



Construction No. 238 TGKX.238 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

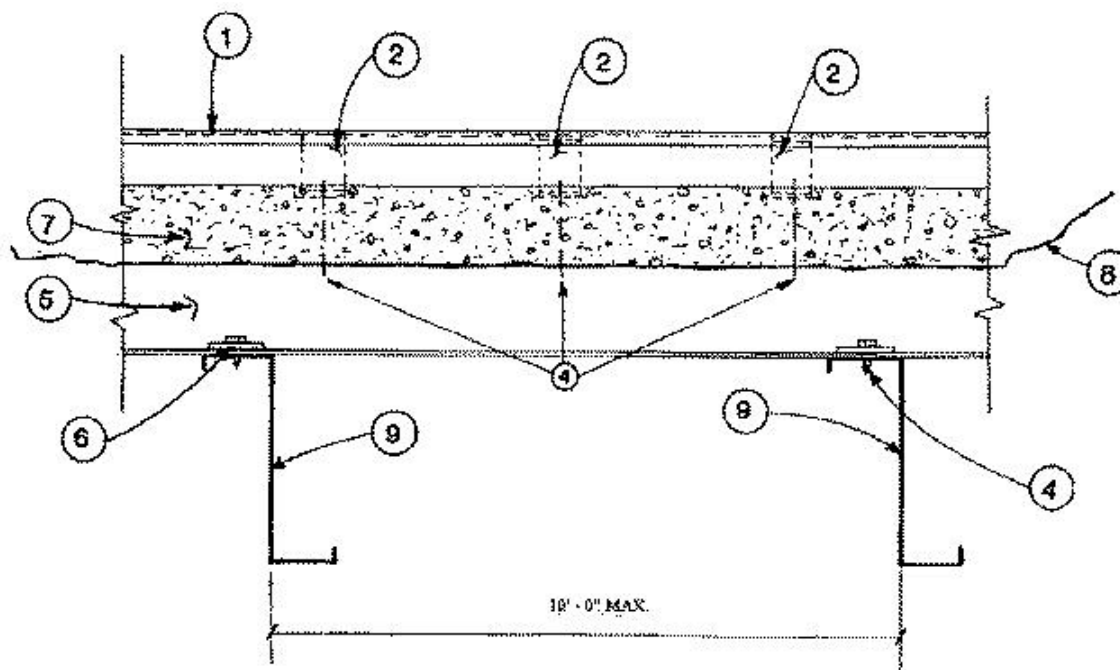
[See General Information for Roof Deck Constructions](#)

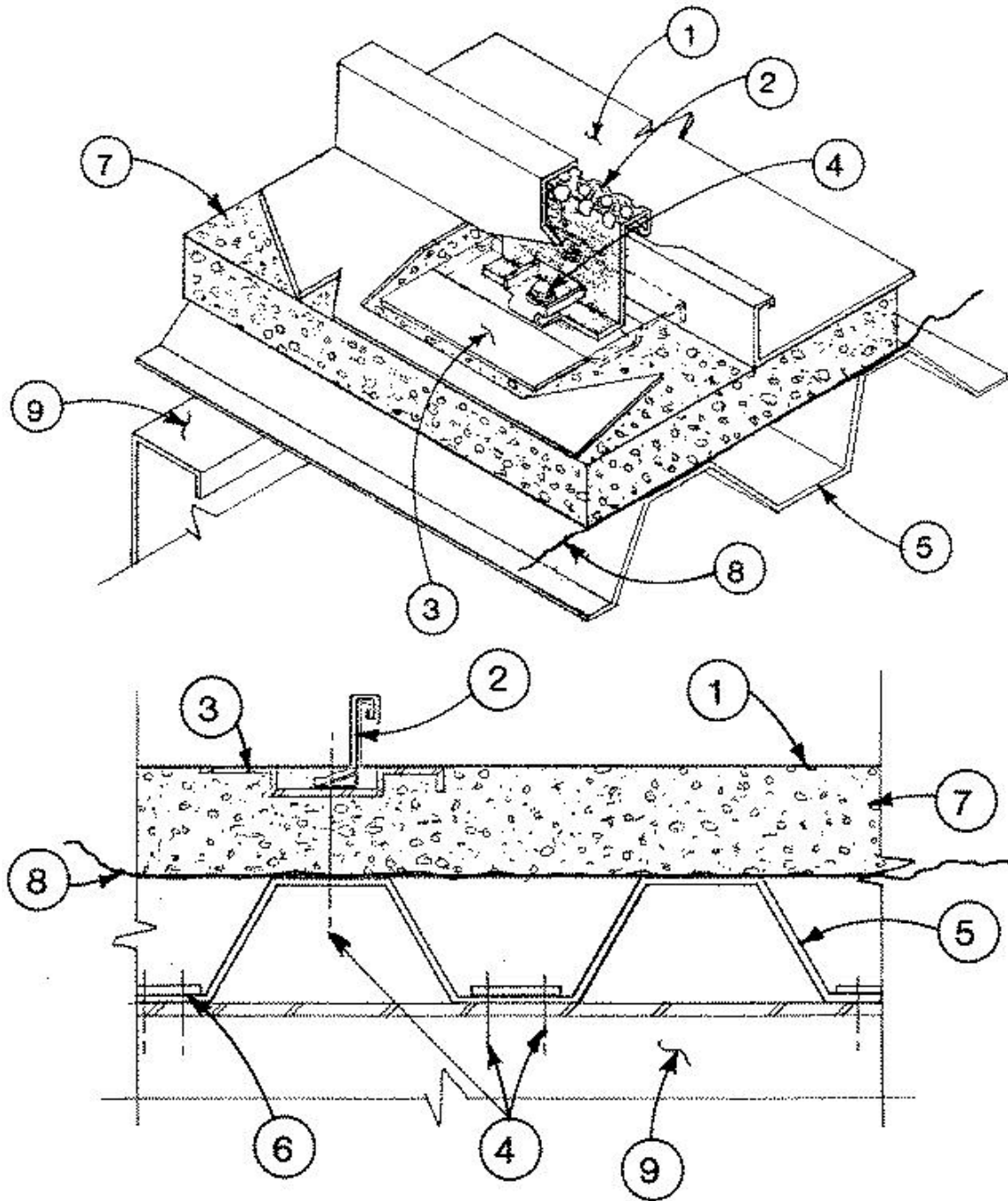
Construction No. 238

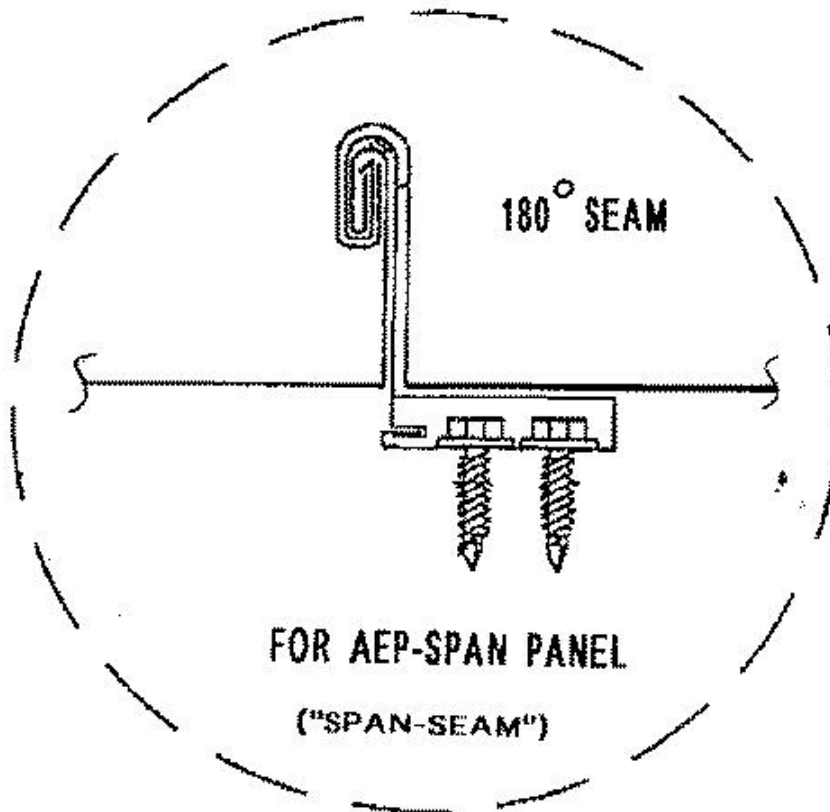
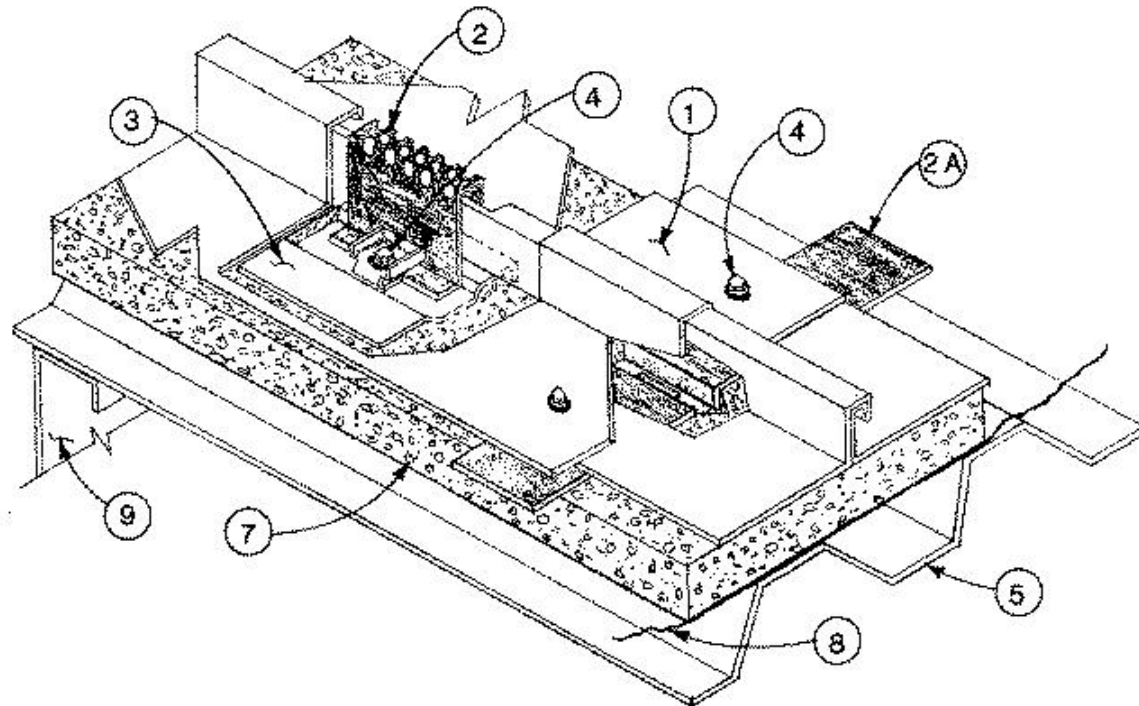
February 27, 2012

Uplift – Class 90

Fire Not Investigated







1. **Metal Roof Deck Panels*** — No. 24 MSG min coated steel. Panels 16 in. wide, 2 in. high at side ribs. Panels continuous over two or more spans. End laps to occur near panel clip locations and to include end lap back up plate (Item 2A). Ends of panels overlapped 6 in. Side laps to be tightened and crimped with a special motorized crimping machine at a maximum 45 degree angle unless indicated in the individual panels in this item. Crimping process to include tabs of panel clips (Item 2). A bead of sealing compound may be used at panel end laps and side joints.

A-1 METAL ROOF SYSTEMS ([View Classification](#)) — "MPSS-2"

A-LERT ROOF SYSTEMS ([View Classification](#)) — "A-Lert Loc"

AEP SPAN, DIV OF ASC PROFILES ([View Classification](#)) — "Span-Lok" or "Span-Lok HP" (90° Seam) or "SpanSeam" (180° Seam)

ADVANCED ROOFING TECHNOLOGY INC ([View Classification](#)) — "ARTK 12" and "ARTK 16"

ALLWINE ROOFING & CONSTRUCTION INC ([View Classification](#)) — "A2-16", "A2-16 Fluted" and "A2-16 with Clip Offset"

AMERICAN BUILDINGS CO ([View Classification](#)) — "Loc-Seam," (90° Seam), "Loc-Seam 360" (180° Seam)

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

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

ARCHITECTURAL SHEETMETAL PRODUCTS INC ([View Classification](#)) — "ASP ML-200"

BAKER ROOFING INC ([View Classification](#)) — "2 in. Mechanical Seamed"

BUTLER MANUFACTURING, DIV OF

BLUESCOPE BUILDINGS NORTH AMERICA INC ([View Classification](#)) — "VSRII"

C & C ROOFING INC ([View Classification](#)) — "Series 2500"

CENTURION INDUSTRIES INC, DBA TFC

CANOPY ([View Classification](#)) — "Centurion 1624M"

CONSTRUCTION METAL PRODUCTS INC ([View Classification](#)) — "CMP Series 2500"

CUSTOM-BILT METALS ([View Classification](#)) — "CB-2000"

DREXEL METALS INC ([View Classification](#)) — "DMC 200S"

DURO-LAST INC ([View Classification](#)) — "EM 200S"

EAST TEXAS ARCHITECTURAL SHEETMETAL L

L C, DBA ETAS INC ([View Classification](#)) — "2" SPANLOCK"

ENGLERT INC ([View Classification](#)) — "Series 2500"

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

J M METALS ROOFING MFRS ([View Classification](#)) — "JM 2.0"

KNUDSON MFG INC ([View Classification](#)) — "ULTRALOK"

METAL-FAB MFG LLC ([View Classification](#)) — "Met-Fab III"

METAL PANEL SYSTEMS INC ([View Classification](#)) — "MP-200" or "UC6"

METAL ROOFING SYSTEMS INC ([View Classification](#)) — "MRS System 2500"

METAL SALES MFG CORP ([View Classification](#)) — "T-Span" or "T-Span 180" (180° Seam)

MORIN CORP ([View Classification](#)) — "SLR-12", "SLR-14", "SLR-16" (90° or 180° Seam)

NEW TECH MACHINERY CORP ([View Classification](#)) — " SS210A "

NORTH COAST COMMERCIAL ROOFING SYSTEM

OF PA INC ([View Classification](#)) — "Series 2500"

NUCOR BUILDING SYSTEMS, DIV OF NUCOR

CORP ([View Classification](#)) — VR16 II "Vise Lock" or VR16II "Vise Lock 360".

PETERSEN DEAN COMMERCIAL INC ([View Classification](#)) — "2" Double Lock"

PITTMAN WALLER ROOFING CO INC ([View Classification](#)) — "US-200"

PMRS ([View Classification](#)) — "200MS"

PREMIUM PANELS INC ([View Classification](#)) — "Premium Lock 210A" or "P.L. 210A"

RIFFE METALS L L C ([View Classification](#)) — "Megaloc 2.0"

ROL-TEC SYSTEMS INC ([View Classification](#)) — "ULTRALOK"

ROOFMASTERS ROOFING & SHEET METAL

CO INC ([View Classification](#)) — "Loc Master"

SAN ANTONIO QUALITY METALS ([View Classification](#)) — "ML-200"

SHEFFIELD METALS INTERNATIONAL ([View Classification](#)) — "SMI 2" A Mechanical Seam"

SPANN ROOFING & SHEET METAL INC ([View Classification](#)) — "Spann Series 2500"

STEELOX SYSTEMS L L C ([View Classification](#)) — "Steelex LRX 262", "Steelex LRX 264", "Steelex PRX 262" or "Steelex PRX 264" (Fabricated from either coated or stainless steel)

STREAMLINE ROOFING & CONSTRUCTION

INC ([View Classification](#)) — "200MS"

SUPERIOR METAL SYSTEMS INC ([View Classification](#)) — "SMS 416"

TAYLOR METAL INC ([View Classification](#)) — "Mechanical Seam 200"

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

UNION CORRUGATING CO ([View Classification](#)) — "ML200"

U S METALS L L C ([View Classification](#)) — "US-210A"

VARCO PRUDEN BUILDINGS, DIV OF

BLUESCOPE BUILDINGS NORTH AMERICA INC ([View Classification](#)) — "SLR II"

ZIMMERMAN METALS INC ([View Classification](#)) — "SS2000"

2. **Roof Deck Fasteners (Panel Clips)** — Two part assembly: Base, 1 in. wide approximately 1-1/4 in. long with upper segment folded over lower end of tab. Fabricated from 0.050 in. thick coated or stainless steel. Upper tab 3 in. wide, maximum tab height 3-1/2 in. with lower end formed to engage base. Fabricated from 0.023 in. thick coated or stainless steel.

BUILDING PRODUCTS DEVELOPMENT INC ([View Classification](#)) — "NC3300", "NCF-3300", "NCF-3300-SS" Series Clip

STEELOX SYSTEMS L L C ([View Classification](#)) — "CF Sliding Clip"

2A. **Roof Deck Fasteners (Panel Clips)** — No. 24 MSG min gauge coated steel with a separately formed base fabricated of No. 18 MSG min gauge coated steel. One clip to be used per panel at each purlin.

AMERICAN BUILDINGS CO ([View Classification](#)) — "LSBC-1", "Loc-Seam MD Clip" or "Loc-Seam Expansion Clip"

2B. **Roof Deck Fasteners (End Lap Back-Up Plate)** — (Not Shown) — No. 18 MSG min gauge coated steel. Max length 48 in., width 6-1/2 in.

METAL SALES MFG CORP ([View Classification](#)) — "T-Span Clip"

NUCOR BUILDING SYSTEMS, DIV OF NUCOR

CORP ([View Classification](#)) — "NBS VR16 II BC", "NBS VR16 II Sliding " or "NBS VR16 II MD".

STEELOX SYSTEMS L L C ([View Classification](#)) — "Backing Plate"

2C. **Roof Deck Fasteners** — (Panel Clips) - Two types, both two piece assemblies. Type 330 base approximately 1.88 in. by 1.70 in.; Type 330B base approximately 1.11 in. by 2.00 in. Both types fabricated from No. 16 MSG coated steel and formed to fold over upper tab. Type 330 upper tab 4.30 in. wide and 2.91 in. high max. Type 330B upper tab 4.30 in. wide and 3.34 in. high max. Both types formed to engage base. Clips spaced 48 in. maximum.

MORIN CORP ([View Classification](#)) — "SLR-330 Clip" (for 45° seam)

MORIN CORP ([View Classification](#)) — "SLR-330B Clip" (for 90° & 180° seam)

3. **Roof Deck Fastener* (Bearing Clip)** — No. 18 MSG min gauge coated steel; 3 in. wide by 3-1/4 in. long with 3/8 in. legs. Used under Panel Clips (Item 2, 2A and 2C) over purlins and rigid insulation. Three 1/4 in. dia guide holes located in base.

STEELOX SYSTEMS L L C ([View Classification](#)) — "Bearing Clip"

3A. **Roof Deck Fasteners* (Bearing Plate)** — (Not Shown) — (Optional) — No. 24 MSG min gauge coated steel. 4-5/8 in. wide, 6 in. long. Used under panel clips over rigid insulation.

AEP SPAN, DIV OF ASC PROFILES ([View Classification](#)) — "SL Bearing Plate"

4. **Fasteners (screws)** — Fasteners used to attach the bearing plates to the liner panels to be No. 11 by 3-3/4 in. long self-drilling, stand-off plated steel, flat torx-head screws. Three fasteners per bearing plate used, driven into liner panel. Fasteners used to attach panel clips (Item No. 2) to the bearing plates (Item 3) to be No. 18 by 1 in. long self-drilling, self-tapping, hex-washer-head, plated steel screws. One screw used for each panel clip. Fasteners used to attach the liner panels to the purlin supports to be No. 12-14 by 1-1/4 in. self-drilling, self-tapping, hex-head, plated steel screws with a separate 5/8 in. diameter steel washer and a neoprene sealing washer. Two fasteners to be used at each support with fasteners located in every valley. Fasteners used at liner panel side laps to be the same type as liner panel screws and spaced 20 in. OC. Fasteners used at end laps to be 1/4-10 by 1 in. long self-drilling, self-tapping, hex-head, plated steel screws with 1/2 in. OD. metal backed sealing washers. Spacing to be in a 1, 3, 3-1/2, 3-1/2, 3, 1 in. pattern.

5. **Liner Panel** — The liner panel to be 3 in. deep and fabricated from No. 22 MSG min steel. Top of crests to be 5-1/2 in. wide, valleys to be 2-1/2 in. wide at top. Yield strength to be min 33,000 psi. Liner panel to be fastened to supports with screws indicated under Item 4 or with welds and weld washers of type indicated by manufacturer of liner panel. Welds to be located in every valley.

6. **Fastener Reinforcement (Bearing Plate)** — The reinforcements used with the screws attaching the liner panels to the purlins to be 0.125 in. min thick steel and to have an area of approximately 2 sq in.

7. **Foamed Plastic** — (Rigid Insulation) — Supplied in 4 ft wide sheets. Min thickness to be 1 in. Density to be min of 2.0 PCF or see products Classified under TJBX.

8. **Vapor Barrier** — Used between the liner panel and the foamed plastic to be a 6 mil plastic sheeting.

9. **Purlins** — No. 12 MSG min gauge steel (min yield strength 40,000 psi) or min type H open web joists.

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

*Bearing the UL Classification Mark

Last Updated on 2012-02-27

[Questions?](#)

[Print this page](#)

[Notice of Disclaimer](#)

[Page Top](#)

© 2012 UL LLC

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Listed and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Designs and/or Listings (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2012 UL LLC".