(b) Piers that are under a transverse joint in the deck shall be coated. The coatings shall be applied to the entire horizontal surface of pier bridge seat areas (between and around the beam pads), and all exposed surfaces of the beam pads.

464.03.03 Material Precautions. The manufacturer's Material Safety Data shall be used in handling and use of the material.

464.03.04 Repairs. Any portion of the structures damaged by the Contractor's operations in applying the protective coatings, including damage to the epoxy protective coating, shall be repaired as directed by the Engineer, at no additional cost to the Administration. Epoxy protective coating repairs shall be performed in conformance with the manufacturer's recommendations.

464.04 MEASUREMENT AND PAYMENT. The payment will be full compensation for both coats and all material, labor, equipment, tools, and incidentals necessary to complete the work.

464.04.01 Epoxy protective coatings for concrete for which no specific item is included in the Contract Documents will not be measured but the cost will be incidental to other pertinent items included in the Contract Documents.

464.04.02 Epoxy protective coatings for concrete will not be measured but will be paid for at the Contract lump sum price for the pertinent Epoxy Protective Coating item.

464.04.03 Epoxy protective coatings for concrete will be measured and paid for at the Contract unit price per square yard for the pertinent Epoxy Protective Coating item.

SECTION 465 — FUSION BONDED POWDER COATINGS FOR METAL

465.01 DESCRIPTION. This work shall consist of furnishing and applying electrostatically applied fusion bonded powder coatings on metal surfaces as specified in the Contract Documents.

465.02 MATERIALS.

Epoxy Powder Coating	917.02 except creep test will not be required
Polyester Powder Coating	917.03

Polyester powder coating shall be used unless otherwise specified.

465.03 CONSTRUCTION. The coating shall be applied in an environmentally controlled plant that is fully enclosed. The coating system shall have the capabilities of preheating and post baking.

All metal surfaces shall be free of oil or any mill coating.

All metal surfaces shall be grit blasted to white metal as specified in SSPC-SP 5 using a mixture of steel shot and grit. Cleaned surfaces shall be protected from conditions of high humidity, rainfall or surface moisture. The metal surfaces shall not flash rust before coating. Blast profile shall be a uniform, angular anchor profile with a height of 2 to 5 mils. Anchor pattern shall be checked with an approved surface profile gauge.

The coating material shall be applied and cured as specified by the coating manufacturer. The metal surfaces and oven temperatures shall not exceed 500 F during any part of the curing process.

The cured coating shall be of uniform color, gloss, and thickness, and shall be free of blisters, fish eyes, sags, runs, and any other irregularities.

The finished coating thickness shall be 10 ± 2 mils when tested as specified in SSPC PA-2 except the balls and sockets on steel sheet piling may have a lesser thickness of coating.

New bolts, nuts, and washers shall be similarly coated with a thickness of 4 to 7 mils. The nuts shall have oversize threads and shall fit the bolts after both are coated. The bolt heads shall be restrained from turning during torquing operations.

The coater shall be responsible for all quality control checking including visual inspection and thickness measurements and shall keep the results of each inspection in a form suitable to the Administration's representative.

The Administration's representative shall have access to each part of the process and shall have the right and opportunity to witness or perform any of the quality control tests on a random sampling basis.

Touch Up. A compatible touch up system shall be provided for repair of defects, all areas damaged during erection, and all visible open areas. Touch up shall be applied by the Contractor as follows:

(a) Surface Preparation. The coating shall be applied directly to the metal surface which shall be clean, dry, and free of rust and

scale. Blast clean to National Association of Corrosion Engineers (NACE) Near White where possible. Grease, oil, etc., shall be removed with suitable solvents. The cleaned surface shall be coated before oxidation occurs.

(b) Mixing. Mix ratio of Part A to Part B shall be as recommended by the manufacturer. The two parts shall be thoroughly mixed until a uniform color is achieved. If thinning is required, each part shall be thinned separately with thinner recommended by the manufacturer. Material not used within the pot life recommended by the manufacturer shall be discarded.

465.03.01 Material Precautions. The manufacturer's Material Safety Data shall be used in handling and use of this material.

465.04 MEASUREMENT AND PAYMENT. Fusion bonded powder coatings for metal will not be measured but the cost will be incidental to the pertinent items specified in the Contract Documents.

SECTION 466 THRU 468 — RESERVED

SECTION 469 — POROUS BACKFILL

469.01 DESCRIPTION. This work shall consist of furnishing and placing of porous backfill material, reinforced concrete base and pipe drains at the rear of abutments, wing walls, retaining walls, and other locations as specified in the Contract Documents or as directed by the Engineer.

469.02 MATERIALS.

Porous Backfill, Size No. 57, Aggregate	901.01
Concrete Mix No. 1	902.10
Pipe Drains	905
Reinforcement Steel	908.01
Geotextile, Class as specified	921.09

469.03 CONSTRUCTION. Porous backfill material shall be placed in layers in conjunction with the adjacent fill. Any fill material removed for placing the porous backfill material shall be at no additional cost to the Administration. When a form is used between the porous backfill material and the earth backfill, the form shall be completely removed from the completed fill.