

**OKLAHOMA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISIONS
FOR
Portland Cement Concrete Pavement
(Bonded Overlay)**

These Special Provisions revise, amend, and where in conflict, supersede Applicable Sections of the 1999 Standard Specifications for Highway Construction, English and Metric, as Applicable. Units of Measurement Are Provided in the Subsections in Both English and Metric Equivalents. The Units Applicable for this Project Will Be Those Specified in the Project Plans.

414.01. Description. *(Substitute the Following:)*

this Work Consists of Placing a Bonded Pcc Overlay on an Existing Pcc Pavement to the Thickness as Shown on the Plans, and May Include Associated Patching and Widening Work.

414.03. Equipment. *(Add the Following:)*

(J) **Shot Blasting Equipment.** The Shot Blasting Equipment Shall Include a Means to Collect Used Shot, Which May Be Used Again, and Waste Material. Materials Removed in the Cleaning Operation Shall Be Disposed of in a Manner Approved by the Engineer.

(K) **Milling Machine.** Provide a Power-operated Milling Machine Capable of Planing a Minimum Depth of 1 1/2 Inch (40 Mm) in a Single Pass. The Equipment Shall Be Self-propelled with Sufficient Power, Traction, and Stability to Maintain Accurate Depth of Cut and Slope. The Equipment Shall Be Capable of Accurately and Automatically Establishing Profile Grades along Each Edge of the Machine by Referencing the Existing Pavement by Means of a Ski or Matching Shoe, or from an Independent Grade Control; in Addition, it Shall Have an Automatic System for Controlling Cross Slope at a Given Rate. The Machine Shall Be Equipped with an Integral Loading Means to Remove the Material Being Cut from the Pavement Surface and to Discharge the Cuttings into a Truck—all in a Single Operation.

414.04. Construction Methods.

(C) **Conditioning of Subgrade or Base Course.** *(Substitute the Following:)*

Surface Preparation Shall Include the Entire Surface to Be Overlaid. The Surface Shall Be Thoroughly Cleaned by Shotblasting, Milling or equivalent equipment. The preparation of the surface shall be of such an extent as to remove all dirt, oil, and other foreign materials, as well as any laitance or loose material from the surface and edges against which new concrete is to be placed. (Excess joint seal on the surface shall be removed, joint sealant that is in the joint slot may remain in place.) All pavement markings and raised pavement marking shall likewise be removed. Materials removed in the preparation operation shall be disposed of in a manner approved by the Engineer.

(g) **Placing Concrete.** *(Add the following:)*

(1) **Surface Cleaning.** Prior to applying the overlay to the surface, the entire surface shall be cleaned with an oil-free, compressed air blast. After cleaning, no construction or other traffic shall be permitted on the cleaned surface except the paving machine and the concrete delivery trucks. If the cleaned concrete is contaminated, the contractor shall stop production while the

- contamination is removed. Concrete trucks will only be allowed to drive on the prepared surface directly in front of the paving machine to place the concrete in front of the paver. If a concrete truck contaminates the prepared surface with oil, grease, water, mud or other foreign objects, it will be prohibited from driving in front of the paving machine. Take precautions to prevent any other contamination of the cleaned pavement surface prior to placing the overlay.
- (2) **Joint Identification.** The exact location of each contraction and expansion joint in the existing pavement and joints to be sawed at each full depth patch shall be identified on both sides by a reliable method.
- (3) **Placing and Finishing Resurfacing Concrete.** Take reasonable precautions to secure a smooth riding surface. Smoothness shall conform to Smoothness Specifications included in the Specifications or Contract documents. Prior to the placement operation, review equipment, procedures, personnel, previous results and the inspection procedure with the Engineer to assure a coordinated effort. Precautions shall include the following:
- Assurance that the concrete can be produced and placed to the proper thickness and cross section within the specified limits, continuously and with uniformity,
 - The thickness of all new concrete above the prepared surface shall be as specified on the plans,
 - The use of mechanical tining shall be as directed by the Engineer or as shown in the Plans.
 - Address temperature restrictions, if necessary, as in the paragraph (v). Placement of a bonded overlay should not be limited to optimal conditions. If temperature extremes are expected, take every precaution to saw the joints as specified.
 - Curing compound shall be applied within 30 minutes of paving to prevent moisture loss from the overlay. A white pigmented curing compound meeting the requirements of applicable sections of the Standard Specifications shall be used and it shall be applied at the rate of one gallon to not more than 100 square feet (9.3 square meters).
- (j) **Joints.** *(Add the following:)*
Joints shall be sawed in the overlay directly over existing transverse and longitudinal joints. The joints shall be sawed to the full depth of the new overlay concrete plus one-half inch. Joints in the overlay sections with a thickness greater than 4 inches (100 mm) shall be sawed $\frac{1}{3}$ of thickness of pavement. The joints shall be sawed as soon as possible without causing excessive raveling. All joints shall be cleaned and sealed in accordance with applicable section of the Standard Specifications or according to the manufacturer's recommendation.
- (v) **Limitations of Operations.** *(Add the following:)*
No resurfacing concrete shall be placed when the air or pavement temperature is at or expected to be below 40 degrees F (4 degrees C) during placement. At no time shall the plastic PCC be delivered at a temperature exceeding 80 degrees F (27 degrees C). If ice is substituted for mix water in concrete to lower the plastic concrete temperature, all of the ice shall be melted and all of the water thoroughly mixed in the plastic PCC prior to placement.

414.05. METHOD OF MEASUREMENT. *(Add the following:)*

- (e) *Portland Cement Concrete for Bonded Pavement Overlay.* The quantity of overlay concrete furnished shall be measured in cubic yards (cubic meters), using the ticket count, or other approved

documentation, of batches incorporated. The Contractor shall use an approved automatic batch weight and printer system. The approved automatic batch weight and printer system shall be electronically controlled and capable of determining the net batch weight of material being delivered to the transporting truck. Such weights shall be evidenced by a weight ticket containing separate weights of each material incorporated into the load. Ticket shall also include quantities of admixtures and volume of water incorporated into load. The automatic batch weight and printer system shall be subject to calibration, inspection, and certification requirements as provided in section 109.01(a) and the 1999 Standard Specifications.

- (f) *Portland Cement Concrete Pavement, Bonded Overlay, Placement Only.* The area of Portland cement concrete overlay placement only will be computed in square yards (square meters) from surface measured longitudinally and the nominal pavement width.

414.06. BASIS OF PAYMENT. *(Add the following)*

- (J) (SP) PORTLAND CEMENT CONCRETE FOR
BONDED PAVEMENT OVERLAY.....Yd³ (m³)

- (K) (SP) PORTLAND CEMENT CONCRETE PAVEMENT,
BONDED OVERLAY, PLACEMENT ONLY.....Yd² (m²)