SITE PIPING NOTES

1. ADDITIONAL PIPING NOTES ARE ON DRAWING PR-1. PROCESS FLOW DIAGRAM AND LEGEND ARE ON DRAWING PR-2. THE PROCESS PIPING SCHEDULE IS LOCATED IN SPECIFICATION SECTION 15050.

2. ALL PIPE LINES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS INDICATED ON THE DRAWINGS. NO CRESTS IN PIPING WILL BE PERMITTED. ALL HORIZONTAL AND VERTICAL BENDS IN PRESSURIZED LINES SHALL BE SUITABLY RESTRAINED WITH RETAINER FITTINGS. PROVIDE ALL BENDS (HORIZONTAL AND VERTICAL) AS REQUIRED TO MEET THE GRADES AND ALIGNMENT INDICATED ON THE DRAWINGS.

3. PROVIDE CAST OR DUCTILE IRON WALL CASTINGS, OR GALVANIZED STEEL PIPE SLEEVES, FOR ALL PIPE PENETRATIONS MADE THROUGH CONCRETE FOUNDATIONS, WALLS AND SLABS. ALL WALL SLEEVES AND WALL CASTINGS SHALL HAVE WATERSTOPS. SEE PROCESS, MECHANICAL AND STRUCTURAL DRAWINGS FOR LOCATIONS OF PENETRATIONS. NEW PENETRATIONS THROUGH EXISTING STRUCTURE WALLS SHALL BE BY CORING MACHINE AND "LINK-SEAL" TYPE SEALS, UNLESS OTHERWISE INDICATED. OPENINGS TO BE COMPATIBLE WITH REQUIRED PIPING AND STANDARD LINK SEAL SIZES. SEE DRAWING PR-20 FOR DETAILS.

4. REFER TO SPECIFICATION SECTION 02200 FOR PIPE AND STRUCTURE BEDDING AND BACKFILL REQUIREMENTS.

5. COMPACTION TESTS WILL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 02200. ANY SETTLEMENT OCCURRING WITHIN ONE YEAR OF FINAL COMPLETION OF THE WORK SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST.

6. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).

7. REFER TO SECTION 01050 OF THE SPECIFICATIONS FOR INFORMATION REGARDING COORDINATION WITH OTHERS, INCLUDING RESPONSIBILITIES AND RELATED COSTS.

8. WHERE NEW PIPING IS TO BE CONNECTED TO EXISTING PIPING, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADAPTERS, FITTINGS, AND ADDITIONAL PIPE AS REQUIRED TO COMPLETE THE CONNECTION AS INDICATED ON THE DRAWINGS. CONTRACTOR SHALL VERIFY LOCATION, ELEVATION, ORIENTATION AND MATERIAL OF CONSTRUCTION. TEST PITS SHALL BE USED AS REQUIRED.

9. ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE UNLESS OTHERWISE NOTED ON THE DEMOLITION PLAN, DRAWING C-2.

10. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL DEMOLITION MATERIALS IN ACCORDANCE WITH SPECIFICATION SECTION 02050A.

11. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO ANY TRENCH EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. DAMAGE TO ANY SUCH STRUCTURES 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 OWNER.

12. CONTRACTOR TO NOTE THAT, IN GENERAL, ALL EXISTING CONDITION INFORMATION ON THE DRAWINGS ARE SHOWN WITH A LIGHTER LINE WEIGHT AND SLANTED TYPE TEXT. PIPING ON THE SITE PIPING PLAN HAS BEEN SHOWN BROKEN FOR CLARITY ONLY. PIPE BREAKS DO NOT INDICATE RELATIVE ELEVATIONS OF PIPING.

13. ELECTRICAL CONDUIT RUNS ARE INDICATED ON ELECTRICAL DRAWINGS.

14. THE LOCATIONS OF UNDERGROUND UTILITIES AND STRUCTURES, AS SHOWN ON THE DRAWINGS, ARE APPROXIMATE AND MAY NOT BE COMPLETE. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE BASED ON PREVIOUS CONSTRUCTION DESIGN PLANS, WHICH ARE AVAILABLE FOR INSPECTION AT THE EAST END WASTEWATER TREATMENT FACILITY. NO GUARANTEE IS MADE THAT UTILITIES OR STRUCTURES WILL BE ENCOUNTERED WHERE SHOWN OR THAT ALL UNDERGROUND UTILITIES AND STRUCTURES ARE SHOWN. CONTRACTOR SHALL ASCERTAIN THE LOCATION AND SIZE OF EXISTING PIPING AND UTILITIES IN THE FIELD BY TEST PIT EXCAVATION PRIOR TO COMMENCING INSTALLATION OF ANY OF THE NEW PIPING AFFECTED, WHERE NEW PIPE CONNECTS TO EXISTING PIPING OR STRUCTURAL PENETRATIONS, CONTRACTOR SHALL VERIFY ELEVATION BY TEST PIT, AS REQUIRED, PRIOR TO INSTALLATION OF ANY OF THE ASSOCIATED/ AFFECTED NEW PIPING. IDENTIFIED CONFLICTS WITH EXISTING PIPING AND UTILITIES WILL BE REVIEWED WITH THE ENGINEER PRIOR TO COMMENCING INSTALLATION. THE HORIZONTAL ALIGNMENT OF NEW PIPING MAY BE ADJUSTED IN THE FIELD SUBJECT TO PRIOR REVIEW AND ACCEPTANCE OF THE ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY LAYOUT OF ALL PROPOSED WORK AS SHOWN ON THE DRAWINGS AND REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE APPROPRIATE DISPOSAL OF FLOWS RESULTING FROM PRECIPITATION AND HIS DEWATERING OPERATIONS.

SITE LAYOUT NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LAYOUT OF ALL PROPOSED WORK AS SHOWN ON THE DRAWINGS. REPORT ANY LAYOUT DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

2. REFER TO THE SITE PIPING, SITE GRADING AND STRUCTURAL DRAWINGS FOR ADDITIONAL LAYOUT INFORMATION.

3. REFER TO THE STRUCTURAL DRAWINGS FOR STRUCTURE DIMENSIONS.

4. THE LOCATION AND LIMITS OF ALL ON-SITE WORK AND STORAGE AREAS SHALL BE AS SHOWN ON DRAWING C-3, SITE LAYOUT AND GRADING PLAN. THE CONTRACTOR SHALL LIMIT HIS ACTIVITIES TO THESE AREAS.

5. WRITTEN DIMENSIONS SHALL PREVAIL. DO NOT SCALE DISTANCES FROM THE DRAWINGS. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

6. CONTRACTOR SHALL CONSTRUCT A VISUAL SITE BARRIER ALONG THE EXISTING FENCE LINE AS SHOWN ON DRAWING C-3. BARRIER SHALL BE ERECTED PRIOR TO THE START OF ANY WORK AND REMAIN UNTIL THE WORK IS COMPLETE.

SITE GRADING NOTES

1. STRIPPING OF TOPSOIL (LOAM) SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02115. REFER TO DRAWING C-3, FOR LIMIT OF WORK.

2. ALL AREAS THAT ARE EXCAVATED, FILLED, OR OTHERWISE DISTURBED BY THE CONTRACTOR SHALL BE LOAMED, GRADED, LIMED, FERTILIZED, SEEDED AND MULCHED, UNLESS OTHERWISE NOTED. THE TOP 4 INCHES OF SOIL SHALL BE LOAM. REFER TO SPECIFICATION SECTION 02485, LOAMING AND SEEDING.

3. THE CONTRACTOR SHALL PROVIDE PROPER EROSION CONTROL AND DRAINAGE MEASURES IN ALL AREAS OF WORK, AND CONFINE SOIL SEDIMENT TO WITHIN THE LIMITS OF EXCAVATION AND GRADING. PRIOR TO BEGINNING EXCAVATION WORK, EROSION CONTROL FENCE SHALL BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE ACTUAL LIMITS OF GRUBBING AND/OR GRADING. EROSION CONTROL FENCE SHALL ALSO BE INSTALLED AT THE DOWN GRADIENT PERIMETER OF THE TOPSOIL STOCKPILES. ALL DISTURBED EARTH SURFACES SHALL BE STABILIZED IN THE SHORTEST PRACTICAL TIME AND TEMPORARY EROSION CONTROL DEVICES SHALL BE EMPLOYED UNTIL SUCH TIME AS ADEQUATE SOIL STABILIZATION HAS BEEN ACHIEVED. TEMPORARY STORAGE OF EXCAVATED MATERIAL SHALL BE STABILIZED IN A MANNER THAT WILL MINIMIZE EROSION. ALL INSTALLED EROSION CONTROL FACILITIES SHALL BE REMOVED AT THE END OF THE PROJECT. REFER TO SPECIFICATION SECTION 02270.

4. ALL STORM DRAINAGE INLETS SHALL BE PROTECTED BY HAY BALE FILTERS TO PREVENT ENTRY OF SEDIMENT FROM RUNOFF WATERS DURING CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL COLLECTED SEDIMENT, AND THAT WHICH COLLECTS IN THE STORM DRAIN SYSTEM.

5. BORING LOGS AND SOIL TESTING RESULTS FOR THE PROJECT SITE ARE INCLUDED IN APPENDIX A OF THE SPECIFICATIONS.

6. ALL ELEVATIONS REFER TO THE NATIONAL GEODETIC VERTICAL DATUM. ORIENTATION IS GRID NORTH MAINE STATE PLANE COORDINATE SYSTEM. PROJECT BENCH MARK IS AS SHOWN ON DWG C-2, NOTE 2.

7. CONTRACTOR SHALL CONTROL DUST ON THE CONSTRUCTION SITE TO A REASONABLE LIMIT, AS DETERMINED BY THE ENGINEER, AND AS OUTLINED IN SPECIFICATION SECTION 01562.

8. CONTRACTOR SHALL NOT TRACK OR SPILL EARTH, DEBRIS OR OTHER CONSTRUCTION MATERIAL ON PUBLIC OR PRIVATE STREETS AND PLANT DRIVES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE ASSOCIATED CLEAN UP.

9. ALL VALVE BOXES AND OTHER BURIED FACILITIES WITH SURFACE ACCESS SHALL BE ADJUSTED TO MATCH FINAL GRADES, UNLESS OTHERWISE INDICATED.

10. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL DEBRIS AND EXCAVATED MATERIAL (SPECIAL WASTE) FROM WITHIN THE CONSTRUCTION LIMIT OF WORK, TO A SUITABLE SITE, AS SPECIFIED IN COMPLIANCE WITH ALL STATE AND LOCAL REGULATIONS. REFER TO EXCAVATION NOTE, THIS DRAWING.

11. CONTRACTOR SHALL REMOVE AND REPLACE, OR REPAIR, ALL CURBS, SIDEWALKS, PAVEMENT AND OTHER ITEMS DAMAGED BY HIS CONSTRUCTION ACTIVITIES TO AT LEAST THEIR ORIGINAL CONDITION, TO THE SATISFACTION OF THE OWNER AND ENGINEER.

12. WHERE EXISTING PAVEMENT IS REMOVED AND REPLACED, MATCH EXISTING GRADES TO THE EXTENT POSSIBLE. COORDINATE FINE GRADING WITH THE ENGINEER.

13. ALL ROAD SURFACES SHALL PITCH 1/4 INCH PER FOOT MINIMUM UNLESS OTHERWISE NOTED. REFER TO DRAWING C-3 FOR DETAILS.

DEMOLITION NOTES

1. REFER TO THE EXISTING SITE PLAN, DRAWING C-2, FOR ADDITIONAL INFORMATION REGARDING EXISTING FACILITIES. REFER TO DRAWING C-3 FOR LIMITS OF WORK.

2. REFER TO ARCHITECTURAL, STRUCTURAL, PROCESS, MECHANICAL AND ELECTRICAL DRAWINGS FOR SPECIFIC INFORMATION REGARDING DEMOLITION AND REMOVAL. THIS DRAWING IS FOR USE AS GENERAL GUIDANCE ONLY.

3. REFER TO SPECIFICATION SECTION 01010, WHICH CONTAINS INFORMATION ON CONSTRAINTS OF CONSTRUCTION SEQUENCING.

4. ALL PIPING, EQUIPMENT AND MATERIALS TO BE DEMOLISHED AND/OR REMOVED FROM SERVICE SHALL BE COORDINATED WITH THE OWNER AND ENGINEER BEFORE COMMENCING THAT WORK.

5. ALL EXISTING PIPING AND UTILITIES WHICH ARE BENEATH PROPOSED STRUCTURES, AND ARE TO BE ABANDONED, SHALL BE REMOVED TO A MINIMUM OF 5 FEET OUTSIDE OF THE STRUCTURE. PIPE AND UTILITIES BENEATH PROPOSED STRUCTURES THAT ARE TO REMAIN SHALL BE CONCRETE ENCASED, UNLESS OTHERWISE INDICATED.

6. SEVERING OF EXISTING UTILITIES FOR ABANDONMENT, OR REMOVAL OF A SEGMENT FROM SERVICE, SHALL BE PERFORMED IN SUCH A MANNER AS TO ALLOW THE REMAINING ACTIVE SEGMENT TO CONTINUE IN ITS INTENDED SERVICE. CAP ACTIVE SEGMENTS WITH APPROPRIATE FITTINGS, JOINT RESTRAINT, ETC. TO ENSURE THEIR INTEGRITY. PLUG ENDS OF ABANDONED PIPE SEGMENTS WITH CONCRETE UNLESS SPECIAL CIRCUMSTANCES DICTATE PLUGGING ABANDONED PIPES WITH BLIND FLANGES. RESTRAINED MECHANICAL JOINT PLUGS, ETC. AS APPROPRIATE.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND DISPOSING OF ALL DEMOLISHED PIPING, EQUIPMENT AND MATERIALS. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REGULATIONS. THE OWNER RESERVES THE RIGHT TO RETAIN ANY SUCH PIPING, EQUIPMENT AND MATERIALS DESIGNATED FOR DEMOLITION FOR HIS USE. SUCH MATERIALS TO BE RETAINED SHALL BE PROPERLY STORED IN AN ON-SITE LOCATION. COORDINATE LOCATION AND MATERIALS TO BE SALVAGED WITH THE OWNER/ ENGINEER.

8. THE CONTRACTOR SHALL KEEP A RECORD OF DEMOLITION AS PART OF THE PROJECT RECORD DOCUMENTS IN ACCORDANCE WITH SPECIFICATION SECTION 01720.

9. THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO ENSURE THAT ALL PROCESS FLOWS ARE MAINTAINED DURING CONSTRUCTION. GRAVITY OR PUMPED BYPASSES AND OTHER MEANS OF MAINTAINING FLOW SHALL BE SUBJECT TO THE REVIEW AND ACCEPTANCE OF THE ENGINEER. THE CONTRACTOR SHALL COORDINATE ANY TEMPORARY STOPPAGES OR BYPASSES WITH THE OWNER AND ENGINEER.

10. CONTRACTOR TO CONSTRUCT TEST PITS AS NECESSARY TO CONFIRM THE LOCATION AND ELEVATIONS OF EXISTING BURIED PIPES AND ELECTRICAL LINES. COST OF TEST PITS TO BE INCLUDED IN THE BASE BID.

DRAWING INDEX

LEGEND

EXISTING		PROPOSED
△	SURVEY CONTROL STATION	
B102	BORING	
⋈	GATE VALVE	⋈
⊕	HYDRANT	⊕
⊎	YARD HYDRANT	⊎
⌀	UTILITY POLE	⌀
●	BOLLARD	●
102	CONTOUR AND ELEVATION	102
35.7x	SPOT ELEVATION	35.7x
	CHAIN LINK FENCE	
	PAVEMENT	
	CONCRETE	
	STRUCTURE	
	FUTURE STRUCTURE	
	TO BE DEMOLISHED	
	GRATING	
	RAILING	
	UNDERGROUND STRUCTURE	
	LIMIT OF WORK	
	FLOW DIRECTION	
	CRUSHED STONE	
CB	CATCH BASIN	CB
DMH	STORM DRAIN MH	DMH
☼	LIGHT POLE	✳
4" PE	PIPING	4" PE
	VISUAL BARRIER ALONG FENCE LINE	
	LIMIT OF WORK	

ABBREVIATIONS

CI	CAST IRON PIPE
DIA	DIAMETER
DI	DUCTILE IRON PIPE
DWG	DRAWING
DMH	DRAIN MANHOLE
EL	ELEVATION
HYD	HYDRANT
INV	INVERT ELEVATION
MAX	MAXIMUM
MIN	MINIMUM
OD	OUTSIDE DIAMETER
PE	POLYETHYLENE PIPE
PVC	POLYVINYL CHLORIDE PIPE
PW	PLANT WATER
SMH	SEWER MANHOLE
TYP	TYPICAL

EXCAVATION NOTE

A SUBSURFACE EXPLORATION WAS CONDUCTED IN VICINITY OF AREA OF CONSTRUCTION TO ASSESS THE EXTENT OF ENVIRONMENTAL CONDITIONS WHICH WOULD AFFECT CONSTRUCTION MEANS, METHODS AND COST. ALL SUBSURFACE SOILS ARE CLASSIFIED AS A SPECIAL WASTE AND AS SUCH MUST BE DISPOSED OF AT A LANDFILL LICENSED TO ACCEPT SPECIAL WASTES. THE OWNER HAS SECURED PERMITS AT SAWYER ENVIRONMENTAL IN HAMPDEN AND CROSSROADS LANDFILL IN NORRIDGEWOCK. THE CONTRACTOR SHALL DISPOSE OF THIS MATERIAL AT ONE OF THE ABOVE NOTED LANDFILLS. THE CONTRACTORS LUMP SUM COSTS SHALL INCLUDE ALL DISPOSAL RELATED COSTS. CONTRACTOR MAY UTILIZE VARIOUS MEANS AND METHODS TO MINIMIZE QUANTITY FOR DISPOSAL. REFER TO THE SUPPLEMENTARY CONDITIONS, SC-4.06 FOR FURTHER INFORMATION.

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Wright-Pierce
99 Main Street Topsham, Maine USA 04086
TEL (207) 725-8721 FAX (207) 729-8414

PORTLAND WATER DISTRICT
PORTLAND, MAINE
PRIMARY SEDIMENTATION BASINS
UPGRADE WITH ODOR CONTROL FACILITIES
GENERAL NOTES, ABBREVIATIONS, LEGEND AND DRAWING INDEX

DWG C-1
1 OF 79