



UNA-CLAD™ Metal Roof Systems Code Approval Guide

You must verify the included assemblies in the charts below with the associated Firm's (UL, FM, etc). Not all of the information included in the RoofNav assemblies will be listed in the charts below.

You must verify that all assemblies meet Firestone Building Products warranty requirements with the associated regions technical team.

Table of Contents

EXTERNAL FIRE RATINGS	5
UL Fire Rated Roof Assemblies.....	6
UL Class A – External Fire Rated Assemblies:	6
UL Class B – External Fire Rated Assemblies:	8
UL – Impact Resistance	9
UL Impact Resistance Rated Panels.....	9
TGAM.R14751 Roof-covering Materials, Impact Resistance	9
(only Steel, copper or aluminum, any thickness)	9
UL – Wind Uplift Ratings	9
UL 580, Class 90 Rated Roof Deck Constructions.....	10
UC-3 Constructions:	10
UC-4 Constructions:	15
UC-6 Constructions:	20
UC-7 Constructions:	23
UC-14 Constructions:	23
5V Crimp Constructions:	33
UL 1897 Testing:.....	34
UC-3.....	34
UC-4.....	36
UC-6.....	38
UC-7.....	38
UC-14.....	39
Internal Fire (“P” Assemblies)	39
STATE OF FLORIDA and MIAMI-DADE APPROVALS	40
Table 1.05a	40
State of Florida Product Approval	40
Table 1.05b	40
Miami-Dade Notice of Acceptance	40
Energy Star Approvals - As Currently Listed at www.energystar.gov	40
Table 1.06	40
Energy Star Approvals	40
CRRC Rated Panels	41
CRRC Rated Panels	41
Air Infiltration & Water Penetration.....	42
Table 1.08a	42
ASTM E283 and E1680 Air Infiltration Tests	42

Table 1.08b	43
ASTM E331 and E1646 Water Penetration Tests	43
Structural Performance	44
Table 1.09a	44
ASTM E330 Structural Performance Tests	44
Table 1.09a (Cont.)	45
ASTM E330 Structural Performance Tests	45
Table 1.09b	45
ASTM E1592 Structural Performance Tests	45
Table 1.09b (Cont.)	46
ASTM E1592 Structural Performance Tests	46
1.11 Concentrated Load Testing.....	53
Table 1.11 Concentrated Load Testing.....	53

Not all of the information included in the assemblies will be listed in the charts below. Verify **ALL assemblies in this document with the associated Firm's (UL, FM, etc) database or QBS.**

Verify that **ALL assemblies meet Firestone Building Products warranty requirements with QBS.**

Codes information is time sensitive and may change without notice. It is the responsibility of the user to complete the above verifications **BEFORE bidding the project in order to assure accuracy.**

EXTERNAL FIRE RATINGS

1. All regional building codes and most local building code officials require that roofing systems meet minimum performance requirements when exposed to external fire sources. The accepted method for measuring external fire resistance is ASTM Standard E-108. This test standard, and closely related standards such as Underwriters Laboratories UL-790 and Uniform Building Code 15-2, is used to determine the ability of a roof system to hinder the horizontal spread or vertical penetration of an external fire source.

A. Noncombustible Roof Decks (Steel, Concrete, and Poured Gypsum) require testing for horizontal spread of flame.
B. Combustible Roof Decks (Wood, Plywood, and Tectum) require testing for both horizontal spread and vertical penetration of flame.
2. ASTM E-108, UL-790 and UBC 15-2. All classified roof covering assemblies fall into one of the three following categories:

CLASS A: "... includes roof coverings which are effective against severe fire exposures..." (See Note 1)
CLASS B: "... includes roof coverings which are effective against moderate fire exposures..." (See Note 1)
CLASS C: "... includes roof coverings which are effective against light fire exposures..." (See Note 1)
3. For insulated assemblies over non-combustible roof decks, any classified roofing assembly may be installed over a new roof deck, an existing roof deck or over an existing roofing assembly. Underwriters Laboratories states that "any classified roofing system may be applied over a pre-existing roof system (Class A, B, C, verifiable or not) of the same deck type and establishes for that roof the classification of the new system". Also, an assembly classified over a combustible deck may be installed over an existing non-combustible deck and establish for the assembly the rating of the new system. A non-combustible deck rated assembly must be tested and classified over a combustible deck in order to obtain the desired classification of the new assembly. Total insulation thickness of combined existing and new roofing systems may not exceed the total maximum allowable for the new roofing system, and non-insulated systems are not intended for use over insulated systems.
4. The class of roof covering required by each regional building code depends upon many factors, including the use and location of the building and the type of construction. The local building authority should always be consulted as to what the roofing assembly classification will need to be for each roofing project.
5. It should be noted that these classifications apply to roofing assemblies, and NOT the metal roofing panel. A metal roofing panel that is classified as part of a Class A assembly when installed over a particular insulated or non-insulated construction may not qualify as part of a Class A assembly if you make changes within the insulated or non-insulated construction.

UL Fire Rated Roof Assemblies

The following UL Fire Rated Roof Assemblies can be found and verified using the following hyperlink:

- [TGFU.R14751](#) – Roofing Systems

Please utilize the UL website to verify the assembly number associated with each listed assembly.

UL Class A – External Fire Rated Assemblies:

Construction: New, Retrofit		
UL #	Deck, Slope & Class	Assembly
1.	Deck: C-15/32 Slope: Unlimited Class: A	<p>Insulation (Optional): — Any thickness Firestone "ISO 95+GL", RESISTA, ISOGARD HD, ISOGARD, HD Composite</p> <p>Barrier Board: — G-P Products "DensDeck®", 1/4 in. thick min, or 1/2 in. thick min UL Classified gypsum board with joints in barrier board offset 6 in. with joints in deck, or minimum one layer GAF Materials Corp. "VersaShield Solo Fire Resistant Slipsheet" CLAD-GARD SA-FR Underlayment</p> <p>Ply Sheet (Optional): — One or more layers CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment.</p> <p>Surfacing: — "UC-1", "UC-2", "UC-3", "UC-4", "UC-6", "UC-6 HD", "UC-7", "UC9", "UC11", "UC-14", "UC-600", "UC-601", "UC750", "UC-500", "UC-501", "UR", "HR", "VR", 5V Crimp, "NB1", "NB2" steel, copper, zinc or aluminum.</p>
1A.	Deck: C-15/32 Slope: Unlimited Class: A	<p>Barrier Board: — G-P Products "DensDeck®", 1/4 in. thick min, or 1/2 in. thick min UL Classified gypsum board with joints in barrier board offset 6 in. with joints in deck, or minimum one layer GAF Materials Corp. "VersaShield Solo Fire Resistant Slipsheet" or minimum one layer of CLAD-GARD SA-FR Underlayment.</p> <p>Insulation (Optional): — Any thickness Firestone "ISO 95+ GL" RESISTA, ISOGARD HD, ISOGARD HD Composite or "HailGard"</p> <p>Ply Sheet (Optional): — CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment.</p> <p>Surfacing: — "UC-1", "UC-2", "UC-3", "UC-4", "UC-6", "UC-6 HD", "UC-7", "UC9", "UC11", "UC-14", "UC-600", "UC-601", "UC750", "UC-500", "UC-501", "UR", "HR", "VR", 5V Crimp, "NB1", "NB2" steel, copper, zinc or aluminum.</p>
1B.	Deck: C-15/32 Slope: Unlimited Class: A	<p>Barrier Board: — G-P Products "DensDeck®", 1/4 in. thick min, or 1/2 in. thick min UL Classified gypsum board with joints in barrier board offset 6 in. with joints in deck, or minimum one layer GAF Materials Corp "VersaShield Underlayment" or minimum one layer of CLAD-GARD SA-FR Underlayment.</p> <p>Insulation (Optional): — Any thickness Firestone "ISO 95+ GL", RESISTA, ISOGARD HD, ISOGARD HD Composite or "HailGard",</p> <p>Ply Sheet (Optional): — CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment.</p> <p>Surfacing: — "UC-1", "UC-2", "UC-3", "UC-4", "UC-6", "UC-6 HD", "UC-7", "UC9", "UC11", "UC-14", "UC-600", "UC-601", "UC750", "UC-500", "UC-501", "UR", "HR", "VR", 5V Crimp, "NB1", "NB2" steel, copper.</p>
2.	Deck: C-15/32 or Spaced Sheathing Slope: Unlimited Class: A	<p>Underlayment: — CLAD-GARD SA-FR Underlayment.</p> <p>Insulation (Optional): — Any thickness Firestone "ISO 95+ GL", RESISTA, "ISOGARD HD", ISOGARD HD Composite or "HailGard"</p> <p>Ply Sheet (Optional): — CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment.</p> <p>Surfacing: — "UC-1", "UC-2", "UC-3", "UC-4", "UC-6", "UC-6 HD", "UC-7", "UC9", "UC11", "UC-14", "UC-600", "UC-601", "UC750", "UC-500", "UC-501", "UR", "HR", "VR", 5V Crimp, "NB1", "NB2" steel or copper.</p>
3.	Deck: C-15/32 Slope: Unlimited Class: A	<p>Underlayment: — CLAD-GARD SA-FR Underlayment.</p> <p>Insulation (Optional): — Any thickness Firestone "ISO 95+ GL", RESISTA, "ISOGARD HD", ISOGARD HD Composite or "HailGard"</p> <p>Ply Sheet (Optional): — CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA</p>

		(not UL Classified) or CLAD-GARD SA-FR Underlayment. Surfacing: — "UC-1", "UC-2", "UC-3", "UC-4", "UC-6", "UC-6 HD", "UC-7 ", "UC9", "UC11", "UC-14", "UC-600", "UC-601", "UC750", "UC-500", "UC-501", "UR", "HR", "VR", 5V Crimp, "NB1", "NB2" aluminum.
4.	Deck: C-15/32 or Spaced Sheathing Slope: Unlimited Class: A	Underlayment: — CLAD-GARD SA-FR Underlayment. Insulation (Optional): — Any thickness Firestone "ISO 95+ GL", RESISTA, "ISOGARD HD", ISOGARD HD Composite or "HailGard" Ply Sheet (Optional): — CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment. Surfacing: — "UC-1", "UC-2", "UC-3", "UC-4", "UC-6", "UC-6 HD", "UC-7 ", "UC9", "UC11", "UC-14", "UC-600", "UC-601", "UC750", "UC-500", "UC-501", "UR", "HR", "VR", 5V Crimp, "NB1", "NB2" steel or copper.
5.	Deck: C-15/32 or Spaced Sheathing Slope: Unlimited Class: A	Underlayment: — CLAD-GARD SA-FR Underlayment. Insulation (Optional): — Any thickness Firestone "ISO 95+ GL", RESISTA, "ISOGARD HD", ISOGARD HD Composite or "HailGard" Ply Sheet (Optional): — CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment. Surfacing: — "UC-1", "UC-2", "UC-3", "UC-4", "UC-6", "UC-6 HD", "UC-7 ", "UC9", "UC11", "UC-14", "UC-600", "UC-601", "UC750", "UC-500", "UC-501", "UR", "HR", "VR", 5V Crimp, "NB1", "NB2" steel, fastened to 2x2 wood battens.
6.	Deck: C-15/32 or Spaced Sheathing Slope: Unlimited Class: A	Underlayment: — CLAD-GARD SA-FR Underlayment. Insulation (Optional): — Any thickness Firestone "ISO 95+ GL", RESISTA, "ISOGARD HD", ISOGARD HD Composite or "HailGard" Ply Sheet (Optional): — CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment. Ply Sheet: — One layer Type 30 base sheet or "VersaShield", mechanically fastened. Surfacing: — "5-V-Crimp ".
7.	Deck: C-15/32 Slope: Unlimited Class: A	Insulation (Optional): — Firestone "ISO 95+ GL (any thickness), RESISTA Insulation: — min. ½ in. "ISOGARD HD" OR ISOGARD HD Composite Ply Sheet: — CLAD-GARD SA-FR Underlayment. Surfacing: — "UC-1", "UC-2", "UC-3", "UC-4", "UC-6", "UC-6 HD", "UC-7 ", "UC9", "UC11", "UC-14", "UC-600", "UC-601", "UC750", "UC-500", "UC-501", "UR", "HR", "VR", 5V Crimp, "NB1", "NB2" steel or copper.
8.	Deck: C-15/32 Slope: Unlimited Class: A	Insulation (Optional): — Firestone "ISO 95+GL" or RESISTA Barrier Board: — G-P Products "DensDeck® ", 1/4 in. thick min, or 1/2 in. thick min UL Classified gypsum board with joints in barrier board offset 6 in. with joints in deck, or minimum one layer CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment". Ply Sheet (Optional) — CLAD-GARD SA-N, CLAD-GARD SA-S, CLAD-GARD R, CLAD-GARD MA (not UL Classified) or CLAD-GARD SA-FR Underlayment". Surfacing: — "UC-1", "UC-2", "UC-3", "UC-4", "UC-6", "UC-6 HD", "UC-7 ", "UC9", "UC11", "UC-14", "UC-600", "UC-601", "UC750", "UC-500", "UC-501", "UR", "HR", "VR", 5V Crimp, "NB1", "NB2" steel, copper or aluminum.
9.	Deck: C-15/32 or Spaced Sheathing Slope: Unlimited Class: A	Insulation (Optional): — Firestone "ISO 95+GL", "ISOGARD HD", RESISTA or "HailGard" Underlayment: — CLAD-GARD SA-FR Underlayment Surfacing: — "UC-1", "UC-2", "UC-3", "UC-4", "UC-6", "UC-6 HD", "UC-7 ", "UC9", "UC11", "UC-14", "UC-600", "UC-601", "UC750", "UC-500", "UC-501", "UR", "HR", "VR", 5V Crimp, "NB1", "NB2" steel or copper.
10.	Deck: C-15/32	Insulation (Optional): — Firestone "ISO 95+GL", "ISOGARD HD", RESISTA, ISOGARD HD Composite or "HailGard"

	Slope: Unlimited Class: A	Underlayment: — CLAD-GARD SA-FR Underlayment Surfacing: — "UC-1", "UC-2", "UC-3", "UC-4", "UC-6", "UC-6 HD", "UC-7", "UC9", "UC11", "UC-14", "UC-600", "UC-601", "UC750", "UC-500", "UC-501", "UR", "HR", "VR", 5V Crimp, "NB1", "NB2" aluminum.
11.	Deck: C-15/32 or Spaced Sheathing Slope: Unlimited Class: A	Insulation (Optional): — Any thickness Firestone "ISO 95+GL", "ISOGARD HD", RESISTA, ISOGARD HD Composite or "HailGard" Underlayment: — CLAD-GARD SA-FR Underlayment Surfacing: — "UC-1", "UC-2", "UC-3", "UC-4", "UC-6", "UC-6 HD", "UC-7", "UC9", "UC11", "UC-14", "UC-600", "UC-601", "UC750", "UC-500", "UC-501", "UR", "HR", "VR", 5V Crimp, "NB1", "NB2" steel or copper.
12.	Deck: C-15/32 or Spaced Sheathing Slope: Unlimited Class: A	Insulation (Optional): — Firestone "ISO 95+GL", "ISOGARD HD", RESISTA, ISOGARD HD Composite or "HailGard" Underlayment: — CLAD-GARD SA-FR Underlayment Surfacing: — "UC-1", "UC-2", "UC-3", "UC-4", "UC-6", "UC-6 HD", "UC-7", "UC9", "UC11", "UC-14", "UC-600", "UC-601", "UC750", "UC-500", "UC-501", "UR", "HR", "VR", 5V Crimp, "NB1", "NB2" steel, fastened to 2x2 wood battens.
13.	Deck: C-15/32 or Spaced Sheathing Slope: Unlimited Class: A	Insulation (Optional): — Firestone "ISO 95+GL", "ISOGARD HD", RESISTA, ISOGARD HD Composite or "HailGard" Underlayment: — One layer GAF Materials Corp "VersaShield Underlayment", mechanically fastened. Ply Sheet: — One layer Type 30 base sheet or "VersaShield Underlayment", mechanically fastened. Surfacing: — "5-V-Crimp".
14.	Deleted	
15.	Deck: NC Slope: Unlimited Class: A	Insulation (Optional): — Any thickness Firestone "ISO 95+GL", Resista, Firestone HailGard, Any UL Classified insulation any thickness. Cover Board (Optional): — Firestone ISOGARD HD, G-P Products "DensDeck®", 1/4 in. thick min, 7/16 inch OSB, 1/2 in. high density wood fiber board or 15/32 in. plywood. Ply Sheet (Optional): — Firestone Clad Gard SA-N, Clad-Gard SA-S, Clad Gard R or Clad-Gard MA (not UL Classified). CLAD-GARD SA-FR Underlayment Surfacing: — "UC-1", "UC-2", "UC-3", "UC-4", "UC-6", "UC-6 HD", "UC-7", "UC-14", "UC-600", "UC-601", "UC750", "UC-500", "UC-501", "UR", "HR", "VR", 5V, Crimp, "NB1", "NB2" steel, copper or aluminum.

UL Class B – External Fire Rated Assemblies:

Construction: New, Retrofit		
1.	Deck: C-15/32 Slope: Unlimited Class: B	Underlayment: — One layer GAF Materials Corp "VersaShield Underlayment", mechanically fastened. Surfacing: — "UC-1", "UC-2", "UC-3", "UC-4", "UC-6", "UC-6 HD", "UC-7", "UC9", "UC11", "UC-14", "UC-600", "UC-601", "UC750", "UC-500", "UC-501", "UR", "HR", "VR", 5V Crimp, "NB1", "NB2" steel, copper or aluminum.
2.	Deck: Spaced Sheathing Slope: Unlimited Class: B	Underlayment: — One layer GAF Materials Corp "VersaShield Underlayment". Surfacing: — "UC-1", "UC-2", "UC-3", "UC-4", "UC-6", "UC-6 HD", "UC-7", "UC9", "UC11", "UC-14", "UC-600", "UC-601", "UC750", "UC-500", "UC-501", "UR", "HR", "VR", 5V Crimp, "NB1", "NB2" steel or copper.

UL – Impact Resistance

[\(TGAM.GuideInfo\)](#)

Testing to UL 2218, "Impact Resistance of Prepared Roof Covering Materials", results in Classifications for impact resistance that are expressed as Class 1, 2, 3 or 4 which relate to a roof covering's ability to withstand impacts from 1-1/4, 1-1/2, 1-3/4 and 2 inch diameter steel balls, respectively. The acceptance criteria to metal roof panels is as follows: withstand the assigned class designation impact without visible evidence of tearing, fracturing, cracking, splitting, rupturing, crazing or other opening of the roof covering layer. Classification is for metal panels placed over solid wood decking (3/8" or greater in thickness).

UL IMPACT RESISTANCE RATED PANELS

[TGAM.R14751](#) ROOF-COVERING MATERIALS, IMPACT RESISTANCE (ONLY STEEL, COPPER OR ALUMINUM, ANY THICKNESS)

Class 4 ratings were achieved for the following panels designations:

UC-3, UC-4, UC-6, UC-7, UC-14	UC-500, UC-501, UC-600, UC-601	5-V Crimp, UR, HR, VR
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UL – Wind Uplift Ratings

UPLIFT RESISTANCE CLASSIFIED

[TGKX.GuideInfo](#) - Roof Deck Constructions

Roof Deck Constructions Classified for Uplift Resistance have been investigated for damageability from both external and internal pressures on the deck associated with high velocity winds. Uplift Classifications are derived from tests conducted in accordance with the Standard for "Tests For Uplift Resistance of Roof Assemblies", [ANSI/UL 580](#). The [ANSI/UL 580](#) test method subjects a 10 ft by 10 ft test sample to various static and oscillating air pressures to index performance under uplift loads imposed on roof decks.

The magnitude of the wind velocity across a roof deck and the resulting uplift pressures on a roof deck are dependent upon many factors such as wind gusts, the shape of the roof deck, edge configuration and the landscape surrounding the roof deck installation. A method to calculate the uplift pressures on roof decks is contained in the American Society of Civil Engineers (ASCE) Standard 7-95, Minimum Design Loads for Buildings and Other Structures.

The nominal static uplift pressure, the oscillating uplift pressures and the maximum static uplift pressure for each Class are:

Class	Nom Static Uplift Pressure psf	Range of Oscillating Pressure psf	Max Static Uplift Pressure psf
15	15	11 to 21	23
30	30	22 to 42	45
60	60	44 to 83	75
90	90	66 to 90	105

The static pressures are maintained for a 5 min period and the oscillating pressures are applied at a 10 plus or minus 2 s frequency and are maintained for a 60 min period for each Class. An assembly rated Class 60 has successfully withstood pressures imposed during Class 30 and Class 60 tests. An assembly rated Class 90 has successfully withstood pressures imposed during Class 30, Class 60 and Class 90 tests.

NOTE: Please utilize the UL website to verify the Construction Number associated with each listed assembly. A hyperlink has been embedded in each assembly using the 'Construction No. ###'. By clicking on this text you can open the hyperlink that will direct you to the current UL construction assembly and details.

UL 580, Class 90 Rated Roof Deck Constructions

The following UL 580, Class 90 Rated Roof Deck Constructions can be found and verified using the following hyperlink:

- [TJPV-R14751](#) – Metal Roof Deck Panels

UC-3 Constructions:

UC-3 – Construction No. 512A Uplift – Class 30*, Class 90		
1.	Panel:	Width 12 in. min to 20 in. max with 1-1/2 in. high legs. No. 24 MSG min thick coated steel, or 0.032 in. min thick aluminum. Panels continuous over three or more clips with no end laps. Panel ribs double seamed with an electric seaming tool with seaming operation to include upper tabs of panel clips (Item 2). FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-3"
2.	Roof Deck Fasteners* (Panel Clips):	Two part assembly, base 3 in. wide, 5/8 in. high, with a 7/8 in. wide base leg having two 3/16 in. embossed guide holes. Upper tab 1/2 in. wide folded over base forming two tabs. Both parts fabricated from 0.015 in. min thick stainless steel. Clips spaced 12 in. OC. (Metal Roof Deck Panels (Item 1) limited to 16 inches wide when UC-3 Super Clip used at 36 inches oc for Class 30. Metal Roof Deck Panels). FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-3 Expansion Clip", UC-3 Super Clip
3.	Fasteners (Screws):	Fasteners used to attach panel clips (Item 2) to plywood decking (Item 5) to be No. 10-12 by minimum 1 in. long, without insulation and/or cover board, 10 x 1" PC PD WOW T17 steel or 10 x 1" PC T WOW T17 stainless steel screws. Two screws used per clip inserted into clip guide holes.
4.	Underlayment:	(Optional) — Underlayment attached over Foamed Plastic (Item 5A and/or 5B) or Decking (Item 5) or Cover Board (Item 9) As an alternate, a self-adhering modified bitumen waterproofing membrane may be used. Installed per manufacturer's recommendations. When alternate is used, plywood joints need not be sealed.
5.	Plywood Decking and Insulation Options: Note: Foamed Plastic*	Deck to be 7/16 inch OSB, 15/32 inch plywood, 19/32 inch plywood; Exposure 1, APA rated sheathing (42/20) or (32/16) respectively, square edged. Roof Deck Panels (Item 1) to be maximum 16 inches wide when fastened into 7/16 OSB or 15/32 plywood decking, and UC-3 Expansion Clip (Item 2) is to be maximum 18 inch oc. Roof Deck Panels greater than 16 inches to follow 12 inch oc spacing noted in Item 2. Butt joints to be located over purlins, side joints not blocked. All butt and side joints to be sealed with a one part urethane caulk sealant-feathered outward from joint (note exception under Item 4 alternate). A: Foamed Plastic — (Rigid Insulation — Optional — Not Shown) — Applied flat or tapered to maximum 10 in. thick combination of Item 5B. Bearing plates required under panel attachment points. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL" or "Resista" 5B. Foamed Plastic — (Rigid Insulation — Optional — Not Shown) — Placed on top of Item 5A. Maximum 10-in thick combination of Item 5A . Bearing plates required under panel attachment points. Bearing plates not required if foamed plastic not used (Item 5A or 5B). FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD" 5C. Roof Deck Fasteners* — (Bearing Plates) — Plates to be 4 in by 4 in. by No. 26 MSG min galvanized steel plate (for use with coated steel panels) or stainless steel plate (for use with aluminum panels). 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" 5D. 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 5A and/or 5B). When used or used over Foamed Plastic bearing plate not required.
6.	Purlins – Deck Supports:	Spaced a max of 24 in. OC. Any of the following types may be used: A. No. 16 MSG min thick coated steel. (Min yield strength 33,000 psi). B. Nom 2 by 6 in. (1-1/2 by 5-1/4 in. actual) No. 2 grade or better S-P-F, Hemlock Fir, Douglas Fir or Southern Yellow Pine or equivalent. C. Wood Trusses with a nom 2 by 4 in. (1-1/2 by 3-1/4 in. actual) upper chord of same grade as Item B.
7.	Plywood Fasteners:	Fasteners used to attach plywood deck to supports to be used as follows: A. For plywood to steel supports, to be No. 8-20 by 1-1/4 in. long No. 2 Phillips Drive Bugle Head Steel screws with an S-12 TEKS 3 Super Point. B. For plywood to wood supports to be No. 8-18 by 1-7/8 in. long No. 2 Phillips Drive Bugle Head, "Hi-Low" thread pattern with an "S" point. Spacing for all fastener types to be 6 in. OC at the edges and 12 in. OC in the interior.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-3 – Construction No. 623 Uplift – Class 90		
1.	Panel:	Width 16 in. max with 1-1/2 in. high legs. Min 0.027 in. thick RHEINZINK (zinc). Panels continuous over three or more clips with no end laps. Panel ribs double seamed with an electric or manual seaming tool with seaming operation to include upper tabs of panel clips (Item 2). FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-3"
2.	Roof Deck Fasteners* (Panel Clips):	Two part assembly, base 5 in. long, 1 in. wide, 0.42 in. high. Fabricated from min 0.0225 in. thick 304 stainless steel. Upper tab 3 in. long, 0.42 in. wide, 1.786 in. high. Fabricated from min 0.0172 in. thick 304 stainless steel. Spaced a maximum of 12 in. OC. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-3 Super Clip"
3.	Fasteners (Screws):	Fasteners used to attach panel clips (Item 2) to plywood deck (Item 7) to be No. 10 by 1-1/2 in. long pancake head stainless steel screws. Two screws used per clip inserted into clip guide holes.
4.	Ventilation Mat:	One layer Colbond "Enkamat 7010", loose laid.
5.	Underlayment*:	One layer Elk "VersaShield" with 2 in. side lap, loose laid.
6.	Underlayment:	One layer Type 30 organic felt with 2 in. side lap. Mechanically fastened to the plywood deck (Item 7) per manufacturers recommendations. Spaced 6 in. OC at the perimeter and 12 in. OC staggered in the field.
7.	Plywood Decking:	Deck to be nominal 5/8 in. (19/32 in. actual) or 1/2-in (15/32-in actual) thickn PS-1 rated plywood.
8.	Pulins – Deck Supports:	Spaced a maximum of 2 ft OC. Any of the following types may be used: A. No. 16 MSG min thick coated steel (33,000 psi min yield strength). B. Graded dimension lumber, No. 2 or better.
9.	Plywood Fasteners:	Fasteners used to attach plywood deck (Item 7) to supports (Item 8) to be as follows: A. For plywood to steel supports, to be No. 8-20 by 1-1/4 in. long No. 2 Phillips Drive Bugle Head steel screws with an S-12 TEKS 3 Super Point. B. For plywood to wood supports, to be 8d by 2-1/2 in. long ring shank common nails or no. 8-18 by 1-7/8 in. long no. 2 Phillips Drive Bugle Head, "Hi Low" thread pattern steel screws with an "S" point. Note: Spacing for all fastener types to be 6 in. OC at the edges and 12 in. OC in the interior. 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.		

UC-3 – Construction No. 656 Uplift – Class 90		
1.	Wood Supports (Joist):	Nominal 2 by 10 in. graded dimensional lumber, No. 2 or better. Spaced 24 in. OC max.
2.	Deck:	Nominal 5/8 in. (19/32 in. actual) or 1/2-in (15/32-in actual) plywood, Grade B-C, PS-1 rated. Fastened to supports (joists) using 8d by 2-1/2 in. long ring shank nails. Spaced 6 in. OC max at the butt ends and 6 in. OC max in the field.
3.	Foamed Plastic:	3. (Rigid Insulation) — Applied flat or tapered to maximum 10-in thick combination of Item 3A. Bearing plates required under panel attachment points. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL" 3A. (Rigid Insulation — Optional) — Placed on top of Item 3. Maximum 10-in thick combination of Item 3 . Bearing plates required under panel attachment points. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD" or "Resista"
4.	Vapor Barrier:	(Optional) — Self-adhered modified bitumen membrane per manufacturer's instructions.
5.	Panel:	Min 24 MSG steel; width 20 in. max., 1-1/2 in. high at the ribs. Panels continuous over three or more clips with no end-laps. A bead of sealant may be used at panel ribs. Panel ribs seamed with an electric seamer with seaming operation to include upper portion of panel clip (Item 5). FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-3"
6.	Roof Deck Fasteners* (Panel Clips):	Two part assembly, base 3 in. wide, 5/8 in. high, with a 7/8 in. wide base leg having two 3/16 in. embossed guide holes. Upper tab 1/2 in. wide folded over base forming two tabs. Both parts fabricated from 0.015 in. min thick stainless steel. Clips spaced 24 in. OC. with seaming operation to include upper tabs of panel clips. Plates used with panel screw fasteners (Item 6) under panel clip to be 4 in. by 4 in. min No. 26 gauge stainless steel or min No. 26 gauge galvanized steel. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-3 Expansion Clip" FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC Bearing Plate"
7.	Panel Fasteners (Screws):	Fasteners used to attach the panel clips to the plywood decking to be No. 12 pancake wafer head steel screws. Length to penetrate plywood decking a minimum of 3/4 in. Two screws are to be used per clip.
8.	Cover Board:	(Optional) — 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 deck (Item 2) or Foamed Plastic (Items 3 and/or 3A). When used or used over Foamed Plastic bearing plate not required.
	* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.	

UC-3 – Construction No. 622 Uplift – Class 90		
1.	Panel*:	Width 16 in. max with 1-1/2 in. high legs. No. 24 MSG min thick coated steel. Panels continuous over three or more clips with no end laps. Panel ribs double seamed with an electric or manual seaming tool with seaming operation to include upper tabs of panel clips (Item 2). FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-3"
2.	Roof Deck Fasteners*:	2. (Panel Clips) — Two part assembly, base 5 in. long, 1 in. wide, 0.42 in. high. Fabricated from No. 22 MSG min thick coated steel. Upper tab 3 in. long, 0.42 in. wide, 1.79 in. high. Fabricated from No. 24 MSG min thick coated steel. Spaced a maximum of 30 in. OC. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-3 Super Clip" 2A. Bearing Plate (Not Shown) — Plates used with panel screw fasteners (Item 3) under panel clip (Item 2) to be 4 in. by 4 in. min No. 26 gauge stainless steel or min No. 26 gauge galvanized steel. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC Bearing Plate" 2B. Plywood - (Optional) - (Not Shown) — As an alternate to the bearing plates (Item 2A), 1/2 in. thick (15/32 in. actual) thickness plywood, APA rated sheathing, square edged may be used to cover the entire deck.
3.	Fasteners (Screws):	Fasteners used to attach panel clips (Item 2) to liner panel (Item 7) to be No. 12 pancake wafer head steel screws. Length to penetrate liner panel (Item 7) a minimum of 3/4 in. Two screws used per clip inserted into clip guide holes.
4.	Underlayment*:	(Optional) — One layer Elk "VersaShield" with 2 in. side lap, loose laid.
5.	Underlayment:	(Optional) — One layer Type 30 organic felt with 2 in. side lap. Mechanically fastened to the liner panel (Item 7) per manufacturers recommendations. As an alternate, a self-adhering modified bitumen waterproofing membrane may be used per manufacturer's installation.
6.	Foamed Plastic*:	6. Rigid Insulation — Applied flat or tapered to maximum 10-in thick combination of Item 6A. Bearing plates required under panel attachment points. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL", "Resista" or "HD Board" 6A. Foamed Plastic — (Rigid Insulation — Optional — Not Shown) — Placed on top of Item 6. Maximum 10-in thick combination of Item 6. Bearing plates required under panel attachment points. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD", Resista" or "HD Board"
7.	Liner Panel:	7. No. 22 MSG min thick coated steel (min yield strength 33,000 psi). Min depth 1-1/2 in., max pitch 6 in. fabricated to various profiles. 7A. Liner Panel Fasteners (Not Shown) — Liner panels (Item 7) to be fastened to structural supports (Item 8) with puddle welds at every other valley, 12 in. OC.
8.	Supports:	Type K open web steel joists, 4 ft OC.
9.	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 liner panel (Item 7) or Foamed Plastic (Items 6 and/or 6A). When used or used over Foamed Plastic bearing plate not required.
	* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.	

UC-3 – Construction No. 512 Uplift – Class 90		
1.	Panel:	Width 12 in. min to 20 in. max with 1-1/2 in. high legs. No. 24 MSG min. thick coated steel, or 0.032 in. min thick aluminum. Width 16-in. max with 1-1/2 in high legs, min 0.022 in. (16 oz) copper. Panels continuous over three or more clips with no end laps. Panel ribs double seamed with an electric seaming tool with seaming operation to include upper tabs of panel clips (Item 2). FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-3"
2.	Panel Fasteners*	Two part assembly, base 3 in. wide, 5/8 in. high, with a 7/8 in. wide base leg having two 3/16 in. embossed guide holes. Upper tab 1/2 in. wide folded over base forming two tabs. Both parts fabricated from 0.015 in. min

	(Panel Clips):	thick stainless steel. Clips spaced 12 in. OC. with seaming operation to include upper tabs of panel clips (Item 2). FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-3 Expansion Clip"
3.	Fasteners (Screws):	3. Fasteners used to attach panel clips (Item 2) to liner panels (Item 5) to be No. 12-13, No. 3 Phillips drive, truss-head, coated steel screws with an "S" point or FirestoneAll-Purpose Stainless Steel Fasteners. Length to be 3/4 in. longer than overall thickness of roof deck. Two screws used per clip inserted into clip and bearing plate (Item 7) guide holes. 3A. Fasteners used to attach panel clips to plywood or OSB cover board (Item 5A) to be 10 x 1" PC PD WOW T17 steel or 10 x " PC T WOW T17 stainless steel screws. 3B. Fasteners used to attach plywood or OSB cover board to Liner Panel (item 5 below) when attaching clips to plywood or OSB to be Firestone HD HailGard Fastener in a pattern of 24 screws per 4-ft by 8-ft cover board. 3C. Fasteners used to attach panel clips (Item 2) to HailGard composite insulation board (Item 6B) No. 10 1-in. long stainless steel, two screws used per clip. 3D. Fasteners used to attach HailGard (Item 6B) composite insulation board to liner panels (Item 5) to be Firestone HD HailGard Fastener in a pattern of 24 screws per 4-ft by 8-ft board.
4.	Underlayment:	(Optional) — Underlayment attached over foamed plastic (Item 6).
5.	Liner Panel:	5. No. 22 MSG min thick coated steel (33,000 psi min yield strength). Min depth 1-1/2 in., max pitch 6 in. Fabricated to various profiles. Fastened to supports 6 in. OC. 5A. 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, 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 liner panel (Item 5) or Foamed Plastic (Items 6 and/or 6A). When used or used over Foamed Plastic bearing plate not required.
6.	Foamed Plastic Insulation*:	6. (Rigid Insulation)* — Applied flat or tapered to maximum 10-in thick in combination with Item 6A or 6B. Bearing plates required under panel attachment points. Optional if Cover Board (Item 5A) is used. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL", "ISOGARD HD Composite Board" or "Resista" 6A. Foamed Plastic (Rigid Insulation) — (Optional — Not Shown) — Placed on top of Item 6. Maximum 10 in. thick combination of Item 6. Bearing plates required under panel attachment points. Optional if Cover Board (Item 5A) is used. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — ISOGARD HD 6B. Foamed Plastic (Composite Board) — (Optional - Not Shown) ---Placed on top of "ISO 95+GL" (Item 6). FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — HailGard
7.	Panel Fasteners* (Bearing Plates*):	Plates to be 4 by 4 in. by No. 26 MSG min thick formed galvanized or stainless steel. Two 1/4 in. guide holes located inline with panel clip guide holes. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC Bearing Plate"
8.	Purlins:	No. 16 MSG min coated steel (33,000 psi min yield strength) spaced max 24 in. OC.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-3 – Construction No. 624 Uplift – Class 90		
1.	Panel*:	Width 16 in. max with 1-1/2 in. high legs. Min 0.027 in. thick Rheinzink (zinc). Panels continuous over three or more clips with no end laps. Panel ribs double seamed with an electric or manual seaming tool with seaming operation to include upper tabs of panel clips (Item 2). FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-3"
2.	Panel Fasteners*:	(Panel Clips) — Two part assembly, base 5 in. long, 1 in. wide, 0.42 in. high. Fabricated from min 0.0225 in. thick 304 stainless steel. Upper tab 3 in. long, 0.42 in. wide, 1.786 in. high. Fabricated from min 0.0172 in. thick 304 stainless steel. Spaced a maximum of 12 in. OC. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-3 Stainless Steel Super Clip" 2A. Bearing Plate (Not Shown) — Plates used with panel screw fasteners (Item 3) under panel clip (Item 2) to be 4 in. by 4 in. min No. 26 gauge stainless steel. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC Bearing Plate"
3.	Panel Clip fasteners:	Fasteners used to attach panel clips (Item 2) to liner panel (Item 8) to be No. 12 pancake wafer head steel screws. Length to penetrate steel deck a minimum of 3/4 in. Two screws used per clip inserted into clip guide holes.
4.	Ventilation Mat:	(Optional) — One layer Colbond "Enkamat 7010", loose layed.

5.	Underlayment*:	(Optional) — One layer Elk "VersaShield" with 2 in. side lap, loose laid.
6.	Underlayment:	(Optional) — One layer Type 30 organic felt with 2 in. side lap. Mechanically fastened to the liner panel (Item 8) per manufacturers recommendations.
7.	Foamed Plastic*:	7. (Rigid Insulation) — Applied flat or tapered to maximum 10-in thick combination of Item 7A. Bearing plates required under panel attachment points. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL" or "Resista" 7A. Foamed Plastic — (Rigid Insulation — Optional — Not Shown) — Placed on top of Item 7. Maximum 10-in thick combination of Item 6 . Bearing plates required under panel attachment points. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD" 7B. 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 liner panel (Item 8) or Foamed Plastic (Items 7 and/or 7A). When used or used over Foamed Plastic bearing plate not required.
8.	Liner Panel:	8. No. 22 MSG min thick coated steel (min yield strength 33,000 psi). Min depth 1-½ in., max pitch 6 in. fabricated to various profiles. 8A. Liner Panel Fasteners (Not Shown) — Liner panels (Item 8) to be fastened to structural supports (Item 9) with puddle welds at every other valley, 12 in. OC.
9.	Supports:	Type K open web steel joists, 4 ft OC.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-3 – Construction No. 658 Uplift – Class 90		
1.	Purlin:	Purlins used for liner panel (Item 2) support to be cold formed steel sections. As alternatives, structural components (hot rolled beams, channels, open web joists, etc.) may be used. Min gauge and yield to depend on design considerations for uplift loading. Purlins spaced max 6 ft. OC.
2.	Liner Panel: Optional: Gypsum Board	2. No. 22 MSG min thick coated steel (33,000 psi min yield strength). Min depth 1-1/2 in., max pitch 6 in. Fabricated to various profiles. Fastened to supports 6 in. OC. 2A. Gypsum Board (Optional not shown) — Max thickness 5/8 in. Fastened to steel deck with same fasteners (Item 6) used to attach the panel clips (Item 5) to the steel decking.
3.	Insulation: Optional: Underlayment	3. (Rigid Insulation) — Applied flat or tapered to maximum 10-in thick combination of Item 3A. Bearing plates required under panel attachment points. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL", "ISOGARD HD Composite Board" or "Resista" 3A. Foamed Plastic — (Rigid Insulation — Optional — Not Shown) — Placed on top of Item 6. Maximum 10-in thick combination of Item 3 . Bearing plates required under panel attachment points. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD" 3B. Underlayment (Optional not shown) — Underlayment attached over foamed plastic per manufacturer's installation instructions.
4.	Panels*:	Min 24 MSG steel; width 20 in. max., 1-1/2 in. high at the ribs. Panels continuous over three or more clips with no end-laps. A bead of sealant may be used at panel ribs. Panel ribs seamed with an electric seamer with seaming operation to include upper portion of panel clip (Item 5). FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-3"
5.	Panel Clips*:	Two part assembly, base 3 in. wide, 5/8 in. high, with a 7/8 in. wide base leg having two 3/16 in. embossed guide holes. Upper tab 1/2 in. wide folded over base forming two tabs. Both parts fabricated from 0.015 in. min thick stainless steel. Clips spaced 24 in. OC. with seaming operation to include upper tabs of panel clips. Bearing plates used with panel screw fasteners (Item 6) under panel clip to be 4 in. by 4 in. min No. 26 gauge stainless steel or min No. 26 gauge galvanized steel. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-3 Expansion Clip" FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC Bearing Plate"
6.	Panel Fasteners:	(Screws) — Fasteners used to attach the panel clips to the steel decking to be No. 12 pancake wafer head steel screws. Length to penetrate steel deck a minimum of 1/2 in. Two screws are to be used per clip.
7.	Cover Board:	(Optional) — 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 liner panel (Item 2) or Foamed Plastic (Items 63and/or 3A). When used or used over Foamed Plastic bearing plate not required.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL		

Certification (such as Canada), respectively.		
<p align="center">UC-3 – Construction No. 663 Uplift – Class 90</p>		
1.	Panel*:	Width 16 in. max with 1-1/2 in. high legs. No. 24 MSG min thick coated steel. Panels continuous with no end laps. Panel ribs single seamed with an electric seaming tool with seaming operation to include upper tabs of panel clips (Item 2). FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-3"
2.	Fasteners:	(Panel Clips) — Two part assembly, base 3 in. wide, 5/8 in. high, with a 7/8 in. wide base leg having two 3/16 in. embossed guide holes. Upper tab 1/2 in. wide folded over base forming two tabs. Both parts fabricated from 0.015 in. min thick stainless steel. Clips spaced maximum 18 in. OC. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-3 Expansion Clip"
3.	Fasteners:	(Screws) — Fasteners used to attach panel clips (Item 2) to plywood decking (Item 5) to be No. 10 by minimum 1 in. long, without insulation and/or cover board, Pancake Type A. Two screws used per clip inserted into clip guide holes.
4.	Underlayment:	(Optional — Not Shown) — Underlayment attached over Foamed Plastic (Item 8 and/or 8A) or Decking (Item 5) or Cover Board (Item 9) Installed per manufacturer's recommendations.
5.	Decking:	Deck to be nominal 5/8 in. (19/32 in. actual) or 1/2-in (15/32-in actual) thickn plywood; Exposure 1, Grade B-C, APA rated sheathing, confirming to requirements of DOC PS-1, with butt joints to be located over wood supports (joist).
6.	Deck Fasteners	Fasteners used to attach plywood deck to supports to be 8d by 2-1/2 in. long ring shank common nails. Spacing to be 6 in. OC at the edges and 6 in. OC in the interior.
7.	Support Joist & Fasteners*:	7. Nom 2 by 10 in. (1-1/2 by 9-1/8 in. actual) 42/20 square edged. No. 2 grade or better S-P-F, Hemlock Fir, Douglas Fir or Southern Yellow Pine or equivalent. Spaced a max of 24 in. OC. 7A. Roof Deck Fasteners* — (Bearing Plates) — Plates to be 4 in by 4 in. by No. 26 MSG min galvanized or stainless steel. Two 1/4 in. guide holes located in line with panel clip (Item 2) guide holes. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL" or "Resista"
8.	Insulation*:	8. (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 8. 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.	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.
<p align="center">* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.</p>		

UC-4 Constructions:

<p align="center">UC-4 – Construction No. 376 Uplift – Class 90</p>		
1.	Panel*:	Width 12 min to 18 in. max with 1-1/2 in. high female legs; No. 24 MSG min thickness coated steel. A mounting flange roll formed into male side of panel. Panels continuous over two or more spans with no end laps. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-4"
2.	Panel Fasteners:	Fasteners used to attach the panels to the plywood deck to be No. 10-12 by minimum 1 in. long, without insulation and/or cover board, No. 2 Phillips Drive, wafer-head, coated steel screws. A 5/8 in. OD nylon or other plastic type washer, 0.030 in. thick to be used with each panel fastener. Fasteners spaced 18 in. OC with two fasteners used at each location driven through adjacent guide holes in mounting flange.
3.	Underlayment:	(Optional) Underlayment attached over Foamed Plastic (Item 7and/or 7A) or Decking (Item 4) or Cover Board (Item 9). As an alternate, a self-adhering modified bitumen water proofing membrane may be used. Installed per manufacturer's recommendations. When alternate is used, plywood joints need not be sealed.
4.	Decking:	Deck to be min 5/8 in. nom (19/32 in. actual) thickness plywood; Exposure 1, APA rated sheathing (42/20) square edged. Butt joints to be located over purlins, side joints not blocked. All butt and side joints to be sealed with a one part urethane caulk sealant - feathered outward from joint (note exception under Item 3 alternate).
5.	Purlins:	Deck Supports — Spaced a max of 24 in. OC. Any of the following types may be used. A. No. 18 MSG min thickness coated steel. (Min yield strength 33,000 psi).

		B. Nom 2 by 6 in. (1-1/2 by 5-1/4 actual) No. 2 grade or better S-P-F, Hemlock Fir, Douglas Fir or Southern Yellow Pine or equivalent. C. Wood Trusses with a nom 2 by 4 in. (1-1/2 by 3-1/4 actual) upper chord of same grade as Item B.
6.	Deck Fasteners:	Fasteners used to attach plywood deck to supports to be used as follows: A. For plywood to steel supports, to be No. 8-20 by 1-1/4 in. long No. 2 Phillips Drive Bugle Head Steel screws with a S-12 TEKS 3 Super Point. B. For plywood to wood support to be No. 8-18 by 1-7/8 in. long No. 2 Phillips Drive Bugle Head, "Hi-Low" thread pattern with an "S" point. Spacing for all fastener types to be 6 in. OC at the edges and 12 in. OC in the interior. Refer to General Information, Roof Deck Construction (Roofing Materials and Systems) for Items not evaluated.
7.	Insulation*:	(Rigid Insulation — Optional — Not Shown) — Placed on top of Item 7. Maximum 10 in. thick combination of Item 7. Bearing plates required under panel attachment points. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD"
8.	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 4) or Foamed Plastic (Items 7 and/or 7A). When used or used over Foamed Plastic bearing plate not required.
9.	Plate Fasteners*:	(Bearing Plates) — Plates to be 4 in by 4 in. by No. 26 MSG min galvanized steel. Two 1/4 in. guide holes. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC Bearing Plate"
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-4 – Construction No. 399 Uplift – Class 90		
1.	Panel*:	0.021 in. thick copper (16 oz), width 12 to 14 in., 1-1/2 in. high female leg. A mounting flange roll-formed into male side of panel. Panels continuous with no end laps. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-4"
2.	Panel Fasteners:	(Screws) — Fasteners used to attach the panels to the plywood deck to be No. 10-12 by minimum 1 in. long, without insulation and/or cover board, No. 2 Phillips Drive, wafer-head, stainless steel screws. A 5/8 in. OD by 0.030 in. nylon washer to be used with each panel fastener. Fasteners spaced 9 in. OC with fasteners inserted in guide holes in mounting flange.
3.	Red Rosin Paper:	Rosin paper 9 mil thick. Side lap min 3 in. stapled to insulation with random spacing.
4.	Underlayment:	Optional — Underlayment attached over Foamed Plastic (Item 8 and/or 8A) or Decking (Item 5) or Cover Board (Item 9).
5.	Deck:	Deck to be 3/4 in. nominal (23/32 in. actual) thickness plywood; Exposure 1, APA rated sheathing (42/20), square edged. Butt joints to be located over purlins, side joints not blocked. All butt and side joints to be sealed with a one part urethane caulk sealant — feathered outward from joint (note exception under Item 4 alternate).
6.	Purlins:	Deck supports — Spaced a max of 24 in. OC. Any of the following types may be used: A. No. 18 MSG min thickness coated steel (Min yield strength 33,000 psi). B. Nominal 2 by 6 in. (1-1/2 by 5-1/4 actual) No. 2 grade or better S-P-F, Hemlock Fir, Douglas Fir or Southern Yellow Pine or equivalent. C. Wood trusses with a nominal 2 by 4 in. (1-1/2 by 3-1/4 actual) upper chord of same grade as Item B.
7.	Deck Fasteners:	Plywood Fasteners — Fasteners used to attach plywood deck to supports to be used as follows: A. For plywood to steel supports, No. 8-20 by 1-1/4 in. long No. 2 Phillips Drive Bugle Head Steel screws with a S-12 TEKS 3 Super Point. B. For plywood to wood supports, No. 8-18 by 1-7/8 in. long No. 2 Phillips Drive Bugle Head, "Hi-Low" thread pattern with an "S" point. Spacing for all fastener types to be 6 in. OC at the edges and 12 in. OC in the interior. Refer to General Information, Roof Deck Construction (Roofing Materials and Systems) for items not evaluated.
8.	Insulation*:	8. (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 8. 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.	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.
10.	Plate Fasteners*:	(Bearing Plates) — Plates to be 4 in by 4 in. by No. 26 MSG min galvanized steel. Two 1/4 in. guide holes. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC Bearing Plate"
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-4 – Construction No. 513A Uplift – Class 60, Class 90		
1.	Panel*:	Minimum No. 24 MSG thick coated steel or 0.032 inch thick aluminum maximum 18 inches wide with 1-1/2 inch high legs. A mounting flange is formed into the male side of the panel. Panels continuous over three or more panel screw fastener locations (Item 2) with no end laps. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-4"
2.	Panel Fasteners:	Fasteners used to attach the panels (Item 1) to plywood deck (Item 4) to be 10 x 1" PC PD NW T17 steel or 10 x 1 PC T NW T17 stainless steel. Fasteners spaced maximum 18 inches OC for Class 90, 30 inches OC for Class 60 for aluminum panels in Item 1. Fasteners spaced 24 inches OC for Class 90, 30 inches OC for Class 60 for steel panels in Item 1. A total of two fasteners must be used in consecutive slots along fastener flange.
3.	Underlayment:	(Optional) — Underlayment attached over Foamed Plastic (Item 4A and/or 4B) or Decking (Item 4) or Cover Board (Item 4C) — As an alternate, a self-adhering modified bitumen water proofing membrane may be used. Underlayment is to be installed as per manufacturer's recommendations. When alternate is used, plywood joints need not be sealed.
4.	Deck, Insulation* and Fasteners*:	4. Plywood Decking — Minimum 7/16 OSB or 15/32 inch thick plywood; Exposure 1, APA rated sheathing (42/20) or (32/16) respectively, square edged. Butt joints are to be located over purlins (Item 5). Side joints not blocked. All butt and side joints to be sealed with a one part urethane caulk sealant-feathered outward from joint (note exception under Item 3 alternate). 4A. Foamed Plastic* — (Rigid Insulation — Optional — Not Shown) — Applied flat or tapered to maximum 10 in. thick combination of Item 4A. Bearing plates required under panel attachment points. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL" or "Resista" 4B. Foamed Plastic — (Rigid Insulation — Optional — Not Shown) — Placed on top of Item 4A. Maximum 10-in thick combination of Item 4A . Bearing plates required under panel attachment points. Bearing plates not required if foamed plastic not used (Item 4A or 4B). FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD" 4C. 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 4) or Foamed Plastic (Items 4A and/or 4B). When used or used over Foamed Plastic bearing plate not required. 4D. Roof Deck Fasteners* — (Bearing Plates) — Plates to be 4 in by 4 in. by No. 26 MSG min galvanized steel plate (for use with coated steel panels) or stainless steel plate (for use with aluminum panels). Two 1/4 in. guide holes. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC Bearing Plate"
5.	Purlins:	Deck Supports — Spaced a max of 24 in. OC. Any of the following types may be used: A. No. 16 MSG min thick coated steel. (33,000 psi min yield strength). B. Nom 2 by 6 in. (1-1/2 by 5-1/4 in. actual). No. 2 grade or better S-P-F, Hemlock Fir, Douglas Fir or Southern Yellow Pine or equivalent. C. Wood trusses with a nom 2 by 4 in. (1-1/2 in. by 3-1/4 in. actual) upper chord of same grade as Item B.
6.	Deck Fasteners:	Fasteners used to attach plywood deck (Item 4) to supports (Item 5) to be as follows: A. For plywood to steel supports, to be No. 8-20 by 1-1/4 in. long No. 2 Phillips drive, bugle head steel screws with an S-12 TEKS® 3 Super Point. B. For plywood to wood supports to be No. 8-18 by 1-7/8 in. long No. 2 Phillips drive, bugle head steel screws with a "Hi-Low" thread pattern and an "S" point. Spacing for all fastener types to be 6 in. OC at the edges and 12 in. OC in the interior. 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.		

UC-4 – Construction No. 377 Uplift – Class 90		
1.	Panels*:	Width 12 min to 18 in. max; with 1-1/2 in. high female leg. No. 24 MSG min coated steel. A mounting flange is roll formed into male side of panel. Panels continuous over two or more spans with no end laps. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) – "UC-4"
2.	Panel Fasteners:	Fasteners used to attach the panels to the steel deck to be No. 12-15 No. 3 Phillips Drive Truss head steel screws with a "S" point. Length to be 3/4 in. longer than overall thickness of roof deck length. A 5/8 in. OD nylon or other plastic type washer, 0.030 in. thick to be used with each panel fastener. Fasteners spaced 18 in. OC with two fasteners used at each location. Fasteners used with a bearing plate (Item No. 6).
3.	Underlayment:	(Optional)—Underlayment attached over Foamed Plastic (Item 5 or 5A), Liner Panel (Item 4) or Cover Board (Item 5B).
4.	Deck:	Liner Panel — Min thickness No. 22 MSG coated steel (33,000 min yield strength). Min depth 1-1/2 in., max pitch 6 in. Fabricated to various profiles.
5.	Insulation:	5. Foamed Plastic — (Rigid Insulation) — (Optional, not shown) — Applied flat or tapered to maximum 10 in. thick combination of Item 5A. Bearing plates required under panel attachment points. Optional if Cover Board (Item 5B) is used. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL", "ISOGARD HD Composite Board" or "Resista" 5A. Foamed Plastic — (Rigid Insulation) — (Optional, not shown) — Placed on top of Item 5. Maximum 10 in. thick combination of Item 5. Bearing plates required under panel attachment points. Optional if Cover Board (Item 5B) is used. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD" 5B. 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 liner panel (Item 4) or Foamed Plastic (Items 5 and/or 5A). When used or used over Foamed Plastic bearing plate not required.
6.	Plates*:	(Bearing Plates) — Plates to be 4 in by 4 in. by No. 26 MSG min galvanized steel. Two 1/4 in. guide holes. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC Bearing Plate"
7.	Purlins:	No. 18 MSG min coated steel (min yield strength 33,000 psi) spaced max 24 in. OC. Refer to General Information, Roof Deck Constructions, (Roofing Materials and Systems 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.		

UC-4 – Construction No. 657 Uplift – Class 90		
1.	Supports:	(Joists, not shown) — Nominal 2 by 10 in. graded dimensional lumber, No. 2 or better. Spaced 24 in. OC max.
2.	Deck:	Nominal 5/8 in. (19/32 in. actual) or 1/2-in (15/32-in actual) plywood, Grade B-C, APA rated. Fastened to supports (joists) using 8d by 2-1/2 in. long ring shank nails. Spaced 6 in. OC max at the butt ends and 6 in. OC max in the field. As an alternate 7/16 in. thick PS-2 rated oriented strand board OSB. Fastened to supports (joists) using No. 8 by 2-1/2 in. long coarse thread steel screws. Spaced 12 in. OC max. at the butt ends and 12 in. OC max. in the field.
3.	Vapor Barrier:	(Optional) — Underlayment attached over Foamed Plastic (Item 6 and/or 6A) or Decking (Item 2) or Cover Board (Item 8).
4.	Panels*:	Min 26 MSG steel or min 0.032 in. thick aluminum; width 9-3/4 in. max, 1-3/8 in. high at the ribs. A bead of sealant may be used at panel ribs. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-4"
5.	Panel Fasteners:	(Screws) — Fasteners used to attach the panels to the plywood or OSB decking to be minimum 1 in. long, without insulation and/or cover board, 10 x 1" PC PD NW T17 steel or 10 x 1" PC T NW T17 stainless steel screws used with a 5/8 in. OD nylon or other plastic washer 0.030 in. thick. Two screws are to be used at 12 in. O.C.
6.	Insulation*:	6. (Rigid Insulation — Optional — Not Shown) — Applied flat or tapered to maximum 10-in thick combination of Item 6A. Bearing plates required under panel attachment points. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL" or "Resista" 6A. Foamed Plastic — (Rigid Insulation — Optional — Not Shown) — Placed on top of Item 6. Maximum 10-in thick combination of Item 6 . Bearing plates required under panel attachment points. Bearing plates not required if foamed plastic no used Item 6 or 6A) FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD"
7.	Bearing	(Bearing Plates) — Plates to be 4 in by 4 in. by No. 26 MSG min galvanized steel plate (for use with coated

	Plates*:	Steel panels) or stainless steel plate (for use with aluminum panels). Two 1/4 in. guide holes. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC Bearing Plate"
8.	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 decking (Item 2) or Foamed Plastic (Items 6 and/or 6A). When used or used over Foamed Plastic bearing plate not required.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-4 – Construction No. 513 Uplift – Class 90		
1.	Panel*:	Width 12 in. min to nominal 18 in. max with 1-1/2 in. high legs. Minimum No. 24 MSG thick coated steel or minimum 0.032 in. thick aluminum. A mounting flange is formed into the male side of the panel. Panels continuous over three or more panel screw fastener locations (Item 2) with no end laps. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-4"
2.	Fasteners:	2. (Screws) — Fasteners used to attach the panels (Item 1) to liner panels (Item 4) to be No. 12-15, No. 3 Phillips drive, truss-head, coated steel screws with an "S" point. Length to be 3/4 in. longer than overall thickness of roof deck. A 5/8 in. OD nylon or other plastic washer 0.030 in. thick to be used with each screw. Fasteners spaced 12 in. OC with two fasteners used at each location. Fasteners used to attach liner panels to supports (Item 7) to be No. 12-14 by 1 in. long self-drilling, self-tapping, hex-washer-head plated steel screws. Fasteners spaced 6 in. OC. 2A. Fasteners (Screws) — Fasteners used to attach the panels (Item 1) to HailGard Insulation (Item 5B) to be 10 x 1" PC PD WOW T17 steel or 10 x " PC T WOW T17 stainless steel screws.
3.	Underlayment & Thermal Barrier:	3. Underlayment — (Optional) — Underlayment attached over Foamed Plastic (Item 5 or 5A), Liner Panel (Item 4) or Cover Board (Item 6A) — Installed per manufacturer's recommendations. 3A. Gypsum Board — (Optional Not Shown) — Max thickness 5/8 in. Fastened to steel deck with same panel fasteners used to attach the metal roof deck panels to the steel decking (Item 4).
4.	Deck:	Liner Panel — No. 22 MSG min thick coated steel (33,000 psi min yield strength). Min depth 1-1/2 in., max pitch 6 in. fabricated to various profiles. Fastened to supports 6 in. OC.
5.	Insulation*:	5. (Rigid Insulation) — Applied flat or tapered to maximum 10 in. thick combination of Item 5A. Bearing plates required under panel attachment points. Optional if Cover Board (Item 6A) is used. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL", "ISOGARD HD Composite Board" or "Resista" 5A. Insulation* — (Rigid Insulation) — (Optional, Not Shown) — Placed on top of Item 5. Max 10 in. thick combination of Item 5. Bearing plates required under panel attachment points. Optional if Cover Board (Item 6A) is used. 5B. Insulation* — (Rigid Insulation) — (Optional, Not Shown) — HailGard placed on top of Item 4 or Item 5 is mechanically fastened into Item 4 with 8 Firestone HailGard HD Fasteners per 4X8 board. Max 10 in. thick in combination of Item 5. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD"
6.	Bearing Plates* & Cover Board:	6. (Bearing Plates)* — Plates to be 4 in by 4 in. by No. 26 MSG min galvanized steel plate (for use with coated steel panels) or stainless steel plate (to be used with aluminum panels). Two 1/4 in. guide holes. Two 1/4 in. guide holes. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC Bearing Plate" 6A. 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 4) or Foamed Plastic (Items 5 and/or 5A). When used or used over Foamed Plastic bearing plate not required.
7.	Purlins:	No. 116 MSG min coated steel (33,000 psi min yield strength) spaced max 24 in. OC.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-4 – Construction No. 378 Uplift – Class 90		
1.	Panels*:	Width 12 min to 18 in. max with 1-1/2 in. high female legs; No. 24 MSG min thickness coated steel. A mounting flange roll formed into male side of panel. Panels continuous over two or more spans with no end laps. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) – "UC-4"
2.	Panel Fasteners:	Fasteners used to attach panels to hat channels (Item No. 3) to be No. 10-16 by 1 in. long self-drilling, self-tapping, hex-head plated steel screws. Fasteners spaced 18 in. OC with two fasteners used at each location driven through adjacent guide holes in mounting flange. A 5/8 in. OD nylon or other plastic type washer, 0.030 in. thick to be used with each fastener.
3.	Hat Channel:	No. 16 MSG min thickness coated steel. Channels 1 in. deep and 3-1/4 in. total width. Flanges, 3/4 in. web, 1-3/4 in. (min yield strength 33,000 psi). Spaced 18 in. OC hat channels fastened to purlins (Item No. 5) with 2 No. 12-14 by 3/4 in. self-drilling, self-tapping, hex-head plated steel screws.
4.	Vapor Retarder:	(Optional — Not Shown) — Min 3 mil vinyl sheeting.
5.	Purlins:	No. 18 MSG min gauge coated steel (33,000 psi min yield strength).
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-6 Constructions:

UC-6 – Construction No. 655 Uplift – Class 90		
1.	Joists:	(Joists, not shown) — Nominal 2 by 10 in. graded dimensional lumber, No. 2 or better. Spaced 24 in. OC max.
2.	Deck:	Nominal 5/8 in. (19/32 in. actual) plywood, Grade B-C, APA rated. Fastened to supports (joists) using No. 8 by 2-1/2 in. long coarse thread steel screws. Spaced 6 in. OC max. at the butt ends and 12 in. OC max. in the field. When installed with aluminum roofing panels 1/2-in (15/32-in actual) B-C exterior plywood can be used.
3.	Panels*, Underlayment & Insulation:	3. Panels — Min 24 MSG steel or min 0.032 in. thick aluminum; width 18 in. max., 2 in. high at the ribs. Panels continuous over three or more clips with no end-laps. A bead of sealant may be used at panel ribs. Panel ribs seamed with an electric seamer with seaming operation to include upper portion of panel clip (Item 4). FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-6", "UC-6 HD" 3A. Underlayment — (Optional — Not Shown) — Underlayment attached over deck as per manufacturer's installation instructions. 3B. Foamed Plastic — (Rigid Insulation — Optional — Not Shown) — Applied flat or tapered to maximum 10-in thick combination of Item 3C , placed on top of the wooden deck. Bearing plates required under panel attachment points. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL", "ISOGARD HD Composite Board" or "Resista" 3C. Foamed Plastic — (Rigid Insulation — Optional — Not Shown) — Placed on top of Item 3. Maximum 10-in thick combination of Item 3B . Bearing plates required under panel attachment points. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD".
4.	Fasteners*:	(Panel Clips) — Two piece assembly; a base of stainless or coated steel and an interlocking upper tab fabricated from stainless or coated steel. Two 1/4 in. guide holes located in the base. Clips spaced 30 in. OC max when used with aluminum panels or 36 in. OC max when used with steel panels. Bearing plates (Item 6) required when Foamed Plastic is used without cover board (Item 7). FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — ""UC-6 Low Float Clip", "UC-6 Super Clip""
5.	Panel Fasteners:	(Screws) — Fasteners used to attach the panel clips to the plywood decking to be No. 12 steel screws, long enough to penetrate the wood deck by 1". Two screws are to be used per clip.
6.	Bearing Plates:	(Not Shown) — Bearing plate 4-in by 4-in by min 26 MSG galvanized or stainless steel. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC Bearing Plate"
7.	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 roof deck (item 2) or Foamed Plastic. When used or used over Foamed Plastic bearing plate not required.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-6 – Construction No. 652 Uplift – Class 90		
1.	Panels*:	No. 24 MSG min gauge coated steel. Panel width 18 in. max; height at female rib 2 in., at male rib 1-3/4 in. Panels seamed with an electric or hand seamer to 180°. A bead of sealant may be used at ribs. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) – "UC-6", "UC-6 HD"
2.	Fasteners*:	(Panel Clips) Two piece assembly; a base of stainless or coated steel and an interlocking upper tab fabricated from stainless or coated steel. Two 1/4 in. guide holes located in the base. Clips spaced 30 in. OC located over bearing plate (Item 5). FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) – "UC-6 Low Float Clip", "UC-6 Super Clip"
3.	Fasteners:	(Screws) — Fasteners used to attach the panel clips to the liner panel (Item 6) to be No.12 self-drilling, self-tapping, pancake head plated steel screws. Two fasteners used per clip. Fasteners shall be of sufficient length to penetrate the liner panel (Item 6) by min 3/4 in.
4.	Insulation*:	4. (Rigid Insulation — Optional — Not Shown) — Applied flat or tapered to maximum 10-in thick combination of Item 4A. Bearing plates required under panel attachment points. Optional if Cover Board (Item 7) is used. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL", "ISOGARD HD Composite Board" or "Resista" 4A. Foamed Plastic — (Rigid Insulation — Optional — Not Shown) — Placed on top of Item 4. Maximum 10-in thick combination of Item 4 . Bearing plates required under panel attachment points. Optional if Cover Board (Item 7) is used. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD"
5.	Bearing Plate:	Bearing Plate 4-in by 4-in by min 26 MSG galvanized steel. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC Bearing Plate"
6.	Deck:	Liner Panel — Structural steel deck, No. 22 MSG min thick, coated steel (33,000 psi min yield strength). Min depth 1-1/2 in.
7.	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 liner panel (Item 6) or Foamed Plastic (Items 4 and/or 4A). When used or used over Foamed Plastic bearing plate not required.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-6 – Construction No. 653 Uplift – Class 90		
1.	Panels*:	Min 0.032 in aluminum or 24 MSG steel. Panel width 18 in max; height at female rib 2 in., at male rib 1-3/4 in. Panels seamed with an electric or hand seamer to 180°. A bead of sealant may be used at ribs. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-6", "UC-6 HD"
2.	Fasteners*:	(Panel Clips) Two piece assembly; a base of stainless or coated steel and an interlocking upper tab fabricated from stainless or coated steel. Two 1/4 in. guide holes located in the base. Clips spaced 30 in. OC located over plywood or OSB cover board (Item 5) FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-6 Low Float Clip", "UC-6 Super Clip"
3.	Fasteners:	(Screws) — Fasteners used to attach the panel clips (item 2) to the plywood or OSB cover board (item 5) to be No.10- 10x1 - AS 1-in or 1-1/2 in. steel screws. Two fasteners used per clip. Fasteners used to attach plywood or OSB (Item 5) to liner panel (Item 6) HD Hailgard Fasteners with pattern of 24 per 4-ft by 8-ft board.
4.	Insulation*:	4. (Rigid Insulation)* — Min thickness 1-in. Joints of multiple layers staggered between layers. 4A. Foamed Plastic* — (Rigid Insulation) — Applied flat or tapered to maximum 10-in thick combination of Item 4B. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL" or "Resista" 4B. Foamed Plastic — (Rigid Insulation — Optional — Not Shown) — Placed on top of Item 4A. Maximum 10-in thick combination of Item 4A. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD"
5.	Cover Board:	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.
6.	Deck:	Liner Panel — Structural steel deck consisting of No. 22 MSG min thick coated steel (33,000 psi min yield strength). Min depth 1-1/2 in.
7.	Opt. 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 liner panel (Item 6) under or in lieu of Items 4, 4A and 4B.

8.	Bearing Plate:	(Optional) — Bearing Plate 4-in by 4-in by min 26 MSG galvanized steel for use with clip fasteners (Item 3). FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — UC Bearing Plate
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-6 – Construction No. 571A Uplift – Class 90		
1.	Panel*:	Min 0.040 in. thick aluminum. Panel width 16 in., height of female rib 2 in., at male rib 1-3/4 in. Panels continuous over two or more spans with no end laps. Panels seamed with an electric or hand seamer to 180°. A bead of sealant may be used at ribs. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-6", "UC-6 HD"
2.	Fasteners*:	(Panel Clips)—Two piece assembly; a base of stainless or coated steel and an interlocking upper tab, fabricated from stainless or coated steel. Two 1/4 in. guide holes located in the base. Clips spaced 36 in. OC located over purlins. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-6 Low Float Clip", "UC-6 Super Clip"
3.	Fasteners:	(Screws) — Fasteners used to attach the panel clips (Item 2) to the purlins (Item 4) to be No. 1/4-14 by 7/8 in. long, self-drilling, self-tapping, hex-washer head plated steel screws. Two fasteners used per clip.
4.	Purlins:	No. 16 MSG min gauge steel (50,000 psi min yield strength). Spacing to be maximum 3 ft, 0 in. OC.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-6 – Construction No. 571 Uplift – Class 90		
1.	Panel*:	No. 22 MSG min gauge coated steel. Panel width 16 in.; height at female rib 2 in., at male rib 1-3/4 in. Panels continuous over two or more spans with no end laps. Panels seamed with an electric or hand seamer to 180°. A bead of sealant may be used at ribs. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-6", "UC-6 HD"
2.	Fasteners*:	(Panel Clips) Two piece assembly; a base of stainless or coated steel and an interlocking upper tab, fabricated from stainless or coated steel. Two 1/4 in. guide holes located in the base. Clips spaced 48 in. OC located over purlins. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-6 Low Float Clip", "UC-6 Super Clip"
3.	Fasteners:	(Screws) — Fasteners used to attach the panel clips (item 2) to the purlins (item 4) to be No. 1/4 - 14 by 7/8 in. long, self-drilling, self-tapping, hex-washer head plated steel screws. Two fasteners used per clip.
4.	Purlins:	No. 16 MSG min gauge steel (50,000) psi. min yield strength). Spacing to be maximum 4 ft, 0 in. OC.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-6 – Construction No. 670 Uplift – Class 90		
1.	Fasteners*:	(Panel Clips) — One piece assembly, No. 24 MSG min thickness, 3-1/2 in. wide, 1-15/16 in. high. Clip spacing to be 30 in. OC. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-6 HI-Float Clip"
2.	Panel*:	No. 24 MSG min gauge coated steel. Panel width 18 in. max., 10 in. min. Rib height 1-3/4 in. at female side. A bead of sealant may be used at panel side joints. Panels continuous over three or more clips with no end laps. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-6"
3.	Fasteners:	For attaching panel clips to steel deck, two number 12 by 1 inch Phillips Head TEK3 self-tapping corrosion resistant coated steel screws supplied by roof deck manufacturer. Screws shall penetrate steel deck min 1/2 in.
4.	Steel ZEE Purlins:	16 gage ZEEs purlins 10" by 2-1/2" were placed 30" OC. Purlin clips were used to fasten the ZEE purlins (joists) to the surrounding CEE Purlins.
5.	Steel CEE Purlins:	(Not Shown) 16 gage ZEEs purlins 10" by 2-1/2" were placed 30" OC. Purlin clips were used to fasten the ZEE purlins (joists) to the surrounding CEE Purlins.
6.	Purlin Clips:	(Not Shown) 16 gage Purlin clips were used to fasten the ZEE purlins (joists) to the surrounding CEE Purlins. The clips are typically welded to the CEE Purlin and the ZEE purlins can be either bolted or welded to the clips.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-7 Constructions:

UC-7 – Construction No. 660 Uplift – Class 90		
1.	Joists:	(Joists, not shown) — Nominal 2 by 10 in. graded dimensional lumber, No. 2 or better. Spaced 24 in. OC max.
2.	Deck:	Nominal 5/8 in. (19/32 in. actual) or 1/2-in (15/32-in actual) plywood, Grade B-C, APA rated. Fastened to supports (joists) using No. 8 by 2-1/2 in. longcoarse thread steel screws. Spaced 6 in. OC max. at the butt ends and 6 in. OC max. in the field.
3.	Underlayment:	(Optional) — Underlayment attached over deck as per manufacturer's installation instructions.
4.	Panels*:	Min 24 MSG steel width 12 in. max., 2 in. high at the ribs. Panels continuous over three or more clips with no end-laps. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-7"
5.	Fasteners*:	(Panel Clips) — One piece assembly 3 in. long fabricated from No. 24 MSG coated steel. Two 1/4 in. guide holes located in the base. Clips spaced 12 in. OC max. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-7 Clip"
6.	Fasteners:	(Screws) — Fasteners used to attach the panel clips to the plywood decking to be minimum 10 x 1" PC PD WOW T17 steel screws. Two screws are to be used per clip.
7.	Insulation*:	7. (Rigid Insulation — Optional — Not Shown) — Applied flat or tapered to maximum 10-in thick combination of Item 7A. Bearing plates required under panel attachment points. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL" or "Resista" 7A. Foamed Plastic — (Rigid Insulation — Optional — Not Shown) — Placed on top of Item 7. Maximum 10-in thick combination of Item 7. Bearing plates required under panel attachment points. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD"
8.	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 2) or Foamed Plastic (Items 7 and/or 7A). When used or used over Foamed Plastic bearing plate not required.
9.	Fasteners*:	Plates to be 4 in by 4 in. by No. 26 MSG min galvanized steel. Two 1/4 in. guide holes. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC Bearing Plate"
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-14 Constructions:

UC-14 – Construction No. 414 Uplift – Class 90		
1.	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. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"
2.	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.
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 cover board, 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.	Deck:	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.	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" .

		<p>b) As an alternate to Item a, 8d common nails may be used.</p> <p>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) (R) point.</p> <p>Spacing: Fastener spacing for all fastener types to be 6 in. OC at the plywood edges and 12 in. OC in the interior.</p>
8.	Insulation*	<p>8. (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.</p> <p>FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL" or "Resista"</p> <p>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.</p> <p>FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD"</p>
9.	Fasteners*	<p>(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.</p> <p>FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC Bearing Plate"</p>
10.	Cover Board:	<p>(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.</p>
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-14 — Construction No. 436		
Uplift — Class 90		
1.	Panels*	<p>No. 24 MSG min coated steel. Max panel width 18 in., rib height 1-3/4 in. Panels continuous over two or more spans. Endlap for panels to be overlapped 6 in. A bead of sealant may be used at panel ends and side joints.</p> <p>FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"</p>
2.	Fasteners*	<p>(Panel Clips) — One piece assembly, 3-1/2 in. wide by 1-7/8 in high. Clip spacing to be 48 in. OC.</p> <p>FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14 Clip"</p>
3.	Fasteners:	<p>(Screws) — Screws used to attach the panel clips to Substructure (Item 4) to be No. 10 by minimum 1 in long, without insulation and/or cover board, Pancake head wood screws with a No. 2 Phillips head or 10x1 in., 1/4 in. Hex Head Woodgrip. Two screws per clip.</p> <p>Screws used to attach Substructure (Item 4) to wood trusses or joists (Item 6) to be No. 8 by 2 in. Bugle head screws. As an optional fastener, 2-1/2 in. long 8d common deformed shank nails may be used. Fasteners used at endlaps to be 14x1 in. Type AB or 10x1 in. woodgrip.</p> <p>When light gauge structural steel joists are used, screws to be No. 12 by 1-5/8 in. long with a Phillips head.</p> <p>Spacing of screws to be 6 in. OC at plywood or OSB ends and 12 in. OC at interior joists.</p>
4.	Substructure:	<p>(Plywood or OSB) — Plywood decking (PS-1) or oriented strand board (OSB) (PS-2) to be a nom 5/8 in. thick, exposure sheathing span C-D, 40/20 plywood. (All butt joints to be sealed against leakage by using tape and/or caulking). In lieu of plywood, 1 in. tongue and groove decking may be used.</p>
5.	Moisture Barrier:	<p>(Optional) — Any suitable membrane to protect Substructure (Item 4).</p>
6.	Joists:	<p>Joists, spaced at 2 ft, 0 in. OC max (when tongue and groove decking is used, joist spacing may be 30 in. OC max), may be one of the following:</p> <p>A. Nom 2 by 6 in. wood joists, No. 2 or better.</p> <p>B. Nom 2 by 4 in wood when used on a top chord of a wood truss, No. 2 or better.</p> <p>C. Light gauge structural steel framing with the member against the plywood to be a min No. 22 MSG coated steel.</p>
7.	Batten Clips and Cap*	<p>The followed items may be used in conjunction with the "Design-Lok" panel (Item 1).</p> <p>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.</p> <p>METAL SALES MANUFACTURING CORPORATION (View Classification) — Vertical Seam Batten Clip</p> <p>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</p>
8.	Insulation*:	<p>8. (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.</p> <p>FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL" or "Resista"</p>

		8A. Foamed Plastic — (Rigid Insulation — Optional — Not Shown) — Placed on top of Item 8. 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.	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 4) or Foamed Plastic (Items 8 and/or 8A). When used or used over Foamed Plastic bearing plate not required.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-14 — Construction No. 508 Uplift — Class 90		
1.	Panel*:	0.032 in. min thick aluminum; 16 in. wide, 1-3/4 in. high at the rib. Panels continuous over three or more clips with no end laps. A bead of sealant may be used at panel side joints. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"
2.	Fasteners*:	(Panel Clips) — One piece assembly, 3-1/2 in. wide, 1-7/8 in. high with a 1-3/8 in. wide horizontal leg. No. 18 MSG min thick galvanized or stainless steel. Two 1/4 in. guide holes located in horizontal leg. Clips spaced 18 in. OC. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"
3.	Fasteners:	(Screws) — Fasteners used to attach panel clips (Item 2) to plywood (Item 5) to be No. 10-12 by minimum 1 in. long, without insulation and/or cover board, No. 1 Phillips drive, bugle head coated steel wood screws. Two screws used per clip inserted through 1/4 in. diameter guide holes.
4.	Underlayment:	(Optional) — Underlayment attached over Foamed Plastic (Item 8 and/or 8A) or Decking (Item 5) or Cover Board (Item 10).
5.	Decking:	Plywood decking to be rated per PS - 1 specification, nominal 5/8-in (19/32 in. actual) or 1/2-in (15/32-in. actual) thick. Butt ends not blocked.
6.	Supports:	Spaced max 24 in. OC. Any of the following types may be used to support the plywood decking: a) 2 by 6 in., min No. 2 grade A.F.P.A. S-P-F Hemlock Fir, Douglas Fir or Southern Pine or equivalent. b) Wood trusses with a nominal 2 by 4 in. upper chord of the same grade as Item a. c) No. 22 MSG min thick cold formed coated steel (min yield strength to be 33,000 psi).
7.	Deck Fasteners:	(Not Shown) — 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 by 2-1/2 in. long deformed shank 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 to No. 16 MSG, No. 6-20 by 1-1/4 in. long bugle-head steel screws with a No. 2 Phillips drive and an S12 (TEKS/3) ® 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.	Insulation*:	8. (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 — (Optional — Not Shown) — Placed on top of Item 8. 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.	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.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-14 – Construction No. 303 Uplift – Class 90		
1.	Panels*:	No. 24 MSG min thickness coated steel. Panel width 18 in. max., 10 in. min. ribs height 1-3/4 in. at female side. Panels continuous over three or more clips with no end laps. A bead of sealant may be used at panel side joints. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"
2.	Fasteners*:	2. (Panel Clips) — One piece assembly, No. 24 MSG min thickness, 3-1/2 in. wide, 1-15/16 in. high. Clip spacing to be 48 in. OC. Clips to interface with Item 2A (bearing plate). FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14 Clip" 2A. Roof Deck Fasteners* — (Bearing Plate) — One piece assembly, No. 24 MSG min thickness steel, 4-1/2 in. wide, 6 in. long or No. 24 MSG minimum thickness, 5 in. wide, 3-7/8 in. long. 2B. Bearing Plate — (Not Shown) — To be used with "Lock-Seam UL 90 Clip", "Permaseam Clip", "K-Lok Structural Clips" or "MP-175 Clip" only, (Item 2). Bearing plates to be 16 MSG min coated steel, 3-7/8 wide by 5 in long (50,000 psi min yield strength). 2F. 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"
3.	Fasteners:	3. Panel Fasteners — (Screws) — Fasteners used to attach panel clips and bearing plates (Items 2 & 2A) through rigid insulation and optional Cover Board (Item 7) into light gauge steel deck (Item No. 5) to be No. 14 truss head type with No. 3 Phillips drive, self-drilling steel screws. Two screws per clip to be used, inserted through 1/4 in. diam guide holes. Fasteners to penetrate liner panel 3/4 in. min. 3A. Panel Fasteners — (Screws) — (Not Shown) — When no Rigid Insulation (Item 4) is used, No. 10-16 by min 1 in. long TEK 3 Carbon pancake head, self-drilling, self-tapping screws to be used. When rigid insulation is used, No. 14-13 by varying lengths, DP1, carbon, pancake-head, Square/Phillips Head screws to be used. Two fasteners per clip to be used for either type.
4.	Insulation*:	4. Foamed Plastic — (Rigid Insulation) — Min thickness 1 in., max thickness 4-1/2 in. Density to be a min of 1.8 pcf. or see products Classified under TJBX Category. 4A. Foamed Plastic* — (Rigid Insulation) — In lieu of Item 4, applied flat or tapered to maximum 10 in. thick combination of Item 4B. Bearing plates required under panel attachment points. Optional if Cover Board (Item 7) is used. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL" or "Resista" 4B. Foamed Plastic — (Rigid Insulation — Optional — Not Shown) — Placed on top of Item 4A. Maximum 10 in. thick combination of Item 4A. Bearing plates required under panel attachment points. Optional if Cover Board (Item 7) is used. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD"
5.	Deck:	Liner Panel — Min thickness No. 22 MSG. Coated steel (33000 psi) min yield strength min depth 1-1/2 in., max pitch 6 in. fabricated to various profiles.
6.	Underlayment:	(Not Shown) — One ply of 30 lb roofing felt or one layer of bituminous resin type water proofing membrane or self-adhering underlayment, installed per manufacturer's instructions.
7.	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 liner panel (Item 5) in lieu of Foamed Plastic (Item 4) or over Foamed Plastic (Items 4, 4A and/or 4B and 4C). When used or used over Foamed Plastic bearing plate not required.
8.	Supports:	(Not Shown) — Used to support liner panels, spaced per deck manufacturer's specifications for uplift.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-14 – Construction No. 448 Uplift – Class 90		
1.	Panels*:	No. 24 MSG min coated steel. Max panel width 18 in., rib height 1-3/4 in. Panels continuous over three or more spans. Endlaps for panels to be overlapped 6 in. and to include back up plate (Item 2B). A bead of sealant may be used at panel ends and side joints. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"
2.	Fasteners*:	2. (Panel Clips) — One piece assembly, 3-1/2 in. wide by 1-7/8 in. high. Clip spacing to be 48 in. OC. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"

		<p>Classification) — "UC-14 Clip"</p> <p>2A. Bearing Plate — (Optional) — To be used in lieu of plywood or OSB (Item 4A) with rigid insulation (Item 4). Bearing plates to be 16 MSG min coated steel or No. 24 MSG minimum thickness, 5 in. wide, 3-7/8 in. long. Located under each clip (Item 2) for support.</p> <p>2B. Endlap Back-Up Plate — (Not Shown) — No. 16 MSG min coated steel, width of back up plate to correspond to width of panel. Two 1 in. wide by 3/4 in. long tabs are used for sliding over end of panels.</p>
3.	Fasteners:	<p>Panel Fasteners – (Screws) — Screws used to attach the panel clips and bearing plates (Items 2 and 2A) through rigid insulation and into metal deck (Item 5). Screws to be No. 14 Truss head with No. 3 Phillips drive. Length to be a min of 1/2 in. longer than thickness of rigid insulation and metal deck. Two screws per clip. Fasteners used at endlaps to be one of the following: 14x1 in. Type AB self-tapper; 14x1-1/4 in. Hex washer head self-driller; 14x1 in. Type AB Phillips stainless steel self-tapper.</p>
4.	Insulation*:	<p>4. Rigid Insulation — (Optional) — Foamed plastic, max thickness 10 in. Density to be a min of 1.5 PCF.</p> <p>4A. Foamed Plastic* — (Rigid Insulation — Optional) — In lieu of Item 4, applied flat or tapered to maximum 10 in. thick combination of Item 4B. Bearing plates required under panel attachment points. Optional if Cover Board (Item 4D) is used. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL" or "Resista"</p> <p>4B. Foamed Plastic — (Rigid Insulation — Optional — Not Shown) — Placed on top of Item 4A. Maximum 10-in thick combination of Item 4A. Bearing plates required under panel attachment points. Optional if Cover Board (Item 4D) is used. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD"</p> <p>4C. 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"</p> <p>4D. 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 liner panel (Item 5) in lieu of Foamed Plastic (Item 4) or over Foamed Plastic (Items 4, 4A and/or 4B). When used or used over Foamed Plastic bearing plate not required.</p>
5.	Deck:	No. 22 MSG min thickness coated steel. Min yield strength 33 KSI. Min depth 1-1/2 in. Max pitch 6 in.
6.	Vapor Barrier:	<p>6. Vapor Barrier — (Optional) — Installed on top of metal deck (Item 5) or on top of gypsum wallboard (Item 4B) if used. Min 6 mil plastic sheet.</p> <p>6A. Waterproof Membrane — (Optional) — (Not Shown) — Used to protect plywood or OSB (Item 4A). Installed under panels (Item 1).</p>
7.	Supports:	(Not Shown) — Used to support metal deck, spaced per deck manufacturer's specifications.
8.	Batten Clips and Cap*:	<p>The followed items may be used in conjunction with the "Design-Lok" panel (Item 1).</p> <p>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</p> <p>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</p>
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-14 – Construction No. 664 Uplift – Class 90		
1.	Purlins:	(Not shown) Purlins used for liner panel (Item 2) support to be cold formed steel sections. As alternatives, structural components (hot rolled beams, channels, open web joists, etc.) may be used. Min gauge and yield to depend on design considerations for uplift loading. Purlins spaced max 6 ft. OC.
2.	Deck:	No. 22 MSG min thick coated steel (33,000 psi min yield strength). Min depth 1-1/2 in., max pitch 6 in. Fabricated to various profiles. Fastened to supports 6 in. OC.
3.	Insulation*:	<p>Foamed Plastic* — (Rigid Insulation — Optional) — Applied flat or tapered to maximum 10 in. thick combination of Item 3A. Bearing plates required under panel attachment points. Optional if Cover Board (Item 3B) is used. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL" or "Resista"</p> <p>3A. Foamed Plastic — (Rigid Insulation — Optional, Not Shown) — Placed on top of Item 3. Max 10-in thick combination of Item 3. Bearing plates required under panel attachment points. Optional if Cover Board (Item 3B) is used. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD"</p>

		<p>3B. 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 2) or Foamed Plastic (Items 3 and/or 3A). When used or used over Foamed Plastic bearing plate not required.</p> <p>FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD"</p>
4.	Panels*:	<p>No. 24 MSG min thick coated steel panels or 0.032 in. min thick aluminum panels, 18 in. wide max. 1-3/4 in. high at female side rib. Panels continuous over three or more clips with no end laps. A bead of sealant may be used at panel side joints.</p> <p>FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"</p>
5.	Fasteners*:	<p>(Panel Clips) — One piece assembly, 3-1/2 in. wide, 1-7/8 in. high. No. 18 MSG min thick coated steel. Clips spaced 18 in. OC max. Fasteners used to attach the panel clips. Bearing plates are used with panel screw fasteners (Item 6) under panel clip to be 4 in. by 4 in. min No. 26 gauge stainless steel or min No. 20 gauge galvanized steel. Bearing plates are optional if foamed plastic is used.</p> <p>FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14 Clip", "UC Bearing Plate"</p>
6.	Fasteners:	<p>(Screws not shown) — Fasteners used to attach the panel clips to the steel decking to be No. 12 steel screws. Length to penetrate steel deck a minimum of 1/2 in. Two screws are to be used per clip.</p>
<p>* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.</p>		

<p align="center">UC-14 — Construction No. 342 Uplift — Class 90</p>		
1.	Panels*:	<p>No. 24 MSG min gauge coated steel. Panel width 18 in. max., 10 in. min. Rib height 1-3/4 in. at female side. A bead of sealant may be used at panel side joints. Panels continuous over three or more clips with no end laps.</p> <p>FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"</p>
2.	Fasteners*:	<p>(Panel Clips) — One piece assembly, No. 24 MSG min thickness, 3-1/2 in. wide, 1-15/16 in. high. Clip spacing to be 48 in. OC.</p> <p>FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14 Clip"</p>
3.	Thermal Barrier*:	<p>(Mineral Board) — Min thickness 1/2 in. Opposite side edges have a tongue and groove configuration. Butt (end) joints to be staggered and occur over steel deck crests. Wallboard installed perpendicular to steel deck corrugations.</p> <p>LOADMASTER SYSTEMS INC (View Classification) — "Mineral Board"</p>
4.	Vapor Barrier:	<p>(Optional) — Installed on top of metal deck (Item 8) or on top of gypsum wallboard (Item 3). Minimum 6 mil plastic sheet.</p>
5.	Joint Tape:	<p>(Not Shown) — All wallboard joints shall be taped with 2.5 in. wide joint tape supplied by the manufacturer.</p>
6.	Insulation:	<p>(Rigid Insulation) — (Optional) — Expanded polystyrene supplied in 4 by 8 ft sheets, min thickness 13/16 in., min density 1.0 pcf, or (Rigid Insulation) Polyisocyanurate supplied in 4 by 8 ft sheets or (Rigid Insulation) Phenolic supplied in 4 by 8 ft sheets. All end joints to be staggered with respect to adjoining rows. All joints to be offset from joints in mineral board (Item 3).</p>
7.	Fasteners:	<p>7. For attaching panel clips to steel deck to be two 0.140 in. diam threaded shank Phillips, bugle or trumpet head, self-drilling, self-tapping corrosion resistant coated steel screws supplied by roof deck manufacturer. Screws shall penetrate steel deck min 1/2 in.</p> <p>7A. Fasteners — For attaching wallboard to steel deck (Item 8) to be min 0.140 in. diam threaded shank Phillips, bugle or trumpet head, self-drilling, self-tapping, corrosion resistant coated steel screws supplied by the manufacturer. Screws are installed into top corrugations of steel deck through nom 3 by 3 in. corrosion resistant steel roof deck plates, spaced in a pattern as determined by the pitch of the steel deck with the min density of 21 fasteners per 4 by 8 ft sheet (Item 3).</p> <p>7B. Panel Fasteners — (Screws) — As an alternate, when no Rigid Insulation (Item 4) is used, No. 10-16 by min 1 in. long TEK 3 Carbon pancake head, self-drilling, self-tapping screws to be used. When rigid insulation is used, No. 14-13 by varying lengths, DP1, carbon, pancake-head, Square/Phillips Head screws to be used. Two fasteners per clip to be used for either type. See Item 8 for steel deck thickness.</p>
8.	Deck:	<p>8. Fabricated to various profiles, min yield strength 33,000 psi. Steel deck profile, support spacing and method of positioning (end and side laps) and fastening of deck to supports to be per deck manufacturers requirements for uplift loading. Deck thickness to accommodate panel clip screw fastener pullout strength. When fasteners described in Item 7B are used, min thickness to be No. 22 MSG</p> <p>8A. Deck Fasteners — Steel deck panels to be fastened to structural supports and at laps using ARC spot welds with weld washers or screw fasteners per deck manufacturer's requirements for uplift loading.</p>
9.	Purlins:	<p>9. Purlins — 16 MSG min gauge steel (min yield strength 50,000 PSI) or min Type H open web joists.</p>
<p>* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.</p>		

UC-14 – Construction No. 486 Uplift – Class 90		
1.	Panels*:	No. 24 MSG min coated steel, 18 in. max width, 1-3/4 in. high at the ribs. Panels continuous over three or more spans. Endlaps for panel to be overlapped 6 in. and to include back-up plate (Item 2A). A bead of sealant may be used at panel end joints. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"
2.	Fasteners*:	2. Roof Deck Fasteners* — One piece assembly, 3-1/2 in. wide, 1-7/8 in. high, thickness 0.048 in. Clip spacing to be 48 in. OC. 2A. Endlap Back-Up Plate — (Not Shown) — No. 16 MSG min coated steel, width of back-up plate to correspond to width of panel. Two 1 in. wide by 3/4 in. long tabs are used for sliding over end of panels.
3.	Gypsum Board*:	(Mineral Board) — Min thickness 1/2 in. Opposite side edges have a tongue and groove configuration. Butt (end) joints to be staggered and occur over steel deck crests. Wallboard installed perpendicular to steel deck corrugations. GEORGIA-PACIFIC GYPSUM L L C (View Classification) — "DensDeck®", "DensDeck Prime®"
4.	Vapor Barrier:	Single ply used between the wallboard (Item 3) and the metal roof deck panels (Item 1).
5.	Joint Tape:	(Not Shown) — 2-1/2 in. wide tape supplied by manufacturer to be used at all wallboard joints.
6.	Insulation:	(Rigid Insulation) — (Optional) — Expanded polystyrene or polyisocyanurate supplied in 4 by 8 ft sheets, min thickness 13/16 in. min density 1.0 pcf. All end joints to be staggered with respect to adjacent rows. All joints to be offset from joints in mineral board (Item 3).
7.	Fasteners:	7. Fasteners — Screws used to fasten panel clips (Item 2) to steel deck (Item 8) to be No. 14 Truss head with No. 3 Phillips drive. Length to be min 1/2 in. longer than thickness of wallboard, rigid insulation and metal deck. Two screws per clip. Fasteners used at endlaps to be one of the following: 14x1 in. Type AB self-tapper; 14x1-1/4 in. Hex washer head self-driller; 14x1 Type AB Phillips stainless steel self-tapper. 7A. Fasteners — For attaching in wallboard to steel deck to be min 0.140 in diam threaded shank Phillips, bugle or trumpet head, self-drilling, self-tapping, corrosion resistance coated steel screws supplied by manufacturer. Screws are installed into top corrugations of steel roof deck through nom 3 by 3 in. corrosion resistant steel roof deck plates, spaced in a pattern as determined by the pitch of the steel deck with a min of 21 fasteners per 4 by 8 ft sheet (Item 3).
8.	Deck:	8. Steel Deck — Fabricated to various profiles, min yield strength 33,000 psi. Steel deck profile, thickness, support spacing and method of positioning (end and side laps) and fastening deck to supports to be per deck manufacturers requirements for uplift loading. 8A. Deck Fasteners — Steel deck panels to be fastened to structural supports and at laps using puddle welds with weld washers or screw fasteners per deck manufactures requirements for uplift loading.
9.	Purlins:	16 MSG min coated steel, min yield strength 50,000 psi or Type H open web joists.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-14 – Construction No. 254 Uplift – Class 90		
1.	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. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"
2.	Fasteners*:	2. 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. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14 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.	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.	Insulation:	(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.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-14 – Construction No. 255 Uplift – Class 90 and 60 (See Item No. 4)		
1.	Panels*:	No. 24 MSG min thickness coated steel. Panel width 18 in. max., 10 in. min. Rib height 1-3/4 in. at female side. Panels continuous over two or more spans. A bead of sealant may be used at panel side joints. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"
2.	Fasteners*:	2. (Panel Clips) — One piece assembly, 3-1/2 in. wide, 1-7/8 in. high. One panel clip located at each purlin intersection. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14 Clip" 2A. (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.	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 DP1 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 Class 90 to be 48 in. OC: For Class 60 to be 60 in. OC
5.	Insulation:	(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.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-14 – Construction No. 261 Uplift – Class 90 or 60								
1.	Panels*:	0.032 in. thick aluminum or No. 24 MSG min thickness coated steel. Panels 10-1/2 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. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"						
2.	Fastener*:	(Panel Clips) — One piece assembly, 3-1/8 in. wide, 1-7/8 in. high. One panel clip located at each purlin intersection. Min thickness 0.048 in. (No. 18 MSG). FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14 Clip"						
3.	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 DP1 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 — <table><tr><td rowspan="2">For aluminum panels:</td><td>For Class 90 to be 36 in. OC.</td></tr><tr><td>For Class 60 to be 48 in. OC.</td></tr><tr><td rowspan="2">For steel panels:</td><td>22 MSG thick to be 60 in. OC.</td></tr><tr><td>24 MSG thick to be 48 in. OC.</td></tr></table>	For aluminum panels:	For Class 90 to be 36 in. OC.	For Class 60 to be 48 in. OC.	For steel panels:	22 MSG thick to be 60 in. OC.	24 MSG thick to be 48 in. OC.
For aluminum panels:	For Class 90 to be 36 in. OC.							
	For Class 60 to be 48 in. OC.							
For steel panels:	22 MSG thick to be 60 in. OC.							
	24 MSG thick to be 48 in. OC.							
5.	Insulation:	(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.						
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.								

UC-14 – Construction No. 445 Uplift – Class 90					
1.	Panels*:	No. 24 MSG min coated steel. Max panel width 12 in., rib height 1-3/4 in. Panels continuous over two or more spans. No endlaps. A bead of sealant may be used at panel ends and side joints. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"			
2.	Fasteners*:	(Panel Clips) — One piece assembly, 3-1/2 in. wide by 1-7/8 in. high. Clip spacing to be 48 in. OC. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14 Clip"			
3.	Fasteners:	(Screws) — Screws used to attach panel clips (Item 2) to purlins (Item 4) to be No. 10x1 in. long No. 3 self-drilling point, No. 2 Phillips Pancake head. Two screws per clip.			
4.	Purlins:	No. 16 MSG min thickness steel (min yield 50 ksi). <table><tr><td rowspan="2">Spacing —</td><td>For 22 MSG thickness panels - 60 in. OC.</td></tr><tr><td>For 24 MSG thickness panels - 48 in. OC.</td></tr></table>	Spacing —	For 22 MSG thickness panels - 60 in. OC.	For 24 MSG thickness panels - 48 in. OC.
Spacing —	For 22 MSG thickness panels - 60 in. OC.				
	For 24 MSG thickness panels - 48 in. OC.				
5.	Insulation:	(Optional) — (Not Shown) — 3 in. thick vinyl faced blanket insulation. To be installed between metal panels (Item 1) and purlins (Item 4).			
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.					

UC-14 – Construction No. 446 Uplift – Class 90		
1.	Panels*:	No. 24 MSG min coated steel. Max panel width 18 in., rib height 1-3/4 in. Panels continuous over two or more spans. No endlaps. A bead of sealant may be used at panel ends and side joints. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"
2.	Fasteners*:	(Panel Clips) — One piece assembly, 3-1/2 in. wide by 1-7/8 in. high. Clip spacing to be 48 in. OC. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14 Clip"
3.	Fasteners:	(Screws) — Screws used to attach panel clips (Item 2) to purlins to be No. 10 by 1 in. long No. 3 self-drilling point, No. 2 Phillips Pancake head. Two screws per clip.
4.	Purlins:	No. 16 MSG min thickness steel (min yield 50 ksi) spaced 48 in. OC.
5.	Insulation:	5. Insulation — (Optional) — (Not Shown) — 3 in. thick vinyl faced blanket insulation. To be installed between metal panels (Item 1) and purlins (Item 4). 5A. Insulation — (Optional) — (Not Shown) — 1/4 in. thick closed/microcellular polyethylene insulation with foil facing designated "Low-E Insulation™." To be installed between metal panels (Item 1) and purlins (Item 4).
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-14 – Construction No. 447 Uplift – Class 90								
1.	Panels*:	0.032 in. thick aluminum or No. 24 MSG min thickness coated steel. Panels 10 in. wide, 1-3/4 in. high at the ribs. Panels continuous over two or more spans. No endlaps. A bead of sealant may be used at panel side joints. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"						
2.	Fasteners*:	(Panel Clips) — One piece assembly, 3-1/2 in. wide by 1-7/8 in. high. One panel clip located at each purlin intersection. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14 Clip"						
3.	Fasteners:	(Screws) — Screws used to attach panel clips (Item 2) to purlins (Item 4) to be No. 10x1 in. long No. 3 self-drilling point. No. 2 Phillips Pancake head. Two screws per clip.						
4.	Purlins:	No. 16 MSG min thickness steel (min yield 50 ksi). Spacing — <table><tr><td>For 0.032 in. thick aluminum panels</td><td>36 in. OC.</td></tr><tr><td>For 22 MSG thickness panels</td><td>60 in. OC.</td></tr><tr><td>For 24 MSG thickness panels</td><td>48 in. OC.</td></tr></table>	For 0.032 in. thick aluminum panels	36 in. OC.	For 22 MSG thickness panels	60 in. OC.	For 24 MSG thickness panels	48 in. OC.
For 0.032 in. thick aluminum panels	36 in. OC.							
For 22 MSG thickness panels	60 in. OC.							
For 24 MSG thickness panels	48 in. OC.							
5.	Insulation:	(Optional) — (Not Shown) — 3 in. thick vinyl faced blanket insulation. To be installed between metal panels (Item 1) and purlins (Item 4).						
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.								

UC-14 – Construction No. 543 Uplift – Class 90		
1.	Panels*:	No. 24 MSG (minimum) thickness coated steel. Maximum panel width 18 inches by 1-3/4 inches high at the ribs. Panels continuous over two or more spans with no end laps. A bead of sealant may be used at the panel side joint. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"
2.	Fasteners*:	(Panel Clips) — One piece assembly, 3-1/2 inches wide, 1-7/8 inches high. Minimum thickness No. 18 MSG. One clip located at each purlin intersection.
3.	Fasteners:	(Screws) — Fasteners used to attach panel clips (Item No. 2) to purlins to be No 10-16 by 1 inch long plated steel pancake head No. 2 Phillips drive with a No. 3 self-drilling point or 1/4-14 x 1 inch DP3 coated steel screws, Square/Phillips drive head, self drilling. Two screws per clip.
4.	Purlins:	No. 16 MSG minimum thickness steel with a minimum yield strength of 50,000 psi. Purlin spacing as follows: a) 48 inch purlin spacing for class 90 rating for No. 24 MSG panels in all widths. b) 60 inch purlin spacing for class 90 rating for No. 22 MSG 12 inch wide panels only. c) 60 inch purlin spacing for class 60 rating for No. 22 MSG panels in all widths.
5.	Insulation:	(Optional) — Any compressible blanket insulation, 3 inches max. thickness when located between panels (Item No. 1) and purlin (Item No. 4).
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UC-14 – Construction No. 544 Uplift – Class 90		
1.	Panels*:	No. 24 MSG min. Coated steel. Max. panel width 18 inches and rib height 1-3/4 inches. Panels continuous over two or more spans. Endlap for panels to be overlapped 6 in. A bead of sealant may be used at panel ends and side joints. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14"
2.	Fasteners*:	(Panel Clips) — One piece assembly, 3-1/2 inches wide, 1-7/8 inches high. Minimum thickness No. 18 MSG. One clip to be used at each purlin. Maximum clip spacing to be 48 inches O.C. Clips to interface with bearing plates (Item No. 2A). 2A. Bearing Plate — No. 24 MSG minimum gauge coated steel, 5 inches wide by 3-7/8 inches long (50,000 psi minimum yield strength). 2B. Roof Deck Fasteners* — (Panel Clips) — One piece assembly, 3-1/2 in. wide by 1-7/8 in. high. Clip spacing to be 48 in. OC. Clips to interface with bearing plates (Item No. 2C). FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC-14 Clip" 2C. 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"
3.	Fasteners:	(Screws) — Fasteners used to attach panel clips (Item No. 2) and bearing plates (Item No. 2A) through rigid board insulation (Item No. 4), light gauge steel deck (Item No. 5) and into purlins (Item No.7) to be No. 14 self-tapper. Two screws per clip to be used. Length to be a minimum of 1/2 inch longer than the combined thickness of the liner panel (Item No. 5), rigid insulation (Item No. 4), gypsum wall board (Item No. 4B) and plywood or oriented strand board (Item No. 4A).
4.	Insulation:	4. Foamed Plastic — (Rigid Insulation) — Minimum thickness 1 inch, maximum thickness 10 inches. Density to be a minimum of 1.5 pcf. 4A. Foamed Plastic* — (Rigid Insulation — Optional) — In lieu of Item 4, applied flat or tapered to maximum 10-in thick combination of Item 4B. Bearing plates required under panel attachment points. Optional if Cover Board (Item 4D) is used. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL" or "Resista" 4B. Foamed Plastic — (Rigid Insulation — Optional — Not Shown) — Placed on top of Item 4A. Maximum 10-in thick combination of Item 4A. Bearing plates required under panel attachment points. Optional if Cover Board (Item 4D) is used. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD" 4C. 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" 4D. 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 liner panel (Item 5) in lieu of Foamed Plastic (Item 4) or over Foamed Plastic (Items 4, 4A and/or 4B). When used or used over Foamed Plastic bearing plate not required.
5.	Deck:	Liner Panel — (Optional) — (Required when Items 4, 4A, 4B, 4C and 4D are used) — No. 29 MSG minimum steel. Minimum yield strength 80,000 psi, minimum depth 9/16 inches, maximum pitch 2.6667 inches O.C.
6.	Underlayment:	(Optional — Not Shown) — Underlayment attached over Foamed Plastic (Item 4, 4A or 4B), Liner Panel (Item 5) or Cover Board (Item 4D) installed per manufacturer's recommendations.
7.	Supports:	(Purlins) — (Not Shown) — No. 16 MSG minimum thickness coated steel with a minimum yield strength of 50,000 psi. Or minimum "H" series open-web joists. Maximum spacing "48" O.C.
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

5V Crimp Constructions:

5V Crimp — Construction No. 629 Uplift — Class 90		
1.	Joist:	Graded dimension lumber, No. 2 or better. Spaced a maximum of 24 in. OC.
2.	Deck:	Min. 5/8 in., Type CDX APA Rated plywood sheathing.
3.	Underlayment:	3. Underlayment — (Optional) — One layer of Type 30, fastened per manufacturer's installation instructions. 3A. Underlayment (Not shown) — (Optional) — One layer UL Classified Elk "VersaShield" with 2 in. side lap, loose laid.
4.	Panels*:	Width 22-1/2 in. by No. 26 MSG coated steel. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "5-V-Crimp"
5.	Fasteners:	(Screws) — Fasteners for attaching panels to the decking, No. 9 by minimum 1-1/2 in. long, without insulation and/or cover board, hex head steel screws with a bonded washer. Fasteners spaced 24 in. O.C. and located on the top part of the panel v-crimp. Fasteners for attaching decking to joists, 2 in. long, No. 8 coarse thread screws spaced 6 in. OC at the edges and 12 in. OC in the field.
6.	Insulation*:	6. Foamed Plastic* — (Rigid Insulation — Optional — Not Shown) — Applied flat or tapered to maximum 10-in thick combination of Item 6A. Bearing plates required under panel attachment points. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISO 95+ GL" or "Resista" 6A. Foamed Plastic — (Rigid Insulation — Optional — Not Shown) — Placed on top of Item 6. Maximum 10-in thick combination of Item 6. Bearing plates required under panel attachment points. FIRESTONE BUILDING PRODUCTS CO L L C (View Classification) — "ISOGARD HD"
7.	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 2) or Foamed Plastic (Items 6 and/or 6A). When used or used over Foamed Plastic bearing plate not required.
8.	Fasteners*:	(Bearing Plates) — Plates to be 4 in by 4 in. by No. 26 MSG min galvanized steel. Two 1/4 in. guide holes. FIRESTONE METAL PRODUCTS, A DIV OF FIRESTONE BUILDING PRODUCTS CO LLC (View Classification) — "UC Bearing Plate"
* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.		

UL 1897 Testing:

Test is conducted in accordance with UL 1897 "Uplift Test for Roof Covering Systems". The test method subjects a minimum 10 ft by 10 ft sample to various short term (one minute increments) static air pressure to index performance under uplift loads imposed on a roofing system's securement to a specified roof deck.

FIRESTONE BUILDING PRODUCTS HAS POSTED ALL OF THE AVAILABLE UL REPORTING IN THE CODES SECTION OF THE FBP WEBSITE. PLEASE COPY AND PASTE THE FOLLOWING LINK INTO A WEB BROWSER TO VISIT OUR WEBSITE AND REVIEW FIRESTONE BUILDING PRODUCTS UL EVALUATION REPORTS:

[HTTP://DATABASE.UL.COM/CGI-BIN/XYV/TEMPLATE/LISEXT/1FRAME/SHOWPAGE.HTML?NAME=TGIK.R14751&CCNSHORTTITLE=ROOFING+SYSTEMS,+UPLIFT+RESISTANCE&OBJID=1075607477&CFID=1073741824&VERSION=VERSIONLESS&PARENT_ID=1073993603&SEQUENCE=1](http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/showpage.html?name=TGIK.R14751&ccnshorttitle=Roofing+Systems,+Uplift+Resistance&objid=1075607477&cfid=1073741824&version=versionless&parent_id=1073993603&sequence=1)

Please utilize the UL website to verify the assembly number associated to each listed assembly.

Table 1.03c
UL 1897 Tested Roof Constructions

Deck	Thermal Board	Insulation	Underlayment	Panel Type and Width	Clips and/or Fasteners	Wind Uplift
UC-3						
Assembly No. 2 Steel: Min. No. 22 MSG	N/A	Foamed Plastic (Rigid Insulation): Min. 1", max. 4" thickness. Joints staggered between layers. Mechanically fastened to the steel deck per manufacturer's recommendation.	Underlayment #1: One layer Type 30 organic felt with 2" side laps. Mechanically fastened to the steel deck per manufacturers recommendations. Underlayment #2: One layer UL Classified ELK "VersaShield" with 2" side laps, loose laid.	Width: Max. 16" With 1-1/2" high legs Metal: Min. No. 24 MSG coated steel. Panels must be continuous over three or more clips with no end laps. Panel ribs seamed with an electric seaming tool with seaming operation to include upper tabs of panel clips. Identified as "UC-3".	Clips: UC-3 Expansion Clip Two part assembly, base 5" long, 1" wide, 0.42" high. Fabricated from No. 22 MSG min. thick coated steel. Upper tab 3" long, 0.42" wide, 1.786" high. Fabricated from No. 24 MSG min. thick coated steel. Clip Spacing: 12" o.c. max. Bearing Plates: Plates used with panel screw fasteners under panel to be 4" by 4" min. 26 gauge stainless steel. As an alternate, 1/2" thick (15/32" actual) plywood, APA rated sheathing, square edged may be used. Fasteners: Fasteners used to attach panel clips to steel deck to be No. 12 pancake wafer head steel screws. Length to penetrate steel deck a min. 3/4". Two fasteners used per clip.	142 PSF
Assembly No. 3 Plywood: Min 19/32" thick CDX	N/A	N/A	Underlayment #1: One layer Type 30 organic felt with 2" side lap. Fastened to the plywood deck per manufacturer's recommendations. Underlayment #2: One layer UL Classified Elk "VersaShield" with 2" side lap, loose laid. Vapor Barrier: One layer of Colbond "Enkamat 7010", loose laid	Width: Max. 16" With 1-1/2" high legs Metal: Min. 0.027" RHEINZINK Panels continuous over three or more clips with no end laps. Panels ribs double seamed with and electric seaming tool	Clips: UC-3 Expansion Clip Two part assembly, base 5" long, 1" wide, 0.42" high. Fabricated from min. 0.0225" thick 304 stainless steel. Upper tab 3" long, 0.42" wide, 1.786" high. Fabricated from min. 0.0172" thick 304 stainless steel. Clip Spacing: 12" o.c. max. Fasteners: Fasteners used to attach panel clips to plywood deck to be No. 10x1-1/2" long pancake head stainless steel	247 PSF

				with seaming operation to include upper tabs of panel clips. Identified as "UC-3".	screws. Two screws used per clip.	
Assembly No. 4 Steel: Min. No. 22 MSG	N/A	Foamed Plastic (Rigid Insulation): Min. 1", max. 4" thickness. Joints staggered between layers. Mechanically fastened to the steel deck per manufacturer's recommendation.	Underlayment #1: One layer Type 30 organic felt with 2" side laps. Mechanically fastened to the steel deck per manufacturers recommendations. Underlayment #2: One layer UL Classified ELK "VersaShield" with 2" side laps, loose laid. Vapor Barrier: One layer Colbond "Enkamat 7010", loose laid.	Width: Max. 16" With 1-1/2" high legs Metal: Min. 0.027" RHEINZINK Panels continuous over three or more clips with no end laps. Panels ribs double seamed with and electric seaming tool with seaming operation to include upper tabs of panel clips. Identified as "UC-3".	Clips: UC-3 Expansion Clip Two part assembly, base 5" long, 1" wide, 0.42" high. Fabricated from min. 0.0225" thick 304 stainless steel. Upper tab 3" long, 0.42" wide, 1.786" high. Fabricated from min. 0.0172" thick 304 stainless steel. Clip Spacing: 12" o.c. max. Bearing Plates: Plates used with panel screw fasteners under panel to be 4" by 4" min. 26 gauge stainless steel. As an alternate, 1/2" thick (15/32" actual) plywood, APA rated sheathing, square edged may be used. Fasteners: Fasteners used to attach panel clips to steel deck to be No. 12 pancake wafer head steel screws. Length to penetrate steel deck a minimum 3/4". Two screws used per clip.	187 PSF
Assembly No. 10 Plywood: Min. 5/8" nom (19/32" actual) thick plywood; Exposure 1, Grade B-C, APA rated sheathing, conforming to requirements of DOC PS-1, with butt joints to be located over wood supports (joist). Fastened to supports with 8d x 2-1/2" long ring shank nails spaced 6" o.c. at butted ends and 6" o.c. in the field.	N/A	N/A	Underlayment: One layer Type 15 or 30 organic felt with 2" side lap. Fastened to the plywood deck per manufacturer's recommendations.	Width: Max. 16" With 1-1/2" high legs. Metal: Min. No. 24 MSG coated steel. Panel ribs single seamed. Identified as "UC-3".	Clips: UC-3 Expansion Clip Two part assembly, base 5" long, 1" wide, 0.42" high. Fabricated from min. 0.0225" thick 304 stainless steel. Upper tab 3" long, 0.42" wide, 1.786" high. Fabricated from min. 0.0172" thick 304 stainless steel. Clip Spacing: 18" o.c. max. Fasteners: Fasteners used to attach panel clips to plywood deck to be No. 10x1" long pancake head screws. Two screws used per clip.	157 PSF
Assembly No. 11 Plywood: Min. 5/8" nom (19/32" actual) thick plywood; Exposure 1, Grade B-C, APA rated sheathing, conforming to requirements of DOC PS-1, with butt joints to be located over wood supports (joist). Fastened to supports with 8d x 2-1/2" long ring shank nails spaced 6"	N/A	N/A	Underlayment: One layer Type 30 organic felt with 2" side lap. Fastened to the plywood deck per manufacturer's recommendations.	Width: Max. 16" With 1-1/2" high legs Metal: Min. No. 24 MSG coated steel. Panel ribs single seamed. Identified as "UC-3".	Clips: UC-3 Expansion Clip Two part assembly, base 5" long, 1" wide, 0.42" high. Fabricated from min. 0.0225" thick 304 stainless steel. Upper tab 3" long, 0.42" wide, 1.786" high. Fabricated from min. 0.0172" thick 304 stainless steel. Clip Spacing: 8" o.c. max. Fasteners:	202 PSF

o.c. at butted ends and 6" o.c. in the field.					Fasteners used to attach panel clips to plywood deck to be No. 10x1" long pancake head screws. Two screws used per clip.	
Deck	Thermal Board	Insulation	Underlayment	Panel Type and Width	Clips and/or Fasteners	Wind Uplift
UC-4						
Assembly No. 6 Plywood: Min. 19/32" thick APA rated sheathing Grade B-C fastened to supports with 8d x 2-1/2" long ring shank nails spaced 6" o.c.	N/A	N/A	N/A	Width: Max. 9-3/4" With 1-1/2" high legs Metal: Min. No. 26 MSG Coated steel or Min. 0.032" Alum Panel ribs single seamed. A bead of sealant may be used at panel ribs. Identified as "UC-4".	Fasteners: Fasteners used to attach panel to plywood deck to be No. 10x1" long pancake head screws. Fastener Spacing: 12" o.c. with two fasteners used at each location.	247 PSF
Assembly No. 7 Plywood: Min. 19/32" thick APA rated sheathing Grade B-C fastened to supports with 8d x 2-1/2" long ring shank nails spaced 12" o.c. in the field and 6" o.c. along the perimeter.	N/A	N/A	N/A	Width: Max. 9-3/4" With 1-1/2" high legs Metal: Min. No. 26 MSG Coated steel or Min. 0.032" Alum Panel ribs single seamed. A bead of sealant may be used at panel ribs. Identified as "UC-4".	Fasteners: Fasteners used to attach panel to plywood deck to be No. 10x1" long pancake head screws. Fastener Spacing: 12" o.c. with two fasteners used at each location.	217 PSF
Assembly No. 17 Plywood: Minimum 15/32 inch APA rated plywood sheathing Grade B-C, or minimum 7/16 inch APA rated OSB fastened to supports with 8d by 2-1/2 in. long ring-shank nails spaced 6 inches on center.	N/A	Insulation (Optional): Maximum 10 inch Firestone ISO 95+ GL, RESISTA "ISOGARD HD", ISOGARD HD Composite or "HailGard" loose-laid.	N/A	Width: Max. 18" With 1-1/2" high at the ribs. Metal: Min. No. 24 MSG Coated steel A bead of sealant may be used at panel ribs. Identified as "UC-4".	Fasteners: Fasteners used to attach the panels to the plywood to be No. 10 coarse thread steel screws. Two screws spaced 18 inches on center.	180 PSF
Assembly No. 18 Plywood: Minimum 15/32 inch APA rated plywood sheathing Grade B-C, or minimum 7/16 inch APA rated OSB fastened to supports	N/A	Insulation (Optional): Maximum 10 inch Firestone ISO 95+ GL, RESISTA "ISOGARD HD", ISOGARD HD Composite or "HailGard" loose-laid.	N/A	Width: Max. 18" With 1-1/2" high at the ribs. Metal: Min. No. 24 MSG Coated	Fasteners: Fasteners used to attach the panels to the plywood to be No. 10 coarse thread steel screws. Two screws spaced 24 inches on center.	150 PSF

with 8d by 2-1/2 in. long ring-shank nails spaced 6 inches on center.				steel A bead of sealant may be used at panel ribs. Identified as "UC-4".		
Assembly No. 19 Plywood: Minimum 15/32 inch APA rated plywood sheathing Grade B-C, or minimum 7/16 inch APA rated OSB fastened to supports with 8d by 2-1/2 in. long ring-shank nails spaced 6 inches on center.	N/A	Insulation (Optional): Maximum 10 inch Firestone ISO 95+ GL, RESISTA "ISOGARD HD", ISOGARD HD Composite or "HailGard" loose-laid.	N/A	Width: Max. 18" With 1-1/2" high at the ribs. Metal: Min. .032 in. thick aluminum A bead of sealant may be used at panel ribs.	Fasteners: Fasteners used to attach the panels to the plywood to be No. 10 coarse thread steel screws. Two screws spaced 12 in. on center.	105 PSF
Assembly No. 20 Plywood: Minimum 15/32 inch APA rated plywood sheathing Grade B-C, or minimum 7/16 inch APA rated OSB fastened to supports with 8d by 2-1/2 in. long ring-shank nails spaced 6 inches on center.	N/A	Insulation (Optional): Maximum 10 inch Firestone ISO 95+ GL, RESISTA "ISOGARD HD", ISOGARD HD Composite or "HailGard" loose-laid.	N/A	Width: Max. 18" With 1-1/2" high at the ribs. Metal: Min. .032 in. thick aluminum A bead of sealant may be used at panel ribs.	Fasteners: Fasteners used to attach the panels to the plywood to be No. 10 coarse thread steel screws. Two screws spaced 18 inches on center.	135 PSF
Assembly No. 21 Steel: Min. No. 22 MSG	N/A	Insulation (Optional): Maximum 10 inch Firestone ISO 95+ GL, RESISTA "ISOGARD HD", ISOGARD HD Composite or "HailGard" loose-laid.	N/A	Width: Max. 18" With 1-1/2" high at the ribs. Metal: Min. .032 in. thick aluminum A bead of sealant may be used at panel ribs.	Fasteners: Fasteners used to attach the panels to the plywood to be No. 10 by 1-1/2 inch long coarse thread steel screws. Two screws spaced 18 inches on center.	120 PSF
Assembly No. 22 Plywood: Minimum 15/32 inch APA rated plywood sheathing Grade B-C, or minimum 7/16 inch APA rated OSB fastened to supports with 8d by 2-1/2 in. long ring-shank nails spaced 6 inches on center.	N/A	Insulation (Optional): Maximum 10 inch Firestone ISO 95+ GL, RESISTA "ISOGARD HD", ISOGARD HD Composite or "HailGard" loose-laid.	N/A	Width: Max. 18" With 1-1/2" high at the ribs. Metal: Min. 24 MSG Steel A bead of sealant may be used at panel ribs.	Fasteners: Fasteners used to attach the panels to the plywood to be No. 10 coarse thread steel screws. Two screws spaced 18 inches on center.	120 PSF

Deck	Thermal Board	Insulation	Underlayment	Panel Type and Width	Clips and/or Fasteners	Wind Uplift
UC-6						
Assembly No. 1 Supports (Purlins): No. 16 MSG steel (50ksi yield strength) spaced max 3'-0" o.c.	N/A	N/A	N/A	Width: Max. 16" With 2" high female leg and 1-3/4" male leg Metal : Min. .040" Alum Panels continuous over two or more spans. Panels seamed 180° at ribs with an electric seamer.	Clips: UC-6 Clip Two part assembly. Located over panel sides, fastened to supports using two fasteners per clip. Fasteners: Used to attach panel clips to purlins, No. 1/4-14x7/8" long , self-drilling, self-taping, hex-head steel. Two screws used per clip.	165 PSF
Assembly No. 23 Steel: Min. No. 22 MSG	N/A	Insulation (Optional): Maximum 10 in. Firestone ISO 95+ GL, Resista, ISOGARD HD, ISOGARD HD Composite or HailGard HD, loose-laid Cover Board: Minimum 1 1/2" thick HailGard Composite Board, installed with 8 HD HailGard Fasteners per 4'x8' board	N/A	Width: Max. 18" With 1.5" high ribs. A bead of sealant may be used at panel ribs. Metal : Min. .032" Alum	Clips: UC-6 Low-Float Clip Clip Fasteners: Fastened to the deck with Firestone UNA-CLAD #10 fasteners, 1 1/2" long (2 per clip), spaced at 30" o.c. Panel Fasteners: No. 10 Coarse thread screws. Two screws spaced 18" o.c.	105 PSF

Deck	Thermal Board	Insulation	Underlayment	Panel Type and Width	Clips and/or Fasteners	Wind Uplift
UC-7						
Assembly No. 8 Plywood: Min. 5/8" APA rated sheathing Grade B-C fastened to supports with No. 8d by 2-1/2" long steel ring shank nails spaced 6" o.c. in the field and 6" o.c. along the perimeter	N/A	N/A	N/A	Width: Max. 12" With Max. 1" high legs Metal : Min. No. 24 MSG A bead of sealant may be used at panel ribs.	Clips: UC-7 Clip One piece assembly spaced. Clip Spacing: 12" o.c. max. Fasteners: Used to attach panel clips to deck, No. 12x1" long steel screws. Two screws used per clip.	120 PSF

Deck	Thermal Board	Insulation	Underlayment	Panel Type and Width	Clips and/or Fasteners	Wind Uplift
UC-14						
Assembly No. 9 Steel: Min. No. 22 MSG	N/A	Optional Foamed Plastic (Rigid Insulation): Max. 4" thickness. Joints staggered between layers.	N/A	Width: Max. 18" With 1-3/4" high legs Metal : Min. No. 24 MSG coated steel or Min. 0.032 Alum A bead of sealant may be used at panel side joints.	Clips: UC-14 Clip Clip Spacing: 18" o.c. max. Bearing Plates: Plates used with panel screw fasteners under panel to be 4" by 4" min. 26 gauge stainless steel. Bearing plate optional if insulation is not used. Fasteners: Fasteners used to attach panel clips to steel deck to be No. 12 pancake wafer head steel screws. Length to penetrate steel deck a minimum 1/2" Two screws used per clip.	105 PSF
Assembly No. 24 Plywood: Minimum 15/32 inch APA rated plywood sheathing Grade B-C, or minimum 7/16 inch APA rated OSB fastened to supports with 8d by 2-1/2 in. long ring-shank nails spaced 6 inches on center.	N/A	Insulation (Optional): Maximum 10 inch Firestone ISO 95+ GL, RESISTA "ISOGARD HD", ISOGARD HD Composite or "HailGard" loose-laid.	N/A	Width: Max. 18" With 1-1/2" high at the ribs Metal : Min. No. 24 MSG steel A bead of sealant may be used at panel side joints.	Clips: UC-14 Clip Clip Spacing: 24" o.c. max. Fasteners: Fastened to the decked sheathing with Firestone UNA-CLAD #10 Fasteners, 11/2 inch long (2 PER CLIP) clips spaced 24 inches on center.	135 PSF

Internal Fire ("P" Assemblies)

These "P" assemblies can be found using the UL Online Certification Directory report [CETW.R14751](#).

- The following panel designations can be used in Design Nos.:
[P225](#), [P227](#), [P230](#), [P237](#), [P259](#), [P508](#), [P510](#), [P512](#), [P514](#), [P518](#), [P701](#), [P711](#), [P717](#), [P720](#), [P722](#), [P723](#), [P726](#), [P731](#), [P734](#), [P801](#), [P815](#), [P819](#).
 - Mechanically Attached Metal Roof Panels** – Type UC-3, UC-4, UC-6, UC-7, UC-14, UC-500, UC-501, UC-600, UC-601, UR, HR, and VR roof panels (26 MSG min gauge coated steel, min 0.020 in. thick copper or 0.032 min. gauge coated aluminum) placed over specified insulation and/or roof covering for the respective designs. Panel secured to top layer of 7/16 in. APA-rated oriented strand board (OSB) laminated to rigid insulation or 5/8 in. plywood over rigid insulation. Refer to individual Roof-Ceiling design under the appropriate Building Unit item for name of Classified Companies. Panels secured to oriented strand board or plywood at side ribs with panel clips designed specifically for these panels. Panel clips spaced 18 in. oc using No. 12-15 No. 3 Phillips self-drilling, self-tapping truss head steel or stainless steel screw. Zinc plated carbon steel screws. The oriented strand board laminated insulation or plywood covered rigid insulation are mechanically fastened to steel roof deck and covered with a 30 lb. felt.
 - Mechanically Attached Metal Roof Panels** – Type UC-3, UC-4, UC-6, UC-7, UC-14, UC-500, UC-501, UC-600, UC-601, UR, HR, and VR roof panels (26 MSG min gauge coated steel, min 0.020 in. thick copper or 0.032 min. gauge coated aluminum) placed over specified insulation and/or roof covering for the respective designs.
- Type UC-3, UC-4, UC-6, UC-7, UC-14 are secured by their panel clips with the upper portion of the clip engaging the panel rib, a 3 in. by 4 in. bearing plate fabricated of nominal 0.018 in. thick coated steel is used under each panel clip. The bearing plate shall be placed over the specified roof insulation. The fastener shall penetrate the roof deck a min of 1/2 in. and shall be spaced 18 in. OC.
- Type UC-500, UC501, UC-600, UC-601, UR, HR, and VR are screwed into the top of the panel rib through the metal panels into the specified insulation. Panel clips are attached using No. 12-15 Phillips drive truss head steel or

stainless steel screw with a "S" point or tek point. Two fasteners per clip are used. The fasteners shall penetrate the roof deck a min. of ½ in. and shall be spaced 18 in. OC.

STATE OF FLORIDA and MIAMI-DADE APPROVALS

Table 1.05a

State of Florida Product Approval

Specific State of Florida Product Approvals can be viewed by going to www.floridabuildingcode.org/		
FL Product Approval Number	Firestone Metal Products Profile	Type of Metal
FL 13629	UC-3, UC-4, UC-6, UC-7, UC-14, 5-V-Crimp	See specific product approval

NOTE: Florida Product Approval Numbers FL 175-02, FL 2833-R1, FL 3570-R1, FL 4193-R1, FL 5292-R1, and FL 10601-R2 are consolidated under FL 13629.

Table 1.05b

Miami-Dade Notice of Acceptance

Specific Miami-Dade Notice of Acceptance (NOA) can be viewed by clicking on the hyperlink below.		
Miami-Dade NOA#	Firestone Metal Products Profile:	Roof System:
16-0114.01	UC-3	Min. 0.032" Aluminum, WD, NI
15-0720.03	UC-3	Min. 0.040 Alum., 22 ga steel deck, insulated
13-0311.03	UC-3	Min. 16oz Copper, WD, NI
13-0311.04	UC-3	Min. 24ga Steel, WD, NI
16-0114.02	UC-4	Min. 24ga Steel, WD, NI
14-0416.03	UC-4	Min. 0.032 Aluminum
10-1214.04	UC-6	Steel, large & small Impact rated
14-0122.03	UC-14	Min. 24ga Steel, WD, NI
13-0610.02	UC-14	Min. 24ga Steel, WD, NI

Notes:

See specific Miami-Dade NOA for the maximum pressure allowed for all areas of the roof

WD = wood deck, 19/32" or greater

NI = non-insulated

Energy Star Approvals - As Currently Listed at www.energystar.gov

Table 1.06

Energy Star Approvals

Color	Models	Initial Solar Reflectance	Solar Reflectance after 3 years
Almond SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.57	0.56
Bone White SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.72	0.7
Brandywine SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.25	0.23
Champagne Metallic SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.37	0.36
Charcoal Gray SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.29	0.28

Color	Models	Initial Solar Reflectance	Solar Reflectance after 3 years
Cityscape SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.35	0.34
Classic Copper SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.42	0.40
Colonial Red SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.31	0.31
Dark Bronze SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.26	0.25

Dark Ivy SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.25	0.25
Hemlock Green SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.32	0.29
Mansard Brown SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.30	0.29
Matte Black SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.25	0.27
Medium Bronze SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.30	0.28
Patina Green SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.26	0.28
Regal Red SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.42	0.41
Sandstone SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.51	0.50
Sherwood Green SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.27	0.26
Sierra Tan SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.35	0.34
Silver Metallic SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.59	0.60
Sky Blue SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.29	0.28
Slate Gray SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.36	0.33
Stone White SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.57	0.56
Terra Cotta SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.34	0.33
Tropical Patina SR	UC-3, UC-4, UC-6, UC-7, UC-14, UC-600, UC-601, 5VC, HR Ultra Omega Panel, VR Classic Omega, UR Pro Omega	0.28	0.28

CRRC Rated Panels

CRRC Rated Panels						
Color	Brand	Initial Solar Reflectance	3-year Solar Reflectance	Initial Emittance	3-year Emittance	CRRC Product ID
Stone White SR	Any panel	0.55	0.55	0.83	0.82	0806-0010
Fluoropon Cityscape	Any panel	0.35	0.34	0.84	0.83	0806-0004
Fluoropon Classic II Silver Metallic	Any panel	0.56	0.55	0.76	0.76	0806-0005
Fluoropon Bone White	Any panel	0.70	0.69	0.84	0.84	0806-0006
Fluoropon Sandstone	Any panel	0.51	0.49	0.84	0.83	0806-0007
Classic Copper SR	Any panel	0.35	0.35	0.75	0.75	0806-0022
Charcoal Gray SR	Any panel	0.25	0.25	0.83	0.82	0806-0021
Mansard Brown SR	Any panel	0.25	0.25	0.83	0.83	0806-0019
Hemlock Green SR	Any panel	0.25	0.25	0.83	0.83	8060-0015
Patina Green SR	Any panel	0.32	0.32	0.83	0.82	0806-0014
Almond SR	Any panel	0.55	0.55	0.83	0.82	0806-0013
Medium Bronze SR	Any panel	0.25	0.25	0.83	0.83	0806-0011

Slate Gray SR	Any panel	0.35	0.35	0.83	0.81	8060-0009
Terra Cotta SR	Any panel	0.35	0.35	0.83	0.82	0806-0012
Sky Blue SR	Any panel	0.25	0.25	0.83	0.83	0806-0023
Colonial Red SR	Any panel	0.25	0.25	0.83	0.82	0806-0016

Air Infiltration & Water Penetration

Table 1.08a
ASTM E283 and E1680 Air Infiltration Tests

Panel System:		ASTM E283		ASTM E1680		
		Static Pressure Differential (PSF)	Air Infiltration Rate (CFM/SF)	Preload Pressure (PSF)	Static Pressure Differential (PSF)	Air Infiltration Rate (CFM/SF)
UC-3						
24ga Steel & .040” Aluminum 17.75” Wide w/o sealant		1.56	0.03			
		6.24	0.05			
24ga Steel 20” Wide w/o Sealant		12.0	0.044	15±	-1.57	0.011
					1.57	0.008
					-6.24	0.0138
					6.24	0.0333
24ga Steel 18” Wide w/ Sealant				15+/30-	±1.57	0.0015
					±6.24	0.0022
UC-4						
24ga Steel & .040” Aluminum 17.75” Wide		1.56 (w/o sealant)	0.22			
		6.24 (w/o sealant)	0.52			
		1.56 (w/ sealant)	0.04			
		6.24 (w/ sealant)	0.17			
24ga Steel 18” Wide w/ Sealant				15±	-1.57	0.010
					1.57	0.028
					-6.24	0.010
					6.24	0.099
UC-6						
24ga Steel 18” Wide w/ Sealant				15+/30-	±1.57	0.0031
					±6.24	0.0091

Panel System:		ASTM E283		ASTM E1680	
	Static Pressure Differential (PSF)	Air Infiltration Rate (CFM/SF)	Preload Pressure (PSF)	Static Pressure Differential (PSF)	Air Infiltration Rate (CFM/SF)
UC-14					
24ga Steel 18" Wide w/ Sealant			15+/30-	±1.57	0.0017
				±6.24	0.0039
UC-500					
24 gauge steel and 0.038 Aluminum, 12" wide	1.56 (w/o sealant)	0.07			
	6.24 (w/o sealant)	0.17			
	1.56 (w/ sealant)	0.03			
	6.24 (w/ sealant)	0.11			

Table 1.08b
ASTM E331 and E1646 Water Penetration Tests

Panel System:	ASTM E331			ASTM E1646	
	Static Pressure Differential (PSF)	Water Infiltration	Preload Pressure (PSF)	Static Pressure Differential (PSF)	Water Infiltration
UC-3					
24ga Steel & .040" Aluminum 17.75" Wide w/o Sealant	10.5	None			
24ga Steel 20" Wide w/o Sealant	12.0	None	15±	2.86	None
24ga Steel 18" Wide w/ Sealant			15+/30-	15.0	None
UC-4					
24ga Steel & 0.038" Aluminum 17.75" Wide w/o Sealant	10.5	None			
24ga Steel 18" Wide w/ Sealant	12.0	None	15±	2.86	None
UC-6					
24ga Steel 16" Wide w/ Sealant			15+/30-	12.0	None
UC-14					
24ga Steel 18" Wide w/ Sealant			15+/30-	12.0	None
UC 500					
24 gauge steel and 0.038 Aluminum, 12" wide	10.5 sealed	No Entry			
	10.5 unsealed	No Entry			

Structural Performance

Table 1.09a
ASTM E330 Structural Performance Tests

Product Name	Panel width	Material type	Material thickness	Purlin Spacing	Max. Test Uplift Pressure (psf)	Design Uplift pressure (psf)
UC-3	17.75"	Steel	24 ga.	2.0'	-45	
UC-3	17.75"	Aluminum	0.038	2.0'	-75	
UC-4	17.75"	Aluminum	0.038	2.0'	-75	
UC-4	17.75"	Steel	24 ga.	2.0'	-105	
UC-7	12.0"	Aluminum	0.032	1.0'	- 104.3	- 41.7
				1.25'		- 39.1
				1.5'		- 36.5
				1.75'		- 33.9
				2.0'	- 78.3	- 31.3
				2.25'		- 28.8
				2.5'		- 26.4
				2.75'		- 23.9
UC-7	12.0"	Aluminum	.040	3.0'	- 53.95	- 21.5
				1.0'	- 111.1	- 44.4
				1.25'		- 41.1
				1.5'		- 37.8
				1.75'		- 34.5
				2.0'	- 78.3	- 31.3
				2.25'		- 28.8
				2.5'		- 26.4
UC-7	16.0"	Aluminum	0.032	2.75'		- 23.9
				3.0'	- 53.9	- 21.5
				1.0'	- 72.7	- 29.0
				1.25'		-27.3
				1.5'		- 25.6
				1.75'		- 23.9
				2.0'	- 55.5	- 22.2
				2.25'		- 20.6
UC-7	16.0"	Aluminum	.040	2.5'		- 19.1
				2.75'		- 17.6
				3.0'	- 40.0	- 16.0
				1.0'	- 89.0	- 35.6
				1.25'		- 33.2
				1.5'		- 30.9
				1.75'		- 28.6
				2.0'	- 65.8	- 26.3
UC-7	12.0"	Steel	24 ga.	2.25'		- 24.3
				2.5'		- 22.3
				2.75'		- 20.3
				3.0'	- 45.75	- 18.3
				1.0'	- 103.7	- 41.4
				1.25'		- 38.3
				1.5'		- 35.2
				1.75'		- 32.1
UC-7	12.0"	Steel	22 ga.	2.0'	- 72.9	- 29.1
				2.25'		- 28.0
				2.5'		- 27.0
				2.75'		- 26.0
				3.0'	- 62.6	- 25.0
				1.0'	- 157.9	- 63.1
				1.25'		- 59.1
				1.5'		- 55.2
UC-7	12.0"	Steel	22 ga.	1.75'		- 51.3
				2.0'	- 118.7	- 47.4
				2.25'		- 44.1
				2.5'		- 40.8
				2.75'		- 37.5
				3.0'	- 85.6	- 34.2

**Table 1.09a (Cont.)
ASTM E330 Structural Performance Tests**

Product Name	Panel width	Material type	Material thickness	Purlin Spacing	Max. Test Uplift Pressure (psf)	Design Uplift pressure (psf)
UC-7	16.0"	Steel	24 ga.	1.0'	- 66.0	- 26.4
				1.25'		- 25.1
				1.5'		- 23.9
				1.75'		- 22.7
				2.0'	- 53.8	- 21.5
				2.25'		- 20.8
				2.5'		- 20.1
				2.75'		- 19.4
UC-7	16.0"	Steel	22 ga.	3.0'	- 47.17	- 18.8
				1.0'	- 101.0	- 40.4
				1.25'		- 38.3
				1.5'		- 36.3
				1.75'		- 34.3
				2.0'	- 80.75	- 32.3
				2.25'		- 30.8
				2.5'		- 29.3
UC-500	12.0"	Alum	0.038"	2.75'		- 27.8
				3.0'	- 65.8	- 26.3
UC-500	12.0"	Steel	22 ga.	4.0'	-105	
UC-500	12.0"	Steel	24 ga.	5.0'	-38	
				2.0'	-20	
UC-500	12.0"	Steel	26 ga.	4.0'	-60	
				4.0'	-27	
UC-500	12.0"	Steel	26 ga.	4.0'	-20	

**TABLE 1.09B
ASTM E1592 Structural Performance Tests**

Product Name	Panel Width	Material Type	Clip	Clip/Purlin Spacing	Max. Test Uplift Pressure (psf)	Design Uplift Pressure (psf)
UC-3	14.0"	16 oz. Copper	UC-3 Stainless Steel Expansion Clip	1.0'	- 100.8	- 61.0
				2.5'		- 51.8
				3.0'		-42.7
				3.5'		- 33.6
				4.0'	- 40.4	- 24.4
UC-3	20"	24 ga Steel	UC-3 Stainless Steel Expansion Clip	1.0'	-190.0	-95.0
				1.25'		-89.58
				1.5'		-84.17
				1.75'		-78.75
				2.0'		-73.33
				2.25'		-67.92
				2.5'		-62.50
				2.75'		-57.08
				3.0'		-51.67
				3.25'		-46.25
				3.5'		-40.83
				3.75'		-35.42
UC-3	20"	0.032" Aluminum	UC-3 Stainless Steel Expansion Clip	4.0'	-60.0	-30.0
				1.0'	- 150.0	
UC-4	18"	24 ga Steel	N/A	4.0'	- 45.0	
				1.0'	- 58.5	
UC-4	18"	0.032" Aluminum	N/A	4.0'	- 48.1	
				1.0'	-55.0	
UC-4	18"	0.032" Aluminum	N/A	4.0'	-15.0	
				4.0'		

TABLE 1.09B (CONT.)
ASTM E1592 Structural Performance Tests

Product Name	Panel Width	Material Type	Clip	Clip/Purlin Spacing	Max. Test Uplift Pressure (psf)	Design Uplift Pressure (psf)
UC-6	18"	24 ga Steel	UC-6 Low-Float Clip, Galvanized Steel	1.0'	-220.0	-110.0
				1.25'		-104.69
				1.5'		-99.38
				1.75'		-94.06
				2.0'		-88.75
				2.25'		-83.44
				2.5'		-78.13
				2.75'		-72.81
				3.0'		-67.5
				3.25'		-62.19
				3.5'		-56.88
				3.75'		-51.56
				4.0'		-46.25
				4.25'		-40.94
				4.5'		-35.63
				4.75'		-30.31
UC-6	16"	0.032" Aluminum	UC-6 Low-Float Clip	5.0'	-50.0	-25.0
				1.0'	-114.9	
UC-6	18"	0.032" Aluminum	UC-6 Low Float Clip, Stainless Steel	5.0'	-49.9	
				1.0'	-180.0	-90.0
				1.25'		-85.94
				1.5'		-81.88
				1.75'		-77.81
				2.0'		-73.75
				2.25'		-69.69
				2.5'		-65.63
				2.75'		-61.56
				3.0'		-57.50
				3.25'		-53.44
				3.5'		-49.38
				3.75'		-45.31
				4.0'		-41.25
				4.25'		-37.19
				4.5'		-33.13
				4.75'		-29.06
UC-14	16"	24 ga Steel	UC-14 Clip, Galvanized Steel	5.0'	-50.0	-25.0
				1.0'	-180.0	-50.00
				1.25'		-47.92
				1.5'		-45.83
				1.75'		-43.75
				2.0'		-41.67
				2.25'		-39.58
				2.5'		-37.50
				2.75'		-35.42
				3.0'		-33.33
				3.25'		-31.25
				3.5'		-29.17
				3.75'		-27.08
				4.0'	-50.0	-25.00
UC-14	18"	24 ga steel	UC-14 Clip, Galvanized Steel	1.0'	-95.0	
				4.0'	-40.0	
UC-14	18"	.032" Aluminum	UC-14 Clip, Stainless Steel	1.0'	-55.0	
				4.0'	-30.0	

**Verify all FM approved assemblies on www.RoofNav.com
Factory Mutual – Firestone Building Products Metal Panel Assemblies**

**Firestone UNA-CLAD UC-3 Metal Panel Uplift Ratings
Existing Roof**

Uplift	Deck	Vapor Retarder	Separator Sheet, Substrate and Attachment	Bearing Plate	Panel Clip	Clip Fastener	RoofNav Assembly Number
1-105	Steel, 22 gauge Min., 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> - Firestone ISO 95+ GL, .5"-1", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼" Min.	Yes	UC-3 Stainless Expansion Clip, 12" oc w/ 20" max panel.	UNA-CLAD #12 w/ nylon washer – 2 per clip.	259348-0-0
1-105	Steel, 22 gauge Min., 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> APA Rated OSB, 7/16"-1/2" thickness, 24 HD HailGard Fasteners per 4'x8' board. <u>Optional:</u> Firestone ISO 95+ GL, .5"-1", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼" Min.	No	UC-3 Stainless Expansion Clip, 12" oc w/ 20" max panel.	UNA-CLAD #10 (Stainless or E-Coated) – 2 per clip.	259349-0-0
1-105	Steel, 22 gauge Min., 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> Firestone ISO 95+ GL, .5"-1", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼" Min.	Yes	UC-3 Stainless Expansion Clip, 12" oc w/ 20" max panel.	UNA-CLAD #12 w/ nylon washer – 2 per clip.	301645-0-0
1-105	Steel, 22 gauge Min., 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> APA Rated OSB, 7/16"-1/2" thickness, 24 HD HailGard Fasteners per 4'x8' board. <u>Optional:</u> Firestone ISO 95+ GL, .5"-1", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼" Min.	No	UC-3 Stainless Expansion Clip, 12" oc w/ 20" max panel.	UNA-CLAD #10 (Stainless or E-Coated) – 2 per clip.	301646-0-0
1-120	Steel, 22 gauge Min., 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> APA Rated OSB, 7/16"-1/2" thickness, 16 All-Purpose Fasteners per 4'x8' board. <u>Optional:</u> Firestone ISO 95+ GL, .5"-1", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼" Min.	No	UC-3 Stainless Expansion Clip, 12" oc w/ 20" max panel.	UNA-CLAD #10 (Stainless or E-Coated) – 2 per clip.	301642-0-0
1-120	Steel, 22 gauge Min., 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> APA Rated OSB, 7/16"-1/2" thickness, 16 All-Purpose Fasteners per 4'x8' board. <u>Optional:</u> Firestone ISO 95+ GL, .5"-1", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼" Min.	No	UC-3 Stainless Expansion Clip, 12" oc w/ 20" max panel.	UNA-CLAD #10 (Stainless or E-Coated) – 2 per clip.	259347-0-0
1-105	Steel, 22-18 gauge, 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> Firestone ISO 95+ GL, 1.5"-12", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼" Min.	Yes	UC-3 Stainless Expansion Clip, 12" oc w/ 20" max panel.	UNA-CLAD #12 w/ nylon washer – 2 per clip.	259335-0-0
1-105	Steel, 22-18 gauge, 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> APA Rated OSB, 7/16"-1/2" thickness, Firestone HailGard, 1.5"-4" 4'x8' boards. 24 HD HailGard Fasteners per 4'x8' board. <u>Optional:</u> Firestone ISO 95+ GL, 1.5"-12", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼"	No	UC-3 Stainless Expansion Clip, 12" oc w/ 20" max panel.	UNA-CLAD #10 (Stainless or E-Coated) – 2 per clip.	259336-0-0

Firestone UNA-CLAD UC-3 Metal Panel Uplift Ratings (Cont.)

Existing Roof

Uplift	Deck	Vapor Retarder	Separator Sheet, Substrate and Attachment	Bearing Plate	Panel Clip	Clip Fastener	RoofNav Assembly Number
1-105	Steel, 22-18 gauge, 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> Firestone HailGard, 1.5"-4" 4'x8' boards. 24 HD HailGard Fasteners per 4'x8' board.	No	UC-3 Stainless Expansion Clip, 12" oc w/ 20" max panel.	UNA-CLAD #10 (Stainless or E-Coated) – 2 per clip.	259337-0-0
1-105	Steel, 22-18 gauge, 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> Firestone ISO 95+ GL, 1.5"-12", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼"	Yes	UC-3 Stainless Expansion Clip, 12" oc w/ 20" max panel.	UNA-CLAD #12 w/ nylon washer – 2 per clip.	301628-0-0
1-105	Steel, 22-18 gauge, 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> APA Rated OSB, 7/16"-1/2" thickness, Firestone HailGard, 1.5"-4" 4'x8' boards 24 HD HailGard Fasteners per 4'x8' board. <u>Optional:</u> Firestone ISO 95+ GL, 1.5"-12", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼"	No	UC-3 Stainless Expansion Clip, 12" oc w/ 20" max panel.	UNA-CLAD #10 (Stainless or E-Coated) – 2 per clip.	301631-0-0
1-105	Steel, 22-18 gauge, 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> Firestone HailGard, 1.5"-4" 4'x8' boards 24 HD HailGard Fasteners per 4'x8' board.	No	UC-3 Stainless Expansion Clip, 12" oc w/ 20" max panel.	UNA-CLAD #10 (Stainless or E-Coated) – 2 per clip.	301634-0-0
1-120	Steel, 22-18 gauge, 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> APA Rated OSB, 7/16"-1/2" thickness, Firestone HailGard, 1.5"-4" 4'x8' boards. 16 All-Purpose Fasteners per 4'x8' board. <u>Optional:</u> Firestone ISO 95+ GL, 1.5"-12", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼"	No	UC-3 Stainless Expansion Clip, 12" oc w/ 20" max panel.	UNA-CLAD #10 (Stainless or E-Coated) – 2 per clip.	259059-0-0
1-120	Steel, 22-18 gauge, 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> Firestone HailGard, 1.5"-4" 4'x8' boards, 16 All-Purpose Fasteners per 4'x8' board.	No	UC-3 Stainless Expansion Clip, 12" oc w/ 20" max panel.	UNA-CLAD #10 (Stainless or E-Coated) – 2 per clip.	259334-0-0
1-120	Steel, 22-18 gauge, 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> APA Rated OSB, 7/16"-1/2" thickness, Firestone HailGard, 1.5"-4" 4'x8' boards. 16 All-Purpose Fasteners per 4'x8' board. <u>Optional:</u> Firestone ISO 95+ GL, 1.5"-12", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼"	No	UC-3 Stainless Expansion Clip, 12" oc w/ 20" max panel.	UNA-CLAD #10 (Stainless or E-Coated) – 2 per clip.	301583-0-0
1-120	Steel, 22-18 gauge, 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> Firestone HailGard, 1.5"-4" 4'x8' boards, 16 All-Purpose Fasteners per 4'x8' board.	No	UC-3 Stainless Expansion Clip, 12" oc w/ 20" max panel.	UNA-CLAD #10 (Stainless or E-Coated) – 2 per clip.	301625-0-0

Firestone UNA-CLAD UC-3 Steel Panel Uplift Ratings (Cont.)

New Roof

Uplift	Deck	Vapor Retarder	Separator Sheet, Substrate and Attachment	Bearing Plate	Panel Clip	Clip Fastener	RoofNav Assembly Number
1-120	Steel, 22-18 gauge, 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> APA Rated OSB, 7/16"-1/2" thickness, 16 HD HailGard Fasteners per 4'x8' board. <u>Required:</u> Firestone ISO 95+ GL, ISOGARD HD Comp., or Resista, 1.5"-1-12", 4'x8' boards	No	UC-3 Stainless Expansion Clip, 12" oc w/ 16" max panel.	UNA-CLAD #10 (Stainless) – 2 per clip.	341935-0-0

Firestone UNA-CLAD UC-4 Steel Panel Uplift Ratings

Existing Roof

Uplift	Deck	Vapor Retarder	Separator Sheet, Substrate and Attachment	Bearing Plate	Fastener	RoofNav Assembly Number
1-105	Steel, 22 gauge Min., 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> APA Rated OSB, 7/16"-1/2" thickness, 16 All-Purpose Fasteners per 4'x8' board. <u>Optional:</u> Firestone ISO 95+ GL, .5"-.5", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼" Min.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12" oc, 9.75" row spacing, 1" minimum and 1.5" maximum length.	259351-0-0
1-105	Steel, 22 gauge Min., 33 ksi	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> APA Rated OSB, 7/16"-1/2" thickness, 16 All-Purpose Fasteners per 4'x8' board. <u>Optional:</u> Firestone ISO 95+ GL, .5"-.5", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼" Min.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12" oc, 9.75" row spacing, 1" minimum and 1.5" maximum length.	301654-0-0
1-165	Steel, 22 gauge Min., 33 ksi	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> Firestone ISO 95+ GL, .5"-1", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼" Min.	Yes	UNA-CLAD #12 (Stainless or Steel) w/ nylon washer– 12" oc, 9.75" row spacing, 1" minimum and 1.5" maximum length. 2 per plate. *See Comment under Securement in RoofNav.	301649-0-0
1-165	Steel, 22 gauge Min., 33 ksi	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> Firestone ISO 95+ GL, .5"-1", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼" Min.	Yes	UNA-CLAD #12 (Stainless or Steel) w/ nylon washer– 12" oc, 9.75" row spacing, 1" minimum and 1.5" maximum length. 2 per plate. *Firestone UC Bearing Plates – 4 x 4 in. x min 0.028 in. (102 x 120 x min 0.72 mm) required between the clip and rigid insulation.	259350-0-0
1-105	Steel, 22-18 gauge, 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> APA Rated OSB, 7/16"-1/2" thickness, Firestone HailGard, 1.5"-4" 4'x8' boards. 16 All-Purpose Fasteners per 4'x8' board. <u>Optional:</u> Firestone ISO 95+ GL, 1"-12", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼" Min.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12" oc, 9.75" row spacing, 1" minimum and 1.5" maximum length.	259338-0-0
1-105	Steel, 22-18 gauge, 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> APA Rated OSB, 7/16"-1/2" thickness, Firestone HailGard, 1.5"-4" 4'x8' boards. 16 All-Purpose Fasteners per 4'x8' board. <u>Optional:</u> Firestone ISO 95+ GL, 1"-12", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼" Min.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12" oc, 9.75" row spacing, 1" minimum and 1.5" maximum length.	301637-0-0

Firestone UNA-CLAD UC-4 Steel Panel Uplift Ratings (Cont.)

Existing Roof

Uplift	Deck	Vapor Retarder	Separator Sheet, Substrate and Attachment	Bearing Plate	Fastener	RoofNav Assembly Number
1-120	Steel, 22-18 gauge, 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> Firestone HailGard, 1.5"-4" thickness. 16 All-Purpose Fasteners per 4'x8' board.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12" oc, 9.75" row spacing, 1" minimum and 1.5" maximum length.	259340-0-0
1-120	Steel, 22-18 gauge, 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> Firestone HailGard, 1.5"-4" thickness. 16 All-Purpose Fasteners per 4'x8' board.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12" oc, 9.75" row spacing, 1" minimum and 1.5" maximum length.	301640-0-0
1-165	Steel, 22-18 gauge, 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> Firestone ISO 95+ GL, 1"-4", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼" Min.	Yes	UNA-CLAD #12 (Stainless or Steel) w/ nylon washer – 12" oc, 9.75" row spacing, 2 per plate. *See Comment under Securement in RoofNav.	259060-0-0
1-165	Steel, 22-18 gauge, 33 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> Firestone ISO 95+ GL, 1"-4", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime ¼" Min.	Yes	UNA-CLAD #12 (Stainless or Steel) w/ nylon washer – 12" oc, 9.75" row spacing, 2 per plate. *See Comment under Securement in RoofNav.	301595-0-0

Firestone UNA-CLAD UC-6 Steel Panel Uplift Ratings

Existing Roof

Uplift	Deck	Vapor Retarder	Separator Sheet, Substrate and Attachment	Bearing Plate	Fastener	RoofNav Assembly Number
1-90	Steel, 22 gauge Min., 36 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> APA Rated OSB, 7/16"-1/2" thickness, 16 All-Purpose Fasteners per 4'x8' board. <u>Optional:</u> Firestone ISO 95+ GL, .5"-1", DensDeck or Prime ¼" Min.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12" oc, 18" row spacing, 2 per clip. UC-6 Super Clips (Galvanized or Stainless Steel).	259407-0-0
1-90	Steel, 22 gauge Min., 36 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> APA Rated OSB, 7/16"-1/2" thickness, 16 All-Purpose Fasteners per 4'x8' board. <u>Optional:</u> Firestone ISO 95+ GL, .5"-1", DensDeck or Prime ¼" Min.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12" oc, 18" row spacing, 2 per clip. UC-6 Super Clips (Galvanized or Stainless Steel).	301686-0-0
1-105	Steel, 22 gauge Min., 36 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> APA Rated OSB, 7/16"-1/2" thickness. 24 HD HailGard Fasteners per 4'x8' board. <u>Optional:</u> Firestone ISO 95+ GL, .5"-1", DensDeck or Prime ¼" Min.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12" oc, 18" row spacing, 2 per clip. UC-6 Low Float Clips (Galvanized or Stainless Steel).	259394-0-0
1-105	Steel, 22 gauge Min., 36 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> APA Rated OSB, 7/16"-1/2" thickness, 24 HD HailGard Fasteners per 4'x8' board. <u>Optional:</u> Firestone ISO 95+ GL, .5"-1", DensDeck or Prime ¼" Min.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12" oc, 18" row spacing, 2 per clip. UC-6 Low Float Clips (Galvanized or Stainless Steel).	301677-0-0
1-135	Steel, 22 gauge Min., 36 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> Firestone ISO 95+ GL, .5"-1", DensDeck or Prime ¼" Min.	Yes	UNA-CLAD #10 (Stainless or E-Coated) – 12" oc, 18" row spacing, 2 per clip w/ optional nylon washer. UC-6 Super Clips (Galvanized or Stainless Steel).	259406-0-0

Firestone UNA-CLAD UC-6 Steel Panel Uplift Ratings (Cont.)

Existing Roof

Uplift	Deck	Vapor Retarder	Separator Sheet, Substrate and Attachment	Bearing Plate	Fastener	RoofNav Assembly Number
1-135	Steel, 22 gauge Min., 36 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> Firestone ISO 95+ GL, .5”-1”, 4’x8’ boards, ISOGARD HD, .5”-1”, DensDeck or Prime ¼” Min.	Yes	UNA-CLAD #10 (Stainless or E-Coated) – 12” oc, 18” row spacing, 2 per clip w/ optional nylon washer. UC-6 Super Clips (Galvanized or Stainless Steel).	301678-0-0

Firestone UNA-CLAD UC-6 Steel Panel Uplift Ratings

No Deck

Uplift	Deck	Separator Sheet, Substrate and Attachment	Bearing Plate	Fastener	RoofNav Assembly Number
1-150	None	<u>Required:</u> Bay insulation (varying types), 3”-6” thickness, or glass fiber batts & blankets (unfaced), 2”-6” thickness.	No	UNA-CLAD #12 Purlin Drilling – 36” oc, 18” row spacing, 2 per clip. UC-6 Low Float Clips (Galvanized or Stainless Steel).	259061-0-0

Firestone UNA-CLAD UC-6 Steel Panel Uplift Ratings

New Roof

Uplift	Deck	Vapor Retarder	Separator Sheet, Substrate and Attachment	Bearing Plate	Fastener	RoofNav Assembly Number
1-90	Steel, 22-16 gauge, 33 ksi	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> APA Rated OSB, 7/16”-1/2” thickness, Firestone HailGard, 1.5”-4” 4’x8’ boards. 16 All-Purpose Fasteners per 4’x8’ board. <u>Optional:</u> Firestone ISO 95+ GL, 1”-12”, 4’x8’ boards, ISOGARD HD, .5”-1”, DensDeck or Prime ¼” Min.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12” oc, 18” row spacing, 2 per clip. UC-6 Super Clips (Galvanized or Stainless Steel).	259360-0-0
1-90	Steel, 22-18 gauge, 33 ksi	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> Firestone HailGard, 1.5”-4” thickness. 24 HD HailGard Fasteners per 4’x8’ board. <u>Optional:</u> Firestone ISO 95+ GL, 1”-12”, 4’x8’ boards, ISOGARD HD, .5”-1”, DensDeck or Prime ¼” Min.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12” oc, 18” row spacing, 2 per clip. UC-6 Low Float Clips (Galvanized or Stainless Steel).	259361-0-0
1-105	Steel, 22-18 gauge, 33 ksi	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> APA Rated OSB, 7/16”-1/2” thickness, Firestone HailGard, 1.5”-4” 4’x8’ boards. 24 HD HailGard Fasteners per 4’x8’ board. <u>Optional:</u> Firestone ISO 95+ GL, 1”-12”, 4’x8’ boards, ISOGARD HD, .5”-1”, DensDeck or Prime ¼” Min.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12” oc, 18” row spacing, 2 per clip. UC-6 Low Float Clips (Galvanized or Stainless Steel).	259358-0-0
1-105	Steel, 22-18 gauge, 33 ksi	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> APA Rated OSB, 7/16”-1/2” thickness, 16 HD HailGard Fasteners per 4’x8’ board. <u>Optional:</u> Firestone ISO 95+ GL, ISOGARD HD Composite, or Resista, 1.5”-12”, 4’x8’ boards.	NO	UNA-CLAD #10 (Stainless or E-Coated) – 12” oc, 18” row spacing, 2 per clip. UC-6 Low Float Clips (Galvanized or Stainless Steel).	341936-0-0
1-105	Steel, 22-18 gauge, 33 ksi	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> APA Rated OSB, 7/16”-1/2” thickness, Firestone HailGard, 1.5”-4” 4’x8’ boards. 24 HD HailGard Fasteners per 4’x8’ board. <u>Optional:</u> Firestone ISO 95+ GL, 1”-12”, 4’x8’ boards, ISOGARD HD, .5”-1”, DensDeck or Prime ¼” Min.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12” oc, 18” row spacing, 2 per clip. UC-6 Low Float Clips (Galvanized or Stainless Steel).	301664-0-0

Firestone UNA-CLAD UC-6 Steel Panel Uplift Ratings (Cont.)

New Roof

Uplift	Deck	Vapor Retarder	Separator Sheet, Substrate and Attachment	Bearing Plate	Fastener	RoofNav Assembly Number
1-105	Steel, 22-18 gauge, 33 ksi	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> Firestone HailGard, 1.5”-4” thickness. 24 HD HailGard Fasteners per 4’x8’ board.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12” oc, 18” row spacing, 2 per clip. UC-6 Low Float Clips (Galvanized or Stainless Steel).	301669-0-0
1-120	Steel, 22-18 gauge, 33 ksi	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> Firestone HailGard, 1.5”-4” thickness. 16 All-Purpose Fasteners per 4’x8’ board.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12” oc, 18” row spacing, 2 per clip. UC-6 Super Clips (Galvanized or Stainless Steel).	259362-0-0
1-120	Steel, 22-18 gauge, 33 ksi	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> Firestone HailGard, 1.5”-4” thickness. 16 All-Purpose Fasteners per 4’x8’ board.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12” oc, 18” row spacing, 2 per clip. UC-6 Super Clips (Galvanized or Stainless Steel).	301671-0-0
1-135	Steel, 22-18 gauge, 33 ksi	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> Firestone ISO 95+ GL, 1”-12”, 4’x8’ boards, ISOGARD HD, .5”-1”, DensDeck or Prime ¼” Min.	Yes	UNA-CLAD #10 (Stainless or E-Coated) – 12” oc, 18” row spacing, 2 per clip w/ optional nylon washers. UC-6 Super Clips (Galvanized or Stainless Steel).	259359-0-0
1-135	Steel, 22-18 gauge, 33 ksi	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> Firestone ISO 95+ GL, 1”-12”, 4’x8’ boards, ISOGARD HD, .5”-1”, DensDeck or Prime ¼” Min.	Yes	UNA-CLAD #10 (Stainless or E-Coated) – 12” oc, 18” row spacing, 2 per clip w/ optional nylon washers. UC-6 Super Clips (Galvanized or Stainless Steel).	301666-0-0

Firestone UNA-CLAD UC-14 Steel Panel Uplift Ratings

Existing Roof

Uplift	Deck	Vapor Retarder	Separator Sheet, Substrate and Attachment	Bearing Plate	Fastener	RoofNav Assembly Number
1-60	Steel, 22 gauge Min., 36 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> APA Rated OSB, 7/16”-1/2” thickness, 24 HD HailGard Fasteners per 4’x8’ board. <u>Optional:</u> Firestone ISO 95+ GL, .5”-.5”, 4’x8’ boards, ISOGARD HD, .5”-.5”, DensDeck or Prime ¼” Min.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12” oc, 18” row spacing, 1” min length and 1.5” max length.	259408-0-0
1-60	Steel, 22 gauge Min., 36 ksi.	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> APA Rated OSB, 7/16”-1/2” thickness, 24 HD HailGard Fasteners per 4’x8’ board. <u>Optional:</u> Firestone ISO 95+ GL, .5”-.5”, 4’x8’ boards, ISOGARD HD, .5”-.5”, DensDeck or Prime ¼” Min.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12” oc, 18” row spacing, 1” min length and 1.5” max length.	301688-0-0

Firestone UNA-CLAD UC-14 Steel Panel Uplift Ratings

New Roof

Uplift	Deck	Vapor Retarder	Separator Sheet, Substrate and Attachment	Bearing Plate	Fastener	RoofNav Assembly Number
1-60	Steel, 22-16 gauge, 33 ksi	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> APA Rated OSB, 7/16”-1/2” thickness, Firestone HailGard, 1.5”-4” thickness. 24 HD HailGard Fasteners per 4’x8’ board. <u>Optional:</u> Firestone ISO 95+ GL, 1”-12”, 4’x8’ boards, ISOGARD HD, .5”-1”, DensDeck or Prime ¼” Min.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12” oc, 18” row spacing, 1” min length and 1.5” max length.	301656-0-0
1-60	Steel, 22-16 gauge, 33 ksi	<u>Optional:</u> Polyethylene (6mil)	<u>Optional:</u> Separator Sheet – Firestone CLAD-GARD SA. <u>Required:</u> Firestone HailGard, 1.5”-4” thickness. 24 HD HailGard Fasteners per 4’x8’ board.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12” oc, 18” row spacing, 1” min length and 1.5” max length.	301660-0-0

Firestone UNA-CLAD UC-14 Steel Panel Uplift Ratings (Cont.)
New Roof

Uplift	Deck	Vapor Retarder	Separator Sheet, Substrate and Attachment	Bearing Plate	Fastener	RoofNav Assembly Number
1-60	Steel, 22-16 gauge, 33 ksi	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> APA Rated OSB, 7/16"-1/2" thickness, 24 HD HailGard Fasteners per 4'x8' board. <u>Optional:</u> Firestone ISO 95+ GL, 1"-12", 4'x8' boards, ISOGARD HD, .5"-1", DensDeck or Prime 1/4" Min.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12" oc, 18" row spacing, 1" min length and 1.5" max length.	259354-0-0
1-60	Steel, 22-16 gauge, 33 ksi	<u>Optional:</u> Polyethylene (6mil)	<u>Required:</u> Firestone HailGard, 1.5"-4" thickness. 24 HD HailGard Fasteners per 4'x8' board.	No	UNA-CLAD #10 (Stainless or E-Coated) – 12" oc, 18" row spacing, 1" min length and 1.5" max length.	259356-0-0

1.11 Concentrated Load Testing

Testing is per FM 4471, Section 5.4 Foot Traffic Resistance, which uses a 200# load concentrated on a 3" x 3" square area at mid span with joists on 5 foot centers.

Table 1.11 Concentrated Load Testing

Panel	Panel description	Maximum Deflection	Permanent Deflection	Damage
UC-3	Nominal 20" wide, 24 ga. Steel with 1.5" rib; 180° seam	0.1875"	None	No failure
UC-4	Nominal 17-3/4" wide, 24 ga. Steel with 1.5" Snap rib	0.125"	None	No failure
UC-14	Nominal 18" wide, 24 ga. Steel with 1.75" rib; Snap Lock	0.0625"	None	No failure
UC-6	Nominal 18" wide, 24 ga. Steel with 1.5" rib; 180° seam	0.0625"	None	No failure