

# **CLOSED METAL STORAGE SHELVING**

## **PART 1.0 GENERAL**

### **1.1 DESCRIPTION**

- A. Work Included: Install pre-manufactured clipper metal storage shelving and other items not specifically described as being installed under other Sections of these Specifications.

### **1.2 SUBMITTALS**

- A. Shop Drawings:
  - 1. Submit shop drawings for storage units, identified with location, materials and finishes.
  - 2. Indicate materials, methods of assembly and jointing, thickness of parts, location and type of hardware.
  - 3. Take measurements at the site for space where each item is to be placed.
- B. Product Data: Submit manufacturer's detailed product description. Indicate unit construction including finishes.

### **1.3 DELIVERY, STORAGE AND HANDLING**

- A. Deliver storage units only after building is enclosed, wet operations, grinding and painting in building are completed.
- B. Protect finished surfaces from soiling and damage during handling and installation.

## **PART 2.0 PRODUCTS**

**GENERAL:** All shelving shall comply with SMA and ANSI MH 28.1-1982 and in addition shall have the following characteristics:

### **2.1 ACCEPTABLE MANUFACTURERS**

- A. Penco Products, Clipper Class 1 Heavy Duty Open Shelving (Basis of Design)  
Tennsco Q-Line Heavy Duty Open Shelving

## 2.2 MATERIALS AND COMPONENTS

- A. **POSTS** - All posts shall be punched for clip or nut and bolt construction. Shelves and accessories are to be vertically adjustable on 1" centers. Side sway braces or side panels to be attached to the side flange of the post. Bolts, nuts, and sway braces or panels shall not obstruct the full adjustability of the shelves.
1. **OFFSET ANGLE-** 14 gauge offset angle post shall be roll formed and have overall dimensions of 1-1/8" wide x 2-1/2" deep. The rear flange shall be punched to accept sway braces or backs, the side flange shall be punched to accept side sway braces or side panels.
  2. **BOX POST-** 14 gauge box post to be roll formed and have overall dimensions of 3/4" wide x 2-7/16" deep. Box post to be flush within 1/4" of the face of the shelves when assembled.
  3. Posts to be 87" high
- A. **SHELVES: CLIPPER HI-PERFORMANCE BOX -FORMED:** Class 1 - Heavy Duty 20 gauge shelves , manufactured from cold rolled steel. Shelves have 1-1/4" face on all four sides. Front and rear faces have four 90\_ bends providing a 3/4" x 1-1/4" high tubular shape with an 11/16" wide flange seated against the underside of the shelf.
1. Seven (7) shelves per section
- B. **CLIPPER SHELF CLIP:** One piece 14 gauge rugged compression type to insert into either box or offset angle posts to form a positive four point connection. Clips shall have two claw-like hooks to seat firmly into post slots and two tabs at bottom to seat into post holes for a tight friction connection. All clips for all posts and shelves to be the same. Design shall offer a pre-clipping feature to simplify erection. Finish: zinc plated. All shelves are to have four independently adjustable clips.
- C. **BACKS:** (for closed units when specified) Shall be 24 gauge steel with holes on each side for bolting to angle posts and in the middle for using a back panel clip
- D. **SIDE PANELS:** (for closed units when specified) Shall be 24 gauge steel. Each side shall be punched with holes for bolting to posts.
- F. **BASE STRIP:** (for closed units when specified) Shall be 18 gauge steel attached to face of shelf with bolts and nuts to close space between the bottom of the shelf and the floor
- E. **FINISH:** All painted parts shall be selected from a minimum of four standard colors. Materials shall be cleaned and phosphatized in a multi-stage process, dried in a 400 degrees oven and electrostatically spray painted with a high grade enamel and baked on at 360 degrees (site finish is not acceptable)
1. Color - gray

### **2.3 FABRICATION**

- A. Manufacture shelving in sizes as necessary to fit wall-to-wall as indicated on the drawings. Gaps in excess of 2" are not acceptable.

## **PART 3.0 EXECUTION**

### **3.1 SURFACE CONDITIONS**

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

### **3.2 INSTALLATION**

- A. Install in strict accordance with manufacturer's current instructions and approved shop drawings.
- B. Anchor all wall units.

**END OF SECTION**