

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

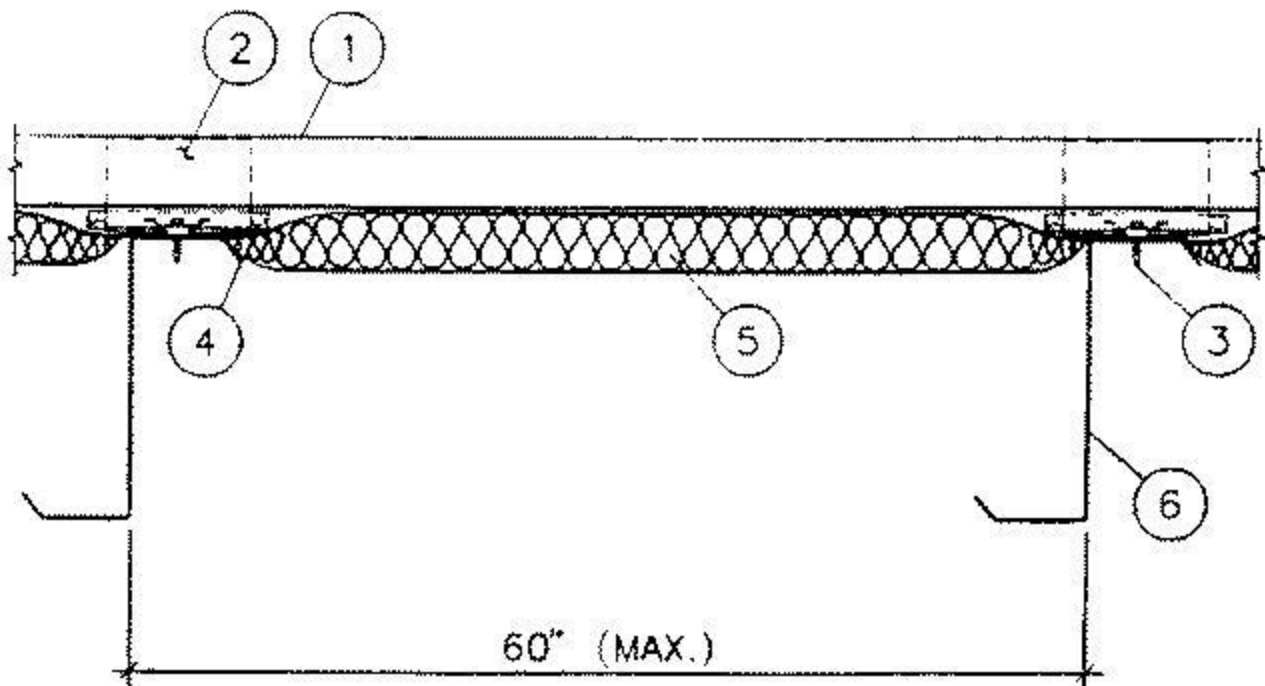
Roof Deck Constructions

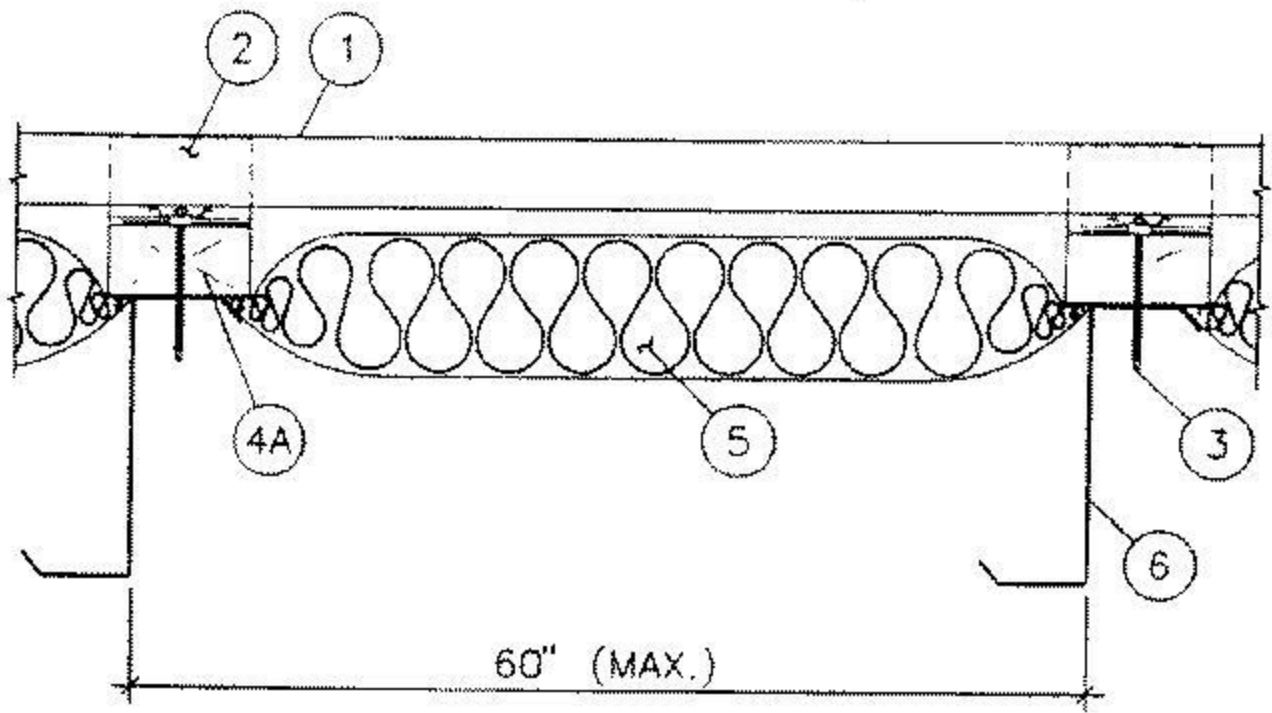
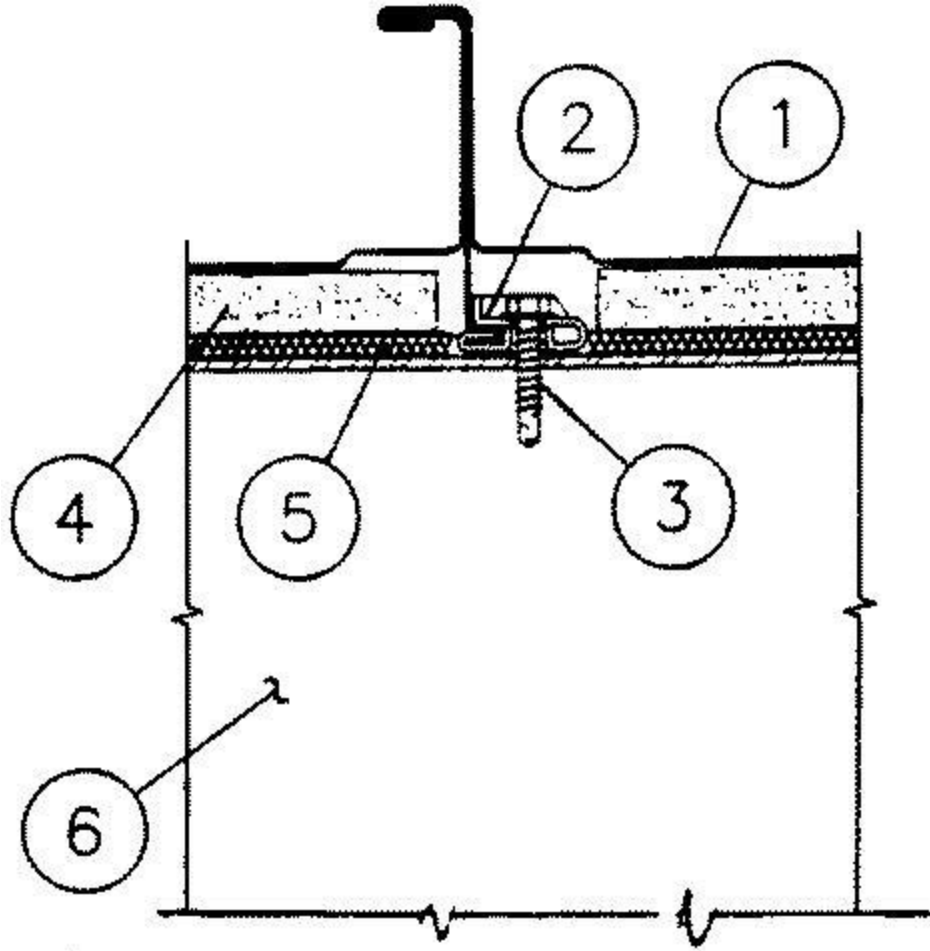
[See General Information for Roof Deck Constructions](#)

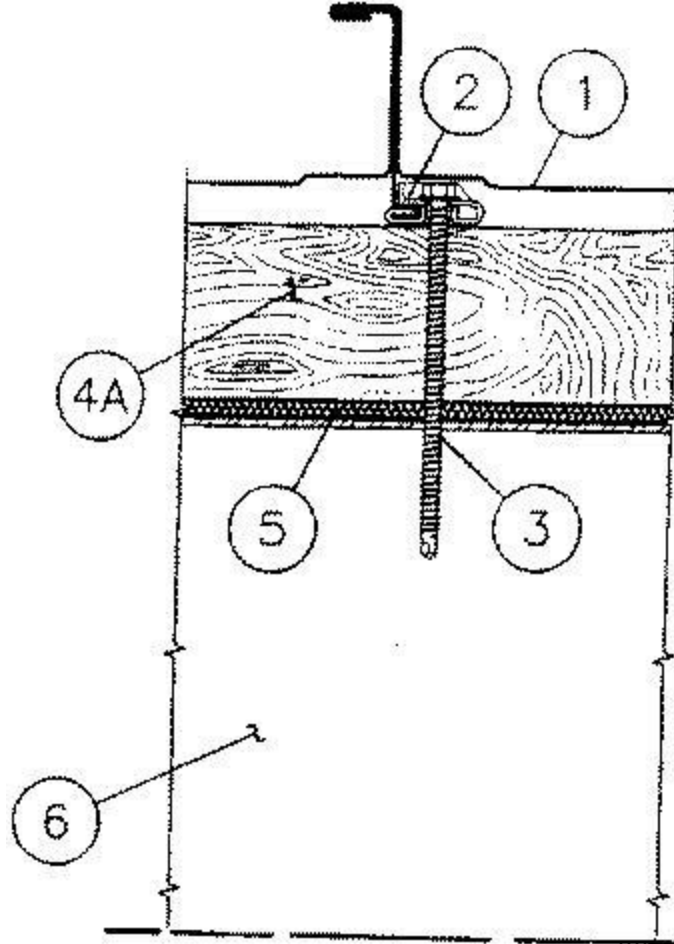
Construction No. 506

April 1, 2022

Uplift — Class 90
Fire Not Investigated







1. Metal Roof Deck Panels* — No. 24 MSG min thick coated steel. Panel width, max 18 in., min 12 in.; rib height 2 in. Panels continuous over two or more spans. The panel flat area may have optional striations or minor corrugations placed at various locations in the panel flat area beginning min of 2 in. from side ribs. The upper flange of the panel rib may be horizontal, or optionally formed down to form an angle of 0 degree to 90 degree between the vertical segment and the top flange of the rib. End lap to occur adjacent to and within 12 in. of purlin (Item 6) with panels overlapped 2 in. min.

An end lap back-up-plate (Item 2A) to be used. A bead of sealant may be used at panel end laps and side ribs. Ribs to be seamed with an electric or hand seaming tool to form a flange with a tight hem. Seaming process to include the upper portion of the Panel Clips (Item 2).

ACI BUILDING SYSTEMS INC ([View Classification](#)) — "UltraLok", "UltraLok 216", "UltraLok 218"

ALLIANCE STEEL INC ([View Classification](#)) — "Alliance Lok 212", "Alliance Lok 216", "Alliance Lok 218"

ALLSOUTH PRE-ENGINEERED COMPONENTS L L C ([View Classification](#)) — "APEC 216", "APEC 218"

BEHLEN MFG CO ([View Classification](#)) — "ZL-16"

BIGBEE STEEL BUILDINGS INC ([View Classification](#)) — "Bigbee VR"

CENTRAL STATES MFG INC ([View Classification](#)) — "Central Span"

CENTRIA, A DIVISION OF NCI GROUP, INC ([View Classification](#)) — "SDP200-12", "SDP200-16", "SDP200-18"

HORIZON STRUCTURAL SYSTEMS ([View Classification](#)) — "Panel Craft"

MCELROY METAL MILL INC ([View Classification](#)) — "Maxima-212", "Maxima-216", "Maxima-218"

METAL SALES MANUFACTURING CORPORATION ([View Classification](#)) — "Magna-Loc 18", "Magna-Loc 16" or "Magna-Loc 180" (180° Seam)

MBCI ([View Classification](#)) — "BattenLok HS"

RIGID GLOBAL BUILDINGS L L C ([View Classification](#)) — "Platinum Series"

ROLLFAB METAL BUILDING PRODUCTS ([View Classification](#)) — "MS-200HP/90" or "MS-200HP/180"

SCHULTE BUILDING SYSTEMS INC ([View Classification](#)) — "VS-216"

SOUTHEASTERN METALS MANUFACTURING CO INC ([View Classification](#)) — "Rock-Lok"

STANDARD STRUCTURES INC ([View Classification](#)) — "PanelCraft"

TAYLOR METAL INC, DBA TAYLOR METAL PRODUCTS ([View Classification](#)) — "MS200"

TRIAD CORRUGATED METALS INC ([View Classification](#)) — "MS216" or "MS218"

TREMCO CPG INC. — "TremLock VP212", "TremLock VP216", "TremLock VP218"

WHIRLWIND STEEL BUILDINGS INC ([View Classification](#)) — "WeatherLok-16"

1A. **Metal Roof Deck Panels*** — (Not Shown) - Panels (coated steel only) may be physically or mechanically curved at a radius of 4 ft. or greater.

MCELROY METAL MILL INC — Maxima ADV

TREMCO CPG INC. — TremLock VP180

2. **Roof Deck Fasteners* (Panel Clips)** — Located at side of panels over purlins (Item 6). (Max spacing 60 in. OC). When wood thermal block (Item 4A) is used, clips to be located on top. Either of the following:

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"

BUILDING RESEARCH SYSTEMS INC ([View Classification](#)) — "FC 11200", "FC 11203", "FC 11213", or "MPS 1220"

MCELROY METAL MILL INC ([View Classification](#)) — "Maxima 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" or "MPW-1213-XX Floating Clip".

MCELROY METAL MILL INC ([View Classification](#)) — "Maximum Floating Clip"

Floating Clip — Two piece assembly with a base fabricated from No. 16 MSG min thick steel, 3-3/8 in. wide and a top fabricated from No. 22 MSG min thick steel, 4-5/16 in. wide.

BUILDING RESEARCH SYSTEMS INC ([View Classification](#)) — "MPS-PC Floating Clip"

2A. **End Lap Back-Up-Plate** — (Not shown) — No. 16 MSG min thick coated steel channel, 3 in. wide with two 3/8 in. deep legs. Max length 74 in. Located under the panel end lap (50 ksi min yield strength).

2B. **Roof Deck Fasteners*(Cinch Plate)** — (Optional) — (Not Shown) — width 1-5/16 in., length 18 in. max. Fabricated from No. 20 MSG min thick stainless steel. Located over end lap.

BUILDING RESEARCH SYSTEMS INC ([View Classification](#)) — "PC-16 Cinch Plate", "PC-18 Cinch Plate"

2C. **End Lap Back-Up-Plate** — (Optional) — (Not shown) — No. 16 MSG min thick coated steel. Width 11, 15 or 17 in., length 7 in. Two 3/4 in. by 3/4 in. tabs and a 1 in. deep vertical leg located at upslope edge of panel. Used with Item 2A when Item 2B is not used (50 ksi min yield strength).

3. **Fasteners (Screws)** — For panel clip-to-purlin attachment to be No. 1/4-14 by min 1 in. long self drilling, self-tapping hex-washer-head plated steel screws. Two fasteners used per clip. Fasteners used at end lap to be one of the following: No. 1/4-14 by 1 in. long Type AB point, self-drilling, self-tapping hex-washer-head plated or stainless steel screws or No. 12-14 by 1-1/4 in. long self-drilling self-tapping hex-washer-head plated steel screws. Spacing for 16 in. wide panels to be a 1, 3, 4, 4, 3 in. pattern; spacing for 18 in. wide panels to be a 1-1/2, 3-1/2, 4, 4, 3-1/2, 1-1/2 in. pattern. When optional cinch plate (Item 2B) is used, four fasteners to be required, inserted into factory punched guide holes.

4. **Thermal Spacer** — (Optional) — Polyisocyanurate — 3/8 in. min, 2-3/8 in. max thick, 4 in. min width, length sized to fit between panel clips (Item 2).

4A. **Thermal Block** — (Optional) — Nom 2 by 4 in. wood, length continuous.

5. **Insulation** — (Optional) — Any compressible blanket insulation 8 in. max thick before compression, or 6 in. max thick when located between Thermal Spacer (Item 4) or Thermal Block (Item 4A) and purlin (Item 6).

6. **Purlins** — No. 16 MSG min thick steel (50 ksi min yield strength). Max spacing 60 in. OC.
Refer to General Information, Roof Deck Constructions for items not evaluated.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2022-04-01

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