

## Section 05 50 00 Metal Fabrications

Specifications

05 50 00-1

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. The work required under this section consists of metal fabrications made of steel shapes, sheets, plates, pipes as required for miscellaneous supports and railings.

#### 1.02 WORK INCLUDES

- A. Miscellaneous steel that may be required for brick lintels, pipe supports, etc.

### PART 2 PRODUCTS

#### 2.01 MISCELLANEOUS MATERIALS

##### A. Ferrous Metals:

1. Metal Surfaces, General: For fabrication of miscellaneous metal work which will be exposed to view, use only materials which are smooth and free of surface blemishes including pitting, seam marks, roller marks, rolled trade names and roughness.
2. Steel Angles, Plates, Shapes and Bars: ASTM A 36.
3. Steel Pipe: ASTM A 53; Type and grade as selected by fabricator and as required for design loading; black finish unless galvanizing is indicated; standard weight (sched. 40), unless otherwise indicated.
4. Brackets, Flanges and Anchors: Cast or formed metal of the same type material and finish as supported rails, unless otherwise indicated.
5. Concrete Inserts: Threaded or wedge type; galvanized ferrous castings, either malleable iron, ASTM A 47, or cast steel, ASTM A 27. Provide bolts, washers and shims as required, hot-dip galvanized, ASTM A 153.

##### B. Grout:

1. Non-Shrink Non-Metallic Grout: Pre-mixed, factory-packaged, non-staining, non-corrosive, non-gaseous grout complying with CE CRD-C621. Provide grout specifically recommended by manufacturer for interior and exterior applications of type specified in this section.

##### C. Fasteners:

1. General: Provide zinc-coated fasteners for exterior use or where built into exterior walls. Select fasteners for the type, grade and class required.
2. Bolts and Nuts: Regular hexagon head type, ASTM A 307, Grade A.
3. Lag Bolts: Square head type, FS FF-B-561.
4. Machine Screws: Cadmium plated steel, FS FF-S-92.
5. Wood Screws: Flat head carbon steel, FS FF-S-111.
6. Plain Washers: Round, carbon steel, FS FF-W-92.
7. Masonry Anchorage Devices: Expansion shields, FS FF-S-325.
8. Toggle Bolts: Tumble-wing type, FS FF-B-588, type and style as required.
9. Lock washers: Helical spring type carbon steel, FS FF-W-84.

##### D. Paint:

1. Shop Primer for Ferrous Metal: Manufacturer's or Fabricator's standard, fast-curing, lead-free, "universal" primer; selected for good resistance to normal atmospheric corrosion, for compatibility with finish paint systems indicated and for capability to provide a sound foundation for field-applied topcoats despite prolonged exposure; complying with performance requirements of FS TT-P-645.
2. Galvanizing Repair Paint: High zinc dust content paint for regalvanizing welds in galvanized steel, complying with the Military Specifications MIL-P-21035 (Ships) or SSPC-Paint-20.

##### E. Galvanizing: Provide a zinc coating for those items indicated or specified to be galvanized, as follows:

1. ASTM A 153 for galvanizing iron and steel hardware.
2. ASTM A 123 for galvanized rolled, pressed and forged steel shapes, plates, bars and strip 1/8" thick and heavier.
3. ASTM A 386 for galvanizing assembled steel products.

##### F. Shop Painting:

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1. Apply shop primer to surfaces of metal fabrications except those which are galvanized or as indicated to be embedded in concrete or masonry, unless otherwise indicated, and in compliance with requirements of SSPC-PA1 "Paint Application Specification No. 1" for shop painting (red oxide).

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verify that field conditions are acceptable and are ready to receive Work.

#### **3.02 PREPARATION**

- A. Clean and strip primed steel items to bare metal where site welding is required.
- B. Supply steel items required to be cast into concrete or embedded in masonry with setting templates to appropriate sections.

#### **3.03 INSTALLATION**

- A. Install items plumb and level, accurately fitted, free from distortion or defects.
- B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
- C. Field weld components indicated on shop drawings.
- D. Perform field welding in accordance with AWS D1.1.
- E. After erection, prime welds, abrasions, and surfaces not shop primed, except surfaces to be in contact with concrete.

#### **3.04 ERECTION TOLERANCES**

- A. Maximum Offset From True Alignment: 1/4 inch.
- B. Maximum Out-of-Position: 1/4 inch.

**END OF SECTION**

## Section 06 10 00 Rough Carpentry

Specifications

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### PART 1 - GENERAL

- 1.01 SECTION INCLUDES
- A. Blocking in wall and roof openings; wood furring and grounds; electrical panel back boards, concealed wood blocking.
  - B. Concealed wood blocking for support of toilet and bath accessories, wall cabinets, wood trim, where illustrated in drawings.
- 1.02 RELATED SECTIONS
- A. Section 04 22 00 – Concrete Unit Masonry: Concrete Block wall.
  - B. Section 06 40 00 – Interior Architectural Woodwork: Walls to receive wood blocking for millwork.
  - C. Section 09 29 16 - Gypsum Board Systems: Walls to receive blocking for doors, windows, toilet accessories, door frames, etc.
- 1.03 REFERENCES
- A. ALSC (American Lumber Standards Committee) - Softwood Lumber Standards.
  - B. ANSI A208.1 - Mat-Formed Wood Particleboard.
  - C. APA (American Plywood Association).
  - D. NFPA (National Forest Products Association).
  - E. SPIB (Southern Pine Inspection Bureau).
- 1.04 QUALITY ASSURANCE
- A. Perform Work in accordance with the following agencies:
    - 1. Lumber Grading Agency: Certified by ALSC.
    - 2. Plywood Grading Agency: Certified by APA.

### PART 2 - PRODUCTS

- 2.01 LUMBER MATERIALS
- A. Lumber Grading Rules: WWPA.
  - B. Non-Structural Light Framing: 2 x 2 Southern Pine species, 19 percent maximum moisture content, No. 2 Kiln Dried.
  - C. Plate: Pressure treated Southern Pine, No. 2 Kiln Dried.
- 2.02 SHEATHING MATERIALS
- A. Plywood Sheathing APA rated sheathing, classified for exterior use; 5/8 inch thick, 48 x 96 inch sized sheets, square edges, preservative treated AWPA C9.
- 2.03 FACTORY WOOD TREATMENT
- A. Wood Preservative Pressure Treatment: AWPA Treatment C1 using water borne preservative with 0.25 percent retainage.
  - B. Wood Preservative Surface Application: Clear type.
  - C. Moisture Content: Kiln dried after treatment to attain max. 19% for lumber and max. 15% for plywood
- 2.04 FIRE-TREATED WOOD:
- A. Used above ceilings and/ or within fire-rated enclosures plus other areas as required by code. Max. 25 flame spread per ASTM E-84. Isolate from contact with metal items.
- 2.05 PRESSURE TREATED WOOD:
- A. Used in contact with masonry, steel, concrete, and/ or roofing system materials.
  - B. Micronized copper quaternary at locations in contact with aluminum
  - C. Hot-dipped galvanized and/ or stainless steel fasteners in accordance with manufacturers instructions