

## SECTION 60

### CONCRETE CURB AND GUTTER

#### 60.1 DESCRIPTION

##### A. General

This work consists of constructing concrete curb and gutter on a prepared subgrade.

##### B. Related Work

Section 12	Roadway and Drainage Excavation
Section 55	Concrete Masonry
Section 56	Concrete for Incidental Construction, Class M
Section 57	Reinforcement for Concrete Masonry
Section 61	Concrete Sidewalk and Handicap Ramps
Section 62	Drop Inlets
Section 100	Portland Cement
Section 101	Air-Entraining Admixtures
Section 102	Chemical Admixtures for Concrete
Section 104	Water for Use in Portland Cement Concrete
Section 105	Fine Aggregate for Use in Portland Cement Concrete
Section 107	Coarse Aggregate for Use in Portland Cement Concrete
Section 108	Concrete Curing Materials
Section 113	Preformed Expansion Joint Filler For concrete
Section 114	Concrete Joint Sealer
Section 117	Aggregate for Granular Bases and Surfacing
Section 123	Reinforcement

#### 60.2 MATERIALS

- A. Concrete shall conform to the requirements of Class M6, Section 56.
- B. Expansion joint filler shall conform to the requirements of Section 113.
- C. Curing compound shall conform to the requirements of Section 108, Linseed Oil Base Emulsion Compound, white pigmented.
- D. Reinforcing steel shall conform to the requirements of Section 123.

### 60.3 CONSTRUCTION REQUIREMENTS

#### A. General

The construction of fillets and curb and gutter shall follow the construction of inlet boxes and precede the construction of bituminous surfacing. Inlet tops shall be constructed with the curb and gutter to provide a continuous grade and alignment.

Monolithic curb, gutter, and pavement may be placed providing a sawed longitudinal joint is constructed at the theoretical edge of the pavement and the gutter cross-slope is as shown for standard curb and gutter.

The foundation shall be excavated, shaped and compacted to a firm, uniform bearing surface, conforming to the planned section and established grade. Unsuitable foundation material shall be removed and replaced as directed.

Granular material, shall be furnished, placed and compacted to the required Contract depth and density. Minimum depth of granular material placed under fillets, pans, curb and gutter, type "P" gutter, and driveway approach pavement shall be four (4) inches. The foundation shall be thoroughly moistened immediately prior to the placing of concrete.

Forms shall be full depth, rigid, unyielding and mortar tight. They shall be securely staked, braced and tied to the required line and grade.

In lieu of construction using fixed side forms, concrete may be placed and formed to the required shape by using an approved type of extrusion machine. When machine placement is used, the Engineer may permit modification of consistency requirements.

The exposed surfaces of the fillets and pan and curb and gutter shall be finished smooth and even. Edges of gutter and the top face edges of the curb shall be finished with an approved finishing tool. The top surface of the concrete shall be brushed or broomed to slightly roughen the surface and remove the finishing tool marks.

All honeycombed surfaces shall be corrected to the satisfaction of the Engineer by using a grout composed of one part cement and two parts sand. Severly honeycombed areas shall be removed and replaced at the Contractor's expense.

Joints shall be constructed at the locations and of the dimensions shown on the plans or as directed by the Engineer. As a minimum, joints shall match those in the Portland cement concrete pavement section as applicable.

Concrete shall be protected and cured in accordance with the provisions of Section 55.

After the curing period, the area behind the curb and gutter and fillets shall be filled to the required elevations with suitable material and the material shall be satisfactorily compacted. Injury to the concrete shall not occur during these operations. Curb and gutter and fillets shall be backfilled and compacted prior to placing pavement section if applicable.

#### B. Testing

The Contractor shall be responsible for providing a minimum of a slump, air content, seven (7) day and twenty-eight (28) day compressive strength quality test set for each days pour. Additional test sets and testing may be required by the Engineer or as called for in the Detailed Specifications.

### **60.4 METHOD OF MEASUREMENT**

Concrete curb, gutter and combined curb and gutter will be measured to the nearest one-tenth (0.1) linear foot. Measurement for concrete curb will be on the inside bottom face of the curb. Measurement for separate gutters and combined curb and gutter will be on the inside edge next to the pavement.

Measurement of curb and combined curb and gutter will include tapers for approaches and or entrances. Measurement for approach gutter or "P" gutter will not include tapers.

Measurement for curb and gutter shall not include the "gutter throat" of a Type "E" Inlet or the fillet curb. Refer to standard detail.

Concrete fillets, pans, approach pavement and similar items shall be measured to the nearest whole square foot or square yard consistent with the appropriate bid item in the Bidder's Proposal.

Measurement for granular materials placed under the concrete shall be in accordance with Section 117, Aggregates for Granular Bases and Surfacing.

### **60.5 BASIS OF PAYMENT**

Concrete curb, gutter and combined curb and gutter will be paid for at the contract unit prices per linear foot for the types constructed.

Concrete fillets, pans, approach pavement and similar items will be paid for at the contract unit prices per square foot or per square yard for the types constructed.

Payment for granular materials placed under the concrete shall be in accordance with Section 117, Aggregates for Granular Bases and Surfacing.

Payment for these items will be full compensation for furnishing materials, the expansion joints, steel reinforcement, forms, bracing, excavation, backfill, labor, equipment, and incidentals necessary.

**END OF SECTION**