



**SPECIAL PROVISIONS  
FOR  
METAL CANOPY STRUCTURE**

**Polk County  
EDP-8260(653)--7Y-77**

**Effective Date  
February 21, 2023**

**THE STANDARD SPECIFICATIONS, SERIES 2015, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.**

**151180.01 DESCRIPTION.**

**A. Scope.**

This work shall consist of furnishing and erecting a metal canopy structure fabricated from galvanized steel at Pier 3 of the pedestrian bridge across the Raccoon River.

**B. References.**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to by basic designation only.

1. ASTM F 3125 Standard Specification for Structural Steel Bolts and Assemblies.
2. ASTM A 709 Standard Specification for Structural Steel for Bridges.
3. ASTM A 563 Standard Specification for Carbon and Alloy Steel Nuts.
4. ASTM F 436 Standard Specification for Hardened Steel Washers.
5. ASTM A 6 Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling.
6. ASTM A 123 Standard Specifications for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
7. ASTM F 2329 Standard Specification for Zinc Coating, Hot-Dip, Requirements for Application to Carbon and Alloy Steel Bolts, Screws, Washers, Nuts, and Special Threaded Fasteners.
8. ASTM B695-04 Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel.
9. ASTM A385-11e1 Standard Practice for Providing High-Quality Zinc Coatings (Hot-Dip).
10. ASTM A 780 Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.
11. SSPC-SP1 – Solvent Cleaning.
12. SSPC-SP2 – Hand Tool Cleaning.
13. SSPC-SP3 – Power Tool Cleaning.
14. SSPC-SP6 – Commercial Blast Cleaning.
15. SSPC-SP7 – Brush-Off Blast Cleaning.

16. AWS D1.1 Structural Welding Code
17. AWS D.1.5 Bridge Welding Code
18. National Ornamental and Miscellaneous Metals Association (NOMMA), Guideline 1: Joint Finishes.
19. National Association of Architectural Metal Manufacturers (NAAMM), Metal Finishes Manual for Architectural and Metal Products.

#### **151180.02 MATERIALS.**

##### **A. Structural Steel.**

Structural steel shall be in accordance with Section 2408 of the Standard Specifications.

##### **B. High Strength Fasteners.**

Fasteners shall be ASTM A 325 Type 1 High Strength bolts, with ASTM A 563 Grade DH3 nuts and ASTM F 436 Type 1 washers and shall be in accordance with Article 4153.06 of the Standard Specifications.

##### **C. Hot Dip Galvanized Coating.**

Galvanized coating properties shall be in accordance with ASTM A 123 for galvanizing of steel members and assemblies, and ASTM F 2329 for galvanizing of steel fasteners.

#### **151180.03 CONSTRUCTION.**

##### **A. Fabrication Requirements**

1. Computer Aided Design (CAD) files depicting canopy geometry will be provided by the Engineer to the Contractor after award to aid development of shop drawings and fabrication. CAD file format will be AutoCAD .dwg or MicroStation .dgn format latest version.
2. After fabrication (cutting, welding, drilling, etc.) is complete, all holes shall be deburred and all fins, scabs or other surface/edge anomalies shall be ground or repaired per ASTM A6. The items shall then be cleaned per SSPC-SP1 and SSPC-SP6. All surfaces shall be inspected to verify no fins, scabs or other similar defects are present.
3. The Contractor shall consult with the galvanizer to insure proper removal of grease, paint, and other deleterious materials prior to galvanizing.
4. All bolt holes for field splices shall be drilled full size or sub-drilled and reamed to size. Bolt holes punched full size are not allowed.
5. Galvanized finish shall be Coating Class G90 or equal in accordance with NAAMM guidance.
6. Welding shall be in accordance AWS D1.1 or AWS D1.5.
7. Welds shall be finished in accordance with NOMMA Joint Finish #2.
8. Galvanizing surfaces damaged after galvanizing shall be repaired in accordance with ASTM A 780, Damage that occurs in the shop shall be repaired in the shop. Damage that occurs in the field shall be repaired in the field.

##### **B. Submittals**

1. Provide shop drawings for structural steel for approval prior to fabrication. Shop drawings shall describe which components are shop assembled and which components are field assembled.
2. Provide full scale mockups of the following components:
  - a. Tree trunk with branches.
  - b. Horizontal plate canopy.
3. Fabricator to provide photos of mockup to the Engineer or to permit site visits to shop when fabrication has advanced to the point of demonstrating finish of representative components prior to galvanizing.
4. Do not proceed with full production fabrication of components without shop drawing and mockup approval.

5. Design intent is to permit the Contractor to use mockup as a part of the permanent construction after approval.

**151180.04 METHOD OF MEASUREMENT**

The method of measurement for Metal Canopy Structure will be lump sum. An estimated weight of structural steel is provided on the drawings for bidding purposes only. The weight of galvanizing is not included in the estimated weight of structural steel.

**151180.05 BASIS OF PAYMENT**

Payment shall be in accordance with Article 2408.05 of the Standard Specifications. Payment is full compensation for furnishing, fabricating galvanizing, transporting, and erecting metal canopy structure. Includes to repairs to galvanizing required after erection.