

## **SECTION 05210 - STEEL JOISTS**

### **PART 1 GENERAL**

#### **1.01 WORK INCLUDED**

- A. Open web steel joists, with bridging, attached bearing plates, angles, and anchors.
- B. Loose bearing plates and anchor bolts for site placement.

#### **1.02 WORK FURNISHED BUT INSTALLED UNDER OTHER SECTIONS**

- A. Section 0300.1500: Anchorages cast in concrete.
- B. Section 0400.0200: Anchorages embedded in masonry.

#### **1.03 RELATED WORK**

- A. Section 05120 - Structural Steel.
- B. Section 05311 - Steel Roof Deck: Support framing for small openings in metal deck.
- C. Section 05313 - Steel Floor Deck: Support framing for small openings in metal deck.

#### **1.04 REFERENCES**

- A. ASTM A307 - Carbon Steel Threaded Standard Fasteners.
- B. ASTM A325 - High Strength Bolts for Structural Steel Joints.
- C. AWS D1.1 - Structural Welding Code.
- D. FS TT-P-636 - Primer Coating, Alkyd, Wood and Ferrous Metal.
- E. SJI - Standard Specifications for Open Web Steel Joists H-Series, and Standard Specifications for Longspan Steel Joists LH- Series and Deep Longspan Steel Joists DLH-Series.
- F. SSPC 15 - Red Oxide.

## 1.05 QUALITY ASSURANCE

- A. Conform to SJI Standard Specifications, Load Tables, and Weight Tables.

## 1.06 SHOP DRAWINGS

- A. Submit shop drawings under provisions of the General Conditions.
- B. Indicate standard designations, configuration, sizes, spacing, and locations of joists, bridging, connections, and attachments.
- C. Prepare shop drawings under seal of a Professional Structural Engineer registered in State of New York.

## PART 2 PRODUCTS

### 2.01 MATERIALS

- A. Open Web Joist Members: SJI Type.
- B. Anchor Bolts, Nuts and Washers: ASTM A325.
- C. Primer: SSPC 15, Type 1 red oxide.

### 2.02 FABRICATION

- A. Fabricate steel joists in accordance with SJI Standard Specifications including headers and other supplementary framing.
- B. Provide bottom and top joist chord extensions indicated.
- C. Drill holes in top chords necessary for attachment of wood nailers. Weld threaded lugs to top chords for attachment of wood nailers.
- D. Prepare and shop prime with two coats of primer.

## PART 3 EXECUTION

### 3.01 ERECTION

- A. Erect steel joists in accordance with SJI Standard Specifications.
- B. Bear joists on supports in accordance with SJI.
- C. During erection, provide temporary bracing for induced loads and stresses.
- D. Coordinate placement of anchorages in concrete and masonry construction for securing bearing plates.
- E. Field weld joist seat to placed bearing plates after alignment, positioning after installation of bridging.
- F. Do not permit erection of decking until joists are braced and bridged.
- G. Do not field cut or alter joists without approval of Architect/Engineer.
- H. After erection, prime welds, abrasions, and surfaces not primed. Use primer consistent with shop coat.
- I. All joists and accessories shall be of the type, size, gage and spacing as shown on the plans.
- J. All joists shall receive one shop coat of approved paint, and after erection, touch up paint as necessary.
- K. All bridging shall be continuous top and bottom, and shall be welded to joists. Provide "X" bridging where shown.
- L. Any field cutout to be made in joists shall be approved by, and reinforced as specified by the engineer. No cutout shall be made prior to approval.
- M. End blocking shall be provided where joists are not otherwise restrained against rotation.
- N. All joists to be welded or bolted to supporting steel per SJI requirements.

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