGE 480VAC: PHASE MONITOR RELAY, 8-PIN, 430-480VAC, 10A	SLA-230A-ALA (208/240 VAC) RELAY BASE: RB-11 SLA-440-ASA (480VAC) RELAY BASE: RB-08	ATC DIVERSIFIED ELECTRONICS
PS	1	POWER SUPPLY	INPUT: 100-240 VAC; OUTPUT: 24-28 VDC, 120W; DIN RAIL MOUNT SWITCHED MODE POWER SUPPLY	CP5.241	PULS
PWM	1	POWER MONITOR	3 PH POWER MONITOR; 120 VAC INPUT, 5A NOMINAL CT INPUT, LCD DISPLAY, 100BASET ETHERNET, FOUR 4-20mA ANALOG OUTPUTS	SHARK 250-60-10-V2-D2-INP100S-20M AOS-X	ELECTRO INDUSTRIES
R1-R2	2	DPDT RELAY	RELAY, DPDT; INDICATOR AND CHECK BUTTON; 120 VAC COIL; 8-PIN W/ RELAY BASE	RELAY: RR2P-ULC-AC120V RELAY BASE: SR2P-06	IDEC
SC	1	SURGE CAPACITOR	600V, 3 PH, 4W, SURGE CAPACITOR	LA303(240 VAC) LA603 (480 VAC)	DELTA
SC1-4	A/R	SIGNAL CONDITIONERS (ANALOG SIGNALS)	SURGE PROTECTION FOR 2-WIRE FLOATING ANALOG SIGNAL (4-20 mA) CURRENT LOOPS	TTC-6-1X2-M-24DC-UT-I	PHOENIX CONTACT
SPD1	1	SURGE PROTECTION DEVICE	120 VAC SURGE PROTECTION DEVICE	PLT-SEC	PHOENIX CONTACT
SPD2	2	COAXIAL SURGE PROTECTION DEVICE	COAXIAL RF SURGE PROTECTOR, SMA-SMA TYPE CONNECTOR	GTH-SFF-AL	POLYPHASER
SPD3	3	INDUCTIVE LOAD VOLTAGE SUPPRESSOR	120VAC R-C TYPE VOLTAGE SUPPRESSOR FOR INDUCTIVE LOAD VOLTAGEKICKBACK	SNUB0000	RED LION
SS	2	SELECTOR SWITCH	22mm, DOUBLE INSULATED, STANDARD OPERATOR, 3 POSITION, MAINTAINED, BLACK, 2 N.O. CONTACTS	XB5AD33	SQUARE D
SS	4	SELECTOR SWITCH	OPERATOR ADD-ON CONTACT BLOCK, 1 N.O. CONTACT	ZBE101	SQUARE D
SS	2	SELECTOR SWITCH	OPERATOR ADD-ON CONTACT BLOCK, 1 N.C. CONTACT	ZBE102	SQUARE D
STARTER1-2	2	REDUCED VOLTAGE SOFT STARTER (RVSS) PUMP MOTORS >= 20 HP ACROSS THE LINE (ATL) STARTER PUMP MOTORS < 20 HP	RVSS 120 VAC CONTROL POWER, INTERNAL BYPASS WITH FAN OPTION FOR CORRESPONDING FRAME SIZE ATL MAGNETIC STARTER FOR AC INDUCTIVE LOADS, AC COIL; 600 VAC RATING; WITH OVERLOADS SIZED FOR PUMP APPLICATION, EXTERNAL RESET MECHANISM	RVSS ALTISTART ATS22D##S6U ALTISTART VW3G22U40# ATL 8536 SERIES	RVSS SQUARE D ATL SQUARE D
TB1	A/R	TERMINAL BLOCKS	SINGLE LEVEL TERMINAL BLOCKS, 30 A MIN, 10-26 AWG; INCLUDE END COVERS/CLAMPS	3044102 UT4	PHOENIX CONTACT
TB2	A/R	TERMINAL BLOCKS	DUAL LEVEL TERMINAL BLOCKS, 30 A MIN, 10-26 AWG; INCLUDE END COVERS/CLAMPS	3044814 UTTB 4	PHOENIX CONTACT
TMR	1	SITE LIGHT TIMER	SPRING WOUND COUNTDOWN TIMER, 60 MINUTE, SPST, 125-277 VAC	FF60MC	INTERMATIC
UPS	1	UNINTERRUPTIBLE POWER SUPPLY	INPUT: 24 VDC / 12 VDC BATTERY BACKUP; OUTPUT: 24 VDC; DIN RAIL MOUNT UPS	UB10.241	PULS
XFMR	1	CONTROL POWER TRANSFORMER	480/240 VAC PRIMARY, 120 VAC SECONDARY, 60 Hz; INDUSTRIAL CONTROL POWER TRANSFORMER	9070T3000D31	SQUARE D

*A/R = AS REQUIRED

Lift Station Control Panel Material List

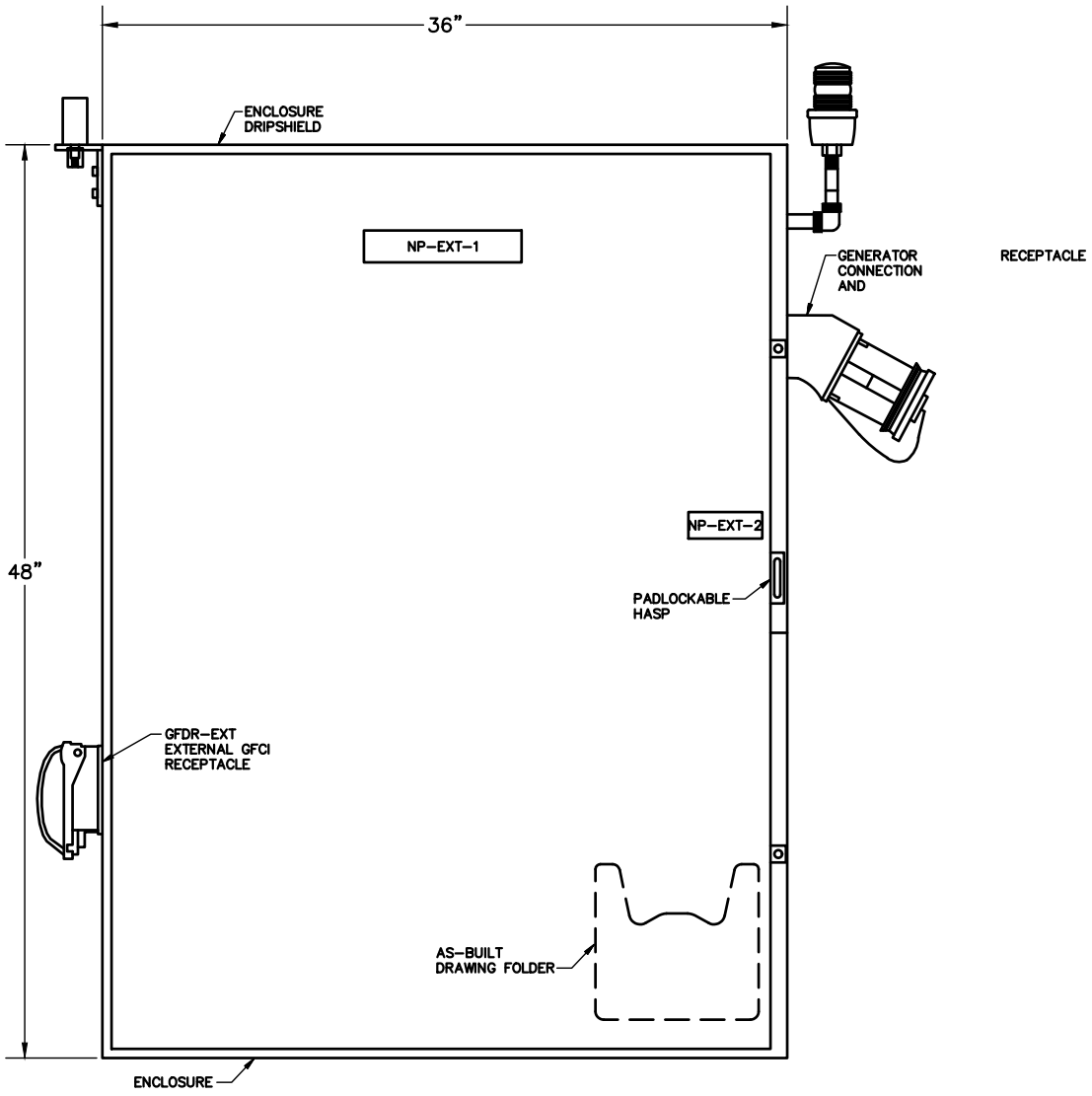
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

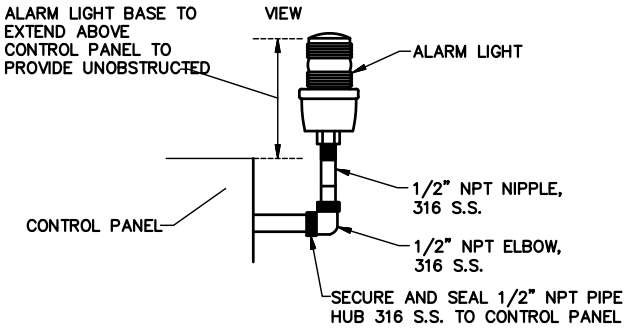
Revision D-24

DATE APPROVED:
FEB 26, 2025

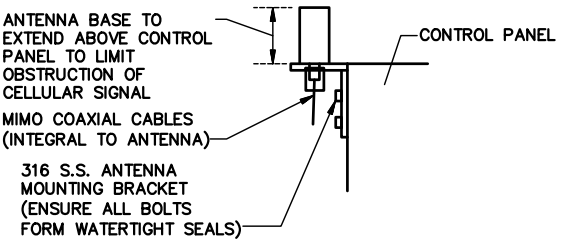
DRAWING No.
67e



ENCLOSURE EXTERIOR
FRONT LAYOUT



ALARM LIGHT INSTALLATION DETAIL
NOT TO SCALE



CELLULAR ANTENNA INSTALLATION DETAIL
NOT TO SCALE

Duplex Lift Station Control Panel - 480V/3PH 20HP and up

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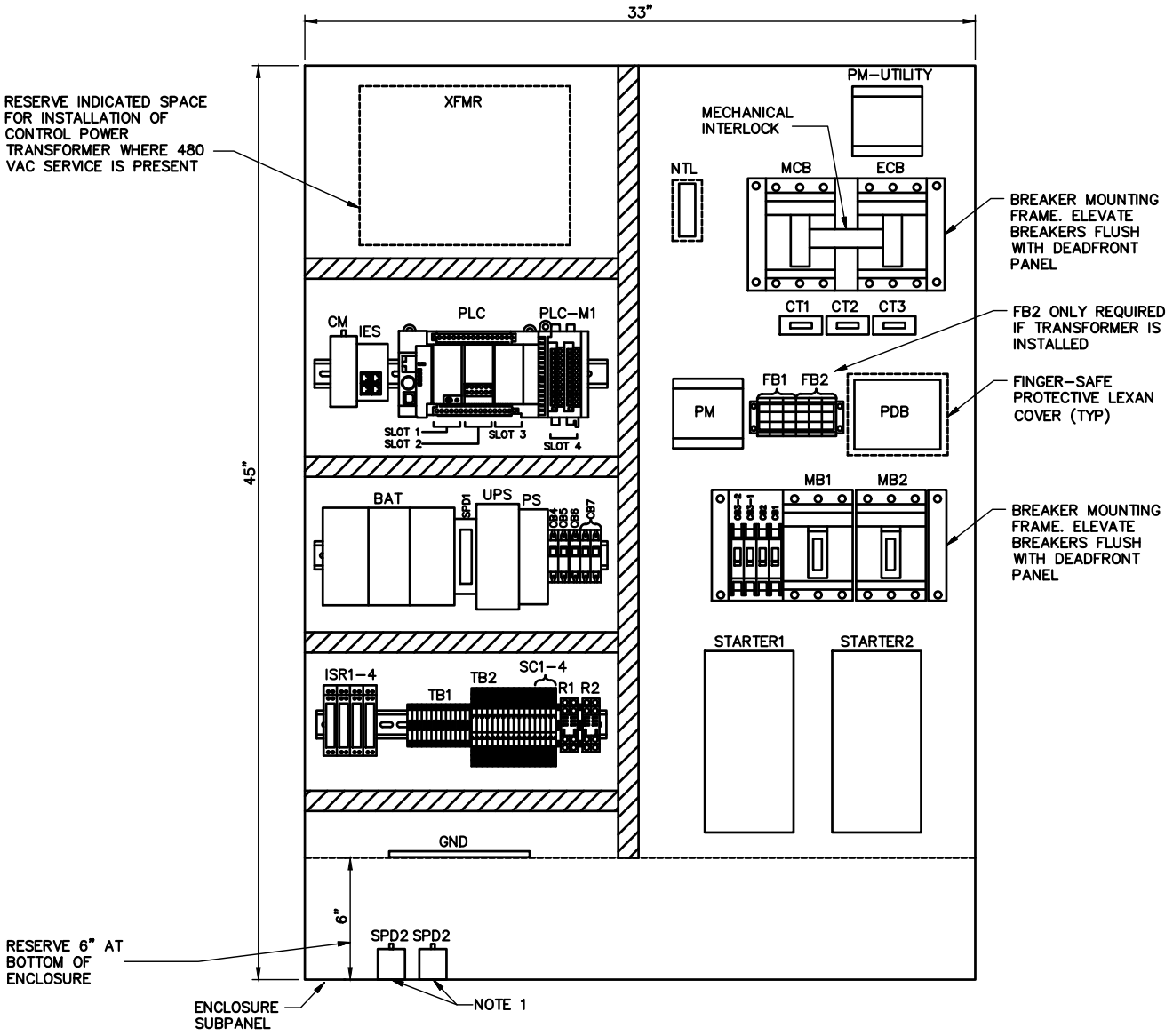
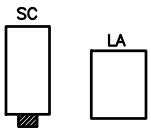
68a



ENCLOSURE INTERIOR
SUBPANEL LAYOUT



SURGE CAPACITOR AND LINE ARRESTOR (480 VAC) PROVIDED AND INSTALLED BY OTHERS

NOTES:
1. COAXIAL CABLE SPDs ARE BULKHEAD-MOUNTED ON BOTTOM PANEL OF ENCLOSURE.

Duplex Lift Station Control Panel Subplate View - 480V/3PH 20HP and up

SEACOAST UTILITY AUTHORITY

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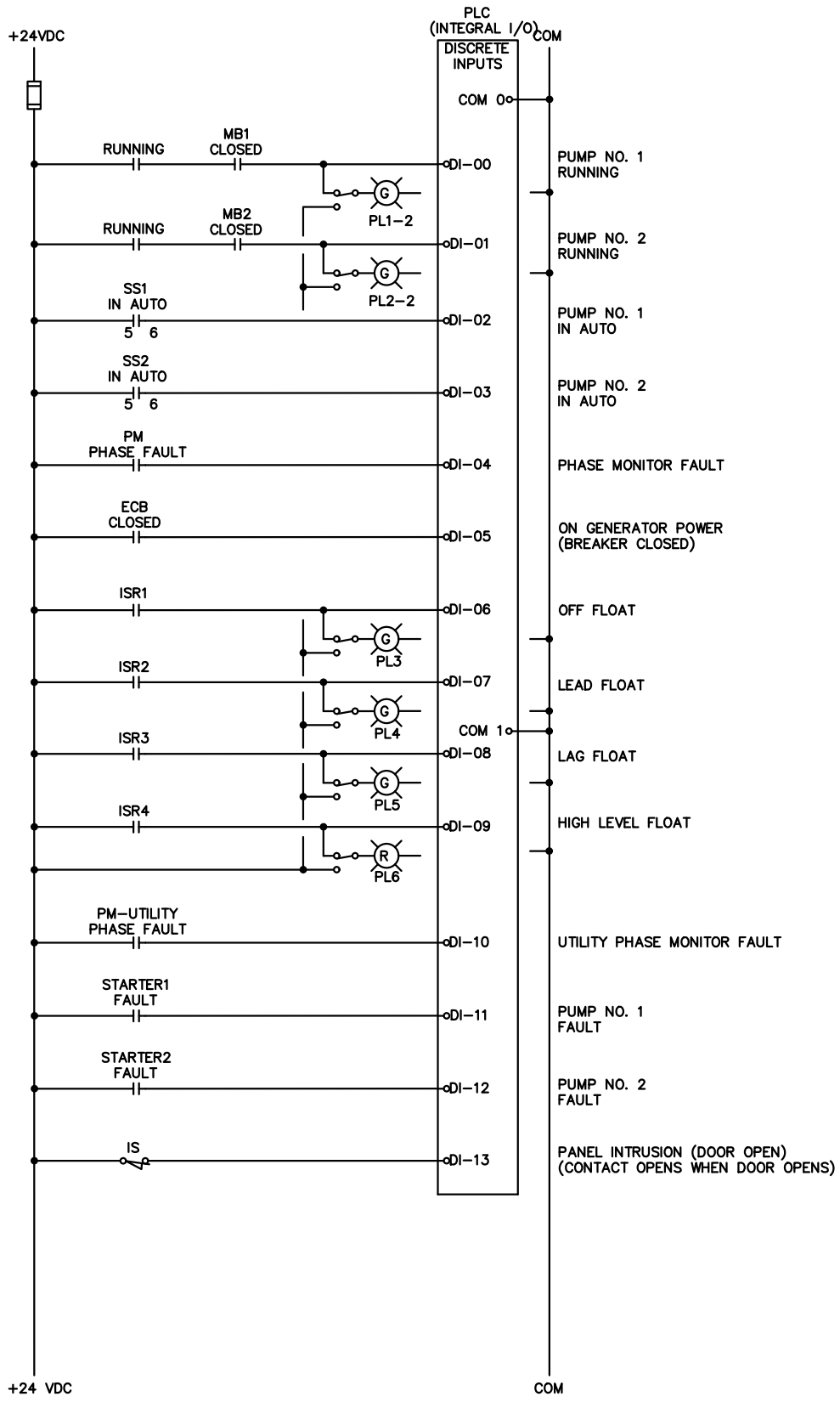

INPUT/OUTPUT SCHEMATICS

Duplex Lift Station Control Panel Schematic - 480V/3PH 20HP and up

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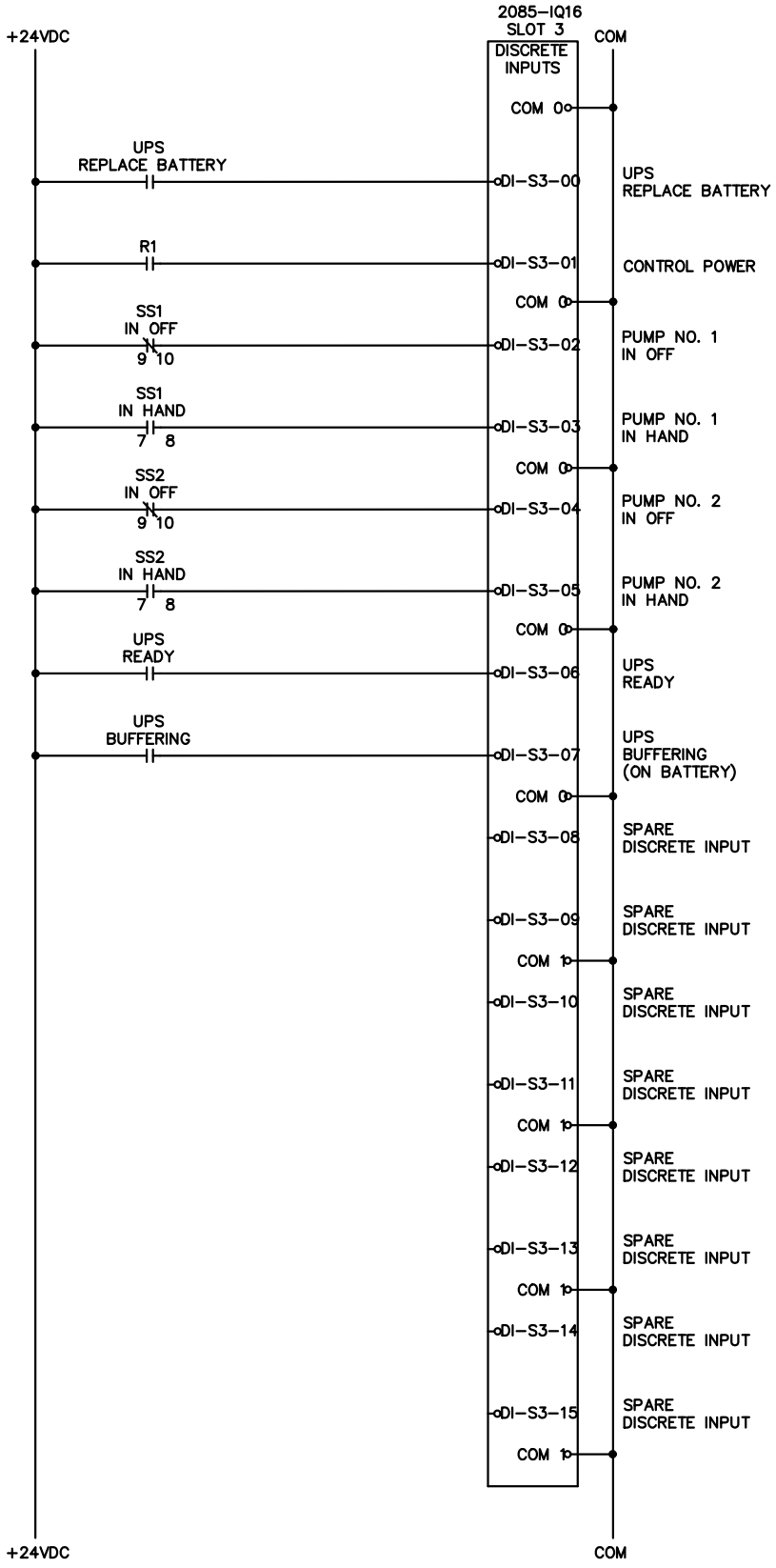
DRAWING No. 68c



INPUT/OUTPUT SCHEMATICS

Duplex Lift Station Control Panel Schematic - 480V/3PH 20HP and up

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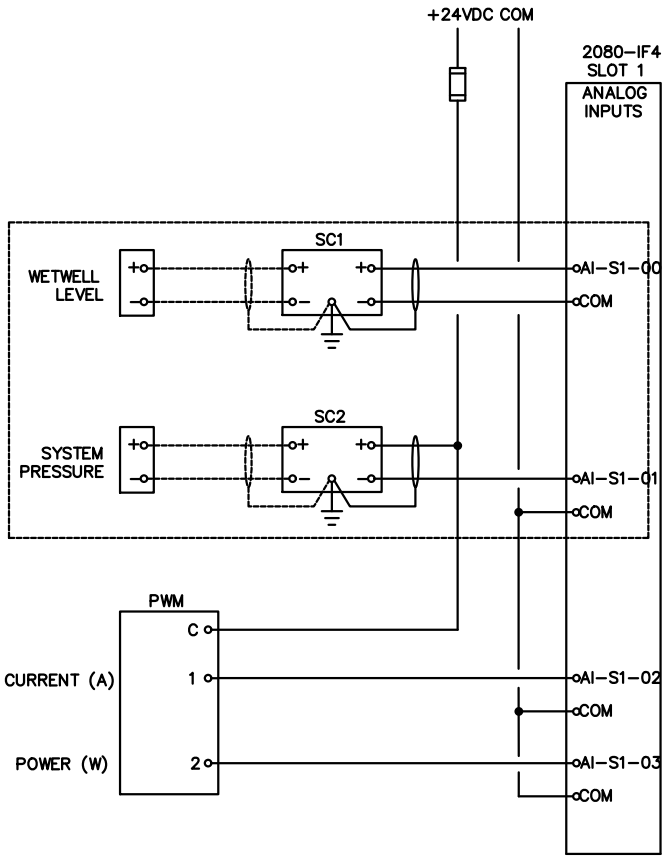
DRAWING No. 68d



INPUT/OUTPUT SCHEMATICS

Duplex Lift Station Control Panel Schematic - 480V/3PH 20HP and up

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DATE APPROVED: FEB 26, 2025

DRAWING No. 68e

SUMMARIZED PARTS LIST: SECTION 1				
DEVICE TAG	QTY.	MANUFACTURER	TYPE NUMBER	DESCRIPTION
AL	1	FEDERAL SIGNAL	LP3P-120R	120VAC RED STROBE LIGHT, FEMALE PIPE FITTING
AL	1	McMASTER-CARR	4452K414	ELBOW, FNPT, 90°, 1/2", 316 S.S., 150 PSI
AL	1	THOMAS & BETTS	H050-TB	HUB, 1/2", ZINC
AL	2	McMASTER-CARR	4548K175	NIPPLE, 1/2" x 3", 316 S.S.
BATTERY MODULE	1	PULS	UZK12.071	STANDARD VERSION BATTERY MODULE 12V, 7Ah.
C.C.C.C. MECHANICAL INTERLOCK	1	SHOP	A & J	C.C.C.C. MECHANICAL CIRCUIT BREAKER INTERLOCK MECHANISM, ALUMINUM
CB1;CB2	2	SQUARE D	HDL36060-AA	60 AMP/3 POLE/600V CIRCUIT BREAKER WITH AUXILLIARY CONTACTS
CCB1;CCB2	2	SQUARE D	720 QOU115	15 AMP SINGLE POLE MINIATURE CIRCUIT BREAKER
CCB3...CCB5	3	SQUARE D	720 QOU110	10 AMP/SINGLE POLE MINIATURE CIRCUIT BREAKER
CR1;CR2	2	SQUARE D	RUMC32F7	ZELIO UNIVERSAL TUBE BASE RELAY, 3PDT, 120VAC, CYLINDRICAL, LOCKABLE TEST BUTTON & LED
CR1;CR2	2	SQUARE D	RUZC3M	RELAY SOCKET, 11 PIN, DIN-RAIL MOUNT
CT1...CT3	3	WESCHLER	2SFT-101	SOLID CORE CURRENT TRANSFORMER. CURRENT RATIO 100:5. WINDOW I.D.: 1.13"
DS	1	SQUARE D	9007 AP221	DOOR SWITCH
ECB	1	SQUARE D	HDL36100-AA	100 AMP/3POLE/600V CIRCUIT BREAKER W/AUXILLARY CONTACTS
ENCLOSURE	1		DRIPSHIELD	316 S.S. DRIPSHIELD
ENCLOSURE	1	SCHAEFER	SPP-4836	12 GAUGE CARBON STEEL SUBPANEL, 45"H X 33"W
ENCLOSURE	1		DOOR & DEADFRONT STOP KIT	DOOR & DEADFRONT STOP KIT
ENCLOSURE	1		E_PRINT POCKET STUDS, WELDED, S.S.	E_PRINT POCKET STUDS, WELDED, S.S.
ENCLOSURE	1	SCHAEFER	SPN123RSS6-483612	"ENCLOSURE: A.) SIZE: 48""H x 36""W x 12""D B.) STYLE: SINGLE DOOR, WALL MOUNT C.) ENV. RATING: TYPE 12/3R D.) DOOR: 3-POINT PADLOCKING HANDLE E.) COMPOSITION: 14 GAUGE 316 S.S. F.) FINISH: POLISHED G.) 316 S.S. DRIPSHIELD"
ES	1	N-TRON	104TX	UNMANAGED ETHERNET SWITCH WITH FOUR 10/100BASE TX PORTS
F1	1	SQUARE D	9080 MHA10	END CLAMP
F1...F3	3	BUSSMANN	KTK-1	FAST ACTING FUSE, 600V, 1A
F1...F3;F7...F9	7	SQUARE D	9080 GF6	FUSE HOLDER
F7;F8	2	BUSSMANN	KTK-10	FAST ACTING FUSE, 600V, 10A
F9	1	BUSSMANN	KTK-20	FAST ACTING FUSE, 600V, 20A
F9	1	SQUARE D	9080 GF6B	END BARRIER FOR SQD.GF6 FUSE HOLDERS
GENERATOR RECEPTACLE	1	APPLETON	ADR1034-RS	100 AMP GENERATOR RECPT. 4 POLE, 3 WIRE, REVERSE SERVICE OPTION
GENERATOR RECEPTACLE	1	APPLETON	AJA-100	ANGLE ADAPTER FOR 100 AMP GENERATOR RECEPTACLE
GFDR	1	HUBBELL	GFTRST15SNAPW	15A WHITE TRWR SNAP GFR RECEPTACLE
GFDR	1	HUBBELL	SNAP2RA	RIGHT ANGLE, CLEAR TERMINAL WITH 6-INCH LEADS
GROUND BUS	1	PANDUIT	UGB2/0-414-12	12-PORT GROUND BAR KIT. ACCEPTS #14 - #4 AWG
GROUND BUS	1	PANDUIT	UGB-IN-SO	ISOLATION STAND-OFF FOR PANDUIT UNIVERSAL GROUND KITS
GROUND BUS	1	PANDUIT	CB35-36-CY	GROUND LUG. ONE-HOLE, OFFSET TONGUE. AWG: #6 - #14, 50A
GROUND BUS	1	PANDUIT	CLMAR2/0-14-Q	ANTI-ROTATIONAL LUG. ACCEPTS #14 - 2/0 AWG
LA	1	SQUARE D	6671 SDSA3650	600V 3 PHASE SURGE ARRESTER
MCB	1	SQUARE D	HDL36100	100 AMP/3 POLE/600V 25kA @ 240VAC, 18kA @ 480VAC, 14kA @ 600VAC CIRCUIT BREAKER
NEUTRAL	1	SQUARE D	9080 LBA163206	"1P POWER DISTRIBUTION BLOCK: LINE SIDE: 2 OPENINGS PER POLE (2/0 - #14 AWG), HIGH SCCR: (1/0 - #8 AWG) LOAD SIDE: 6 OPENINGS PER POLE (#4 - #14 AWG), HIGH SCCR: (#4 - #10 AWG)"
PDB	2	SQUARE D	9080 LBA363206	"3P POWER DISTRIBUTION BLOCK: LINE SIDE: 2 OPENINGS PER POLE (2/0 - #14 AWG), HIGH SCCR: (1/0 - #8 AWG) LOAD SIDE: 6 OPENINGS PER POLE (#4 - #14 AWG), HIGH SCCR: (#4 - #10 AWG)"
PL1...PL3;PL9	4	SQUARE D	ZB5AW143	22mm LED RED PROJECTING ILLUMINATED PUSHBUTTON
PL1...PL3;PL9	4	SQUARE D	ZB5AW0B45	RED LIGHT BLOCK WITH BODY/FIXING COLLAR WITH INTEGRAL LED 24V 1NO+1NC
PL4...PL8	5	SQUARE D	ZB5AW133	22mm LED GREEN PROJECTING ILLUMINATED PUSHBUTTON
PL4...PL8	5	SQUARE D	ZB5AW0B35	GREEN LIGHT BLOCK WITH BODY/FIXING COLLAR WITH INTEGRAL LED 24V 1NO+1NC
PL10	1	SQUARE D	ZB5AW113	22mm LED WHITE PROJECTING ILLUMINATED PUSHBUTTON
PL10	1	SQUARE D	ZB5AW0G11	WHITE LIGHT BLOCK WITH BODY/FIXING COLLAR WITH INTEGRAL LED 120V 1NO
PLC	1	ALLEN BRADLEY	1766-L32BXBA	"MICROLOGIX 1400 PLC CONTROLLER: A.) INPUT POWER: 24VDC B.) DIGITAL INPUTS: (12) FAST 24VDC, (8) NORMAL 24VDC C.) DIGITAL OUTPUTS: (6) RELAY, (3) FAST DC, (3) NORMAL DC D.) ANALOG INPUTS: (4) VOLTAGE INPUTS E.) ANALOG OUTPUTS: (2) VOLTAGE OUTPUTS F.) COMMS: CHANNEL 0- 8 PIN MINI DIN, CHANNEL 1- RJ-45, CHANNEL 2- 9 PIN D SHELL"
PLC	1	ALLEN BRADLEY	1766-MM1	MEMORY EXPANSION MODULE
PLC	1	ALLEN BRADLEY	1763-NC01	11.8" 8-PIN MINI DIN CABLE TO 6-PIN DH-485 TERMINAL
PM;PM-UTILITY	2	ATC DIVERSIFIED	SLA-440-ALE	PHASE MONITOR. 3 PHASE

Duplex Lift Station Control Panel Material List - 480V/3PH 20HP and up

SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision B-24

DATE APPROVED: FEB 26, 2025

DRAWING No. 68f

SUMMARIZED PARTS LIST: SECTION 1				
DEVICE TAG	QTY.	MANUFACTURER	TYPE NUMBER	DESCRIPTION
POWER MONITOR	1	EATON	PXM2250MA65145	"PXM2250 XPERT POWER METER WITH THE FOLLOWING: A.) POWER SUPPLY: 90–265VAC B.) DISPLAY: LCD C.) OUTPUTS: (4) ANALOG OUTPUT 4–20mA OPTION CARD"
PS1	1	PULS	CP5.241	DIN RAIL POWER SUPPLY FOR 1–PHASE SYSTEMS, AC 100–240V WIDE–RANGE INPUT, OUTPUT: DC 24V, 5A, DC–OK RELAY CONTACT, CONNECTION METHOD: SCREW TERMINALS
RES1...RES4	4	VISHAY DALE	RN60C4990F	499 OHM 1.2 WATT RESISTOR
RVSS1;RVSS2	2	SQUARE D	ATS22D47S6U	"ALTISTART™ 22 OPEN STYLE SOFTSTARTER: A.) HORSEPOWER RATING: 30HP B.) AMP RATING: 47A C.) INTERNAL BYPASS"
RVSS1;RVSS2	2	SQUARE D	VW3G22U400	FAN OPTION – SIZE A – 110 V, FOR USE WITH ALTISTART 22 SOFT STARTERS (ATS22D17–D47S6)
SA1;SA2	2	ASCO	DRS–036	SIGNAL SURGE ARRESTER
SC	1	DELTA	CA603R	SURGE CAPACITOR, 3 PHASE. 4–WIRE. 600V
SS1;SS2	2	SQUARE D	XB5AD33	HARMONY 22mm 3–POSITION SELECTOR SWITCH BLACK OPERATOR, 2 N.O. CONTACTS MARKED HAND OFF AUTO
SS1;SS2	4	SQUARE D	ZBE101	HARMONY, 22MM PUSH BUTTON, ADD ON CONTACT BLOCK, 1 NO, SCREW CLAMP TERMINAL
SS1;SS2	2	SQUARE D	ZBE102	HARMONY, 22MM PUSH BUTTON, ADD ON CONTACT BLOCK, 1 NC, SCREW CLAMP TERMINAL
T1	1	SQUARE D	9070T2000D1	480/240VAC/120VAC 2KVA INDUSTRIAL CONTROL TRANSFORMER
+SECTION 1–TB1	2	PHOENIX CONTACT	1201442 E/UK	END CLAMP
+SECTION 1–TB1	1	PHOENIX CONTACT	3047028 D–UT 2,5/10	END COVER FOR UT TERMINALS
TB1	12	PHOENIX CONTACT	3044102 UT 4	FEED–THROUGH TERMINAL BLOCK, AWG 26 – 10, TIGHTENING TORQUE: 5.3 – 7 IN–LBS
+SECTION 1–TB2...+SECTION 1–TB4	4	PHOENIX CONTACT	1201413 E/UK 1	END CLAMP, TALL
+SECTION 1–TB2;+SECTION 1–TB4	2	PHOENIX CONTACT	3047303 DP–UTTB 2,5/4	PARTITION PLATE FOR DOUBLE–LEVEL UT TERMINALS
TB2;TB4	13	PHOENIX CONTACT	3044814 UTTB 4	DOUBLE–LEVEL TERMINAL BLOCK, AWG: 26 – 10
+SECTION 1–TB4;TB2	2	PHOENIX CONTACT	3047293 D–UTTB 2,5/4	END COVER FOR DOUBLE–LEVEL UT TERMINALS
+SECTION 1–TB3	1	PHOENIX CONTACT	3214314 D–UT 2,5–3L	END COVER FOR TRIPLE–LEVEL UT TERMINALS
TB3	2	PHOENIX CONTACT	3214259 UT 2,5–3L	TRIPLE–LEVEL TERMINAL BLOCK, AWG: 26 – 12
TM1	1	INTERMATIC	FF60MC	AUTO–OFF TIMER, 60 MINUTES DECREMENTS
UPS	1	PULS	UB10.241	24V DC–UPS, INPUT: DC 24V –6%/+25%, OUTPUT: DC 24V, 10A/15A, SYSTEM DIMENSIONS WXHXD: 49X124X117MM, TEMPERATURE RANGE: –25°C...+60°C, CONNECTOR: SPRING–CLAMP TERMINALS, ALLOWED BATTERY SIZES: 12V, 3.9 TO 40AH

NOTES:

1. PUMPS UP TO 35HP AT 480V WILL USE APPLETON POWERTITE PARTS:
   - ANGLE ADAPTER AJA100
   - RECEPTACLE – ADR1034RS, USE SPRING LOADED DOOR ONLY

2. PUMPS LARGER THAN 35HP AT 480V WILL USE APPLETON POWERTITE PARTS:
   - ANGLE ADAPTER – AJA200
   - RECEPTACLE – ADR20034RS

Duplex Lift Station Control Panel Material List - 480V/3PH 20HP and up

SEACOAST UTILITY AUTHORITY

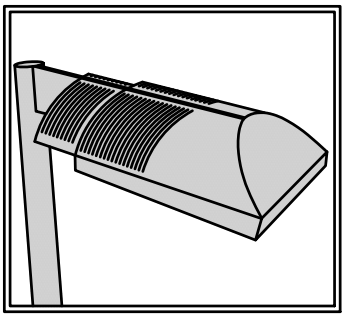
CONSTRUCTION STANDARDS AND DETAILS

Revision B–24

DATE APPROVED: FEB 26, 2025

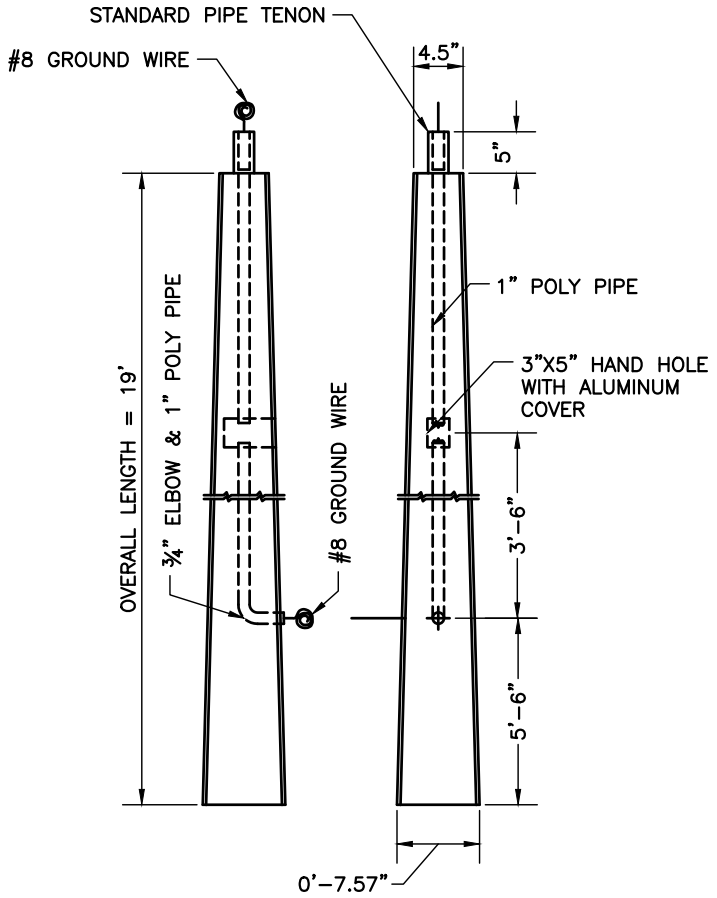
DRAWING No. 68g

SITE LIGHT



SPEC. LIGHTING FIXTURES TO BE KIM LIGHTING THE ARCHETYPE SERIES
MODEL: ARX16–3–4K–35–UV–BL–ST–A30–FGL–SVSF

CONFIGURATION: 1SA
FIXTURE: ARX16
DISTRIBUTION: 3 – TYPE III
COLOR TEMPERATURE: 4K – 4000K
DRIVE CURRENT: 35 – 350mA
VOLTAGES: UV – 120–277V
FIXTURE FINISH: BL – BLACK
ARM SUPPORT: ST – STRAIGHT
PHOTOCELL OPTIONS: A30 – 120V BUTTON PHOTOCELL
LENS OPTION: FGL – FLAT GLASS LENS
MOUNTING OPTIONS: SVSF – VERTICAL SLIPFITTER MOUNT SQUARE FOR 2" PIPE TENON, (2–3/8" O.D.)



19 FT TYPE I –0 POLE

LENGTH OF POLE	19 FT			
EMBEDMENT SPECIFIED	7 FT			
HEIGHT ABOVE GROUND	12 FT			
WEIGHT	818 LBS			
WIND VELOCITY (MPH)	150	160	170	180
MAXIMUM EPA* (SQ FT)				

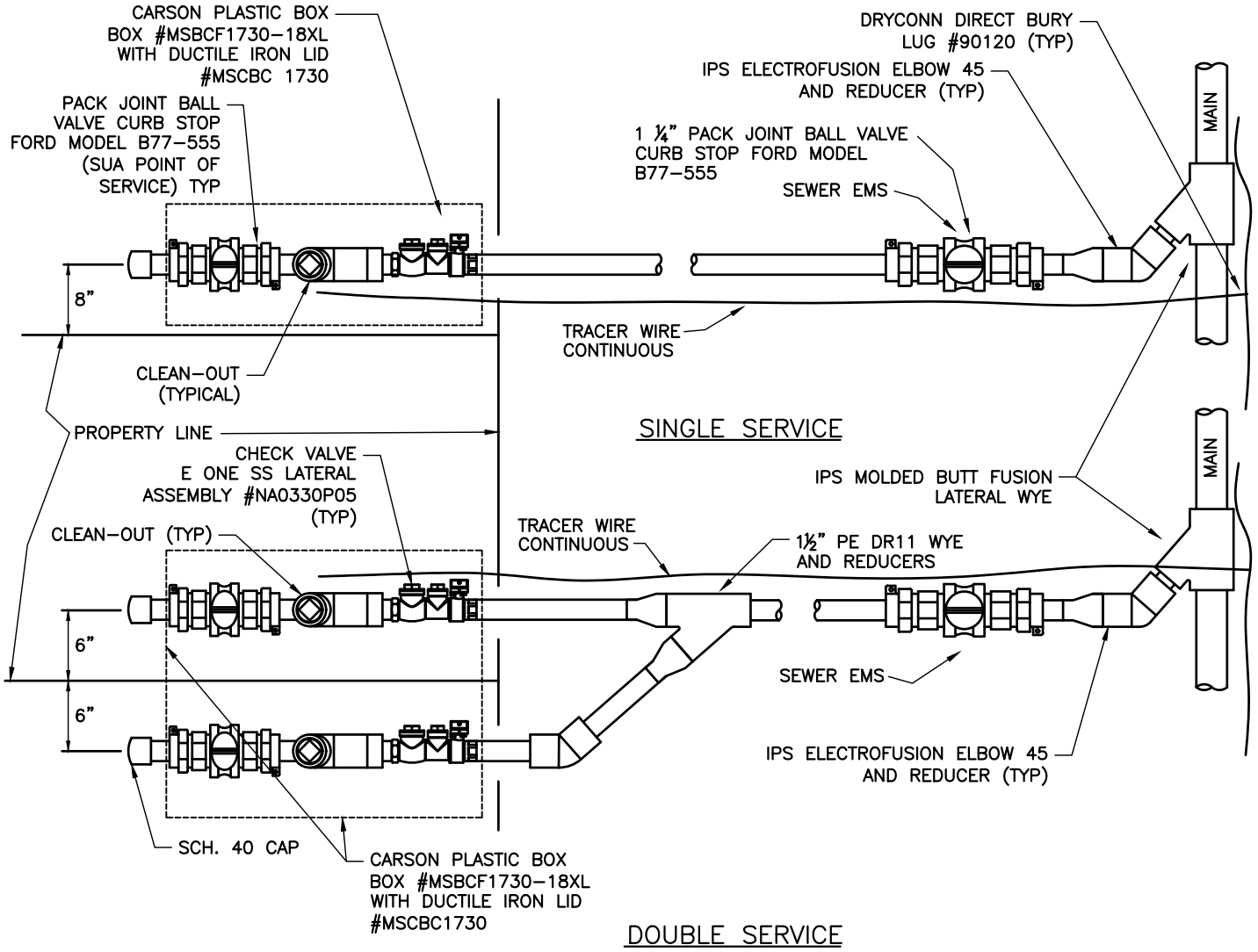
ABOVE EMBEDMENT SHOWN IN SAND.
OTHER EMBEDMENT DEPTH MAY BE REQUIRED FOR OTHER SOIL CONDITION.

STANDARD PIPE TENON SIZE	
NOMINAL DIAMETER (IN)	OUTSIDE DIAMETER (IN)
2"	2 ⅜"

Lift Station Yard Light

SEACOAST UTILITY AUTHORITY
CONSTRUCTION STANDARDS AND DETAILS
Revision C–23

DATE APPROVED: FEB 26, 2025
DRAWING No. 69



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. SERVICE PIPE FITTINGS AND VALVES FOR ALL LIFT STATIONS SHALL BE 1¼" PE4710 GREEN IPS DR 11. NO COUPLINGS ALLOWED.
2. SERVICE FITTINGS SHALL BE STRONGBRIDGE INTERNATIONAL (SBI) OR APPROVED EQUAL. NO COUPLINGS ALLOWED.
3. CLEANOUT FITTINGS SHALL BE SPEARS MANUFACTURING COMPANY OR EQUAL, SCHEDULE 40 PVC. NO DWV FITTINGS, SCHEDULE 40 MALE ADAPTERS, SLIP COUPLINGS, SLIP BUSHINGS, OR SCHEDULE 80 PVC FITTINGS ARE ALLOWED.
4. TRACER WIRE TO BE #12 AWG SOLID COPPER, TYPE THHN WITH GREEN INSULATION. USE 11" CABLE TIES TO CONNECT TO PVC PIPE AND FITTINGS. TRACER WIRE SHALL WRAP AROUND AND TERMINATE INSIDE CLEAN OUT BOX WITH ENOUGH SLACK TO EXTEND 2-3' ABOVE GRADE.
5. PVC PRIMER AND CEMENT SHALL BE OATEY MEDIUM-BODIED.
6. CURB STOPS SHALL BE FULL PORT BALL VALVES WITH PACK JOINT FOR PVC PIPE BOTH ENDS, FORD METER BOX COMPANY MODEL B77-555.
7. ZIP TIE TRACER WIRE TO PIPE EVERY 5'.

Low Pressure Sewer Service

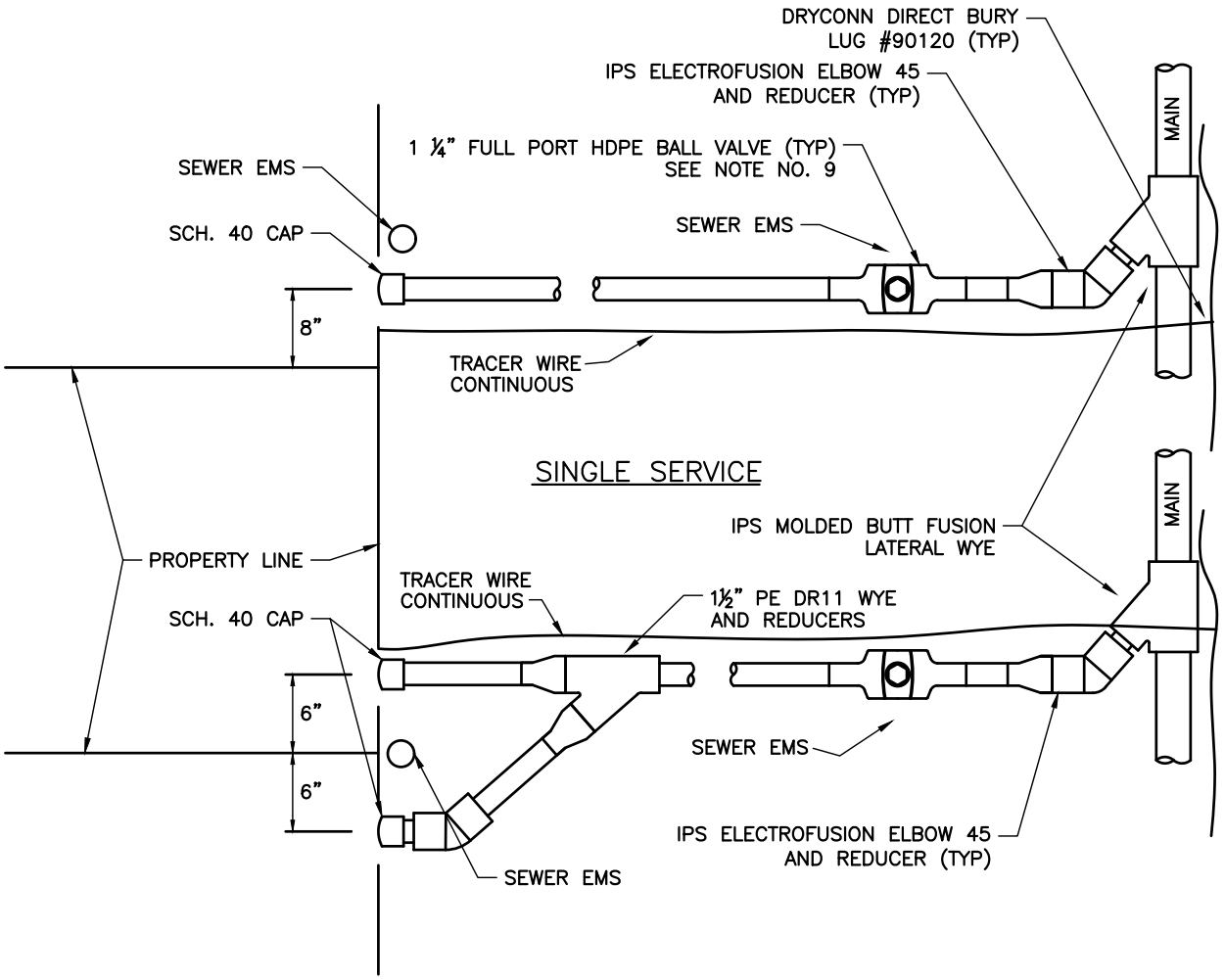
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D-25

DATE APPROVED: FEB 26, 2025

DRAWING No. 70



DOUBLE SERVICE

NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. SERVICE PIPE FITTINGS AND VALVES FOR ALL LIFT STATIONS SHALL BE 1¼" PE4710 GREEN IPS DR 11. NO COUPLINGS ALLOWED.
2. SERVICE FITTINGS SHALL BE STRONGBRIDGE INTERNATIONAL (SBI) OR APPROVED EQUAL. NO COUPLINGS ALLOWED.
3. CLEANOUT FITTINGS SHALL BE SPEARS MANUFACTURING COMPANY OR EQUAL, SCHEDULE 40 PVC. NO DWV FITTINGS, SCHEDULE 40 MALE ADAPTERS, SLIP COUPLINGS, SLIP BUSHINGS, OR SCHEDULE 80 PVC FITTINGS ARE ALLOWED.
4. TRACER WIRE TO BE #12 AWG SOLID COPPER, TYPE THHN WITH GREEN INSULATION. USE 11" CABLE TIES TO CONNECT TO PVC PIPE AND FITTINGS. TRACER WIRE SHALL WRAP AROUND AND TERMINATE INSIDE CLEAN OUT BOX WITH ENOUGH SLACK TO EXTEND 2–3' ABOVE GRADE.
5. PVC PRIMER AND CEMENT SHALL BE OATEY MEDIUM–BODIED.
6. CURB STOPS SHALL BE FULL PORT BALL VALVES WITH PACK JOINT FOR PVC PIPE BOTH ENDS, FORD METER BOX COMPANY MODEL B77–555.
7. ZIP TIE TRACER WIRE TO PIPE EVERY 5'.
8. SHORT SIDE SERVICE TO BE CAPPED AFTER BALL VALVE.
9. IF THE BALL VALVE IS LOCATED IN DRIVEWAY, USE 1 ¼" PACK JOINT BALL VALVE CURB STOP FORD MODEL B77–555.

Low Pressure Sewer Service (Temporary)

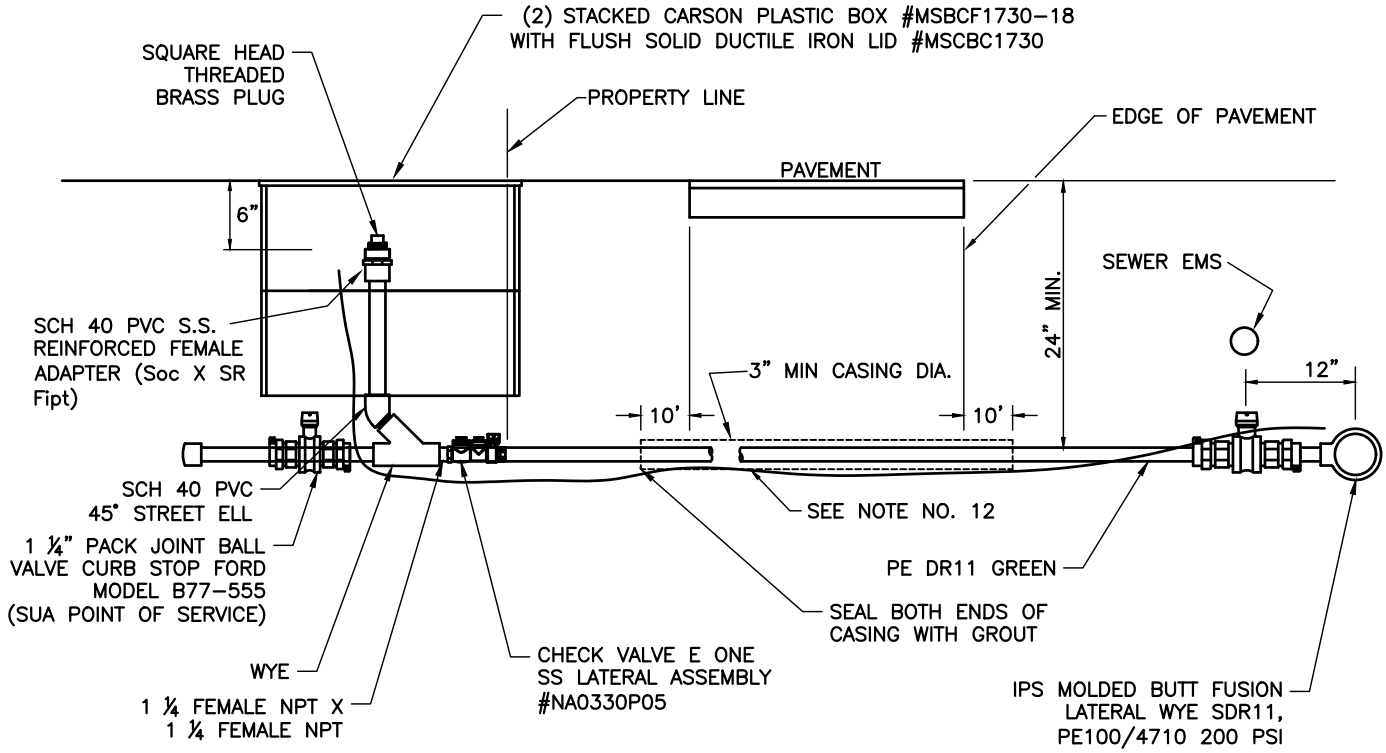
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D–25

DATE APPROVED: FEB 26, 2025

DRAWING No. 71



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. CASINGS SHALL BE REQUIRED FOR ALL LONG SIDE SERVICES INSTALLED USING EITHER JACK AND BORE OR OPEN CUT.
2. SUCCESSIVE SERVICE LINES OFF THE LOW PRESSURE FORCE MAIN SHALL BE SPACED A MINIMUM OF 18" APART.
3. SERVICE FITTINGS SHALL BE STRONGBRIDGE INTERNATIONAL (SBI) OR APPROVED EQUAL. NO COUPLINGS ALLOWED.
4. SERVICE PIPE SHALL BE PE4710 GREEN IPS DR11. NO COUPLINGS ALLOWED.
5. CLEANOUT FITTINGS SHALL BE SPEARS MANUFACTURING COMPANY ONLY, SCHEDULE 40 PVC. NO DWV FITTINGS, SCHEDULE 40 MALE ADAPTERS, SLIP COUPLINGS, SLIP BUSHINGS, OR SCHEDULE 80 PVC FITTINGS ARE ALLOWED.
6. PLUGS SHALL BE SCHEDULE 40 RED BRASS, SOLID TYPE WITH SQUARE HEAD.
7. TRACER WIRE TO BE #12 AWG SOLID COPPER, TYPE THHN WITH GREEN INSULATION. USE 11" CABLE TIES TO CONNECT TO PVC PIPE AND FITTINGS. TRACER WIRE SHALL WRAP AROUND AND TERMINATE INSIDE CLEANOUT BOX WITH ENOUGH SLACK TO EXTEND 2-3' ABOVE GRADE.
8. PVC PRIMER AND CEMENT SHALL BE OATEY MEDIUM BODIED.
9. THREAD SEALING COMPOUND - PTFE PASTE SHALL BE LA-CO SLIC-TITE OR HERCULES REAL-TUFF.
10. CURB STOPS SHALL BE FULL PORT BALL VALVES WITH PACK JOINT FOR PVC PIPE BOTH ENDS, FORD METER BOX COMPANY MODEL B77-555.
11. SERVICE CASING SHALL NOT BE INSTALLED BY WATER JETTING UNDER ROADWAY.
12. GALVANIZED CASING REQUIRED FOR ANY INSTALLATION REQUIRING A JACK AND BORE, SCHEDULE 40 PVC MAY BE USED FOR AN OPEN CUT INSTALLATION WITH THE APPROVAL OF SUA, CASING SHOULD EXTEND TEN (10) FEET BEYOND EDGE OF PAVEMENT AND SIZED AS FOLLOWS:
    A.) 2" MAIN USE 4" CASING
    B.) 3" MAIN USE 6" CASING
13. CASINGS ARE NOT REQUIRED FOR HORIZONTAL DIRECTIONAL DRILLING.
14. ALL OTHER UTILITIES SHALL BE LOCATED 4' MINIMUM CLEAR OF ALL LOW PRESSURE MAINS AND SERVICES.
15. ZIP TIE TRACER WIRE TO PIPE EVERY 5'.
16. REFER TO REGULATORY REQUIREMENTS FOR MINIMUM COVER IN GREEN SPACES AND UNDER PAVEMENT.

Low Pressure Sewer Service Installation

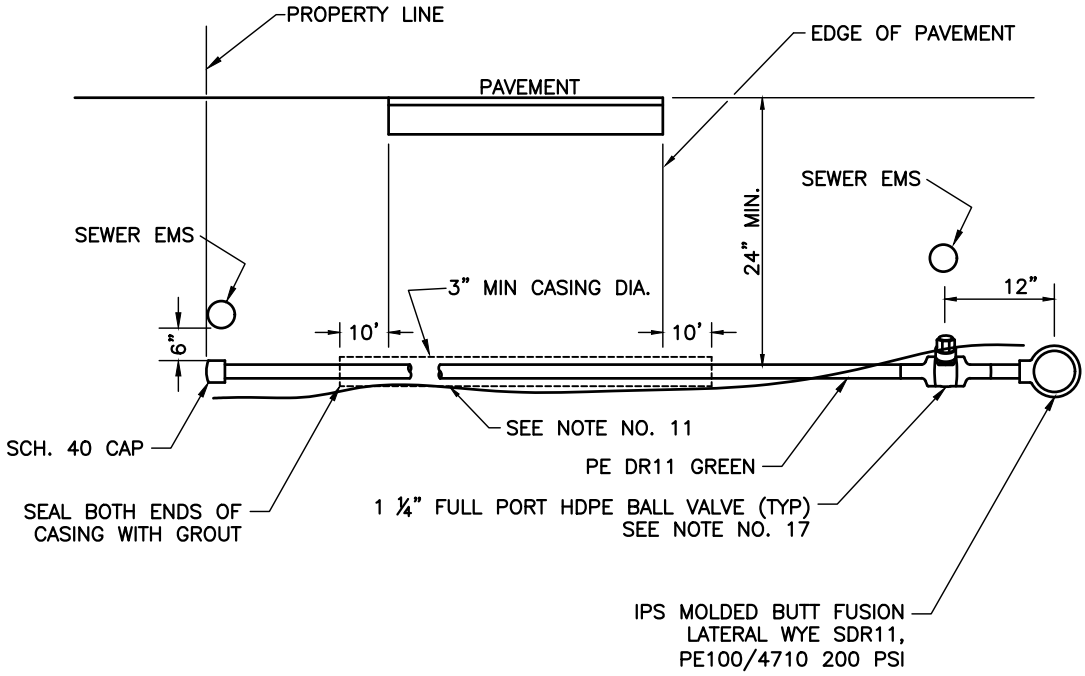
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D-25

DATE APPROVED: FEB 26, 2025

DRAWING No. 72



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. CASINGS SHALL BE REQUIRED FOR ALL LONG SIDE SERVICES.
2. SUCCESSIVE SERVICE LINES OFF THE LOW PRESSURE FORCE MAIN SHALL BE SPACED A MINIMUM OF 18" APART.
3. SERVICE PIPE SHALL BE PE4710 GREEN IPS DR11. NO COUPLINGS ALLOWED.
4. SERVICE FITTINGS SHALL BE STRONGBRIDGE INTERNATIONAL (SBI) OR APPROVED EQUAL. NO COUPLINGS ALLOWED.
5. PLUGS SHALL BE SCHEDULE 40 RED BRASS, SOLID TYPE WITH SQUARE HEAD.
6. TRACER WIRE TO BE #12 AWG SOLID COPPER, TYPE THHN WITH GREEN INSULATION. USE 11" CABLE TIES TO CONNECT TO PVC PIPE AND FITTINGS. TRACER WIRE SHALL WRAP AROUND AND TERMINATE INSIDE CLEANOUT BOX WITH ENOUGH SLACK TO EXTEND 2–3' ABOVE GRADE.
7. PVC PRIMER AND CEMENT SHALL BE OATEY MEDIUM BODIED.
8. THREAD SEALING COMPOUND – PTFE PASTE SHALL BE LA–CO SLIC–TITE OR HERCULES REAL–TUFF.
9. CURB STOPS SHALL BE FULL PORT BALL VALVES WITH PACK JOINT FOR PVC PIPE BOTH ENDS, FORD METER BOX COMPANY MODEL B77–555.
10. SERVICE CASING SHALL NOT BE INSTALLED BY WATER JETTING UNDER ROADWAY.
11. GALVANIZED CASING REQUIRED FOR ANY INSTALLATION REQUIRING A JACK AND BORE, SCHEDULE 40 PVC MAY BE USED FOR AN OPEN CUT INSTALLATION WITH THE APPROVAL OF SUA, CASING SHOULD EXTEND TEN (10) FEET BEYOND EDGE OF PAVEMENT AND SIZED AS FOLLOWS:
    A.) 2" MAIN USE 4" CASING
    B.) 3" MAIN USE 6" CASING
12. CASINGS ARE NOT REQUIRED FOR HORIZONTAL DIRECTIONAL DRILLING.
13. ALL OTHER UTILITIES SHALL BE LOCATED 4' MINIMUM CLEAR OF ALL LOW PRESSURE MAINS AND SERVICES.
14. ZIP TIE TRACER WIRE TO PIPE EVERY 5'.
15. REFER TO REGULATORY REQUIREMENTS FOR MINIMUM COVER IN GREEN SPACES AND UNDER PAVEMENT.
16. SHORT SIDE SERVICE TO BE CAPPED AFTER BALL VALVE.
17. IF THE BALL VALVE IS LOCATED IN DRIVEWAY, USE 1 ¼" PACK JOINT BALL VALVE CURB STOP FORD MODEL B77–555.

Low Pressure Sewer Service Installation (Temporary)

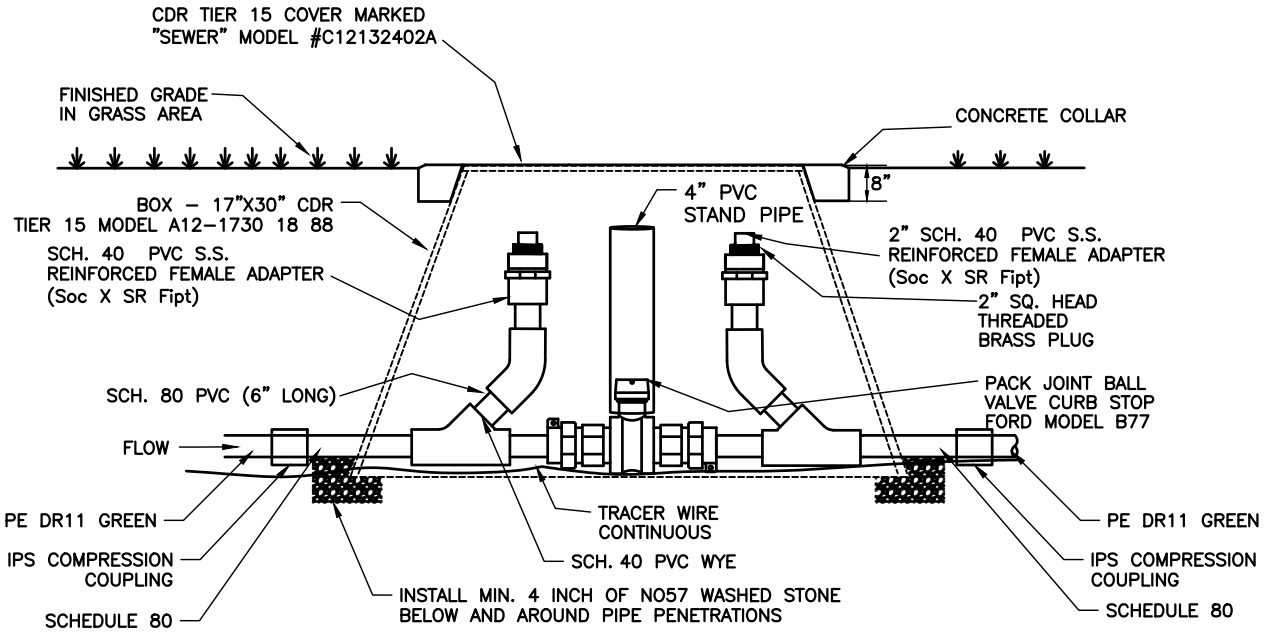
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

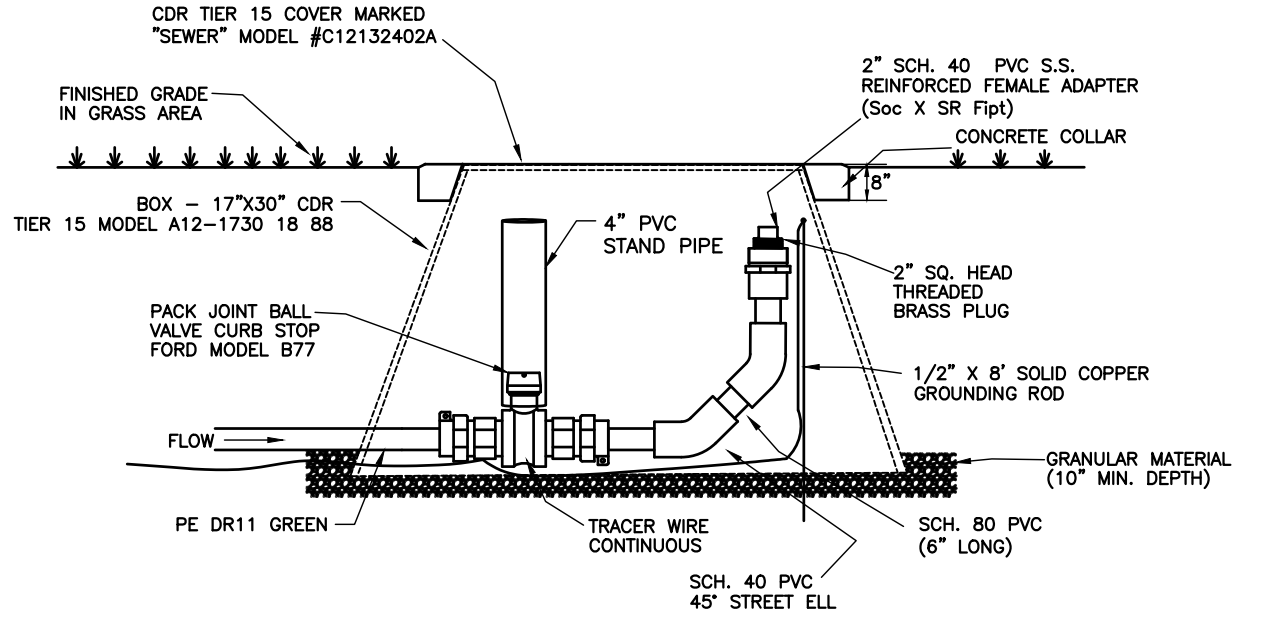
Revision A–25

DATE APPROVED: FEB 26, 2025

DRAWING No. 73



In-Line Cleanout Port and Main Line Valve



Terminal Cleanout Port and Main Line Valve

NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. MAINLINE VALVES SHALL BE FULL PORT BALL VALVES WITH PACK JOINT FOR PVC PIPE BOTH ENDS, FORD METER BOX B77
2. PIPE AND FITTING SIZE WILL BE DETERMINED BY PROJECT FLOW CALCULATIONS.
3. DEPTH SHALL BE 24" UNLESS OTHERWISE REQUIRED BY ROAD PERMITTING AGENCY.
4. ZIP TRACER WIRE TO PIPE EVERY 10'.

Low Pressure Sewer Cleanout Port with Valve

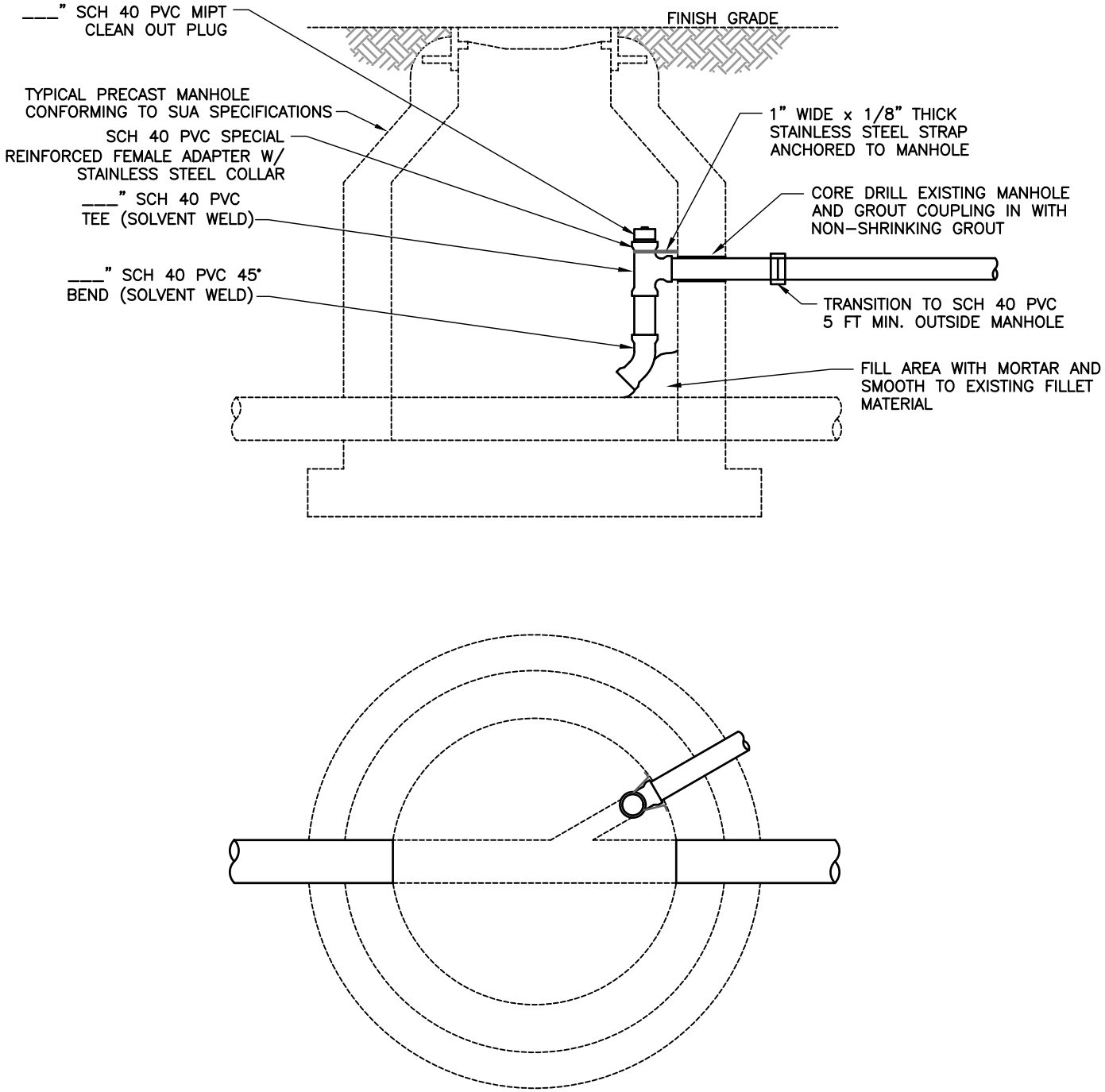
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D–25

DATE APPROVED: FEB 26, 2025

DRAWING No. 74



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. NO INSIDE DROP IS PERMITTED IN A MANHOLE WITH MORE THAN TWO INVERTS.
2. INTERIOR OF MANHOLE SHALL BE COATED IN ACCORDANCE WITH THE AUTHORITY'S MINIMUM CONSTRUCTION STANDARDS AND SPECIFICATIONS.

Low Pressure Force Main into Manhole Connection

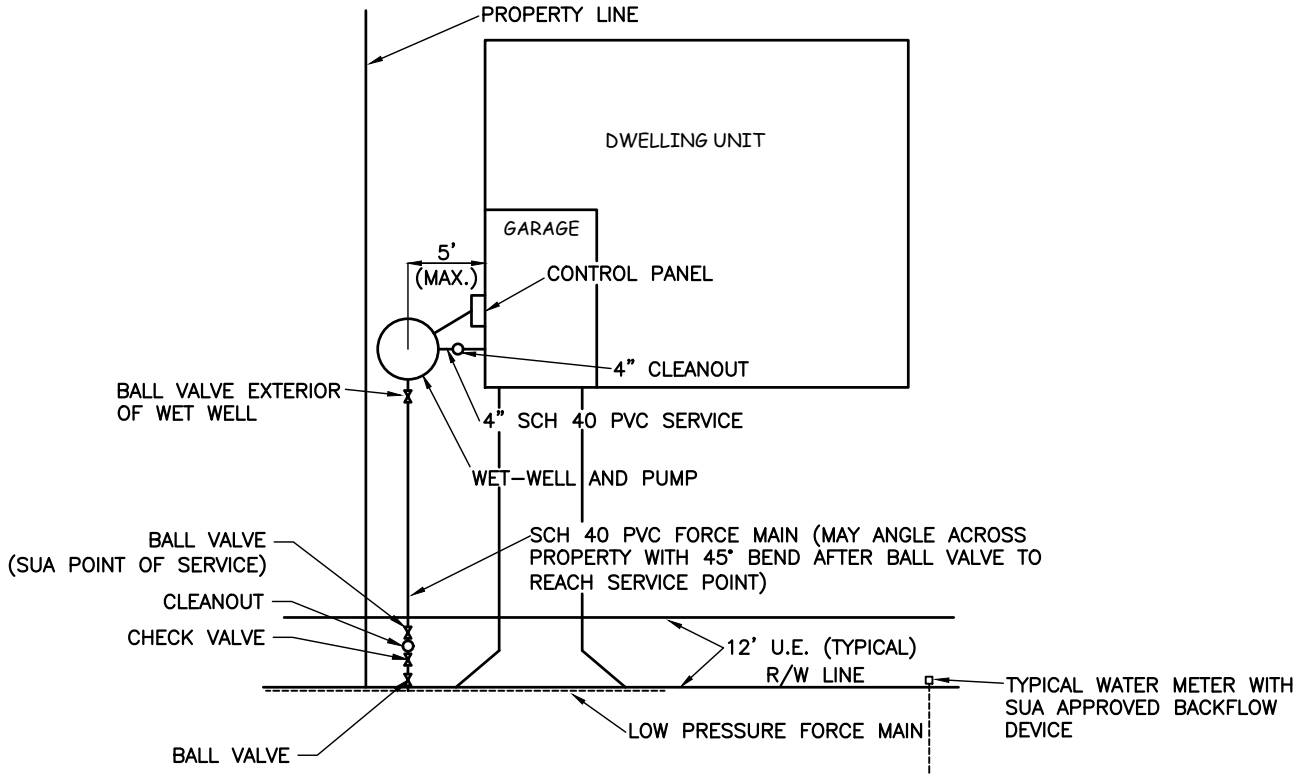
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

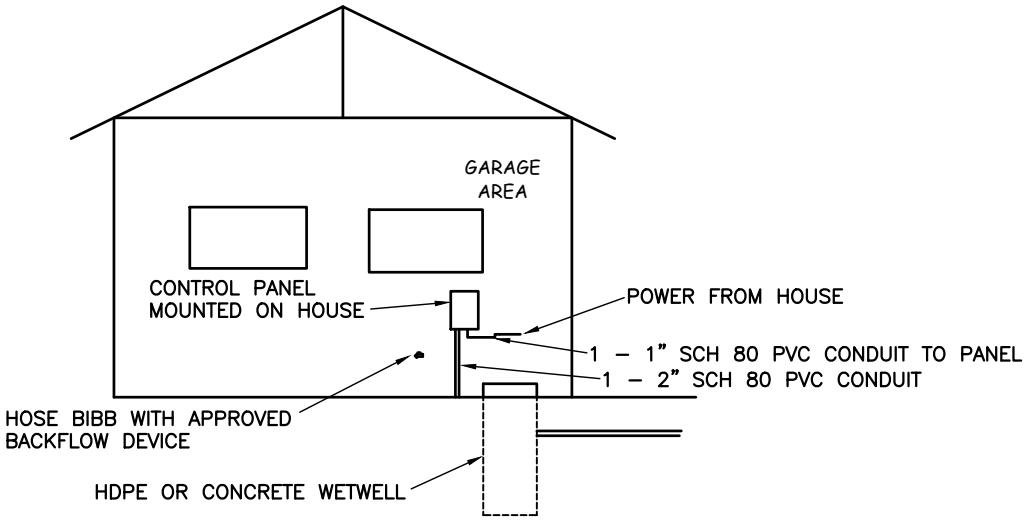
Revision C-24

DATE APPROVED: FEB 26, 2025

DRAWING No. 75



PLAN VIEW



SIDE VIEW

NOTE: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. ROOF, DOWN SPOUTS, AND FINISHED GRADE TO DRAIN AWAY FROM LIFT STATION.
2. ELEVATION OF TOP OF LIFT STATION TO BE AT OR ABOVE FINISHED FLOOR ELEVATION, 3" MINIMUM ABOVE FINISHED GRADE.
3. LOCATION OF WET WELL MAY VARY DEPENDING ON BUILDING SEWER LATERAL.

Low Pressure Sewer Grinder Pump and Control Panel Layout - Residential

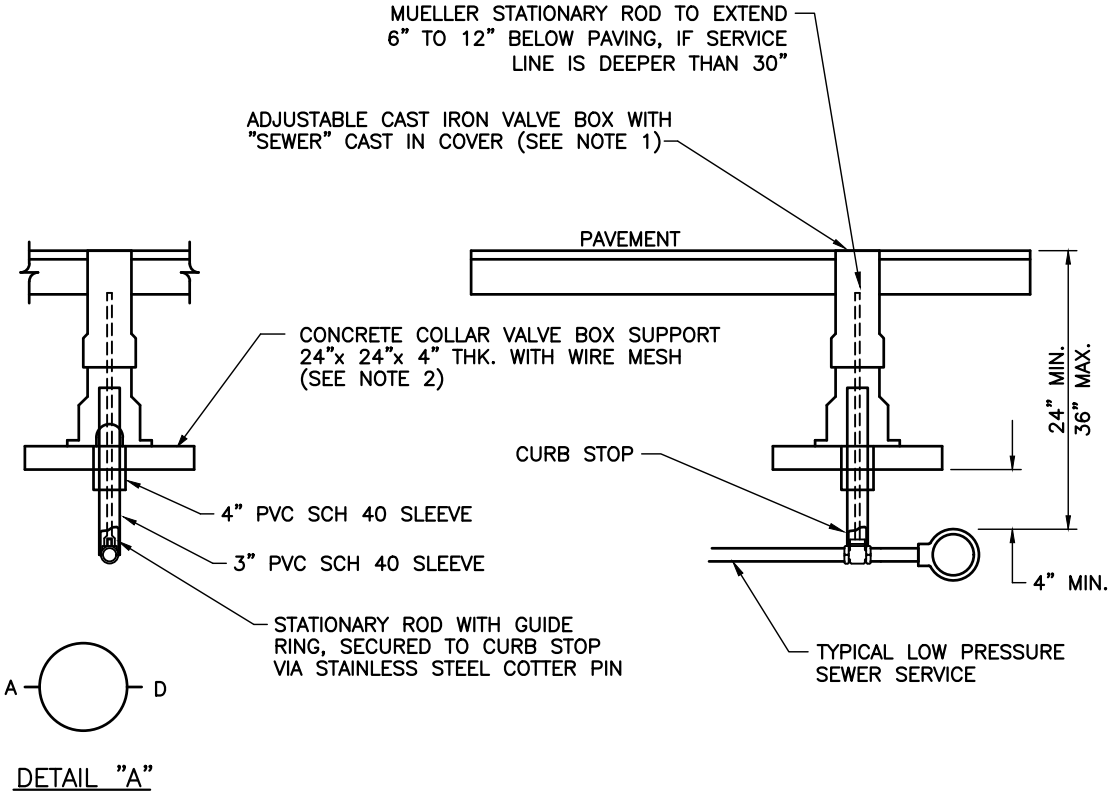
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision F-25

DATE APPROVED: FEB 26, 2025

DRAWING No. 76



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. VALVE BOX SHALL BE 5 1/4" CAST IRON SCREW TYPE ADJUSTABLE.
2. CONCRETE COLLAR VALVE BOX SUPPORT TO BE PLACED ON COMPACTED SOIL TO SUPPORT VALVE BOX SO THAT A MINIMUM OF 4 INCHES EXISTS BETWEEN THE BOTTOM OF THE CONCRETE COLLAR AND THE TOP OF THE WATER MAIN.
3. FOR RESIDENTIAL APPLICATIONS MUST BE DESIGNATED ON THE APPROVED PLAN OR APPROVED IN ADVANCE BY SUA REPRESENTATIVE.

Low Pressure Sewer Service Tap Under Pavement

SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision A–24

DATE APPROVED: FEB 26, 2025

DRAWING No. 77

BLANK SPACE FOR FUTURE SUA DETAIL

Future Detail

SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision A–18

DATE APPROVED: FEB 26, 2025

DRAWING No. 78

BLANK SPACE FOR FUTURE SUA DETAIL

Future Detail

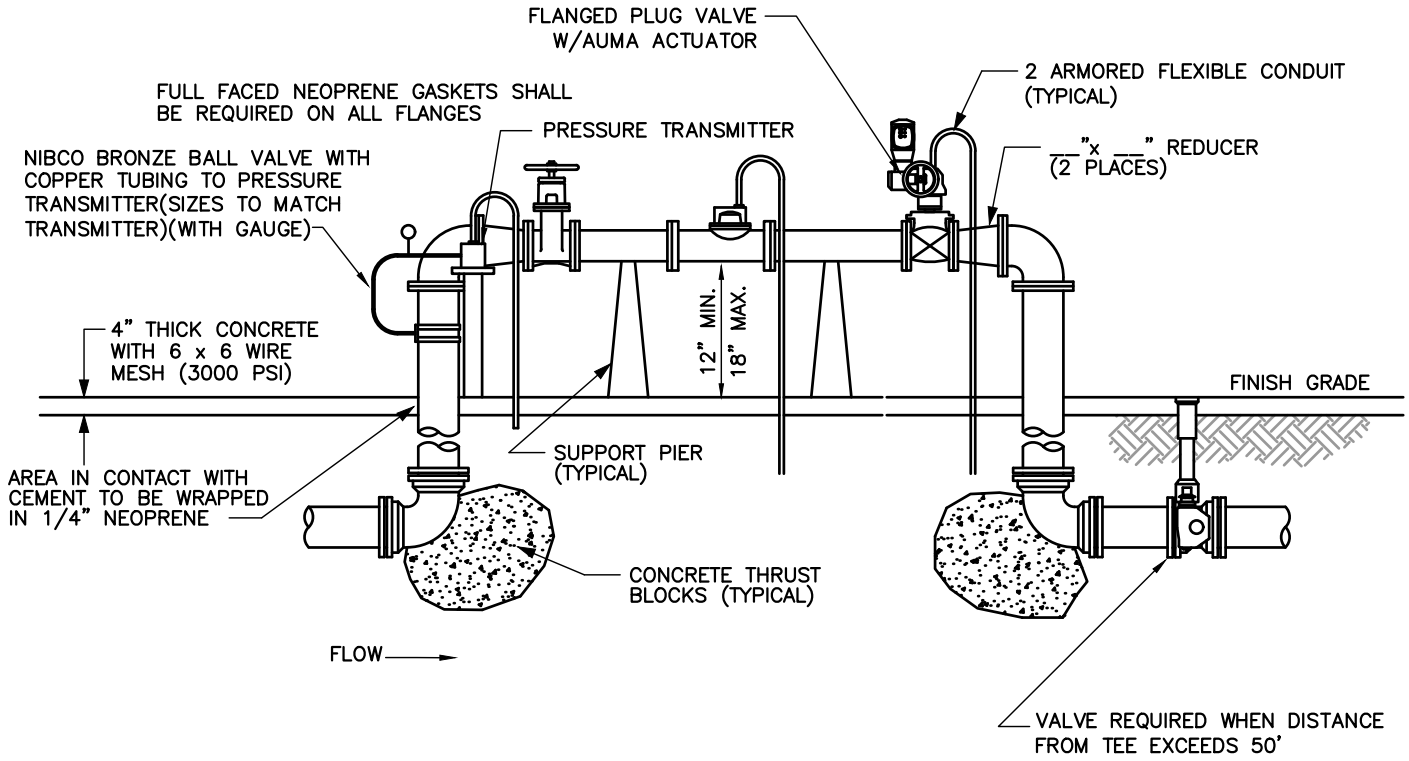
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision A–18

DATE APPROVED: FEB 26, 2025

DRAWING No. 79



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. ALL FLANGED PIPE AND FITTINGS SHALL BE CLASS 53 DUCTILE IRON CEMENT LINED.
2. MECHANICAL JOINT FITTINGS SHALL BE REQUIRED UNDERGROUND AND FLANGED FITTINGS FOR ABOVE GROUND USE, NO UNIFLANGES PERMITTED.
3. PAINT THE ABOVE GROUND ASSEMBLY, INCLUDING ENTIRE LENGTH OF TIE RODS, IN ACCORDANCE WITH SUA CONSTRUCTION STANDARD SECTION V, ITEM 1, AFTER MANUFACTURERS RECOMMENDED SURFACE PREP IS COMPLETED. DO NOT PAINT OVER NAME/SERIAL PLATE, STAINLESS STEEL, BRASS FITTINGS, CAL VAL OR FLOW METER.
4. SUPPORT PIERS OR PIPE JACKS AS APPROVED BY SUA, EXACT LOCATION TO BE DETERMINED IN THE FIELD BY SUA AND THE ENGINEER OF RECORD. SUPPORTS SHALL BE STAINLESS STEEL.
5. SPOOL PIECES SHALL BE A MINIMUM IN LENGTH OF 5 TIMES THE DIAMETER OF THE PIPE UPSTREAM OF THE METER AND A MINIMUM IN LENGTH OF 3 TIMES THE DIAMETER OF THE PIPE DOWNSTREAM OF THE METER. IF THE METER MANUFACTURERS CRITERIA EXCEEDS THESE MINIMUM LENGTHS, THAT CRITERIA SHALL GOVERN.
6. ENGINEER OF RECORD TO FOLLOW DESIGN CRITERIA TO ENSURE THAT THE RECLAIMED WATER DELIVERY SYSTEM REMAINS FULL OF LIQUID AT ALL TIMES. VACUUM BREAKER OR SIPHON BREAKER MAY BE REQUIRED AT POND DISCHARGE.
7. TWO OF THE FOLLOWING FORMS OF RESTRAINT SHALL BE USED WHEN PIPE IS GREATER THAN 12".
   A) APPROVED MECHANICAL JOINT RESTRAINT (i.e. MEGALUG)
   B) TIE RODS AND NUTS EQUAL IN DIA. TO TEE BOLTS AND NUTS, COATED WITH KOP-COAT 300-M OR APPROVED EQUAL.
8. MOUNT PRESSURE TRANSMITTER TO FLANGE OR PROVIDE 3" ALUMINUM POST WITH 6" X 6" BASE. BASE SHALL BE ANCHORED TO SLAB WITH STAINLESS STEEL WEDGE ANCHORS. PRESSURE TRANSMITTER TO BE ROSEMOUNT MODEL 3051.

Reclaimed Metering Facility Section

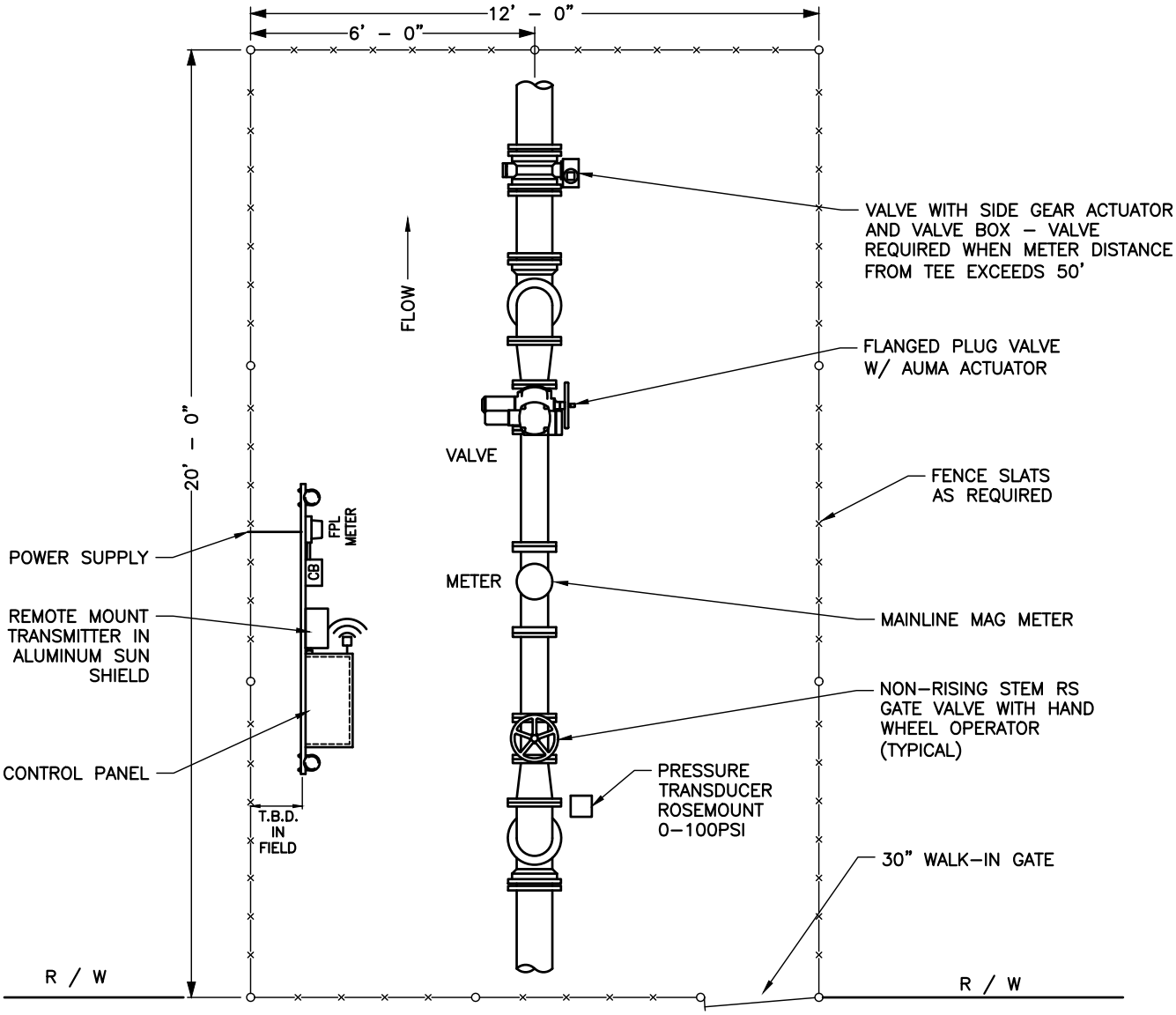
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D-20

DATE APPROVED: FEB 26, 2025

DRAWING No. 80



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. GROUND COVER WITHIN FENCED AREA SHALL BE 4" THICK CONCRETE (3000 PSI) WITH 6" x 6" WIRE MESH AND BE SLOPED IN SUCH A WAY TO PROMOTE RUN OFF AND PREVENT PUDDLING.
2. PROVIDE A 30 INCH WALK–IN GATE. BOX HINGES ONLY.
3. THIS DRAWING DEPICTS A GENERAL SITE PLAN ONLY. THE ENGINEER OF RECORD SHALL COORDINATE THE SPECIFIC SITE PLAN REQUIREMENTS WITH SUA.
4. INSTALL FENCE PER DETAIL 17.

Reclaimed Metering Facility Plan

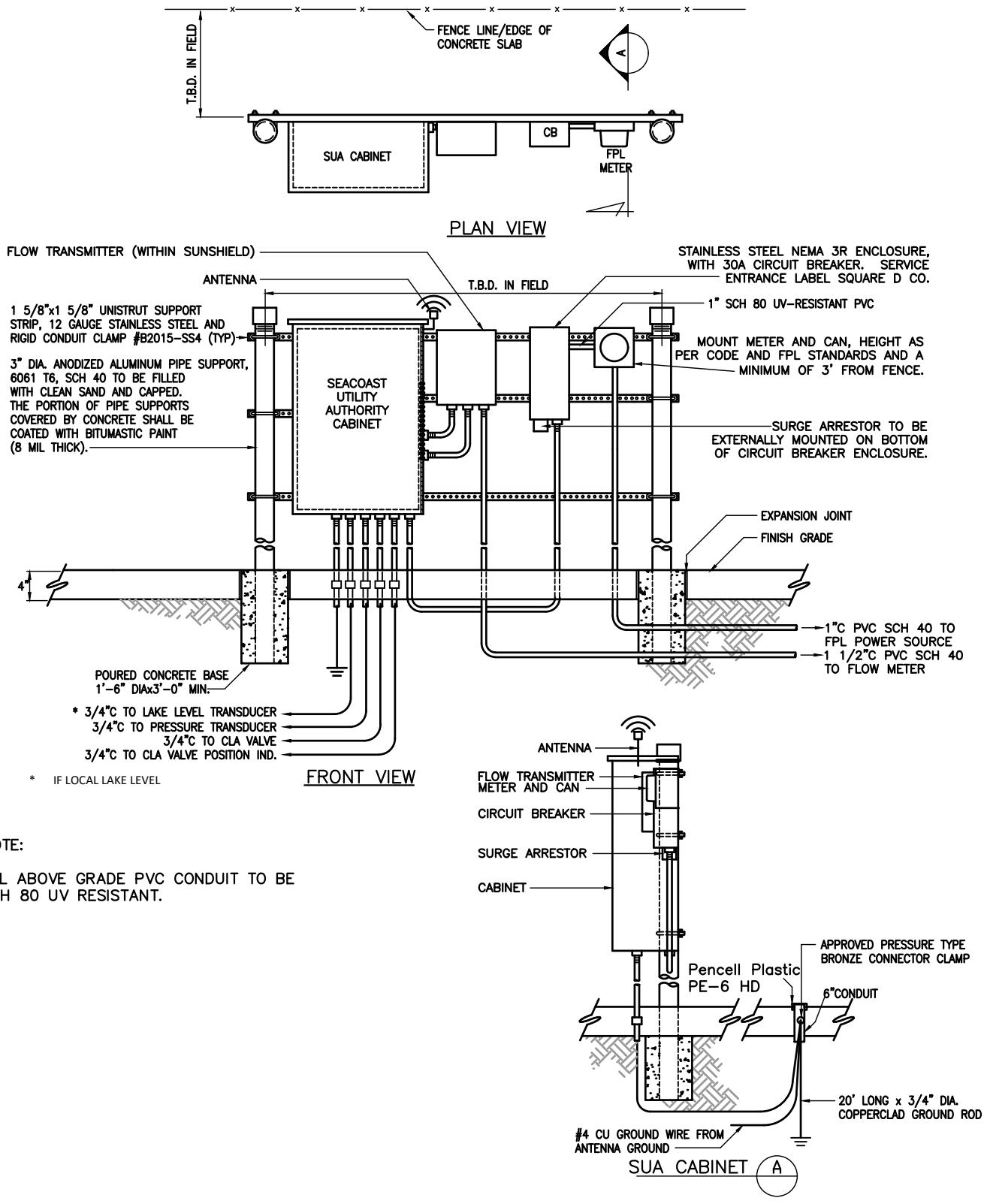
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision E–23

DATE APPROVED: FEB 26, 2025

DRAWING No. 81



NOTE:

ALL ABOVE GRADE PVC CONDUIT TO BE SCH 80 UV RESISTANT.

PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

Reclaimed Water Control Cabinet Plan and Elevation

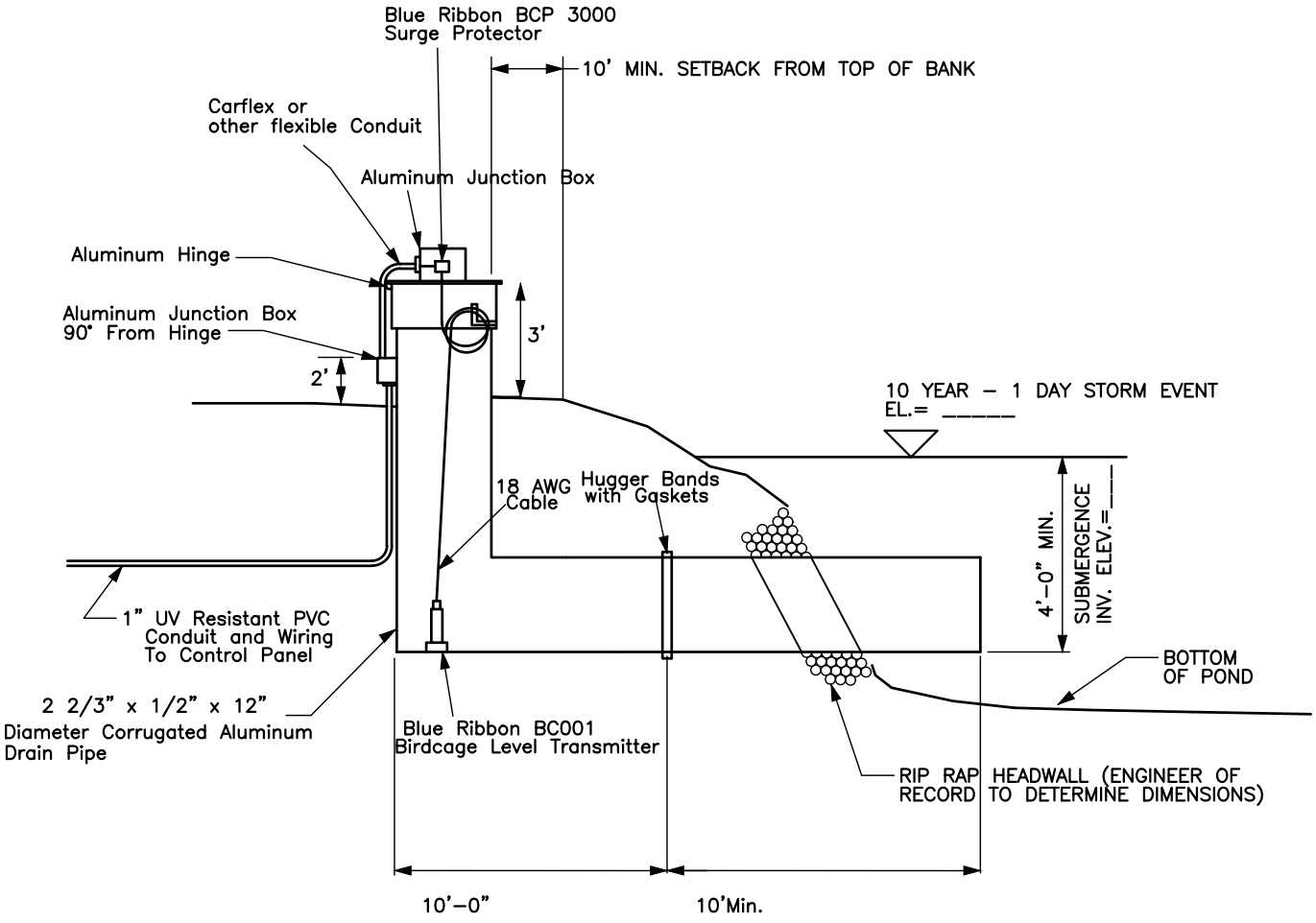
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D-23

DATE APPROVED: FEB 26, 2025

DRAWING No. 82



PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

Stilling Well

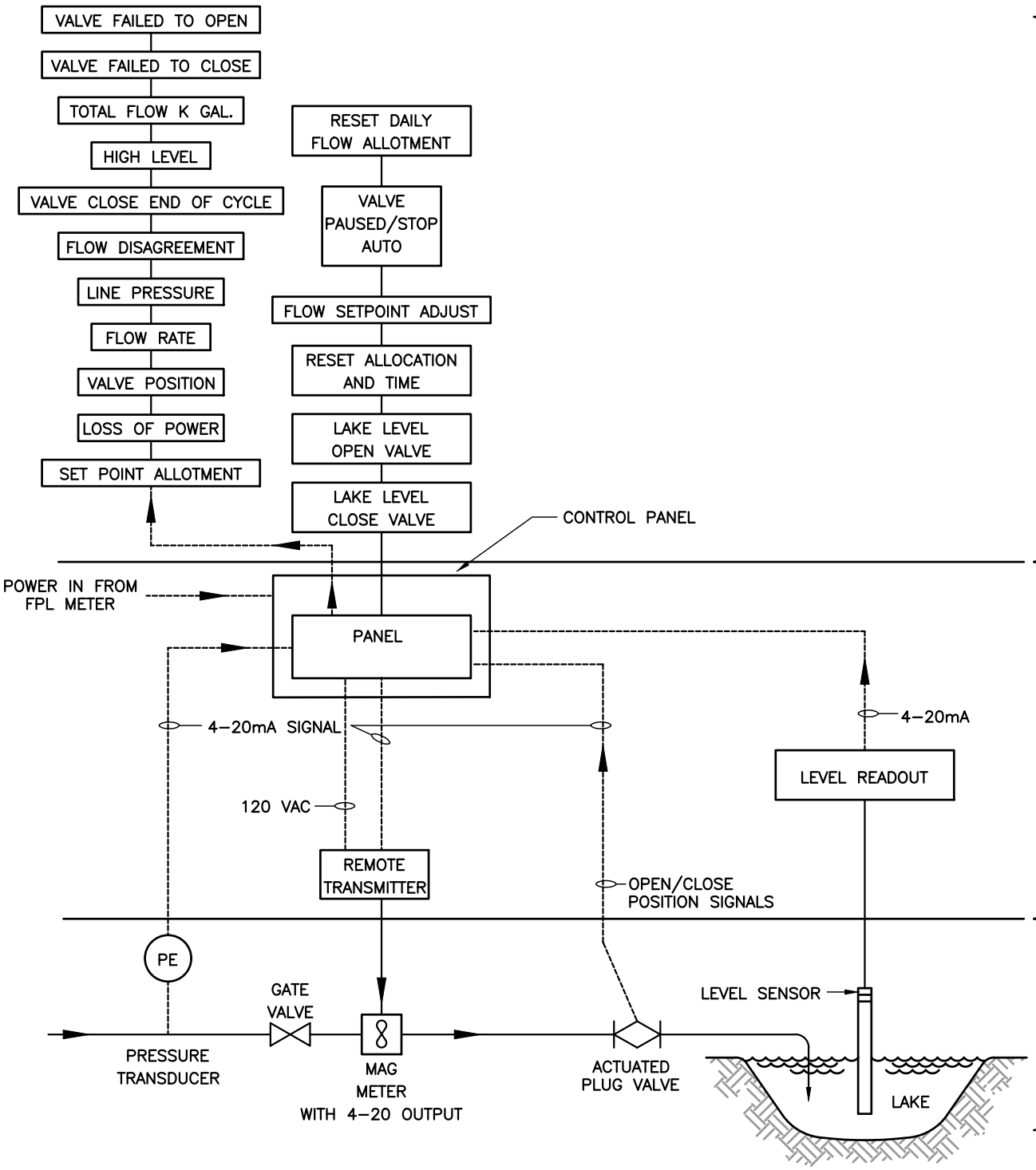
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision C–23

DATE APPROVED: FEB 26, 2025

DRAWING No. 83



PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

Reclaimed Water Control Schematic

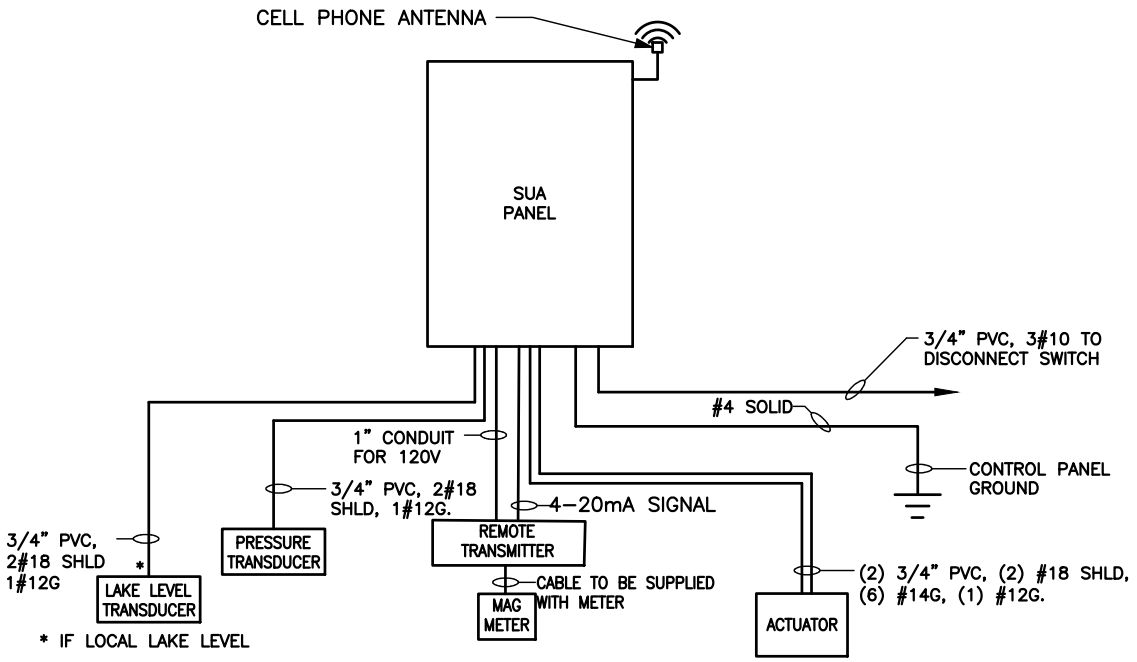
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision C–20

DATE APPROVED: FEB 26, 2025

DRAWING No. 84



CONDUIT SCHEMATIC

PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

Reclaimed Water Control Panel and Conduits

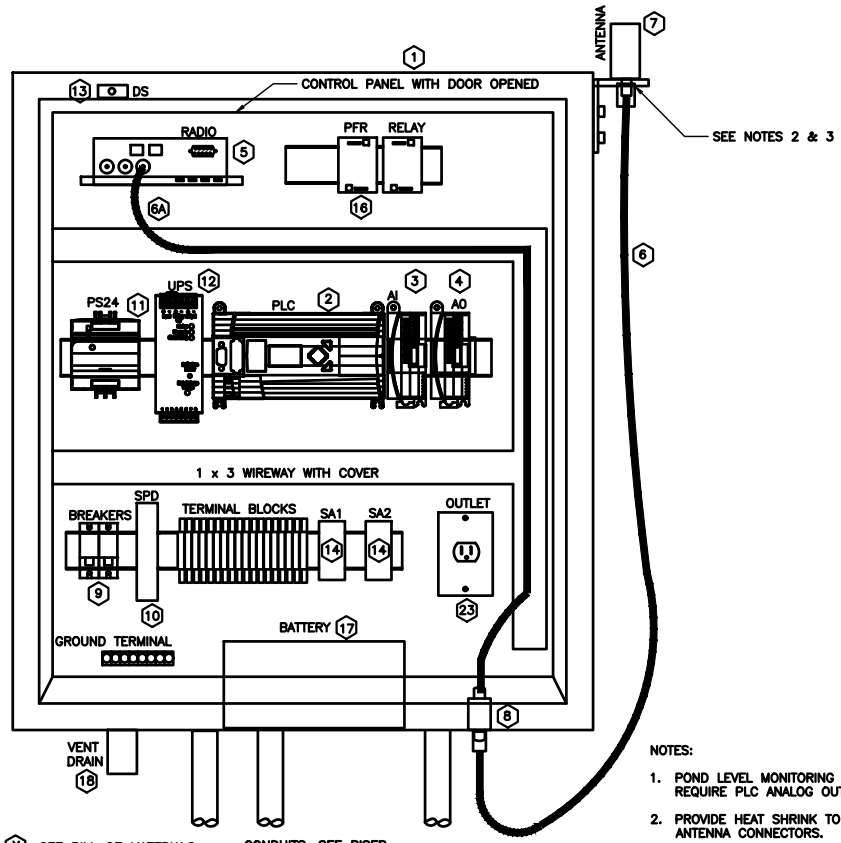
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision E-23

DATE APPROVED: FEB 26, 2025

DRAWING No. 85



NOTES:

1. POND LEVEL MONITORING RTU DOES NOT REQUIRE PLC ANALOG OUTPUT CARD.
2. PROVIDE HEAT SHRINK TO ALL OUTDOOR ANTENNA CONNECTORS.
3. ANTENNA MOUNTING BRACKET AND HARDWARE SHALL BE 316 STAINLESS STEEL. MOUNTING BOLT PENETRATIONS TO RTU ENCLOSURE SHALL BE SEALED TO MAINTAIN THE ENCLOSURE RATING.

BILL OF MATERIALS

(ALL ELECTRICAL COMPONENTS AND ASSEMBLIES MUST BE UL LISTED/APPROVED)

ITEM	NAME	DESCRIPTION	MANUFACTURER	TYPE
1	CONTROL PANEL	24"Wx24"Hx10"D NEMA 4X 316 SS PANEL POWDER COATED WHITE WITH 3-POINT LATCH, SS LOCKABLE HANDLE, DRIP SHIELD AND DATA POCKET	HOFFMAN OR APPR. EQUAL	A24H2410SS6LP3PTW
2	PLC	MICROLOGIX 1400 (24VDC) W/ MEMORY MODULE	ALLEN-BRADLEY	1766-L32BXB W/ 1763-MM1
3	ANALOG INPUT MODULE	ANALOG INPUT EXPANSION MODULE	ALLEN-BRADLEY	1762-IF4
4	ANALOG OUTPUT MODULE	ANALOG OUTPUT EXPANSION MODULE	ALLEN-BRADLEY	1762-OF4
5	RADIO	INDUSTRIAL GRADE, 4G LTE, CELLULAR RADIO	SIERRA WIRELESS	AIRLINK RV50X
6	ANTENNA CABLE	LOW LOSS COAXIAL CABLE W/ NECESSARY CONNECTOR. LENGTH AS REQ.	TIMES MICROWAVE	LMR400
6A	ANTENNA CABLE	LMR 400, SMA MALE 90 TO N-MALE, LENGTH AS REQ. PER RTU ENCLOSURE DIMENSIONS WHICH VARY PER SITE	NEMAL ELECTRONICS	LMR4-SMAM9-NM
7	CELLULAT ANTENNA	4G/LTE OMNI DIRECTIONAL ANTENNA 3 DB GAIN, 694-894 MHZ AND 1.7-2.7 GHZ W/ DIRECT N CONNECTOR	MOBILE MARK	RM-WLF-DN-BLK
8	RF SURGE SUPPRESSOR	RF LIGHTING SURGE ARRESTER 698-2.7 GHZ, 500W	POLYPHASER	TSX-NFM
9	CIRCUIT BREAKER	THERMAL MAGNETIC	SQUARE D	TYPE QOU
10	120V SPD	DIN-RAIL MOUNT SURGE ARRESTER	ATLANTIC SCIENTIFIC	MA15
11	24VDC POWER SUPPLY	120VAC TO 24VDC POWER SUPPLY UNIT, 100W	PULS	ML100.100
12	UPS	24V, 10A, DC TO DC UPS	PULS	UB10.241
13	DOOR SWITCH	SNAP SWITCH, PLUNGER HEAD	SQUARE D	9007AP221
14	LOW VOLTAGE SURGE	DUAL SIGNAL SURGE ARRESTER	EDCO	PC642C-036-X
15	ETHERNET CABLE	GIGATURE CAT 6 550MHZ PATCH CABLE. LENGTH AS REQUIRED.	BLACK BOX	EVNSL641
16	120VAC RELAY	3PDT 11 PIN, ROUND BASE 120VAC	ALLEN-BRADLEY	700-HA33A1-3-4
17	BATTERY	10AH, 12VDC BATTERY	POWERSONIC	PS12100H
18	VENT DRAIN	STAINLESS STEEL	HOFFMAN	AVDR4SS4
19	DISPLAY	4-DIGIT DISPLAY, 24VDC INPUT POWER	PRECISION DIGITAL	PD765
20	INDICATION LIGHT	PUSH-TO-TEST LED LIGHT	SQUARE D	RUN SERIES
21	3-POSITION SWITCH	HAND-OFF-AUTO	SQUARE D	SKS43B
22	PUSHBUTTON	OILTIGHT	SQUARE D	SKR1UH5
23	120VAC OUTLET	15A SINGLE RECEPTACLE	HUBBELL	HBL5251I

Reclaimed Water Panel Layout

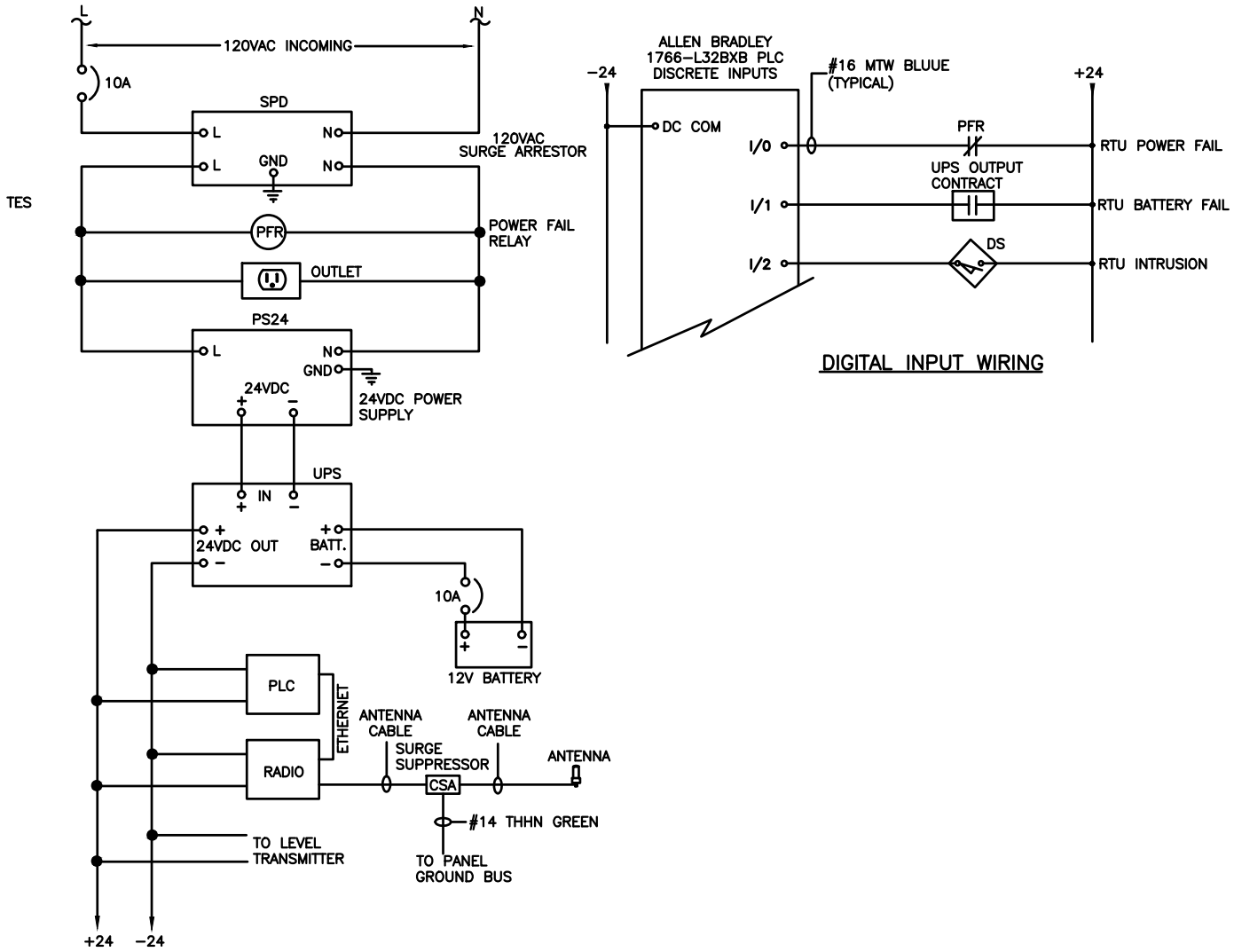
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

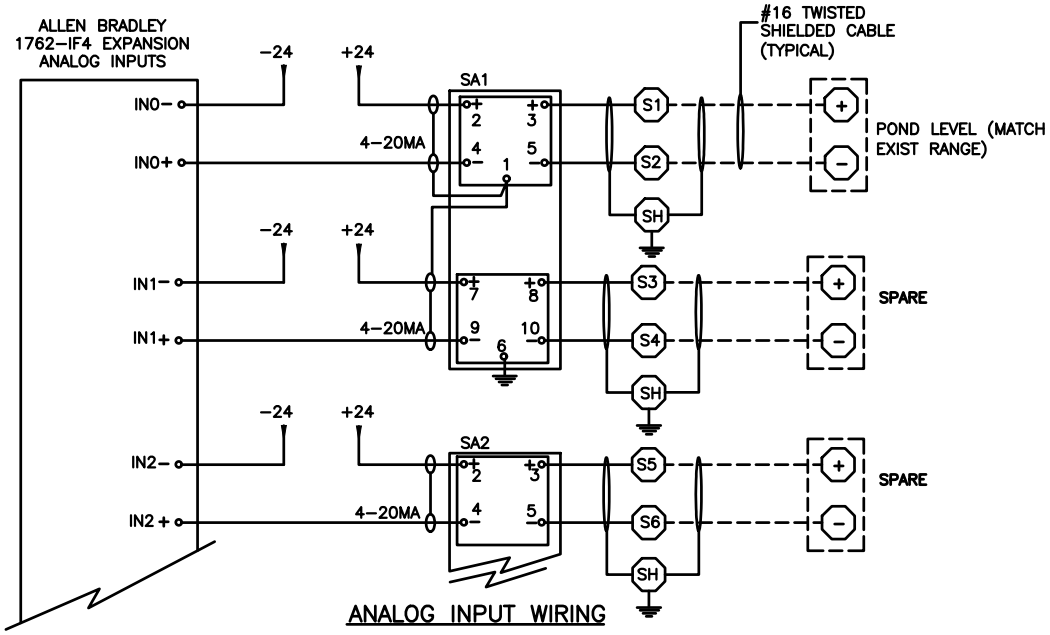
Revision A-23

DATE APPROVED: FEB 26, 2025

DRAWING No. 86



DIGITAL INPUT WIRING



ANALOG INPUT WIRING

Reclaimed Water Panel Wiring Diagram

SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

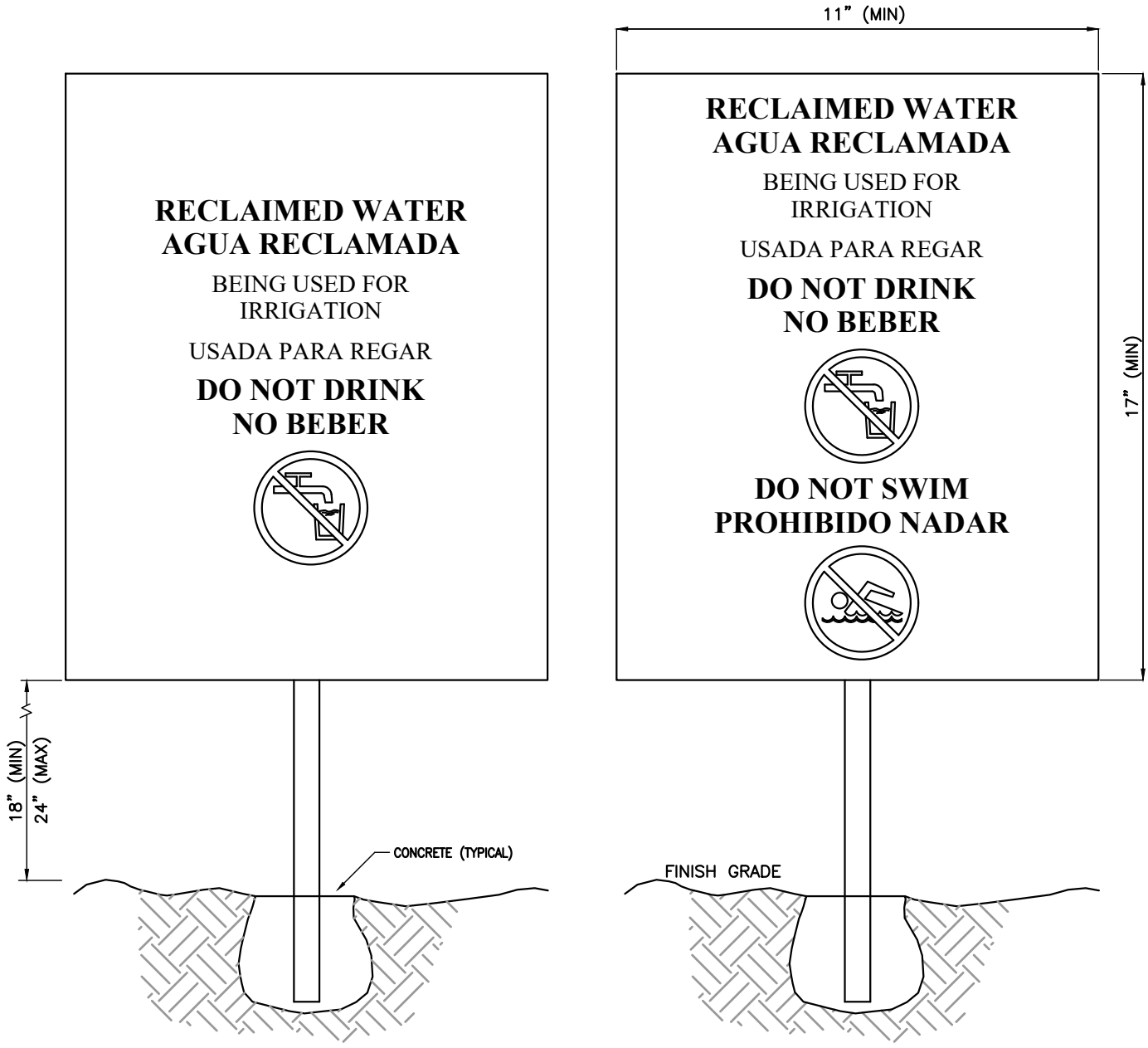
Revision A-23

DATE APPROVED: FEB 26, 2025

DRAWING No. 87

NOTE: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. MOUNT SIGN TO HOT DIPPED GALVANIZED STANDARD U–CHANNEL SIGN POST WITH STAINLESS STEEL HARDWARE.
2. SIGN SHALL BE .080 GAUGE ALUMINUM, WITH UV RESISTANT POLYURETHANE COATING.
3. COLOR SHALL BE WHITE LETTERS ON DARK BLUE BACKGROUND. COLORS MAY VARY WITH PRIOR APPROVAL OF SUA.



Reclaimed Water Signs

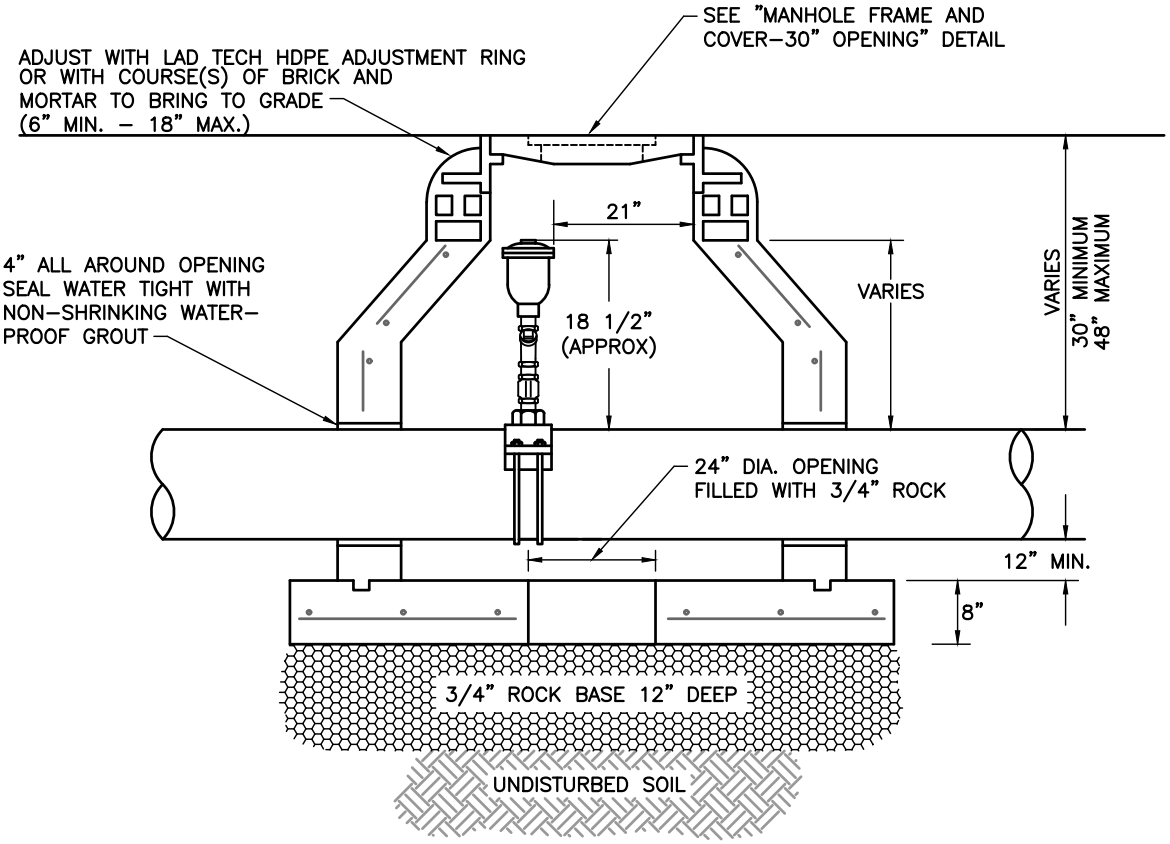
SEACOAST UTILITY AUTHORITY

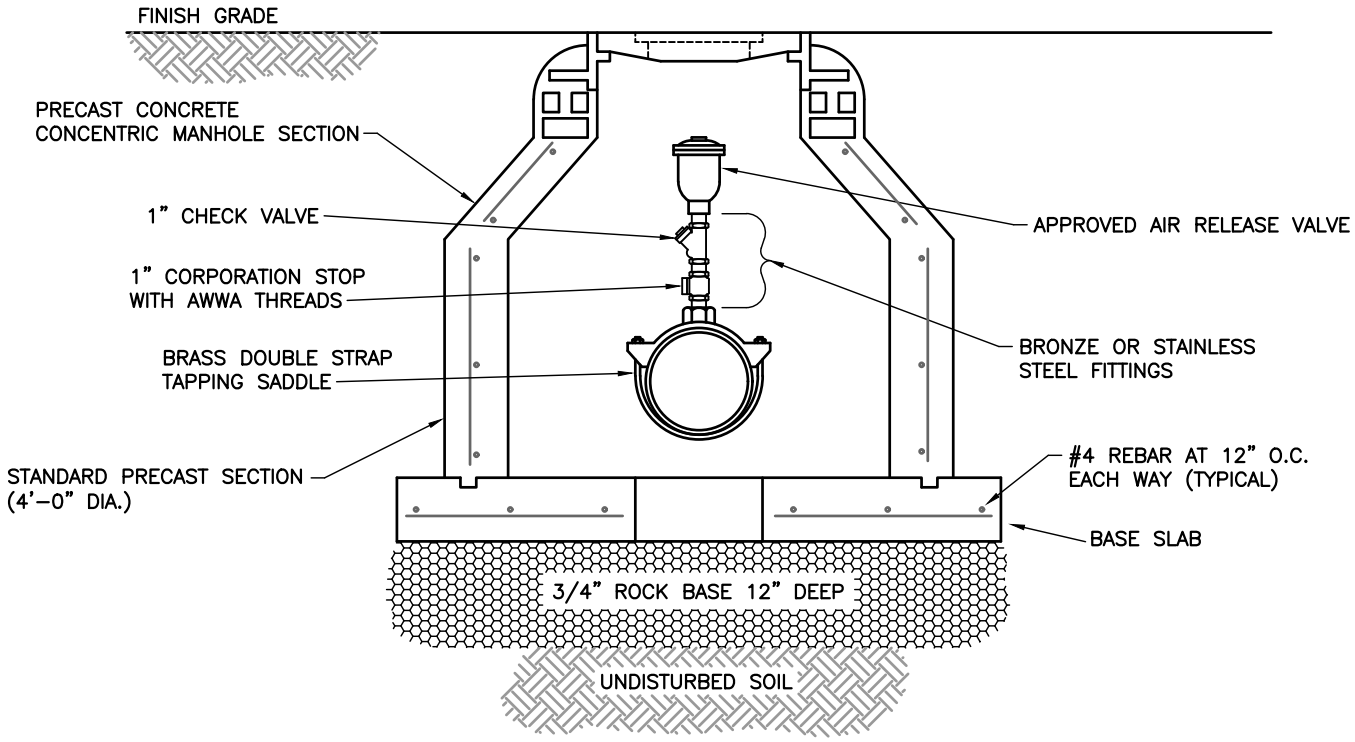
CONSTRUCTION STANDARDS AND DETAILS

Revision C–20

DATE APPROVED: FEB 26, 2025

DRAWING No. 88





PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

Air Release Valve (Underground Reclaimed Water Main)

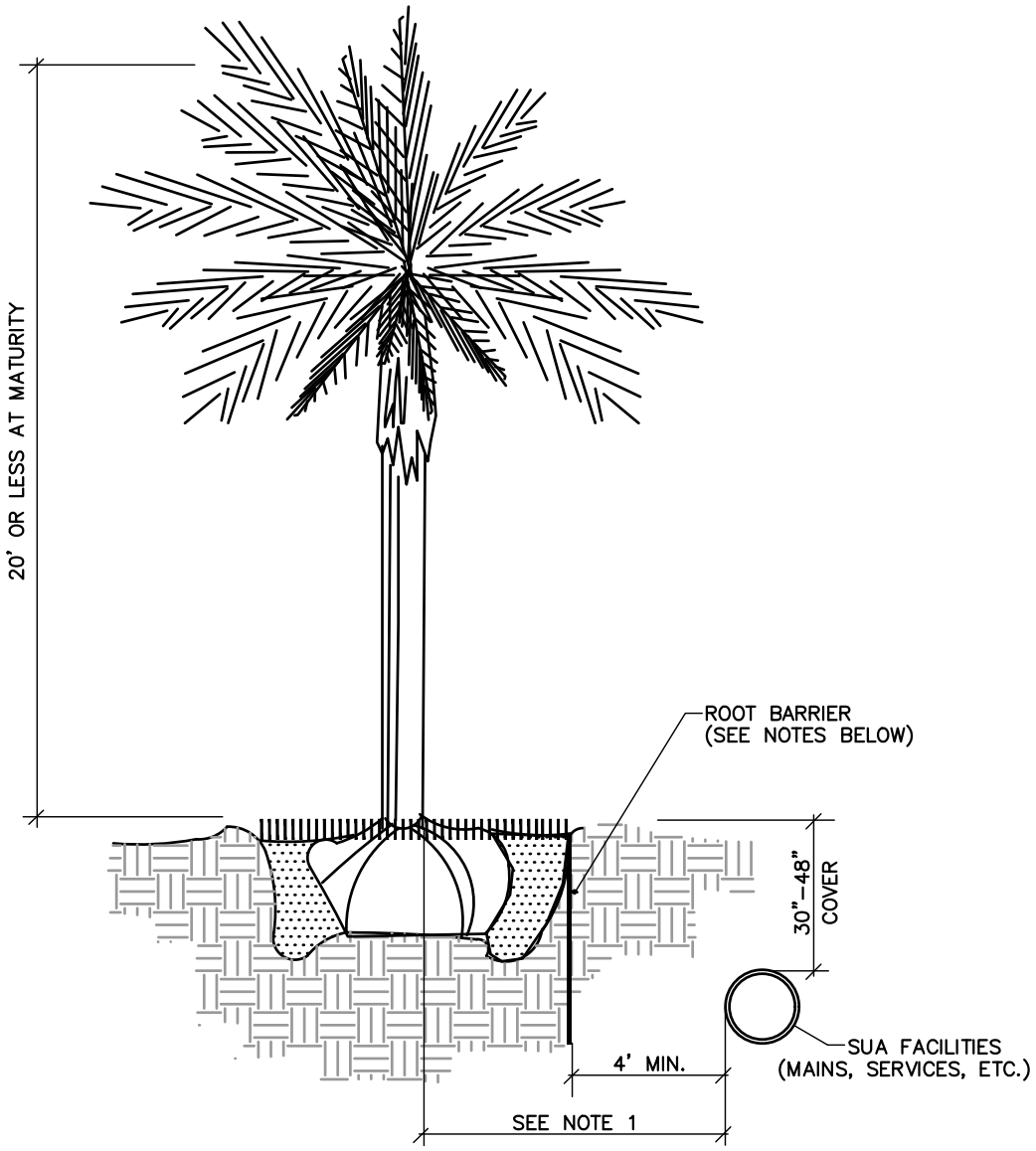
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision E–24

DATE APPROVED: FEB 26, 2025

DRAWING No. 89



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. THIS DISTANCE SHALL BE 7' MINIMUM WITH ROOT BARRIER AND 10' MINIMUM IF NO ROOT BARRIER IS USED.
2. ALL ROOT BARRIERS SHALL BE 4' MINIMUM FROM ALL SEACOAST FACILITIES.
3. THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH SEACOAST AND INSPECTED BY SEACOAST PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE.
4. ROOT BARRIERS SHALL BE MINIMUM 36" DEEP. APPROVED PRODUCTS INCLUDE "DEEP ROOT", "ROOT SOLUTIONS", AND "NDS EP SERIES".
5. ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.

Typical Shrub, Small Tree or Palm Tree with Root Barrier

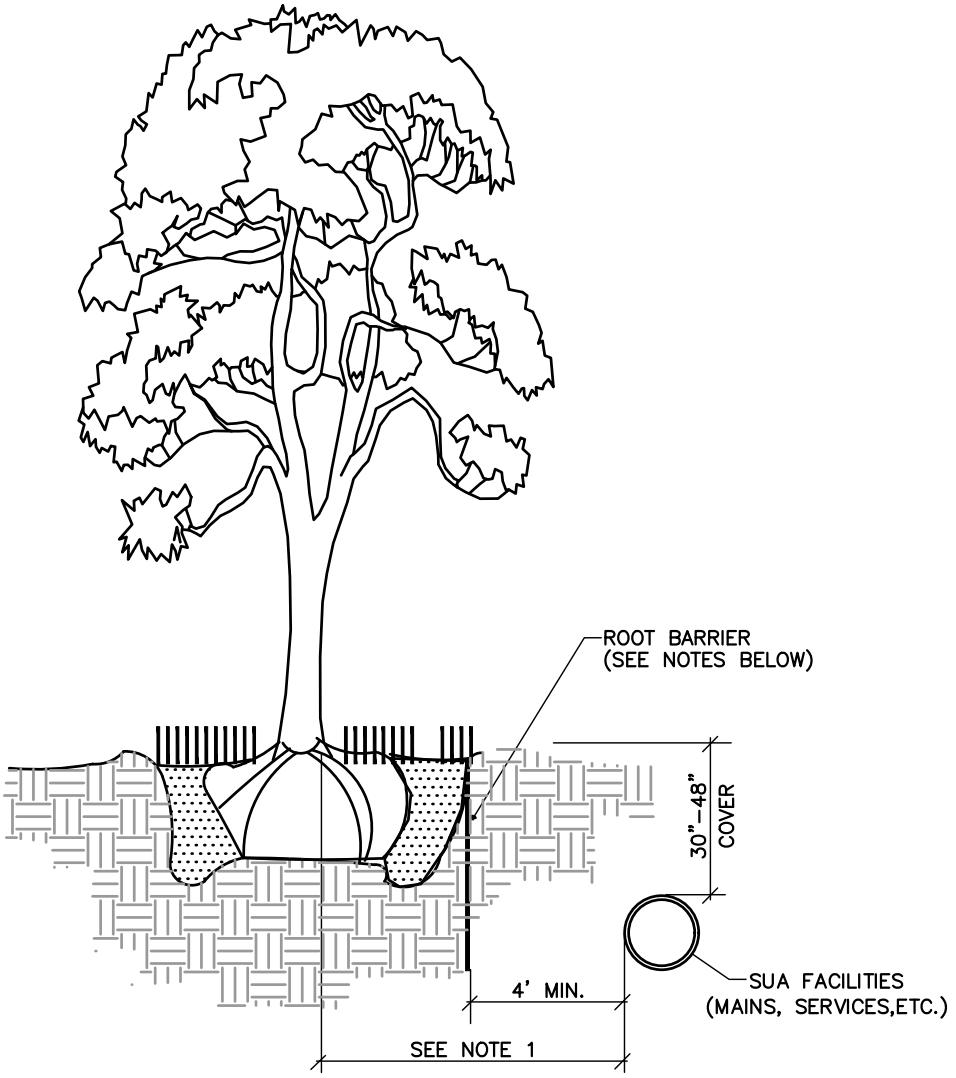
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D–23

DATE APPROVED: FEB 26, 2025

DRAWING No. 90



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. THIS DISTANCE SHALL BE 10' MINIMUM WITH ROOT BARRIER AND 15' MINIMUM IF NO ROOT BARRIER IS USED.
2. ALL ROOT BARRIERS SHALL BE 4' MINIMUM FROM ALL SEACOAST FACILITIES.
3. THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH SEACOAST AND INSPECTED BY SEACOAST PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE.
4. ROOT BARRIERS SHALL BE MINIMUM 36" DEEP. APPROVED PRODUCTS INCLUDE "DEEP ROOT", "ROOT SOLUTIONS", AND "NDS EP SERIES".
5. ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS WRITTEN INSTRUCTIONS.
6. LARGE PALM TREES INCLUDE ROYAL, WASHINGTONIAN, BISMARK AND SIMILAR SIZED SPECIES.

Typical Canopy Tree, Large Palm or Exotic Tree with Root Barrier

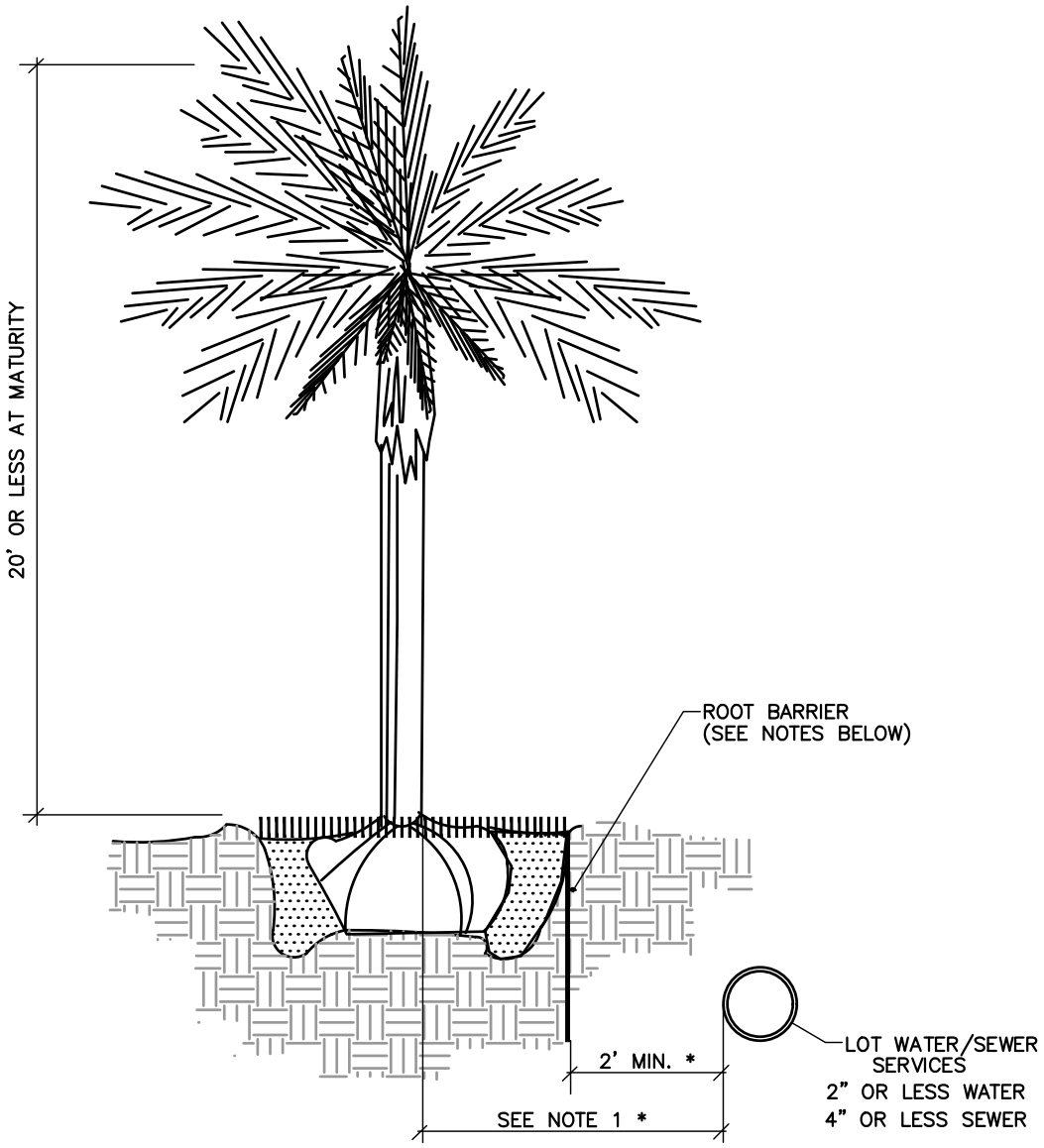
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision D–23

DATE APPROVED: FEB 26, 2025

DRAWING No. 91



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. THIS DISTANCE SHALL BE 4' MINIMUM WITH ROOT BARRIER AND 7' MINIMUM IF NO ROOT BARRIER IS USED.
2. ALL ROOT BARRIERS SHALL BE 2' MINIMUM FROM ALL SINGLE FAMILY SERVICE LINES.
3. THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH SEACOAST AND INSPECTED BY SEACOAST PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE.
4. ROOT BARRIERS SHALL BE MINIMUM 36" DEEP. APPROVED PRODUCTS INCLUDE "DEEP ROOT", "ROOT SOLUTIONS", AND "NDS EP SERIES".
5. ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
6. * SHRUB PLANTING SHOULD BE MINIMUM 2' FROM LINE WITH A ROOT BARRIER 1' FROM LINE FOR PROTECTION.

Private Utilities Setback Typical Shrub, Small Tree or Palm Tree with Root Barrier

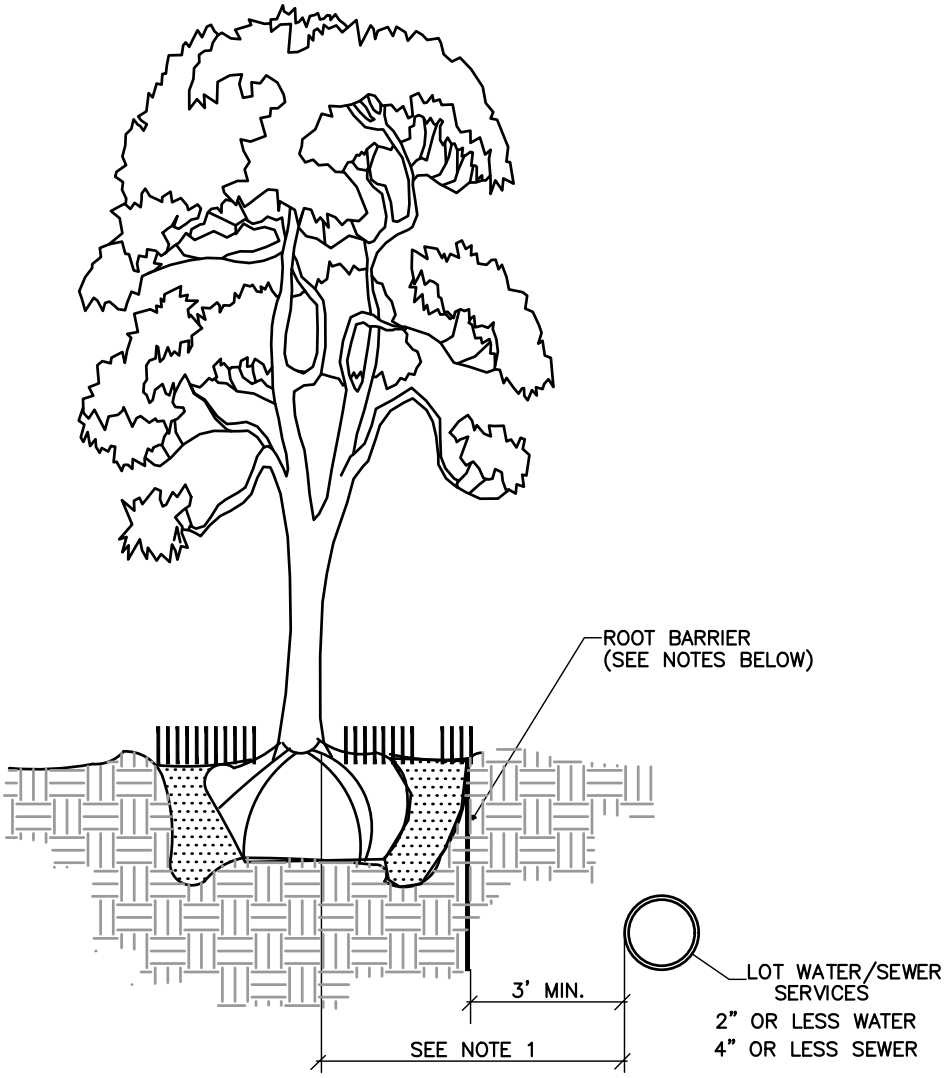
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision B-23

DATE APPROVED: FEB 26, 2025

DRAWING No. 92



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. THIS DISTANCE SHALL BE 6' MINIMUM WITH ROOT BARRIER AND 10' MINIMUM IF NO ROOT BARRIER IS USED.
2. ALL ROOT BARRIERS SHALL BE 3' MINIMUM FROM ALL SINGLE FAMILY SERVICE LINES.
3. THE INSTALLATION OF ROOT BARRIERS SHALL BE COORDINATED WITH SEACOAST AND INSPECTED BY SEACOAST PRIOR TO BACKFILLING. ALL ROOT BARRIERS SHALL EXTEND UP TO FINISHED GRADE.
4. ROOT BARRIERS SHALL BE MINIMUM 36" DEEP. APPROVED PRODUCTS INCLUDE "DEEP ROOT", "ROOT SOLUTIONS", AND "NDS EP SERIES".
5. ALL ROOT BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
6. LARGE PALM TREES INCLUDE ROYAL, WASHINGTONIAN, BISMARK AND SIMILAR SIZED SPECIES.

Private Utilities Setback Typical Canopy Tree, Large Palm or Exotic Tree with Root Barrier

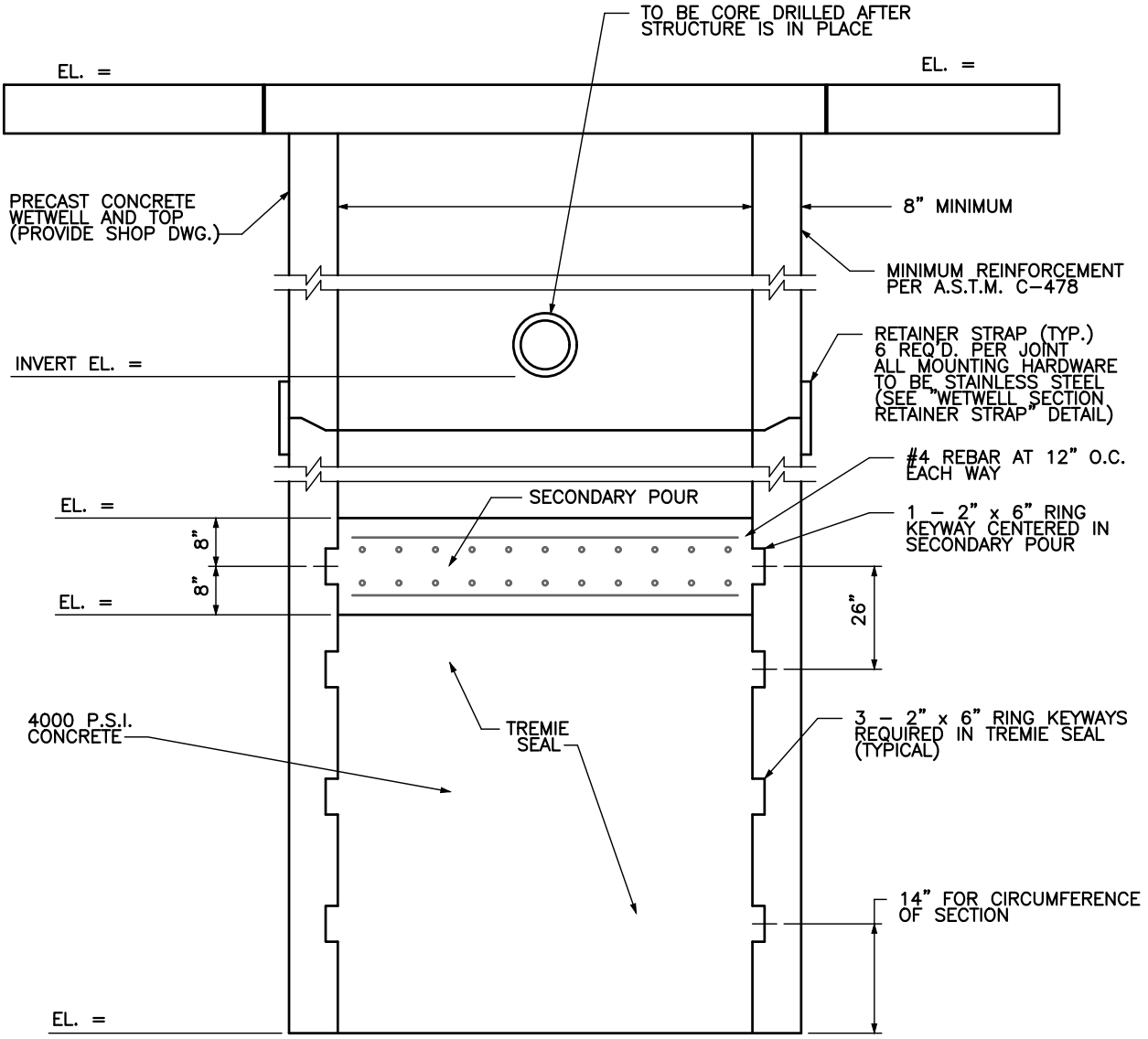
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision B-23

DATE APPROVED: FEB 26, 2025

DRAWING No. 93



NOTES: (PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

1. CONCRETE USED FOR TREMIE SEAL AND SECONDARY POUR MUST BE 4000 P.S.I. AT 28 DAYS WITH TYPE II PORTLAND CEMENT. SECONDARY POUR SHALL NOT OCCUR UNTIL WETWELL IS WATER TIGHT ON ALL SIDES AND BOTTOM.
2. MINIMUM OF FOUR 2" x 6" RING KEYWAYS REQUIRED WITH TOP KEYWAY CENTERED IN THE SECONDARY CONCRETE POUR.
3. TREMIE SEAL REQUIRED TO BE A MINIMUM OF 36" THICK AND SECONDARY CONCRETE POUR 16" THICK.
4. TREMIE SEAL TO CURE 48 HOURS PRIOR TO PUMPING OFF WATER TO PREPARE FOR SECONDARY CONCRETE POUR.
5. E.O.R. SHALL SUBMIT SIGNED AND SEALED BUOYANCY CALCULATIONS TO SUA FOR REVIEW AND APPROVAL.
6. WEIGHT OF TOP SLAB, SECONDARY CONCRETE POUR, PUMPS AND EXTERIOR SKIN FRICTION SHALL NOT BE INCLUDED IN BUOYANCY CALCULATIONS. GROUNDWATER SHALL BE CONSIDERED AT GROUND LEVEL FOR BUOYANCY CALCULATIONS UNLESS SPECIAL CONSIDERATIONS APPLY (ON COASTAL RIDGE, ETC.).

Wet Well Installation (Caisson Construction)

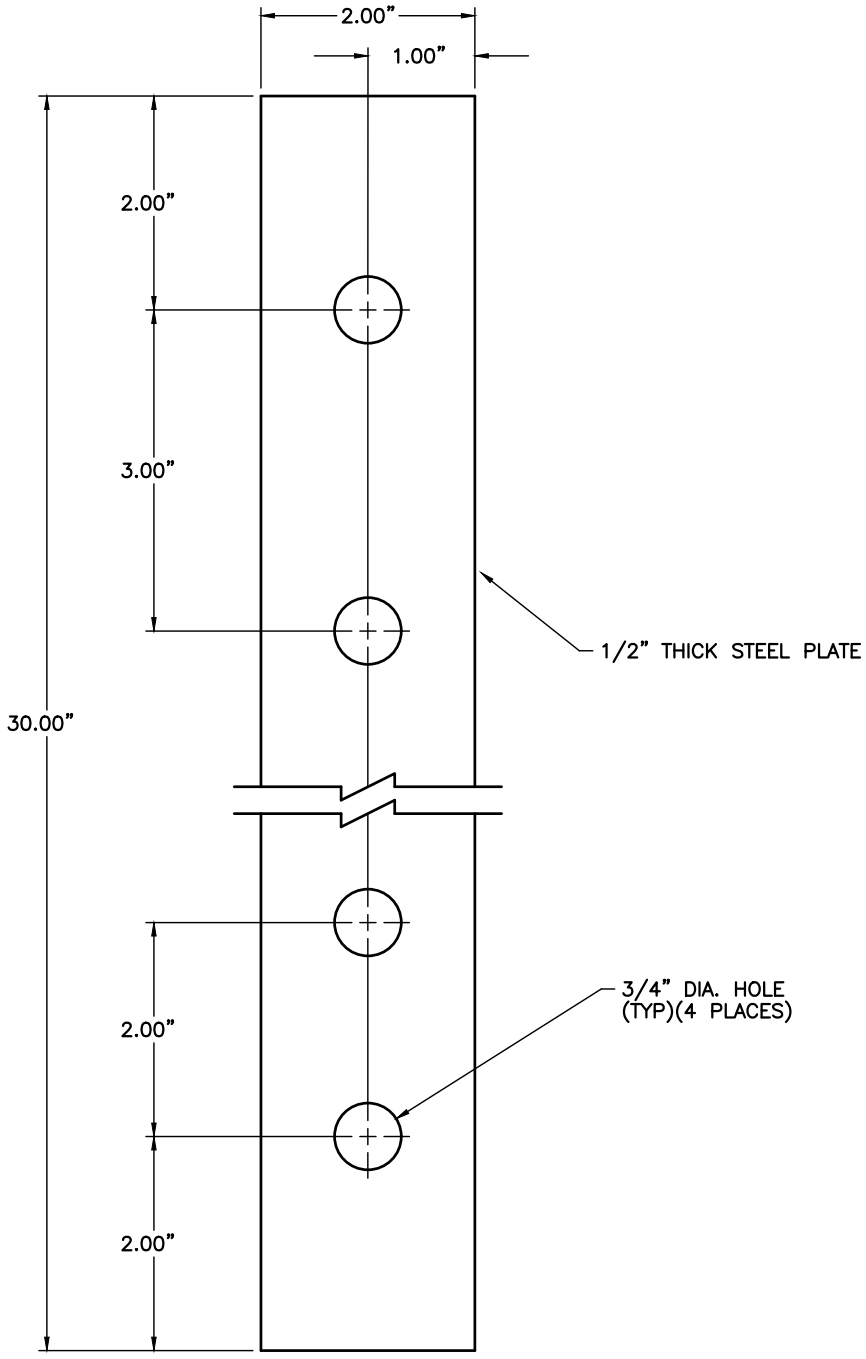
SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision C-23

DATE APPROVED: FEB 26, 2025

Exhibit F



PLEASE REFER TO WRITTEN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS

Wet Well Section Retainer Strap

SEACOAST UTILITY AUTHORITY

CONSTRUCTION STANDARDS AND DETAILS

Revision B–23

DATE APPROVED:
FEB 26, 2025

Exhibit F