ShelterSDirect
"first choice"

MATERIAL SPECIFICATIONS FOR PRE-FABRICATED STRUCTURAL STEEL CANOPIES

Structural Components

1. Columns:

a. Structural steel tubing shall be used.

b. Square tube to be ASTM A500 Grade B with a minimum yield stress of 46,000 psi.

c. Round tube to be ASTM A500 Grade B with a minimum yield stress of 42,000 psi.

d. Sized to meet or exceed specific project design load requirements.

e. Provide each column with a 4" electrical access opening and cover plate.

2. Base plates:

a. ASTM A36 structural steel plate with a minimum yield stress of 36,000 psi. Plate to be minimum 1" thick with welded gussets. Shop fabricated with pre-punched or pre-drilled boltholes.

3. Top plates:

a. ASTM A36 structural steel plate with a minimum yield stress of 36,000 psi. Plate to be minimum 3/4" thick with welded gussets. Shop fabricated with pre-punched or pre-drilled boltholes.

4. Structural Framing:

a. ASTM A36 wide flange steel beams shall be used.

5. Structural Connections:

a. ASTM A36 structural steel connection plates with a minimum yield stress of 36,000 psi.

b. All framing members shall be shop fabricated for bolted field assembly.

c. Domestic ASTM A325 high strength bolts shall be used. All ASTM A325 Bolts shall be installed per the RSCS SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS, 11/13/85, contained in part 5 of the AISC MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN, 9TH EDITION.

d. Flange and purlin bracing where required.

6. Anchor Bolts:

a. ASTM A572 grade 50 threaded round stock with a minimum yield stress of 50,000 psi.

b. 1-1/4" diameter x 36" long rod with a 90 degree, 6"minimum, bent leg shall be used. Total bolt length 42".

c. Threaded projection above footing shall be 7".

d. Double nuts and washers for each bolt shall be provided, one set to be used for plumbing and leveling.

e. Templates for setting anchor bolts shall be provided.

f. Templates shall be removed before setting column on foundation.

7. Painting:

a. All framing members will be given one shop coat of drying red oxide primer.

B. Deck Panels

a. ASTM A653 with a minimum yield stress of 40,000 psi having a G60 galvanized surface.

b. 20 gauge, 16" wide x 3" deep, steel panels.

c. Panels are fastened to the wide flange purlin beams with an engineered, screw type, clamp and lock nut system.

d. No splicing of deck panels will be allowed.

e. Panels shall have a finish side coated with a full coat of polyester paint baked on over an epoxy primer. A white wash coat applied over an epoxy primer shall protect reverse side.

f. Panels to be manufactured in sufficient length to avoid unnecessary center gutters.

C. Fascias

1. Laminated Panels

a. 24 gage sheet steel.

b. Factory pre-assembled in 10' lengths.

c. No exposed fasteners on bottom or exterior face.

d. Panel core material: 1" thick virgin expanded polystyrene in 1.25 PCF density.

e. Panels shall have a finish side coated with a fully coat of polyester paint baked on over an epoxy primer. A white polyester wash coat baked on over an epoxy primer shall protect reverse side of panel.

f. Backer sheet of laminated panel to be G60 galvanized sheet metal.

2. Fascia Attachment Systems:

a. Fascia support brackets to be 20 gage galvanized steel. Break to form channel 1-1/2" x 2" x 1-1/2". 8' long.

D. Accessories

1. Gutter:

a. Straight sections to be ASTM A653 with a minimum yield stress of 40,000 psi having a G60 galvanized surface.

b. Straight sections are 8" wide x 3" deep, 20 gage steel.

c. Straight gutter sections shall have a finish side coated with a full coat of polyester paint baked on over an epoxy primer. Interior surface shall be protected by a white wash coat baked on over an epoxy primer.

d. Corners to be molded fiberglass with gel coat finish.

2. Downspouts:

a. Collectors

1. Round, gel coated fiberglass.

b. External Downspouts

1. 4" x 3", 26 gage, roll formed with watertight locked seams.
2. Exterior painted with a full coat of white/bronze polyester paint baked on over an epoxy primer.
3. Downspouts shall be of one continuous length up to 15'.

c. Internal Drains

1. 3" Schedule 40 PVC

3. Hardware:

a. Gutter to deck panel fasteners shall be #14 x 3/4" long, self-drilling, screws.

4. Sealants:

a. Tube sealant shall be 100% silicone and/or urethane caulk.

E. General Notes

a. All materials are new and without defects which would lessen quality of work

b. All materials will conform to the requirements, tolerances, etc. of the latest editions of the AISC Manual of Steel Construction, AISI Specifications for the Design of Cold Formed Steel Members, ASTM Standard Specifications for General Requirements for rolled steel plates, shapes, sheets, and bars for structural use, and AWS for welded connections.

c. Canopy erection drawings to be furnished at time of shipment. Piece marks included for field identification of all major parts.

d. Anchor bolt setting plans includes a required footing size.

e. Upon request, design calculations or a letter of design certification, sealed by a registered professional engineer licensed in the state in which the job sit e is located, shall be provided.

f. All A325 bolts shall be tightened by the turn-of-nut method.