SP-090038
(New)

Iowa Department of Transportation

SPECIAL PROVISIONS
FOR
HIGH PERFORMANCE COATINGS

Pottawattamie County
BRF-006-1(113)--38-78

Effective Date
February 16, 2010

THE STANDARD SPECIFICATIONS, SERIES 2009, ARE AMENDED BY THE FOLLOWING ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

090038.01 DESCRIPTION
This work shall consist of preparation for and installation of high performance coatings on light poles, including all associated connection hardware.

REFERENCES
SSPC: The Society for Protective Coatings
1. SSPC – Steel Structures painting Manual
2. SSPC –SP2 - Hand Tool Cleaning
3. SSPC –SP3 – Power Tool Cleaning
4. SSPC – SP5 – White metal Blasting cleaning
5. SSPC – SP6 – Commercial Blast Cleaning
6 SSPC – SP7 – Brush Blast Cleaning

090038.02 MATERIALS
Materials shall meet the following requirements:

A. Manufacturers
Manufacturers shall meet all requirements in this section for manufacturer and materials. Product approvals permitted PRIOR to bidding ONLY.

B. High performance Coatings
General: provide complete multi –coat systems formulated and recommended by manufacturer for the applications indicated, in the thickness indicated; number of coats specified does not include primer or filler coat unless specifically noted.

C. High Performance Coating – Type 1: Aliphatic acrylic polyurethane; two coats, semi-gloss finish.

1. Preparation: SSPC SP-7 Brush Blast to remove existing coatings only and maintain galvanized coating on street light poles. Preparation (Galvanized Steel): SSPC SP-1 Solvent Clean and light sanding to etch surface.
2. Primer for Galvanized Steel (Shop Applied): Tnemec 66 Polyamide Epoxy, 3.0 -5.0 mils dry film thickness.
3. Intermediate Coat (Shop Applied): Tnemec Series N69 Hi-Build Epoxoline II 4.0-6.0 mils dry film thickness per coat.
4. Top Coat (Shop Applied)): Aliphatic acrylic Polyurethane; Tnemec series 1075U Endura-Shield II; (5.5 mils wet /3.0 mils dry per coat).
5. Location: exterior galvanized street light poles and light pole sleeves.
6. Application: Per Manufacturer's specifications
7. Temperature: Per Manufacturer's specifications
8. Time between surface preparation and paint application: Per Manufacturer's specifications
9. Time between coats: Per Manufacturer's specifications

D. Color

Light poles and light pole bases shall be finished with Federal Standard No. 595B color number 22197 on the north side of the bridge and Federal Standard No. 595B color number 23655 on the south side of the bridge.

090038.03 SUBMITTALS

The Contractor shall submit to the Engineer product data, plans, working drawings and specifications as indicated below:

A. Product Data

1. Product Data: Provide data for all coating products. Identify each product by the manufacturer's catalog number and general classification.

2. Submit two samples 6 x6 inches in size illustrating color and finish selected for topcoat.

3. Submit maintenance Data; Include maintenance and cleaning requirements for coatings, repair and patching techniques.

B. Installer Qualifications

1. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with a minimum ten years documented experience.

2. Applicator Qualifications: Company specializing in performing the work of this section with a minimum three years experience and approved by high performance coatings manufacturer.

090038.04 CONSTRUCTION

A. Examination:

Verify that substrate surfaces are ready to receive work as indicated by the coating manufacturer. Obtain and follow manufacturer's instructions for examination and testing of substrates.

B. Preparation:

1. Clean surfaces of loose foreign matter.

2. Remove substances that would bleed through finished coatings. If irremovable, seal surface with pure white shellac.

3. Remove finish hardware, fixture covers, and accessories and store.

4. Existing painted and sealed surfaces: Strip existing paint and coatings from surface.

5. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent following blast removal of existing coatings. Mechanically remove zinc oxide (white rust).

6. Protect adjacent surfaces and materials not receiving coating from overspray or drippings: mask if necessary to provide adequate protection. Repair damage.

C. Priming:

Apply primer to all surfaces, unless specifically not required by coating manufacturer. Apply in accordance with coating manufacturer's instructions.

D. Coating Application:

1. Grind all sharp edges and holes.

2. Apply coatings in accordance with manufacturer's instructions, to thickness specified.

3. Apply in uniform thickness coats, without runs, drips, pinholes, brush marks, or variations in color, texture, or finish. Finish edges, crevices, corners and other changes in dimension with full coating thickness.

E. Cleaning/Protection:

1. Collect waste material that may constitute a fire hazard, place in closed metal containers and remove daily from site.

2. Clean surfaces immediately of over spray, splatter and excess materials.

3. After coating has cured, clean and replace finish hardware and brackets, fixtures and fittings.

4. Protect elements adjacent to the work from damage or disfiguration.

F. Environmental Requirements

1. Do not install materials when temperature is below 55°F or above 90°F.

2. Maintain this temperature range, 24 hours before, during and 72 hours after installation of coating.

3. Provide lighting level of 80 foot candles measured mid height at substrate surface. Restrict traffic from area where coating is being applied or is curing.

090038.05 METHOD OF MEASUREMENT

The quantity of High Performance Coating for which payment will be made will be the quantity, in square feet of finished area, shown in the contract documents that is acceptably placed.

090038.06 BASIS OF PAYMENT

The square feet area of High Performance Coatings, computed as specified above, will be paid for as a Lump Sum item. No additional payment will be made for surface preparation, primer, or repair and touch up of High Performance Coating.