



Construction No. 343 TGKX.343 Roof Deck Constructions

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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

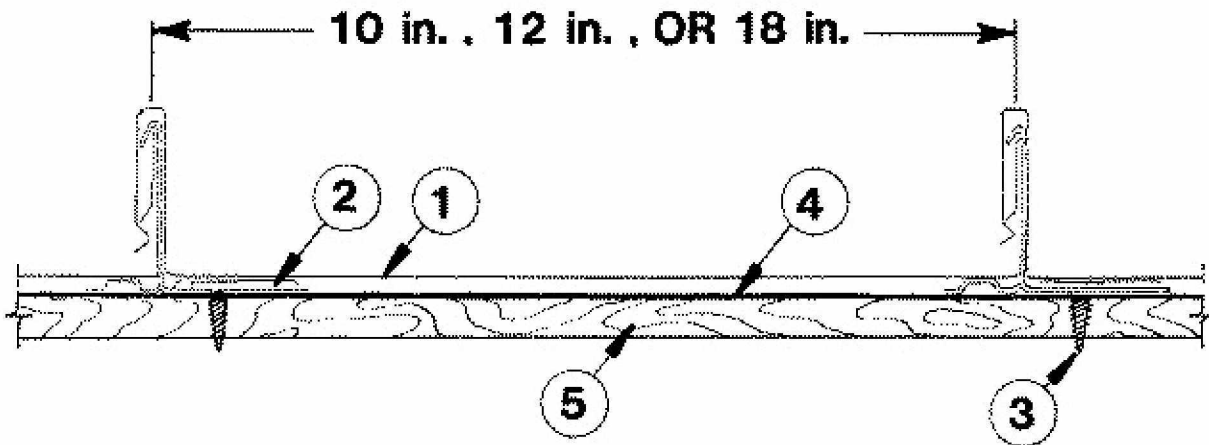
[See General Information for Roof Deck Constructions](#)

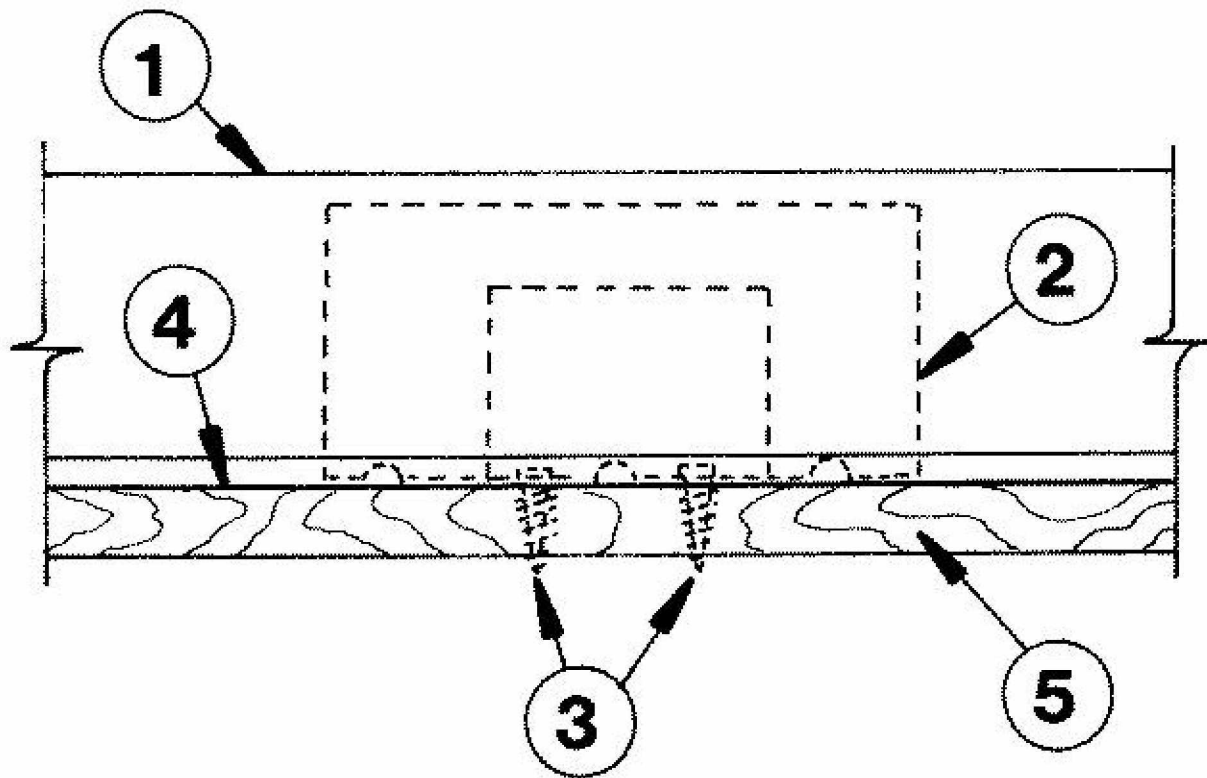
Construction No. 343

March 21, 2012

Uplift — Class 90

Fire Not Investigated





1. Metal Roof Deck Panels* — No. 24 MSG min coated steel. Panel width 18 in. max., 10 in. min. Rib height 1-3/4 in. at female side. Panels continuous over three or more clips with no endlaps. A bead of sealant may be used at panel side joints.

A-1 METAL ROOF SYSTEMS ([View Classification](#)) — "MPSL-1.75"

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

ACI BUILDING SYSTEMS INC ([View Classification](#)) — "SnapLok"

AEP SPAN, DIV OF ASC PROFILES ([View Classification](#)) — "10 in. — Snap-Seam", "12 in. — Snap-Seam", "18 in. — Snap-Seam"

ALLIANCE STEEL INC ([View Classification](#)) — "NFS16"

AMERICAN ARCHITECTURAL METAL MFG INC ([View Classification](#)) — "TL1750"

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

ARCHITECTURAL BUILDING COMPONENTS INC ([View Classification](#)) — "Permaseam"

ARCHITECTURAL INTEGRATED METALS INC ([View Classification](#)) — "SNAP-Seam"

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

ARCHITECTURAL METAL WORKS ([View Classification](#)) — "AMW SNAPLOCK 2500"

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

BOBBY JAMES INC ([View Classification](#)) — "BJI675"

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

CENTRIA ([View Classification](#)) — "SDP 175-12, -16, -18"

BEACON SALES ACQUISITION INC, DBA

COASTAL METAL SERVICE ([View Classification](#)) — "EZ Loc"

COATED METALS GROUP ([View Classification](#)) — "Ultra-Snap 1.75SL"

CONSOLIDATED SYSTEMS INC ([View Classification](#)) — "SC175"

CUSTOM-BILT METALS ([View Classification](#)) — "SL-1750"

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

DURO-LAST INC ([View Classification](#)) — "EM 175S"

EAGLE METALS MFG INC — "Eagle Metals Series 2000 Snap-Loc"

FABRAL INC ([View Classification](#)) — "Thin Seam"

FIRESTONE METAL PRODUCTS L L C ([View Classification](#)) — "UC-14"

INTEGRIS METALS INC ([View Classification](#)) — "Integris System 4"

MADDOX ROOFING & CONSTRUCTION INC ([View Classification](#)) — "SS675 SNAP-LOK"

MBCI ([View Classification](#)) — "LokSeam"

MCELROY METAL MILL INC ([View Classification](#)) — "Medallion-Lok" or "Metalogic-2000"

MESCO METAL BUILDINGS ([View Classification](#)) — "LokSeam"

METALCRAFT INC ([View Classification](#)) — "MC175SL"

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

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

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

METAL SALES MFG CORP ([View Classification](#)) — "Vertical Seam"

MID-SOUTH METAL PRODUCTS ([View Classification](#)) — "MSMP Structural Snap Lock"

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"

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

PETERSEN DEAN COMMERCIAL INC ([View Classification](#)) — "1.75" Snap Lock"

PREMIUM PANELS INC ([View Classification](#)) — "SS675"

RAIN PROOF ROOFING L L C ([View Classification](#)) — "RP175"

RIFFE METALS L L C ([View Classification](#)) — "Rapidloc 1.75"

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

SHEFFIELD METALS INTERNATIONAL ([View Classification](#)) — "SMI 1 ¾" SnapLock"

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

SOUTHEASTERN METALS MANUFACTURING CO

INC ([View Classification](#)) — "Verti-Lok"

STEELOX SYSTEMS L L C ([View Classification](#)) — "LS-175"

STREAMLINE ROOFING & CONSTRUCTION

INC ([View Classification](#)) — "175SL"

TAYLOR METAL INC ([View Classification](#)) — "Versa Span"

TEXARKANA METAL BUILDING SUPPLY ([View Classification](#)) — "SSP 675 Panel"

THE BRYER CO ([View Classification](#)) — "TBC-ULTRA"

TREMCO INC ([View Classification](#)) — "Tremlock SL Series II"

ULTRA SEAM INC ([View Classification](#)) — "US 175 LS"

UNION CORRUGATING CO ([View Classification](#)) — "SL175"

U S METALS L L C ([View Classification](#)) — "US-175LS"

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

ZIMMERMAN METALS INC ([View Classification](#)) — "SL1750"

2. Roof Deck Fasteners* (Panel Clips) — One piece assembly, 3-1/2 in. wide, 1-7/8 in. high. Min thickness No. 18 MSG. Clips spaced 36 in. OC, max, fastened to plywood deck.

AEP SPAN, DIV OF ASC PROFILES ([View Classification](#)) — "Snap Seam Clip"

ARCHITECTURAL METAL SPECIALTIES INC ([View Classification](#)) — "178-SLU-18-G(S)", "178-SLUP-18-G(S)" and "175-SLUZ-18-G(S)".

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

CENTRIA ([View Classification](#)) — "C175"

BEACON SALES ACQUISITION INC, DBA

COASTAL METAL SERVICE ([View Classification](#)) — "EZ Loc Panel Clip"

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

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

FIRESTONE METAL PRODUCTS L L C ([View Classification](#)) — "UC-14 Clip"

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

MCELROY METAL MILL INC ([View Classification](#)) — "Medallion-Lok Clip"

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

METAL SALES MFG CORP ([View Classification](#)) — "Vertical Seam Clip"

MORIN CORP ([View Classification](#)) — "SWL Clip"

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

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

STEELOX SYSTEMS L L C ([View Classification](#)) — "Design-Lok Clip"

STEELOX SYSTEMS L L C ([View Classification](#)) — "LS-175 Clip"

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

3. Fasteners (Screws) — Fasteners used to attach panel clips (Item 2) to plywood to be No. 10-12 by 1 in. long pancake head, No. 2 Phillips drive, A-point, coated steel screw. Min two fasteners per clip to be used. When Items 5A (Rigid

Insulation) and 5B (Bearing Plate) are used, No. 12 Dekfast fastener to be used and installed through clip (Item 2), bearing plate (Item 5B), rigid insulation (Item 5A) and plywood decking (Item 5A). Length of fastener to be equal to total thickness plus 7/8 in.

4. **Underlayment** — Underlayment used over plywood deck to be Type 15 or 30 organic felt. Sides overlapped min 2 in., end laps per manufacturer's instructions. Felt nailed to plywood deck with 1-1/4 in. long steel cap nails, located per manufacturer's instructions. Nail spacing to be max 12 in. OC at the side lap and max 24 in. OC in interior rows. **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 PS83 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.)

5A. **Rigid Insulation (Optional)** — (Not Shown) - Maximum thickness 1-1/2 in. Any rigid type having a minimum compressive strength of 25 psi or minimum density of 2 pcf. Supplied in 4 ft. wide sheets.

5B. **Bearing Plate (Optional)** — (Not Shown) - To be used with Item 5A. Bearing plates to be minimum 16 MSG coated steel. Located under each clip (Item 2) for support.

5C. **Oriented Strand Board (OSB)** — (Not Shown) - As an alternate decking, nom. 5/8 in. thick (19/32 in. actual) APA rated OSB may be substituted for plywood decking (Item 5). Installation procedures to be same as for plywood.

6. **Supports** — (Not Shown)—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** — (Not Shown)—Fasteners used to attach the plywood deck or OSB 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 ring shanked 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 to 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)supR point.

Spacing: Fastener spacing for all fastener types to be 6 in. OC at the plywood edges and 12 in. OC in the interior.

The following items may be used in conjunction with the "AEP SPAN" Metal Roof Deck Panels (Item 1). When used, the panel system is identified as "SNAP-SEAM (SBS)".

A. **Batten Clips*** — Slipped over ribs formed by roof deck panels. One piece assembly, 1-3/4 in. high, 1-3/4 in. max width, with four legs and two arms. Formed to engage ribs of AEP SPAN Panels and Batten Cap (Item 6). Clips spaced 48 in. OC.

AEP SPAN, DIV OF ASC PROFILES ([View Classification](#)) — "SNAP-SEAM (SBS) Clip"

B. **Batten Cap*** — Slipped over batten clip. Two inches high 1-1/2 in. wide at top with sides formed to engage batten clip. Snapped over batten clips.

AEP SPAN, DIV OF ASC PROFILES ([View Classification](#)) — "SNAP-SEAM (SBS) Batten"

The following items may be used in conjunction with the "K-Lok Structural 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 MFG CORP ([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 MFG CORP ([View Classification](#)) — "Vertical Seam Batten Cap "

The following items may be used in conjunction with the "Structural Standing Seam" panel and a Classified Batten Clip as described in this construction.

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

The following items may be used in conjunction with the "LokSeam 18, 12 or 10 in." panel (Item 1).

A. **Batten Clips** — Slipped over ribs formed by roof deck panels. One piece assembly, 1-3/4 in. high, 1-3/4 in. max width, with four legs and two arms. Formed to engage ribs of panels and Batten Cap. Clips spaced 48 in. OC.

The following items may be used in conjunction with the "SDP 175-12, -16, -18" panels. (Item 1).

A. **Batten Clips*** — Slipped over ribs formed by roof deck panels. One piece assembly formed to engage ribs of "SDP-12, -16, -18" panels (Item 1) and " SDP 175B" battens (Item B). Spaced 48 in. OC.

CENTRIA ([View Classification](#)) — "175B"

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

CENTRIA ([View Classification](#)) — "SDP 175B"

Refer to General information, Roof Deck Construction for items not evaluated.

*Bearing the UL Classification Mark

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