

SECTION 03310

CONCRETE CURB, GUTTER, SIDEWALK AND DRIVEWAYS

PART 1 - GENERAL

1.1 Summary

A. Description of Work

The work to be performed in accordance with this section includes the furnishing and placement of Portland cement concrete curb, gutter, sidewalk and driveways.

The work shall include the furnishing of all labor, tools, equipment, materials and performing all required operations to provide a complete item in accordance with the project plans and specifications.

B. Related Work Specified Elsewhere

Aggregate Base Course	Section 02610
Concrete Formwork.....	Section 03100
Concrete Reinforcement	Section 03200
Concrete	Section 03300

1.2 Quality Assurance

Provide all laboratory and field testing of material and workmanship in accordance with Specification Section 3300, Concrete.

A. Applicable Test Standards and Specifications

1. American Society for Testing and Materials (ASTM)

ASTM D-1751, Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction.

B. Tolerances

1. Sidewalk

Test the surface of concrete sidewalk with a 5-foot straightedge. Correct any deviation in excess of 1/8-inch at no additional cost to the Owner.

2. Water Test

Water test gutters having a slope of 0.8 foot per hundred feet or less, or where unusual or special conditions cast doubt on the capability of the gutters to drain. Establish flow in the length of gutter to be tested by supplying water from a hydrant, tank truck or other source. One hour after the supply of water is shut off, inspect the gutter for evidence of ponding or improper shape. In event water is found ponded in the gutter to a depth greater than 1/2-inch, or on the adjacent asphalt pavement, the defect or defects shall be corrected in a manner acceptable to the Owner at no additional cost.

PART 2 - MATERIALS

2.1 Portland Cement Concrete

Provide concrete conforming to Specification Section 3300, Concrete Structures unless indicated otherwise.

2.2 Preformed Joint Filler

According to ASTM D 1751.

PART 3 - EXECUTION

3.1 Matching Existing Concrete

Sawcut and remove existing concrete to the lines indicated on the plan in accordance with Specification Section 2110, Removal of Existing Improvements. Sawcut, remove and replace sections damaged by construction in accordance with these specifications.

3.2 Base Preparation

According to Section 2610, Aggregate Base Course.

3.3 Form Work

Unless otherwise approved, use conventional forms to construct concrete curb, gutter, sidewalk and drives. Secure formwork to line and grade. Thoroughly clean forms before each use and apply a light coat of release agent, which will not discolor the concrete.

Do not remove front face form before the concrete has taken the initial set and has sufficient strength to carry its own weight. Do not remove gutter forms or rear forms until concrete has reached sufficient strength to prevent damage. Sawcut, remove and replace damaged sections.

3.4 Machine Formed

Machines shall be designed specifically for such work and approved by the Owner. Machines shall be capable of producing results equal to or better than that produced with forms. If the results are not satisfactory to the Owner, discontinue the use of the machine and make necessary repairs no additional cost to the Owner. All applicable requirements of construction with forms shall apply to the use of machines.

3.5 Densification

Thoroughly spade concrete away from the forms so there will be no rock pockets next to the forms. The concrete may be compacted by mechanical vibrators approved by the Owner. Tamp or vibrate the concrete until the mortar rises to the surface and the coarse aggregate is not exposed.

3.6 Finish

Finish all concrete surfaces smooth, straight and defect free. Provide a light broom finish as approved by Owner on all surfaces.

3.7 Concrete Curing

Concrete curing shall be required according to the MAG Standard Specifications, Section 726. No diesel fuel is to be used.

3.8 Joints

A. Expansion Joints

Construct expansion joints in a straight line and vertical plane perpendicular to the longitudinal of the sidewalk or curb and gutter, except in cases of curved alignment, when joints will be constructed along the radial lines of the curve. Construct to the full depth and width of the concrete. Match the joints in the adjacent pavement sidewalk or curb and gutter. Joints shall be constructed at all radius points, driveways, alley entrances, adjoining structures, and at a maximum interval of 100 feet between joints.

B. Contraction Joints

Construct in a straight line and vertical plane perpendicular to the longitudinal line of the sidewalk or curb and gutter, except in cases of curved alignment when joints will be constructed along the radical lines of the curb. Construct to a depth of 1-inch and at 10-foot intervals on sidewalk widths of 5 feet and 12-foot intervals on sidewalks of 4-foot and 6-foot widths.

C. Edges

Shape with a suitable tool so formed as to round the edges to the radius indicated.

3.9 Sidewalks

Sidewalks shall have a cross-slope of 1/4-inch per foot or as indicated on the Plans.

PART 4 - MEASUREMENT AND PAYMENT

4.1 Measurement

A. Curb With And Without Gutter

Curb and gutter will be measured in linear feet, to the nearest one linear foot, along the gutter flow line horizontally from end of curb to end of curb, including the street frontage of driveways, sidewalk ramps, and all curb returns. The measurement shall be per plan dimensions.

B. Sidewalk

Sidewalk will be measured in square feet, to the nearest one square foot, along the sidewalk centerline horizontally, from end of sidewalk to end of sidewalk. Sidewalk ramps will be included in the sidewalk quantity. Driveways will not be included in the sidewalk quantity. The measurement shall be per plan dimensions.

C. Residential and Commercial Driveways

Residential and commercial driveways will be measured in square feet, to the nearest one square foot, horizontally from edge of driveway to edge of driveway and back of curb to the end of the driveway. The measurement shall be per plan dimensions.

D. Valley Gutter

Valley gutter will be measured in linear feet, to the nearest one linear foot, horizontally along the longest flow line of valley gutter, parallel to the street, from end of curb return to end of curb return. The curb and gutter around the curb returns shall not be considered as a portion of the valley gutter. The measurement shall be per plan dimension.

4.2 Payment

If no item is listed in the bid tab or the measurement and payment section, this item is to be considered incidental.

Payment for concrete curb with and without gutter, valley gutter, sidewalk, residential driveways and commercial driveways will be made at the full contract price per linear foot, square foot or per each. Payment shall include, but not be limited to subgrade preparation, base preparation, base course, form materials and placement of steel and concrete materials.

See Section 00310 Bid Schedule for Bid Items.

**** END OF SECTION 03310 ****