SECTION I – General

1.01 Summary
A. Furnish labor, products and equipment required for the application of a seamless, spray elastomer coating system to suitable concrete, masonry or miscellaneous metal surfaces. Default thickness is 80 mils (2 mm) on the deck surfaces and 40 mils on the abutment areas where required.

B. The coating system shall be a spray-applied, 100% solids, fast-cure, high-build system meeting AREMA Cold-Spray Applied Waterproofing requirements Chapter 8, Section 29. Primer may be required.

1.02 Definitions
A. SSPC Metal Preparation Standards - SSPC-SP 5, White Metal Blast; SP 6, Commercial Blast; and SP 10 Near White Blast

1.03 Submittals
A. Submit product datasheets and installation specification.

B. Submit SDS for product used in the work.

C. Submit substrate preparation details.

D. Submit sample of proposed membrane. 8 inch (200mm) square sample shall include color, texture and thickness of proposed membrane system.

1.04 Project Conditions
A. Environmental Requirements: Install system when air and substrate temperature is above 34°F and substrate is above dew point. For installation below 34°F, contact the membrane manufacturer.

B. Personnel Requirements: Provide protective clothing, gloves and respirators for use by installers as required.

1.05 Quality Control Provisions
A. Manufacturer Qualifications: The manufacturer should be a primary blender with proprietary formulations, an Authorized Applicator program and capacity to provide field technical services as required.

Manufacturer to provide Infrared Spectrograph of the actual membrane tested whose results are published on the Manufacturer's datasheet and represented by the third party test certificates.

Manufacturer to provide Infrared Spectrograph of membrane shipped to the project and certification that the membrane meets all physicals represented on the product datasheet.

B. Applicator Qualifications: Use Contractor holding a current Authorized Applicator Certificate from the manufacturer or the presence of Manufacturer's direct representative on site during installation.

1.06 Quality Assurance Provisions
A. Schedule pre-installation conference to review installation schedule, shutdown and restricted access procedures. Indicate Owner’s Representative and Contractor’s Superintendent.

B. Inspect surface preparation, review application procedures and proposed dry film thickness at each installation location.

1.07 Delivery, Storage and Handling
A. Deliver product in manufacturer's original containers.

B. Store product in warm, dry condition.

C. Replace product damaged by shipment, weather or job conditions.
### SECTION II - Products

#### 2.01 Manufacturer

The D.S. Brown Company  
300 East Cherry Street  
North Baltimore, OH 45872  
(419) 257-3561

#### 2.02 Materials

A. Primer: DSB Deckguard® Primer - 100% solids, two-component polymer primer. Cures to 0°F.

B. Waterproofing Membrane: Deckguard® Spray-Applied Membrane - 100% solids, rapid-curing elastomer.

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open to Traffic*</td>
<td>One Hour</td>
<td></td>
</tr>
<tr>
<td>Solids Content</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Gel Time</td>
<td>5 seconds</td>
<td></td>
</tr>
<tr>
<td>Tack-Free Time</td>
<td>10 seconds</td>
<td></td>
</tr>
<tr>
<td>Hardness</td>
<td>ASTM D2240</td>
<td>50 Shore D</td>
</tr>
<tr>
<td>Elongation</td>
<td>ASTM D638</td>
<td>250% +</td>
</tr>
<tr>
<td>Water Vapor Transmission</td>
<td>ASTM E96 Procedures A and B</td>
<td>&lt; 0.2 perms</td>
</tr>
<tr>
<td>Adhesion to Steel</td>
<td>ASTM D4541</td>
<td>&gt; 300 psi</td>
</tr>
<tr>
<td>Adhesion to Concrete (primed)</td>
<td>ASTM D7234 and D4541</td>
<td>&gt; 200 psi**</td>
</tr>
<tr>
<td>Taber Abrasion</td>
<td>ASTM D4060</td>
<td>125 mg</td>
</tr>
<tr>
<td>Crack-Bridging</td>
<td>ASTM C1305</td>
<td>Pass</td>
</tr>
<tr>
<td>Ballast Test</td>
<td>N. American</td>
<td>Pass 2,000,000 cycles</td>
</tr>
<tr>
<td>Electrical Resistance</td>
<td>ASTM D257</td>
<td>1.5 x 1014 +ohmcm</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>ASTM D638</td>
<td>&gt; 2000</td>
</tr>
<tr>
<td>Chemical Resistance to Glycol, Calcium Chloride, Diesel and Gas</td>
<td>ASTM D543 Method B</td>
<td>Pass</td>
</tr>
<tr>
<td>Tear Strength, pli, Die C</td>
<td>ASTM D624</td>
<td>450 pli</td>
</tr>
</tbody>
</table>

*Membrane system shall not be exposed to traffic for more than 7 days or as allowed by the product manufacturer.

**Or failure in concrete

### SECTION III - Execution

#### 3.01 Inspection

A. Prior to application of primer, inspect and approve substrate preparation.

#### 3.02 Preparation

A. Provide clean, sound, metal substrate.

B. Sandblast metal surfaces to SSPC SP10 to remove mill scale and other contaminants and provide 5 mil profile if surface is not to be primed.

C. Prepare metal surfaces to SSPC SP6 Commercial Blast if surface is to be primed.

D. Sandblasted surfaces must be sprayed within 6 hours of preparation or before rust bloom appears.

E. Test prepared surface using Elcometer adhesion testing (ASTM D4541). Minimum pull strength is 300 psi.

F. Metal surfaces must be above dew point before application.

G. Mask protected surfaces before spray applications.

H. Erect spray curtains and partitions as required.

#### 3.03 Installation

A. Spray or roll primer at 400 - 600 square feet per gallon over surfaces to receive coating system. Allow primer to go tack free before spraying Deckguard® Membrane. Primer may not be necessary if steel surface is prepared to 5 mil profile or better and no rust is present.

B. Metal surfaces must be dry, rust-free and have proper SSPC profile and preparation.

C. Reapply primer if set more than 12 hours.

D. Spray membrane over primed surfaces at 20 square feet per gallon (80 mils) by using a Graco Reactor pumping system or other approved by the manufacturer. Spray base coat over primed surfaces at 20 square feet per gallon (80 mils).

E. Retouch coat by filling low spots or areas with inadequate thickness.
F. Spray additional base coats to achieve specified system thickness. Retouch as required.

**Deckguard® Primer**

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gel Time</td>
<td></td>
<td>30 seconds typical</td>
</tr>
<tr>
<td>Maximum Tack-Free Time at 77°F (hours)</td>
<td>1 hour</td>
<td></td>
</tr>
<tr>
<td>Bond to Deckguard® Membrane</td>
<td>ASTM D4541</td>
<td>500 psi+</td>
</tr>
<tr>
<td>Adhesion to Steel</td>
<td>ASTM D4541</td>
<td>&gt;300 psi</td>
</tr>
<tr>
<td>Adhesion to Concrete</td>
<td>ASTM D7234 and D4541</td>
<td>150 psi*</td>
</tr>
</tbody>
</table>

*Or failure in concrete.

3.04 Field Quality Control

A. Perform dry film thickness tests as required. Deckguard® gels too rapidly to wet film test. Use destructive testing, stroke per gallon method or place steel coupons at a rate of every 400 square feet. Then measure thickness by a magnetic gauge to assure proper film thickness.

1. Spray equipment is calibrated and tested to a stroke count per gallon of product sprayed. This is suitable for thickness assurance on most projects.

2. Ultrasonic/magnetic testing is usually accurate to +/- 5%.

3. Repair destructive testing areas by respraying.

B. Maintain spray and other installation equipment in proper operating condition throughout installation. Provide reserve equipment as required.

3.05 Cleaning

A. Clean spills and oversprays as they occur.

B. Consult manufacturer’s literature and SDS for proper cleaning products and methods.

C. Clean site to owner’s satisfaction before final acceptance.

3.06 Protection

A. Protect installed work before acceptance by owner.

B. Place ballast after coating has cured for minimum of one hour.

3.07 Schedules

A. Submit spray schedule if required.