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## **SEAL COAT**

### **PART 1 – GENERAL**

1.1 SCOPE. The work covered by this Section includes, but is not limited to, the testing, coordination, submittal information, implementation, and quality control required for the proper 2 coat application of a seal coat.

1.2 QUALITY ASSURANCE. The Contractor shall examine the work site prior to submitting a bid. The submission of a bid shall be evidence that this requirement has been met. Failure to inspect the site prior to bidding will not relieve the Contractor of the responsibility of performing all work included in this contract. Work related rubbish shall be removed and the jobsite shall be kept clean, neat and orderly at all times.

1.3 SUBMITTALS. Submit to the Owner or Design Consultant, two copies of materials certificates signed by Material Producer and Contractor, for review and approval prior to work per shop drawing submittal requirements. Certificates shall state that each material item meets specified requirements. Material certificates shall be provided for approval a minimum of 7 days prior to installation. Any Contractor that applies non-approved seal coat material shall not be paid for the work.

Submit to the Owner or Design Consultant, two copies of the list of equipment to be used during seal coat operations along with certifications that they will meet the requirements of the Plans and Specifications. Seal coating operations equipment submittals shall be provided for approval with bid documents at time of bid. Owner will have the right to visit location of bidder prior to award to verify equipment and conditioned storage capacity.

1.4 TRAFFIC CONTROL. Suitable methods shall be used by the Contractor to protect the seal coat to allow for proper curing for at least 24 hours from all types of vehicular traffic or until the new seal coat application will not sustain damage from vehicular traffic. Opening to traffic does not constitute acceptance of the work. The Owner or Design Consultant shall be notified of the methods to be used.

1.5 NOTIFICATION. The Owner or Design Consultant shall be notified two (2) days in advance of the installation of the seal coat applications. Suitable tow away signs will be properly posted by Contractor a minimum of 24 hours prior to the commencement of the work. If the work does not occur on the specified day, a new notification will be distributed by the Contractor posted 24 hours in advance of commencement of the work.

## **PART 2 – PRODUCTS**

**UltraSeal Systems:** Polymer modified asphalt emulsion sealer must be UltraSeal Type 1 or UltraSeal Type 2 as manufactured by Vance Brothers and meet all the applicable standards as outlined in UltraSeal Product Data Sheets.

The contractor shall certify that the product to be delivered and applied is UltraSeal Type 1 or Type 2 as manufactured by Vance Brothers and Vance Brothers shall certify that the selected UltraSeal meets the requirements of this specification and UltraSeal Product Data Sheet.

The selected UltraSeal System Type 1 shall be mixed with the following mix design (based on 100 gallons): 200-300 lbs. of sand for 100 gallons of UltraSeal Type 1 concentrate. The sand shall have a mesh American Foundry Society Grain Fineness Rating of 40 to 70.

Mineral aggregate shall be added at 3-4 lbs./gal of undiluted UltraSeal. The mineral aggregate shall be clean and dry silica sand free from foreign matter and the percent of aggregate passing each sieve shall not vary more than +/- 4.0 percent from the mix design formula. The residual asphalt content shall not vary more than +/- 1.0 percent from the mix design quantity.

Dilution with a small amount of water may be required for workability when sand mixture with UltraSeal Type 1 is used. Any water used for mixing shall be clean and potable and shall be added in the minimum quantity sufficient for good application consistency.

Manufacturer: Vance Brothers

Manufacturer Application: Apply the UltraSeal Type 2 or properly mixed UltraSeal Type 1 (UltraSeal concentrate, sand, and water – if needed) at a rate of 0.12 to .15 gallon per square yard (40-50 square feet per gallon) per coat. One gallon of UltraSeal Type 2 or properly mixed UltraSeal Type 1 will cover approximately 40-50 square feet per coat.

Application must be made when ambient temperatures and pavement temperatures are above 50 degrees F. Good drying conditions above 50 degrees F are required during the subsequent 8 hours and no temperatures below 50 degrees F should be anticipated for 24 hours.

### **PART 3 – EXECUTION**

3.1 SURFACE PREPARATION. Minor pavement repairs can be made with hot mix asphalt. Areas that have been softened by petroleum derivatives or that have failed due to any other cause shall be repaired according to applicable Plans and Specifications.

Vegetation shall be removed from all surfaces to be sealed. Surfaces to be sealed shall be thoroughly cleaned to remove all foreign debris (dirt, silt, gravel, leaves, etc.) using a mechanically powered forced air sweeper and steel bristle hand brooms.

Mud areas shall be scraped thoroughly, scrub-washed, and/or pressure rinsed with clear fresh water.

Oil and paint areas or raised material shall be scraped of excess. After cleaning these areas, they shall be coated with Petrobond acrylic oil spot primer to achieve superior adhesion and prevent bleeding.

Treat all highly oxidized or oil-stained asphalt pavements with a coat of Polyprime penetrating pavement primer as recommended.

Cracks should be sealed according to crack seal specification.

Compatibility with Primers and Sealers. All primers and sealants must be certified for compatibility with the refined seal coat by the manufacturer of the refined seal coat and approved by the Owner or Design Consultant.

3.2 APPLICATION OF MATERIAL. Two applications of seal coat material shall be applied uniformly over the entire pavement surface, prepared as described in Section 3.1, and shall be free of holidays and pinholes. To insure a better bond, fog spraying the pavement with fresh clean water may be used to maintain workability and assure even spreading of the product.

Adequate time shall be allowed for the first application to dry thoroughly (tack free) prior to the second application. It is recommended that the first application be allowed a minimum of 4 hours of dry time before applying the second application. Upon completion of the second application, all traffic will be excluded from the coated surface. It is recommended the coating be allowed to cure for at least 24 hours of good drying conditions before opening to traffic.

The contractor shall barricade from traffic the sealed areas until material is thoroughly dried. Area should be tested for trafficability before opening to use.

3.3 METHOD OF APPLICATION. The machine that is used to apply seal coat material shall have adequate agitation to keep material in proper suspension at all times. It should be equipped with a water fog bar so that the pavement can be dampened (but without puddles) when emulsion is applied if temperatures are above 85 degrees F or in bright sun.

Any spray distributor or squeegee machine used for application of the coating shall be self-propelled, equipped with pneumatic tires, have full sweep agitator blades and be capable of applying the required coat weight of sand-reinforced seal coat material evenly over the entire width of the application mechanism to provide a uniformly coated surface.

The first coat shall be applied with a squeegee or sprayer to provide a total coat of the surface with focused attention to cover the cracks. Application technique for the first coat should be based on the condition of the asphalt and be approved prior to application. The second coat shall be applied with the sprayer and the adjacent areas shall be protected outside the application area to ensure the spray is completed evenly over the entire surface of the pavement. Each operation shall be inspected by the Owner or Design Consultant and approved before the next phase of work is to begin. Finished seal coat shall be cured at least 24 hours before traffic is permitted.

### 3.4 BASIS OF PAYMENT.

Base Bid Lump Sum Costs include:

- Asphalt Pavement – Seal Coat - all labor, material, and equipment to install two (2) coats of seal coat on the existing asphalt surface in accordance with drawings and specifications. Cost includes necessary surface preparation such as cleaning and priming, testing, coordination, submittal information, implementation, and quality control required for the proper two (2) coat application of a seal coat.
  - Contractor shall also provide all incidental work per the Administrative Provisions, Soil Erosion & Sedimentation Control, Landscaping Restoration, Temporarily Removing and Resetting Concrete Parking Blocks or Other Portable Devices, Replacement of Pavement Striping and Pavement Markings (including ADA Handicap Striping and Barrier-Free Routes), Structure Adjustments, Permits, and providing Barrier-Free Documentation of completed work.

Contractor shall also provide a unit cost for Owner to increase or deduct from the Lump Sum the above work items for work areas identified on plans.

End of Section

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