

802.01

**Section 802. CONCRETE CURB, GUTTER, AND DIVIDERS**

**802.01. Description.** This work consists of constructing the following items on the prepared base, with or without reinforcement, as required by the contract:

- A. Concrete curb, combination curb and gutter, curb nose;
- B. Valley gutter, and shoulder gutter;
- C. Down spout headers, and spillways; and
- D. Dividers.

**802.02. Materials.** Provide materials in accordance with the following:

Concrete, Grade P1.....	<u>601</u>
Concrete, Grade S2.....	<u>701</u>
Mortar, Type R-2 .....	<u>702</u>
Curing Compound .....	<u>903</u>
Steel Reinforcement.....	<u>905</u>
Geotextile Liner .....	<u>910</u>
Lane Ties.....	<u>914</u>
Joint Fillers .....	<u>914</u>

**802.03. Construction.**

A. **Preparation of Base.** Prepare the base in accordance with subsection 602.03.B. Construct a uniform base, compacted to 95 percent of the maximum unit weight of the base. Prepare the base and geotextile liner for concrete spillways in accordance with subsection 814.03.A.

B. **Placing Forms.** Place fixed forms in accordance with subsection 602.03.C. Use face forms, where required, to construct straight curbs with fixed forms.

If using slip forming methods, match the dimensions of the form to the dimensions of the curb shown on the plans.

C. **Placing Steel Reinforcement.** Space and fix steel reinforcement or lane ties in the correct position during concrete placement, as required.

Splice steel reinforcement bars by lapping, and securely wiring the bars with at least two ties per splice. Lap the bars at least 10 inches.

Place mesh reinforcement in accordance with subsection 602.03.E.

D. **Placing Concrete.** Obtain the Engineer's approval for the base before placing concrete. Moisten the base before placing concrete.

For concrete curbing constructed as an integral part of the concrete pavements, except at night headers, place concrete curbing within 30 minutes of placing the concrete for the pavement. At night headers, use ties and methods approved by the Engineer.

Construct transitions between concrete valley gutter and concrete curb and gutter as miscellaneous pavement in accordance with section 602.

Obtain the Engineer's approval for forms and form placement before placing concrete.

Place concrete to the required depth and spade or vibrate to ensure consolidation.

Before applying membrane curing compound, repair honeycombed areas or voids with Type R-2 mortar or remove and replace as directed by the Engineer.

E. **Joints.** Construct joints perpendicular to the surfaces of the curb, gutter or dividers, and no greater than ¼ inch from the plan location. Seal joints in accordance with subsection 602.03.S.

1. **Contraction Joints and Plane-of-Weakness Joints.** Construct joints, as approved by the Engineer, to ensure a plane-of-weakness at least ¼ the depth of the section.
2. **Expansion Joints.** Place expansion joint filler to the full depth of the joint. Recess the top of the joint filler ¼ inch to ½ inch below the finished surface of the structure.

F. **Finishing.** Use finishing tools approved by the Engineer. Round the exposed edges to a ¼-inch radius, including transverse joints. Shape the face of the curb to produce the radii shown on the plans. Fill low spots with the same concrete mixture used in the work.

Finish exposed surfaces smooth and even, and lightly brush using a broom, brush, or burlap. Finish the gutter and top of curb to within 3/16 inch when checked with a 10-foot straightedge. Finish other exposed surfaces to within 3/8 inch of the alignment and typical cross section.

Do not add water to the concrete surface to aid finishing.

G. **Stenciling.** Stencil survey station numbers, in accordance with subsection 602.03.L, into the exposed surface of continuous runs of concrete curb, gutter, curb and gutter, and driveway opening, or shoulder that directly adjoins the traveled way. Stenciling curb and gutter is not required if concrete barrier is present and is stenciled in accordance with subsection 804.03.E.

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Place stencil numbers as follows:

1. To be read from the traveled way;
2. On one side of one-way roadways (preferably the right side);
3. On both sides of the traveled way of two-way roadways; and
4. Midway up on the face of a curb or 2 inches from the back of a gutter or driveway opening.

H. **Curing.** Cure concrete curb, gutter, and dividers in accordance with subsection 602.03.M.

I. **Weather and Temperature Limitations.** Protect concrete curb, gutter, and dividers in accordance with subsection 602.03.T.

J. **Backfilling.** After the concrete gains the required strength, backfill, compact, and grade the remaining excavated areas.

**802.04. Measurement and Payment.**

<b>Pay Item</b>	<b>Pay Unit</b>
Curb, Conc, Det ____	Foot
Curb and Gutter, Conc, Det ____	Foot
Valley Gutter, Conc	Foot
Curb and Gutter, Bridge Approach	Foot
Shoulder Gutter, Conc, Det ____	Each
Curb Nose	Each
Downspout Header, Conc	Each
Driveway Opening, Conc, Det M	Foot
Spillway, Conc	Foot
Divider, Reinf Conc, Type I	Square Foot
Divider, Non reinf Conc, Type ____	Square Foot

A. **Concrete Acceptance.** Conduct concrete quality control as specified in section 604. The Engineer will conduct quality assurance as specified in section 605. The Department will pay for concrete required for this work based on the quality assurance results.

B. **Curb, Concrete; Curb and Gutter, Concrete; Valley Gutter, Concrete; and Curb and Gutter, Bridge Approach.** The Engineer will measure **Curb and Gutter, Conc, Det, Valley Gutter, Conc,** and **Curb and Gutter, Bridge Approach** in place along the joint of the curbing with the pavement. The Engineer will not make deductions in the pay item measured length for catch basins, inlet castings, or Detail L driveway openings. The plans will show the pay limits for **Valley Gutter, Conc**. The Engineer will divide transition areas between **Valley Gutter, Conc** and **Curb and Gutter, Conc** in half and will measure each half in the units of the adjacent item.

C. **Integral Curb and Pavement Construction.** If the Contractor chooses to construct curb as an integral part of the pavement, the Engineer will measure the curb separately. The Department will not consider payment for extras or increases in pay quantities due to the Contractor's choice to cast curbing integral with the pavement.

D. **Shoulder Gutter, Concrete.** The unit price for **Shoulder Gutter, Conc Det** includes the cost of providing and placing a geotextile liner. The plans will show the pay limits for **Shoulder Gutter, Conc Det**.

E. **Driveway Opening, Conc, Det M.** The Engineer will measure **Driveway Opening, Conc, Det M** from springline to springline.

F. **Spillway, Concrete.** The unit price for **Spillway, Conc** includes the cost of providing and placing a geotextile liner.

G. **Divider, Concrete.** The unit prices for concrete divider include the cost of steel reinforcement, if required.

H. **Backfilling.** Unless the contract includes separate pay items for backfill, the cost of backfilling is included in the unit price for related items of work.