SECTION 05 30 00 - METAL DECKING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Provide all metal decking complete in place as shown on the drawings, specified herein, and needed for a complete and proper installation.

1.2 RELATED REQUIREMENTS

A. Section 05 10 00 - Structural Steel

B. Section 05 40 00 - Cold-Formed Metal Framing

1.3 REFERENCE STANDARDS:

A. ASTM International, latest versions

1. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process

2. A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low Alloy, High-Strength Low Alloy with Improved Formability

3. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low Alloy with Improved Formability, and Ultra- High-Strength.

B. American Welding Society (AWS), latest edition.

1. D1.3 - Structural Welding Code - Sheet Steel

C. Steel Deck Institute.

1. SDI - Design Manual for Floor Decks, Form Decks and Roof Decks

2. SDI - Diaphragm Design Manual Third Edition

1.4 QUALITY ASSURANCE

A. Qualification of Field Welders: Welders shall be certified in accordance with AWS D1.3 within the last 12 months.

1.5 SUBMITTALS

A. Product Data: Submit manufacturer's specifications and installation instructions for each type of decking and accessories.

B. Shop Drawings: Submit detailed drawings showing layout and types of deck panels, anchorage details, and conditions requiring closure panels, supplementary framing, sump pans, cant strips, cut openings, special jointing or other accessories. Shop Drawings shall not be made by reproduction of the Contract Drawings.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. Support metal deck above ground on skids, pallets, platforms or other supports.

B. Protect metal deck from damage.

C. Store packaged materials in original unbroken package or container.

D. Waste Management and Disposal: As specified in Division 01 Section “Construction Waste Management” and as follows:

1. Collect off cuts and scrap and place in designated area for recycling in accordance with the Waste Management Plan and local recycler standards.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Metal Roof Deck: ASTM A 1008, Grade C, 50 ksi steel. See plans for type, size and finish. Metal deck used in fire rated assemblies shall meet the requirements of UL. The UL mark on the product will be accepted as evidence of compliance.

B. Finishes:

1. Painted: Manufacturer's baked-on, rust-inhibitive paint.

2. Galvanized: Conform to ASTM A 653, G60.

PART 3 - EXECUTION

3.1 COORDINATION

A. All edge angle shall be in place with proper attachment prior to installation of metal deck. All roof and floor opening frames shall be installed prior to deck installation.

3.2 INSTALLATION

A. General: Install deck units and accessories in accordance with manufacturer's recommendations and final shop drawings, and as specified herein. Locate deck bundles to prevent overloading of structural members.

B. Place deck units on supporting steel framework and adjust to final position with ends accurately aligned and bearing on supporting members before being permanently fastened. Do not stretch or contract side lap interlocks.

C. Place deck units in straight alignment for entire length of run.

D. Place deck units flat and square secured to adjacent framing without warp or excessive deflection.

E. Lap ends of deck units a minimum of 2 inches over supports.

F. Place deck units to permit proper attachment to the perimeter deck angle.

G. Do not use deck units for storage or working platforms until permanently secured.

H. Cut and neatly fit deck units and accessories around other work projecting through or adjacent to the decking, as shown.

I. Fasten deck units to steel supporting members as shown on the structural drawings.

J. Fasten side laps of units as called for on the structural drawings.

K. Care shall be exercised in the selection of electrodes and amperage to provide positive welds and to prevent high amperage blowholes.

L. Comply with AWS D1.3 requirements and procedures.

M. Provide additional metal reinforcement and closure pieces as required for strength, continuity of decking and support of other work shown.

N. Install closure strips at all locations as recommended by the manufacturer to provide a complete installation.

O. Provide cleaning and touch-up painting of field welds, abraded areas and rust spots, as required for all exposed areas after erection and before proceeding with field painting.

END OF SECTION 05 30 00