

SECTION 32 16 00

CONCRETE CURBS, DRIVES, AND SIDEWALKS

PART 1 - GENERAL

1.1 EQUIPMENT

- A. Furnish the pump, pipe connections, and all necessary apparatus for the pressure and leakage tests including gauges and metering devices. Owner reserves the option to furnish the gauges and metering devices for the tests. Excavate, backfill, and furnish all necessary assistance for conducting the tests.
- B. The work under this section shall include the installation of all concrete curbs, sidewalks, and drives. Installation will include new installations as required on the drawings, and replacement of all curbs, drives and sidewalks damaged or removed incidental to construction. Adhere to most stringent requirements between local regulations and this specification concerning concrete installations for work performed on property owned by others (the municipality or private owners other than American Water).

PART 2 - PRODUCTS

2.1 CONCRETE

- A. All concrete shall conform to the following: ASTM C-150 Type I Portland cement, Class A - 3,000 psi; design mix, with a 4-inch + air-entrained slump ready mixed in accordance with ASTM C-94.
- B. Aggregate shall conform to ASTM C-33, which is clean, hard, durable, screened, crushed stone or gravel. The aggregate shall contain no cheat.

2.2 REINFORCEMENT

- A. The As needed to meet or exceed existing conditions or as specified in these contract documents.

2.3 CURBING COMPOUND

- A. Curing compound shall conform to the specifications of AASHTO M148, Type II, clear, and shall consist of a practically colorless impervious liquid which will thoroughly seal the surface of the concrete and will not impart a slippery surface thereto. The quality and the quantity to be used shall be approved by the Owner. The use of any material which would impart a slippery surface to the concrete or alter its natural color will not be permitted. The colorless, impervious compound shall contain not less than twenty-five percent (25%) solids. Admixtures applied to concrete with reinforcing steel require review and approval by the Owner before use.

2.4 PROTECTION

- A. Immediately upon finishing the concrete, the concrete shall be completely covered with plastic or alternate approved by the OWNER. Canvas or wetted straw will not be allowed as alternate coverings for curing..

PART 3 – EXECUTION

3.1 CURBS

- A. All base for the installation shall be thoroughly compacted to support curb installation. Expansion joints should be provided at a minimum of every 12 feet.
- B. All new curb installations shall be as shown on the drawings and the detail sheets.
- C. All replacement curbs shall be of the same type and thickness as the curb and gutter which it abuts. The grade of the restored curb and gutter shall conform with the grade of the existing adjacent curb and gutter, and installed to insure there is no ponding of water

3.2 DRIVEWAYS

- A. All base for the installation shall be thoroughly compacted and leveled to support the new and replacement installations without settlement. Expansion joints should be provided at a minimum of every 30 feet.
- B. All new driveways shall be installed as shown on the plans, and as detailed on the detail sheets.
- C. All permanent restoration of driveways shall conform to the construction as originally placed and to the original lines and grades, unless directed otherwise by the OWNER.
 - 1. No patching of concrete driveway areas will be allowed between joints or dummy joints.
 - 2. All joints shall be saw cut.
 - 3. In no case shall the thickness of the driveway be less than four inches, with 6x6x6/6 woven wire mesh.

3.3 SIDEWALKS

- A. All base for the installation of sidewalks shall be thoroughly compacted and leveled to support the new and replacement installations without settlement. Expansion joints should be provided at a minimum of every 30 feet.
- B. All new sidewalks shall be installed as shown on the plans and as detailed on the detail sheets.
 - 1. Sidewalks shall have a minimum thickness of four inches, with 6x6x10/10 wire mesh.
 - 2. All sidewalks shall slope 1/4 inch per foot across the width of the walk toward the street.
 - 3. The finish shall be a broom finish at right angles to the walkway.

4. Dummy expansion grooves shall be marked on the sidewalk at five foot intervals. The grooves shall be 1/2 inch deep by 3/8 inch in width.
 5. Sawed grooves will not be permitted.
- C. All permanent restoration of sidewalks shall conform to the manner of construction as originally constructed and placed (brick, block or stone).
1. When concrete sidewalks are replaced, the replacements shall match the existing line and grades, and width.
 2. All replacement work shall meet the requirements of new sidewalk construction. No patching will be allowed between joints or dummy joints.
 3. If a curing compound is employed, it shall be applied per the manufacturer's direction and at a recommended rate of application. If unknown, it shall be applied at 1 gallon (3.79 liters) per 200 square feet (18.58 square meters) for each coat. Surfaces damaged by construction operations during curing shall be resprayed at the same rate.

3.4 PAVED SIDE DITCH

- A. All base for the installation shall be thoroughly compacted and leveled to support the new and replacement installations without settlement.
- B. All new side ditch shall be installed as shown on the plans, and as detailed on the detail sheets.
- C. All permanent restoration of side ditch areas shall conform to the construction as originally placed and to the original lines and grades in accordance with the current appropriate state transportation department guidelines.
1. No patching of concrete side ditches will be allowed between joints or dummy joints.
 2. All joints shall be saw cut.

3.5 PROTECTION

- A. All concrete work shall be protected by barricades, lights, etc. to protect the concrete until set-up.

END OF SECTION 32 16 00