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)

Beacon Sales Acquisition, Inc.
505 Huntmar Park Dr
Herndon, VA 20170

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: Tri-Built Modified Bitumen Roof System over Concrete 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 20-0414.14 and consists of pages 1 through 44.
The submitted documentation was reviewed by Alex Tigera.

ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Modified Bitumen
Material: APP/SBS
Deck Type: Concrete
Maximum Design Pressure: **-635 psf**

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
TRI-BUILT Smooth Torch	39 3/8" x 32' 10"; Roll weight: 87 lbs. (1 square)	ASTM D 6222, Grade S, Type I	Smooth surfaced APP Modified Bitumen membrane with non-woven polyester mat reinforcement for torch application.
TRI-BUILT Granulated Torch	39 3/8" x 32' 10"; Roll weight: 105 lbs. (1 square)	ASTM D 6222, Grade G, Type I	Granule surfaced APP Modified Bitumen membrane with non-woven polyester mat reinforcement for torch application.
TRI-BUILT SBS Cap	39 3/8" x 32' 10"; Roll weight: 94 lbs. (1 square)	ASTM D 6164, Grade G, Type I	Granule surfaced SBS Modified Bitumen membrane with non-woven polyester mat reinforcement for mop application.
TRI-BUILT FG Base Sheet 3SQ	36" x 98'9"; Roll weight: 75 lbs. (3 squares)	ASTM D 4601, Type II	Asphalt coated, fiberglass base sheet.
TRI-BUILT SAT Base	36" x 68'7"; Roll weight: 78 lbs. (2 squares)	ASTM D 1970 ASTM D4601 Type I	Self-adhering fiberglass reinforced modified bitumen base sheet

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ACFoam-II	Polyisocyanurate foam insulation	Atlas Roofing Corp.
ACFoam-III	Polyisocyanurate foam insulation	Atlas Roofing Corp.
H-Shield	Polyisocyanurate foam insulation	Hunter Panels LLC
H-Shield-CG	Polyisocyanurate foam insulation	Hunter Panels LLC
DensDeck	Water resistant gypsum board	Georgia Pacific Gypsum LLC
DensDeck Prime	Water resistant gypsum board	Georgia Pacific Gypsum LLC
ENRGY 3	Polyisocyanurate foam insulation	Johns Manville Corp.
ENRGY 3 25 PSI	Polyisocyanurate foam insulation	Johns Manville Corp.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
FescoBoard	Expanded mineral fiber insulation	Johns Manville Corp.
SECUROCK Gypsum-Fiber Roof Board	Gypsum insulation	USG Corp.
DuraBoard	Expanded mineral fiber insulation	Johns Manville Corp.
Structodek High Density Fiberboard Roof Insulation	Wood fiber insulation board	Blue Ridge Fiberboard, Inc.
Multi-Max FA-3	Polyisocyanurate foam insulation	RMax Operating, LLC

APPROVED FASTENERS/ADHESIVES:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast DF-#14-PH3	Insulation fastener for wood, steel and concrete decks	various	SFS Group USA, Inc.
2.	Dekfast DF-#15-PH3	Insulation fastener for wood, steel and concrete decks	various	SFS Group USA, Inc.
3.	Dekfast PLT-H-2-7/8	Galvalume hex stress plate.	2 7/8" x 3 ¼"	SFS Group USA, Inc.
4.	Dekfast PLT-P-R-3	Polypropylene locking plate.	3" x 3 ¼"	SFS Group USA, Inc.
5.	#14 Roofgrip	Insulation fastener	various	OMG, Inc.
6.	ASAP RoofGrip Pre-Assembled System	Pre-assembled Insulation fastener and plate	various	OMG, Inc.
7.	3 in. Round Metal Plate	Galvalume AZ50 steel plate	3" round	OMG, Inc.
8.	Dekfast DF-#14-PH3-P3	Pre-assembled Insulation fastener and plate	various	SFS Group USA, Inc.
9.	Trufast #14 HD Fastener	Insulation fastener for wood and steel decks	various	Altenloh, Brinck & Co. U.S., Inc.
10.	Trufast 3" Metal Insulation Plate	Galvalume AZ50 steel plate	3" round	Altenloh, Brinck & Co. U.S., Inc.
11.	Trufast 2.4" Barbed Metal Seam Plate	Galvalume AZ50 steel plate	2.4" round	Altenloh, Brinck & Co. U.S., Inc.
12.	Trufast #15 EHD Fastener	Coated carbon steel screw	Various	Altenloh, Brinck & Co. U.S., Inc.
13.	Trufast 2" Metal Seam Plate	Galvalume steel stress plate	2" round	Altenloh, Brinck & Co. U.S., Inc.
14.	Dekfast PLT-R-3	Steel, Galvalume AZ50 stress plate for use with all Dekfast fasteners	3" round	SFS Group USA, Inc.

APPROVED FASTENERS/ADHESIVES:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
15.	OMG 3" Galvalume Steel Plate	Galvalume coated steel plate for use with approved fasteners screw.	3" round	OMG, Inc.
16.	3 in. Ribbed Galvalume Plate	Round Galvalume plated steel stress plate with reinforcing ribs for use with OMG fasteners.	3" round	OMG, Inc.
17.	AccuTrac Plate	Galvalume steel plate for use with Standard Roofgrip and Standard Hex Head fasteners.	3" square	OMG, Inc.
18.	AccuTrac Flat Bottom	A2-SS aluminized steel plate for use with #12 Roofgrip, #14 Roofgrip and #15 Roofgrip.	3" square	OMG, Inc.
19.	Flat Bottom Metal Plate	A2-SS aluminized steel plate for use with #12, #14 or #15 Roofgrip.	3" square	OMG, Inc.
20.	Trufast 3" Recessed Metal Insulation Plate	Galvalume steel stress plate for use with Trufast fasteners	3" round	Altenloh, Brinck & Co. U.S., Inc.
21.	Trufast 3" TL Insulation Plate	Galvalume steel stress plate for use with Trufast TL fasteners	3" round	Altenloh, Brinck & Co. U.S., Inc.
22.	Millennium One Step Foamable Adhesive	Polyurethane two component high rise insulation adhesive	See Published Details	H.B. Fuller Company
23.	Millennium One Step Green Foamable Adhesive	Polyurethane two component high rise insulation adhesive	1.5 liters	H.B. Fuller Company
24.	Millennium PG-1 Low Viscosity Insulation Adhesive	Polyurethane two component low rise insulation adhesive	1.5 liters	H.B. Fuller Company
25.	ICP Adhesive CR-20	Polyurethane two component low rise insulation adhesive	Two kits (A = 40lb and B = 35lb cylinders)	ICP Adhesives & Sealants, Inc.
26.	Pliodeck Insulation Adhesive	Polyurethane one component low VOC adhesive system	See Published Details	Ashland, Inc.
27.	Insta Stik Quik Set Insulation	Polyurethane one component moisture curing adhesive	It is supplied in pressurized cylinders with a net weight of 23 lbs., with a total unit weight of 30 lbs.	The Dow Chemical Company
28.	OMG OlyBond 500 Adhesive	Spray polyurethane foam insulation adhesive	10 gal. bag-in-box set and 1.5 liters SpotShot cartridge	OMG, Inc.

APPROVED FASTENERS/ADHESIVES:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
29.	OMG OlyBond 500 Green Adhesive	Spray polyurethane foam insulation adhesive	10 gal. bag-in-box set and 1.5 liters SpotShot cartridge	OMG, Inc.

APPROVED SURFACING/COATING OPTIONS:

TABLE 4

Chosen components must be applied according to manufacturer's application instructions. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

System Number	Manufacturer	Application
1.	Generic	Gravel applied at 400 lbs/sq., adhered with flood coat of asphalt at 60 lbs/sq.
2.	Generic	Slag applied at 300 lbs/sq., adhered with flood coat of asphalt at 60 lbs/sq.
3.	Karnak Corp.	Karnak (#97 AF) Fibrated Aluminum Roof Coating applied at an application rate of 1.5 gal/sq.
4.	Gardner Asphalt Corp.	APOC #212 Fibered Aluminum Roof Coating applied at an application rate of 1.5 gal/sq.
5.	Gardner Asphalt Corp.	APOC #400 Sunbrite applied at an application rate of 3 gal./sq.

EVIDENCE SUBMITTED:

Test Agency/Identifier	Name	Report	Date
Factory Mutual Research Corp.	FM 4470	3Y8A1.AM	03/23/96
	FM 4470	0D3A3.AM	04/04/97
	FM 4470	1D7A4.AM	11/09/98
	FM 4470	2D0A0.AM	12/23/98
	FM 4470	3023458	07/18/06
	FM 4470	3024177	07/18/06
	FM 4470	3024311	11/01/06
	FM 4470	3031350	09/27/07
	FM 4470	3036182	07/31/09
	FM 4470	3037127	01/11/10
	FM 4470	3039046	06/15/10
	FM 4470	3039848	12/02/11
	FM 4470	3046104	08/13/13
	FM 4470	3048520	09/19/13
Underwriters Laboratories, Inc.	UL 790	R11656	01/11/13
Dynatech Engineering Corp.	TAS 114	3504-12.94-1	10/16/95
United States Testing Company	ASTM D 5147	97-457-2R	12/02/87
	ASTM D 5147	97457-4	06/03/88
Momentum Technologies, Inc.	ASTM D 6164	AX31G8F	06/05/09
Trinity|ERD	TAS 114 (J)	#3504.06.01-1	06/05/01
	TAS 114	3521.07.04	07/29/04
	TAS 114 (H)	Letter	04/05/06
	TAS 117 (B)	3503.10.06	10/10/06
	TAS 117 (B)	O6490.04.07-R1	06/27/07
	TAS 114	3533.01.06-R1	10/26/07
	TAS 117 (B) / ASTM D 6862	C8500SC.11.07	11/30/07
	TAS 114	C8370.08.08	08/19/08
	TAS 117 & TAS 114	C30560.03.10	03/18/10
	TAS 117 & TAS 114	C30560.06.10	06/10/10
	FM 4474 / TAS 114	C31420.08.10	09/21/10
	ASTM D 6164 / D 4798	C31410.01.11-2	01/10/11
	TAS 117 B	C35500.02.11	02/09/11
	FM 4474 / TAS 114	C37820.07.12	07/24/12
	ASTM D1876, TAS 114 (H), TAS 117 (B)	C42110.08.12	08/13/12
	ASTM D 4601	C40050.09.12-1	09/28/12
	ASTM D 1970	C40050.09.12-2	09/28/12
	ASTM D 5147 / D 4798	C31410.10.10-R1	11/01/12
	ASTM D 5147 / D 4798	C31410.01.11-1-R1	11/01/12
	ASTM D 4798	C31410.01.11-2A-R1	02/21/13
	ASTM D 1876 / TAS 114 (H) / FM 4474	C44580.07.13	07/25/13
	ASTM D 4798	C31410.12.13	12/05/13

EVIDENCE SUBMITTED:

Test Agency/Identifier	Name	Report	Date
	ASTM D 6222	C40050.12.13-R1	12/31/13
	ASTM D4601	CTR-SC8740.04.15-R2	04/21/15
	ASTM D 2178	C47250.03.14	03/26/14
	ASTM D 1876, TAS 114 (H), FM 4474	C45620.03.14	03/27/14
	ASTM D 1876, TAS 114 (H), FM 4474	C47320.03.14-R1	04/01/15
	ASTM D 1876	C35460.05.11-R1	05/20/15
	FM 4474 / UL1897 / TAS 114 (D)	CTR-SC9935.01.16-R1	01/19/16
	FM 4474 / TAS 114 (D)	CTR-SC9175.09.16-1	09/06/16
	ASTM D 4601	CTR-SC11145.09.16-3C	09/19/16
	ASTM D 4601-04 (2012), Type II	CTR-SC11145.09.16-3A	09/19/16
	ASTM D 6163	CTR-SC11145.09.16-5A	09/19/16
	ASTM D 6222	CTR-SC11145.09.16-7A	09/19/16
	FM 4474 (B) / TAS 114 (D)	3522.07.04-R1	12/22/16
	TAS 114 (D)	CTR-SC15775.10.17	10/31/17
PRI Construction Materials Technologies LLC	ASTM D6163	CTC-056-02-01	08/25/10
	ASTM D 6163	CTC-066-02-01	08/09/11
	ASTM D 6222	CTC-071-02-01	08/08/11
	ASTM D 6164 / D 4798	CTC-093-02-01	08/09/11
	ASTM D 4601	CTC-126-02-01	03/12/12
	ASTM D 2178	CTC-123-02-01	03/13/12
	ASTM D 6509	CTC-116-02-01	04/04/12
	ASTM D 6163	CTC-128-02-01	06/11/12
	ASTM D 6163	CTC-129-02-01	06/11/12
	ASTM D 6164	CTC-132-02-01	06/11/12
	ASTM D 6164	CTC-161-02-01	05/09/13
	ASTM D 6162	CTC-183-02-01	10/02/13
	ASTM D 6164	CTC-190-02-01	12/02/13
	ASTM D 6163	CTC-319-02-01	08/22/17
	ASTM D 4601	CTC-321-02-01	08/22/17
	ASTM D 1970	CTC-320-02-01	08/28/17
Dynatech Engineering Corp.	TAS 114	3504-12.94-1	10/16/95

APPROVED ASSEMBLIES

Membrane Type: SBS/APP Modified

Deck Type 3I: Concrete Decks, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type A(1): One or more layers of insulation adhered with approved adhesive.

All General and System Limitations apply.

Primer: Concrete deck primed with ASTM D41 asphalt primer at a rate of 0.75 gal/sq. and allowed to dry prior to application of insulation.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	**N/A**	**N/A**
FescoBoard Minimum ¾" thick		

Note: Insulation shall be adhered to the deck with hot asphalt in full coverage at a rate of 20-25 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs/sq.

Ply Sheet: (Optional) One ply of TRI-BUILT Smooth Torch, torched-applied to base sheet.

Membrane: One ply of TRI-BUILT SBS Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 25 lbs./sq.
Or
One ply of TRI-BUILT Granulated Torch, torched-applied to base or ply sheet.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -105 psf. (See General Limitation #9)

Membrane Type: APP Modified

Deck Type 3I: Concrete Decks, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type A(2): Anchor sheet (optional), insulation adhered with approved asphalt.

All General and System Limitations apply.

Anchor Sheet: (Optional) One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the primed concrete deck with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ACFoam-III, ENRGY 3, ENRGY 3 25 PSI, H-Shield Minimum 1.5" thick	**N/A**	**N/A**
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	**N/A**	**N/A**
FescoBoard Minimum ¾" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	**N/A**	**N/A**
FescoBoard Minimum ¾" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of anchor sheet. All insulation shall be adhered in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional)	One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of TRI-BUILT SAT Base self adhered or one ply of TRI-BUILT Smooth Torch, torch adhered.
Membrane:	One ply of TRI-BUILT Granulated Torch, torch adhered to base or ply sheet.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-107.5 psf (For top layer minimum ¾" thick FescoBoard applied in hot asphalt.) (See General Limitations #9) -227.5 psf (For top layer minimum ½" thick Structodek High Density Fiberboard Roof Insulation applied in hot asphalt.) (See General Limitations #9) -240 psf (For top layer minimum ¼" thick DensDeck or DensDeck Prime applied in hot asphalt.) (See General Limitations #9)

Membrane Type: SBS Modified

Deck Type 3I: Concrete Decks, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type A(3): Anchor sheet (optional), insulation adhered with approved asphalt.

All General and System Limitations apply.

Anchor Sheet: (Optional) One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the primed concrete deck with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, ACFoam-III, ENRGY 3, ENRGY 3 25 PSI, H-Shield Minimum 1.5" thick	**N/A**	**N/A**
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	**N/A**	**N/A**
FescoBoard Minimum ¾" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	**N/A**	**N/A**
FescoBoard Minimum ¾" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of anchor sheet. All insulation shall be adhered in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional)	One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of TRI-BUILT SAT Base self adhered
Membrane:	One ply of TRI-BUILT SBS Cap, adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-107.5 psf (For top layer minimum ¾" thick FescoBoard applied in hot asphalt.) (See General Limitations #9) -227.5 psf (For top layer minimum ½" thick Structodek High Density Fiberboard Roof Insulation applied in hot asphalt.) (See General Limitations #9) -240 psf (For top layer minimum ¼" thick DensDeck or DensDeck Prime applied in hot asphalt.) (See General Limitations #9)

Membrane Type: SBS Modified

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2,500 psi structural concrete or concrete plank.

System Type A(4): One or more layers of insulation adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ACFoam-III Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners**	**Fastener Density/ft^2**
SECUROCK Gypsum-Fiber Roof Board Minimum ¼" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the deck with Pliodek Insulation Adhesive, Millennium PG-1 Low Viscosity Insulation Adhesive, ICP Adhesive CR-20 applied in ½" to ¾" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Base Sheet: One or more plies of TRI-BUILT SAT Base self adhered to the insulated substrate.

Membrane: One ply of TRI-BUILT SBS Cap adhered to base sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -117.5 psf (See General Limitation #9)

Membrane Type: SBS Modified

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2,500 psi structural concrete or concrete plank.

System Type A(5): One or more layers of insulation adhered with approved adhesive.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Structodek High Density Fiberboard Roof Insulation, FescoBoard Minimum ½" thick	**N/A**	**N/A**

Note: All insulations shall be adhered to the deck in 2-½" wide beads of ICP Adhesive CR-20 spaced 12" o.c. or in ¾" – 1" wide beads of Insta Stik Quik Set Insulation Adhesive, OMG OlyBond 500 Adhesive or OMG OlyBond 500 Green Adhesive spaced 12" o.c. or in ½" – ¾" wide beads of Millennium PG-1 Low Viscosity Insulation Adhesive spaced 12" o.c. or in ¼" – ½" wide beads of Ashland Pliodeck Insulation Adhesive spaced 6" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of TRI-BUILT SBS Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -195 psf (See General Limitation #9)

Membrane Type:	SBS Modified
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2,500 psi structural concrete or concrete plank.
System Type A(6):	One or more layers of insulation adhered with approved adhesive.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck, DensDeck Prime Minimum 1/4" thick	**N/A**	**N/A**

Note: All insulations shall be adhered to the deck in ½" – ¾" wide beads of Millennium PG-1 Low Viscosity Insulation Adhesive spaced 12" o.c. or in ¼" – ½" wide beads of Ashland Pliodeck Insulation Adhesive spaced 6" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet:	One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Membrane:	One ply of TRI-BUILT SBS Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-195 psf (See General Limitation #9)

Membrane Type: SBS Modified

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2,500 psi structural concrete or concrete plank.

System Type A(7): One or more layers of insulation adhered with approved adhesive.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	**N/A**	**N/A**

Note: All insulations shall be adhered to the deck in 2-½" wide beads of ICP Adhesive CR-20 spaced 12" o.c. or in ¾" – 1" wide beads of Insta Stik Quik Set Insulation Adhesive, OMG OlyBond 500 Adhesive or OMG OlyBond 500 Green Adhesive spaced 12" o.c. or in ½" – ¾" wide beads of or Millennium PG-1 Low Viscosity Insulation Adhesive spaced 12" o.c. or in ¼" – ½" wide beads of Ashland Pliodeck Insulation Adhesive spaced 6" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of TRI-BUILT SBS Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -195 psf (See General Limitation #9)

Membrane Type: SBS Modified

Deck Type 3I: Concrete, Insulated

Deck Description: Min. 2,500 psi structural concrete or concrete plank.

System Type A(8): One or more layers of insulation adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, ACFoam-III Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board Minimum ¼" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the deck with Pliodek Insulation Adhesive, Millennium PG-1 Low Viscosity Insulation Adhesive, ICP Adhesive CR-20 applied in ½" to ¾" ribbons spaced 6" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Base Sheet: One or more plies of TRI-BUILT SAT Base self adhered to the insulated base sheet.

Membrane: One ply of TRI-BUILT SBS Cap adhered to base sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -217.5 psf (See General Limitation #9)

Membrane Type: APP Modified

Deck Type 3I: Concrete Decks, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type A(9): One or more layers of insulation adhered with approved adhesive.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ACFoam-III, H-Shield Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
SECUROCK Gypsum-Fiber Roof Board Minimum $^1/_4$" thick	**N/A**	**N/A**

Note: All insulation shall be adhered with Millennium One Step Foamable Adhesive, Millennium One Step Green Foamable Adhesive, Millennium PG-1 Low Viscosity Insulation Adhesive, Insta-Stik Quik Set Insulation Adhesive, OMG OlyBond 500 Adhesive or OMG OlyBond 500 Green Adhesive in 3/4" – 1" wide beads spaced 12 inch o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of TRI-BUILT Smooth Torch, torch adhered to the insulated substrate.

Ply Sheet: (Optional) One ply of TRI-BUILT Smooth Torch, torch adhered to base sheet.

Membrane: One ply of TRI-BUILT Granulated Torch, torch adhered to base or ply sheet.

Surfacing: Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -252.5 psf (See General Limitation #9)

Membrane Type: SBS Modified

Deck Type 3I: Concrete Decks, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type A(10): One or more layers of insulation adhered with approved adhesive.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, ACFoam-III Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DensDeck (*Only with Millennium PG-1 Low Viscosity Insulation Adhesive*) Minimum 1/4" thick	**N/A**	**N/A**
DensDeck Prime Minimum 1/4" thick	**N/A**	**N/A**

Note: All insulations shall be adhered to the deck in ¾" – 1" wide beads of Insta Stik Quik Set Insulation Adhesive spaced 12" o.c. or in ½" – ¾" wide beads or Millennium PG-1 Low Viscosity Insulation Adhesive spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of TRI-BUILT SBS Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -270 psf (With DensDeck) (See General Limitation #9)
-297.5 psf (See General Limitation #9)

Membrane Type:	SBS Modified
Deck Type 3I:	Concrete Decks, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type A(11):	One or more layers of insulation adhered with approved adhesive.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ACFoam-III Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
SECUROCK Gypsum-Fiber Roof Board Minimum $^1/_4$" thick	**N/A**	**N/A**

Note: All insulations shall be adhered to the deck in ¾" – 1" wide beads of Insta Stik Quik Set Insulation Adhesive, OMG OlyBond 500 Adhesive or OMG OlyBond 500 Green Adhesive spaced 12" o.c. or in ½" – ¾" wide beads or Millennium PG-1 Low Viscosity Insulation Adhesive spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet:	One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Membrane:	One ply of TRI-BUILT SBS Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-297.5 psf (See General Limitation #9)

Membrane Type:	SBS Modified
Deck Type 3I:	Concrete Decks, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type A(12):	Base sheet and insulation adhered with approved asphalt..

All General and System Limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ACFoam-III, H-Shield Minimum 1.5" thick	**N/A**	**N/A**

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet:	One ply of TRI-BUILT SAT Base self-adhered to the insulated base sheet.
Membrane:	One ply of TRI-BUILT Granulated Torch, torch adhered to base sheet. Or One ply of TRI-BUILT SBS Cap adhered to base sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-307.5 psf (See General Limitations #9)

Membrane Type: APP Modified

Deck Type 3I: Concrete Decks, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type A(13): Base sheet and insulation adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ACFoam-III, H-Shield Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FescoBoard Minimum 0.75" thick	**N/A**	**N/A**

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of TRI-BUILT SAT Base self adhered or one ply of TRI-BUILT Smooth Torch, torch adhered.

Membrane: One ply of TRI-BUILT Granulated Torch, torch adhered to base or ply sheet.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -390.9 psf. (See General Limitation #9)

Membrane Type: SBS Modified

Deck Type 3I: Concrete Decks, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type A(14): Base sheet and insulation adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ACFoam-III, H-Shield Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FescoBoard Minimum 0.75" thick	**N/A**	**N/A**

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of TRI-BUILT SAT Base self adhered.

Membrane: One ply of TRI-BUILT SBS Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -390.9 psf. (See General Limitation #9)

Membrane Type: APP Modified

Deck Type 3I: Concrete Decks, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type A(15): Base sheet and insulation adhered with approved asphalt.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam-II, ACFoam-III, H-Shield Minimum 1.5" thick	**N/A**	**N/A**

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

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of TRI-BUILT SAT Base self adhered or one ply of TRI-BUILT Smooth Torch, torch adhered.

Membrane: One ply of TRI-BUILT Granulated Torch, torch adhered to base or ply sheet.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -430 psf. (See General Limitation #9)

Membrane Type: SBS Modified

Deck Type 3I: Concrete Decks, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type A(16): Base sheet and insulation adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ACFoam-III, H-Shield Minimum 1.5" thick	**N/A**	**N/A**

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

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of TRI-BUILT SAT Base self adhered.

Membrane: One ply of TRI-BUILT SBS Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -430 psf. (See General Limitation #9)

Membrane Type: SBS Modified

Deck Type 3I: Concrete Decks, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type A(17): One or more layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Structodek High Density Fiberboard Roof Insulation, Fesco Board Minimum 0.5" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum $^1/_4$" thick	**N/A**	**N/A**

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulations shall be adhered to the deck in full mopping of approved hot asphalt within the EVT range and at a rate of 25 lbs/100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of TRI-BUILT SBS Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

Maximum Design Pressure: -437.5 psf (Structodek High Density Fiberboard Roof Insulation or Fesco Board) (See General Limitation #9)
-537.5 psf (See General Limitation #9)

Membrane Type: APP Modified

Deck Type 3I: Concrete Decks, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type B(1): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI		
Minimum 1.4" thick	**1, 5 or 9**	**1:2 ft²**
Minimum 2" thick	**1, 5 or 9**	**1:3.2 ft²**
ACFoam-II, ACFoam-III, H-Shield		
Minimum 1.5" thick	**1, 5 or 9**	**1:2 ft²**
Minimum 2" thick	**1, 5 or 9**	**1:3.2 ft²**
FescoBoard		
Minimum ¾" thick	**1, 5 or 9**	**1:2 ft²**
Structodek High Density Fiberboard Roof Insulation		
Minimum ½" thick	**1, 5 or 9**	**1:2 ft²**
DensDeck, DensDeck Prime		
Minimum ½" thick	**1, 5 or 9**	**1:2 ft²**

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Any of the insulations listed for Base Layer, above.	**N/A**	**N/A**

Note: Optional top layer of insulation shall be adhered with approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet:	One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Ply Sheet: (Optional)	One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of TRI-BUILT SAT Base self adhered or one ply of TRI-BUILT Smooth Torch, torch adhered.
Membrane:	One ply of TRI-BUILT Granulated Torch, torch adhered to base/ply sheet.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-45.0 psf (See General Limitations #9)

Membrane Type:	SBS Modified
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2,500 psi structural concrete or concrete plank.
System Type B(2):	Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI		
Minimum 1.4" thick	**1, 5 or 9**	**1:2 ft²**
Minimum 2" thick	**1, 5 or 9**	**1:3.2 ft²**
ACFoam-II, ACFoam-III, H-Shield		
Minimum 1.5" thick	**1, 5 or 9**	**1:2 ft²**
Minimum 2" thick	**1, 5 or 9**	**1:3.2 ft²**
FescoBoard		
Minimum ¾" thick	**1, 5 or 9**	**1:2 ft²**
Structodek High Density Fiberboard Roof Insulation		
Minimum ½" thick	**1, 5 or 9**	**1:2 ft²**
DensDeck, DensDeck Prime		
Minimum ½" thick	**1, 5 or 9**	**1:2 ft²**

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Any of the insulations listed for Base Layer, above.	**N/A**	**N/A**

Note: Optional top layer of insulation shall be adhered with approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet:	One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Ply Sheet: (Optional)	One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of TRI-BUILT SAT Base self adhered.

Membrane:	One ply of TRI-BUILT SBS Cap adhered to base/ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-45.0 psf (See General Limitations #9)

Membrane Type:	APP Modified
Deck Type 3I:	Concrete Decks, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type B(3):	Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ACFoam-III, ENRGY 3, Multi-Max FA-3, H-Shield Minimum 1.5" thick	**1, 5 or 9**	**1:1.33 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FescoBoard Minimum ¾" thick	**N/A**	**N/A**
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet:	One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Ply Sheet: (Optional)	One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of TRI-BUILT SAT Base self adhered or one ply of TRI-BUILT Smooth Torch, torch adhered.

Membrane:	One ply of TRI-BUILT Granulated Torch, torch adhered to base or ply sheet.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-52.5 psf (For FescoBoard) (See General Limitation #7) -67.5 psf (For Structodek High Density Fiberboard Roof Insulation) (See General Limitation #7)

Membrane Type:	SBS Modified
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2,500 psi structural concrete or concrete plank.
System Type B(4):	Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ACFoam-III, ENRGY 3, Multi-Max FA-3, H-Shield Minimum 1.5" thick	**1, 5 or 9**	**1:1.33 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FescoBoard Minimum ¾" thick	**N/A**	**N/A**
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet:	One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Ply Sheet: (Optional)	One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of TRI-BUILT SAT Base self adhered.
Membrane:	One ply of TRI-BUILT SBS Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-52.5 psf (For FescoBoard) (See General Limitation #7) -67.5 psf (For Structodek High Density Fiberboard Roof Insulation) (See General Limitation #7)

Membrane Type: APP Modified

Deck Type 3I: Concrete Decks, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type C(1): All layers of insulation simultaneously fastened.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ENRGY 3, ENRGY 3 25 PSI, ACFoam-II, ACFoam-III, H-Shield Minimum 1.5" thick	**N/A**	**N/A**
Approved Perlite Listed in Table 2 Minimum ¾" thick	**N/A**	**N/A**
Approved High Density Wood Fiberboard Listed in Table 2 Minimum ½" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
FescoBoard Minimum ¾" thick	**1, 5, 9**	**1:2 ft²**
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	**1, 5, 9**	**1:2 ft²**
DensDeck, DensDeck Prime Minimum ½" thick	**1, 5, 9**	**1:2 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density.

Base Sheet: One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of TRI-BUILT SAT Base self adhered or one ply of TRI-BUILT Smooth Torch, torch adhered.

Membrane: One ply of TRI-BUILT Granulated Torch, torch adhered to base or ply sheet.

Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-45.0 psf (See General Limitations #9)

Membrane Type: SBS Modified

Deck Type 3I: Concrete Decks, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type C(2): All layers of insulation simultaneously fastened.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ENRGY 3, ENRGY 3 25 PSI, ACFoam-II, ACFoam-III, H-Shield Minimum 1.5" thick	**N/A**	**N/A**
Approved Perlite Listed in Table 2 Minimum ¾" thick	**N/A**	**N/A**
Approved High Density Wood Fiberboard Listed in Table 2 Minimum ½" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
FescoBoard Minimum ¾" thick	**1, 5, 9**	**1:2 ft²**
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	**1, 5, 9**	**1:2 ft²**
DensDeck, DensDeck Prime Minimum ½" thick	**1, 5, 9**	**1:2 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density.

Base Sheet: One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of TRI-BUILT SAT Base self adhered.

Membrane:	One ply of TRI-BUILT SBS Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-45.0 psf (See General Limitations #9)

Membrane Type: APP Modified

Deck Type 3I: Concrete Decks, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type C(3): All layers of insulation simultaneously fastened.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners Table 3	Fastener Density/ft²
ENRGY 3, ENRGY 3 25 PSI, ACFoam-II, ACFoam-III, Multi-Max FA-3, H-Shield Minimum 1.5" thick	**1, 5 or 9**	**1:1.33 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of TRI-BUILT SAT Base self-adhered to the insulated substrate.

Ply Sheet: (Optional) One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of TRI-BUILT SAT Base self adhered or one ply of TRI-BUILT Smooth Torch, torch adhered.

Membrane: TRI-BUILT Granulated Torch, torch adhered to base or ply sheet.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

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

Membrane Type: SBS Modified

Deck Type 3I: Concrete Decks, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type C(4): All layers of insulation simultaneously fastened.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners Table 3	Fastener Density/ft²
ENRGY 3, ENRGY 3 25 PSI, ACFoam-II, ACFoam-III, Multi-Max FA-3, H-Shield		
Minimum 1.5" thick	**1, 5 or 9**	**1:1.33 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of TRI-BUILT SAT Base self-adhered to the insulated substrate.

Ply Sheet: (Optional) One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of TRI-BUILT SAT Base self adhered.

Membrane: One ply of TRI-BUILT SBS Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq.

Surfacing: (Optional) Any of the approved surfacing/coating options listed in Table 4.

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

Membrane Type:	SBS/APP Modified
Deck Type 3:	Concrete Decks, Non-Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type F(1):	Base sheet adhered to deck.

All General and System Limitations apply.

Primer:	Concrete deck primed with ASTM D41 asphalt primer and allowed to dry prior to application of base sheet.
Base Sheet:	One ply of TRI-BUILT SAT Base, self-adhered to the non-insulated substrate.
Membrane:	One layer of TRI-BUILT SBS Cap adhered to base sheet with approved mopping asphalt applied in full coverage at a rate of 20-25 lbs./sq. Or One ply of TRI-BUILT Granulated Torch, torch applied to base sheet.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-97.5 psf (See General Limitation #9)

Membrane Type:	APP Modified
Deck Type 3I:	Concrete Decks, Non-Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type F(2):	Base sheet adhered with approved asphalt.

All General and System Limitations apply.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet:	One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the non-insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Ply Sheet: (Optional)	One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of TRI-BUILT SAT Base self adhered or one ply of TRI-BUILT Smooth Torch, torch adhered.
Membrane:	One ply of TRI-BUILT Granulated Torch, torch adhered to base or ply sheet.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-635 psf (See General Limitation #9)

Membrane Type:	SBS Modified
Deck Type 3I:	Concrete Decks, Non-Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type F(3):	Base sheet adhered with approved asphalt.

All General and System Limitations apply.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet:	One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the non-insulated substrate with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of TRI-BUILT SAT Base self-adhered to the non-insulated substrate.
Ply Sheet: (Optional)	One ply of TRI-BUILT FG Base Sheet 3SQ adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply of TRI-BUILT SAT Base self adhered.
Membrane:	One ply of TRI-BUILT SBS Cap adhered to base or ply sheet with approved mopping asphalt applied within the EVT range and at a rate of 20 to 40 lbs./sq.
Surfacing: (Optional)	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-635 psf (See General Limitation #9)

Membrane Type:	APP Modified
Deck Type 3:	Concrete Decks, Non-Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type F(4):	Base sheet heat welded to primed substrate

All General and System Limitations apply.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet:	One ply of TRI-BUILT Smooth Torch, torch adhered to the non-insulated substrate.
Ply Sheet: (Optional)	One ply of TRI-BUILT Smooth Torch, torch adhered to base sheet.
Membrane:	One ply of TRI-BUILT Granulated Torch, torch adhered to base or ply sheet.
Surfacing:	Any of the approved surfacing/coating options listed in Table 4.
Maximum Design Pressure:	-345 psf (See General Limitation #9)

CONCRETE 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, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.

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 Professional Engineer, Registered 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. 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