

# TGKX.414 - ROOF DECK CONSTRUCTIONS

## 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

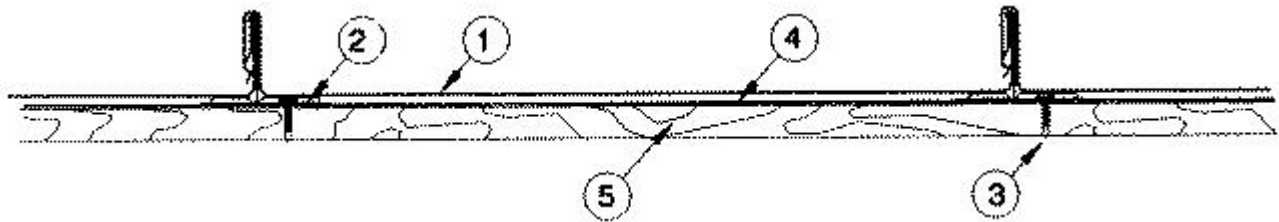
See General Information for Roof Deck Constructions

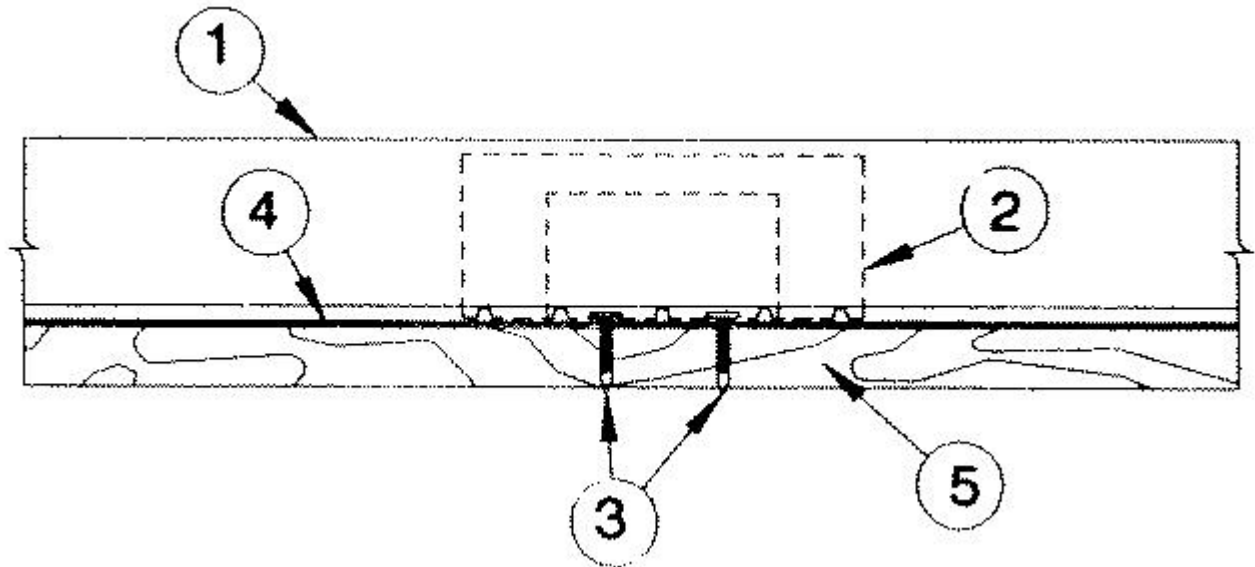
### Construction No. 414

April 02, 2019

### Uplift — Class 90

### Fire Not Investigated





**1. Metal Roof Deck Panels\*** — No. 24 MSG min coated steel panels, 18 in. max width, 1-3/4 in. high at female side rib. Panels continuous over three or more clips with no endlaps. A bead of sealant may be used at panel side joints.

**A & S BUILDING SYSTEMS L P** (View Classification) — "LokSeam"

**ACI BUILDING SYSTEMS INC** (View Classification) — "SnapLok"

**ALLIANCE STEEL INC** (View Classification) — "NFS16"

**AMERICAN BUILDING COMPONENTS** (View Classification) — "LokSeam"

**BERRIDGE MFG CO** (View Classification) — "Snaplock Panel"

**BORGA STEEL INC** (View Classification) — "Vertical Lock"

**CENTRAL TEXAS METAL ROLLFORMING INC** (View Classification) — "Shurloc 175"

**FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC** (View Classification) — "UC-14"

**GIDEON STEEL PANEL CO L L C** (View Classification) — "G175s"

**HPM BUILDING SUPPLY** (View Classification) — "Sur-Lock"

**MASTERPIECE METALS** (View Classification) — "SS675"

**MBCI** (View Classification) — "LokSeam"

**METALMAX L L C** (View Classification) — "SSP 675 Panel"

**METAL FORMING INC** (View Classification) — "1.75 Snap Lock Steel Panel"

**METALLION INDUSTRIES INC** (View Classification) — "Clip Lock"

**METAL ROOFING SYSTEMS INC** (View Classification) — "MRS System 2000"

**NCI BUILDING SYSTEMS L P** (View Classification) — "LokSeam"

**NEW TECH MACHINERY CORP** (View Classification) — "SS675"

**NORTHWEST ROOF TILE & METAL L L C** (View Classification) — "LT175"

**P S M L V INC DOING BUSINESS AS PENN SHEET METAL** (View Classification) — "PSM175SL"

**PREMIUM PANELS INC** (View Classification) — "SS675"

**REEDS METALS OF BENTON** (View Classification) — "Secure-Seam"

**RLS METAL SYSTEMS INC** (View Classification) — "RLS 175S"

**ROLLFAB METAL BUILDING PRODUCTS** (View Classification) — "SL-175" or "1.75 Snap Lock Steel Panel"

**SHEET METAL WORKS OF ARIZONA** (View Classification) — "SL175"

**SHEFFIELD METALS INTERNATIONAL** (View Classification) — "SMI 1 3/4" SnapLock"

**STANDARD STRUCTURES INC** (View Classification) — "SnapSeam"

**TAYLOR METAL INC, DBA TAYLOR METAL PRODUCTS** (View Classification) — "Versa Span"

**UNION CORRUGATING CO** (View Classification) — "SL175"

**U S METALS L L C** (View Classification) — "US-175LS"

**V & R SHEET METAL LLC** (View Classification) — "SS675 Panel"

**VOGLER SHEET METAL COMPANY** (View Classification) — "VSM Snap-Tite"

**WESTAR ROOFING CORP** (View Classification) — "SL175"

**WHIRLWIND STEEL BUILDINGS INC** (View Classification) — "Weather Snap-12" or "Weather Snap-16"

2. **Roof Deck Fasteners\* — (Panel Clips)** — One piece assembly, 3-1/2 in. wide, 1-7/8 in. high. Min thickness 18 MSG. Clips spaced 36 in. OC, max, fastened to plywood deck.

**AMERICAN BUILDING COMPONENTS** (View Classification) — "LokSeam UL 90 Clip"

**EXCEL STAMPING & MFG INC** (View Classification) — "LS-178-18 Clip"

**LOGAN STAMPINGS INC** — "Snap Lock Clip No. 675"

**NCI BUILDING SYSTEMS L P** (View Classification) — "LokSeam UL 90 Clip"

3. **Fasteners — (Screws)** — Fasteners used to attach panel clips (Item 2) to plywood to be No. 10-12 by minimum 1 in. long, without insulation and/or coverboard, pancake head, No. 2 Phillips drive, A-point, coated steel screw. Min two fasteners per clip to be

used.

**4. Underlayment** — (Optional) — Underlayment attached over Foamed Plastic (Item 8 and/or 8A) or Decking (Item 5) or Cover Board (Item 10).

As an Alternate-A self-adhering modified bitumen water proofing membrane may be used, installed per manufacturer's instructions. Note - when alternate is used the plywood joints need not be sealed.

**5. Plywood Decking** — Plywood decking to be graded per PS-1 specifications, 19/32 in. thick, exposure 1, APA Rated Sheathing (42/20) square edged. Butt ends not blocked. All butt and side joints to be sealed with a one part urethane caulk sealant applied with a caulking gun and feathered outward from the joint. (Note exception under Item No. 4, Alternate).

**6. Supports** — Spaced max of 24 in. OC. Any of the following types may be used to support the plywood decking:

a) Nom 2 by 6 in., No. 2 grade or better S-P-F, Hemlock Fir, Douglas Fir or Southern Yellow Pine or equivalent.

b) Wood trusses with a nom 2 by 4 in. upper chord of the same grade as Item a.

c) No. 22 MSG min cold formed coated steel (min yield to be 33,000 psi).

**7. Plywood Fasteners** — Fasteners used to attach the plywood deck to the supports to be as follows:

a) For plywood-to-wood supports No. 8-18 by 1-7/8 in. long bugle-head steel screws with a No. 2 Phillips drive, a "Hi-Low" thread pattern and an "S-Point".

b) As an alternate to Item a, 8d common nails may be used.

c) For plywood-to-steel supports for a steel thickness less than No. 20 MSG No. 7-19 by 1-1/4 in. long bugle-head steel screws with a No. 2 Phillips head drive "Hi-Low" threads and an "S-Point". For a steel thickness greater than No. 20 MSG No. 16 MSG, No. 6-20 by 1-1/4 in. long bugle-head steel screws with a No. 2 Phillips drive and a S12 (TEKS/3) (R) point. Spacing: Fastener spacing for all fastener types to be 6 in. OC at the plywood edges and 12 in. OC in the interior.

**8. Foamed Plastic\*** — (Rigid Insulation — Optional — Not Shown) — Applied flat or tapered to maximum 10 in. thick combination of Item 8A. Bearing plates required under panel attachment points.

**FIRESTONE BUILDING PRODUCTS CO L L C** (View Classification) — "ISO 95+ GL" or "Resista"

**8A. Foamed Plastic** — (Rigid Insulation — Optional — Not Shown) — Placed on top of Item 4A. Maximum 10-in thick combination of Item 8. Bearing plates required under panel attachment points.

**FIRESTONE BUILDING PRODUCTS CO L L C** (View Classification) — "ISOGARD HD"

**9. Roof Deck Fasteners\*** — (Bearing Plates) — Plates to be 4 in by 4 in. by No. 26 MSG min galvanized steel. Two 1/4 in. guide holes located in line with panel clip (Item 2) guide holes.

**FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC** (View Classification) — "UC Bearing Plate"

**10. Cover Board** — (Optional — Not Shown) — Min 1/2 in. thick (15/32 in. actual) plywood, DOC PS-1 rated (square edged may be used) or min 7/16 in thick OSB, DOC PS-2 rated, 1/2 in. thick gypsum board, 1/2 in. wood fiberboard, 1/4 in. min thickness G-P Gypsum "DensDeck", 1/4 in. min thick USG "SECUROCK Glass Mat Board" or "SECUROCK Roof Board" applied over the plywood decking (Item 5) or Foamed Plastic (Items 8 and/or 8A). When used or used over Foamed Plastic bearing plate not required.

Refer to General information, Roof Deck Construction (Building Materials Directory) 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.**

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