MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

Johns Manville Corporation
717 17th Street, 9th Floor
Denver, CO 80202

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: JM PVC Single Ply Roof Systems over Steel Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA renews NOA No. 16-1025.03 and consists of pages 1 through 39.
The submitted documentation was reviewed by Hamley Pacheco, P.E.

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Single Ply
Materials:	PVC
Deck Type:	Steel
Maximum Design Pressure:	-90 psf.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product Name	Dimensions	Test Specifications	Product Description
JM PVC	50 mil x roll width x 100' 60 mil x roll width x 100' 80 mil x roll width x 75'	ASTM D4434	PVC polyester reinforced membrane with DuPont™ Elvaloy® KEE. Available in 3.25', 5', 6.5', 10', and 12' rolls.
JM PVC Fleece Backed	50 mil x roll width x 90' 60 mil x roll width x 90' 80 mil x roll width x 75'	ASTM D4434	PVC polyester reinforced membrane backed with a lightweight polyester fleece. Available in 6.33' and 12' rolls.
JM PVC SD Plus	50 mil x roll width" x 100' 60 mil x roll width x 100' 80 mil x roll width x 75'	ASTM D4434	PVC polyester reinforced membrane. Available in 5' and 10' rolls.
DynaFast 180 S	39-3/8" x 49'2"	ASTM D6164	A polyester reinforced SBS modified bitumen base or inner ply sheet.
JM PVC Profile	1-1/2" wide x 1-1/4" high x 10' long	Proprietary	Non-reinforced, extruded PVC for simulating the aesthetics of standing seam metal roofing.
JM PVC Spine	¾" wide x 13/16" high x 7' long	Proprietary	Non-reinforced, extruded PVC for simulating the aesthetics of standing seam metal roofing.
Urethane Insulation Adhesive	N/A	Proprietary	Urethane insulation adhesive.
One-Step Foamable Adhesive	N/A	Proprietary	Two part urethane low rise foam insulation
JM Two Part Urethane Insulation Adhesive	N/A	Proprietary	A two-part urethane insulation adhesive.
JM Green Two Part Urethane Insulation Adhesive	N/A	Proprietary	A two-part urethane insulation adhesive.
JM PVC Membrane Adhesive (Low VOC)	N/A	Proprietary	Low solvent based adhesive.

Product Name	Dimensions	Test Specifications	Product Description
JM PVC Membrane Adhesive (Water Based)	N/A	Proprietary	Water based adhesive.
JM Roofing System Urethane Adhesive	N/A	Proprietary	A two-part urethane insulation adhesive.
JM PVC Penetration Pan	Various	ASTM D4434	Molded PVC for flashing penetration.
JM PVC Pipe Boots	Various	ASTM D4434	Non-reinforced molded PVC flashing penetrations.
JM PVC Universal Corner	Various	ASTM D4434	Non-reinforced molded PVC for inside and outside corner flashing.
JM PVC T-Joint Patch	Various	ASTM D4434	Non-reinforced PVC used to cover T-joints and fasteners.
JM PVC Detail Membrane	Various	ASTM D4434	Non-reinforced PVC used for pipe and corner flashing.
JM PVC Detail Strip	Various	ASTM D4434	PVC used to waterproof joints
JM PVC Split Pipe Boot	Various	ASTM D4434	Reinforced PVC used to flash vent stacks and other round penetrations
JM PVC Coated Metal	Various	ASTM D4434	JM PVC laminated onto galvanized steel for metal flashings and edge details.
JM PVC Walkpad	Various	ASTM D4434	Textured PVC walk pad.
JM PVC Heavy-Duty	Various	ASTM D4434	Textured PVC walk pad.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
Invinsa Roof Board	High-density polyisocyanurate with fiber glass reinforced facers.	Johns Manville
Invinsa FR Roof Board	High-density polyisocyanurate with mineral coated glass reinforced facers; bottom face is premium coated for combustible decks.	Johns Manville
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI	Polyisocyanurate Insulation.	Johns Manville
ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI	Polyisocyanurate Insulation with glass reinforced facers.	Johns Manville
ENRGY 3 FR, ENRGY 3 FR 25 PSI	Polyisocyanurate Insulation with inorganic coated glass reinforced facers; bottom face is premium coated for combustible decks.	Johns Manville
Fesco Foam	Polyisocyanurate Insulation with perlite facer.	Johns Manville
DuraBoard	High-density perlite roof insulation.	Johns Manville
JM SECUROCK Gypsum-Fiber Roof Board	Gypsum Fiber Board	Johns Manville
RetroPlus Roof Board	High density, perlite base cover board	Johns Manville
Structodek® High Density Fiber Board Roof Insulation	High Density Fiber Board.	Blue Ridge Fiber Board, Inc.
DensDeck	Silicon treated gypsum	Georgia Pacific Gypsum, LLC

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	High Load Fasteners	Insulation and membrane fastener for steel, wood, or concrete	#15 x 22" max. #3Phillips hd	Johns Manville
2.	High Load Plates	Membrane seam plate	2-3/8" round steel plate	Johns Manville
3.	Extra High Load Fastener	Truss head, self-drilling, pinch point, high thread fastener	#21 x 16" max. length	Johns Manville
4.	High Load Plus Plate	Round galvanized steel stress plates.	2-¾" round	Johns Manville
5.	UltraFast Fastener	Insulation Fastener		Johns Manville
6.	UltraFast 3" Round Metal Plate	Galvalume AZ55 steel plate	3" round & 3" square	Johns Manville
7.	UltraFast Plastic Plate	Polypropylene round plate	3" round	Johns Manville
8.	JM PVC RhinoPlate	Membrane bonding plate	3" round	Johns Manville
9.	High Load LH	fastener for steel, wood, or concrete	#15 x 14" max. Oversize #3 Phillips head	Johns Manville
10.	Polymer Membrane Batten	Membrane anchors	1" plastic strips	Johns Manville
11.	APB Plate	Membrane plates	2" round steel plate	Johns Manville
12.	UltraFast Square Recessed Metal Plate	Galvalume AZ55 steel plate	3" round & 3" square	Johns Manville

EVIDENCE SUBMITTED:

Test Agency Name	Identifier	Report	Date
FM Approvals	3025245	FM 4470	03/24/08
	3025168	FM 4470	10/31/07
	3025170	FM 4470	12/10/07
	3028040	FM 4470	11/14/07
	3031670	FM 4470	12/10/07
	3023458	FM 4450	07/18/06
	3033308	FM 4470	09/03/08
	3039813	FM 4470	06/28/10
	3040105	FM 4470	11/24/10
	797-07972-267	FM 4470	01/04/13
	3037540	FM 4450	10/20/10
	3035538	FM 4470	05/25/10
	3043824	FM 4470	02/29/12
	3044716	FM 4470	10/19/12
	3046174	FM 4470	04/03/13
UL LLC	R10167	UL 790	09/06/16
Momentum Technologies, Inc.	NX21J0A	ASTM D 4434	06/01/11
	NX21J0B	ASTM D 4434	07/20/11
	NX21J0C	ASTM D 4434	06/01/11
Momentum Technologies Int.	CX23G3A	ASTM D 4434	04/14/14
PRI Construction Materials Technologies, LLC	JMC-088-02-01.4	ASTM D1867/TAS 117 B	07/01/14
	JMC-107-02-01.7	ASTM D5147/D903/D1876 TAS 117(A)/(B)/(C)	03/31/16
	JMC-108-02-01	TAS 114(J)	04/16/13
	JMC-114-02-01	TAS 114(J)	08/20/13
	JMC-141-02-01	TAS 114(J)	04/18/13
	JMC-168-02-01	TAS 114(J)	08/20/13
	JMC-193-02-01A	TAS 114(J)	04/28/14
	JMC-209-02-01	TAS 114(J)	10/15/14
Trinity|ERD	J45020.05.13-1	TAS 114-C	05/16/13
	J45020.09.13-1-R1	TAS 114-C	09/12/13

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

Engineer/Agency	Identifier	Assemblies	Date
FM Approval Deck Limitations	N/A	B(1), B(2), B(6), C(7), C(8), C(9), D(1), D(2), D(3)	01/01/13
Zachary R. Priest, P.E.	Signed/Sealed Calculations	C(12), C(13), C(14), C(15), C(16), D(8), D(9), D(10)	09/13/17
		D(5), D(6), D(7)	04/22/16
		D(4)	12/06/17

APPROVED ASSEMBLIES

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Grade 33 steel deck fastened to supports spaced maximum 6 ft. o.c. with two (2) Traxx 5 fasteners spaced 6" o.c. maximum and with side laps fastened with Traxx 1 fasteners spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.

System Type B(1): Base layer of insulation mechanically attached. Top layer of insulation fullly adhered with approved asphalt or adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI		
Minimum 1.5" thick	**5 with 6, 7 or 12**	**1:1.33 ft^2**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
JM SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the deck with ¾" wide beads of JM Two-Part Urethane Insulation Adhesive, 12" o.c., JM Roofing System Urethane Insulation Adhesive in ½" to ¾" ribbons spaced 12" o.c. or One Step Foamable Adhesive. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: JM PVC membrane fully adhered to the insulation as specified below.

Option #1: JM PVC Membrane fully adhered to the insulation with JM PVC Membrane Adhesive (Low VOC) applied at a rate of 1.0 -1.10 gal./sq. and a heat welded seam minimum of 1.5" wide within 6" wide laps

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Option #2: JM PVC Membrane fully adhered to the insulation with JM PVC Membrane Adhesive (Water Based) applied at a rate of 0.83 -1.0 gal./sq. and a heat welded seam minimum of 1.5" wide within 6" wide laps

Maximum Design Pressure: -52.5 psf. (See General Limitation #7)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Grade 33 steel deck fastened to supports spaced maximum 6 ft. o.c. with two (2) Traxx 5 fasteners spaced 6" o.c. maximum and with side laps fastened with Traxx 1 fasteners spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.

System Type B(2): Base layer of insulation mechanically attached. Top layer of insulation fullly adhered with approved asphalt or adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI		
Minimum 1.5" thick	**5 with 6, 7 or 12**	**1:1.33 ft^2**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
JM SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the deck with ¾" wide beads of JM Two-Part Urethane Insulation Adhesive, 12" o.c., JM Roofing System Urethane Insulation Adhesive in ½" to ¾" ribbons spaced 12" o.c. or One Step Foamable Adhesive. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: JM PVC Fleeced Back Membrane fully adhered to the insulation with JM PVC Membrane Adhesive (Water Based) applied at a rate of 0.83 -1.0 gal./sq. and a heat welded seam minimum of 1.5" wide within 6" wide laps.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18 - 22 ga. 33 ksi

System Type B(3): Base layer of insulation mechanically attached. Top layer of insulation fullly adhered with approved asphalt or adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI		
Minimum 2" thick	**5 with 6 or 12**	**1:4 ft^2**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
JM SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the deck with ¾" wide beads of JM Two-Part Urethane Insulation Adhesive, 12" o.c., JM Roofing System Urethane Insulation Adhesive in ½" to ¾" ribbons spaced 12" o.c. or One Step Foamable Adhesive. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: JM PVC membrane fully adhered to the insulation as specified below.

Option #1: JM PVC Membrane fully adhered to the insulation with JM PVC Membrane Adhesive (Low VOC) applied at a rate of 1.0 -1.10 gal./sq. and a heat welded seam minimum of 1.5" wide within 6" wide laps

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Option #2: JM PVC Membrane fully adhered to the insulation with JM PVC Membrane Adhesive (Water Based) applied at a rate of 0.83 -1.25 gal./sq. and a heat welded seam minimum of 1.5" wide within 6" wide laps

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18 - 22 ga. 33 ksi

System Type B(4): Base layer of insulation mechanically attached. Top layer of insulation fullly adhered with approved asphalt or adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI		
Minimum 2" thick	**5 with 6 or 12**	**1:4 ft^2**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
JM SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the deck with ¾" wide beads of JM Two-Part Urethane Insulation Adhesive, 12" o.c., JM Roofing System Urethane Insulation Adhesive in ½" to ¾" ribbons spaced 12" o.c. or One Step Foamable Adhesive. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: JM PVC Fleeced Back Membrane fully adhered to the insulation with JM PVC Membrane Adhesive (Water Based) applied at a rate of 0.83 -1.0 gal./sq. and a heat welded seam minimum of 1.5" wide within 6" wide laps.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18 - 22 ga. 33 ksi

System Type B(5): Base layer of insulation mechanically attached. Top layer of insulation fully adhered with approved asphalt or adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI		
Minimum 1.5" thick	**5 with 6 or 12**	**1:2 ft^2**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
RetroPlus Roof Board		
Minimum 0.5" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the deck with ¾" wide ribbons spaced 12" o.c. of JM Two-Part Urethane Insulation Adhesive or JM Green Two Part Urethane Insulation Adhesive, or 0.5-0.75" wide ribbons spaced 12" o.c. of JM Roofing System Urethane Adhesive. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Membrane fully adhered to the insulation as specified below.

Option #1: JM PVC Membrane fully adhered to the insulation with JM PVC Membrane Adhesive (Low VOC) applied at a rate of 1.67 gal./sq. or JM PVC Membrane Adhesive (Water Based) applied at a rate of 1.10 gal./sq. with minimum 2.5" wide side laps that shall be sealed with a minimum 1.5" wide heat weld.

Option #2: JM PVC Fleece Backed Membrane fully adhered to the insulation with JM PVC Membrane Adhesive (Water Based) applied at a rate of 1.0 gal./sq. with minimum 2.5" wide side laps that shall be sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel deck fastened to supports spaced maximum 6 ft. with two ICH Traxx/5 fasteners and ¾" diameter washers (two fasteners and washers installed at each bearing attachment point.) The deck side laps are secured with ICH Traxx/1 fasteners spaced 18" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.

System Type B(6): Base layer of insulation mechanically attached. Top layer of insulation fully adhered with approved asphalt or adhesive.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI		
Minimum 1.5" thick	**5 with 6 or 12**	**1:1 ft^2**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
RetroPlus Roof Board, Invinsa Roof Board, or JM SECUROCK Gypsum-Fiber roof board		
Minimum 0.5" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the deck with 0.5"-0.75" wide ribbons of JM Two-Part Urethane Insulation Adhesive, JM Roofing System Urethane Adhesive, 6" o.c. or One Step Foamable Adhesive (JM SECUROCK Gypsum-Fiber Roof Board to ENRGY 3, ENRGY 3 25 PSI only). Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: JM PVC Fleece Backed adhered with JM Roofing System Urethane Adhesive applied in 0.5"-0.75" ribbons spaced 12" o.c. with minimum 2.5" wide side laps that shall be sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -67.5 psf. (See General Limitation #7)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18 - 22 ga. 33 ksi

System Type C(1): One or more layers of insulation simultaneously attached. Membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**5 with 6 or 12**	**1:2 ft^2**

Note: All layers shall be simultaneously fastened. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: JM PVC Fleece Backed membrane fully adhered to the insulation as specified below.

Option #1: Membrane is fully adhered to the insulation with JM PVC Membrane Adhesive (Water Based) applied at a rate of 1 gal./sq., on the substrate. Side laps will be a minimum 2.5" wide and shall be sealed with a minimum 1.5" wide heat weld.

Option #2: Membrane is fully adhered to the insulation with JM PVC Membrane Adhesive (Low VOC) applied at a rate of 0.83 gal./sq., on both the membrane and the substrate for a total of 1.67 gal./sq. with minimum 2.5" wide side laps that shall be sealed with a minimum 1.5" wide heat weld.

Option #3: Membrane is fully adhered to the insulation with approved hot asphalt applied at 20-25 lbs./sq. with minimum 2.5" wide side laps that shall be sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18 - 22 ga. 33 ksi

System Type C(2): All layers of insulation simultaneously attached. Membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Plywood		
Minimum 19/32" thick	**5 with 6 or 12**	**1:2 ft^2**

Note: All layers shall be simultaneously fastened. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: JM PVC Fleece Backed Membrane adhered with approved hot asphalt applied at 20-25 lbs./sq. with minimum 2.5" wide side laps that shall be sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18 - 22 ga. 33 ksi

System Type C(3): All layers of insulation simultaneously attached. Membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**5 with 6 or 12**	**1:1.78 ft^2**

Note: All layers shall be simultaneously fastened. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: JM PVC Fleece Backed membrane fully adhered to the insulation as specified below.

Option #1: Membrane is fully adhered to the insulation with JM PVC Membrane Adhesive (Low VOC) applied at a rate of 0.83 gal./sq., on both the membrane and the substrate for a total of 1.67 gal./sq. with minimum 2.5" wide side laps that shall be sealed with a minimum 1.5" wide heat weld.

Option #2: Membrane is fully adhered to the insulation with approved hot asphalt applied at 20-25 lbs./sq. with minimum 2.5" wide side laps that shall be sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -52.5 psf. (See General Limitation #9)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18 - 22 ga. 33 ksi

System Type C(4): All layers of insulation simultaneously attached. Membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**5 with 6 or 12**	**1:2 ft^2**

Note: All layers shall be simultaneously fastened. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: JM PVC membrane fully adhered to the insulation as specified below.

Option #1: Membrane is fully adhered to the insulation with JM PVC Membrane Adhesive (Water Based) applied at a rate of 0.67 gal./sq., on the substrate. Side laps will be a minimum 2.5" wide and shall be sealed with a minimum 1.5" wide heat weld.

Option #2: Membrane is fully adhered to the insulation with JM PVC Membrane Adhesive (Low VOC) applied at a rate of 0.83 gal./sq., on both the membrane and the substrate for a total of 1.67 gal./sq. with minimum 2.5" wide side laps that shall be sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18 - 22 ga. 33 ksi

System Type C(5): All layers of insulation simultaneously attached. Membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**5 with 6 or 12**	**1:1.78 ft^2**

Note: All layers shall be simultaneously fastened. See Top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: JM PVC membrane fully adhered to the insulation as specified below.

Option #1: Membrane is fully adhered to the insulation with JM PVC Membrane Adhesive (Low VOC) applied at a rate of 0.83 gal./sq., on both the membrane and the substrate for a total of 1.67 gal./sq. with minimum 2.5" wide side laps that shall be sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -52.5 psf. (See General Limitation #9)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18 - 22 ga. 33 ksi

System Type C(6): One or more layers of insulation simultaneously fastened; membrane bonded.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
JM SECUROCK Gypsum-Fiber Roof Board, Invinsa Roof Board, Invinsa FR Roof Board, DensDeck		
Minimum 0.25" thick	**1 with 8**	**1:5.33 ft^2**
Plywood		
Minimum 19/32" thick	**1 with 8**	**1:5.33 ft^2**

Note: All layers shall be simultaneously fastened. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Standard RAS 117 for insulation attachment.

Membrane: JM PVC or JM PVC SD Plus membrane is induction welded to JM PVC RhinoPlates with minimum 2.5" wide side lap and a minimum 1.5" heat weld offset from plates.

Maximum Design Pressures: -45 psf. (See General Limitation #9)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Grade 33 steel deck fastened to supports spaced maximum 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. maximum and with side laps fastened with Traxx 1 fasteners spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(7): One or more layers of insulation simultaneously fastened; membrane bonded.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**
Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
JM SECUROCK Gypsum-Fiber Roof Board, Invinsa Roof Board, Invinsa FR Roof Board, DensDeck		
Minimum 0.25" thick	**1 with 8**	**1:4 ft^2**
Plywood		
Minimum 19/32" thick	**1 with 8**	**1:4 ft^2**

Note: All layers shall be simultaneously fastened. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: JM PVC or JM PVC SD Plus membrane is induction welded to JM PVC RhinoPlates with minimum 2.5" wide side lap and a minimum 1.5" heat weld offset from plates.

Maximum Design Pressures: -67.5 psf. (See General Limitation #7)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Grade 33 steel deck fastened to supports spaced maximum 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. maximum and with side laps fastened with Traxx 1 fasteners spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(8): All layers of insulation simultaneously attached. Membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
JM SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" thick	**5 with 6 or 12**	**1:33 ft^2**

Note: All layers shall be simultaneously fastened. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: JM PVC Membrane fully adhered to the insulation with JM PVC Membrane Adhesive (Low VOC) applied at a rate of 1.0 -1.10 gal./sq. and a heat welded seam minimum of 1.5" wide within 6" wide laps.

Or

JM PVC Fleeced Back Membrane fully adhered to the insulation with JM PVC Membrane Adhesive (Water Based) applied at a rate of 0.83 -1.25 gal./sq. and a heat welded seam minimum of 1.5" wide within 6" wide laps.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Grade 33 steel deck fastened to supports spaced maximum 6 ft. o.c. with Traxx 5 fasteners spaced 6" o.c. maximum and with side laps fastened with Traxx 1 fasteners spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(9): All layers of insulation simultaneously attached. Membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
JM SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" thick	**5 with 6 or 12**	**1:1 ft^2**

Note: All layers shall be simultaneously fastened. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: JM PVC Membrane fully adhered to the insulation with JM PVC Membrane Adhesive (Low VOC) applied at a rate of 1.0 -1.10 gal./sq. and a heat welded seam minimum of 1.5" wide within 6" wide laps.

Or

JM PVC Fleeced Back Membrane fully adhered to the insulation with JM PVC Membrane Adhesive (Water Based) applied at a rate of 0.83 -1.25 gal./sq. and a heat welded seam minimum of 1.5" wide within 6" wide laps.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18 - 22 ga. 33 ksi

System Type C(10): All layers of insulation simultaneously attached. Membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
JM SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.375" thick	**5 with 6 or 12**	**1:2.67 ft^2**

Note: All layers shall be simultaneously fastened. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	JM PVC membrane fully adhered to the insulation as specified below.
Option #1:	JM PVC Membrane fully adhered to the insulation with JM PVC Membrane Adhesive (Low VOC) applied at a rate of 1.0 -1.10 gal./sq. and a heat welded seam minimum of 1.5" wide within 6" wide laps.
Option #2:	JM PVC Membrane fully adhered to the insulation with JM PVC Membrane Adhesive (Water Based) applied at a rate of 0.83 -1.25 gal./sq. and a heat welded seam minimum of 1.5" wide within 6" wide laps.
Option #3:	JM PVC Fleeced Back Membrane fully adhered to the insulation with JM PVC Membrane Adhesive (Water Based) applied at a rate of 0.83 -1.25 gal./sq. and a heat welded seam minimum of 1.5" wide within 6" wide laps.
Maximum Design Pressure:	-45 psf. (See General Limitation #9)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18 - 22 ga. 33 ksi

System Type C(11): All layers of insulation simultaneously attached. Membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
JM SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.5" thick	**5 with 6 or 12**	**1:4 ft^2**

Note: All layers shall be simultaneously fastened. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: JM PVC Membrane fully adhered to the insulation with JM PVC Membrane Adhesive (Low VOC) applied at a rate of 1.0 -1.10 gal./sq. and a heat welded seam minimum of 1.5" wide within 6" wide laps.

Or

JM PVC Fleeced Back Membrane fully adhered to the insulation with JM PVC Membrane Adhesive (Water Based) applied at a rate of 0.83 -1.25 gal./sq. and a heat welded seam minimum of 1.5" wide within 6" wide laps.

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 40 steel deck installed over structural supports spaced 6-ft o.c. attached with two (2) #12-24 x 1-1/4" HWH screws and ¾" O.D. washers.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(12): All layers of insulation simultaneously attached. Membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 0.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.0" thick	**1 with 8**	**1:2.13 ft^2**
Invinsa Roof Board, Invinsa FR Roof Board, or JM SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" thick	**1 with 8**	**1:2.13 ft^2**

Note: <u>The minimum total thickness of the insulation layer(s) shall be 1.25".</u> All layers shall be simultaneously fastened. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Standard RAS 117 for insulation attachment.

Membrane: JM PVC or JM PVC SD Plus membrane is induction welded to JM PVC RhinoPlates with minimum 2.5" wide side lap and a minimum 1.5" heat weld offset from plates.

Maximum Design Pressures: -90 psf. (See General Limitation #7)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel deck attached to structural supports spaced a maximum 6-ft o.c. with #12-24 x 1-1/4" HWH screws. Panel laps stitched with 1/4"-14 x 7/8" HWH screws spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(13): All layers of insulation simultaneously attached. Membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 0.5" thick	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**1 with 8**	**N/A**
Invinsa Roof Board, Invinsa FR Roof Board, or JM SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" thick	**1 with 8**	**N/A**

Note: <u>The minimum total thickness of the insulation layer(s) shall be 1.25".</u> All layers shall be simultaneously fastened. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Standard RAS 117 for insulation attachment.

Membrane: JM PVC SD Plus membrane shall be induction welded to JM PVC RhinoPlates spaced 12" o.c. in rows spaced 60" o.c. Side laps shall be a minumum 6" wide and sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -45 psf. (See General Limitation #7**)**

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Grade 33, Type B steel deck attached to structural supports spaced a maximum 6-ft o.c. with #12-24 x 1-1/4" HWH screws. Panel laps stitched with 1/4"-14 x 7/8" HWH screws spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(14): All layers of insulation simultaneously attached. Membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 0.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**1 with 8**	**1:4 ft^2**
Invinsa Roof Board, Invinsa FR Roof Board, or JM SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" thick	**1 with 8**	**1:4 ft^2**

Note: <u>The minimum total thickness of the insulation layer(s) shall be 1.25".</u> All layers shall be simultaneously fastened. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Standard RAS 117 for insulation attachment.

Membrane: JM PVC SD Plus membrane is induction welded to JM PVC RhinoPlates. Side laps shall be a minumum 6" wide and sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 80 steel deck attached to structural supports spaced a maximum 6-ft o.c. with #12-24 x 1-1/4" HWH screws. Panel laps stitched with 1/4"-14 x 7/8" HWH screws spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(15): All layers of insulation simultaneously attached. Membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 0.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**1 with 8**	**N/A**
Invinsa Roof Board, Invinsa FR Roof Board, or JM SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" thick	**1 with 8**	**N/A**

Note: <u>The minimum total thickness of the insulation layer(s) shall be 1.25".</u> All layers shall be simultaneously fastened. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Standard RAS 117 for insulation attachment.

Membrane: JM PVC SD Plus membrane shall be induction welded to JM PVC RhinoPlates spaced 6" o.c. in rows spaced 72" o.c. Side laps shall be a minumum 6" wide and sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -82.5 psf. (See General Limitation #7)

Membrane Type: Single ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 50 steel deck attached to structural supports spaced a maximum 6-ft o.c. with #12-24 x 1-1/4" HWH screws. Panel laps stitched with 1/4"-14 x 7/8" HWH screws spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(16): All layers of insulation simultaneously attached. Membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 0.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**1 with 8**	**N/A**
Invinsa Roof Board, Invinsa FR Roof Board, or JM SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" thick	**1 with 8**	**N/A**

Note: <u>The minimum total thickness of the insulation layer(s) shall be 1.25".</u> All layers shall be simultaneously fastened. Insulation panels listed are minimum sizes and dimensions. If larger panels are used, the number of fasteners shall be increased using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Standard RAS 117 for insulation attachment.

Membrane: JM PVC SD Plus membrane shall be induction welded to JM PVC RhinoPlates spaced 6" o.c. in rows spaced 60" o.c. Side laps shall be a minumum 6" wide and sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -90 psf. MDP (See General Limitation #7)

Membrane Type: Single Ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: 18 - 22 ga.,(MSG) .0474, .0358 or .0295 thick, 1.5" deep, meeting ASTM A1008/A1008M-01a or A653/653M-01a SS Grade 80 steel attached with Teks 4 or 5 fasteners to supports having a maximum spacing of 6' o.c. Side laps secured with Stitch Teks 1 fasteners spaced 30" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(1): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**
DuraBoard, Structodek® High Density Fiber Board Roof Insulation, DensDeck		
Minimum ½" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck		
Minimum ¼" thick	**N/A**	**N/A**

Note: All layers of insulation and base sheet shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. At an application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft.

Membrane: JM PVC Membrane attached through the preliminary attached insulation as specified below.

Fastening #1: Membrane is mechanically attached using High Load Fasteners and High Load Plates spaced 12" o.c. within 5" wide laps, spaced 73" o.c. and sealed with minimum 1-1/2" wide heat welds.
(Maximum Design Pressure -45 psf. See General Limitation #7)

Fastening #2: Membrane is mechanically attached using High Load Fasteners and High Load Plates spaced 6" o.c. within 5" wide laps, spaced 73" o.c. and sealed with minimum 1-1/2" wide heat welds.
(Maximum Design Pressure -60 psf. See General Limitation #7)

Maximum Design Pressure: See fastening above.

Membrane Type: Single Ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: 1. Min.18, ga., (MSG) .0474, .0358 or .0295 thick, 1.5" deep, meeting ASTM A1008/A1008M-01a or A653/653M-01a SS Grade 33 steel . attached with Teks 4 or 5 fasteners to supports having a maximum spacing of 6' o.c.
2. Min. 20 ga. Grade 80 steel attached with Teks 4 or 5 fasteners to supports having a maximum spacing of 6' o.c.
3. Min. 22 ga. Grade 80 steel attached with Teks 4 or 5 fasteners to supports having a maximum spacing of 54" o.c.
Side laps secured with Stitch Teks 1 fasteners spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(2): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**
Structodek® High Density Fiber Board Roof Insulation, DensDeck		
Minimum ½" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck		
Minimum ¼" thick	**N/A**	**N/A**

Note: All layers of insulation and base sheet shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. At an application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft.

Membrane: JM PVC Membrane attached through the preliminary attached insulation as specified below.

Membrane is mechanically attached using High Load Fasteners and High Load Plates spaced 6" o.c. within 5.5" wide laps, spaced 114" o.c. and sealed with minimum 2" wide heat welds.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: Single Ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: 1. Min. 18 o20 ga., (MSG) .0474, .0358 or .0295 thick, 1.5" deep, meeting ASTM A1008/A1008M-01a or A653/653M-01a SS Grade 80 steel , attached 6" o.c. with Teks 4 or 5 fasteners to supports having a maximum span of 6 ft o.c.
2. Minimum 22 ga, Grade 80 steel attached with Teks 4 or 5 fasteners to supports having a maximum spacing of 54" o.c.
Side laps secured with Stitch Teks 1 fasteners spaced 30" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(3): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Invinsa Roof Board, Invinsa Roof Board FR, JM SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" thick	**N/A**	**N/A**

Note: All layers of insulation and membrane shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. At an application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft.

Membrane: JM PVC Fleece Backed Membrane attached through the preliminary attached insulation as specified below.

Fastening: Membrane is mechanically attached using High Load Fasteners and High Load Plates spaced 6" o.c. within 4-1/2" wide laps, spaced 114" o.c. and sealed with minimum 2" wide heat welds.

Maximum Design Pressure: -60 psf. (See General Limitation #7)

Membrane Type: Single Ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 40 steel deck attached to structural supports spaced a maximum 6-ft o.c. with 5/8" diameter puddle welds.
This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.

System Type D(4): One or more layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One ply of DynaFast 180 S mechanically fastened through the insulation with JM High Load Fasteners & APB Plates spaced 6" o.c. within in the center of the 4" heat welded side laps.

Membrane: JM PVC Fleece Backed applied with approved mopping asphalt at an application rate of 20-40 lbs./sq. with minimum 2.5" wide side laps that shall be sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -60 psf. (See General Limitation #9.)

Membrane Type: Single Ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 40 steel deck attached to structural supports spaced a maximum 6-ft o.c. with 5/8" diameter puddle welds.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(5): One or more layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One ply of DynaFast 180 S mechanically fastened through the insulation with High Load LH fastener 6" o.c. along the Polymer Membrane Batten placed within the center of every other 4" heat welded side lap for a maximum diatance between rows of 71" o.c.

Membrane: JM PVC Fleece Backed applied with approved mopping asphalt at an application rate of 20-40 lbs./sq. with minimum 2.5" wide side laps that shall be sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -60 psf. (See General Limitation #7.)

Membrane Type: Single Ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel deck attached to structural supports spaced a maximum 6-ft o.c. with 5/8" diameter puddle welds.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(6): One or more layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One ply of DynaFast 180 S mechanically fastened through the insulation with High Load Fasteners and High Load Plates spaced 12" o.c. within the 4" heat welded side laps.

Membrane: JM PVC Fleece Backed applied with approved mopping asphalt at an application rate of 20-40 lbs./sq. with minimum 2.5" wide side laps that shall be sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -60 psf. (See General Limitation #7.)

Membrane Type: Single Ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel deck attached with #12-24 x 1-1/4" HWH self-drilling screws at each flute having max 6ft span. Laps stitched with 1/4"-14 x 7/8" HWH self-drilling screws at 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(7): One or more layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One ply of DynaFast 180 S mechanically fastened through the insulation with High Load Fasteners and High Load Plates spaced 6" o.c. within the every other 4" heat welded side laps for a maximum distance between rows of 70".

Membrane: JM PVC Fleece Backed applied with approved mopping asphalt at an application rate of 20-40 lbs./sq. with minimum 2.5" wide side laps that shall be sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -52.5 psf. (See General Limitation #7.)

Membrane Type: Single Ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel deck attached to structural supports spaced a maximum 6-ft o.c. with 5/8" diameter puddle welds.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(8): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 0.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Invinsa Roof Board, Invinsa FR Roof Board, or JM SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" thick	**N/A**	**N/A**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 0.5" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Membrane: JM PVC membrane fastened with High Load Fasteners and High Load Plates spaced 6" o.c. within 6" wide laps, spaced 72" o.c. and sealed with minimum 1.5" wide heat welds.

Maximum Design Pressure: -45 psf. (See General Limitation #7.)

Membrane Type: Single Ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 80 steel deck attached to structural supports spaced a maximum 6-ft o.c. with 5/8" diameter puddle welds. Deck attached at each flute along with intermediate supports. Panel laps were stitched with 1/4" – 14 x 7/8" HWH screws 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(9): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Membrane: JM PVC SD Plus membrane fastened with High Load Fasteners and High Load Plates spaced 6" o.c. within 6" wide laps, spaced 114" o.c. and sealed with minimum 1.5" wide heat welds.

Maximum Design Pressure: -45 psf. (See General Limitation #7.)

Membrane Type: Single Ply, PVC

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel deck attached to structural supports spaced a maximum 6-ft o.c. with #12-24 x 1-1/4" HWH screws. Panel laps stitched with 1/4"-14 x 7/8" HWH screws spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(10): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Membrane: JM PVC SD Plus membrane attached through the preliminary attached insulation as specified below.

Fastening #1: Membrane is mechanically attached using High Load Fasteners and High Load Plates spaced 12" o.c. within 6" wide laps, spaced 54" o.c. and sealed with minimum 1.5" wide heat welds.
(Maximum Design Pressure -45 psf. See General Limitation #7)

Fastening #2: Membrane is mechanically attached using High Load Fasteners and High Load Plates spaced 6" o.c. within 6" wide laps, spaced 54" o.c. and sealed with minimum 1.5" wide heat welds.
(Maximum Design Pressure -60 psf. See General Limitation #7)

Maximum Design Pressure: See fastening above.

STEEL DECK SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117 and/or RAS 137, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.
2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.
   Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf. As tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. Insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117 and/or RAS 137. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10 All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE