HILL STREET BOOSTER PUMP STATION

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JANUARY 2022 BID DOCUMENTS







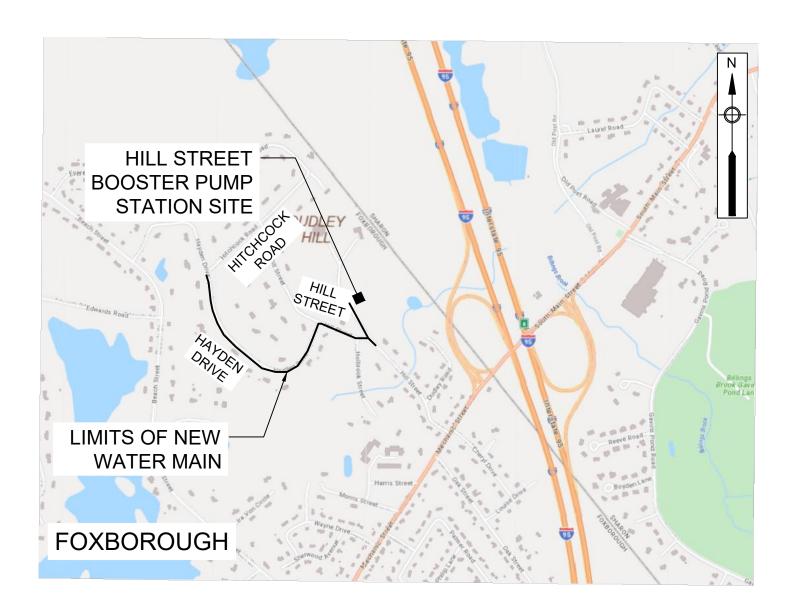
CHRIS GALLAGHER, P.E. - DIRECTOR

TOWN ENGINEER

LANCE DELPRIORE, P.E., MCPPO

WATER & SEWER DEPARTMENT SUPERINTENDENT

ROBERT WORTHLEY



VICINITY MAP
1"= 2000'



GENERAL NOTES:

- BASE MAP INFORMATION IS TAKEN FROM SURVEY PERFORMED BY MERRILL ENGINEERS AND LAND SURVEYORS ON AUGUST 7, 2020 AND AUGUST 10, 2020, AND INFORMATION PROVIDED BY THE TOWN OF FOXBOROUGH. ELEVATIONS ARE BASED ON NAVD 88 DATUM. IT IS NOTED THAT ADDITIONAL UTILITY PIPES AND STRUCTURES MAY EXIST.
- IN AREAS WHERE CONSTRUCTION ACTIVITIES ARE ANTICIPATED TO OCCUR ADJACENT TO PRIVATE PROPERTY, PROPERTY LINES ARE TO BE LOCATED AND REVIEWED WITH THE TOWN OF FOXBOROUGH PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. PROPERTY LINES SHOULD BE DETERMINED IN THE FIELD.
- NORTH DIRECTION SHOWN IS APPROXIMATE.
- 4. ALL EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY DIG SAFE AT LEAST 72 HOURS IN ADVANCE, EXCLUDING WEEKENDS AND HOLIDAYS, PRIOR TO ANY EXCAVATION.
- DO NOT SCALE DRAWINGS UNLESS OTHERWISE NOTED. WRITTEN DIMENSION AND STATIONING SHALL PREVAIL. REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.
- 6. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
- 7. THE CONTRACTOR SHALL RESTORE ALL PUBLIC AND PRIVATE PROPERTY TO ITS PRE-CONSTRUCTION CONDITION AT NO ADDITIONAL COST TO THE OWNER.
- 8. ALL EXISTING UTILITY LINES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE. THE CONTRACTOR, AT NO ADDITIONAL COST TO THE TOWN, SHALL REPAIR ANY EXISTING SEWERS, STORM DRAIN LINES, CULVERTS, OR OTHER UNDERGROUND UTILITIES DAMAGED DURING CONSTRUCTION.
- 9. IN THOSE INSTANCES WHERE POWER OR TELEPHONE POLE SUPPORT IS REQUIRED, THE CONTRACTOR SHALL PROVIDE A MINIMUM 48-HOUR NOTIFICATION TO THE RESPECTIVE UTILITY COMPANY. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR TEMPORARY BRACING OF UTILITIES.
- 10. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO THE TRENCH EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. INJURY TO ANY SUCH STRUCTURE CAUSED BY, OR RESULTING FROM, THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL UTILITIES REQUIRING REPAIR, RELOCATION, OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED THROUGH THE RESPECTIVE UTILITY AND THE TOWN.
- 11. THE CONTRACTOR IS TO TAKE SPECIAL CARE NOT TO DAMAGE TREES, BUSHES, PLANTS. FLOWERS, STONEWALLS, FENCES, ETC. WITHIN THE CONSTRUCTION AREA UNLESS THEY ARE NOTED TO BE REMOVED. CONTRACTOR SHALL REPLACE AT NO COST TO OWNER, ALL DAMAGED
- 12. CONTRACTOR SHALL REMOVE AND REPLACE, OR REPAIR, ALL CURBS, SIDEWALKS, PAVEMENT AND OTHER ITEMS DAMAGED BY CONSTRUCTION ACTIVITIES TO AT LEAST THEIR ORIGINAL CONDITION, AND TO THE SATISFACTION OF THE TOWN OF FOXBOROUGH AND ENGINEER.
- 13. THE CONTRACTOR SHALL BE REQUIRED TO FURNISH AND MAINTAIN A TELEPHONE NUMBER WHERE THE CONTRACTOR CAN BE REACHED 24 HOURS A DAY, 7 DAYS A WEEK.
- 14. THE LOCATION AND LIMITS OF ALL ON-SITE WORK AND STORAGE AREAS SHALL BE REVIEWED/COORDINATED WITH, AND ACCEPTABLE TO THE TOWN OF FOXBOROUGH. THE CONTRACTOR SHALL LIMIT HIS ACTIVITIES TO THESE AREAS.
- 15. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR WORK IN ROADWAYS. THE CONTRACTOR IS RESPONSIBLE FOR CONFORMING TO ALL PERMITS AS AN INTEGRAL PART OF HIS
- 16. THE CONTRACTOR SHALL HANDLE GROUNDWATER, WHERE ENCOUNTERED, IN AN APPROVED MANNER. DURING ANY DEWATERING, THE CONTRACTOR SHALL USE STONE AROUND THE SUCTION END TO MINIMIZE DISCHARGE OF TRENCH MATERIALS. THE DISCHARGED WATER SHALL PASS THROUGH FILTER FABRIC.
- 17. PROVIDE TEMPORARY BERMS AND SWALES TO DIVERT SURFACE WATER AWAY FROM THE AREAS THAT WILL BE EXPOSED BY CONSTRUCTION ACTIVITY TO MINIMIZE THE AMOUNT OF SURFACE WATER COMING INTO CONTACT WITH EXPOSED SOILS. PROVIDE STABLE OUTLETS FOR THESE DEVICES, AND LINE OR VEGETATE THESE DIVERSIONS TO PROVIDE FOR THEIR STABILITY DURING CONSTRUCTION.
- 18. WHEN EARTHWORK CONSTRUCTION ACTIVITY IN AN AREA IS COMPLETE, IMMEDIATELY STABILIZE THE AREA WITH A SUITABLE SURFACE AS DESCRIBED HEREIN. ALL DISTURBED AREAS SHALL BE GRADED, LOAMED, AND SEEDED WITH VEGETATION PRIOR TO NOVEMBER 1ST TO PREVENT EROSION.
- 19. EXISTING PAVED ROADWAYS ADJACENT TO THE SITE WILL BE SWEPT MANUALLY OR BY MOTORIZED STREET SWEEPER AS NEEDED TO REMOVE LOSE SOIL MATERIALS ACCUMULATED ON PAVED SURFACES FROM CONSTRUCTION ACTIVITIES. IN ADDITION TO THESE PRACTICES, THE CONTRACTOR SHALL FOLLOW THE SPECIAL PRACTICES DESCRIBED BELOW, COMPLY WITH THE DIRECTIONS OF THE ENGINEER TO ADDRESS EROSION AND SEDIMENTATION CONDITIONS THAT MAY ARISE ON A CASE-BY-CASE BASIS DURING CONSTRUCTION.
- 20. DURING THE PERIOD OF CONSTRUCTION:
- A. TEMPORARY DEWATERING SEDIMENTATION BASINS, IF REQUIRED, WILL BE CHECKED AFTER EACH SIGNIFICANT RAINFALL AND CLEANED AS NEEDED TO RETAIN STORAGE CAPACITY.
- B. TEMPORARY DRAINAGE SWALES, IF REQUIRED, WILL BE CHECKED DAILY AND REPAIRED WHEN NECESSARY.
- C. THE FILTER SOCK AND OTHER EROSION AND SEDIMENT CONTROL MEASURES/DEVICES SHALL BE INSPECTED, CLEANED, REPLACED, AND/OR REPAIRED AS NECESSARY, WEEKLY, AND AFTER EACH SIGNIFICANT RAINFALL.
- D. INSTALL FILTER SOCK PRIOR TO COMMENCEMENT OF THE EARTHWORK OPERATIONS. INSPECT EROSION CONTROLS IMMEDIATELY AFTER EACH STORM AND REMOVE ACCUMULATED SEDIMENT AS REQUIRED. REPLACE DAMAGED EROSION CONTROLS AS REQUIRED.

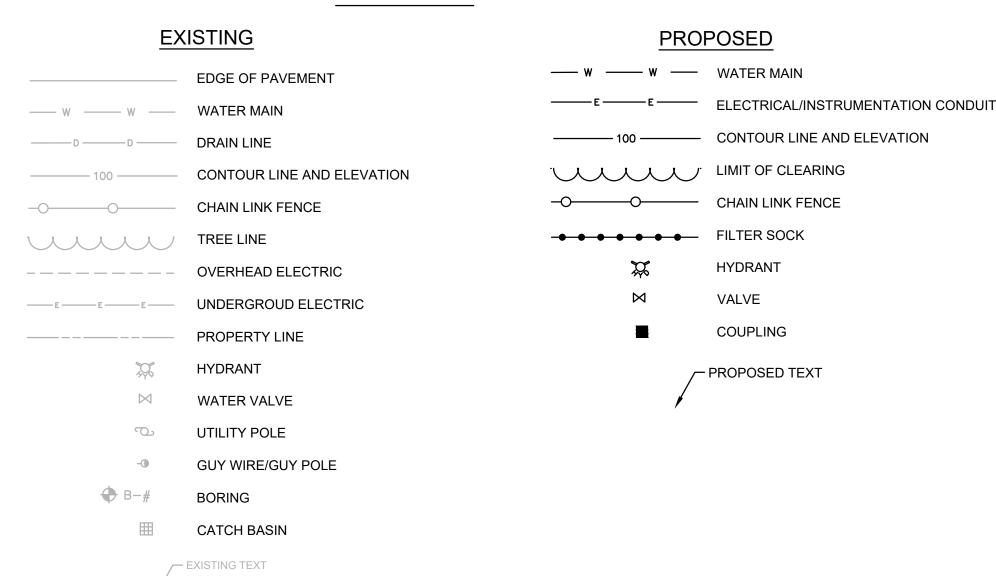
WATER MAIN NOTES:

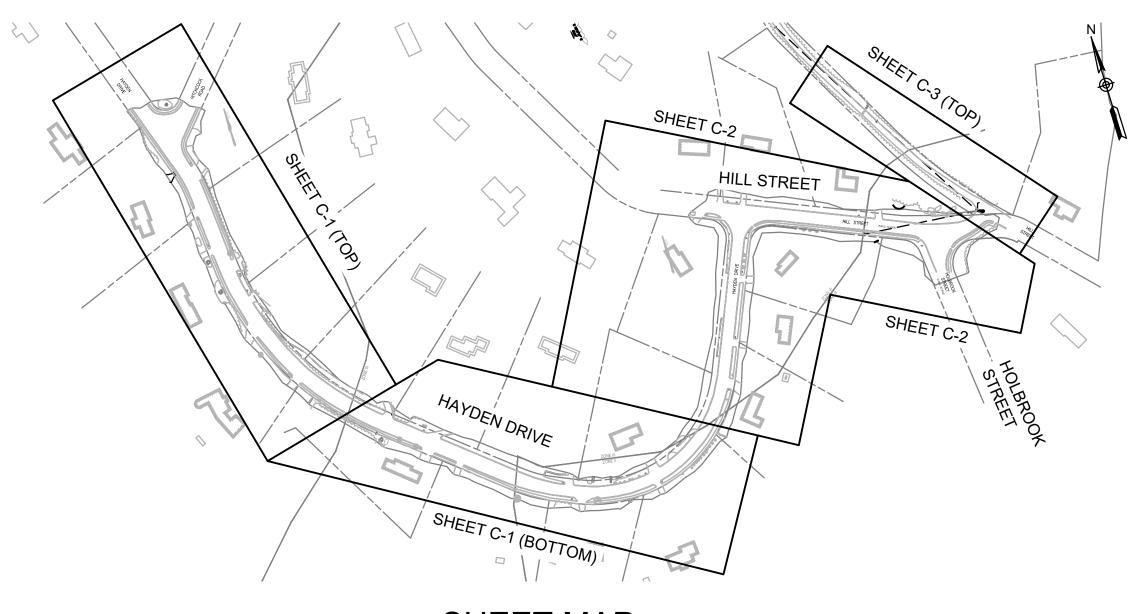
- 1. ALL HYDRANT BRANCHES SHALL HAVE VALVES AS SHOWN ON THE HYDRANT DETAIL.
- 2. THE CONTRACTOR SHALL STAKE OUT ALL HYDRANT LOCATIONS AT LEAST 3 DAYS IN ADVANCE OF INSTALLATION. LOCATION OF ALL HYDRANTS SHALL BE VERIFIED BY THE FOXBOROUGH FIRE DEPARTMENT, ENGINEER, AND OWNER PRIOR TO DIGGING FOR INSTALLATION.
- 3. NEW WATER MAINS AND SERVICES SHALL BE INSTALLED AT THE MINIMUM DEPTH FROM FINISH GRADE TO TOP OF PIPE AS SHOWN ON THE DRAWINGS. WHERE NECESSARY, NEW WATER MAINS SHALL BE INSTALLED AT A GREATER DEPTH TO CLEAR OBSTACLES SHOWN ON THE DRAWINGS AT NO ADDITIONAL COST TO THE OWNER. MINIMUM CLEARANCES TO UTILITIES, AS SHOWN ON THE DRAWINGS SHALL BE MAINTAINED.
- 4. TEST PITS TO LOCATE EXISTING UTILITIES MAY BE ORDERED BY THE ENGINEER TO DETERMINE WHETHER TO RAISE OR LOWER THE PROPOSED WATER MAIN TO CLEAR EXISTING UTILITIES OR MEET EXISTING WATER MAINS.
- 5. EXISTING WATER MAINS OR SERVICES SHALL NOT BE ABANDONED WITHOUT THE APPROVAL OF THE
- 6. WATER SERVICE SHALL NOT BE INTERRUPTED MORE THAN 4 HOURS WITHOUT PRIOR APPROVAL OF THE
- 7. MINIMUM COVER OVER THE PROPOSED WATER MAIN AND APPURTENANCES SHALL BE 5'-0" UNLESS OTHERWISE NOTED OR DIRECTED BY ENGINEER.
- 8. ANY HYDRANT WHICH IS NOT IN SERVICE SHALL BE COVERED WITH A SECURELY FASTENED BURLAP BAG (OR EQUAL).
- 9. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES OR HYDRANTS WHICH HOLD WATER IN THE SYSTEM. THE OWNER WILL, ON 24 HOURS NOTICE FROM THE CONTRACTOR, OPEN AND/OR CLOSE ANY VALVES OR HYDRANTS REQUIRED FOR DRAINING OR ADMITTING WATER TO THE VARIOUS SECTIONS OF THE WATER MAINS.
- 10. SOME WATER SERVICE CONNECTIONS MAY NOT BE SHOWN ON THE DRAWINGS. THE OWNER WILL MARK THE LOCATION OF SUCH CONNECTIONS, PROVIDED THE CONTRACTOR GIVES THE OWNER AT LEAST ONE WEEK ADVANCE NOTICE.
- 11. OPEN TRENCHES MUST BE BACKFILLED AT THE END OF THE WORKDAY OR COVERED AND SECURED WITH STEEL PLATES, AS APPROVED BY THE ENGINEER AND TOWN.
- 12. THE CONTRACTOR IS REQUIRED TO NOTIFY AND COORDINATE WITH THE RESIDENTS ALL WATER MAIN SHUT DOWNS 24 HOURS IN ADVANCE.
- 13. CONCRETE THRUST BLOCKS AND "MEGA-LUG" (OR APPROVED EQUAL) MECHANICAL RESTRAINTS ARE REQUIRED AT ALL TEES, BENDS, PLUGS, AND HYDRANTS.
- 14. WATER SERVICES SHALL BE INSULATED IN AREAS WHERE CONNECTION TO EXISTING WATER SERVICE IS LESS THAN 4 FEET DEEP.
- 15. VALVE DECOMMISSIONING CLOSE VALVE, REMOVE AND LEGALLY DISPOSE OF GATE BOX, FILL HOLE, AND PAVE ACCORDING TO TYPICAL TRENCH DETAIL.
- 16. HYDRANT DECOMMISSIONING CUT AND CAP HYDRANT LATERAL, REMOVE AND LEGALLY DISPOSE OF EXISTING HYDRANT ASSEMBLY, FILL HOLE AND PAVE ACCORDING TO TYPICAL TRENCH DETAIL OR RESTORE LANDSCAPING TO MATCH ADJACENT AREAS AT NO EXPENSE TO THE OWNER.
- 17. SLEEVES, NIPPLES, AND ACCESSORIES NECESSARY FOR CONNECTIONS BETWEEN EXISTING AND NEW PIPES MAY NOT BE SHOWN IN DETAIL. FURNISH AND INSTALL ITEMS NECESSARY FOR CONNECTING TO EXISTING MAINS AND AS INDICATED ON THE CONTRACT DOCUMENTS.
- 18. CONTRACTOR SHALL REMOVE AND LEGALLY DISPOSE OF ALL MATERIAL REMOVED FROM TRENCH DURING CUTTING AND CAPPING OF EXISTING WATER MAINS.
- 19. EXCEPT WHERE OTHERWISE DIRECTED, 12" MINIMUM CLEARANCE SHALL BE PROVIDED BETWEEN THE NEW MAIN AND OTHER UTILITIES WHERE THEY CROSS. WHERE NEW MAIN PASSES UNDER UTILITIES, IT SHALL CROSS WITHOUT THE USE OF BENDS UNLESS OTHERWISE NOTED ON THE PLANS.
- 20. ALL HYDRANT LATERALS SHALL CROSS UNDER EXISTING UTILITIES AND WATER MAINS. HYDRANT
- 21. PRIOR TO DEMOBILIZATION THE CONTRACTOR SHALL INSPECT EVERY VALVE, HYDRANT, AND CURB STOP WITH THE RESIDENT ENGINEER PRESENT TO ENSURE PROPER OPERATION.

ABBREVIATIONS

BH	BITUMINOUS	CIAI	OLIV MIDE
BLDRS	BOULDERS	GW	GUY WIRE
01	OAOT IDON	EP	EDGE OF PAVEMENT
CI	CAST IRON	UP	UTILITY POLE
CLDI	CEMENT LINED DUCTILE IRON	CD	STONE BOLIND
CONC	CONCRETE	SB	STONE BOUND
DI	DUCTILE IRON	EM	ELECTRIC METER
וט	DUCTILE IRON	TYP	TYPICAL
D	DRAIN	ССВ	CAPE COD BERM
ELEV	ELEVATION		
MJ	MECHANICAL JOINT	OD	OUTSIDE DIAMETER
		MG	MILLION GALLONS
W	WATER	NG	NATURAL GAS
VCC	VERTICLE GRANITE CURB	FI	FLANCE
СВ	CATCH BASIN	FL	FLANGE

LEGEND





SHEET MAP SCALE: 1" = 200'

HILL STREET BOOSTER PUMP STATION FOXBOROUGH, MASSACHUSETTS

Sheet No.

ENVIRONMENTAL PARTNERS

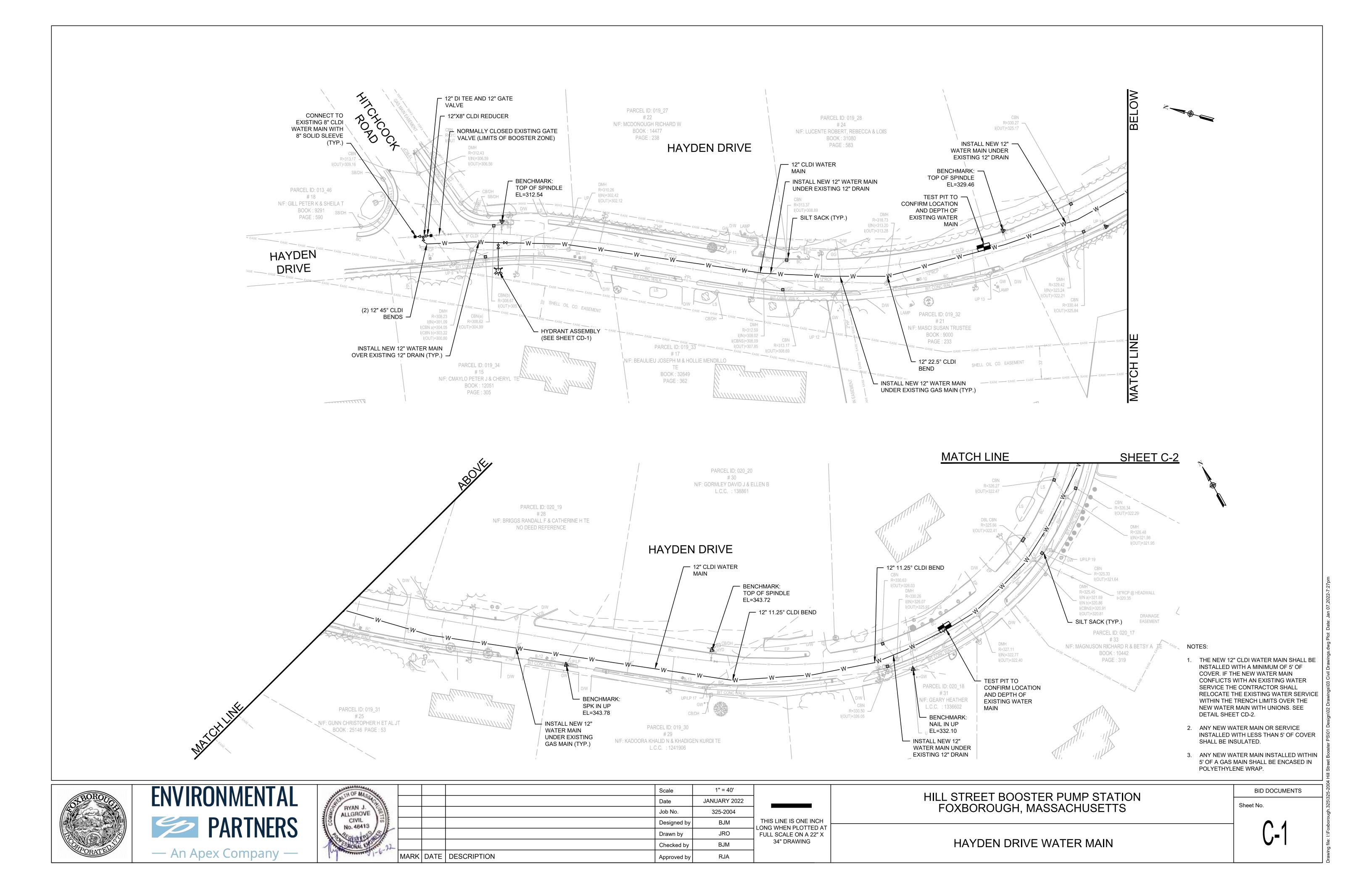
— An Apex Company —

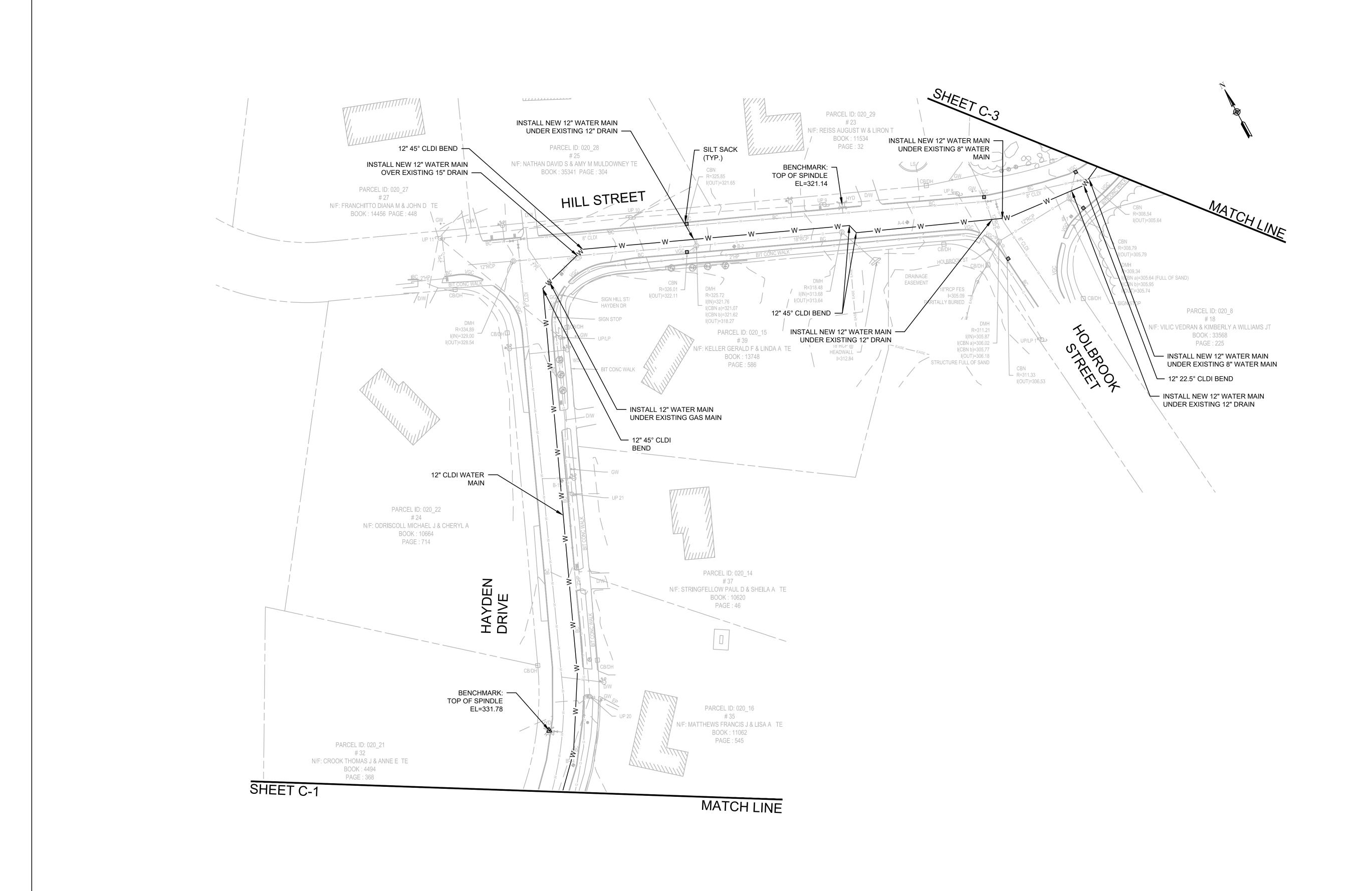


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			Date	JANUARY 2022	
			Job No.	325-2004	
			Designed by	ВЈМ	THIS LINE IS ONE INCH LONG WHEN PLOTTED AT
			Drawn by	JRO	FULL SCALE ON A 22" X
			Checked by	ВЈМ	34" DRAWING
MARK	DATE	DESCRIPTION	Approved by	RJA	

GENERAL NOTES AND LEGEND

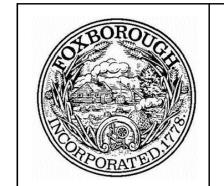
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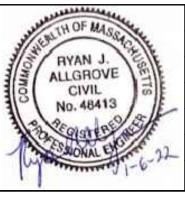


NOTES:

- 1. THE NEW 12" CLDI WATER MAIN SHALL BE INSTALLED WITH A MINIMUM OF 5' OF COVER. IF THE NEW WATER MAIN CONFLICTS WITH AN EXISTING WATER SERVICE THE CONTRACTOR SHALL RELOCATE THE EXISTING WATER SERVICE WITHIN THE TRENCH LIMITS OVER THE NEW WATER MAIN WITH UNIONS. SEE DETAIL SHEET CD-2.
- 2. ANY NEW WATER MAIN OR SERVICE INSTALLED WITH LESS THAN 5' OF COVER SHALL BE INSULATED.
- 3. ANY NEW WATER MAIN INSTALLED WITHIN 5' OF A GAS MAIN SHALL BE ENCASED IN POLYETHYLENE WRAP.



ENVIRONMENTAL PARTNERS — An Apex Company —



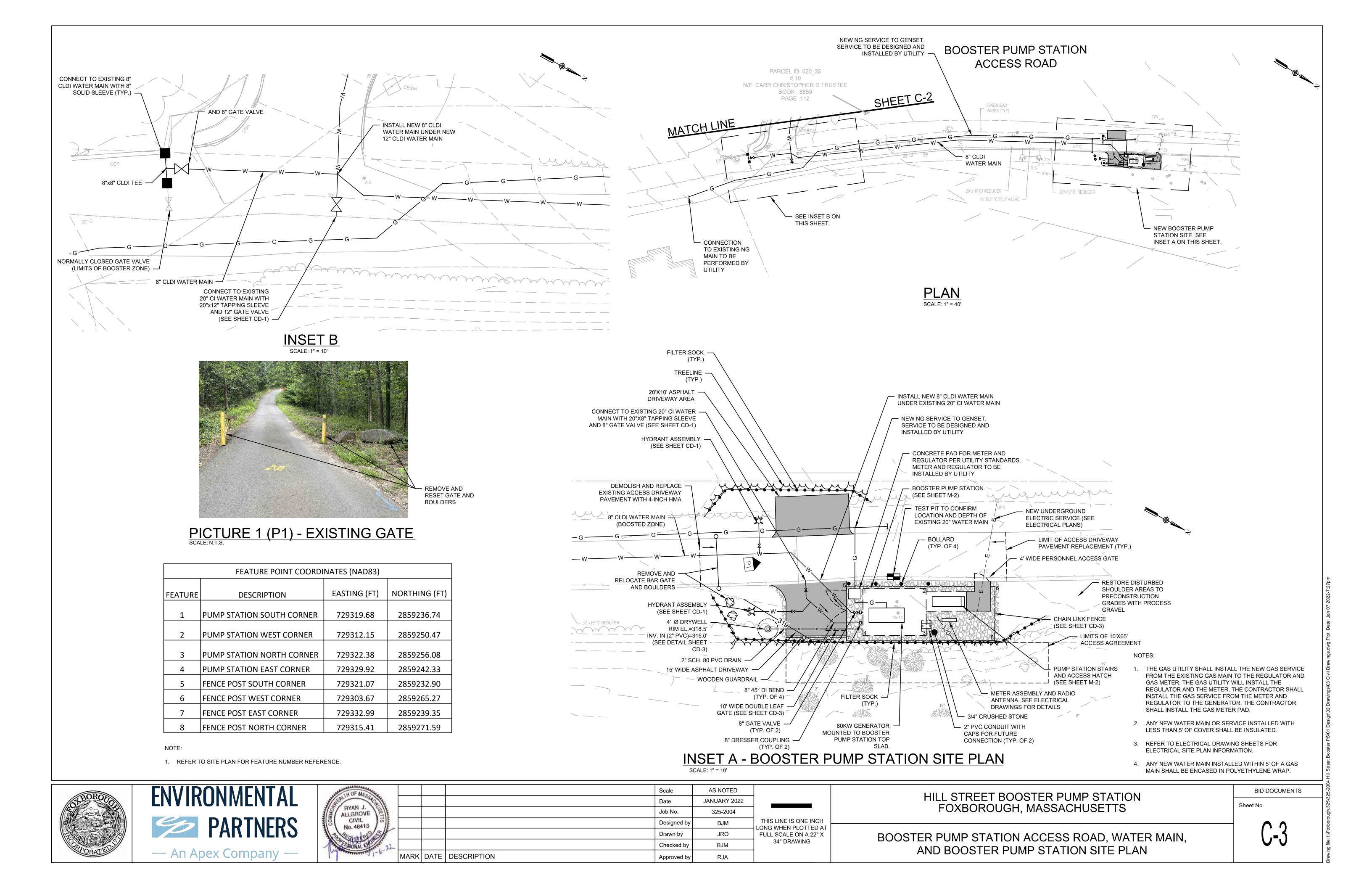
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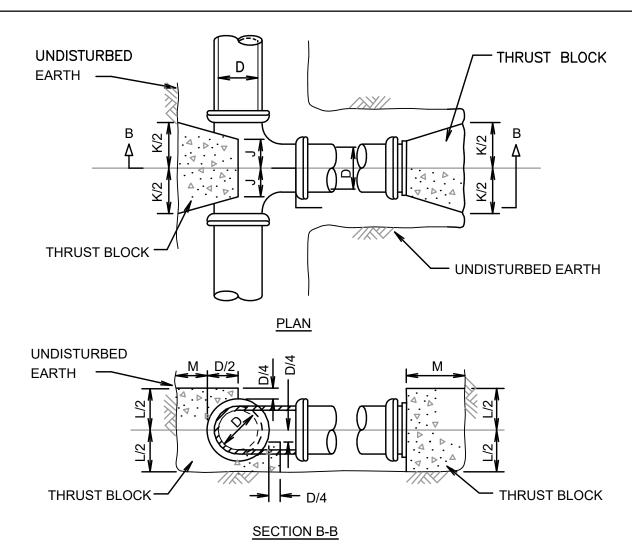
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HILL STREET BOOSTER PUMP STATION FOXBOROUGH, MASSACHUSETTS

Sheet No.

HAYDEN DRIVE AND HILL STREET WATER MAIN

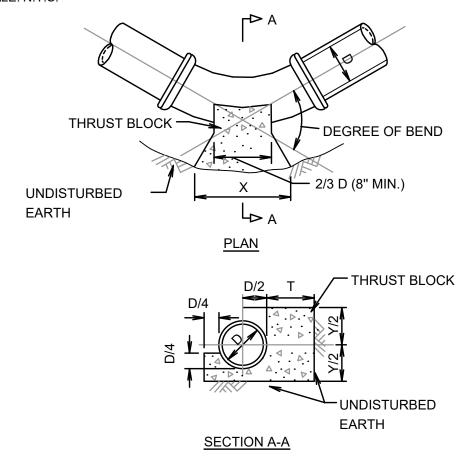




- 1. ALL CONCRETE SHALL BE 3000 PSI @ 28 DAYS (CLASS 'A' CONCRETE).
- 2. DIMENSIONS SHOWN ARE MINIMUM AND ARE BASED UPON SOIL PRESSURE OF 1500 PSF AND TOTAL PRESSURE OF 250 PSI. TOTAL PRESSURE IS WORKING PRESSURE PLUS SURGE PRESSURE.
- 3. THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED EARTH.

	T.	ABLE	OF DI	MENSI	ONS		
D (in)	4	6	8	10	12	16	20
J (in)	6	6	7	9	10	12	14
K (in)	16	16	20	26	32	36	40
L (in)	16	16	21	24	29	36	40
M (in)	11	11	14	16	19	22	26

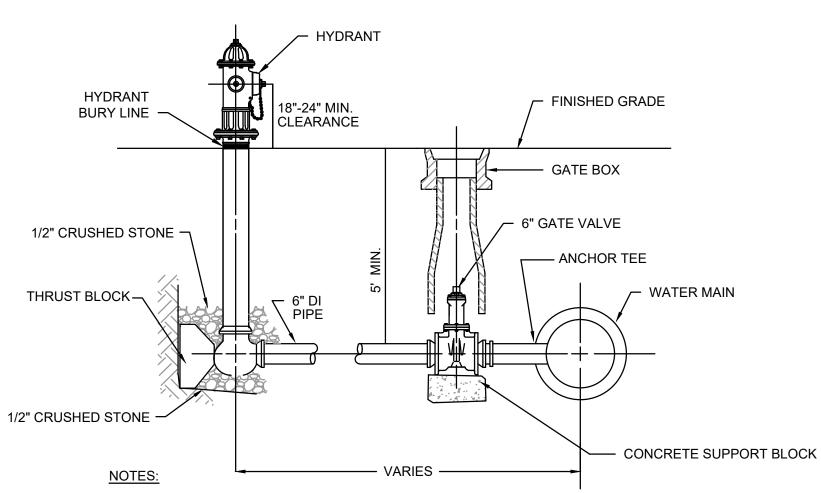
CONCRETE THRUST BLOCK DETAIL AT TEE / PLUG / CAP



- 1. ALL CONCRETE SHALL BE 3000 P.S.I. @ 28 DAYS (CLASS "A" CONCRETE)
- 2. DIMENSIONS SHOWN ARE MINIMUM AND ARE BASED UPON SOIL PRESSURE OF 1500 P.S.F. AND TOTAL PRESSURE OF 250 P.S.I. TOTAL PRESSURE IS WORKING PRESSURE PLUS SURGE PRESSURE.
- 3. THRUST BLOCKS SHALL BEAR AGAINST UNDISTURBED EARTH

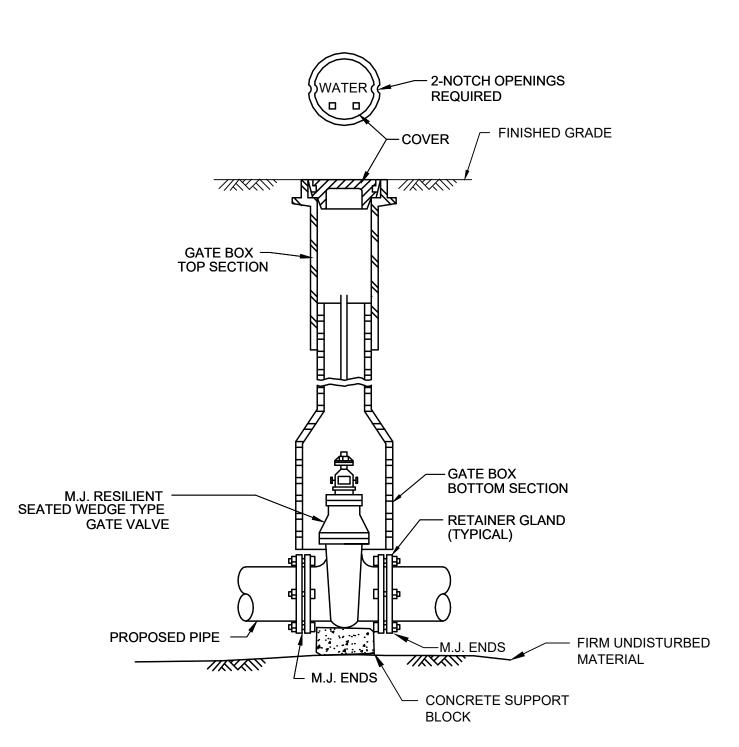
TABLE OF DIMENSIONS

	DIMENSION			90	° BEI	ND					45	° BEI	ND					22 1/	2° BI	END					11 1/	4° B	END		
Ī	D (in.)	4	6	8	10	12	16	20	4	6	8	10	12	16	20	4	6	8	10	12	16	20	4	6	8	10	12	16	20
	X (in.)	35	35	50	56	72	80	90	24	24	35	45	51	60	70	28	28	30	32	37	42	48	12	12	19	21	27	33	40
	Y (in.)	20	20	24	32	35	40	45	16	16	19	21	27	33	40	13	13	13	16	19	22	25	8	8	9	12	13	16	20
	T (in.)	11	11	14	16	19	22	24	11	11	14	16	19	22	30	11	11	13	16	19	22	25	11	11	13	16	19	22	25

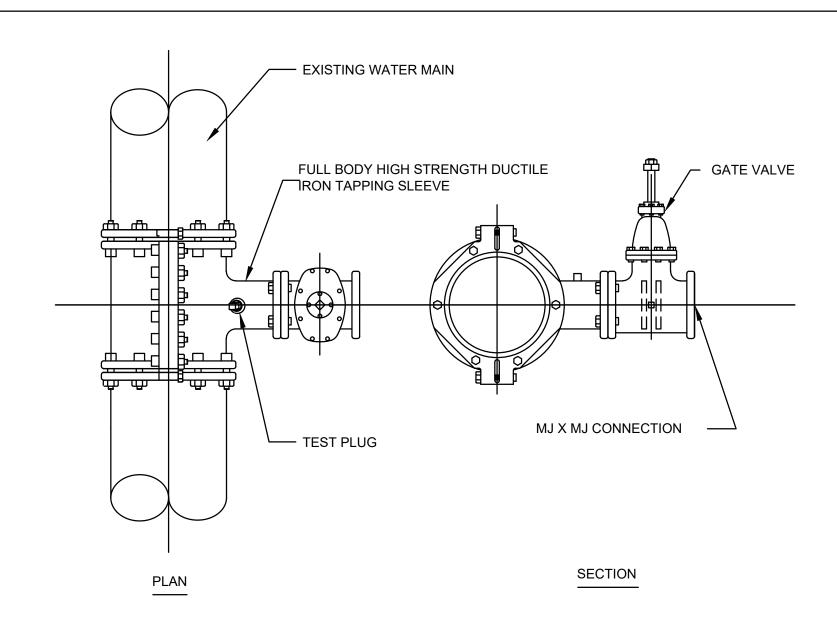


- 1. ALL HYDRANT, VALVE AND TEE JOINTS TO BE RESTRAINED MECHANICAL JOINTS.
- 2. DEPTH OF HYDRANT BURY SHALL SUIT INSTALLED DEPTH OF COVER OVER WATER MAIN
- 3. INSTALL RISERS AS NECESSARY AT NO ADDITIONAL COST TO THE OWNER.
- 4. HYDRANTS SHALL BE PAINTED RED WITH WHITE CAPS IN ACCORDANCE WITH TOWN

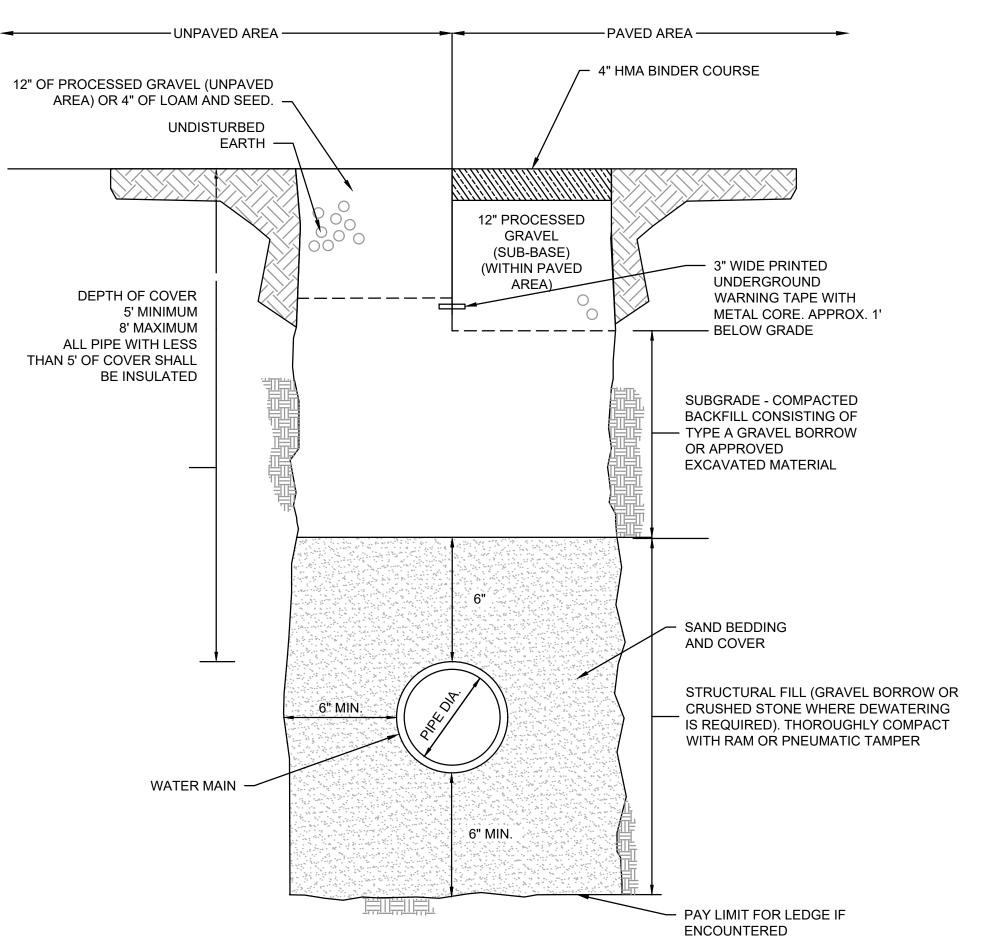
FIRE HYDRANT ASSEMBLY DETAIL



GATE VALVE AND VALVE BOX DETAIL

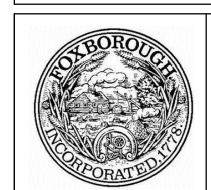


TAPPING SLEEVE AND GATE VALVE



TYPICAL WATER TRENCH DETAIL

CONCRETE THRUST BLOCK DETAIL AT BEND



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			Checked by	RJA	
MARK	DATE	DESCRIPTION	Approved by	RJA	

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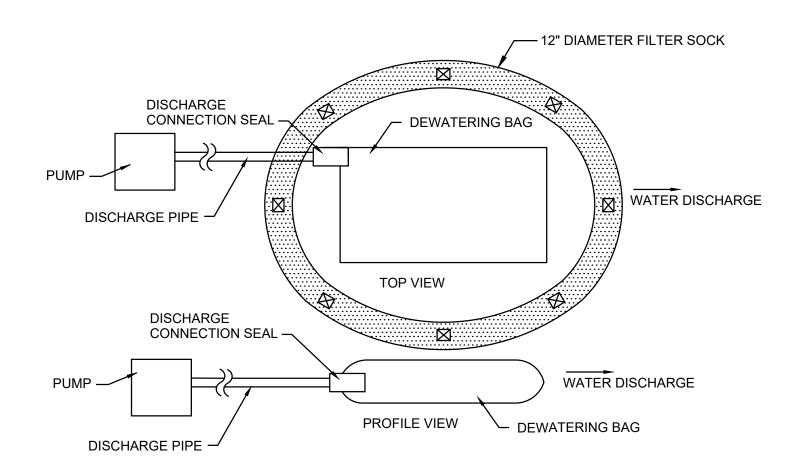
HILL STREET BOOSTER PUMP STATION FOXBOROUGH, MASSACHUSETTS

Sheet No.

CIVIL DETAILS I

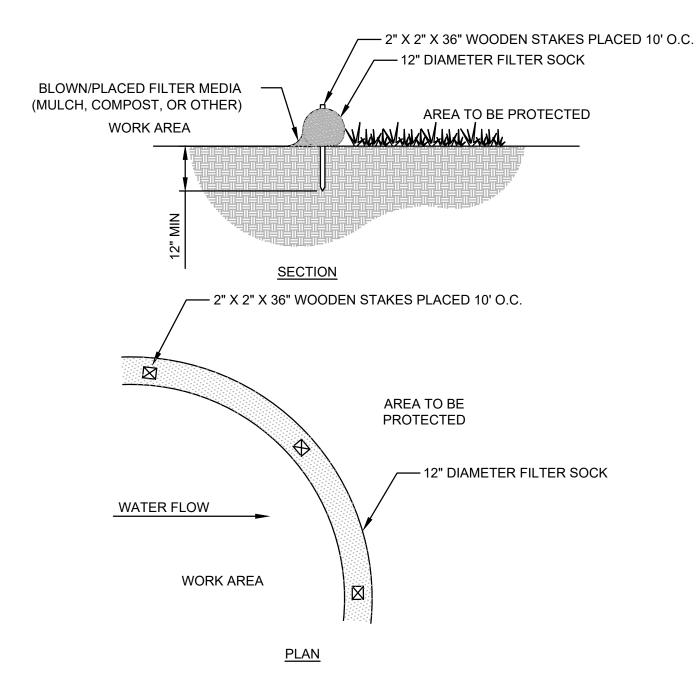
BID DOCUMENTS

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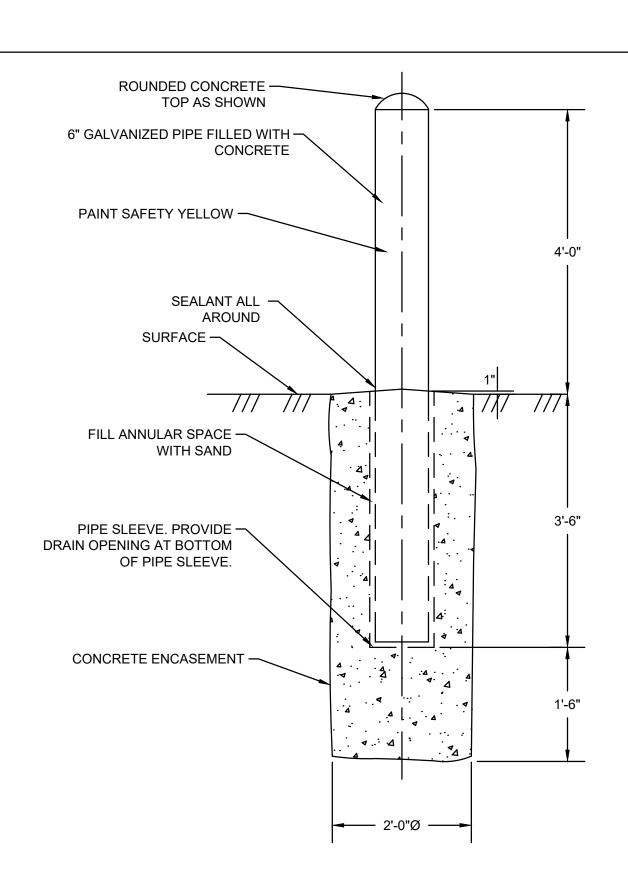


- 1. DEWATERING BAG SIZE AND QUANTITY SHALL BE AS NEEDED TO ADEQUATELY FILTER ALL PUMP EFFLUENT FROM DEWATERING ACTIVITIES. CONTRACTOR SHALL PROVIDE A REDUNDANT BAG ON SITE AT ALL TIMES.
- 2. EACH BAG SHALL HANDLE A 2", 3", OR 4" DISCHARGE HOSE.
- 3. DISCHARGE HOSES CAN BE PLACED ALONG ANY EDGE BY MAKING A SMALL INCISION INTO THE FABRIC, INSERTING THE HOSE, AND THEN CLAMPING THE FABRIC TO THE HOSE VIA WIRE, TIES, CLAMP, ROPE OR SIMILAR TO CREATE A GOOD SEAL.
- 4. CONTRACTOR SHALL AVOID DISCHARGING MULTIPLE PIPES INTO ONE BAG.

DEWATERING BAGS



12" DIAMETER FILTER SOCK



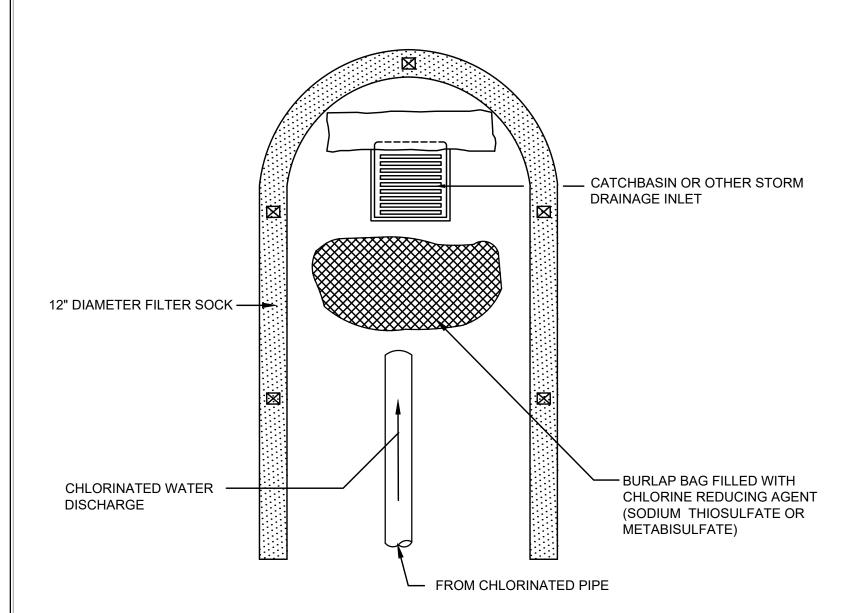
BOLLARD DETAIL SCALE: N.T.S.

TOP AND BOTTOM JOINT RAILS AT

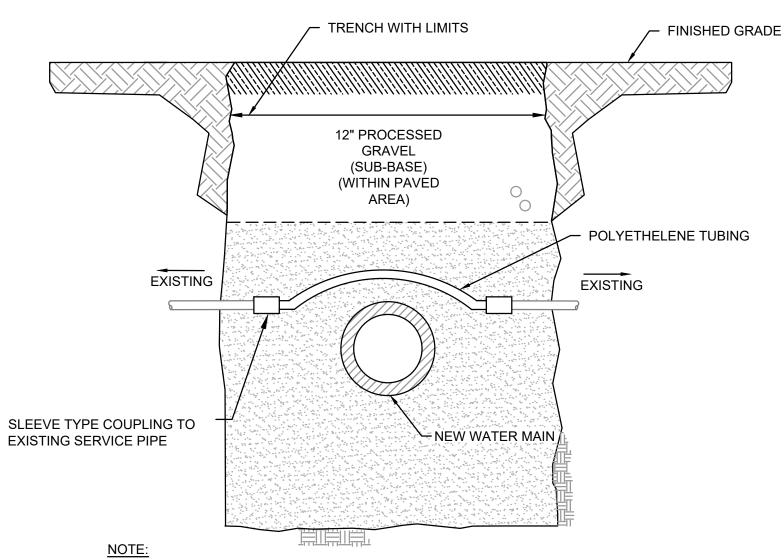
PLAN VIEW

- COUNTERSINK AND PEEN

ALTERNATE POSTS







1. WATER SERVICES SHALL BE INSULATED IN AREAS WHERE CONNECTION TO EXISTING WATER SERVICE IS LESS THAN 4 FEET.



8X8 WC

GRAVEL BORRO

COMPACTED SUBGRADE

SECTION VIEW

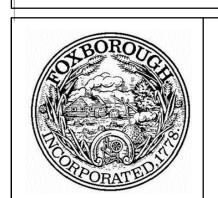
1/2" CHAMFER AT FACE EDGE

5/8" DIA, GALV. MACHINED BOLT, NUT, & WASHER

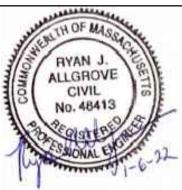
4X10 WOOD RAIL

FINISH GRADE

WATER SERVICE CROSSING DETAIL



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	FULL SCALE ON A 22" X	
	34" DRAWING	

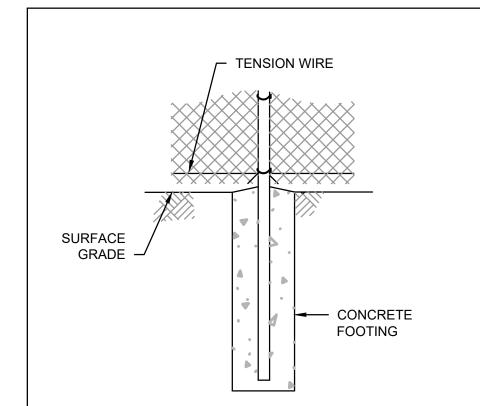
HILL STREET BOOSTER PUMP STATION FOXBOROUGH, MASSACHUSETTS

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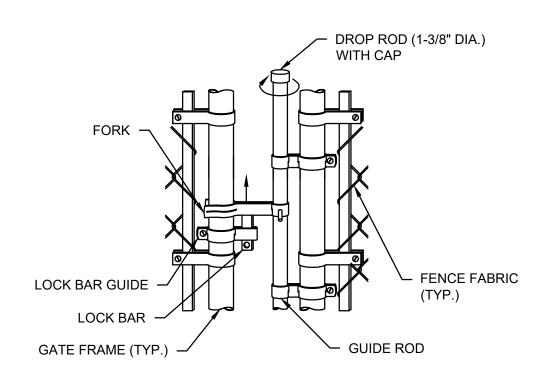
CIVIL DETAILS II

FRONT ELEVATION VIEW

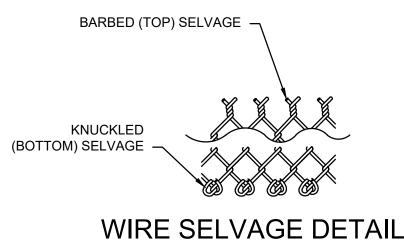
CD-2



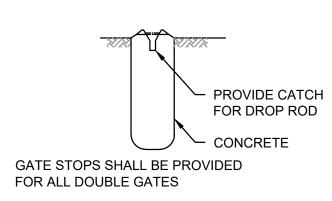




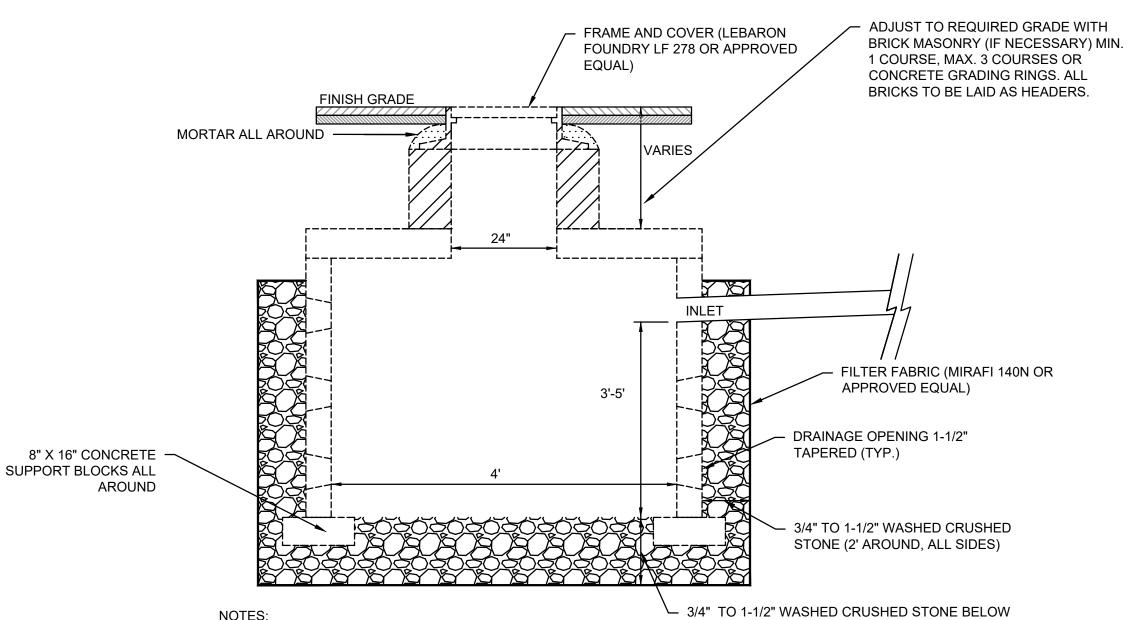
DROP ROD ASSEMBLY DETAIL SCALE: N.T.S.



SCALE: N.T.S.



GATE STOP DETAIL SCALE: N.T.S.

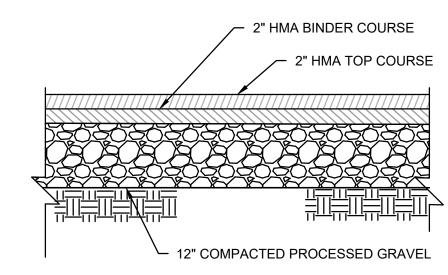


LEACHING PIT 12" MIN. (DEPTH VARIES)

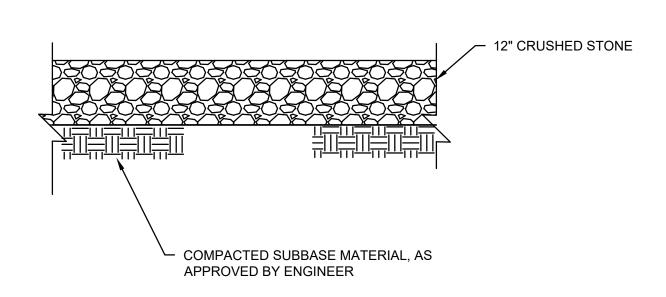
NOTES:

- 1. NO BOTTOM (4" WALLS)
- 2. CONCRETE MINIMUM STRENGTH: 4000 PSI @ 28 DAYS
- 3. REINFORCING GRADE 60 4. DESIGN LOADING: H20
- 5. USE MBO PRECAST, INC. 4' DIA. LEACHING PIT OR EQUAL

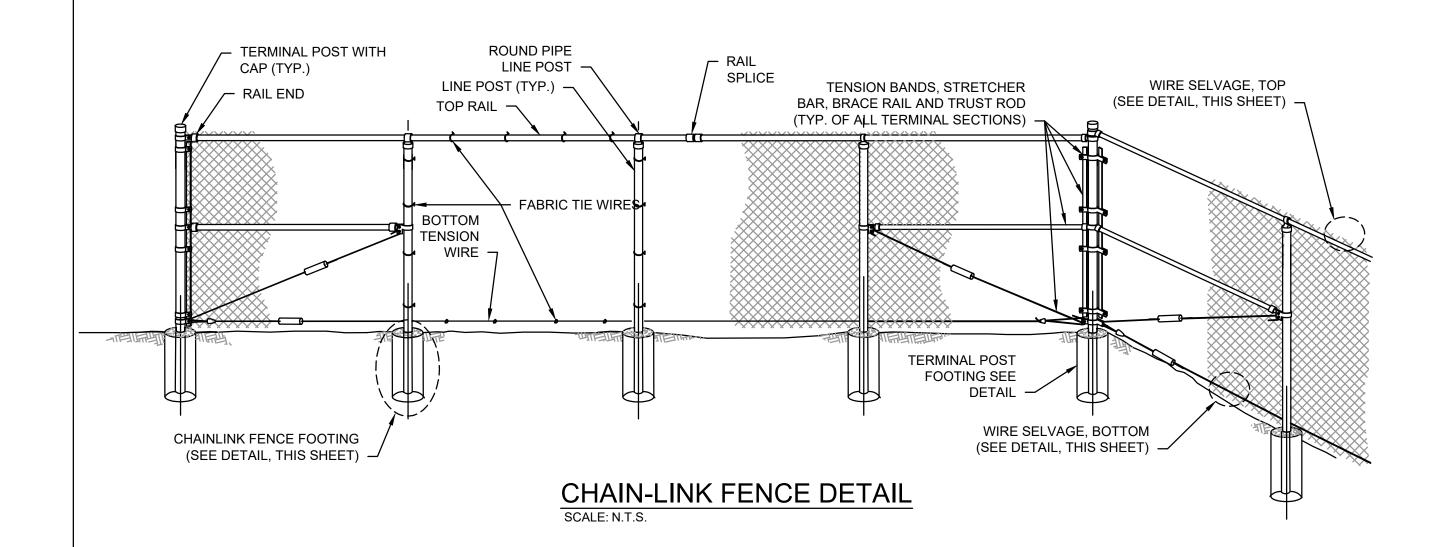
DRY WELL DETAIL

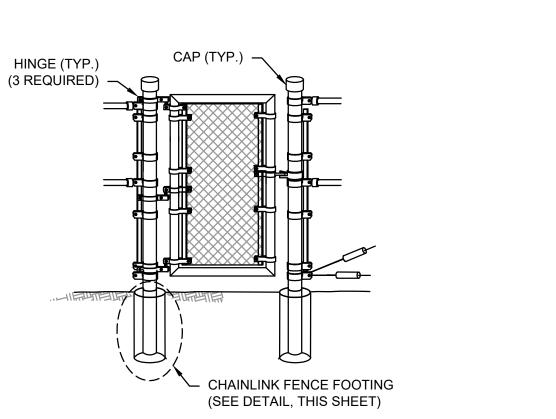


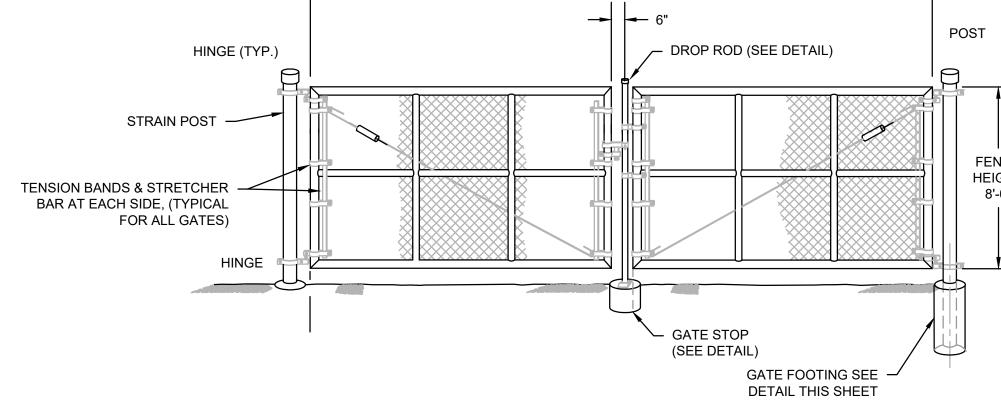
PAVEMENT DETAIL - BOOSTER PUMP STATION ACCESS ROAD AND DRIVEWAYS SCALE: N.T.S.



CRUSHED STONE AREA DETAIL SCALE: N.T.S.



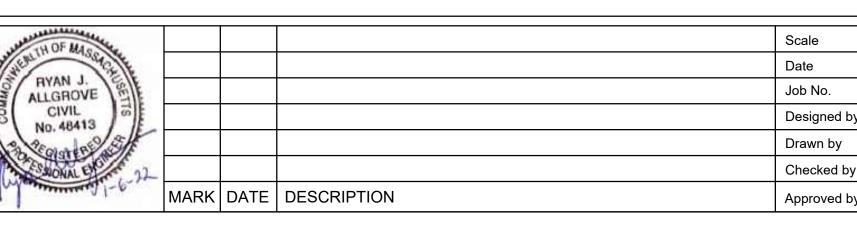




DOUBLE SWING GATE DETAIL



4-FT WIDE PEDESTRIAN GATE



JANUARY 2022		
325-2004		
ВЈМ	THIS LINE IS ONE INCH LONG WHEN PLOTTED AT	
JRO	FULL SCALE ON A 22" X	
RJA	34" DRAWING	
RJA		

AS NOTED

HILL STREET BOOSTER PUMP STATION FOXBOROUGH, MASSACHUSETTS

CIVIL DETAILS III

BID DOCUMENTS Sheet No.

CD-3

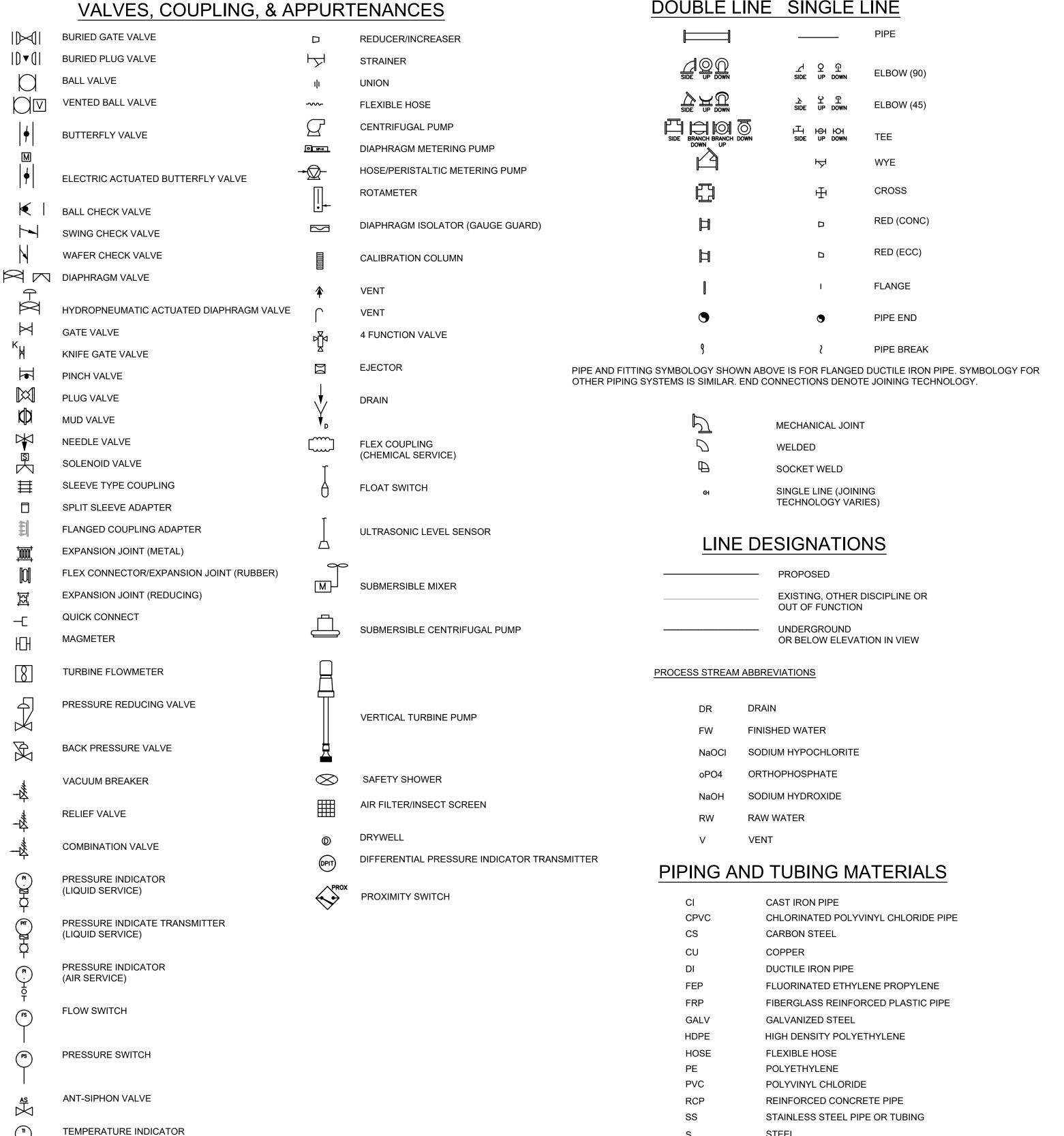
PROCESS MECHANICAL NOTES

- THE REQUIREMENTS INCLUDED IN THESE NOTES ARE SUPPLEMENTARY TO THE CONTRACT, GENERAL CONDITIONS, TECHNICAL REQUIREMENTS, AND OTHER REQUIREMENTS SPECIFIED HEREIN.
- MOUNTING DETAILS PROVIDED ARE GENERIC FOR EQUIPMENT AND DEVICES OF VARIOUS MANUFACTURERS. THE INSTALLING CONTRACTOR MUST STRICTLY COMPLY WITH MANUFACTURER'S INSTRUCTION IN THE INSTALLATION OF THESE DEVICES. IF THERE ARE ANY ENGINEERING ISSUES THEY MUST BE REFERRED TO THE ENGINEER PRIOR TO INSTALLATION.
- IT IS NOT THE INTENT OF THESE DRAWINGS TO PORTRAY EVERY DETAIL OF THE REQUIRED WORK. THE CONTRACTOR SHALL PROVIDE THE EQUIPMENT AND SYSTEMS COMPLETE SO THAT WHEN ASSEMBLED AND INSTALLED IN THE WORK, THEY SHALL OPERATE AND PERFORM AS DESCRIBED HEREIN.
- COORDINATE THE WORK REQUIRED BY THESE DRAWINGS ("M" SERIES) WITH THE WORK REQUIRED BY OTHER DRAWINGS
- THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES WHICH HOLD WATER IN THE SYSTEM, UNLESS GRANTED APPROVAL TO DO SO BY THE TOWN OF FOXBOROUGH.
- ALL WALL AND FLOOR SLEEVES SHALL BE LARGE ENOUGH TO ACCOMMODATE FLANGES AS REQUIRED. FLOOR SLEEVES SHALL PROJECT AT LEAST 4-IN ABOVE FINISH FLOOR UNLESS OTHERWISE SHOWN. IF SLEEVES ARE TO BE SEALED, PROVIDE GROOVED COUPLING PIPING CONNECTION TO FACILITATE INSTALLATION AND REMOVAL OF PIPING.
- ALL PIPE PENETRATIONS THROUGH INTERIOR AND EXTERIOR WALLS AND FLOORS SHALL BE SEALED WATERTIGHT.
- SMALL PIPING IS SHOWN DIAGRAMMATICALLY: FIELD-ROUTING SUBJECT TO APPROVAL OF THE ENGINEER. SMALL PIPE ROUTING MUST NOT INTERFERE WITH ACCESS TO OR OPERATION OF ANY OTHER PIPE, VALVE, EQUIPMENT, OR PUMP STATION SYSTEM.
- ALL PROCESS EQUIPMENT. INCLUDING PUMPS. SHALL BE ISOLATED FROM PIPING LOADS AND DYNAMICS BY FLEXIBLE CONNECTORS IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS AND SPECIFICATIONS.
- ALL PIPING, VALVES, EQUIPMENT, ETC. SHALL BE LABELED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE LOCATION FOR ALL WALL PENETRATIONS WITH THE VARIOUS TRADES. WALL PIPES AND WALL SLEEVES SHALL BE REQUIRED FOR ALL PIPE PENETRATIONS THROUGH CONCRETE WALLS WHETHER SHOWN ON THE DRAWINGS OR NOT. ALL WALL AND FLOOR SLEEVES SHALL BE LARGE ENOUGH TO ACCOMMODATE FLANGES, IF REQUIRED.
- ALL SLEEVE TYPE COUPLINGS ON PRESSURE PIPING SHALL BE HARNESSED UNLESS OTHERWISE INDICATED. WHERE COUPLINGS ARE PROVIDED TO PROVIDE AXIAL FLEXIBILITY, PIPING MUST BE SECURELY RESTRAINED.
- MATERIALS AND WORKMANSHIP FURNISHED UNDER THIS CONTRACT SHALL BE A STANDARD, HIGH-GRADE QUALITY, AND OF THE BEST WORKMANSHIP AND DESIGN. ALL LIKE PARTS OF EQUIPMENT OF THE SAME SIZE OR CAPACITY SHALL BE INTERCHANGEABLE. SUITABLE PROVISION SHALL BE MADE FOR EASY ADJUSTMENT OR REPLACEMENT OF ALL PARTS REQUIRING ADJUSTMENT OR REPLACEMENT.
- THE INSTALLATION OF FACILITIES AND APPURTENANT WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF ALL FEDERAL STATE, AND MUNICIPAL CODES AND REGULATIONS GOVERNING THE WORK. IN INSTANCES WHERE THE REQUIREMENT OF DRAWINGS AND SPECIFICATIONS ARE IN EXCESS OF THE REQUIREMENTS OF THE APPLICABLE CODES AND REGULATIONS, AND ARE PERMITTED THEREUNDER, THEN, IN SUCH INSTANCES, THE REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL GOVERN, UNLESS DIRECTED OTHERWISE IN WRITING BY THE ENGINEER.
- UNLESS OTHERWISE SPECIFIED, NEAT BRASS PLATE, OR OTHERWISE SUITABLE MATERIAL, HAVING THE SERIAL NUMBER, THE MAKE, HORSEPOWER, CAPACITY, SPEED, AND OTHER PERTINENT DATA, AND ANY IMPORTANT OPERATING OR MAINTENANCE INSTRUCTIONS, PERMANENTLY AND CLEARLY MARKED ON THE PLATE, SHALL BE MOUNTED ON EACH ITEM OF EQUIPMENT. ALL IMPORTANT PARTS OF EQUIPMENT, AS DIRECTED BY ENGINEER/OWNER SHALL BE STAMPED FOR IDENTIFICATION AND LOCATION.
- ALL NECESSARY ANCHOR BOLTS, NUTS, WASHERS, SETTING TEMPLATES, AND SUCH OTHER PARTS SHALL BE PROVIDED AS REQUIRED FOR THE PROPER INSTALLATION OF THE WORK, AND WHEREVER PRACTICABLE, THEY SHALL BE BUILT IN AS THE WORK PROGRESSES. THE PARTS SHALL BE OF THE MATERIALS SPECIFIED, AND WHERE NOT SPECIFIED OR INDICATED, THEY SHALL BE OF APPROVED TYPES AND MATERIALS FOR EACH APPLICATION. THE SETTING OF ANCHOR BOLTS BY DRILLING AND GROUTING WILL NOT BE PERMITTED.
- ALL EQUIPMENT SHALL BE INSTALLED IN STRICT CONFORMANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER, AS APPROVED. TRULY LEVEL AND PLUMB, AND SHALL BE PROVIDED COMPLETE WITH ALL NECESSARY PIPING, FITTINGS, VALVES, CONTROLS, WIRING, AND APPURTENANCES AND ACCESSORIES SO THE EQUIPMENT WILL BE LEFT COMPLETE AND IN SATISFACTORY OPERATION. PARTICULAR CARE SHALL BE TAKEN IN THE INSTALLATION OF PUMPS IN ORDER TO PREVENT A STRAIN ON THE PIPING OR PUMP FLANGES AND THE CONTRACTOR SHALL INSURE THE CORRECT ALIGNMENT OF SHAFTS, COUPLINGS, AND BEARINGS.
- 18. ALL WEDGES, SHIMS, FILLING PIECES, KEYS, PACKING, GROUT, OR OTHER MATERIALS NECESSARY TO PROPERLY ALIGN, LEVEL. AND SECURE APPARATUS IN PLACE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. ALL PARTS INTENDED TO BE PLUMB OR LEVEL MUST BI PROVEN EXACTLY SO. ANY GRINDING NECESSARY TO BRING PARTS TO PROPER BEARING AFTER ERECTION SHALL BE DONE AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL PROVIDE ALL OPENINGS, CHANNELS, CHASES, ETC. AS REQUIRED TO COMPLETE THE WORK UNDER THIS CONTRACT, TOGETHER WITH THOSE REQUIRED BY OTHER CONTRACTORS.
- CONTRACTOR SHALL PROVIDE RESTRAINT OF ALL EXPANSION JOINTS/FLEX CONNECTORS WITH TIE-RODS.
- CONTRACTOR SHALL SUBMIT PIPING LAYOUT DIAGRAMS TO THE ENGINEER FOR APPROVAL PRIOR TO ANY PIPING INSTALLATION. PIPING LAYOUT DIAGRAMS SHALL SHOW DIMENSIONS OF ALL VALVES, FITTINGS, PIPE RUNS, AND SUPPORTS.
- ALL PIPING SYSTEMS AND EQUIPMENT SHALL BE ADEQUATELY AND SAFELY SUPPORTED. CONTRACTOR SHALL DESIGN, PROVIDE, AND INSTALL
- ALL SUPPORTS AS REQUIRED BY THE PIPING AND EQUIPMENT PROVIDED. AT A MINIMUM, ALL PIPING SYSTEMS SHALL BE SUPPORTED PER THE REQUIREMENTS OF MANUFACTURER'S STANDARDIZATION SOCIETY (MSS) SP-58 AND MSS SP-69. SUPPORT DESIGN SHALL ACCOMMODATE ALL STATIC AND OPERATIONAL CONDITIONS TO WHICH THE PIPING AND EQUIPMENT MAY BE SUBJECTED. SUPPORTS SHALL BE IN ADDITION TO THOSE SHOWN ON THE CONTRACT DRAWINGS.

MECHANICAL PROCESS LEGEND

PIPE AND FITTINGS

DOUBLE LINE SINGLE LINE







				Scale	AS NOTED
				Date	JANUARY 2022
				Job No.	325-2004
				Designed by	ВЈМ
				Drawn by	JRO
_				Checked by	RJA
	MARK	DATE	DESCRIPTION	Approved by	RJA

THIS LINE IS ONE INCH LONG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING

SAMPLE TAP

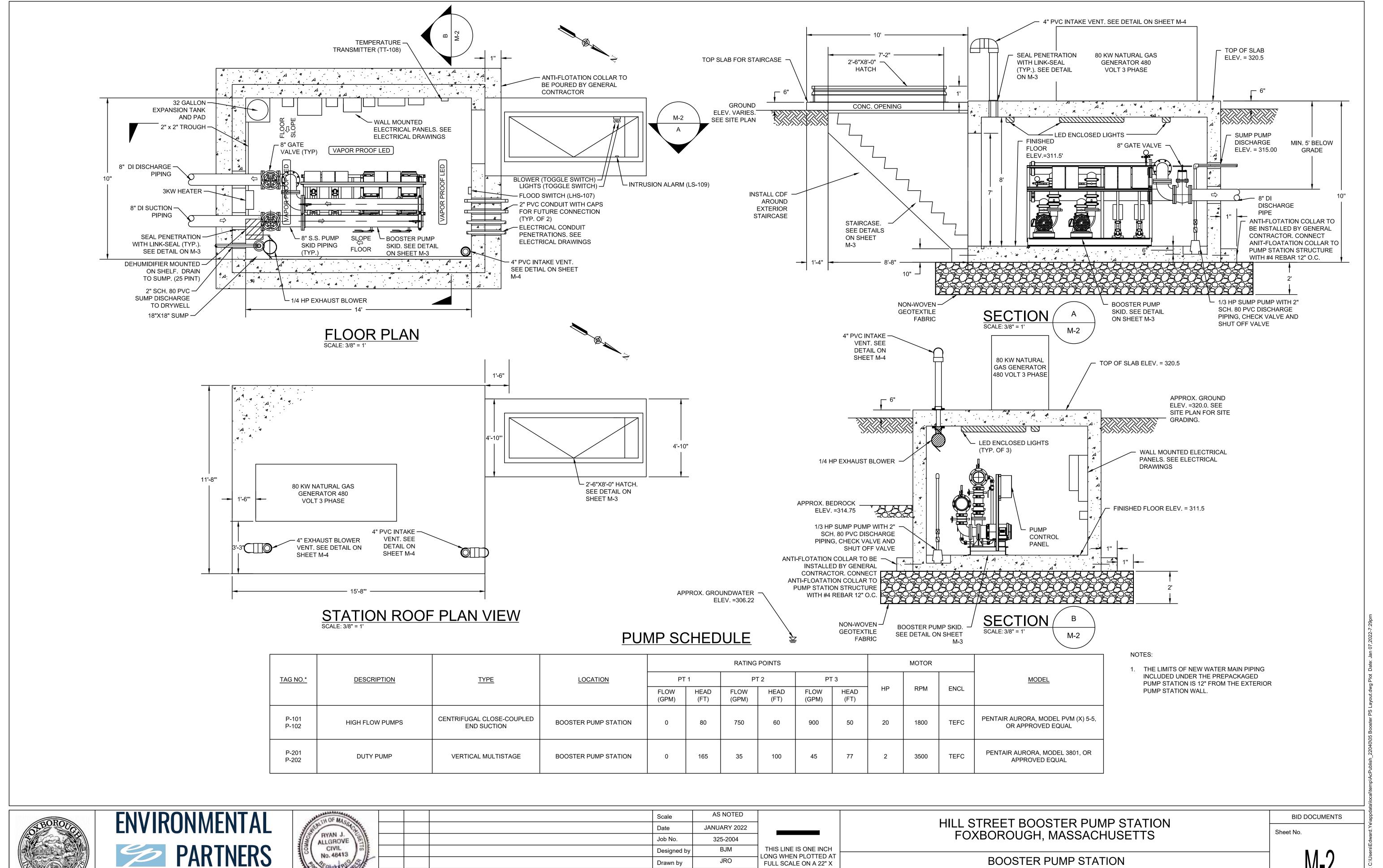
HILL STREET BOOSTER PUMP STATION FOXBOROUGH, MASSACHUSETTS

Sheet No.

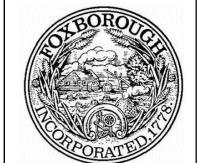
STEEL

BID DOCUMENTS

LEGEND AND ABBREVIATIONS



34" DRAWING

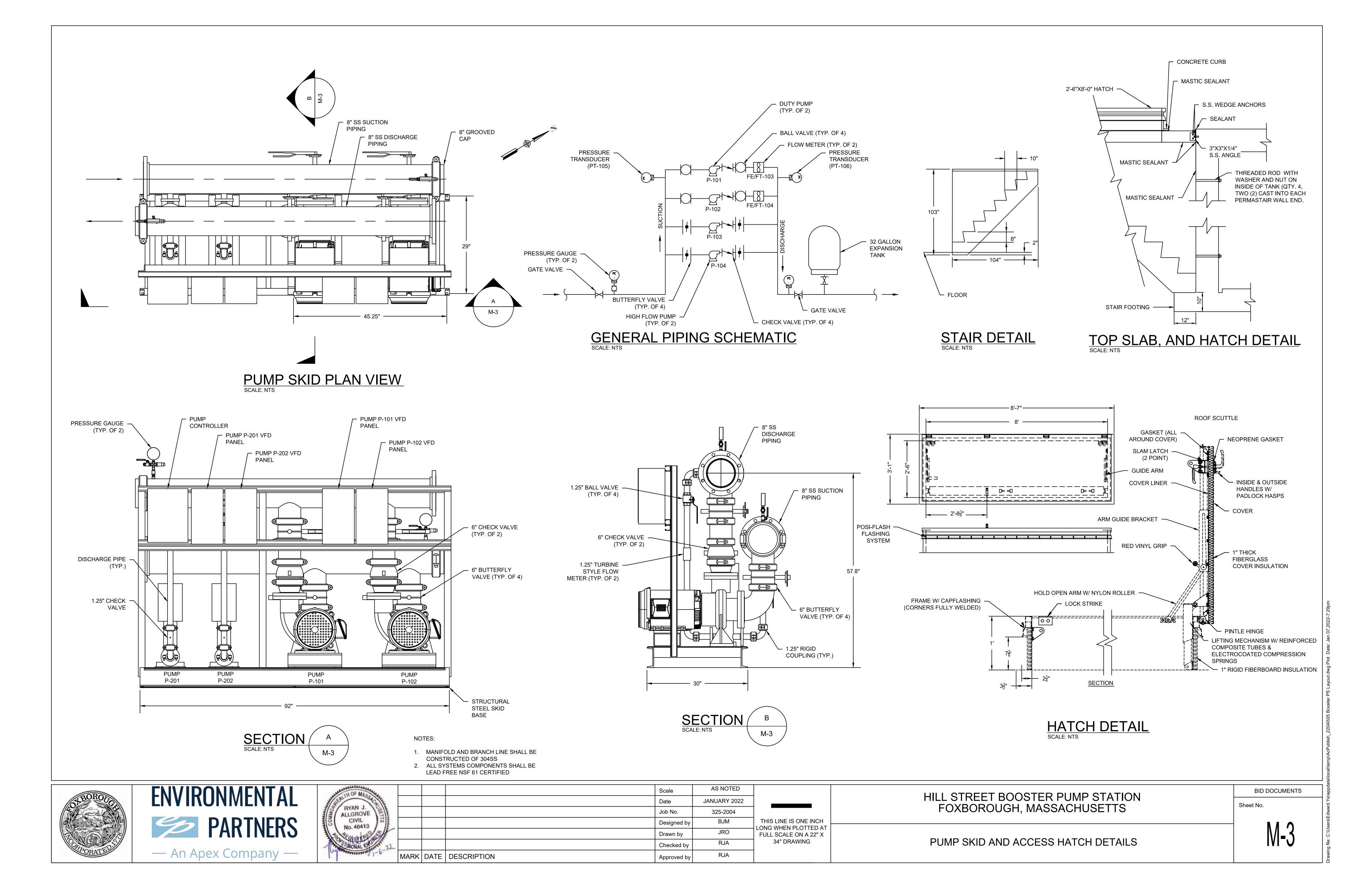


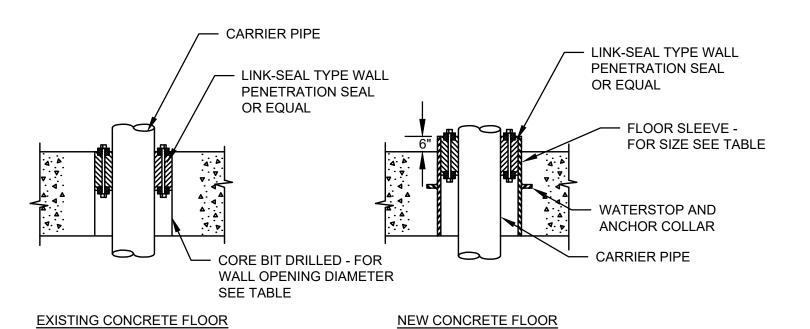


			Scale	AS NOTED
			Date	JANUARY 2022
			Job No.	325-2004
			Designed by	ВЈМ
			Drawn by	JRO
			Checked by	RJA
MARK	DATE	DESCRIPTION	Approved by	RJA
	MARK	MARK DATE	MARK DATE DESCRIPTION	Date Job No. Designed by Drawn by Checked by

BOOSTER PUMP STATION PLANS AND SECTIONS

M-2



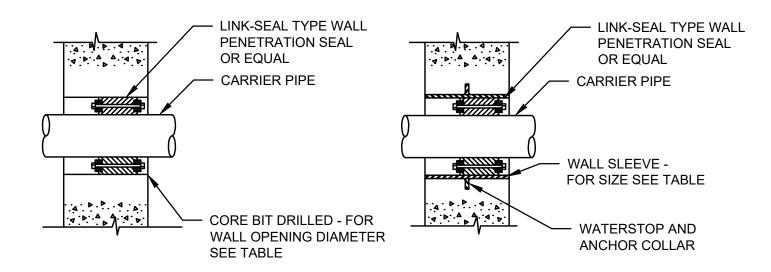


CARRIER PIPE NOMINAL SIZE	CARRIER PIPE O.D.	FLOOR SLEEVE SIZE	CORE DRILLED I.D.
1 1/2"	1.625"	3"	3"
2"	2.50"	4"	4"
4"	4.80"	8"	8"
6"	6.90"	10"	10"
8"	9.05"	12"	12"
16"	17.40"	20"	20"
18"	19.50"	24"	24"
24"	25.80"	30"	29"

NOTES:

- 1. SIZES SHOWN ARE FOR DUCTILE IRON PIPE, FOR OTHER MATERIALS AND PIPE SIZES CONSULT MANUFACTURER'S SPECIFICATIONS.
- 2. FOR WATER-TIGHT AND GAS-TIGHT APPLICATIONS, PROVIDE NON-SHRINK GROUT ON BOTH SIDES.

TYPICAL PIPE SLAB PENETRATION DETAIL



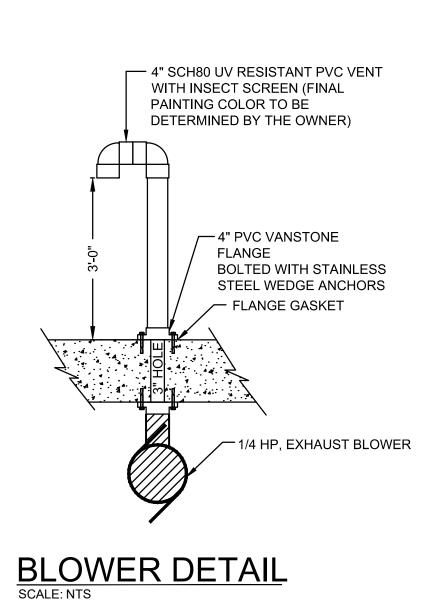
EXISTING CONCRETE WALL

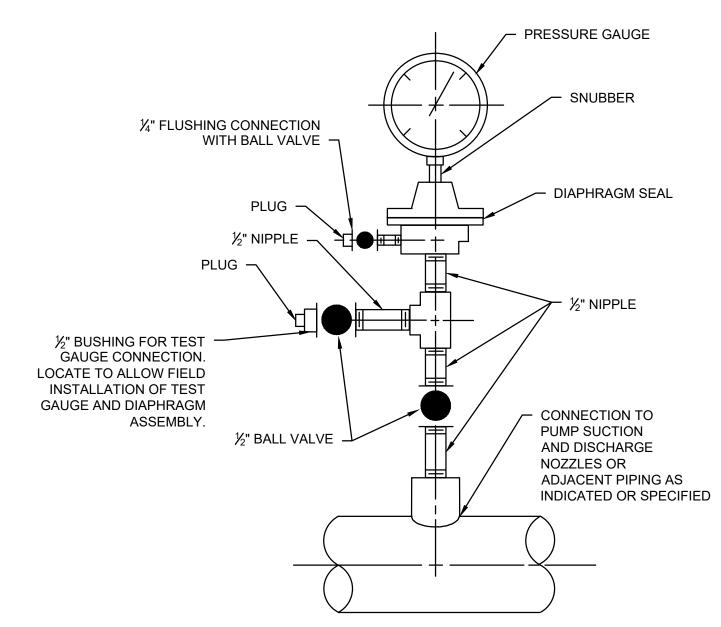
NEW CONCRETE WALL

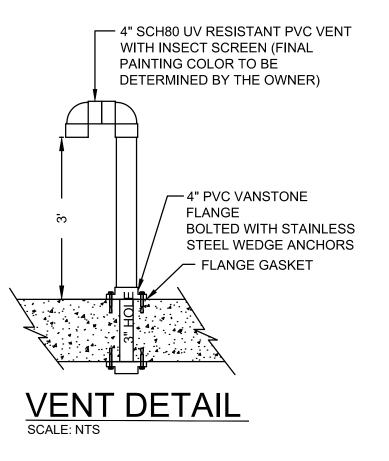
CARRIER PIPE NOMINAL SIZE	CARRIER PIPE O.D.	WALL SLEEVE SIZE	CORE DRILLED I.D.
2"	2.50"	4"	4"
4"	4.80"	8"	8"
6"	6.90"	10"	10"
8"	9.05"	12"	12"
16"	17.40"	20"	20"
18"	19.50"	24"	24"
24"	25.80"	30"	29"

- 1. SIZES SHOWN ARE FOR DUCTILE IRON PIPE, FOR OTHER MATERIALS AND PIPE SIZES CONSULT MANUFACTURER'S SPECIFICATIONS.
- 2. SOME APPLICATIONS MAY REQUIRE STANDARD WALL CASTINGS.
- 3. FOR WATER-TIGHT AND GAS-TIGHT APPLICATIONS, PROVIDE NON-SHRINK GROUT ON BOTH SIDES.

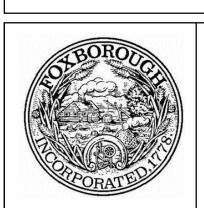
TYPICAL WALL PENETRATION DETAIL







PRESSURE GAUGE MOUNTING DETAIL FOR LIQUID PIPING
SCALE: N.T.S.







					AS NOTED	
				Scale	ASNOTED	
				Date	JANUARY 2022	
				Job No.	325-2004	
				Designed by	ВЈМ	THI LONG
				Drawn by	JRO	FUL
2				Checked by	RJA	
	MARK	DATE	DESCRIPTION	Approved by	RJA	

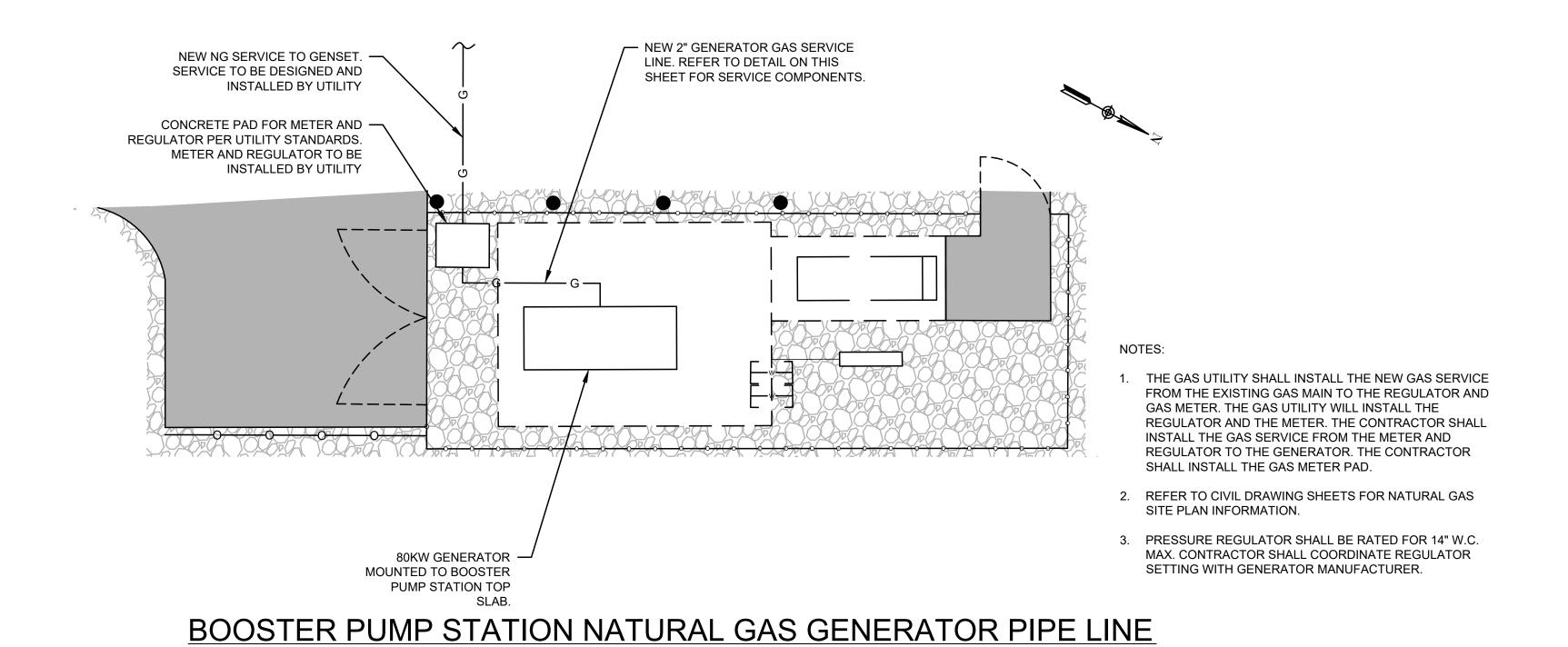
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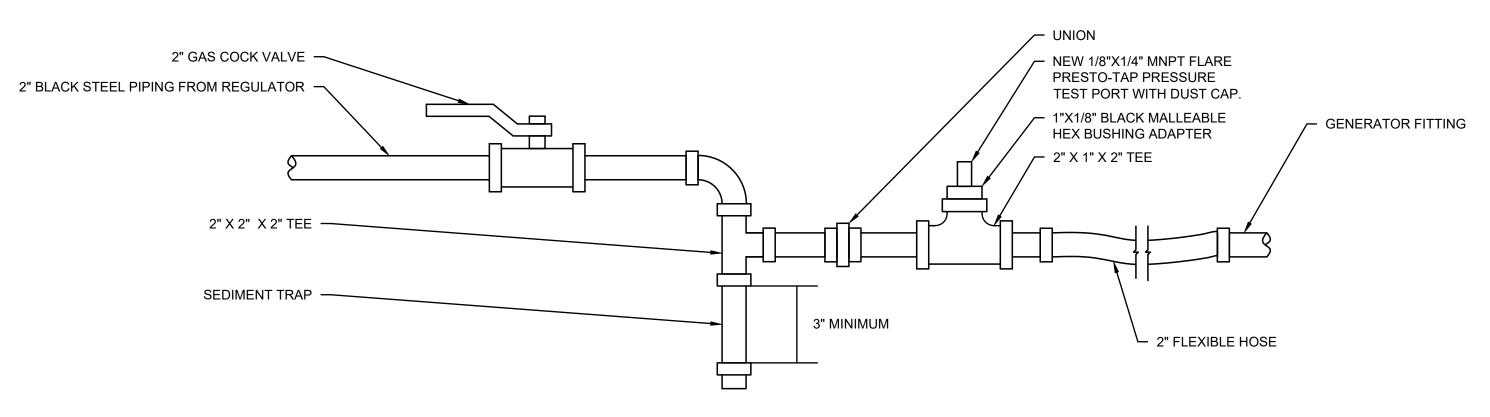
HILL STREET BOOSTER PUMP STATION FOXBOROUGH, MASSACHUSETTS

Sheet No.

MECHANICAL DETAILS I

M-4





GENERATOR SUPPLY GAS LINE CONFIGURATION

SCALE: NTS

ENVIRONMENTAL PARTNERS — An Apex Company





				Scale	AS NOTED	
				Date	JANUARY 2022	
				Job No.	325-2004	
				Designed by	LEO	TH LON
)				Drawn by	LEO	FUI
				Checked by	HGG	
	MARK	DATE	DESCRIPTION	Approved by	ВВМ	

THIS LINE IS ONE INCH DNG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING

HILL STREET BOOSTER PUMP STATION FOXBOROUGH, MASSACHUSETTS

PLUMBING SYSTEMS GENERAL NOTES

1. ALL PLUMBING WORK SHALL BE PROVIDED IN ACCORDANCE WITH THE MA STATE AND LOCAL BUILDING CODES, THE MA STATE PLUMBING CODE, ALL APPLICABLE LOCAL CODES,

2. UTILITY ROUTING LOCATIONS, AS WELL AS RELATIVE LOCATIONS AND ELEVATIONS OF

ACCORDANCE WITH THE BEST AVAILABLE ENGINEERING INFORMATION. FIELD INVESTIGATE EACH UTILITY CONNECTION POINT AND UTILITY ROUTING BEFORE COMMENCING WORK. ALL NEW & EXISTING INVERT AND CENTERLINE ELEVATIONS SHALL BE FIELD VERIFIED PRIOR TO INSTALLATION. REPORT ANY UNSUITABLE CONDITIONS OR INTERFERENCES TO THE OWNER'S AUTHORIZED REPRESENTATIVE/PERSONNEL AND ENGINEER OF RECORD.

3. PROVIDE MATERIALS, LABOR, AND EQUIPMENT TOGETHER WITH INCIDENTAL ITEMS NOT

INSPECTIONS AT THE APPROPRIATE INTERVALS, PRIOR TO COVERING OR CONCEALMENT

6. ALL PLUMBING SYSTEMS AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AS APPROVED BY THE OWNER AND SO AS NOT TO INTERFERE WITH NEW SYSTEMS OR ARCHITECTURAL FINISHES. ALL SYSTEMS AND EQUIPMENT SHALL BE COMPLETE, CLEANED, INSPECTED, TESTED AND MADE READY

7. ALL PIPING PENETRATING EXTERIOR WALLS SHALL BE FLASHED IN AN APPROVED MANNER

9. PROVIDE ALL CUTTING AND PATCHING OF CONCRETE INCLUDING RESTORATION TO

EXISTING CONDITIONS FOR ALL WORK REQUIRED UNDER THE SCOPE OF THIS PROJECT.

INCLUDE PATCHING AND FINISH MATERIALS, LABOR, PAINT, ETC. FOR ALL STRUCTURES,

10. NO CUTTING OR DRILLING SHALL BE PERMITTED THROUGH ANY BEARING STRUCTURE

PRIOR TO WRITTEN APPROVAL OF THE OWNER. ALL WORK SHALL BE PERFORMED IN SUCH

FITTINGS

MALLEABLE IRON

THREADED

FITTINGS

NOTES

FACTORY APPLIED OIL

COATING TO BE REMOVED

THEN APPLY PRIMER AND

YELLOW PAINT.

REBAR AND FINISHES ALTERED AND/OR DAMAGED AS A RESULT OF THIS PROJECT.

PIPING SCHEDULE

PIPING

SCHEDULE 40

BLACK STEEL

STANDARDS FOR COMPLETE, SAFE, AND PROPERLY OPERATING SYSTEMS. DRAWINGS ARE DIAGRAMMATIC AND MAY NOT REPRESENT ALL OFFSETS, FITTINGS, OR WORK REQUIRED.

SPECIFICALLY SHOWN OR SPECIFIED WHICH ARE REQUIRED BY PLUMBING INDUSTRY

INCLUDE ALL WORK AS REQUIRED TO INTERFACE WITH EXISTING SYSTEMS AND

4. OBTAIN AND PAY FOR ALL PERMITS, AND ARRANGE AND CONDUCT TESTS AND

NECESSARY FOR PROPER INSTALLATION AND OPERATION.

8. ALL PIPING SHALL BE SUPPORTED EVERY SIX FEET OF RUN.

MANNER SO AS NOT TO COMPROMISE THE BUILDING STRUCTURE.

AND SHALL BE SEALED WEATHERTIGHT.

SYSTEM

NATURAL

GAS

DESGINATION

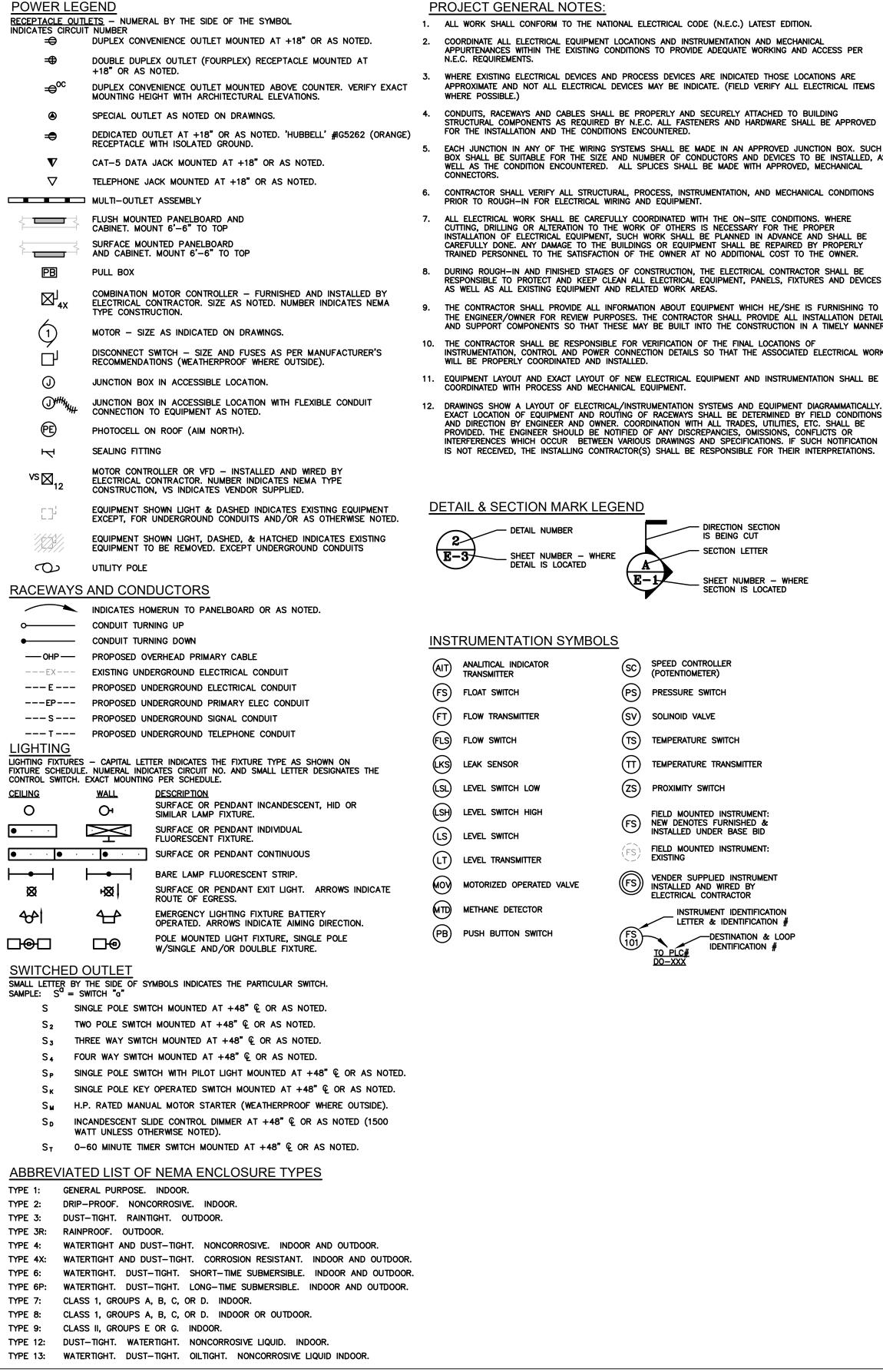
ORDINANCES, AMENDMENTS, AND THE LOCAL AUTHORITIES HAVING JURISDICTION.

EXISTING DISCIPLINE FEATURES ARE SCHEMATIC REPRESENTATIONS SHOWN IN

Sheet No.

BOOSTER PUMP STATION NATURALGAS GENERATOR PIPE LINE

P-'



APPURTENANCES WITHIN THE EXISTING CONDITIONS TO PROVIDE ADEQUATE WORKING AND ACCESS PER

WELL AS THE CONDITION ENCOUNTERED. ALL SPLICES SHALL BE MADE WITH APPROVED, MECHANICAL

INSTALLATION OF ELECTRICAL EQUIPMENT. SUCH WORK SHALL BE PLANNED IN ADVANCE AND SHALL BE

CAREFULLY DONE. ANY DAMAGE TO THE BUILDINGS OR EQUIPMENT SHALL BE REPAIRED BY PROPERLY

RAINED PERSONNEL TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST TO THE OWNER.

ND DIRECTION BY ENGINEER AND OWNER. COORDINATION WITH ALL TRADES. UTILITIES. ETC. SHALL BE ROVIDED. THE ENGINEER SHOULD BE NOTIFIED OF ANY DISCREPANCIES, OMISSIONS, CONFLICTS OF

> SC SPEED CONTROLLE (POTENTIOMETER) SPEED CONTROLLER

(PS) PRESSURE SWITCH

(SV) SOLINOID VALVE

EXISTING

THIS LINE IS ONE INCH LONG WHEN PLOTTED AT

FULL SCALE ON A 22" X

34" DRAWING

(TS) TEMPERATURE SWITCH

(TT) TEMPERATURE TRANSMITTER

PROXIMITY SWITCH

FIELD MOUNTED INSTRUMENT:

NEW DENOTES FURNISHED &

INSTALLED UNDER BASE BID

FIELD MOUNTED INSTRUMENT:

VENDER SUPPLIED INSTRUMENT

TO PLC# DO-XXX

INSTRUMENT IDENTIFICATION

LETTER & IDENTIFICATION #

-DESTINATION & LOOP

INSTALLED AND WIRED BY

ELECTRICAL CONTRACTOR

IS BEING CUT

- SECTION LETTER

SHEET NUMBER - WHERE

SECTION IS LOCATED

CUTTING. DRILLING OR ALTERATION TO THE WORK OF OTHERS IS NECESSARY FOR THE PROPER

N.E.C. REQUIREMENTS.

WHERE POSSIBLE.)

FOR THE INSTALLATION AND THE CONDITIONS ENCOUNTERED.

PRIOR TO ROUGH—IN FOR ELECTRICAL WIRING AND EQUIPMENT.

AS WELL AS ALL EXISTING EQUIPMENT AND RELATED WORK AREAS.

WILL BE PROPERLY COORDINATED AND INSTALLED.

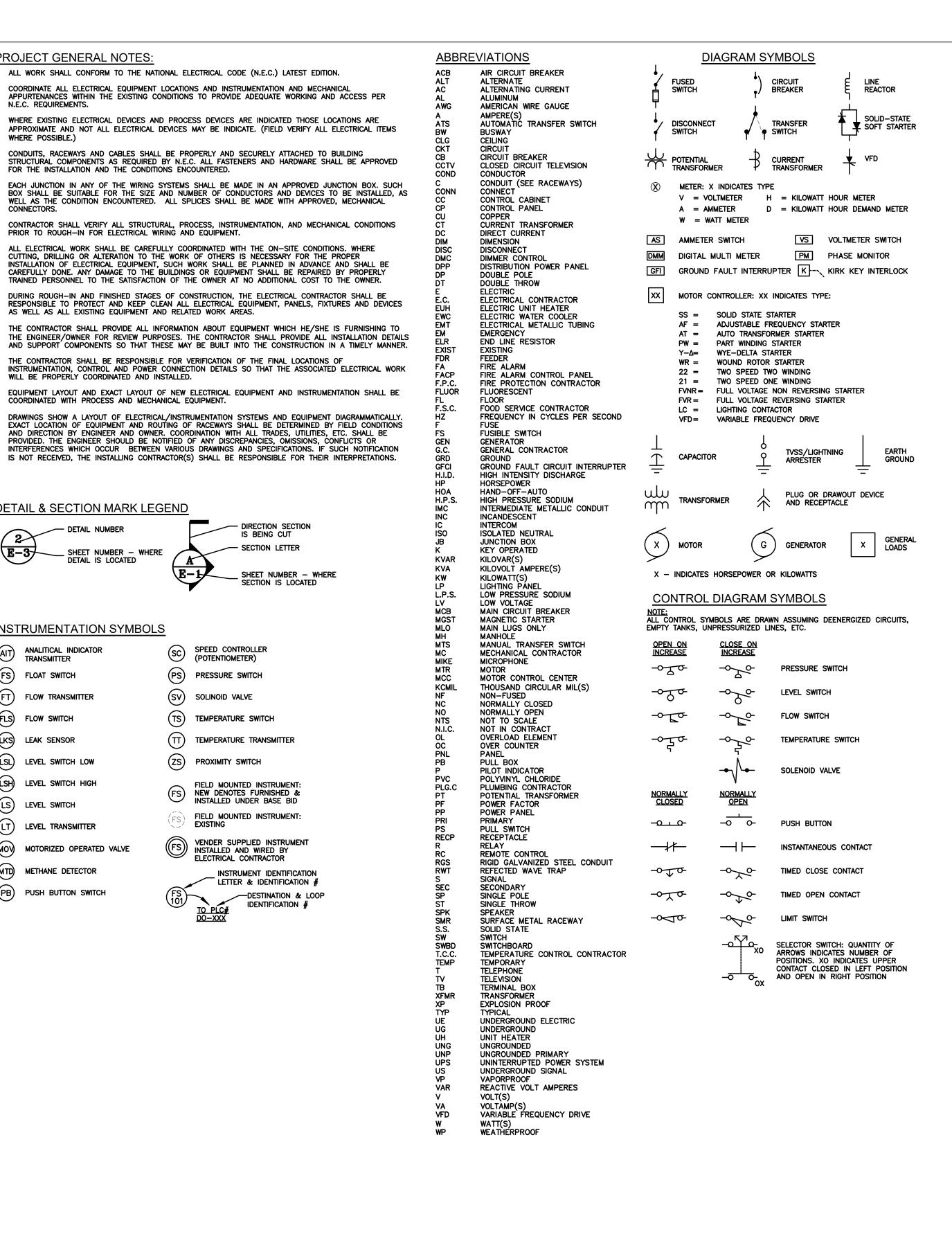
COORDINATED WITH PROCESS AND MECHANICAL EQUIPMENT

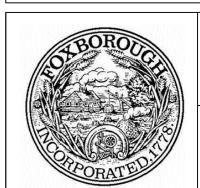
SHEET NUMBER - WHERE

DETAIL IS LOCATED

ANALITICAL INDICATOR

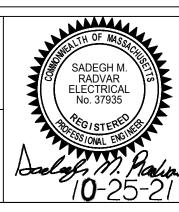
TRANSMITTER

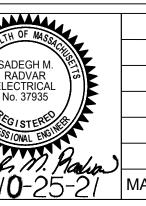












	TYPE	13: WATERTIGHT.	DUST-TIGHT.	OILTIGHT.	NONCORROSIVE I	LIQUID INDOOR.		
							Scale	AS NOTED
							Date	OCTOBER 2021
							Job No.	325-2004
							Designed by	JWC
							Drawn by	JWC
							Checked by	SMR
MARK	DATE	DESCRIPTION					Approved by	RJA
•	•							

HILL STREET BOOSTER PUMP STATION FOXBOROUGH, MASSACHUSETTS

Sheet No.

ELECTRICAL DUCT BANK SCHEDULE					
DUCT BANK SECTION NO.	CONDUIT	EQUIPMENT	WIRE	CONNECTION	
A	(A) 2" PVC	мсв	(3)#1/0 CABLES	SERVICE CONDUIT FROM UTILITY RISER POLE WITH POLE MOUNTED TRANSFORMER TO MAIN CIRCUIT BREAKER (MCB) VIA SERVICE DISCONNECT AND UTILITY METER.	
E-2	(B) 2" PVC	SPARE	PULL ROPE	SPARE CONDUIT FROM UTILITY RISER POLE WITH POLE MOUNTED TRANSFORMER TO 24" AFG UNDER METER PEDASTAL.	
	(A) 2" PVC	МСВ	(4)#1/0 CABLES	SERVICE CONDUIT FROM UTILITY METER TO MAIN CIRCUIT BREAKER (MCB) INSIDE PUMP STATION.	
B E-2	(B) 2" PVC	SPARE	PULL ROPE	SPARE CONDUIT FROM UTILITY METER TO 12" INSIDE PUMP STATION.	
	(C) 2" PVC	YAGI RADIO ANTENNA	RADIO CABLE	RADIO CONDUIT FROM RTU PANEL INSIDE PUMP STATION TO YAGI ANTENNA ON METER PEDISTAL.	

UNDERGROUND CONDUIT NOTES: 1. PROVIDE RIGID GALVANIZED SWEEPS ON ALL 90° TURNS.

۷٠	COORDINATE HEW CHEEKOROOME C
7	REPAIR EXISTING PAVED AREAS AN
J.	KEPAIK EXISTING PAVED AKEAS AN
	RESTORED PER DIVISION 2.

- 2. COORDINATE NEW UNDERGROUND CONDUIT LOCATION WITH EXISTING UNDERGROUND ELECTRIC CONDUIT, PROCESS PIPING AND STRUCTURES PRIOR TO EXCAVATION.
- IND EXISTING DIRT/GRAVEL ACCESS ROAD AREAS TO CONDITION EXISTING PRIOR TO EXCAVATION. GRASSED AREAS TO BE
- 4. ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED, INCLUDING THOSE IN CONTROL OF UTILITIES NOT SHOWN ON THIS PLAN PRIOR TO DESIGNING, EXCAVATING, INSTALLING, BACKFILLING, GRADING, PAVEMENT RESTORING OR REPAVING.
- 5. REFER TO DETAIL 3/E-2 FOR TYPICAL TRENCHING DETAIL FOR ELECTRICAL/CABLE/CONDUITS.

PROPOSED LOCATION OF NEW _

ELECTRICAL EQUIPMENT INSIDE

UNDERGROUND PUMP STATION. SEE

6. CONTRACTOR SHALL FURNISH AND INSTALL POLYESTER PULLING TAPE IN ALL SPARE CONDUITS RATED @ 2500 LBS, WITH FOOTAGE MARKINGS AS MANUFACTURED BY NEPT CO., MODEL# WP2500 OR APPROVED EQUAL.

UTILITY RISER POLE WITH POLE

PROPOSED LOCATION OF NEW UNDERGROUND SERVICE CONDUITS.

PROPOSED LOCATION OF NEW

ANTENNA CONDUITS.

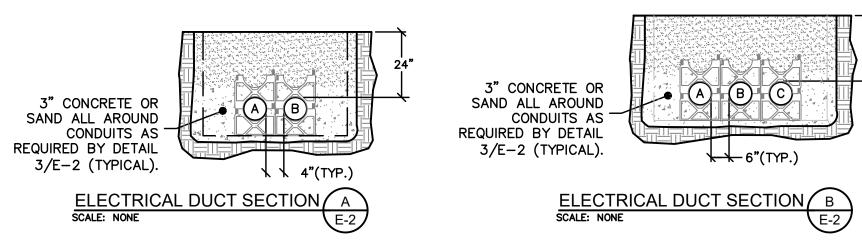
UNDERGROUND SERVICE & RADIO

PUMP STATION

HATCH (TYP.).

STAIRS ACCESS

MOUNTED TRANSFORMER.



ELECTRICAL DUCT BANK SCHEDULE WITH DUCT BANK SECTIONS (2) SCALE: NONE E-2

PROPOSED LOCATION OF

NEW GAS METER

PEDASTAL.

PROPOSED NATURAL GAS STANDBY

INSERT BOOSTER PUMP STATION ELECTRICAL SITE PLAN (1)

GENERATOR SET WITH WEATHER PROOF ENCLOSURE. INSTALLED ON TOP OF PUMP

STATION. SEE DETAIL ON DRAWING E-3.

SCALE: 1"=5'-0"

ELECTRICAL SITE LEGEND

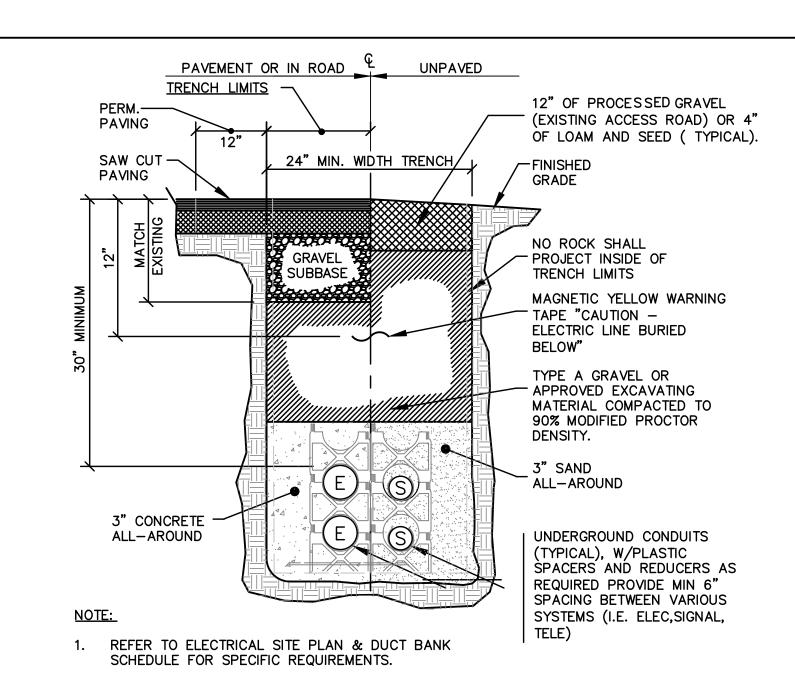
PROPOSED UTILITY POLE

---ES--- PROPOSED UNDERGROUND ELECTRICAL SERVICE CONDUIT

---T--- PROPOSED UNDERGROUND TELEPHONE CONDUIT

— E/S — PROPOSED UNDERGROUND ELECTRIC & SIGNAL CONDUIT

PROPOSED ELECTRIC OR SIGNAL HANDHOLE

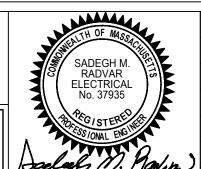


SUBSURFACE WORK NOTE:

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR IT'S REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT "DIG SAFE" AT 1(888)344-7233 (1(888)DIG-SAFE) AND COORDINATE ACTIVITIES PRIOR TO ANY EXCAVATIONS.



TYPICAL ELECTRICAL TRENCHING DETAIL / SCALE: NONE



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			Scale	AS NOTED			
			Date	OCTOBER 2021			
			Job No.	325-2004			
			Designed by	JWC	THIS LINE IS ONE INCH LONG WHEN PLOTTED AT		
			Drawn by	JWC	FULL SCALE ON A 22" X		
			Checked by	SMR	34" DRAWING		
MARK	DATE	DESCRIPTION	Approved by	RJA			

HILL STREET BOOSTER PUMP STATION

E-2

Sheet No.

BID DOCUMENTS

PROPOSED CHAIN LINK FENCE.

PROPOSED LOCATION OF NEW SERVICE DISCONNECT SWITCH, UTILITY METER

AND YAGI ANTENNA ASSEMBLY. SEE

DETAIL ON DRAWING E-3

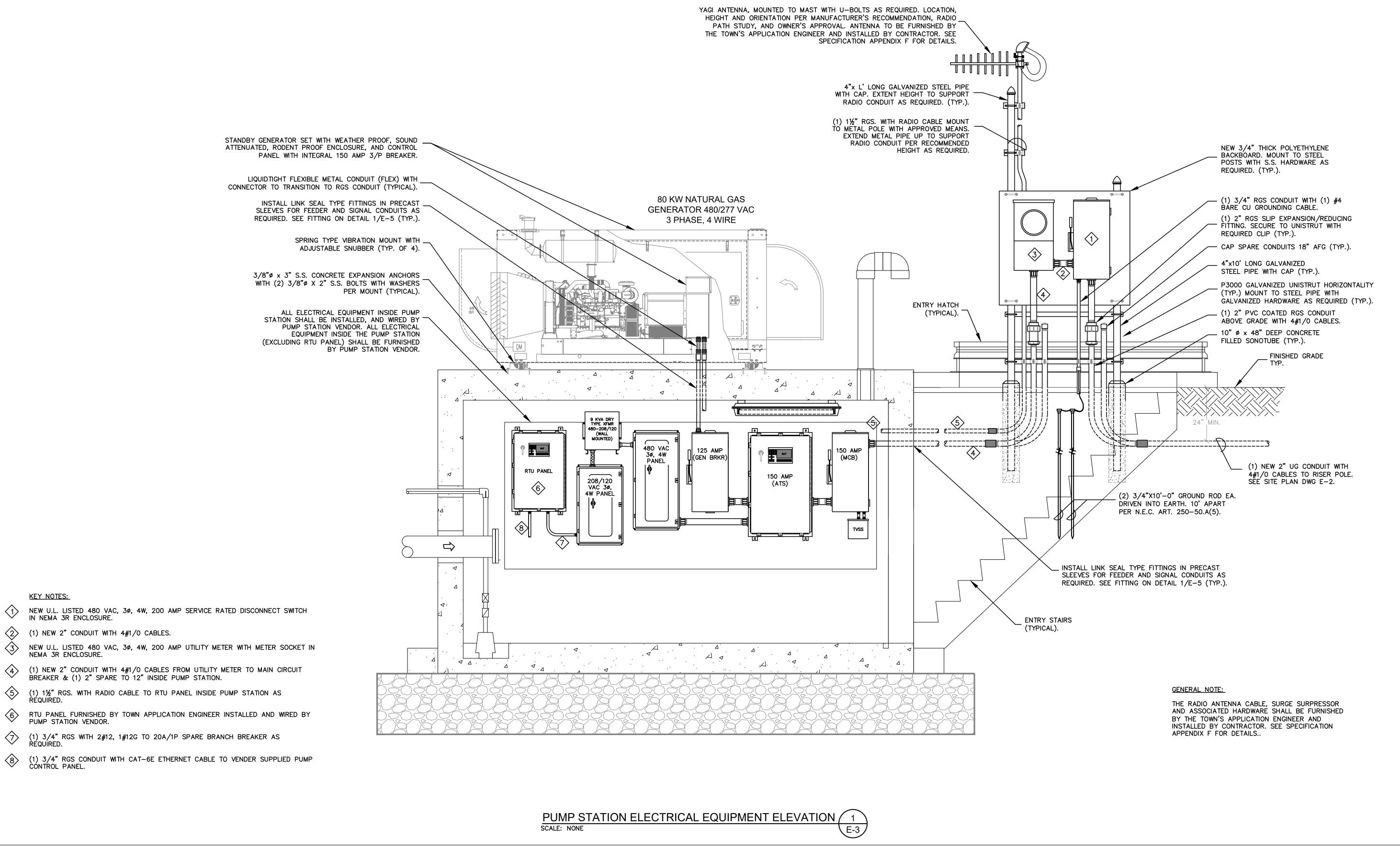
FOXBOROUGH, MASSACHUSETTS

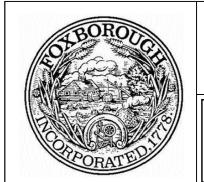
BOOSTER PUMP STATION ELECTRICAL SITE PLAN

ENVIRONMENTAL

PARTNERS Electrical, Instrumentation, & Control Systems Engineering 22 Greeley Street, Suite 2 Merrimack, NH 03054 **Phone:** 603/429-3313 **Fax:** 603/429-3466



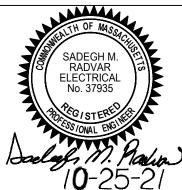




KEY NOTES:

ENVIRONMENTAL PARTNERS

Electrical, Instrumentation, & Control Systems Engineering 22 Greeley Street, Suite 2 Merrimack, NH 03054 **Phone**603/429-3313 **Fax:** 603/429-3466



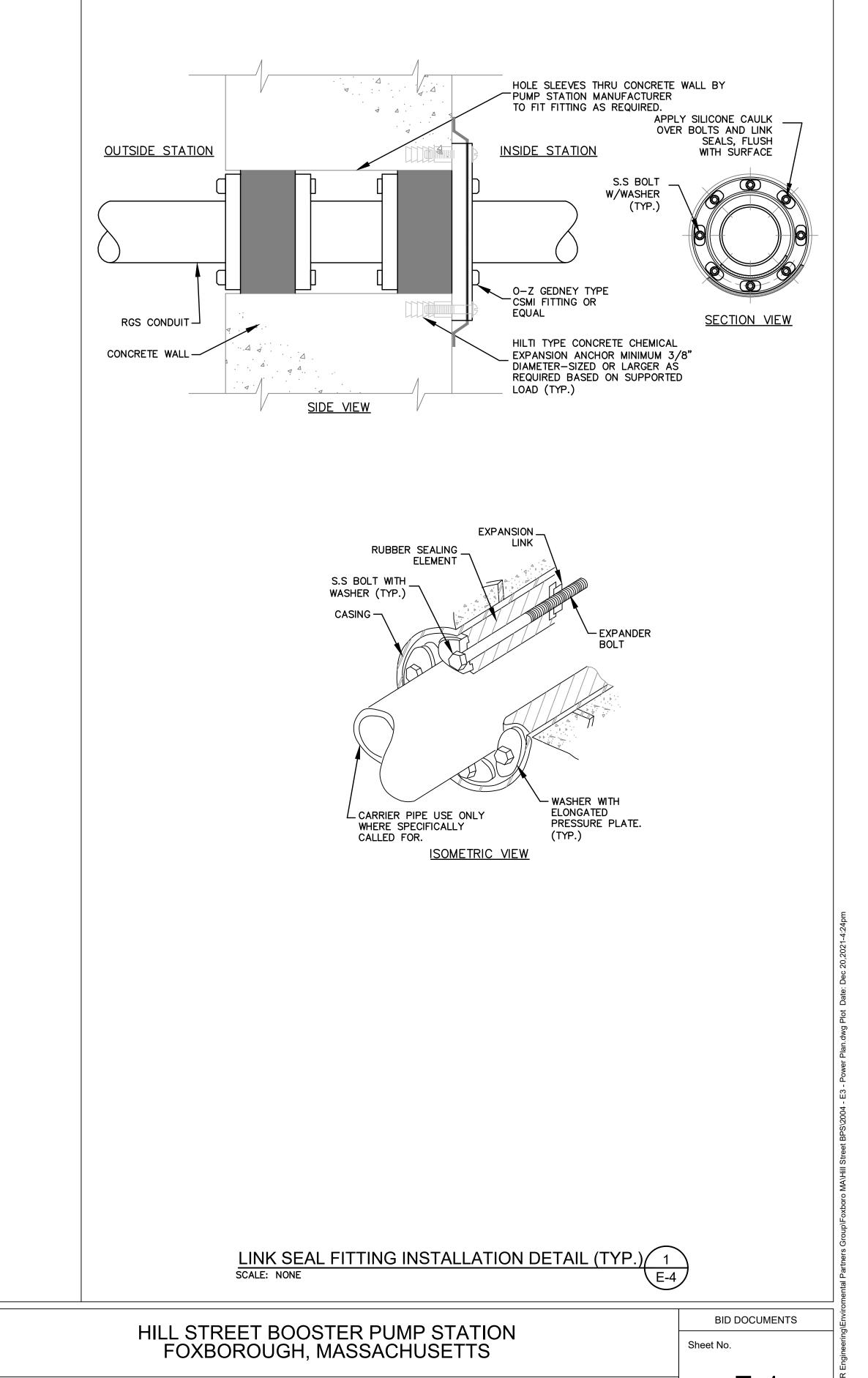
			Scale	AS NOTED	
			Date	OCTOBER 2021	
			Job No.	325-2004	
			Designed by	JWC	THIS LINE IS ONE INCH LONG WHEN PLOTTED AT
			Drawn by	JWC	FULL SCALE ON A 22" X
			Checked by	SMR	34" DRAWING
//ARK	DATE	DESCRIPTION	Approved by	RJA	
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HILL STREET BOOSTER PUMP STATION FOXBOROUGH, MASSACHUSETTS

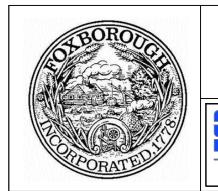
BOOSTER PUMP STATION POWER PLAN

Sheet No.

E-3

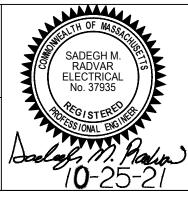


ELECTRICAL DETAILS



ENVIRONMENTAL PARTNERS

Electrical, Instrumentation, & Control Systems Engineering 22 Greeley Street, Suite 2 Merrimack, NH 03054 Phone603/429-3313 Fax: 603/429-3466



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THIS LINE IS ONE INCH LONG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING

E-4