



Construction No. 180C TGKX.180C Roof Deck Constructions

[Page Bottom](#)

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 Listed or Classified 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 as Classified, Listed, or Recognized.

Roof Deck Constructions

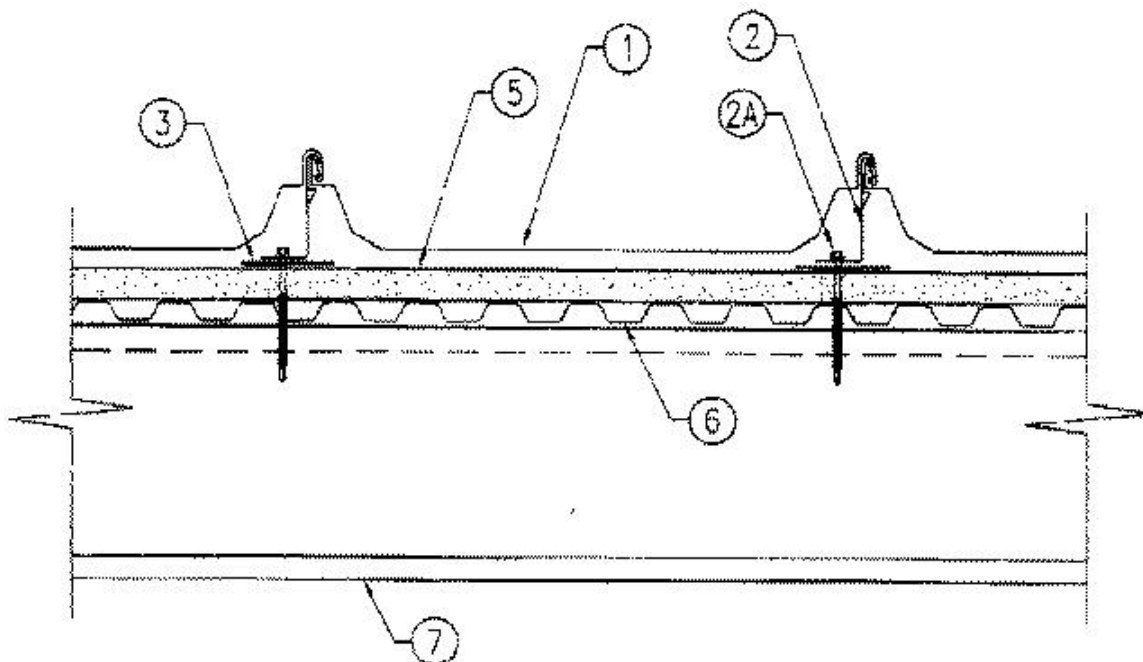
[See General Information for Roof Deck Constructions](#)

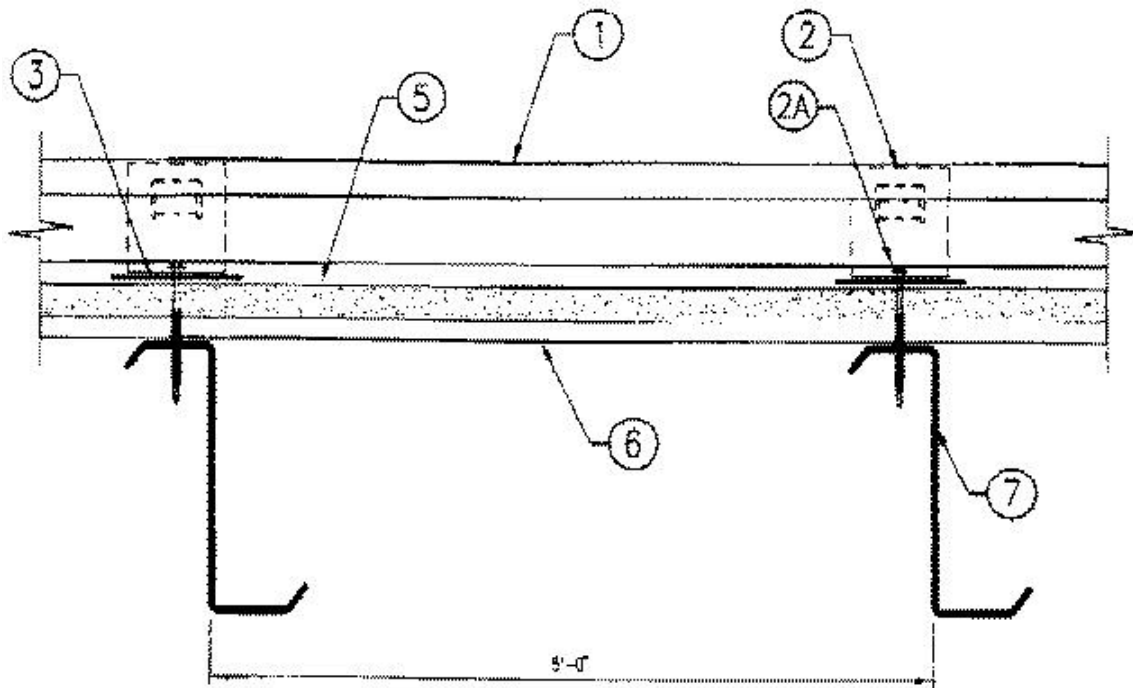
Construction No. 180C

February 22, 2012

Uplift – Class 90

Fire Not Investigated





1. **Metal Roof Deck Panels*** — No. 24 MSG min coated steel. Panels continuous over two or more spans. Endlaps to occur adjacent to purlin with panels overlapped 3 in. A bead of sealant may be used at panel end joints.

A & S BUILDING SYSTEMS L P ([View Classification](#)) — "Double-Lok"

B C STEEL BUILDINGS INC ([View Classification](#)) — "BCL-MS".

CENTRAL STATES MFG INC ([View Classification](#)) — "Central-Seam Plus"

CENTRAL TEXAS METAL ROLLFORMING INC ([View Classification](#)) — "SPANLOC 300"

CHIEF INDUSTRIES INC ([View Classification](#)) — "MSC".

CORLE BUILDING SYSTEMS ([View Classification](#)) — "Corle Seam Lock"

GOLDEN EMPIRE MFG INC, DBA GEM

BUILDINGS ([View Classification](#)) — "GEM Superior-24"

MBCI ([View Classification](#)) — "Double-Lok "

MESCO METAL BUILDINGS ([View Classification](#)) — "Double-Lok"

NCI BUILDING SYSTEMS L P ([View Classification](#)) — "Double-Lok" or "Triple-Lok"

PINNACLE STRUCTURES INC ([View Classification](#)) — "PINNACLE D-LOK"

UNITED STRUCTURES OF AMERICA INC ([View Classification](#)) — "Guardian-Lok"

WHIRLWIND STEEL BUILDINGS INC ([View Classification](#)) — "Super-Seam Plus"

2. **Roof Deck Fasteners*** — Two or four piece articulating clip used with an upper tab clip to engage the metal roof deck panel rib (Item 1). Height to be 3-3/8 in. when no thermal spacer (Item 4) is used and 4-3/8 in. when a thermal spacer is used. Clips are spaced 5 ft OC max along length of panels, located at the panel ribs with three guide holes in the bottom to accommodate screw fasteners (Item 2A).

BUILDING PRODUCTS DEVELOPMENT INC ([View Classification](#)) — "NC34501", "NC34502", "NC34701", "NC34702"

CHIEF INDUSTRIES INC ([View Classification](#)) — "MSC Sliding Clip"

GOLDEN EMPIRE MFG INC, DBA GEM

BUILDINGS ([View Classification](#)) — "GEM Low Superior Clip", "GEM High Superior Clip"

NCI BUILDING SYSTEMS L P ([View Classification](#)) — "Double-Lok Articulating Clip" or "Double-Lok Floating Clip" or "Double-Lok Sliding Clip" or "Triple-Lok Sliding Clip" or "Double-Lok 2" Sliding Hi-Thermal Clip".

2A. **Fasteners (Screws)** — Screws used to attach panel clips (Item 2) to purlins (Item 7) to be 1/4 in. diameter with maximum 28 threads per inch. Length to be 3/4 in. longer than thickness of rigid insulation (Item 5) and liner panel (Item 6). Two screws per clip. Screws used at endlap are to be No. 14, Type A by 1 in. long, Hex Washer Head, self-tapping. First screw is located 3/8 in. from first slanted segment in a 4 - 5-1/2 - 5-1/2 - 4 in. pattern.

2B. **End-Lap Assembly (Optional) (Stud Plate and Cinch Strap) (Not Shown)** — End-Lap Plate Assembly (Item 8). Stud Plate (16 MSG Galv.) placed on top of purlin (Item 7) with the first stud located 1-31/32 in. from either rib and then spaced in a 4, 4-1/8, 2-3/8, 4-1/8, 4 in. pattern. Upper and Lower pre-punched metal roof deck panels (Item 1), with pre-cut tape sealer, to accommodate stud locations are positioned to receive Stud Plate. Cinch Strap (0.100 in. thick aluminum) placed over studs that penetrate both lower and upper panels. Flange nut, 1/4 in. dia., hand installed on each stud. Roof Deck Fastener (Panel Clip), Item 2, installed over male leg of panel at purlin location and secured as described in Fasteners (screws) (Item 2A).

3. **Bearing Plate** — No. 16 MSG min coated steel, 3-7/8 in. wide by 5 in. long. Used under panel clip (Item 2).

4. **Thermal Spacer** — (Optional) (Not Shown) — Polystyrene, 1 in. max thickness, 3 in. wide, cut to fit between panel clips.

5. **Foamed Plastic (Rigid Insulation)** — (Optional) — Foamed plastic, min thickness 1 in., max thickness 4.4 in. Density to be 2 pcf or see products Classified under TJBX.

6. **Liner Panel** — (Optional) — No. 29 MSG min coated steel. Ribs to be 9/16 in. deep with a 3/4 in. wide crest and spaced 2.67 in. OC.

7. **Purlins** — 16 MSG min coated steel, (55,000 min yield strength).

Refer to General Information, Roof Deck Construction, (Roofing Materials and Systems Directory) for Items Not Evaluated.

*Bearing the UL Classification Mark

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[Page Top](#)

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