

# TGKX.254 - 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.

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## Roof Deck Constructions

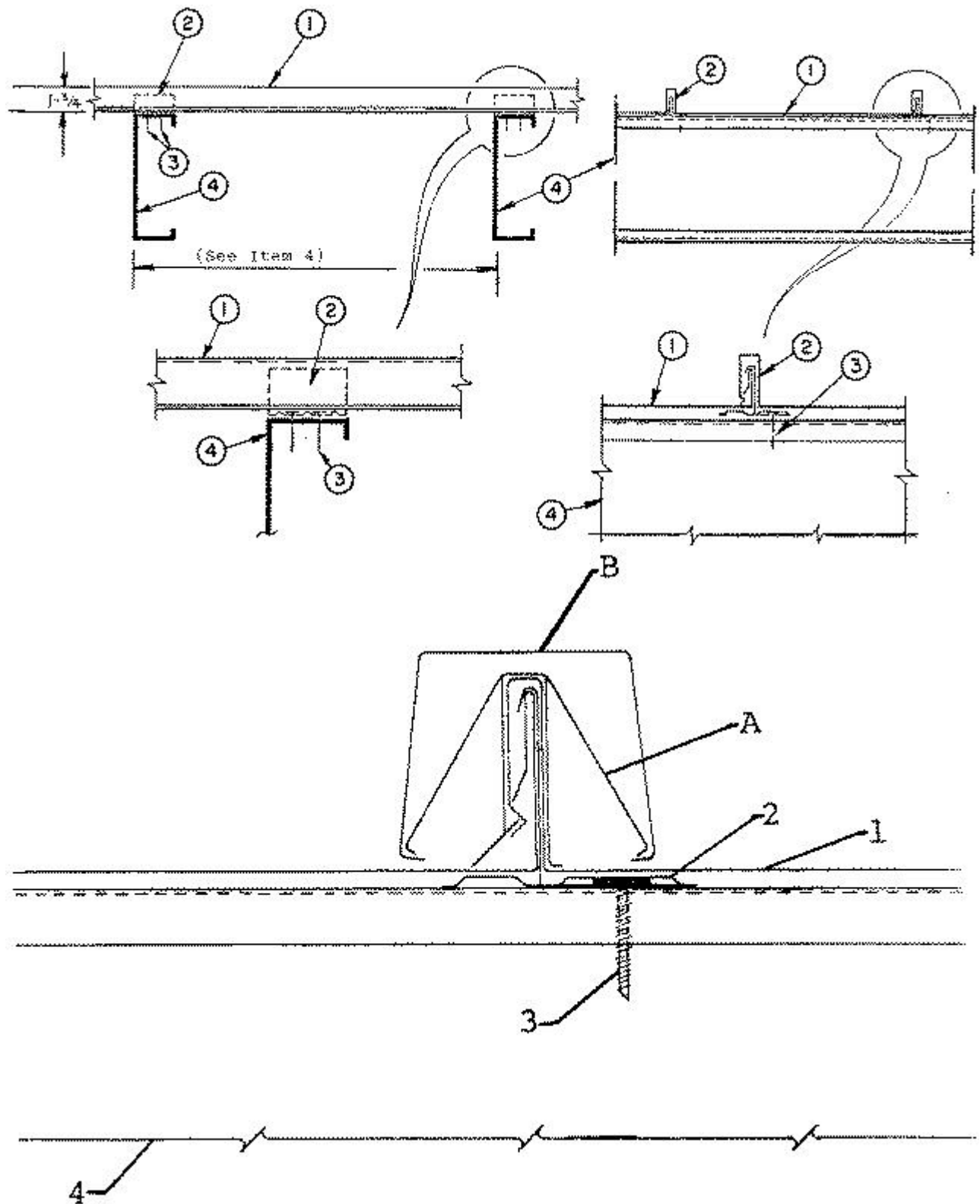
### Roof Deck Constructions

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

## Construction No. 254

February 3, 2023

**Wind-Uplift — Class 90 (See Item No. 4)**  
**Fire Not Investigated**



1. **Metal Roof Deck Panels \*** — No. 22 MSG or No. 24 MSG min thickness coated steel panels. Panels 12 in. wide, 1-3/4 in. high at the ribs. Panels continuous over two or more spans. 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"

**AMERICAN BUILDINGS CO** ([View Classification](#)) — "SeamLoc 12, 16 18"

**AMERICAN BUILDING COMPONENTS** ([View Classification](#)) — "LokSeam"

**ARCHITECTURAL METAL SOLUTIONS** ([View Classification](#)) — "Snap-Lock"

**ATAS INTERNATIONAL INC** ([View Classification](#)) — "MRS Panel"

**BAKER ROOFING INC** — "Snap Seam"

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

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

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

**CONSTRUCTION METAL PRODUCTS INC** ([View Classification](#)) — "CMP Series 2000"

**CREGO METAL SYSTEMS** ([View Classification](#)) — "CregoLock"

**DIMENSIONAL METALS INC** ([View Classification](#)) — "Ultra-Lock 20"

**DREXEL METALS INC** ([View Classification](#)) — "DMC 175S"

**DREXEL METALS, INC.** ([View Classification](#)) — "MetFab Snap-On 675"

**EAST TEXAS ARCHITECTURAL SHEETMETAL L L C, DBA ETAS INC** ([View Classification](#)) — "STRUCTURAL SNAP LOCK"

**ENGLERT INC** ([View Classification](#)) — "Series 2000"

**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"

**H&H METAL PRODUCTS INC** ([View Classification](#)) — "Uni-SnapLoc"

**HPM BUILDING SUPPLY** ([View Classification](#)) — "Shur-Lock"

**LAWMAN HEATING & COOLING INC** ([View Classification](#)) — "SS675"

**MASTERPIECE METALS** ([View Classification](#)) — "SS675"

**MBCI** ([View Classification](#)) — "Lock-Seam"

**MCELROY METAL MILL INC** ([View Classification](#)) — "ABC Permaseam Panel"

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

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

**METAL PANELS INC** ([View Classification](#)) — "StrongSeam SL175"

**METAL PANEL SYSTEMS INC** ([View Classification](#)) — "MP-175" or "UC14"

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

**METAL SALES MANUFACTURING CORPORATION** ([View Classification](#)) — "Vertical Seam"

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

**MIDWEST METAL** ([View Classification](#)) — "SS 675"

**MORIN CORP** ([View Classification](#)) — "SWL-12", "SWL-16", "SWL-18"

**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"

**PETERSEN ALUMINUM CORP** ([View Classification](#)) — "Snap-Clad"

**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"

**ROOF WORKS FABRICATING L L C** ([View Classification](#)) — "Snap Lock 675"

**RPR INC, DBA RAIN PROOF ROOFING** ([View Classification](#)) — "RP175"

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

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

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

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

**STREAMLINE ROOFING & CONSTRUCTION INC** ([View Classification](#)) — "175SL"

**T T & L SHEET METAL INC** ([View Classification](#)) — "Earl 300"

**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"

**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, thickness 0.048 in. One panel clip located at each purlin intersection.

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

**ATAS INTERNATIONAL INC** ([View Classification](#)) — "MRS Clip"

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

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

**LOGAN STAMPINGS INC** ([View Classification](#)) — "Snap Lock Clip No. 675"

**MCELROY METAL MILL INC** ([View Classification](#)) — "ABC Permaseam Clip"

**METAL PANEL SYSTEMS INC** ([View Classification](#)) — "MP-175 Clip"

**METAL SALES MANUFACTURING CORPORATION** ([View Classification](#)) — "Vertical Seam Clip"

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

**PETERSEN ALUMINUM CORP** ([View Classification](#)) — "Snap-Clad Clip"

**VICWEST INC** ([View Classification](#)) — "AP Clip"

**2A. Roof Deck Fasteners (Bearing Plate)** — (Not Shown) — No. 16 MSG coated steel, 4 in. by 5 in. with guide holes. Used when Rigid Insulation (Item 5) is used.

**3. Panel Fasteners (Screws)** — Fasteners used to attach panel clips (Item 2) to purlins (Item 4) when no rigid insulation (Item 5) is used to be No. 10-16 by 1 in. long, self-drilling, self-tapping, pancake head, No. 3 point, plated steel screws. When rigid insulation is used, No. 14-13 DPI carbon, pancake head combination Square/Phillips Drive screws to be used. Length to penetrate steel minimum of 5/8 in. Two screws per clip to be used, inserted through panel clip guide holes.

**4. Purlins** — No. 16 MSG min thickness steel (50,000 psi min yield strength).

Spacing — For 22 MSG thickness panels - 60 in. OC

For 24 MSG thickness panels - 48 in. OC

5. **Foamed Plastic (Rigid Insulation)** — (Optional) — Not Shown — Maximum thickness 4 in. Located over purlins (Item 4) Density to be minimum 1.8 pcf. Compliant with ASTM C1289 or ASTM C578 Standards, Types IV, X or XII.

The following items may be used in conjunction with the "MRS Panel" (Item 1).

A. **Batten Clips\*** — Slipped over ribs formed by roof deck panels. One piece assembly formed to engage ribs of "K-Lok Structural Panels" (Item 1) and Batten Cap (Item B). Spaced 48 in. O.C.

**ATAS INTERNATIONAL INC** ([View Classification](#)) — "MRS Batten Clip"

B. **Batten Cap\*** — Slipped over batten clip (Item A) and formed to snap and engage batten clip.

**ATAS INTERNATIONAL INC** ([View Classification](#)) — "MRS Batten"

The following items may be used in conjunction with the "Design-Lok" panel (Item 1).

A. **Batten Clips\*** — Slipped over ribs formed by roof deck panels. One piece assembly formed to engage ribs of "Design-Lok" panels (Item 1) and "Design-Lok Batten Cap" (Item B) spaced 48 in. OC.

**METAL SALES MANUFACTURING CORPORATION** ([View Classification](#)) — "Vertical Seam Batten Clip"

B. **Batten Cap\*** — Slipped over batten clip (Item A), formed to snap over and engage batten clip.

**METAL SALES MANUFACTURING CORPORATION** ([View Classification](#)) — "Vertical Seam Batten Cap"

The following items may be used in conjunction with the "Structural Standing Seam" panels (Item 1) and a Classified Batten clip as described in this construction.

A. **Snapped-on-Batten\*** — Slipped over a Classified Batten Clip, formed to snap over and engage batten clip.

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 2023-02-03

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