

ITEM 559.1796--08 M - PROTECTIVE SEALING OF STRUCTURAL CONCRETE FOR EXISTING BRIDGE DECKS (NO ABRASIVE BLASTING ALLOWED)

DESCRIPTION:

Under this work the Contractor shall furnish and apply, in accordance with this specification, a protective sealer to concrete surfaces, at locations indicated on the plans or proposal booklet or where directed by the Engineer.

MATERIALS:

The protective sealer shall be a non-water based sealer appearing on the Department's Approved List for Section 717-03- Penetrating Type Protective Sealers.

CONSTRUCTION DETAILS:

- A. General. The Contractor shall provide the Engineer with the sealer Manufacturer's written instructions for application and use, at least five (5) working days before the start of work. Only one (1) brand and specific type of sealer will be allowed for use on each individual deck.
- B. Surface Preparation.
 - 1. Existing Concrete. Concrete surfaces to be sealed shall be thoroughly cleaned by pressurized water. The surface shall be allowed to air dry for a minimum of twenty-four (24) hours and then be vacuum cleaned to remove loose particles immediately before the sealer is applied. If the concrete is subjected to rain or moisture from other project operations, the surface shall be allowed to air dry for a minimum of twenty-four (24) hours before the sealer is applied. In the early A.M. the Engineer may direct a waiting period for drying by the sun on the surfaces to be sealed. If the surfaces are not sealed within seven (7) calendar days after the pressure wash the Engineer, due to debris, may direct a rewashing of the total or partial surface to be sealed at the Contractors expense.
 - 2. Care shall be taken while cleaning that all dirt is removed with minimal exposure of coarse aggregate. After cleaning, no laitance, standing water, dirt or other foreign particles shall be present which may prevent penetration or adhesion of the sealer. All surface preparation work shall be completed and approved by the Engineer, before sealer application can commence.
- C. Weather Limitations. Sealer materials shall not be applied during wet weather conditions or, if in the opinion of the Engineer, adverse weather conditions are anticipated within six (6) hours of the completion of sealer application. Ambient and surface temperatures shall be a minimum of 10_ C during application and until the sealed concrete is dry to the touch. Application by spray methods will not be permitted during windy conditions, if in the opinion of the Engineer unsatisfactory results will be obtained.
- D. Sealer Application.
 - 1. The sealer shall be used as supplied by the manufacturer without the use of any thinning alterations, or additives unless specifically required in the manufacturer's instructions. Thorough mixing of the sealer before and during its use shall be accomplished as recommended by the manufacturer. The Engineer will view any mixing of all materials. The equipment for all sealing operations will be clean of foreign materials and in good working order for the application rate, it will be approved by the Engineer. If in the

ITEM 559.1796--08 M - PROTECTIVE SEALING OF STRUCTURAL CONCRETE FOR EXISTING BRIDGE DECKS (NO ABRASIVE BLASTING ALLOWED)

opinion of the Engineer the application equipment becomes nonfunctional it will be rejected.

2. When using the penetration sealer, the contractor will observe the number of coats with the application rate using the application equipment as recommended by the manufacturer. The contractor will achieve the total coating as stated in the approved material list of the NYSDOT Materials Bureau of gallons per square foot or liters per square meters. Care shall be exercised with each coat that running or puddling does not occur. No sealer shall be allowed to run over the sides of the bridge surface. If more than one coat is required each successive coat shall be allowed to dry according to the manufacturer's instructions, before the removal of maintenance and protection of traffic. No artificial means to accelerate the drying of the sealer shall be allowed.
3. On sloping and vertical concrete surfaces, sealer application shall progress from bottom to top. Care shall be taken to ensure that the entire surface of the concrete is covered and all pores filled.

METHOD OF MEASUREMENT:

Payment will be made at the unit price bid per square meter for the number of square meters of structural concrete to be sealed, stated in the Estimate of Quantities shown on the Contract Plans.

BASIS OF PAYMENT:

The unit price bid per square meter shall include the cost of furnishing all labor, materials and equipment necessary to satisfactorily complete the work. Payment shall be based on actual area of concrete sealed.