

SECTION 32 20 00 - SIDEWALKS

PART 1 - GENERAL

1.01 SUMMARY:

This work shall consist of repairing brick and reinforced concrete sidewalks in accordance with these specifications and in reasonably close conformity with the lines and grades as shown on the plans.

1.02 REFERENCES:

A. Specification Sections:

1. Earth Moving: Section 31 20 00.
2. Flexible Paving: Section 32 12 00.
3. Curbs and Gutters: Section 32 16 00.

B. State of Maine Department of Transportation "Standard Specifications," latest revision

C. State of Maine Department of Transportation "Supplemental Specifications – Corrections, Additions & Revisions to Standard Specifications – Latest Edition"

D. City of Portland Technical and Design Standards, latest edition (available online <http://me-portland.civicplus.com/757/Technical-Design-Standards>).

1.03 SUBMITTALS:

- A. Design Mix: Provide mix design for concrete to be used for reinforced concrete sidewalks at least 20 days prior to start of placement.
- B. Brick: Provide manufacturer's information for brick to be used for brick sidewalks at least 20 days prior to start of placement.

PART 2 - PRODUCTS

2.01 REINFORCED CONCRETE:

- A. MATERIALS: Material for reinforced concrete shall be as identified on the Plans and shall conform to the requirements of the various subsections of the specifications listed below:
 1. Portland Cement Concrete shall conform to the requirements of Section 502 of the Maine Department of Transportation Standard Specifications for Structural Concrete, Class "A".
 2. Preformed Expansion Joint Fill shall conform to the requirements of subsection 705.01 of the Maine Department of Transportation Standard Specifications.
 3. Welded Steel Wire Fabric shall be 6" x 6" mesh with No. 2.0 wire and shall conform to the requirements of AASHTO designation M55, Welded Steel Wire Fabric for Concrete Reinforcement.
 4. Sealants: Joint sealants shall be color-matched to the concrete and specially formulated for high-performance in pedestrian and vehicular traffic areas.

2.02 BITUMINOUS CONCRETE:

- A. MATERIALS: Bituminous pavement, as identified on the Construction Drawings and as defined in Specification Section 32 12 00 Flexible Paving.

2.03 GRAVEL BASE AND SUBBASE:

- A. MATERIALS: Gravel/aggregate base and subbase, as identified on the Construction Drawings and as defined in Specification Section 31 20 00 Earth Moving.

2.04 BRICK:

- A. MATERIALS: All brick shall be in conformance with the current City of Portland Technical Standards.
 - a. New sidewalk construction shall utilize 4"x8" Pinehall Pathway Paver Brick; manufactured by Pine Hall Brick Co., Madison, North Carolina, Lachance Item # 193623, Pine Hall Pathway Paver Brick.
 - b. Repair and maintenance to existing brick shall utilize Vermont Paver; supplied by Gagne and Sons, specification number "Vermont Backer Brick" Item Number #VBBB.

PART 3 - EXECUTION

3.01 REINFORCED CONCRETE:

- A. Subgrade: The subgrade shall be shaped parallel to the proposed surface of the walks and drives and shall be thoroughly compacted. All depressions occurring shall be filled with suitable material and again compacted until the surface is smooth and hard.
- B. Installation: For installation of Brick Sidewalks, comply with the City of Portland Technical Standards and the Construction Drawings.
- C. Construction: As per Drawings.

3.02 BRICK:

- A. Subgrade: The subgrade shall be shaped parallel to the proposed surface of the walks and drives and shall be thoroughly compacted. All depressions occurring shall be filled with suitable material and again compacted until the surface is smooth and hard.
- D. Installation: For installation of Portland Cement Concrete Sidewalks, comply with the City of Portland Technical Standards and the Construction Drawings.
 - c. For installation of bituminous concrete for use in brick sidewalks, comply with Specification Section 31 12 00 Flexible Paving.
- B. Construction: As per Drawings.

END OF SECTION 322000

SECTION 33 11 00 - WATER UTILITY DISTRIBUTION PIPING

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK: Water distribution piping includes:

- A. Furnishing and installing all service piping and associated water utility appurtenances as noted on the Drawings.
- B. Verifying location of existing utilities prior to construction.
- C. Coordinating with the Portland Water District MEANS Group (207.774.5961) for new service and construction activities.
- D. Flushing, testing and disinfection of all water distribution piping.
- E. Repair of water piping damaged during construction.

1.02 REFERENCES:

- A. Specification Sections:
 - 1. Earth Moving: Section 31 20 00.
 - 2. Erosion and Sedimentation Controls: Section 31 25 13.
- B. Portland Water District Construction Specifications, latest version (available online <https://www.pwd.org/document-library>)

1.03 QUALITY ASSURANCE:

- A. Code Compliance: Comply with State Plumbing Code and local plumbing codes where more stringent. Comply with Maine Department of Human Services, Division of Health Engineering rules.
- B. AWWA Standards: Comply with requirements of Section 4 of AWWA C601, "Preventive Measures During Construction" for cleanliness.
- C. Other Standards: Comply with requirements of the Portland Water District specifications.
- D. Testing: CONTRACTOR shall pay for all flushing, pressure and leakage testing, disinfection, and fire flow testing. CONTRACTOR shall pay for all inspections by the Portland Water District.

1.04 SUBMITTALS:

- A. Submit manufacturer's product data and installation instructions for each product specified for water service piping, tapping, valving, risers, and fittings.

PART 2 - PRODUCTS

All products and materials shall be as identified in the Construction Drawings, and shall be in accordance with the Portland Water District Construction Specifications.

PART 3 - EXECUTION

The following construction related section is intended to apply to ALL new construction, both public and private. For the purposes of ensuring overall proper workmanship and compliance to these specifications, the District makes no distinction between extensions that are to be owned and maintained by the District, and private extensions installed to serve commercial, industrial or multi-unit type projects. All work shall be performed in accordance with the Portland Water District Construction Specifications.

3.01 INSTALLATION:

- A. All water services shall be installed in accordance with the final approved plans and in accordance with the Portland Water District Construction Specifications. Any variation to the plans must have prior approval in writing by the District.
- B. Pipe, fittings, valves, hydrants, and associated appurtenances shall be installed in accordance with the latest American Water Works Association Standards, Portland Water District Standards and as directed herein.
- C. Fittings and hydrants shall be blocked for horizontal and/or vertical movement in accordance with American Water Works Association Standards and the Portland Water District Construction Specifications.
- D. All main line gate boxes, service gate boxes and blow-off appurtenances shall be properly installed and raised to grade at the completion of paving or grading operations. Any gate box found to be improperly installed or not raised to grade at any point prior to the end of the one year warranty period will be the responsibility (and cost) of the contractor to repair.
- E. The trench will be kept dewatered during pipe installation. Every effort shall be made to avoid any situation where groundwater or surface water runoff is allowed to enter the main. The District reserves the right to issue a stop work order upon a project if this situation cannot be controlled.
- F. Every effort and precaution must be undertaken to prevent the introduction of any foreign material (insects, rodents or other animals, sediment, organic material, etc.) from entering the pipeline, either before construction or during installation. Each pipe section shall be visibly inspected on the inside and outside prior to lowering into the trench. Failure to follow proper housekeeping during installation will result in a stop work order or rejection of the pipe system.

3.02 BEDDING & BACKFILL:

- A. Pipe bedding and backfill shall be in accordance with the Construction Drawings and Portland Water District Construction Specifications.
- B. No backfill material which is frozen shall be placed in the trench.
- C. Trench Compaction: Compaction of backfill material shall be done in 12-inch maximum lifts achieving 95% proctor, or in accordance with the specifications and requirements of the State or Municipality responsible for the street or highway involved (whichever is the more stringent).

Under no circumstance shall the District authorize the start of construction for any water main without a pre-approved compaction plan in place. The Portland Water District reserves the right to hire an independent testing firm, at the expense of the contractor, to verify compliance to the approved compaction plan.

END OF SECTION 331100