

SECTION 00710 - SINGLE APPLICATION EMULSIFIED ASPHALT CHIP SEAL

(Follow all instructions and make all edits with "Track Changes" turned on. If there are no instructions [purple text] above a subsection, paragraph, sentence, or bullet, then include it in the project. Delete all purple text before preparing the final document. All other modifications to this Section will require ODOT Technical Resource and State Specifications Engineer approval.)

Comply with Section 00710 of the Standard Specifications modified as follows:

~~(Use the following subsection .00 when chip seal size is NOT designated on the plans. Delete the parentheses and types that do not apply.)~~

00710.00 Scope - Replace the paragraph that begins "The chip seal ..." with the following paragraph:

The chip seal design is designated on the Plans or in the Special Provisions.

~~(Use the following subsection .00~~**two paragraphs** ~~when chip seal size is NOT designated on the plans. Delete the parentheses and types that do not apply.)~~

Add the following paragraph to the end of this subsection:

Provide (Fine, Single Size Medium, Graded Medium, Coarse) chip seal design type(s) on this Project.

00710.10(a) Size Designation - Replace the paragraph that begins "Provide the size ..." with the following paragraph:

Furnish the size of Aggregate for the single application Emulsified Asphalt chip seal design designated in the Plans or Special Provisions according to the following:

00710.10(b) Fractured Faces - Replace this subsection, except for the subsection number and title, with the following:

Furnish Aggregates consisting of broken stone, crushed Gravel or a combination of both. Crush Aggregate such that at least 90 percent by weight of the total Aggregate retained on the No. 8 and larger sieves is fractured on two faces, as determined according to AASHTO T 335.

00710.10(c) Grading - Replace the paragraph that begins "Perform sieve analysis ..." with the following paragraph:

Perform sieve analysis according to AASHTO T 27 and AASHTO T 11. Furnish grading for the designated single application Emulsified Asphalt chip seal design according to the following:

00710.10(d) Unit Weight of Aggregate - Replace this subsection, except for the subsection number and title, with the following:

Furnish Aggregate with a minimum unit weight of 90 pounds per cubic foot according to AASHTO T 19.

00710.10(e) Soundness - Replace this subsection, except for the subsection number and title, with the following:

Furnish Coarse and Fine Aggregate with a weighted loss not exceeding 12 percent when subjected to five cycles of the soundness test using sodium sulfate solution according to AASHTO T 104.

00710.10(f) Durability - Replace the paragraph that begins "Provide Aggregates ..." with the following paragraph:

Furnish Aggregates meeting the following durability requirements:

00710.10(g) Harmful Substances - Replace the paragraph that begins "Provide Aggregates ..." with the following paragraph:

Furnish Aggregates meeting the following harmful substances requirements:

00710.10(h) Taking Aggregates from Agency Stockpiles - Replace this subsection, except for the subsection number and title, with the following:

When it is specified that Aggregates are to be taken from Agency-controlled stockpiles, take the material in an orderly manner. Do not contaminate the materials. Salvage all material possible from the area that the material is taken. Shape unused portions of a stockpile to Neat Lines. The Contractor is charged for materials wasted through negligence or used without authority.

00710.10(i) Stockpiling Contractor Furnished Aggregates on Agency Property - Replace this subsection, except for the subsection number and title, with the following:

Aggregates may be temporarily stockpiled at approved sites on Agency property provided the areas used are as small as practicable. Restore the site to its original condition after the materials have been removed. Any contamination during storage or from reloading operations is cause for rejection.

00710.11 Emulsified Asphalt - Add the following paragraph to this subsection:

(Choose the correct Polymer-Modified or Non-Polymer-Modified emulsified asphalt. It ~~will be~~ is specified in the pavement design report. Delete the one that does not apply. Remove the parentheses.)

~~Provide~~ Furnish (Polymer-Modified)(Non-Polymer-Modified) Emulsified Asphalt for this Project.

00710.11(c) Acceptance of Emulsified Asphalt - Replace this subsection, except for the subsection number and title, with the following:

Furnish Emulsified Asphalt according to the requirements of ODOT's publication, *Standard Specifications for Asphalt Materials*. Copies of the publication are available from the ODOT Pavement Services Engineer. The applicable Specifications are those contained in the current publication on the date the Project is advertised. The materials may be conditionally accepted at the source or point of loading for transport to the Project.

Excessive delay in the use of the Emulsified Asphalt or excessive pumping of the Emulsified Asphalt may significantly reduce the viscosity and may make the material unsuitable for chip seal use. For this reason limit pumping between the bulk storage tank, hauling transportation, field storage tanks and distributor to an absolute minimum to maintain proper viscosity. Final acceptance of Emulsified Asphalt is at the point of application.

Obtain samples of Emulsified Asphalt according to AASHTO R 66 at the frequency according to Section 00165. Samples are tested at the ODOT Materials Laboratory, or other laboratory as designated by the Agency. Non-polymer-modified Emulsified Asphalt is tested within 30 Calendar Days from the date it is sampled. Polymer-modified Emulsified Asphalt is tested within 14 Calendar Days from the date it is sampled.

00710.55(a)(3) Preproduced Aggregate - Replace this subsection, except for the subsection number and title, with the following:

Compliance of Aggregates produced and stockpiled before the Award of this Contract is determined according to Section 00165.

00710.16 Acceptance of Aggregate - Replace this subsection, except for the subsection number and title, with the following:

The Contractors quality control tests are used for acceptance of Aggregates if verified by the Quality Assurance Program. The Agency will perform Aggregate production quality assurance according to the following:

(a) ODOT Administered Projects - Quality assurance testing on ODOT administered projects are performed according to Section 00165.

(b) Projects Administered by Other Agencies - The quantity of quality assurance testing on projects administered by other Agencies are at the discretion of the Agency or as designated in the Special Provisions.

00710.21 Asphalt Distributor - Replace this subsection, except for the subsection number and title, with the following:

Provide an asphalt distributor designed, equipped, maintained and operated so the Emulsified Asphalt material may be applied uniformly at even heat. Provide a distributor capable of applying the asphalt on variable surface widths up to 16 feet, at readily determined and controlled rates from 0.05 - 2.0 gallons per square yard, and with uniform pressure. Do not vary any specified rate by more than 0.02 gallons per square yard. Provide distributor Equipment that includes a tachometer, pressure gauges, accurate volume measuring devices and a thermometer for measuring temperature of tank contents. Provide distributors

equipped with a positive power unit for the asphalt pump, and full circulation spray bars adjustable both laterally and vertically. Set the bar height for triple lap coverage.

00710.23(a) Pneumatic-tired Rollers - Replace this subsection, except for the subsection number and title, with the following:

Provide self-propelled, tandem or multiple axle, multiple wheel type pneumatic-tired rollers with smooth-tread pneumatic tires of equal size. Stagger the tires on the axles at such spacings and overlaps that will provide uniform compacting pressure for the full compacting width of the roller. The minimum load per tire is 2,800 pounds, with tire inflation pressures of 45 psi to 90 psi.

00710.40 Season and Weather Limitations - Replace the title of this subsection with "Weather Limitations".

(Use the following sentence to change hours. Check with the Project Manager for the number of hours that emulsified asphalt and aggregate can be placed before sunset. It may range from 2 - 4 hours, depending on elevation, work in shaded areas, and other conditions.)

In the sentence that begins "Complete the application of...", replace the words "3 hours" with the words " _____ hours".

(Use the following paragraph for Region 3 Projects. Use the previous subsection number and title if above hours are not changed.)

In the sentence that begins "The placing of single...", replace "July 1" with "June 15".

(Use the following paragraph for Region 4 and 5 Projects. Use the previous subsection number and title if above hours are not changed.)

In the sentence that begins "The placing of single...", replace "July 1" with "June 1".

00710.44 Application Rates - Replace the paragraph that begins "Apply the Emulsified ..." with the following paragraph:

Apply the Emulsified Asphalt and spread the Aggregate within the following ranges of rates for the specified chip seal design. The exact application and spread rate is determined by the Engineer.

~~*(Use the following subsection .45 to change hours. Check with the Project Manager for the number of hours that courses can be squared up before sunset. It may range from 2 - 4 hours, depending on elevation, work in shaded areas, and other conditions.)*~~

00710.45 Applying Emulsified Asphalt - Replace the bullet that begins "Place building paper ..." with the following bullet:

- At the beginning of each Pass and at each transverse joint, remove excess aggregate from the joint and place building paper over the treated surface to ensure that the

nozzles are operating properly before the uncovered surface is reached. Remove and dispose of building paper in a manner satisfactory to the Engineer.

(Use the following subsection .45 two paragraphs and bullet to change hours. Check with the Project Manager for the number of hours that courses can be squared up before sunset. It may range from 2 - 4 hours, depending on elevation, work in shaded areas, and other conditions.)

In the third bullet, replace the words "3 hours" with the words " _____ hours".

Replace the bullet that begins "Place building paper over the treated surface ..." with the following bullet:

- At the beginning of each Pass and at each transverse joint, remove excess aggregate from the joint and place building paper over the treated surface to ensure that the nozzles are operating properly before the uncovered surface is reached. Remove and dispose of building paper in a manner satisfactory to the Engineer.

00710.46 Hauling and Spreading Aggregates - Replace the paragraph that begins "Aggregates shall ..." with the following paragraph:

Furnish surface damp Aggregates at the time of application. Excess free water (water not adhering to the Aggregate surface) on the Aggregate is not allowed.

Replace the paragraph that begins "Do not operate ..." with the following paragraph:

Do not operate the chip spreader at speeds that cause the chips to roll over after striking the emulsion covered surface.

(Use the following subsection .60 if brooming hours are specified.)

00710.60 Power Brooming - In the paragraph that begins "Following the application of...", replace the first sentence with the following sentence:

Between the hours of _____ (p.m.)(a.m.) and _____ a.m. of the Day following the application of the chip seal, carefully broom the entire surface, unless brooming damages the surface, to remove loose aggregate that could damage vehicles.

00710.90 Payment - Replace the paragraph that begins "Payment will be payment ..." with the following paragraph:

Payment will be payment in full for furnishing and placing all Materials, and for providing all Equipment, labor, and Incidentals necessary to complete the Work as specified.