

**EVALUATION REPORT OF
F & F ASSEMBLIES
'SKY-BRITE LIGHT TRANSMITTING PANEL INSERTS'
WITH NUCOR CFR PANELS**

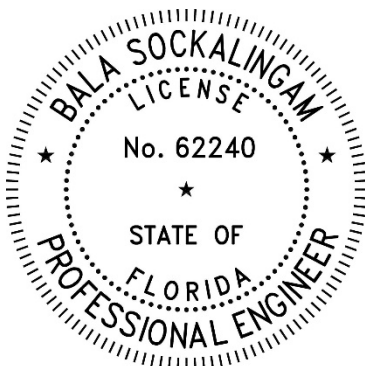
**FLORIDA BUILDING CODE 8TH EDITION (2023)
FLORIDA PRODUCT APPROVAL
FL10757.1-R7
STRUCTURAL COMPONENTS
ROOF DECK**

**Prepared For:
F & F Assemblies
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**This report consists of
Evaluation Report (3 Pages including cover)
Installation Details (3 Pages)**

**Report No. C2836-1
Date: 9.18.2024**



This item has been digitally signed and sealed by Bala Sockalingam, PE, on the date indicated.

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Manufacturer:	F & F Assemblies
Product Name:	Sky-Brite Light Transmitting Panel Inserts
Product Description:	Sky-Brite Inserts are factory bonded with proprietary adhesive to Nucor CFR roof panel manufactured by Nucor Buildings Group.
Materials:	Woven roving fiberglass reinforcement: 8 Oz 100% acrylic; MAWR08 formula. Self-ignition temperature greater than 650°F (343°C) in accordance with ASTM D1929. Maximum average smoke density rating less than 75 where tested in the thickness intended for use in accordance with ASTM D2843. Plastic materials Class CC2 with burning rate of less than 2¹/₂ inches per minute accordance with ASTM D635.
Slope:	1/4:12 or greater in accordance with FBC 2023 Section 1507.4.2
Design Uplift Pressure: (Factor of Safety = 2)	52.5 psf @ maximum support spacing of 60" o.c.
Panel Attachment:	Min 24 ga. CFR roof panels will be fastened in accordance with UL Construction No. 590. Panels will be installed in accordance with FBC 2023 Section 2609 for CC2 class of plastics. Panels shall not be installed in groups H, I-2, I-3.
Test Standards:	Roof assembly tested in accordance with UL580-06 'Uplift Resistance of Roof Assemblies' and FM 4470 (2012) Section 5.5 'Resistance to Foot Traffic'.
Test Equivalency:	The test procedure in FM 4470 (2012) comply with test procedure prescribed in FM 4470 (2016) Section 4.6 'Resistance to Foot Traffic'. The test procedure in ASTM G154-06 comply with test procedure prescribed in ASTM G154-16a.
Code Compliance:	The product described herein has demonstrated compliance with FBC 2023 Section 1504.3.2, 1504.6, 1504.7, 1507.4 and 2606.4.
Product Limitations:	Design wind loads shall be determined for each project in accordance with FBC 2023 Section 1609 or ASCE 7-22 using allowable stress design. The maximum support spacing listed herein shall not be exceeded. The design uplift pressure for reduced support spacing may be computed using rational analysis prepared by a Florida Professional Engineer. This evaluation report is not applicable in High Velocity Hurricane Zone. Fire classification is not within the scope of this

Evaluation Report. Refer to FBC 2023 Section 1505 and current approved roofing materials directory or ASTM E108/UL790 report from an accredited laboratory for fire ratings of this product.

Supporting Documents: UL 580 Roof Deck Construction No. 590

FM 4470 Test Report
PRI Construction Materials Technologies
FAE-007-02-01, Reporting Date 4/23/2012

ASTM G154 Test Report
PRI Construction Materials Technologies
FAE-002-02-01, Reporting Date 4/23/2012

ASTM D635, D1929 & D2843 Test Report
PRI Construction Materials Technologies
FAE-029-02-01, Reporting Date 10/02/2017

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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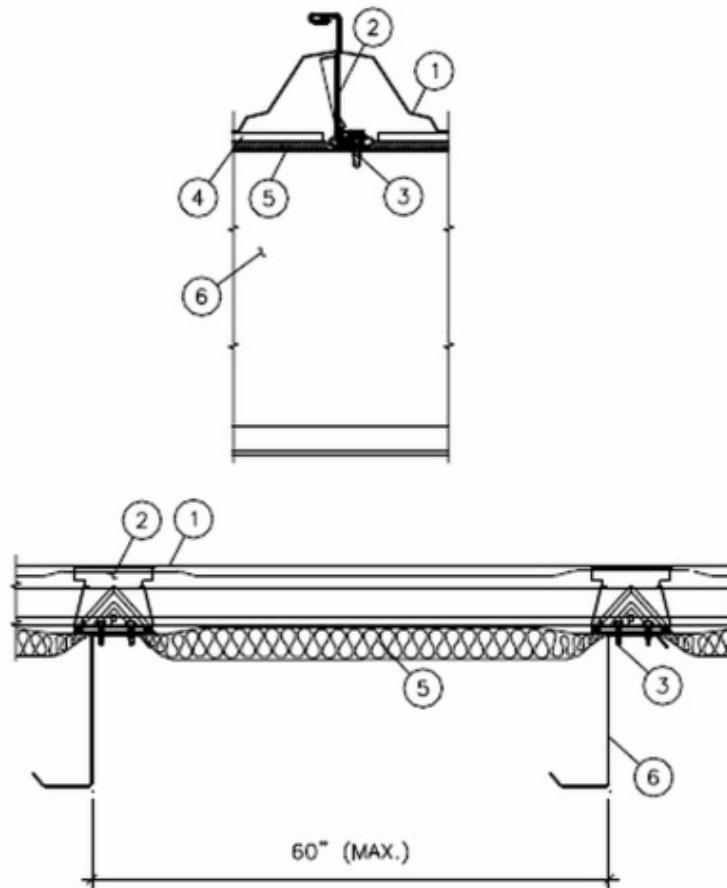
Roof Deck Constructions

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

Construction No. 590

March 8, 2023

Uplift — Class 90
Fire Not Investigated



1. Metal Roof Deck Panels* — No. 24 MSG min thickness coated steel. Maximum panel width 24 in.; rib height 3 in. Panels continuous over two or more spans. Panel flat area may have optional minor corrugations placed at various locations beginning at a min. of 2 in. from side ribs. End laps to occur adjacent to purlin with panels overlapped 2 in. min - 4 in. max. End laps to be either continuous or single course. Optional end lap back-up plate (Items 2B & 2C) may be used for single course or continuous situations. An alternate end-lap channel (Item 2A) to be used for continuous end-lap situations. A bead of sealant may be used at panel end laps and side ribs. Ribs to be seamed with hand seamer to form a horizontal flange with a tight hem. Seaming operation may be continuous or only at panel clip (Item 2) locations.

NUCOR CORP. (NUCOR BUILDINGS GROUP) ([View Classification](#)) — "Nucor CFR Roof"

2. Roof Deck Fasteners* (Panel Clip) — Location at side of panels over purlin (Item 6). Max spacing 60 in. Two piece assembly with a reinforced base fabricated from No. 16 MSG min. coated steel; Width 3-3/8 in.; Height, .60 in. min., .80 in. max. Upper tab fabricated from No. 21 MSG min. coated steel. Width 4.30 in.; Height 3.41 in. (short) or 4.41 in. (tall) or one-piece assembly fabricated from No. 21 MSG min coated steel. Width 3-1/4 in. Height 3-1/2 in. (short), 4-1/2 in. (tall) or 5-1/2 in. (super tall).

NUCOR CORP. (NUCOR BUILDINGS GROUP) ([View Classification](#)) — "NBS CFR Short Sliding Clip" or "NBS CFR Super Tall Sliding Clip" or "NBS CFR Tall Sliding Clip" or "NBS CFR Short Fixed Clip" or "NBS CFR Tall Fixed Clip"

2A. End Lap Back-Up Channel — (Optional) (Not Shown) - (For continuous end-lap situations only) - No. 16 MSG min. coated steel channel, 3 in. wide with two 1/2 in deep legs. Located under panel end lap, 12 in. from purlin (Item 6).

2B. End Lap Back-Up Plate* — (Optional) (Not Shown) - (For single panel width or continuous end-lap situations) - No. 16 MSG min coated steel, fabricated to the profile of the Metal Roof Deck Panels (Item 1), 6 in. wide. Located under the panel end lap, adjacent to purlin. To be used in lieu of Item 2A.

2C. Endlap Back-Up Plate* — (Optional) (Not Shown) (For single panel width or continuous end lap situations) - No. 16 MSG min. coated steel, fabricated to the general profile of the Metal Roof Deck Panels (Item 1), 12 1/2 in. wide. Located under the panel end lap, adjacent to purlin. To be used in lieu of item 2A and 2B.

NUCOR CORP. (NUCOR BUILDINGS GROUP) ([View Classification](#)) — "NBS Back-up Plate"

2D. Cinch Strap — (Optional) (Shown) - 1-1/4 in. wide, fabricated from 0.091 in. thick aluminum.

3. Fasteners — (Screws) - For roof deck fastener (panel clip)-to-purlin attachment to be No. 1/4-14 by 1-1/4 in. min. long self-drilling, self-tapping, hex head, plated steel screws. Two fasteners used per clip. Fasteners used at the end lap to be No. 17-14 by 1-1/4 in. min. long self-

drilling, self-tapping, hex head, plated steel screws with EPDM sealing washer or 1/4-14 x 1 1/4" minimum type Self-Drilling, Self-Tapping Plated Steel Screw with a EPDM Sealing Washer. As an alternate fastener, No. 11/32 by 1-1/4 in. min. long, type AB, self-tapping, hex head, plated steel; screws with EPDM sealing washer may be used. Diameter of pilot holes to be appropriate for fastener. Spacing to be nominal 6 in. OC. Fasteners inserted into guide holes in Cinch Strap (Item 2D) when used. For open web joists or hot rolled sections having a min. 1/8 in. upper flange thickness, No. 12-24 by 1-1/2 in. min. self-drilling screws may be used. Spacing to be the same for all types.

3A. Fasteners — (Screws) (Used on Optional End Lap) For panel to purlin attachment to be No. 1/4 - 14 by 11/4 in. min. long self-drilling, self-tapping, hex head, plated steel screws. Two fasteners used per clip. Fasteners used at the end lap to be No. 12-14 x 1 1/4 in. min. long self-drilling, self-tapping, hex head, plated steel screws with a EPDM sealing washer. As an alternate fastener, No. 17-14 x 1 1/4 in. min long type AB, self-tapping, hex head, plated steel, screws with a EPDM sealing washer may be used. Spacing to be 2 1/2 in. O.C. One fastener is located in the shoulder of each side of the major rib. All fasteners located 1 in. from end of panel. (10) fasteners total used on each lap. When used with item 2A, 2B, and 2C.

For open web joists or hot rolled sections having a min. 1/8 in upper flange thickness, No. 12-24 by 11/2 in. min. self-drilling screws may be used. Spacing to be the same for all types.

4. Thermal Spacer — (Optional) Polystyrene, 3/4 - 1 in. thick, length sized to fit between panel clips (Item 2).

5. Insulation — (Optional) Any compressible blanket insulation, 12 in. max thickness before compression, located between thermal spacer (Item 4) and purlin (Item 6).

6. Purlins — No. 16 MSG min. thickness coated steel (min yield strength 50 ksi). Max spacing 60 in. OC. As an alternative, open web joint (min. yield strength 50 ksi) may be used. Max spacing 60 in. OC.

7. Building Unit* (Skylight) — (Optional) — (Translucent, glass fiber reinforced plastic) — Prefabricated assemblies of formed translucent glass fiber reinforced plastics and only perforated 24 MSG Classified Metal Roof Deck Panel (Item 1). Panel continuous over two or more spans.

ALLIANCE STEEL INC ([View Classification](#)) — "Alliance Seam 24 Skylight Panel"

F & F ASSEMBLIES INC ([View Classification](#)) — "SKY-BRITE", "American Building Company", "Nucor Building System", "UltraDek/DoubleLok", "Schulte Building Systems" or "BRS style Panel".

MUELLER INC ([View Classification](#)) — "SKY-BRIGHT"

7A. Building Units* (Integrated Skylight) — (Optional) — Prefabricated assemblies of formed polycarbonate lens and perforated 24 MSG Classified Metal Roof Deck Panel (Item 1). Panel continuous over two or more spans.

NUCOR CORP. (NUCOR BUILDINGS GROUP) ([View Classification](#)) — "CFR Integrated Prismatic Skylight"

8. Lateral Bracing — (Not Shown) - As required.

Refer to general information, Roof Deck Construction, 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 2023-03-08

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