

## SECTION 923 - MISCELLANEOUS

### 923.06 DAMPPROOFING AND WATERPROOFING.

#### (G) Concrete Penetrating Sealer.

Delete the first paragraph and replace it with the following:

Penetrating Sealer shall be a VOC compliant silane based concrete penetrating sealer containing a minimum 100 percent active ingredients such as "SL100 Water Repellant" as manufactured by ProSoCo., Inc., Kansas City, KS, and "Hydrozo 100" or "Hydrozo 100 Plus" as manufactured by BASF Construction Chemicals, LLC, Shakopee, MN (800) 433-9517 or an approved equal.

Delete Subparagraph (1) and replace it with the following:

- (1) Water absorption values for treated concrete surfaces shall not exceed 1 percent moisture after 48-hour immersion in water and 2 percent after 50 days immersion in water in accordance with ASTM C642 testing modified as follows:

Delete the first paragraph in Part (a), and replace it with the following:

- (a) The untreated surfaces of the oven-dried sample shall be coated with a waterproof substance (i.e. epoxy) prior to determining the oven-dried weight.

[Note to Designer: "Substructure Waterproofing" is required for small areas and spall repair areas. "Substructure Membrane Waterproofing" is required to waterproof entire substructure elements. "Substructure Membrane Waterproofing" shall not be applied to piers located below continuous superstructure spans.]

The following Paragraph (H) is added:

#### (H) Waterproofing Systems for Substructures.

Substructure Waterproofing shall conform to the requirements of (E) Epoxy Resin Waterproofing.

Substructure Membrane Waterproofing shall consist of a primer and the membrane. The membrane system must originate from one manufacturer to insure compatibility. The membrane system shall be Eliminator by Stirling Lloyd Products, Inc., North Haven, CT, ~~Wabo Guardian~~ "Traffic Deck System" by ~~Watson Bowman Acme~~, Amherst, NY 716-691-7566 or "Bridge Deck Membrane" by Bridge Preservation, LLC, Kansas City, KS 913-321-9006 as distributed by R.J. Watson, Inc., Amherst, NY 716-691-3301, or an approved equal. The membrane shall conform to the following:

<u>Property</u>	<u>Test Method</u>	<u>Criteria</u>
Solids Content		100%

Coverage Rate 80 mils (2mm)		20.5 sq. ft./gal
Cure Time		30 minutes at 68 degrees F
Water Vapor Transmission	ASTM E96	4.3 g/m <sup>2</sup> /day
Water Absorption	ASTM D570	<0.5%
Tensile Strength	ASTM D638	400 psi (min)
Elongation (min)	ASTM D638	100%
Adhesion to Concrete	ACI 503A	100 psi (min)
Crack Bridging	ASTM C836	Pass at 15 degrees F 62.5 mils at 25 cycles
<u>Resistance To:</u>		
Ethylene Glycol	ASTM D543	Pass
Calcium Chloride	ASTM D543	Pass
Diesel Fuel	ASTM D543	Pass
Gasoline	ASTM D543	Pass

The following samples and information along with the current published technical product data and material safety data sheets for the system selected shall be submitted to the Engineer at least one month before application of the waterproof membrane system is anticipated by the Contractor:

- The design mix for the membrane system, including samples for testing and approval prior to ordering any materials for the waterproofing membrane.
- Primer Coat – 1 quart
- Liquid Components of the membrane – 1 quart each
- Hardener Powder
- Aggregate – 25 lbs.
- Written procedures for the surface preparation, application, quality control and placement of the waterproof membrane.
- Manufacturer's Literature including descriptive data and specific recommendations for surface preparation, mixing, and application of all materials, and a copy of the manufacturer's quality assurance program listing all in-house testing criteria.
- Manufacturer's "Materials Safety Data Sheets" for each respective product to be used.