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## SECTION 25 – PORTLAND CEMENT CONCRETE PAVEMENT

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### **25-1 GENERAL**

Portland cement concrete pavement shall conform to Section 40, “Concrete Pavement”, of the State Specifications, and these Specifications.

Portland cement concrete pavement shall be constructed to the dimensions, lines and grades shown on the Plans. Unless otherwise provided in the Special Provisions, the pavement shall be constructed of Class “A” or “B” concrete, at the Contractor’s option, conforming to the requirements of Section 50-5, “Portland Cement Concrete”, of these Specifications. Unless otherwise specified in the Special Provisions, the portland cement used in the concrete shall be Type II as described in said Section 50-5, “Portland Cement Concrete”.

### **25-2 SUBGRADE**

Subgrade for concrete pavement shall be prepared as specified in Section 18-2.05, “Subgrade Preparation”, of these Specifications. Subgrade shall be free of all loose or deleterious material when concrete is placed thereon and shall be uniformly moist. Any excess water on subgrade surface shall be removed prior to placing concrete, as directed by the City.

### **25-3 SIDE FORMS**

Side forms shall be furnished and installed in accordance with Section 24, “Side Forms and Headers”, of these Specifications.

### **25-4 CONCRETE CUTTING**

Where new concrete is to join existing concrete, the existing concrete shall be cut to a true line to a minimum depth of one and one-half inches (1-1/2”) with a power driven abrasive type saw.

### **25-5 EXPANSION JOINTS IN ALLEY PAVEMENT**

An expansion joint shall be placed ten feet (10’) from each end of the work and every twenty feet (20’) therefrom, and at other places shown or specified in the Contract. The expansion joint material shall be not less than one half inch (1/2”) in thickness and shall conform to Section 50-4, “Premoulded Expansion Joint Filler”, of these Specifications.

### **25-6 PLACING CONCRETE PAVEMENT**

The Contractor shall make adequate advance arrangements to prevent delay in delivery and placing of the concrete. An interval of more than forty-five (45) minutes between placing of any two (2) consecutive batches or loads shall constitute cause for stopping paving operations, and the Contractor shall make a contact joint, in the concrete already placed, at the location and of the type directed by the City. Such contact joint shall be made at the Contractor’s expense.

Slip-form paving and finishing equipment shall be properly adjusted and in satisfactory operating condition. Prior to placing concrete, the Contractor shall demonstrate proper adjustment of all screeds and floats on slip-form pavers by measurements from grade stakes driven to known elevations. Satisfactory operation and adjustment of all propulsion and control equipment, including pre-erected grade and alignment lines, shall be demonstrated by moving slip-form pavers and finishing machines over a five-hundred-foot (500’) length of prepared subgrade, with all propulsion and control equipment fully operational.

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Unless otherwise required by these Specifications or the Contract, concrete pavement shall be constructed in twelve-foot (12') traffic lane widths separated by contact joints, or monolithically in multiples of twelve-foot (12') traffic lane widths with a longitudinal weakened plane joint at each traffic lane line.

All pavement concrete shall be placed while fresh. The use of water for re-tempering any concrete will not be permitted. The temperature of the concrete mix at the time of placement shall not exceed 90°F.

### **25-7 FINISHING CONCRETE PAVEMENT**

The surface of concrete pavement shall be finished smooth and true to grade with wooden floats. Floats shall be operated from the end of the pavement and parallel with the centerline of the pavement.

High areas of concrete pavement shall be cut down using the edge of a float while the concrete is workable. Material removed by the float shall be worked into depressions by the float until a true surface is obtained.

Finishing and floating of the concrete pavement shall continue after concrete placement has stopped, until the concrete has achieved initial set.

### **25-8 CURING PORTLAND CEMENT CONCRETE PAVEMENT**

The curing of portland cement concrete pavement shall be with a pigmented curing compound as specified in Section 50-6, "Curing Compounds for Concrete", of these Specifications.

### **25-9 PROTECTION OF PAVEMENT**

The Contractor shall protect the surface of the concrete pavement from damage and markings, both from pedestrian and other traffic. Barriers shall be placed as necessary to protect the concrete from traffic.

The concrete pavement shall be maintained at a temperature of not less than 45°F for seventy-two (72) hours after placement. When required by the City, the Contractor shall submit a written outline of the proposed methods for protecting the concrete pavement and maintaining the required temperature.

When required by the Special Provisions, bridges or other devices shown on the Plans, or approved by the City, shall be furnished and installed by the Contractor across the pavement to provide crossing for the public and private traffic. The Contractor shall maintain the crossing devices throughout the period of their use at any location. When no longer required, the crossing devices shall be removed and disposed of by the Contractor.

After the City has ordered the pavement opened to traffic, the Contractor will not be held responsible for damage resulting from its use by public traffic. The Contractor is liable for any damage to newly laid pavement caused by the Contractor's operations.

### **25-10 PAVEMENT DAMAGE AND REPAIR**

All damage done to concrete pavement, or openings cut in concrete pavement or alley crossings during the progress of the Work, shall be repaired by the Contractor under the direction of the City. Materials for all repairs shall conform to these Specifications.

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### **25-11 MEASUREMENT**

Earthwork and subgrade preparation shall be measured in accordance with Section 18, “Earthwork”, of these Specifications.

The quantity of portland cement concrete pavement to be paid for will be measured by the cubic yard. The volume to be paid for will be calculated on the basis of the lines, grade and thickness shown on the Plans. Should the subgrade be low or irregular, thus requiring additional yardage above that computed from the dimensions shown on the Plans, no allowance shall be made for such additional concrete pavement, unless otherwise ordered by the City.

### **25-12 PAYMENT**

Earthwork and subgrade preparation shall be paid for in accordance with Section 18, “Earthwork”, of these Specifications.

The price paid per cubic yard for portland cement concrete pavement includes full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in constructing the portland cement concrete pavement complete in place, including furnishing and placing expansion joint material, finishing concrete surface, furnishing and applying curing compound, protecting the pavement and repairing any damage, as shown or specified in the Contract, in these Specifications, and directed by the City.