

CITY OF MEMPHIS – STANDARD CONSTRUCTION SPECIFICATIONS
SECTION 02770 CURB, CURB AND GUTTER, AND WATER TABLE

PART 1 – SCOPE

1.01 This work shall consist of constructing concrete curb, concrete curb and gutter, asphalt curb, and concrete water table in conformity with the lines, grades, and dimensions shown on the Plans or directed by the Owner

PART 2 – MATERIALS AND EQUIPMENT

2.01 MATERIALS

A. Concrete Materials: Concrete materials shall meet the requirements of Specification Section 03050, Portland Cement Concrete for Class A concrete, except for special mix for use with approved curb machines as approved by the Owner.

B. Curb Dowel Bars: If specified, curb dowel bars shall be deformed billet steel bars conforming to the requirements of ASTM A 615.

C. Asphaltic Concrete For Curbs: Asphaltic concrete for curbs shall be Mix No. 1 as specified in Specification Section 02741 Paragraph 2.01 D. Other gradations which have a history of satisfactory performance may be used when approved by the Owner.

D. Curing Materials: Curing materials shall conform to the applicable provisions of Specification Section 02750 Paragraph 2.01C.

E. Preformed Joint Fillers: Preformed joint fillers shall be of the bituminous type and shall conform to the requirements of AASHTO M 213 and shall not be less than 1/2 inch or more than 1 inch in thickness. For water table slab, their width shall be at least equal to the full thickness of the water table slab and their length shall be sufficient to eliminate any splicing. For curbs and curb and gutter, they shall be precut to the full cross-section of the concrete.

2.02 EQUIPMENT

Equipment for this work shall conform to the requirements of Specification Section 02775 Paragraph 2.02. When concrete or asphalt curb machines are used, the necessary special tools required for satisfactory curb machine work shall also be included. All equipment necessary for the satisfactory performance of this construction shall be on the Project and approved before work will be permitted begin.

PART 3 – CONSTRUCTION REQUIREMENTS

3.01 EXCAVATION AND SUBGRADE PREPARATION

All major excavation for curb and gutter or water table construction shall be performed under other Sections of these Specifications. Only the final grade preparation for this Work shall be included in this Section, will be considered incidental to the work, and shall be performed in accordance with the applicable provisions of Specification Section 02775 Paragraph 3.01 or to the satisfaction of the Owner.

3.02 CURBS

Portland cement concrete curbs shall be constructed to the dimensions shown on the Plans and Design Standards. Dowels, if specified, shall be 1/2 inch deformed steel bars conforming to the length and spacing shown on the Plans and will be considered incidental to the Work. Asphaltic Concrete Curbs, when specified, shall conform to the lines, grades, and typical cross-section shown on the Plans and the Work shall be in accordance with Section 715 of the Tennessee Department of Transportation's Standard Specifications for Roads and Bridges.

3.03 FORMS

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A. Forms for Portland cement concrete curbs shall conform to the requirements of Specification Section 02775 Paragraph 2.02. Bracing and staking of forms shall be such that the forms remain in both horizontal and vertical alignment until their removal.

B. Forms for curb and gutter and water table shall conform to the applicable provisions of Specification Section 02775 Paragraphs 2.02 and 3.02. The forms for combination curb and gutter and back forms for water table shall have readily detachable face forms held in place by 1/8 inch thick templates. The templates shall have lugs or other devices to hold them in position during placing of concrete and be of such design to permit removal without causing damage to the concrete. The templates, unless otherwise specified on the Plans, shall be spaced so as to form sections having uniform lengths of 10 feet except where reduced to a minimum of 6 feet when necessary for closures.

3.04 JOINTS

Three-fourths inch thick expansion joints in curb and curb and gutter shall be placed at intervals shown on the Plans but shall not exceed 40 foot maximum spacing. Dummy joints shall be installed at 10 feet on center.

3.05 PLACING AND FINISHING CONCRETE

The work shall be performed in accordance with the applicable provisions of Specification Section 02775 Paragraph 3.04, or as directed by the Owner.

3.06 TESTING CONCRETE

Concrete for curbs, curb and gutter, and water table shall be tested in accordance with the provisions of Specification Section 02775 Paragraph 3.05.

3.07 CURING AND PROTECTION

Curing and protection shall be performed in accordance with the applicable provisions of Specification Section 02775 Paragraph 3.06.

3.08 USE OF CURB MACHINES

A. Extruding type curb machines for Asphaltic concrete curbs or portland cement concrete curbs or curbs and gutters may be used if approved by the Owner. The molds shall be so constructed as to produce the desired cross-section and so that the thrust against the extruded material will eliminate objectionable surface voids as the material passes through the mold.

B. When portland cement concrete curb or curb and gutter is placed by curb machines, finishing shall be performed as specified above except that dummy or construction joints may be sawed at specified intervals in lieu of constructing the curb or curb and gutter in sections as stipulated in Specification Section 02770 Paragraph 3.04.

3.09 WATER TABLE

A. Water tables, unless otherwise shown on the Plans, shall be constructed in accordance with the Plans and Design Standards for concrete water table.

B. The concrete curb, gutter, and 8" concrete slab shall be monolithic for each unit. A unit consists of the construction at the turning radius at any one corner of two intersecting streets and within the limits as shown on the Plans. The 8 foot wide x 8 inch deep invert between the radius slabs shall be a monolithic pour. Measurement for payment of the water table will begin outside of the front edge of the gutter on the approaches to the intersection. For example, the curb and 2 feet of standard 6-30 curb and gutter will be paid for as Curb and Gutter for the distance around the turning radius with the balance of the concrete slab being measured and paid for as concrete water table. One inch expansion joints shall be placed between the invert section and the radii unit. The flow lines of the gutters shall be maintained across the intersection.

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C. No formed or sawed dummy or contraction joints shall be placed in the radius curb.

D. The portland cement concrete inverts across the traveled portion of approaching streets shall be constructed to the grade and invert depth shown on the Plans or as directed by the Owner. Portland cement concrete inverts shall have a 1 inch expansion joint at each end where they abut the monolithic radius slab.

3.10 MISCELLANEOUS

The location of all driveways, curb inlets, or other openings to be left in curb and gutter will be staked by the Owner, and no additional compensation will be allowed other than for actual quantities of curb and gutter constructed.

PART 4 – MEASUREMENT

4.01 CONCRETE CURB

Concrete curb of the dimensions specified will be measured for payment by the linear foot along the face of the curb, complete in place.

4.02 6-30 CONCRETE CURB AND GUTTER

6-30 Concrete Curb and Gutter will be measured for payment by the linear foot along the face of the curb, complete in place.

4.03 6-18 MEDIAN CONCRETE CURB AND GUTTER

6-18 Median Concrete Curb and Gutter will be measured for payment by the linear foot along the face of the curb, complete in place.

4.04 VALLEY GUTTER

Valley gutter will be measured for payment by the linear foot along the gutter line, complete in place.

4.05 CONCRETE WATER TABLE

Eight inch (8") thickness Concrete Water Table will be measured for payment by the square foot, complete in place within the limits described in Specification Section 02770 Paragraph 3.09.

4.06 ASPHALTIC CONCRETE CURB

Asphaltic Concrete Curb will be measured for payment by the linear foot along the face of the curb, complete in place.

4.07 GENERAL

No payment will be made for preformed joint filler material or curb dowel bars as they are considered incidental to the Work.

PART 5 – PAYMENT

5.01 CONCRETE CURB

The accepted quantities of Concrete Curb will be paid for at the contract unit price per linear foot for the size specified, which price will be full compensation for preparing the base; forming; furnishing, placing, finishing and curing the concrete; furnishing and setting all dowels; backfilling; and protection until final acceptance, complete in place.

5.02 6-30 CONCRETE CURB AND GUTTER

6-30 Concrete Curb and Gutter will be paid for at the contract unit price per linear foot, which price will be full compensation for preparing the subgrade; forming; furnishing, placing, finishing, and curing the concrete; and protection until final acceptance, complete in place.

5.03 6-18 MEDIAN CONCRETE CURB AND GUTTER

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6-18 Median Concrete Curb and Gutter will be paid for at the contract unit price per linear foot, which price will be full compensation for preparing the subgrade; forming; furnishing, placing, finishing, and curing the concrete; and protection until final acceptance, complete in place.

5.04 VALLEY GUTTER

Valley gutter will be paid for at the contract unit price per linear foot, which price will be full compensation for preparing the subgrade; forming; furnishing, placing, finishing, and curing the concrete; and protection until final acceptance, complete in place.

5.05 CONCRETE WATER TABLE

Eight inch (8") thickness Concrete Water Table will be paid for at the contract unit price per square foot, which price will be full compensation for preparing the subgrade; forming; furnishing, placing, finishing, and curing the concrete; and protections until final acceptance, complete in place.

5.06 ASPHALTIC CONCRETE CURB

Asphalt Concrete Curb will be paid for at the contract unit price per linear foot for the size specified, which price will be full compensation for preparing the base, tack coat, furnishing and placing the curb, and protection until final acceptance, complete in place.

5.07 PAYMENT WILL BE MADE UNDER:

<u>Item No.</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02770-01	Concrete Curb	Linear Foot
02770-01.____	____" x ____"	Linear Foot
02770-02	6-30 Concrete Curb and Gutter	Linear Foot
02770-03	6-18 Median Concrete Curb and Gutter	Linear Foot
02770-04	Valley Gutter	Linear Foot
02770-05	Concrete Water Table	Square Foot
02770-06	Asphaltic Concrete Curb	Linear Foot
02770-06.____	____"	Linear Foot

END OF SECTION 02770