

ATTACHMENT 1 - TECHNICAL SPECIFICATIONS TO CAMPUS SLURRY SEAL PROJECT

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1 MOBILIZATION

MOBILIZATION

This contract item shall consist of preparatory work and operations for mobilization of the Contractor's personnel, equipment and supplies to the project site including obtaining all bonds, insurance, and permits; furnishing, purchasing, transportation, setup, storage and staging of all labor, materials, tools, equipment, and incidentals required for performance and completion of the work as shown on the Project Plans and specified in the Standard Specifications, these Technical Specifications, as directed by the Engineer for all other work and operations which must be performed or costs incurred prior to beginning work on the various contract items on the project site. In addition, mobilization shall also include but not be limited to the following items:

1. Provide on-site sanitary facilities.
2. Prepare and transmit all submittals as directed in these Technical Specifications or as directed elsewhere in the Contract Documents, Standard Specifications and Project Plans.
3. Wash and clean all tools and equipment prior to bringing on site.
4. Any other costs of work in advance of construction operations and not directly attributable to any specific bid item.

DEMOBILIZATION

Demobilization shall consist of the removal of all materials, tools, equipment, signage, temporary pollution control materials, trash, debris, and all other items imported to or generated on-site as a result of the work completed by the Contractor. Furthermore, demobilization shall include repairing all pavements, walkways, infrastructure, signage, landscape, and any other public or private facilities damaged by construction activities to their pre-construction conditions using comparable materials as accepted and directed by the Engineer.

MEASUREMENT AND PAYMENT

Measurement and payment for "**Mobilization**" shall be made per the **lump sum** price as shown on the Bid Form. The lump sum price shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in mobilization, including demobilization, in conformance with these Technical Specifications, and no additional compensation will be allowed therefore.

The payment for "**Mobilization**" shall also include items which are considered **incidental** to "**Mobilization**", and "Temporary Traffic Control." Partial payments for "**MOBILIZATION**," shall not be made.

2 CLEANING

GENERAL

This section includes cleaning during construction and final cleaning on completion of the work.

At all times Contractor shall:

- a) Maintain areas covered by the Contract and adjacent properties and public access roads free from accumulations of waste, debris, and rubbish caused by construction operations.
- b) Conduct cleaning and disposal operations to comply with local ordinances and antipollution laws.
- c) Do not burn or bury rubbish or waste materials on project site.
- d) Do not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner, in storm or sanitary drains.
- e) Do not dispose of wastes into sewer manholes.

CLEANING DURING CONSTRUCTION

During execution of work, Contractor shall:

- a) Clean site, adjacent properties, and public access roads and dispose of waste materials, debris, and rubbish to assure that buildings, grounds, and public properties are maintained free from accumulations of waste materials and rubbish.
- b) Provide containers for collection and disposal of waste materials, debris, and rubbish.

FINAL CLEANING

At the completion of work and immediately prior to final inspection, Contractor shall clean the entire project site by removing from the site temporary structures and materials or equipment, as well as cleaning any trash or incidental debris created by the working crew.

MEASUREMENT AND PAYMENT

Measurement and payment for “**Cleaning**” shall be considered **incidental** and included in the **lump sum bid price** for “**Mobilization**” as shown on the Bid Form. The other items on the Bid Form shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work associated with all cleaning necessary to construct the new facilities, complete in place, in conformance with the CSS and these Technical Specifications, and no additional compensation will be allowed therefor.

3 TEMPORARY TRAFFIC CONTROL

GENERAL

All work required for maintaining and controlling traffic during the construction period shall conform to this section of these Technical Specifications.

Traffic control for all construction work shall be scheduled to provide for a minimum of inconvenience and a maximum of safety to the public.

All traffic control signs and devices shall remain the property and responsibility of the Contractor.

MEASUREMENT AND PAYMENT FOR TEMPORARY TRAFFIC CONTROL

Measurement and payment for “**Temporary Traffic Control**” shall be considered **incidental** and included in the **lump sum bid price** for “**Mobilization.**” The other items on the Bid Form shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work associated and no additional compensation will be allowed therefore.

4 SLURRY SEAL

GENERAL

Slurry Seal Shall be done on all locations called out in the project plans to receive a slurry seal.

SUBMITTALS

Contractor shall submit the following related to the slurry seal.

- a) Slurry mix design documents, including applicable test results
- b) Aggregate load tickets
- c) Emulsion load tickets

SURFACE PREPARATION

No work shall be started until the following requirements are fulfilled.

CLEANING

Contractor shall clean the road surface immediately before applying the slurry seal by sweeping with self-propelled power brooms or other methods such as flushing with water (leaving no standing water). Oil or grease that has not penetrated the asphalt pavement shall be removed by scraping or by scrubbing with a detergent and washed thoroughly with clean water. After cleaning, these areas shall be treated with oil spot primer. Surface shall be left free of dust, dirt, grease, vegetation, oil or objectionable surface film, or any extraneous material affecting

adhesion of the slurry seal. Contractor shall dispose of the removed material in an appropriate dump site or as directed by Engineer.

UTILITY COVERS AND CONCRETE COLLARS

Contractor shall locate, mark, and mask or cover all utility covers and associated concrete collars, including but not limited to manholes, valves, monuments, vaults, and grates, with plastic or oil-resistant construction paper prior to applying the slurry seal. Masking materials shall be removed prior to completion of the project.

MATERIALS

Contractor shall place Type 2 slurry seal applied at a daily average rate of no less than 18 pounds per square yard. Contractor shall submit load/shipping tickets for materials daily to Engineer adequate for verification of application rate.

a. Asphalt Emulsion. The emulsified asphalt shall conform to ASTM specifications CSS-1h or SS-1h and shall conform to the requirement of the International Slurry Seal Association specification.

b. Aggregate. The mineral aggregate used shall be the type and grade specified for the particular use of the slurry seal. The aggregate shall be manufactured crushed stone such as granite, slag, limestone, chat, or other high quality aggregate, or combination thereof. To assure the material is totally crushed, 100% of the parent aggregate will be larger than the largest stone in the gradation to be used.

The combined mineral aggregate shall conform to the following gradation:

Sieve Size	Type II (% Passing)
3/8"	100
No.4	90-100
No.8	65-90
No.16	45-70
No. 30	30-50
No.50	18-30
No.100	10.-21
No.200	5 -15

Mineral fillers such as Portland cement, limestone dust, fly ash and others shall be considered as part of the blended aggregate and shall be used in minimum required amounts. They shall meet the gradation requirements of ASTM D242. Mineral fillers shall only be used if needed to improve the workability of the mix of gradation of the aggregate.

MEASUREMENT AND PAYMENT

Measurement and payment for “**Slurry Seal**” shall be charged on a **Per Square Foot basis**, included in the price schedule as shown on the Bid Form, and shall include full compensation for

furnishing all labor, materials, tools, equipment and incidentals, and for doing all the Crack Seal and Slurry Seal work necessary to construct the new facilities, as shown on the plans and in conformance with these Technical Specifications and as directed by the Engineer, and no additional compensation will be allowed therefor.

5 STRIPING & PAVEMENT MARKINGS

GENERAL

Pavement stripes and pavement markings shall conform to the project documents, these technical specifications and the Americans with Disabilities Act Provisions.

All striping and pavement markings that have been called out in the Projects Plans shall be install by the contractor. All Stripes shall be 4” wide and in compliance with ADA standards.

MEASUREMENT AND PAYMENT

Measurement and payment for “**Striping**” shall be made on a **lump sum basis** for “**Striping & Pavement Markings**” as shown in the Bid Schedule, and shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved in the installation of all traffic stripes, as shown on the plans and in conformance with these Technical Specifications and the project plans, and no additional compensation will be allowed therefore.