



SECTION 14800- PLATFORMS AND PERMANENT SCAFFOLDING SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Portable, non-penetrating, Industrial process equipment.
- B. Portable, non-penetrating, walkways and platform systems.
- C. Permanent, beam and pier platform systems.

1.2 RELATED SECTIONS

- A. Section 05100 - Structural Metal Framing: Permanent support framing for scaffolding.

1.3 REFERENCES

- A. ASTM A36 - Standard Specification for Carbon Structural Steel; 2005.
- B. ASTM A53 - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2005.
- C. ASTM A123 - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2002.
- D. ASTM A 320 - Standard Specification for Alloy-Steel and Stainless Steel Bolting Materials for Low-Temperature Service; 2005.
- E. ASTM A 570 - Standard Specification for Steel, Sheet and Strip, Carbon, Hot-Rolled; 1998.
- F. ASTM A 582 - Standard Specification for Free-Machining Stainless Steel Bars; 2005.
- G. AWS A5.18 - Specification for Carbon Steel Electrodes and Rods for Gas Shielded Arc Welding.
- H. SAE J429 - Mechanical and Material Requirements for Externally Threaded Fasteners.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. [Product Data]: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Shop Drawings:
 - 1. Submit shop drawings noting the type, size and dimensions of each unit specified.
 - 2. Submit plan noting location of each unit specified.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Single manufacturer specializing in platform systems and accessories shall provide all equipment specified in this section.
- B. Site Inspection: When requested by the Architect, Contractor or other parties to the contract, a representative of the manufacturer shall visit the site during work progress to inspect and ensure that the installation conforms to the design requirements and installation requirements.
- C. Installer Qualifications:
 - 1. Installer shall have at least five (5) years experience in installing platforms and accessories of the same type and scope as specified.
 - 2. Installer shall be licensed, registered or otherwise authorized by the manufacturer and local jurisdiction to install platforms and accessories

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.8 WARRANTY

- A. Provide an executed manufacturer's standard warranty outlining the terms and conditions of the limited warranty against manufacturing defects for a period of fifteen (15) years.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Universal Support Systems, LLC, which is located at: P. O. Box 575 102 Manor Ave. Suite 101; Bardstown, KY 40004; Toll Free Tel: 877-331-9135; Tel: 502-331-9135; Fax: 502-331-9992; Email: info@uss-usa.com; Web: www.uss-usa.com
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 MODULAR PLATFORMS

- A. Personnel Support: Modular platform system, either for maintenance purposes or pedestrian traffic, with frame layout to provide adequate area for maintenance of equipment or walkway/patio for pedestrian traffic. Walkways may require close meshed grating to accommodate pedestrian traffic. Use steps and handrails where shown on drawings.
- B. Equipment Support: Modular platform system with frame layout for specific equipment size and weight, including required areas for clearance around equipment. Platform configuration and quantity of leg assemblies shall be such that the total weight of the platform and equipment shall not produce a contact pressure of a magnitude to exceed the load limits of the footings, piers or other supporting structures. Use steps and handrails where shown on drawings.

2.3 FABRICATION

- A. Materials:
 - 1. Structural Steel, ASTM A36.
 - 2. Welded and Seamless Steel Pipe, ASTM A53 Grade B.
 - 3. Hot-rolled Carbon Steel Sheets and Strips, Structural Quality, ASTM A 570, Grades D and E.
 - 4. Bolts for Structural Steel Joints, including suitable nuts and plain hardened washers, SAE J429 Grade 2.
 - 5. Electrodes for Gas Metal-Arc Welding, AWS A5.18.
 - 6. Zinc Coating: Hot-Dip Galvanized Coating for materials in exterior assemblies or exterior walls, ASTM A123.
 - 7. Adjustable Connectors, Type 303 Stainless Steel.
- B. Adjustable Base:
 - 1. Base Plate: 16 inch (406mm) diameter 1/4" steel plate with elevated center hub for weight dispersing, corrosion resistant finish. 201 square inches (1297 sq cm) per unit.
 - 2. Adjuster: 6 inch (152mm) range type 303 stainless steel threaded adjustment system.
 - 3. Grounding Lead: No. 2 Tin coated, exothermically welded to base plate.
 - 4. Upper Leg: 6 inch (152mm) height tubular steel with threaded end plate, galvanized.
 - 5. Upper Leg: 10 inch (254mm) height tubular steel with threaded end plate, galvanized.
 - 6. Upper Leg: Articulating tubular steel with threaded end plate, galvanized.
- C. Modular Frame:
 - 1. Steel angle structural steel frame, L4 x 4 x 1/4, galvanized.
 - 2. Bar Grating: Type 19W4, 1 inch by 3/16 inch (25mm x 5mm), smooth surface, banded and galvanized.
 - 3. Size: 24 inches by 48 inches (610mm x 1219mm).
 - 4. Size: 30 inches by 60 inches (762mm x 1524mm).
 - 5. Size: 48 inches by 48 inches (1219mm x 1219mm).
 - 6. Size: 36 inches by 72 inches (914mm x 1829mm).

2.4 BEAM AND PIER PLATFORM

- A. Frame: Framing members attach to concrete piers. Hot-dip galvanized after fabrication.
 - 1. Frame: Field welded C-channel.
 - 2. Frame: Bolt Together C-channel.
 - 3. Frame: Field welded I-beam.
 - 4. Frame: Bolt Together I-beam.
- B. Platform:
 - 1. Platform Assembly: Field welded.
 - 2. Platform Assembly: Bolt-together.

2.5 PLATFORM ACCESSORIES

- A. Handrails: All galvanized steel construction, bolted directly to the modular frame. Railing heights meet all OSHA standards.
 - 1. 1 1/2 inch (38mm) diameter pipe rails
 - 2. 4 inch (102mm) high toeboards.
 - 3. Length: 24 inch (610mm).
 - 4. Length: 30 inch (762mm).
 - 5. Length: 48 inch (1219mm).
 - 6. Length: 60 inch (1524mm).
- B. Platform Steps: All galvanized steel construction, bolted directly to the modular frame.
 - 1. Dimensions: 24 inches (610mm) wide by 11 inches (279mm) deep with a 7 1/2 inch

(191mm) deep anti-slip steel grating tread.

- C. Utility Racks: All galvanized steel construction with top and intermediate horizontal steel angle frames. Rack bolted directly to the modular frame for mounting ancillary components required for the installation of primary equipment.
 - 1. Length: 48 inch (1219mm).
 - 2. Length: 60 inch (1524mm).

PART 3 EXECUTION

3.1 GENERAL

- A. The USS Modular Platform System requires minimal site preparation before platform assembly. Field leveling adjustments up to 6 inches (152mm) may be made with the patented USS leg assembly design. Slopes greater than 1/2 inch (13mm) per foot may require the use of the USS articulating leg design or a different length of upper leg.

3.2 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.3 PREPARATION

- A. Remove debris and rubbish from the area for the proposed scaffolding.
- B. Install support bracing and footings as specified in the appropriate sections. Allow adequate curing time of all concrete products prior to installation.

3.4 INSTALLATION

- A. Modular platform systems shall be assembled per manufacturer's drawings and instructions.
- B. Install and locate adjustable bases in accordance with rated load calculations of the platform and any additional overburden.
- C. Install handrails and steps in accordance with all OSHA requirements.
- D. Connect grounding leads as shown on drawings.

3.5 CLEANING AND PROTECTION

- A. Protect all roof surfaces from damage during installation.
- B. Remove all packaging, unused material and other installation material from the project site.
- C. Remove any surface dirt or grease from platform surfaces. Repair any surface blemishes and leave work area in clean condition.
- D. Provide protection as required to leave the work in undamaged condition at the time of completion.

END OF SECTION