



MAGNA-LOC

Construction No. 577

July 02, 2003

Uplift - Class 90

Fire Not Investigated

1. **Metal Roof Deck Panels*** - No. 24 MSG min coated steel. Max panel width 16 in., rib height 2 in. Panels continuous over two or more spans. Endlaps to be 6 in. and to include back up plate (item 3). Panels may be mechanically curved at a radius between 20 ft and 109 ft incl. A bead of sealant may be used at panel ends and side joints. Side laps to be tightend and crimped with an electric crimping machine to approx 90 degree angle. Crimping process to include the upper portion of panel clips (Item 2).

METAL SALES MFG CORP (View Classification) - "Magna-Loc 18", "Magna-Loc 16" or "Magna-Loc 180" (180° Seam)

2. **Roof Deck Fasteners*** - Fixed Clip or Utility - One piece assembly fabricated from 22 min gauge steel, 3 in. wide. Floating Clip - Two piece assembly with a base fabricated from 16 MSG min gauge steel and a topp fabricated from 22 MSG min gauge steel, 4-1/4 in. wide. Clip spacing to be 48 in. OC max. Sealant may be used on top of the clips.

Fixed Clip - (Not Shown) - One piece assembly fabricated from No. 22 MSG min thick steel, 3-1/2 in. wide.

BUILDING RESEARCH SYSTEMS INC (View Classification) - "Challenger 100 Fixed Clip"

Floating Clip - Two piece assembly with a base fabricated from No. 16 MSG min thick steel, 2 in. wide and a top fabricated from No. 22 MSG min thick steel, 4-5/16 in. wide.

BUILDING RESEARCH SYSTEMS INC (View Classification) - "Challenger 100 Floating Clip"

3. **Endlap Back-Up Plate*** - (Not Shown) - 16 MSG min coated steel, 15-1/2 in. wide with two 1 in. wide by 3/4 in. long tabs for sliding over end of panels.
4. **Bearing Plate - Optional** - 16 MSG min coated steel, 3-7/8 in. wide by 5 in. long or 18 MSG min coated steel, 3-5/8 wide by 3 in. long. Used under panel clip (Item 2) over rigid insulation (Item 8).
5. **Panel Fasteners (Screws)** - Screws used to attach the panel clips (Item 2) to metal deck (Item 6) to be No. 14 Truss Head with No. 3 Phillips drive. Length to be a min of 1/2 in. longer than the combined thickness of the liner panel (Item 6), rigid insulation (Item 8), gypsum wallboard (Item 10) and plywood or oriented strand board (Item 10). Two screws per clip. Screws used to attach metal deck (Item 6) to purlins (Item 12) to be No. 12 x 1-1/4 in. self drilling. Hex Head with 5/8 in OD washer. Two screws to be used at each valley. Screws at metal deck side laps to be the same type as metal deck to purlin screws. Spacing to be 20 in. OC.

Screws used at endlap to be one of the following: 14 x 1 in. Type AB, Hex Washer Head self-tapping, 14 x 1-1/4 in. Hex Washer Head, self-tapping, 14 x 1 in. Type AB Phillips Stainless Steel, self-tapping. Five screws per panel in a 1, 4, 5, 5, 3-in. pattern.
6. **Metal Deck** - 22 MSG min steel. Min yield strength 30 ksi. Min depth 1-1/2 in. Panel type to be A, B, F or N Deck. Metal deck to be fastened to supports with screws as indicated in Item 4 or with welds and weld washers of type indicated by

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6. (continued) - manufacturer of metal deck. Welds to be located in each valley.

7. Fastener Reinforcement - (Not Shown) - Reinforcements used with the screws attaching the metal deck to the purlins Thickness to be 0.125 in. with an area of approx of 2 sq in.

8. Foamed Plastic - Rigid Insulation - (Optional) - Min thickness 1 in. Any rigid type having a min compressive strength of 25 psi or min density of 2 pcf or see products Classified under TJBX. Supplied in 4 ft wide sheets.

9. Plywood or OSB - (Optional) (Not Shown) - Min APA Rated plywood, nom 1/2 in. thick or oriented strand board (OSB), nom 7/16 in. thick, 4 x 8 ft. Sheets to be installed on top of Foamed plastic (Item 8) in lieu of bearing plates (Item 4).

10. Wallboard, Gypsum - (Optional)(Not Shown) - Any 5/8 in. thick gypsum wallboard supplied in sheets 2 x 4 to 4 x 12 ft. Applied perpendicular to steel roof deck direction with adhesive. End joints to occur over crests of steel roof deck and be staggered 2 ft. in adjacent rows. The total cumulative thickness of the rigid board (Item 8) and gypsum board may not exceed 4 in.

11. Vapor barrier - (Optional) - Used between liner panel and foamed plastic. Min 6 mil plastic sheeting.

12. Supports (Purlins) - Purlins used to support metal deck to be cold-formed steel sections. AS alternates: structural steel components (hot rolled beams, channels, etc.) may be used. Min gauge and yield to depend on design considerations. max spacing to depend on design considerations.

Refer to general information, Roof Deck Construction, (Roofing Materials and System Directory) for items not evaluated.

*Bearing the UL Classification Mark



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