

Section 02771

CURB, CURB AND GUTTER, AND HEADERS

PART 1 GENERAL

1.01 SUMMARY

A. This Section includes the following:

1. Reinforced concrete curb, reinforced monolithic concrete curb and gutter, and mountable curb.
2. Paving headers and railroad headers poured monolithically with concrete base or pavement

1.02 MEASUREMENT AND PAYMENT

A. Unit Prices.

1. Payment for curbs, curbs and gutter, and esplanade curbs is on linear foot basis measured along face of curb.
2. Payment for 3-foot, concrete-valley gutter is on a linear foot basis.
3. Payment for mountable concrete curbs is on a square foot basis.
4. Payment for concrete paving headers and concrete railroad headers is on a linear foot basis.
5. Payment for headers is on linear foot basis measured between lips of gutters adjacent to concrete base and measured between backs of curbs adjacent to concrete pavement.
6. Refer to Section 01270 – “Measurement and Payment” for unit price procedures.

B. Stipulated Price (Lump Sum). If the Contract is a Stipulated Price Contract, payment for Work in this Section is included in the total Stipulated Price

1.03 REFERENCES (NOT USED)

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 – “Submittal Procedures”.
- B. Submit details of proposed form work for approval.

1.05 RELATED REQUIREMENTS

- A. Section 01270 – “Measurement and Payment”
- B. Section 01330 – “Submittal Procedures”
- C. Section 02752 – “Concrete Pavement Joints”
- D. Section 02753 – “Concrete Pavement Curing”
- E. Section 03002 – “Concrete Pavement”

1.06 – 1.13 NOT USED

PART 2 PRODUCTS

2.01 MANUFACTURER(S) (NOT USED)

2.02 MATERIALS AND/OR EQUIPMENT

- A. Concrete: Conform to material and proportion requirements for concrete of Section 03002 – “Concrete Pavement” – Harris County.
- B. Reinforcing Steel: Conform to material requirements for welded wire fabric of Section 03210 – “Reinforcing Steel”.
- C. Grout: Nonmetallic, nonshrink grout containing no chloride-producing agents conforming to the following requirements:
  - 1. Compressive strength
    - a. at 7 days: 3,500 psi
    - b. at 28 days: 8,000 psi
  - 2. Initial set time: 45 minutes
  - 3. Final set time: 1.5 hours
- D. Preformed Expansion Joint Material: Conform to material requirements for preformed expansion joint material of Section 02752 – “Concrete Pavement Joints”.
- E. Expansion Joint Filler: Conform to material requirements for expansion joint filler of Section 02752 – “Concrete Pavement Joints”.
- F. Mortar: Mortar finish composed of one part Portland cement and 1½ parts of fine aggregate. Use only when approved by Project Manager.

2.03 – 2.04 NOT USED

PART 3 EXECUTION

3.01 GENERAL / MANUFACTURER(S) (NOT USED)

3.02 PREPARATION

Prepare subgrade in accordance with applicable portions of sections on excavation and fill, embankment, and subgrade and roadbed.

3.03 ERECTION/INSTALLATION APPLICATION AND/OR CONSTRUCTION

A. Placement

1. Guideline: Set to follow top line of curb. Attach indicator to provide constant comparison between top of curb and guideline. Ensure flow lines for monolithic curb and gutters conform to slopes indicated on Plans.
2. Forms: Brace to maintain position during pour. Use metal templates cut to section shown on Plans.
3. Reinforcement: Secure in position so that steel shall remain in place throughout placement. Reinforcing steel shall remain at approximate center of base or pavement as indicated on Plans.
4. Joints: Place in accordance with Section 02752 – “Concrete Pavement Joints”. Place dummy groove joints as to match concrete pavement joints at right angles to curb lines. Cut dummy grooves ¼ inch deep using an approved edging tool.
5. Place concrete in forms to required depth. Consolidate thoroughly. Do not permit rock pockets in form. Entirely cover top surfaces with mortar.

B. Manual Finishing

1. After concrete is in place, remove front curb forms. Form exposed portions of curb, and of curb and gutter, using mule which conforms to curb shape, as shown on Plans.
2. Thin coat of mortar may be worked into exposed face of curb using mule and two-handled wooden darby at least 3 feet long.
3. Before applying final finish move 10-foot straightedge across gutter and up curb to back form of curb. Repeat until curb and gutter are true to grade and section. Lap straightedge every 5 feet.
4. Steel trowel finish surfaces to smooth, even finish. Make face of finished curb true and straight.

5. Edge outer edge of gutter with ¼-inch edger. Finish edges with tool having ¼-inch radius.
6. Finish visible surfaces and edges of finished curb and gutter free from blemishes, form marks and tool marks. Finished curb or curb and gutter shall have uniform color, shape and appearance.

C. Mechanical Finishing

Mechanical curb forming and finishing machines may be used instead of, or in conjunction with, previously described methods, if approved by Project Manager. Use of mechanical methods shall provide specified curb design and finish.

D. Curing

Immediately after finishing operations, cure exposed surfaces of curbs and gutters in accordance with Section 02753 – “Concrete Pavement Curing”.

E. Tolerances

Top surfaces of curb and gutter shall have uniform width and shall be free from humps, sags or other irregularities. Surfaces of curb top, curb face, and gutter shall not vary more than 1/8 inch from edge of straightedge laid along them, except at grade changes.

3.04 – 3.08 NOT USED

3.09 PROTECTION

- A. Maintain curbs and gutters in good condition until completion of the Work.
- B. Replace damaged curbs and gutters to comply with this Section.

3.10 SCHEDULES (NOT USED)

END OF SECTION