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Circular forms of specified radius for the intersection returns, for both front and rear of curb and gutter shall be complete built up segments, properly braced and substantially set in position to line and grade. Mortar and dirt shall at all times be removed from the forms. The forms shall be oiled before being set for use.

Expansion joints shall be constructed in the curb and gutter at the tangent points of all street returns. The expansion joints shall be formed by inserting during construction and leaving in place, prepared strips of fibre matrix one-half inch in thickness and shall extend through the entire thickness of the curb and gutter flag.

Between the expansion joints described above, the curb and gutter flag shall be constructed in lengths of six (6) feet each and separated by means of division plates.

#### Division Plates

Sections will be separated by division plates which shall be one-eighth ( $\frac{1}{8}$ ) inch metal and shall exactly conform to the cross section of the curb and gutter flag. They shall be oiled and installed in the forms before concrete is placed and maintained at right angles to the surface of and perpendicular to the line of the curb and gutter flag. Plates shall be withdrawn when the concrete has hardened sufficiently to keep the edges from joining.

The cement, fine aggregate, coarse aggregate, size of coarse aggregate, mixed aggregates, water, measuring materials, mixing and retempering shall meet the same requirements as that specified herein for the pavement.

The concrete for the base shall be mixed in the proportions of one sack of Portland cement to two cubic feet of fine aggregate and three and one-half ( $3\frac{1}{2}$ ) cubic feet of coarse aggregate. The mortar for the top shall be mixed in the proportions of one (1) sack of Portland cement to two (2) cubic feet of screened fine aggregate.

A cubic yard of concrete for the base in place, shall contain not less than one and six-tenths (1.6) barrels of cement.

The materials shall be mixed with sufficient water to produce a concrete which will hold its shape when deposited. The consistency shall not be such as to cause a separation of the mortar from the coarse aggregate in handling.

#### Placing Concrete

Immediately prior to placing any concrete, the sub-grade shall be checked for grade and accepted by the Board of Local Improvements or an authorized representative.

The surface of the sub-grade shall be wet, but shall show no pools of water when the concrete is placed.

When mixed the concrete shall be placed at once in the forms filling both the gutter flag and curb with material of the same consistency. The concrete shall then be tamped, and spaded until a thin coat of mortar is against the forms and so that no coarse aggregate will show when the forms are removed. The concrete portion of the curb and gutter shall be one-half ( $\frac{1}{2}$ ) inch less in thickness than the completed section.

Whole sections shall be constructed without interruption. Whenever mixing is suspended for forty-five (45) minutes or longer, material in excess of a complete section shall be wasted. No concrete shall be placed when the temperature is below thirty-five (35) degrees Fahrenheit or when it is liable to be below thirty-five (35) degrees in the next twenty-four (24) hours.

#### Finishing Mortar Top

Before the concrete base has begun to harden there shall be spread upon it a mortar finishing coat one-half ( $\frac{1}{2}$ ) inch in thickness composed of one part by bulk of Portland cement and two (2) parts by bulk of sand as specified for mortar top. After finishing mortar is in place and before it has begun to harden it shall be made smooth by floating and troweling.

When the concrete has hardened sufficiently the curb and flag face shall be brushed with a catmine brush dipped in water and shaken and any marks left on the surface of the work shall be removed by brushing. The edges of the curb and gutter flag and the joints between the sections shall be edged with an edging tool having a radius not greater than  $\frac{1}{4}$  inch.

#### Curing and Protection

Concrete shall be kept wet for seven (7) days either by sprinkling or covering with earth and sprinkling.

As soon as the concrete has hardened sufficiently, the forms shall be removed and earth banked against the outside of the curb for a width of not less than two (2) feet.

The Contractor shall protect the concrete from all damage by traffic or the elements by canvas covers, barricades, fences, red lights at night, or such other means as may be necessary, and shall provide cross-overs for pedestrians at all street crossings.

### CONCRETE PAVEMENT

#### Slab

Upon the sub-grade, prepared as heretofore directed, of all the portions of the South Main Street Paving District, within the area of this improvement as heretofore described under the heading "Location of Streets," a reinforced, one-course, Portland cement concrete pavement shall be laid. The pavement shall be seven (7) inches in uniform thickness, except at the shoulder that is to be constructed along the curb and gutter. The cross section of the pavement shall have for its base and top a modified parabola, which at the center of the street, and hereafter called the "crown," shall be five (5) inches higher than the sides at the gutter edge. The curvature of the said parabolas shall be such that (starting from the center line of the street) they shall have a fall of one-sixteenth (1-16) of the crown at points one-fourth ( $\frac{1}{4}$ ) of the distance from the center line to the gutter edge; a fall of one-fourth ( $\frac{1}{4}$ ) of the crown at points one-half ( $\frac{1}{2}$ ) of the distance from the center line of the street to the gutter edge; and nine-sixteenths (9-16) of the crown at points three-fourths ( $\frac{3}{4}$ ) of the distance from the center line of the street to the gutter edge.

The shoulder to be constructed along the curb and gutter shall be nine (9) inches thick from the top of the slab and reduce in a straight line to the seven (7) inch slab thickness in a distance of two (2) feet.

#### Proportions

The concrete for the pavement shall be mixed in the proportions of one (1) sack of Portland cement to two (2) cubic feet of the aggregate and three and one-half ( $3\frac{1}{2}$ ) cubic feet of coarse aggregate.