

SECTION 13 - ASPHALT CONCRETE PAVEMENT

13-1 GENERAL

Asphalt concrete pavement shall consist of furnishing and mixing aggregate and asphalt binder at a central mixing plant and spreading and compacting the mixture in accordance with Section 39 of the State Standard Specifications. The bid item shall also include prime coat, paint binder and seal coat.

13-2 AGGREGATE MATERIAL

Aggregate material shall conform to the specifications of Section 39 of the State Standard Specifications for 3/4 inch maximum aggregate (medium) or 1/2 inch maximum aggregate (medium). Where more than 2 inches of A.C. are required the first course shall be 3/4 inch maximum aggregate (medium), the final course shall be 1/2 inch maximum aggregate (medium).

Where only 2 inches of A.C. are required, the gradation shall conform to 1/2 inch maximum aggregate (medium).

13-3 ASPHALT CONCRETE

Asphalt concrete shall be Type B and shall conform to the provisions in Section 39 of the State Standard Specifications and these Special Provisions, except the asphalt concrete mix design as outlined in Section 13-8 of these Specifications.

The asphalt binder to be mixed with aggregate shall be steam-refined asphalt conforming to the provisions of Section 92 of the State Standard Specifications, and shall be viscosity grade AR4000 or as directed by the Engineer.

A self propelled paving machine may not be required in small, difficult unique areas if approved by the Engineer.

13-4 PRIME COAT AND PAINT BINDER

A prime coat of liquid asphalt or a paint binder of asphaltic emulsion shall be applied to the areas to be surfaced in accordance with the following provisions, when there are contract items for such Work:

1. Prime coat shall be applied to all areas unless otherwise designated by the Engineer.
2. Prime coat or paint binder shall be applied only so far in advance of placing the surfacing as may be permitted by the Engineer.
3. Prime coat shall spread at the approximate total rate of 0.25 gallon per square yard of surface covered. The exact rate and number of applications will be determined by the Engineer.

4. Prime coat shall be spread at a temperature conforming to the range of temperatures provided in Section 93 of the State Standard Specifications, "Mixing and Applying", for distributor application of the grade of liquid asphalt being used.
5. Paint binder shall be furnished and applied in accordance with the provisions in Section 94, "Asphaltic Emulsions", of the State Standard Specifications, and shall be applied to all vertical surfaces of existing pavement, curbs, gutters, and construction joints in the surfacing against which additional material is to be placed, to a pavement to be surfaced, and to other surfaces designated by the Engineer.
6. Paint binder shall be applied in one application at a rate of from 0.02 to 0.10 gallon per square yard of surface covered. The exact rate of application will be determined by the Engineer.
7. Where ordered by the Engineer, sand cover shall be applied to driveways and public road approaches, and to areas where prime coat has failed to penetrate, in conformance with the provisions in Section 36 of the State Standard Specifications.

13-5 SEAL COAT

Seal coats shall be as specified in the Special Conditions and shall conform to Section 37 of the State Standard Specifications.

13-6 ROLLING EQUIPMENT

Except as hereinafter specified, rolling equipment shall be as required under Section 39 of the State Standard Specifications. At locations where miscellaneous areas are to be surfaced in accordance with the provisions in Section 39 of the State Standard Specifications and where the width of asphalt concrete to be placed is less than 8 feet or the total thickness of asphalt concrete to be placed is less than 0.1 foot, the required minimum rolling equipment specified in Section 39 of the State Standard Specifications may be reduced to one 8 ton, 2-axle tandem roller for each 100 tons, or fraction thereof, of asphalt concrete placed per hour by each asphalt paver. Areas which are inaccessible to an 8 ton 2-axle roller shall be thoroughly compacted to the lines, grades and cross section by means of pneumatic tampers or by other methods that will produce the same degree of compaction as specified in Section 39 of the State Standard Specifications.

If the finished surface of the asphalt concrete does not meet the specified surface tolerances, the finished surface shall be brought within tolerance by either (1) abrasive grinding (with fog seal coat applied on the areas which have been ground), (2) removal and replacement, or (3) placing an overlay of asphalt concrete. The method will be selected by the Engineer. The corrective Work shall be at the Contractor's expense.

If abrasive grinding is used to bring the finished surface to specified surface tolerances, additional grinding shall be performed as necessary to extend the area around in each lateral directions so that the lateral limits of grinding are at a constant offset from, and parallel to the nearest lane line or pavement edge, and in each longitudinal direction so

that the grinding begins and ends at lines normal to the pavement centerline, within any ground area. All ground areas shall be neat rectangular areas of uniform surface appearance. Abrasive grinding shall conform to the requirements in the first paragraph and the last 4 paragraphs in Section 42-2.02, "CONSTRUCTION", of the State Standard Specifications.

13-7 FINISHING ROADWAY

Finishing roadway shall conform to the provisions of Section 22 of the State Standard Specifications.

13-8 MIX DESIGN

The Contractor shall submit to the Engineer a proposed mix design for each asphalt concrete mixture to be used at least two weeks prior to production of that asphalt concrete mixture. The proposed mix designs shall conform to the asphalt concrete mixture quality requirements specified in Section 39-2 of the State Standard Specifications.

The Contractor shall furnish test data in support of each proposed mix design including asphalt concrete quality requirements for California Test 305, Swell; California Test 307, Moisture Vapor Susceptibility; and, California Test 366, Stabilometer Value. The test data furnished shall be for an asphalt concrete mixture that conforms to the proposed target values for the asphalt binder content. The Contractor shall submit the following for each asphalt concrete mixture proposed for use under the contract:

1. Aggregate and mineral filler:
 - a. Target values for percent passing each sieve size for the aggregate blend. The proposed target values, for the specified type and aggregate size, shall conform to the aggregate gradation limits specified in Section 39-2.02, "Aggregate," of the State Standard Specifications
 - b. Results of tests for aggregate quality requirements specified in Section 39- 2.02, "Aggregate," of the State Standard Specifications
 - c. Source of each aggregate to be used
 - d. Percentage of each aggregate stockpile or hot bin to be used.
 - e. Gradation of each aggregate stockpile or hot bin to be used

2. Asphalt binder:
 - a. Target value for asphalt binder content for each proposed asphalt concrete mixture
 - b. Results of the asphalt binder quality tests as specified in Section 92, "Asphalts," of the State Standard Specifications. Asphalt concrete production for this project shall not begin until the Contractor has received written notification that the proposed mix design has been accepted by the Engineer.

Adjustments from one mix design to another shall not be made during the progress of the Work, unless permitted in writing by the Engineer. The Contractor shall submit to the

Engineer a proposed mix design for each new asphalt concrete mixture to be used at least two weeks prior to production of that mixture. Changes in stockpile or hot bin proportions to conform to aggregate grading requirements will not be considered changes in the approved mix design.

13-9 PAYMENT

Payment shall be as specified in the Special Conditions.