



33 41 00 Storm Drainage Systems .....715

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## SECTION 05031

### PRIMING

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Includes But Not Limited To
  - 1. Quality of priming applied to steel as described in Contract Documents.
- B. Related Sections
  - 1. Finish painting

#### PART 2 PRODUCTS

##### 2.1 MATERIALS

- A. Primer
  - 1. On Plain Iron Or Steel - Conform to Fed Spec TT-P-645A except primer on unexposed surfaces may be fabricator's standard shop coat.
  - 2. Repair Of Welded Areas Or Damaged Areas On Galvanized Metal -

#### PART 3 EXECUTION

##### 3.1 APPLICATION

- A. Except where encased in concrete, thoroughly clean metal and give one prime coat of specified material, well-worked into metal joints and open spaces.
  - 1. Do not apply primer at temperatures below 45 deg F.
  - 2. Protect machine-finished surfaces against corrosion.
  - 3. Clean welds, grind serious abrasions, and apply field primer or zinc-rich coating as required.

END OF SECTION

## SECTION 05057

### WELDING

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Includes But Not Limited To
  - 1. Criteria for metal-to-metal connections to be welded.
- B. Related Sections
  - 1. Performance of welding specified under Section concerned.

##### 1.2 QUALITY ASSURANCE

- A. Certifications - Maintain welder's certifications on job-site.

#### PART 2 PRODUCTS

##### 2.1 MANUFACTURED UNITS

- A. Arc-Welding Electrodes - Type E70XX AWS Iron and Steel Arc-welding electrodes and meeting current AISC Specifications.

#### PART 3 EXECUTION

##### 3.1 PERFORMANCE

- A. Welding shall meet requirements of
  - 1. AWS Structural Welding Code
- B. Minimum weld sizes, unless detailed otherwise
  - 1. Weld column to top plates and anchors to base plates with 1/4 inch fillet weld all around.
  - 2. Weld top plates and base plates with 1/4 inch fillet weld all around outside edges.

END OF SECTION

**SECTION 05521**  
**HANDRAILS & RAILINGS**

**PART 1 GENERAL**

**1.1 SUMMARY**

- A. Includes But Not Limited To
  - 1. Refurbish handrails and columns as described in Contract Documents.
    - a. Type One -
      - 1) Exterior handrails
- B. Related Sections
  - 1. Finish Painting

**1.2 REFERENCES**

- A. American Society For Testing And Materials
  - 1. ASTM A 53-90a, "Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless"
  - 2. ASTM A 501-89, "Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing"

**PART 2 PRODUCTS**

**2.1 MATERIALS**

- A. Match existing handrail and column material, thickness and dimensions.

**2.2 FABRICATION**

- A. Grind smooth welded joints and buff welds to same appearance as remainder of railing.
- B. After fabrication, prime metal to be painted.

**PART 3 EXECUTION - Not Used**

END OF SECTION

**SECTION 09901**  
**GENERAL PAINTING REQUIREMENTS**

**PART 1 GENERAL**

**1.1 SUMMARY**

- A. Includes But Not Limited To
1. Paint exterior ADA and building entrance handrails and columns

**1.2 SUBMITTALS**

- A. Product Data
1. Submit Manufacturer's literature marked to indicated primer and finish coat products to be used. Provide Manufacturer's cut sheets for each primer and finish coat which indicate paint components and percentages.
  2. Maintenance instructions
  3. Color schedule
  4. Maintain copy of submission on Project site.
- B. Samples - Provide paint card for each color and for each paint system. Card to show each component of system as well as total system.

**1.3 QUALITY ASSURANCE**

- A. Field Samples
1. Before application of any paint system, if required by Engineer or Owner, meet on Project site with Engineer, Owner's representative, and Manufacturer's representative. Engineer may select one surface for application of each paint system specified.
  2. Apply paint systems to surfaces indicated by Engineer following procedures outlined in Contract Documents and Product Data submission specified above.
  3. After approval of samples, proceed with application of paint system throughout Project.

**1.4 DELIVERY, STORAGE, & HANDLING**

- A. Deliver specified products in original containers with labels intact on each container. Deliver amount of material indicated on submittal for Project in single shipment. Notify Architect two working days prior to delivery of paint.
- B. Store materials in single place.
- C. Keep storage area clean and rectify any damage to area at completion of work of this Section.

**1.5 PROJECT/SITE CONDITIONS**

- A. Environmental Conditions
1. Maintain temperature of paint storage area at 55 deg F minimum.
  2. Perform painting operations at temperature conditions recommended by Manufacturer for each operation.

**1.6 SCHEDULING**

- A. Coordinate with other Sections for work that requires painting prior to installation.

**1.7 MAINTENANCE**

- A. Extra Materials - If requested by Engineer, provide one quart of each finish coat material in Manufacturer's original container in each color used. Provide one pint of each primer and of each undercoat in each color used. Label each can with color name and mixture instructions.

**PART 2 PRODUCTS**

**2.1 MATERIALS**

- A. Linseed oil, shellac, turpentine, and other painting materials shall be pure, of highest quality, and bear identifying labels on containers.
- B. Paint compositions shall not only meet specified requirements but also contain sufficient miscellaneous components to promote proper drying and performance during and after application.

**PART 3 EXECUTION**

**3.1 ACCEPTABLE APPLICATORS**

- A. Applicator shall have experience in application of specified products for five years minimum and be acceptable to Engineer and Manufacturer.

### 3.2 PREPARATION

- A. Protection
  - 1. Remove all oily rags and waste from project site each night. Take every precaution to avoid danger of fire.
  - 2. Protect finish work and adjacent materials during painting. Do not splatter, drip, or paint surfaces not intended to be painted. These items will not be spelled out in detail but pay special attention to the following -
    - a. Do not paint finish copper, bronze, chromium plate, nickel, stainless steel, anodized aluminum, or monel metal except as explicitly specified.
- B. Surface Preparation
  - 1. Surfaces to be painted shall be clean and free of loose dirt. Clean and dust surfaces before painting or finishing.
  - 2. Do no exterior painting while surface is damp, unless recommended by Manufacturer, nor during rainy or frosty weather. Interior surfaces shall be dry before painting.
  - 3. Wash metal surfaces with mineral spirits to remove dirt and grease before applying materials. Where rust or scale is present, use wire brush or sandpaper to clean before painting. Clean shop coats of paint that have become marred and touch up with proper type primer.
  - 4. Treat galvanized metal and zinc surfaces as specified and in accordance with Manufacturer's directions before applying first paint coat.

### 3.3 APPLICATION

- A. Carefully follow Specifications, painting complete all surfaces to be painted.
- B. Spread materials smoothly and evenly.
- C. Touch up suction spots after application of first coat.
- D. Paint shall be thoroughly dry and surfaces clean before applying succeeding coats.
- E. Use fine sandpaper between coats as necessary to produce even, smooth surfaces.
- F. Make edges of paint adjoining other materials or colors clean, sharp, and without overlapping.
- G. Finished work shall be uniform, of approved color, smooth, and free from runs, sags, defective brushing, rolling, clogging, and excessive flooding.

### 3.4 ADJUSTMENT

- A. At completion of Project, touch up work to match specified finish. Repaint areas damaged during construction with specified finish at no additional cost to Owner.

### 3.5 CLEANING

- A. Do not discard paint containers without Engineer's written approval to allow count to determine if paint delivered was applied.
- B. Upon completion of work of this Section, remove paint spots from concrete, garbage cans, walls, glass, or other surfaces and leave work clean, orderly, and in acceptable condition. Remove debris caused by work of this Section from premises.

END OF SECTION

SECTION 09912

PAINT ON EXTERIOR PLAIN IRON & STEEL

**PART 1 GENERAL**

**1.1 SUMMARY**

- A. Includes But Not Limited To
  - 1. Preparing and painting new and existing exterior plain iron and steel surfaces as described in Contract Documents.
- B. Related Sections
  - 1. Section 09901 - General Painting Requirements

**1.2 SYSTEM DESCRIPTION**

- A. Design Criteria - Systems specified are in addition to prime coats provided by other Sections.

**PART 2 PRODUCTS**

**2.1 APPROVED MANUFACTURERS**

- A. Contractor shall provide product information sheets on both the prime and finish coat products to the Engineer for approval prior to use.

**PART 3 EXECUTION**

**3.1 APPLICATION**

- A. New Work - See appropriate paragraphs of Section 09901.
- B. Existing Work
  - 1. Scrape area with wire brush followed by sanding surfaces with medium grit sandpaper.
  - 2. Clean surface with thinner or turpentine.
  - 3. Spot prime bare surfaces followed by a prime coat.
  - 4. Lightly sand entire surface.
  - 5. Clean surface with soft cloth dampened with thinner.
  - 6. Apply two coats of paint.

END OF SECTION

**SECTION 09913**  
**PAINT ON EXTERIOR GALVANIZED IRON**

**PART 1 GENERAL**

**1.1 SUMMARY**

- A. Includes But Not Limited To
  - 1. Preparing and painting new and existing exterior exposed galvanized metal surfaces as Described in Contract Documents.
- B. Related Sections
  - 1. Section 09901 - General Painting Requirements

**PART 2 PRODUCTS**

**2.1 APPROVED MANUFACTURERS**

- A. Contractor shall provide product information sheets on both the prime and finish coat products to the Engineer for approval prior to use.

**PART 3 EXECUTION**

**3.1 APPLICATION**

- A. New Work
  - 1. See applicable paragraphs of Section 09901.
  - 2. Treat galvanized metal and zinc surfaces before applying first coat of paint.
  - 3. Prime surface.
  - 4. Apply finish coats.
- B. Existing Work
  - 1. Scrape and sand with wire brush and sand with medium sandpaper.
  - 2. Clean with soft cloth dampened with thinner.
  - 3. Prime surface.
  - 4. Apply finish coats.

END OF SECTION