

ITEM 18410.2098 M - QUICK-SET SLURRY SURFACING FOR SHOULDERS

DESCRIPTION Construct a bituminous surfacing system, consisting of a mixture of quick-set asphalt emulsion, mineral aggregate, mineral filler, water and other additives, properly proportioned, mixed and applied to pavement shoulder surfaces. All necessary pavement cleaning, joint sealing, crack filling and tack coats performed on the existing pavement shoulders will be paid for under their appropriate items.

MATERIAL REQUIREMENTS

- This Specification has been Disapproved as a result of the issuance of E101-011
- A. Bituminous Materials.** ASTM D 3910 5.3.1, Quick-Set emulsified asphalts.
 - B. Aggregates.** §703-01, Fine Aggregates.
 - C. Water.** §712-01, Water.
 - D. Mineral Filler.** §703-08, Mineral Filler.
 - E. Additives.** Additives may be added to the slurry or any of the component materials to provide the control of the quick set properties. These additives must be part of the mix design and be compatible with the other components of the mix.

CONSTRUCTION DETAILS

- A. Equipment.** All slurry equipment shall be approved by the Director, Materials Bureau. Make equipment approval requests to the Director, Materials Bureau, at least 30 days before the start of work. Calibrate each mixing unit according to Department written instructions. Submit a completed, Calibration Verification form to the Director, Materials Bureau, for approval at least 14 days before the start of work. Verification is valid for 90 days. Supply copies of the equipment approval letter and the approved calibration verification to the Engineer before the start of work.
- B. Mixture Design.** A job mixture shall be selected that conforms to all requirements of ASTM D 3910 5.4, Composition of Slurry Seal Mixtures, using Type 2 aggregate. Submit the mixture design to the Director, Materials Bureau for approval 30 days before the start of work. Mixture design approvals are valid until December 31, of the year in which they are signed by the Director, Materials Bureau. Supply a copy of the approved mix design to the Engineer before the start of work.
- C. Weather and Seasonal Limitations.** §401-3.01 Weather and Seasonal Limitations, except as modified herein. Place no slurry in the rain. Place no slurry if the pavement or air temperature is below 10°C and falling, or if the air temperature is expected to fall below freezing within 24 hours after application. Application will be permitted when pavement and air temperatures are >7°C, and rising, and are not expected to fall below freezing within 24 hours after application.
- D. Pavement Preparation.** If necessary, dampen the pavement surface before applying slurry surfacing. Standing or free flowing water will not be permitted.
- E. Application Rates.** 7.5 kg/m² minimum to 10.0 kg/m² maximum

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F. Stockpile. Form an aggregate stockpile at a location approved by the Engineer. Screen the aggregate at the stockpile, prior to delivering it to the slurry surfacing equipment. Test three stockpile samples for gradation according to Materials Method 5, and supply the results to the Engineer. If the average aggregate gradation is not within the stockpile tolerance, the Contractor will be given the following three options:

1. Remove the stockpile; or
2. Blend other approved aggregate, that meets all quality tests before blending, with the stockpile material to produce a consistent gradation within the stockpile tolerance; or
3. Develop a new mixture design using the stockpile aggregate, and submit it for approval.

G. Application. Produce a mixture which is homogeneous, with no excess water or emulsion, lumps, balls, unmixed aggregate, or segregation of the emulsion and fines from the coarser aggregate. Keep the mixture from breaking until after application.

Control the break time and mix consistency with mixture proportion adjustments. The maximum adjustment of the mineral filler is 1%. Notify the Engineer of all mixture adjustments.

Use one pass to achieve the desired application rate. Apply the slurry to the pavement evenly across the entire width of the spreader box. Apply the slurry surfacing to produce a smooth riding surface with no streaks, such as those caused by oversized aggregate or excess build up on the slurry equipment. Uncovered areas, an unsightly appearance, or open joints will not be allowed.

The maximum difference in grade across transverse joints, when measured with a 3 meter straight edge centered on the joint parallel to the traffic flow, is 6 mm.

Finish areas which cannot be reached with the spreader box with hand held squeegees. Apply the same type of finish to the surface as is applied by the spreader box. Use hand tools to produce straight lines along curbs.

Cover all utility structures within the area being paved each day. Every effort shall be made to prevent the slurry from spilling onto the adjacent pavement or curbs. Remove all excess material in driveways, gutters and intersections, etc. as specified by the Engineer, each day.

H. Curing. Protect the slurry surfacing from traffic until the mixture has cured sufficiently to resist damage. Repair damage from traffic to the Engineer's satisfaction.

METHOD OF MEASUREMENT.

Slurry Surfacing will be measured as the total number of square meters approved by the Engineer.

BASIS OF PAYMENT. Include the cost of all labor, materials, and equipment necessary to perform the work in the unit price bid per square meter.

Payment will be made under:

Item No.	Item	Pay Unit
18410.2098 M	Quick Set Slurry Surfacing for Shoulders	Square Meter