



NEMO|etc.

Certificate of Authorization #32455
353 Christian Street, Unit #13
Oxford, CT 06478
(203) 262-9245

ENGINEER

EVALUATE

TEST

CONSULT

EVALUATION REPORT

Johns Manville Corporation

717 17th Street
Denver, CO 80202
(303) 978-4879

Evaluation Report J9340.07.08-R7

FL1046-R10

Date of Issuance: 07/08/2008

Revision 7: 11/30/2020

SCOPE:

This Evaluation Report is issued under **Rule 61G20-3** and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code. The product described herein has been evaluated for compliance with the **7th Edition (2020) Florida Building Code** sections noted herein.

DESCRIPTION: Johns Manville APP Modified Bitumen Roof Systems

LABELING: Labeling shall be in accordance with the requirements of the Accredited Quality Assurance Agency noted herein.

CONTINUED COMPLIANCE: This Evaluation Report is valid until such time as the named product(s) changes, the referenced Quality Assurance or production facility location(s) changes, or Code provisions that relate to the product(s) change. Acceptance of our Evaluation Reports by the named client constitutes agreement to notify NEMO ETC, LLC of any changes to the product(s), the Quality Assurance or the production facility location(s). NEMO ETC, LLC requires a complete review of its Evaluation Report relative to updated Code requirements with each Code Cycle.

ADVERTISEMENT: The Florida Product Approval Number (FL#) preceded by the words "NEMO|etc. Evaluated" may be displayed in advertising literature. If any portion of the Evaluation Report is displayed, then it shall be done in its entirety.

INSPECTION: Upon request, a copy of this entire Evaluation Report 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 Evaluation Report consists of pages 1 through 5, plus a 22-page Appendix.

Prepared by:

Robert J.M. Nieminen, P.E.

Florida Registration No. 59166, Florida DCA ANE1983



The facsimile seal appearing was authorized by Robert Nieminen, P.E. on 11/30/2020. This does not serve as an electronically signed document.

CERTIFICATION OF INDEPENDENCE:

1. NEMO ETC, LLC does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products it evaluates.
2. NEMO ETC, LLC is not owned, operated or controlled by any company manufacturing or distributing products it evaluates.
3. Robert Nieminen, P.E. does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the evaluation reports are being issued.
4. Robert Nieminen, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.
5. This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.

ROOFING SYSTEMS EVALUATION:
1. SCOPE:

Product Category: Roofing
Sub-Category: Modified Bitumen Roof Systems
Compliance Statement: Johns Manville APP Modified Bitumen Roof Systems, as produced by Johns Manville Corporation, have demonstrated compliance with the following sections of the 7th Edition (2020) Florida Building Code through testing in accordance with the following Standards. Compliance is subject to the Installation Requirements and Limitations / Conditions of Use set forth herein.

2. STANDARDS:

Section	Property	Standard	Year
1504.3.1	Wind resistance	FM 4474	2011
1504.6	Accelerated weathering	ASTM G155	2013
1504.7	Impact resistance	FM 4470	2016
1507.10.2	Material standard	ASTM D2178	2015
1507.10.2	Material standard	ASTM D4601	2012
1507.10.2	Material standard	ASTM D4897	2009
1507.11.2	Material standard	ASTM D6164	2011
1507.11.2	Material standard	ASTM D6222	2011
1507.11.2	Material standard	ASTM D6223	2009
1507.11.2	Material standard	ASTM D6509	2015

3. REFERENCES:

Entity	Examination	Reference	Date
ERD (TST6049)	FM 4470/4474	J45020.05.13-1	05/16/2013
ERD (TST6049)	FM 4470/4474	J45020.05.13-2	05/20/2013
FM Approvals (TST1867)	FM 4470	0W6A2.AM	02/05/1993
FM Approvals (TST1867)	FM 4470	0X7A4.AM	08/26/1993
FM Approvals (TST1867)	FM 4470	0X0A9.AM	03/25/1994
FM Approvals (TST1867)	FM 4470	3001482	08/11/1998
FM Approvals (TST1867)	FM 4470	3002823	04/01/1999
FM Approvals (TST1867)	FM 4470	3003468	02/02/2000
FM Approvals (TST1867)	FM 4470	3007148	04/19/2000
FM Approvals (TST1867)	FM 4470	3009499	04/04/2001
FM Approvals (TST1867)	FM 4470	3012974	06/03/2002
FM Approvals (TST1867)	FM 4470	3012321	07/29/2002
FM Approvals (TST1867)	FM 4470	3011248	11/01/2002
FM Approvals (TST1867)	FM 4470	3014692	08/05/2003
FM Approvals (TST1867)	FM 4470/4474	3023458	07/18/2006
FM Approvals (TST1867)	FM 4470/4474	3026128	08/04/2006
FM Approvals (TST1867)	FM 4470/4474	3024311	11/01/2006
FM Approvals (TST1867)	FM 4470/4474	3028879	10/28/2007
FM Approvals (TST1867)	FM 4470/4474	3034810	09/10/2009
FM Approvals (TST1867)	FM 4470/4474	3037540	10/20/2010
FM Approvals (TST1867)	FM 4470/4474	3040986	09/23/2011
FM Approvals (TST1867)	FM 4470/4474	3046174	04/03/2013
FM (TST1867)	FM 4470/4474	PR454790	04/02/2020
PRI (TST5878)	ASTM D2178	JMC-070-02-01	04/17/2012
PRI (TST5878)	ASTM D2178	JMC-071-02-01	04/17/2012
PRI (TST5878)	ASTM D4897	JMC-074-02-01	04/17/2012
PRI (TST5878)	ASTM D2178	JMC-070-02-01	04/17/2012
PRI (TST5878)	ASTM D6509	JMC-055-02-01	05/29/2012
PRI (TST5878)	ASTM D4601	JMC-072-02-02	06/04/2012
PRI (TST5878)	ASTM D6223	JMC-054-02-01.04.04	06/04/2012

Entity	Examination	Reference	Date
PRI (TST5878)	ASTM D4601	JMC-093-02-01	08/02/2012
PRI (TST5878)	ASTM D6164	JMC-106-02-01	04/15/2013
PRI (TST5878)	FM 4470/4474	JMC-108-02-01	04/16/2013
PRI (TST5878)	FM 4470/4474	JMC-109-02-01	04/16/2013
PRI (TST5878)	FM 4470/4474	JMC-114-02-01	04/16/2013
PRI (TST5878)	FM 4470/4474	JMC-118-02-01	04/16/2013
PRI (TST5878)	FM 4470/4474	JMC-126-02-01	04/17/2013
PRI (TST5878)	FM 4470/4474	JMC-131-02-01	04/17/2013
PRI (TST5878)	ASTM D6164	JMC-113-02-01	04/19/2013
PRI (TST5878)	FM 4470/4474	JMC-118-02-02	04/19/2013
PRI (TST5878)	ASTM D6222	JMC-053-02-01	05/01/2013
PRI (TST5878)	FM 4470/4474	JMC-141-02-01	05/13/2013
PRI (TST5878)	ASTM D4601	JMC-147-02-01	05/28/2013
PRI (TST5878)	ASTM D6222	JMC-330-02-01	10/17/2018
PRI (TST5878)	ASTM D6222	JMC-330-02-02	10/17/2018
PRI (TST5878)	ASTM D6222	JMC-330-02-03	10/17/2018
UL LLC (QUA9625)	Quality Assurance	Service Confirmation	04/24/2019
UL LLC (QUA9625)	Quality Assurance	Florida BCIS	Current

4. PRODUCT DESCRIPTION:

This Evaluation Report covers **Johns Manville APP Modified Bitumen Roof Systems** installed in accordance with **Johns Manville** published installation instructions and the Limitations / Conditions of Use herein.

TABLE 1: EVALUATED MEMBRANES

Type	Product	Material Standard			Plant(s)
		Reference	Type	Grade	
Base Sheets	GlasBase Plus	ASTM D4601	II	N/A	CA
	PermaPly 28	ASTM D4601	II	N/A	OK
	JM Basegrip SD/SA	ASTM D4601	II	N/A	AL
	Ventsulation Felt	ASTM D4897	II	N/A	OK
	JM APP Base	ASTM D6509	N/A	N/A	CA
Ply Sheets	GlasPly IV	ASTM D2178	IV	N/A	OK
	GlasPly Premier	ASTM D2178	VI	N/A	OK
SBS Membranes	DynaFast 180 HW	ASTM D6164	I	S	GA
	DynaFast 250 HW	ASTM D6164	I	S	GA
APP Membranes	APPeX 4S	ASTM D6222	I	S	CA, GA
	APPeX 4.5M	ASTM D6222	I	G	CA, GA
	APPeX 4.5M FR	ASTM D6222	I	G	CA, GA
	APPeX 4.5M FR CR	ASTM D6222	I	G	CA, GA
	Tricor S	ASTM D6223	II	S	CA
	Tricor M FR	ASTM D6223	II	G	CA
	Tricor M FR CR	ASTM D6223	II	G	CA

5. LIMITATIONS:

- 5.1 This is a Building Code Evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.
- 5.2 This Evaluation Report is not for use in FBC High Velocity Hurricane Zone jurisdictions (i.e., Broward and Miami-Dade Counties).
- 5.3 This Evaluation Report pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction.
- 5.4 This Evaluation Report does not include evaluation of fire classification. Refer to **FBC 1505** for requirements and limitations regarding roof assembly fire classification. Refer to **FBC 2603** for requirements and limitations concerning the use of foam plastic insulation.
- 5.5 This Evaluation Report does not include evaluation of roof edge termination. Refer to **FBC 1504.5** for requirements and limitations regarding edge securement for low-slope roofs.
- 5.6 Refer to **FBC 1511** for requirements and limitations regarding recover installations.
- 5.6.1 For mechanically attached components over existing roof decks, fasteners shall be tested in the existing deck for withdrawal resistance. A qualified design professional shall review the data for comparison to the minimum requirements for the system. Testing shall be in accordance with **ANSI/SPRI FX-1** or **Testing Application Standard TAS 105**.
- 5.6.2 For bonded insulation or membrane over existing substrates in a re-roof (tear off) or recover installation, the existing deck or existing roof surface shall be examined for compatibility with the adhesive to be installed. If any surface conditions exist that bring system performance into question, field uplift testing in accordance with **ANSI/SPRI IA-1, ASTM E907, FM Loss Prevention Data Sheet 1-52** or **Testing Application Standard TAS 124** shall be conducted on mock-ups of the proposed new roof assembly.
- 5.6.3 For bonded insulation or membrane over existing substrates in a recover installation, the existing roof system shall be capable of resisting project design pressures on its own merit to the satisfaction of the Authority Having Jurisdiction, as documented through field uplift testing in accordance with **ASTM E907, FM Loss Prevention Data Sheet 1-52** or **Testing Application Standard TAS 124**.
- 5.7 Refer to Appendix 1 for system attachment requirements for wind load resistance.
- 5.7.1 “MDP” = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads, and reflects the ultimate passing pressure divided by 2 (the 2 to 1 margin of safety per **FBC 1504.9** has already been applied). Refer to **FBC 1609** for determination of design wind loads.
- 5.7.2 For mechanically attached components or partially-bonded insulation, the maximum design pressure for the selected assembly shall meet or exceed at least the Zone 1 PRIME design pressure determined in accordance with **FBC Chapter 16**. Elevated pressure zones shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria. Commonly used methods are **ANSI/SPRI WD1, FM Loss Prevention Data Sheet 1-29, Roofing Application Standard RAS 117** and **Roofing Application Standard RAS 137**. Assemblies marked with an asterisk* carry the limitations set forth in **Section 2.2.10.1 of FM Loss Prevention Data Sheet 1-29 (February 2020)** for Zone 2/3 enhancements.
- 5.7.3 For assemblies with all components fully bonded in place, the maximum design pressure for the selected assembly shall meet or exceed critical design pressure determined in accordance with **FBC Chapter 16**. No rational analysis is permitted for these systems.
- 5.8 All components in the roof assembly shall have quality assurance audit in accordance with **F.A.C. Rule 61G20-3**. Refer to the Product Approval of the component manufacturer for components listed in Appendix 1 that are produced by a Product Manufacturer other than the report holder on Page 1 of this Evaluation Report.

6. INSTALLATION:

Johns Manville APP Modified Bitumen Roof Systems shall be installed in accordance with **Johns Manville** published installation instructions, subject to the Limitations / Conditions of Use noted below.

7. BUILDING PERMIT REQUIREMENTS:

As required by the Building Official or Authority Having Jurisdiction to properly evaluate the installation of this product.

8. MANUFACTURING PLANTS:

Contact the named QA entity for manufacturing facilities covered by **F.A.C. Rule 61G20-3** QA requirements. Refer to Section 4 herein for products and production locations having met codified material standards.

9. QUALITY ASSURANCE ENTITY:

UL, LLC. – QUA9625; (414) 248-6409; karen.buchmann@us.ul.com

- THE 22-PAGES THAT FOLLOW FORM PART OF THIS EVALUATION REPORT -

APPENDIX 1: ATTACHMENT REQUIREMENTS FOR WIND UPLIFT RESISTANCE

TABLE	DECK	APPLICATION	TYPE	DESCRIPTION	PAGE
1A	Wood	New, Reroof (Tear-Off)	A-2	Mechanically Attached Anchor Sheet, Bonded Insulation, Bonded Roof Cover	4
1B	Wood	New, Reroof (Tear-Off), Recover	A-2	Mechanically Attached Anchor Sheet, Bonded Insulation, Bonded Roof Cover	4
1C	Wood	New, Reroof (Tear-Off), Recover	B-1	Mechanically Attached Base Insulation, Bonded Top Insulation, Bonded Roof Cover	4
1D	Wood	New, Reroof (Tear-Off), Recover	C-1	Mechanically Attached Insulation, Bonded Roof Cover	5
1E	Wood	New, Reroof (Tear-Off), Recover	D-2	Insulated, Mechanically Attached Base Sheet, Bonded Roof Cover	5
1F	Wood	New, Reroof (Tear-Off)	E-2	Non-Insulated, Mechanically Attached Base Sheet, Bonded Roof Cover	6
1G	Wood	New, Reroof (Tear-Off), Recover	E-2	Non-Insulated, Mechanically Attached Base Sheet, Bonded Roof Cover	6
2A	Steel or Structural concrete	New, Reroof (Tear-Off), Recover	B-1	Mechanically Attached Base Insulation, Bonded Top Insulation, Bonded Roof Cover	7-11
2B	Steel or Structural concrete	New, Reroof (Tear-Off), Recover	C-1	Mechanically Attached Insulation, Bonded Roof Cover	12
2C	Steel or Structural concrete	New, Reroof (Tear-Off), Recover	D-2	Insulated, Mechanically Attached Base Sheet, Bonded Roof Cover	13
3A	Structural concrete	New, Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Roof Cover	14-15
3B	Structural concrete	New, Reroof (Tear-Off)	F	Non-Insulated, Bonded Roof Cover	15
4A	LWIC	New, Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Roof Cover	16
4B	LWIC	New, Reroof (Tear-Off)	A-2	Mechanically Attached Anchor Sheet, Bonded Insulation, Bonded Roof Cover	17-18
4C	LWIC	New, Reroof (Tear-Off)	E-2	Non-Insulated, Mechanically Attached Base Sheet, Bonded Roof Cover	18-19
5A	CWF	Reroof (Tear-Off), Recover	E-2	Non-Insulated, Mechanically Attached Base Sheet, Bonded Roof Cover	20
6A	Gypsum	Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Roof Cover	20
6B	Gypsum	Reroof (Tear-Off)	E-2	Non-Insulated, Mechanically Attached Base Sheet, Bonded Roof Cover	20
7	Various	Recover	A-1	Bonded Insulation, Bonded Roof Cover	21-22

The following notes apply to the systems outlined herein:

- 1 The roof system evaluation herein pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction.
- 2 Unless otherwise noted, fasteners and stress plates shall be as follows. Fasteners shall be of sufficient length for the following engagements:
 - Wood Deck: UltraFast Fasteners or All Purpose Fasteners with UltraFast Metal Plates. Min. ¾-inch plywood penetration or minimum 1-inch wood plank embedment.
 - Steel Deck: UltraFast Fasteners or All Purpose Fasteners with UltraFast Metal Plates. Minimum ¼-inch steel penetration, engage the top flute of the steel deck.
 - Structural Concrete: All Purpose Fasteners with UltraFast Metal Plates or Structural Concrete Fasteners with UltraFast Metal Plates (flat bottom only). Minimum 1-inch embedment. Fasteners installed with a pilot hole in accordance with the fastener manufacturer’s published installation instructions.
- 3 Unless otherwise noted, insulation may be any one layer or combination of FBC Approved (Local or Statewide) board(s) that meet FBC 1505 and, for foam plastic, FBC Chapter 26, when installed with the roof cover.
- 4 Minimum 200 psi, minimum 2-inch thick FBC Approved lightweight insulating concrete may be substituted for rigid insulation board for System Types B-1, C-1, C-2, D-1 or D-2, whereby fasteners are installed through the lightweight insulating concrete to engage the structural deck. The structural deck shall be of equal or greater type, thickness and strength to the steel and structural concrete deck listings. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction. This is a wind uplift resistance allowance and does not purport to address non-wind-uplift-related issues, such as deck venting or moisture levels within the LWIC and the potential effect on overlying components.
- 5 Preliminary insulation attachment for System Type D: Unless otherwise noted, refer to Section 2.2.10.1.3 of FM Loss Prevention Data Sheet 1-29 (February 2020).
- 6 Unless otherwise noted, insulation adhesive application rates are as follows. Ribbon or bead width is at the time of application; the ribbons/beads shall expand as noted in the manufacturer’s published instructions.

- hot asphalt: Full mopping, 25-30 lbs/square.
 - JM MBR Bonding Adhesive (MBR-BA): Continuous 0.75-inch ribbons, 12-inch o.c.
 - JM Roofing System Urethane Adhesive (JM-RSUA): Continuous 0.5 to 0.75-inch wide ribbons, 12-inch o.c.
 - JM Two Part Urethane Insulation Adhesive (UIA-TWO-PART): Continuous 0.75-inch ribbons, 12-inch o.c. *JM Green Two Part Urethane Insulation Adhesive, JM Two Part Urethane Insulation Adhesive Canister, JM Two-Part UIA or JM Two-Part UIA Canister may be used where "UIA-TWO-PART" is referenced*
 - ICP Adhesives & Sealants "Polyset CR-20": Continuous 2.5 to 3.5-inch ribbons, 12-inch o.c.
 - *Note: When multiple layers(s) of insulation and/or coverboard are installed in ribbon-applied adhesive, board joints shall be staggered.*
 - *Note: The maximum edge distance from the adhesive ribbon to the edge of the insulation board shall be not less than one-half the specified ribbons spacing.*
- 7 Unless otherwise noted, all insulations are flat-stock or taper board of the minimum thickness noted. Tapered polyisocyanurate at the following thickness limitations may be substituted with the following Maximum Design Pressure (MDP) limitations. In no case shall these values be used to 'increase' the MDP listings in the tables; rather if MDP listing below meets or exceeds that listed for a particular system in the tables, then the thinner board listed below may be used as a drop-in for the equivalent thicker material listed in the table.
- JM-RSUA: MDP = -157.5 psf (Min. 0.5-inch thick)
 - UIA-TWO-PART: MDP = -315.0 psf (Min. 0.5-inch thick ENRGY 3 or JM ISO 3)
 - Polyset CR-20: MDP = -117.5 psf (Min. 1.0-inch thick)
- 8 For adhered roof insulation and board-size: Unless otherwise noted, refer to Section 2.2.10.6.2 of FM Loss Prevention Data Sheet 1-29 (February 2020).
- 9 For mechanically attached components or partially-bonded insulation, the maximum design pressure for the selected assembly shall meet or exceed at least the Zone 1 PRIME design pressure determined in accordance with FBC Chapter 16. Elevated pressure zones shall employ an attachment density designed by a qualified design professional to resist the elevated pressure criteria. Commonly used methods are ANSI/SPRI WD1, FM Loss Prevention Data Sheet 1-29, Roofing Application Standard RAS 117 and Roofing Application Standard RAS 137. Assemblies marked with an asterisk* carry the limitations set forth in Section 2.2.10.1 of FM Loss Prevention Data Sheet 1-29 (February 2020) for Zone 2/3 enhancements.
- 10 For assemblies with all components fully bonded, the maximum design pressure for the selected assembly shall meet or exceed critical design pressure determined in accordance with FBC Chapter 16. No rational analysis is permitted for these systems.
- 11 For mechanically attached components over existing decks, fasteners shall be tested in the existing deck for withdrawal resistance. A qualified design professional shall review the data for comparison to the minimum requirements for the system. Testing and analysis shall be in accordance with ANSI/SPRI FX-1 or Testing Application Standard TAS 105.
- 12 For bonded insulation or membrane over existing substrates in a re-roof (tear off) or recover installation, the existing deck or existing roof surface shall be examined for compatibility with the adhesive to be installed. If any surface conditions exist that bring system performance into question, field uplift testing in accordance shall be conducted on mock-ups of the proposed new roof assembly. For bonded insulation or membrane over existing substrates in a recover installation, the existing roof system shall be capable of resisting project design pressures on its own merit to the satisfaction of the Authority Having Jurisdiction, as documented through field uplift testing. Field uplift testing shall be in accordance with ASTM E907, FM Loss Prevention Data Sheet 1-52 or Testing Application Standard TAS 124.
- 13 Refer to FBC 1511 for requirements and limitations regarding recover installations. For Structural Concrete Deck or Recover Applications using System Type C-1, C-2, D-1 or D-2, the insulation is optional. Alternatively, an FBC Approved insulation board or coverboard may be used as a separation layer. Board products shall be preliminarily attached prior to roof cover installation (Note 5 herein). The separator component shall be documented as meeting FBC 1505 and, for foam plastic, FBC Chapter 26, when installed with the roof cover in Recover applications.
- 14 Lightweight insulating concrete (LWIC) shall be cast in accordance with FBC Section 1917 to the satisfaction of the Authority Having Jurisdiction. For systems where specific LWIC is referenced, refer to current LWIC Product Approval for specific deck construction and limitations. Unless otherwise noted, for systems where specific LWIC is not referenced, the minimum design mix shall be 300 psi. In all cases, the minimum top-coat thickness is 2-inches. For LWIC over structural concrete, reference is made to FBC Section 1917.4.1, Point 1. For "pre-existent" LWIC references, listings were established through testing over lightweight concrete cast using only foaming agent (ASTM C896), water and Portland cement (ASTM C150), with no proprietary additives, in accordance with procedures adopted by Miami-Dade BCCO (FBC CER1592). Use of these listings in new construction or re-roof (tear-off) applications is at the discretion of the Designer or Record and Authority Having Jurisdiction.

15 For bonded membrane applications, unless otherwise noted, refer to the following.

MEMBRANE / ADHESIVE COMBINATIONS			
REFERENCE	LAYER	MATERIAL	APPLICATION
BP-AA (Base and Ply sheets, Asphalt-Applied)	Base Ply	GlasBase Plus, PermaPly 28	Hot asphalt at 20-40 lbs/square
	Ply	GlasPly IV, GlasPly Premier, GlasBase Plus, PermaPly 28	
BP-CA1 (Base and Ply sheets, Cold-Applied, 1-part)	Base Ply	GlasBase Plus, PermaPly 28	JM MBR Cold Application Adhesive at 1.5 to 2.0 gal/square
	Ply	GlasPly IV, GlasPly Premier, GlasBase Plus, PermaPly 28	
APP-CA1 (APP, Cold-Applied, 1-part)	Base Ply or Ply	JM APP Base	JM MBR Bonding Adhesive at 1.5 to 2.0 gal/square
	Cap Ply	Tricor M FR, Tricor M FR CR	
APP-CA2 (APP, Cold-Applied, 2-part)	Base Ply or Ply	JM APP Base	Torch-Applied
	Cap Ply	Tricor M FR, Tricor M FR CR	
APP-TA (APP, Torch-Applied)	Base Ply or Ply	JM APP Base, APPeX 4S	Torch-Applied
	Cap Ply	APPeX 4S, APPeX 4.5M, APPeX 4.5M FR, APPeX 4.5M FR CR, Tricor S, Tricor M FR, Tricor M FR CR	

16 Vapor barrier options for use over structural concrete deck followed by bonded insulation carry the following MDP limitations. The lesser of the MDP listings below vs. those in Table 3A applies.

VAPOR BARRIER OPTIONS; STRUCTURAL CONCRETE DECK; FOLLOWED BY ADHESIVE-APPLIED INSULATION PER TABLE 3A:					
OPTION #	PRIMER	VAPOR BARRIER		INSULATION ADHESIVE	MDP (PSF)
		TYPE	APPLICATION		
C-VB-1.	ASTM D41	Two plies GlasPly IV, GlasPly Premier in hot asphalt		JM-RSUA, 12-inch o.c.	-180.0
C-VB-2.	JM SA Primer Low VOC	JM Vapor Barrier SA		JM UIA-TWO-PART, 12-inch o.c.	-277.5
C-VB-3.	JM SA Primer Low VOC	JM Vapor Barrier SA		JM-RSUA, 12-inch o.c.	-277.5
C-VB-4.	ASTM D41	DynaPly T1, DynaBase, DynaBase XT, DynaBase PR, DynaLastic 180 S, DynaLastic 250 S		JM UIA-TWO-PART, 12-inch o.c.	-277.5
C-VB-5.	ASTM D41	DynaBase HW, DynaWeld Base, DynaWeld 180 S		JM UIA-TWO-PART, 12-inch o.c.	-277.5
C-VB-6.	ASTM D41	DynaPly T1, DynaBase, DynaBase XT, DynaBase PR, DynaLastic 180 S, DynaLastic 250 S		JM-RSUA, 12-inch o.c.	-277.5
C-VB-7.	ASTM D41	DynaBase HW, DynaWeld Base, DynaWeld 180		JM-RSUA, 12-inch o.c.	-292.5

17 "MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads. Refer to FBC 1609 for determination of design wind loads

TABLE 1A: WOOD DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-2: MECHANICALLY ATTACHED ANCHOR SHEET, BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	Anchor Sheet			Base Insulation		Top Insulation		Roof Cover (Note 15)			MDP (psf)
		Type	Fasteners (Note 11)	Attach	Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base	Ply	Cap	
W-1	Min. 19/32-inch plywood	Two plies of PermaPly 28 or Ventsulation	32 ga., 1-5/8-inch diameter tin caps with 11 ga. annular ring shank nails	9-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	(Optional) Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	hot asphalt	Min. 0.75-inch Fesco Board (homogeneous), min. 0.5-inch Retro-Fit Board or DuraBoard or min. 1.5-inch Fesco Foam or DuraFoam	hot asphalt	BP-AA	(Optional) APP-TA	APP-TA	-52.5

TABLE 1B: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE A-2: MECHANICALLY ATTACHED ANCHOR SHEET, BONDED INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	Anchor Sheet			Base Insulation		Top Insulation		Roof Cover (Note 15)			MDP (psf)
		Type	Fasteners (Note 11)	Attach	Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base	Ply	Cap	
W-2	Min. 19/32-inch plywood	Two plies of PermaPly 28 or Ventsulation	Note 2	9-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	(Optional) Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	hot asphalt	Min. 0.75-inch Fesco Board (homogeneous), min. 0.5-inch Retro-Fit Board or DuraBoard or min. 1.5-inch Fesco Foam or DuraFoam	hot asphalt	BP-AA	(Optional) APP-TA	APP-TA	-52.5

TABLE 1C: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B-1: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER

System No.	Deck (Note 1)	Base Insulation Layer			Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
		Type	Fasteners (Note 11)	Attach	Type	Attach (Notes 6,7,8)	Base	Ply	Cap	
W-3	Min. 19/32-inch plywood	Min. 1.4-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF, JM ISO 3 or Min 1.5-inch Fesco Foam or DuraFoam	Note 2	1 per 2.0 ft ²	Min. 0.75-inch Fesco Board (homogeneous), min. 0.5-inch Retro-Fit Board or DuraBoard or min. 1.5-inch Fesco Foam	hot asphalt	BP-AA	(Optional) APP-TA	APP-TA	-45.0*
W-4	Min. 19/32-inch plywood	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF, JM ISO 3, Fesco Foam or DuraFoam	Note 2	1 per 1.3 ft ²	Min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Retro-Fit Board or DuraBoard	hot asphalt	BP-AA	(Optional) APP-TA	APP-TA	-52.5

**TABLE 1D: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER**

System No.	Deck (Note 1)	Base Insulation Layer (Note 13)	Top Insulation Layer			Roof Cover (Note 15)			MDP (psf)
			Type	Fasteners (Note 11)	Attach	Base	Ply	Cap	
W-5	Min. 19/32-inch plywood	One or more layers, any combination, loose laid	Min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Retro-Fit Board or DuraBoard	Note 2	1 per 2.0 ft ²	BP-AA	(Optional) APP-TA	APP-TA	-45.0*

**TABLE 1E: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE D-2: PRELIMINARILY ATTACHED INSULATION, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER**

System No.	Deck (Note 1)	Slip Sheet	Insulation Layer(s) (Note 13)		Base Sheet			Roof Cover (Note 15)		MDP (psf)
			Type	Attach	Base	Fasteners (Note 11)	Attach	Ply	Cap	
W-6	Min. 19/32-inch plywood	(Optional) One or more layers PermaPly 28, loose laid below or above insulation	One or more layers, any combination	Prelim Attach	JM APP Base, PermaPly 28, Glasbase Plus or Ventsulation	Note 2	12-inch o.c. in 4-inch lap and 18-inch o.c. in two, equally spaced, staggered center rows	(Optional) APP-TA	APP-TA	-45.0*
W-7	Min. 15/32-inch plywood	(Optional) One or more layers PermaPly 28, loose laid below or above insulation	One or more layers, any combination	Loose-laid	DynaFast 180 HW or DynaFast 250 HW	High Load Fasteners and APB Plates or High Load Plates	18-inch o.c. within the min. 4-inch wide, heat-welded side laps.	(Optional) APP-TA	APP-TA	-45.0*
W-8	Min. 19/32-inch plywood	(Optional) One or more layers PermaPly 28, loose laid below or above insulation	One or more layers, any combination	Prelim Attach	Two plies PermaPly 28 or Ventsulation	Note 2	9-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	(Optional) APP-TA	APP-TA	-52.5
W-9	Min. 15/32-inch plywood	(Optional) One or more layers PermaPly 28, loose laid below or above insulation	One or more layers, min. 1-inch, any combination	Loose-laid	DynaFast 180 HW or DynaFast 250 HW	High Load Fasteners and APB Plates or High Load Plates	9-inch o.c. within the min. 4-inch wide, heat-welded side laps.	(Optional) APP-TA	APP-TA	-60.0
W-10	Min. 15/32-inch plywood	(Optional) One or more layers PermaPly 28, loose laid below or above insulation	One or more layers, min. 1-inch, any combination	Loose-laid	DynaFast 180 HW or DynaFast 250 HW	High Load LH through 1-inch wide JM Polymer Membrane Batten	6-inch o.c. within the min. 4-inch wide, heat-welded side laps.	(Optional) APP-TA	APP-TA	-82.5

TABLE 1F: WOOD DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)								
SYSTEM TYPE E-2: NON-INSULATED, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER								
System No.	Deck (Note 1)	Slip Sheet	Base Sheet			Roof Cover (Note 15)		MDP (psf)
			Base	Fasteners (Note 11)	Attach	Ply	Cap	
W-11	Min. 19/32-inch plywood	(Optional) One or more layers PermaPly 28, loose laid below	Two plies of PermaPly 28 or Ventsulation	32 ga., 1-5/8-inch diameter tin caps with 11 ga. annular ring shank nails	9-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	(Optional) APP-TA	APP-TA	-52.5

TABLE 1G: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER								
SYSTEM TYPE E-2: NON-INSULATED, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER								
System No.	Deck (Note 1)	Slip Sheet	Base Sheet			Roof Cover (Note 15)		MDP (psf)
			Base	Fasteners (Note 11)	Attach	Ply	Cap	
W-12	Min. 19/32-inch plywood	(Optional) One or more layers PermaPly 28, loose laid below	JM APP Base, PermaPly 28, Glasbase Plus or Ventsulation	Note 2	12-inch o.c. in 4-inch lap and 18-inch o.c. in two, equally spaced, staggered center rows	(Optional) APP-TA	APP-TA	-45.0*
W-13	Min. 15/32-inch	(Optional) One or more layers PermaPly 28, loose laid	DynaFast 180 HW or DynaFast 250 HW	High Load Fasteners and APB Plates or High Load Plates	18-inch o.c. within the min. min. 4-inch wide, heat-welded side laps.	(Optional) APP-TA	APP-TA	-45.0*
W-14	Min. 19/32-inch plywood	(Optional) One or more layers PermaPly 28, loose laid below	Two plies of PermaPly 28 or Ventsulation	Note 2	9-inch o.c. in 4-inch lap and 12-inch o.c. in two, equally spaced, staggered center rows	(Optional) APP-TA	APP-TA	-52.5

**TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B-1: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER**

System No.	Deck (Note 1)	Base Insulation Layer			Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
		Type	Fasten (Note 11)	Attach	Type	Attach (Notes 6,7,8)	Base	Ply	Cap	
HOT OR TORCH APPLIED BASE:										
S-1	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Note 2	1 per 2.0 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	hot asphalt	BP-AA or APP-TA	(Optional) APP-TA	APP-TA	-45.0*
S-2	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Note 2	1 per 4.0 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	hot asphalt	BP-AA or APP-TA	(Optional) APP-TA	APP-TA	-45.0*
S-3	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF, JM ISO 3 Fesco Foam or DuraFoam	Note 2	1 per 2.0 ft ²	Min. 0.5-inch Retro-Fit Board or DuraBoard, min. 0.75-inch Fesco Board (homogeneous) or min. 1.5-inch Fesco Foam or DuraFoam	hot asphalt	BP-AA	(Optional) APP-TA	APP-TA	-45.0*
S-4	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF, JM ISO 3, Fesco Foam or DuraFoam	Note 2	1 per 1.3 ft ²	Min. 0.5-inch Retro-Fit Board or DuraBoard, min. 0.75-inch Fesco Board (homogeneous) or min. 1.5-inch Fesco Foam or DuraFoam	hot asphalt	BP-AA	(Optional) APP-TA	APP-TA	-52.5
S-5	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Note 2	1 per 1.6 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	hot asphalt	BP-AA or APP-TA	(Optional) APP-TA	APP-TA	-60.0
S-6	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF, JM ISO 3	Note 2	1 per 1.5 ft ²	Min. 0.5-inch Retro-Fit Board or DuraBoard or min. 1.5-inch DuraFoam	hot asphalt	3 plies BP-AA	(Optional) APP-TA	APP-TA	-75.0
S-7	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF or JM ISO 3	Note 2	1 per 2.0 ft ²	Min. 0.5-inch DuraBoard	MBR-BA	APP-TA	(Optional) APP-TA	APP-TA	-45.0*
S-8	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Note 2	1 per 2.0 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	BP-AA or APP-TA	(Optional) APP-TA	APP-TA	-45.0*

**TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B-1: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER**

System No.	Deck (Note 1)	Base Insulation Layer			Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
		Type	Fasten (Note 11)	Attach	Type	Attach (Notes 6,7,8)	Base	Ply	Cap	
S-9	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Note 2	1 per 4.0 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	BP-AA or APP-TA	(Optional) APP-TA	APP-TA	-45.0*
S-10	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Note 2	1 per 1.6 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	BP-AA or APP-TA	(Optional) APP-TA	APP-TA	-60.0
S-11	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Note 2	1 per 2.0 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	JM-RSUA	APP-TA	(Optional) APP-TA	APP-TA	-45.0*
S-12	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Note 2	1 per 2.0 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Polysset CR-20	BP-AA or APP-TA	(Optional) APP-TA	APP-TA	-45.0*
S-13	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Note 2	1 per 4.0 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Polysset CR-20	BP-AA or APP-TA	(Optional) APP-TA	APP-TA	-45.0*
S-14	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Note 2	1 per 1.6 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Polysset CR-20	BP-AA or APP-TA	(Optional) APP-TA	APP-TA	-60.0
COLD APPLIED BASE:										
S-15	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 5.3 ft ²	Min. 0.5-inch RetroPlus Board	hot asphalt	APP-CA2	None	APP-CA2	-37.5*
S-16	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 4.0 ft ²	Min. 0.5-inch RetroPlus Board	hot asphalt	APP-CA2	None	APP-CA2	-45.0*
S-17	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 2-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 5.3 ft ²	Min. 0.5-inch RetroPlus Board	hot asphalt	APP-CA2	None	APP-CA2	-45.0*
S-18	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.8 ft ²	Min. 0.5-inch RetroPlus Board	hot asphalt	APP-CA2	None	APP-CA2	-60.0

**TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B-1: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER**

System No.	Deck (Note 1)	Base Insulation Layer			Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
		Type	Fasten (Note 11)	Attach	Type	Attach (Notes 6,7,8)	Base	Ply	Cap	
S-19	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.3 ft ²	Min. 0.5-inch RetroPlus Board	hot asphalt	APP-CA2	None	APP-CA2	-67.5
S-20	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.0 ft ²	Min. 0.5-inch RetroPlus Board	hot asphalt	APP-CA2	None	APP-CA2	-90.0
S-21	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 2-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.5 ft ²	Min. 0.5-inch RetroPlus Board	hot asphalt	APP-CA2	None	APP-CA2	-90.0
S-22	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 5.3 ft ²	Min. 0.5-inch RetroPlus Board	MBR-BA, full coverage	APP-CA2	None	APP-CA2	-37.5*
S-23	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 4.0 ft ²	Min. 0.5-inch RetroPlus Board	MBR-BA, full coverage	APP-CA2	None	APP-CA2	-45.0*
S-24	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 2-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 5.3 ft ²	Min. 0.5-inch RetroPlus Board	MBR-BA, full coverage	APP-CA2	None	APP-CA2	-45.0*
S-25	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.8 ft ²	Min. 0.5-inch RetroPlus Board	MBR-BA, full coverage	APP-CA2	None	APP-CA2	-60.0
S-26	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.3 ft ²	Min. 0.5-inch RetroPlus Board	MBR-BA, full coverage	APP-CA2	None	APP-CA2	-67.5
S-27	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.0 ft ²	Min. 0.5-inch RetroPlus Board	MBR-BA, full coverage	APP-CA2	None	APP-CA2	-90.0
S-28	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 2-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.5 ft ²	Min. 0.5-inch RetroPlus Board	MBR-BA, full coverage	APP-CA2	None	APP-CA2	-90.0
S-29	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 5.3 ft ²	Min. 0.5-inch RetroPlus Board	UIA-TWO-PART	APP-CA2	None	APP-CA2	-37.5*
S-30	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 5.3 ft ²	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	BP-CA1, APP-CA1	(Optional) BP-CA1, APP-CA1	APP-CA1	-37.5*

**TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B-1: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER**

System No.	Deck (Note 1)	Base Insulation Layer			Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
		Type	Fasten (Note 11)	Attach	Type	Attach (Notes 6,7,8)	Base	Ply	Cap	
S-31	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 4.0 ft ²	Min. 0.5-inch RetroPlus Board	UIA-TWO-PART	APP-CA2	None	APP-CA2	-45.0*
S-32	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 4.0 ft ²	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	BP-CA1, APP-CA1	(Optional) BP-CA1, APP-CA1	APP-CA1	-45.0*
S-33	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 2-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 5.3 ft ²	Min. 0.5-inch RetroPlus Board	UIA-TWO-PART	APP-CA2	None	APP-CA2	-45.0*
S-34	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 2-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 5.3 ft ²	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	BP-CA1, APP-CA1	(Optional) BP-CA1, APP-CA1	APP-CA1	-45.0*
S-35	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.8 ft ²	Min. 0.5-inch RetroPlus Board	UIA-TWO-PART	APP-CA2	None	APP-CA2	-60.0
S-36	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.8 ft ²	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	BP-CA1, APP-CA1	(Optional) BP-CA1, APP-CA1	APP-CA1	-60.0
S-37	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.3 ft ²	Min. 0.5-inch RetroPlus Board	UIA-TWO-PART	APP-CA2	None	APP-CA2	-67.5
S-38	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.3 ft ²	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	BP-CA1, APP-CA1	(Optional) BP-CA1, APP-CA1	APP-CA1	-67.5
S-39	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.0 ft ²	Min. 0.5-inch RetroPlus Board	UIA-TWO-PART	APP-CA2	None	APP-CA2	-90.0
S-40	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.0 ft ²	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	BP-CA1, APP-CA1	(Optional) BP-CA1, APP-CA1	APP-CA1	-90.0
S-41	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 2-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.5 ft ²	Min. 0.5-inch RetroPlus Board	UIA-TWO-PART	APP-CA2	None	APP-CA2	-90.0
S-42	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 2-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.5 ft ²	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	BP-CA1, APP-CA1	(Optional) BP-CA1, APP-CA1	APP-CA1	-90.0

**TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE B-1: MECHANICALLY ATTACHED BASE INSULATION, BONDED TOP INSULATION, BONDED ROOF COVER**

System No.	Deck (Note 1)	Base Insulation Layer			Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
		Type	Fasten (Note 11)	Attach	Type	Attach (Notes 6,7,8)	Base	Ply	Cap	
S-43	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 5.3 ft ²	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	JM-RSUA	BP-CA1, APP-CA1	(Optional) BP-CA1, APP-CA1	APP-CA1	-37.5*
S-44	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 4.0 ft ²	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	JM-RSUA	BP-CA1, APP-CA1	(Optional) BP-CA1, APP-CA1	APP-CA1	-45.0*
S-45	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 2-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 5.3 ft ²	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	JM-RSUA	BP-CA1, APP-CA1	(Optional) BP-CA1, APP-CA1	APP-CA1	-45.0*
S-46	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.8 ft ²	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	JM-RSUA	BP-CA1, APP-CA1	(Optional) BP-CA1, APP-CA1	APP-CA1	-60.0
S-47	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.3 ft ²	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	JM-RSUA	BP-CA1, APP-CA1	(Optional) BP-CA1, APP-CA1	APP-CA1	-67.5
S-48	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 1.5-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.0 ft ²	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	JM-RSUA	BP-CA1, APP-CA1	(Optional) BP-CA1, APP-CA1	APP-CA1	-90.0
S-49	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	Min. 2-inch ENRGY 3, R-Panel, ENRGY 3 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF or CGF, ENRGY 3 25 PSI AGF or CGF, ValuTherm AGF or CGF, ValuTherm 25 PSI AGF or CGF	Note 2	1 per 1.5 ft ²	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	JM-RSUA	BP-CA1, APP-CA1	(Optional) BP-CA1, APP-CA1	APP-CA1	-90.0

**TABLE 2B: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER**

System No.	Deck (Note 1)	Base Insulation Layer (Note 13)	Top Insulation Layer			Roof Cover (Note 15)			MDP (psf)
			Type	Fasteners (Note 11)	Attach	Base	Ply	Cap	
HOT OR TORCH APPLIED BASE:									
S-50	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	One or more layers, any combination, loose laid	Min. 0.5-inch Retro-Fit Board, DuraBoard or Min. 0.75-inch Fesco Board (homogeneous)	Note 2	1 per 2.0 ft ²	BP-AA	(Optional) APP-TA	APP-TA	-45.0*
S-51	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	One or more layers, any combination, loose laid	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 4.0 ft ²	BP-AA or APP-TA	(Optional) APP-TA	APP-TA	-45.0*
S-52	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	One or more layers, any combination, loose laid	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 1.8 ft ²	BP-AA or APP-TA	(Optional) APP-TA	APP-TA	-60.0
S-53	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	One or more layers, any combination, loose laid	Min. 0.75-inch DuraBoard	Note 2	1 per 1.3 ft ²	APP-TA	(Optional) APP-TA	APP-TA	-67.5
S-54	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi struct conc.	One or more layers, any combination, loose laid	Min. 0.75-inch DuraBoard	Note 2	1 per 1.3 ft ²	APP-TA	(Optional) APP-TA	APP-TA	-75.0
COLD APPLIED BASE:									
S-55	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	One or more layers, any combination, loose laid	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 2.7 ft ²	BP-CA1, APP-CA1	(Optional) BP-CA1, APP-CA1	APP-CA1	-37.5*
S-56	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	One or more layers, any combination, loose laid	Min. 0.375-inch SECUROCK Gypsum-Fiber Roof Board	Note 2; round plates only	1 per 4.0 ft ²	BP-CA1, APP-CA1	(Optional) BP-CA1, APP-CA1	APP-CA1	-45.0*
S-57	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	One or more layers, any combination, loose laid	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 1.5 ft ²	BP-CA1, APP-CA1	(Optional) BP-CA1, APP-CA1	APP-CA1	-82.5
SELF-ADHERING BASE:									
S-58	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	One or more layers, any combination, loose laid	Min. 1.5-inch ENRGY 3	Note 2	1 per 2.0 ft ²	JM BaseGrip SD/SA	(Optional) APP-TA	APP-TA	-45.0*

**TABLE 2C: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE D-2: PRELIMINARILY ATTACHED INSULATION, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER**

System No.	Deck (Note 1)	Insulation Layer(s) (Note 13)		Base Sheet			Roof Cover (Note 15)		MDP (psf)
		Type	Attach	Base	Fasteners (Note 11)	Attach	Ply	Cap	
S-59	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	One or more layers, any combination	Prelim. Attached	JM APP Base, PermaPly 28, Glasbase Plus or Ventsulation	Note 2	12-inch o.c. at the 4-inch lap and 18-inch o.c. in two, staggered center rows	(Optional) APP-TA	APP-TA	-45.0*
S-60	Min. 22 ga., type B, Grade 33 steel	One or more layers, min. 1-inch, any combination	Loose-laid	DynaFast 180 HW or DynaFast 250 HW	High Load Fasteners and APB Plates or High Load Plates	18-inch o.c. within the min. 4-inch wide, heat-welded side laps.	(Optional) APP-TA	APP-TA	-45.0*
S-61	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	One or more layers, any combination	Prelim. Attached	Two Plies of PermaPly 28 or Ventsulation	Note 2	9-inch o.c. at the 4-inch lap and 12-inch o.c. in two, staggered center rows	(Optional) APP-TA	APP-TA	-52.5
S-62	Min. 22 ga., type B, Grade 33 steel	One or more layers, min. 1-inch, any combination	Loose-laid	DynaFast 180 HW or DynaFast 250 HW	High Load Fasteners and High Load Plates	12-inch o.c. within the min. 4-inch wide, heat-welded side laps.	(Optional) APP-TA	APP-TA	-67.5
S-63	Min. 22 ga., type B, Grade 80 steel	One or more layers, min. 1-inch, any combination	Prelim. Attached	DynaFast 180 HW or DynaFast 250 HW	High Load LH through 1-inch wide JM Polymer Membrane Batten	6-inch o.c. within min. 4-inch wide, heat-welded laps spaced 71.75-inch o.c.; intermediate 3-inch laps heat-welded	(Optional) APP-TA	APP-TA	-90.0
S-64	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi struct conc.	One or more layers, min. 1-inch, any combination	Prelim. Attached	GlasBase Plus	Note 2	9-inch o.c. at the 4-inch lap and 12-inch o.c. in two, staggered center rows	(Optional) APP-TA	APP-TA	-97.5
S-65	Min. 22 ga., type B, Grade 33 steel	One or more layers, min. 1-inch, any combination	Loose-laid	DynaFast 180 HW or DynaFast 250 HW	High Load Fasteners and APB Plates or High Load Plates	6-inch o.c. within the min. 4-inch wide, heat-welded side laps.	(Optional) APP-TA	APP-TA	-105.0
S-66	Min. 22 ga., type EF, Grade 80 steel	One or more layers, min. 1-inch, any combination	Prelim. Attached	DynaFast 180 HW	High Load Fasteners and High Load Plates	6-inch o.c. within the min. 4-inch wide, heat welded laps	(Optional) APP-TA	APP-TA	-142.5
S-67	Min. 22 ga., type EF, Grade 80 steel	One or more layers, min. 1.5-inch, any combination	Loose laid	DynaFast 250 HW	High Load Fasteners and High Load Plates	6-inch o.c. within the min. 4-inch wide, heat welded laps	(Optional) APP-TA	APP-TA	-165.0

TABLE 3A: STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER
 REFER TO NOTE 16 FOR VAPOR BARRIER OPTIONS

System No.	Deck (Note 1)	Primer	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
			Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base	Ply	Cap	
HOT OR TORCH APPLIED BASE:										
C-1.	Min. 2,500 psi concrete	ASTM D41	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF or JM ISO 3	hot asphalt	Min 0.5-inch DuraBoard	hot asphalt	APP-TA	(Optional) APP-TA	APP-TA	-67.5
C-2.	Min. 2,500 psi concrete	ASTM D41	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF or JM ISO 3	hot asphalt	Min. 0.75-inch FescoBoard or min. 0.5-inch DuraBoard	hot asphalt	BP-AA	(Optional) BP-AA or APP-TA	APP-TA	-120.0
C-3.	Min. 2,500 psi concrete	ASTM D41	Min. 1.4-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF, JM ISO 3 or Min 1.5-inch Fesco Foam or DuraFoam or Min. 0.75-inch Fesco Board (homogeneous) or Min 0.5-inch Retro-Fit Board or DuraBoard	hot asphalt	Min 1.5-inch Fesco Foam or DuraFoam or Min. 0.75-inch Fesco Board (homogeneous) or Min 0.5-inch Retro-Fit Board or DuraBoard	hot asphalt	BP-AA	(Optional) APP-TA	APP-TA	-150.0
C-4.	Min. 2,500 psi concrete	ASTM D41	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	hot asphalt	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	hot asphalt	BP-AA	(Optional) BP-AA or APP-TA	APP-TA	-225.0
C-5.	Min. 2,500 psi concrete	ASTM D41	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	hot asphalt	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	hot asphalt	APP-TA	(Optional) APP-TA	APP-TA	-232.5
C-6.	Min. 2,500 psi concrete	ASTM D41	Min. 1.5-inch ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm CGF, ValuTherm 25 PSI CGF	hot asphalt	Min. 0.5-inch DuraBoard	hot asphalt	BP-AA	(Optional) APP-TA	APP-TA	-277.5
C-7.	Min. 2,500 psi concrete	ASTM D41	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, JM ISO 3, ValuTherm AGF, ValuTherm 25 PSI AGF	hot asphalt	Min. 0.5-inch DuraBoard	hot asphalt	BP-AA	(Optional) APP-TA	APP-TA	-305.0
C-8.	Min. 2,500 psi concrete	None	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF or JM ISO 3	MBR-BA	Min. 0.75-inch FescoBoard or min. 0.5-inch DuraBoard	MBR-BA	BP-AA	(Optional) BP-AA or APP-TA	APP-TA	-120.0
C-9.	Min. 2,500 psi concrete	None	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF or JM ISO 3	UIA-TWO-PART	Min 0.5-inch DuraBoard	UIA-TWO-PART	APP-TA	(Optional) APP-TA	APP-TA	-67.5

TABLE 3A: STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER
 REFER TO NOTE 16 FOR VAPOR BARRIER OPTIONS

System No.	Deck (Note 1)	Primer	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
			Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base	Ply	Cap	
C-10.	Min. 2,500 psi concrete	None	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF or JM ISO 3	UIA-TWO-PART	Min. 0.5-inch DuraBoard	UIA-TWO-PART	BP-AA	(Optional) BP-AA or APP-TA	APP-TA	-105.0
C-11.	Min. 2,500 psi concrete	None	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	BP-AA	(Optional) BP-AA or APP-TA	APP-TA	-225.0
C-12.	Min. 2,500 psi concrete	None	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	APP-TA	(Optional) APP-TA	APP-TA	-232.5
C-13.	Min. 2,500 psi concrete	None	(Optional) Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF or JM ISO 3	JM-RSUA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	JM-RSUA	APP-TA	(Optional) APP-TA	APP-TA	-105.0
C-14.	Min. 2,500 psi concrete	None	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF or JM ISO 3	JM-RSUA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	JM-RSUA	BP-AA	(Optional) BP-AA or APP-TA	APP-TA	-225.0
C-15.	Min. 2,500 psi concrete	None	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF or JM ISO 3	JM-RSUA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	JM-RSUA	APP-TA	(Optional) APP-TA	APP-TA	-232.5
C-16.	Min. 2,500 psi concrete	None	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Polyset CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Polyset CR-20	BP-AA	(Optional) BP-AA or APP-TA	APP-TA	-225.0
C-17.	Min. 2,500 psi concrete	None	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Polyset CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Polyset CR-20	APP-TA	(Optional) APP-TA	APP-TA	-232.5

TABLE 3B: STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE F: NON-INSULATED, BONDED ROOF COVER

System No.	Deck (Note 1)	Primer	Roof Cover (Note 15)			MDP (psf)
			Base	Ply	Cap	
C-18.	Min. 2,500 psi concrete	ASTM D41	BP-AA	(Optional) APP-TA	APP-TA	-305.0
C-19.	Min. 2,500 psi concrete	ASTM D41	APP-TA	(Optional) APP-TA	APP-TA	-315.0

**TABLE 4A: LIGHTWEIGHT CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER**

System No.	Deck (Note 1)	Lightweight Concrete (Note 14)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
			Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base	Ply	Cap	
CELCORE (FL2037):										
LWC-1	Min. 2,500 psi concrete	Min. 200 psi, min 2-inch Celcore Cellular Concrete	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Polyset CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Polyset CR-20	BP-AA or APP-TA	(Optional) BP-AA or APP-TA	APP-TA	-222.5
ELASTIZELL (FL4994):										
LWC-2	Min. 2,500 psi concrete	Min. 200 psi, min 2-inch Range II Elastizell Lightweight Insulating Concrete	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF or JM ISO 3	UIA-TWO-PART	Min 0.5-inch DuraBoard	UIA-TWO-PART	APP-TA	(Optional) APP-TA	APP-TA	-67.5
LWC-3	Min. 2,500 psi concrete	Min. 200 psi, min 2-inch Range II Elastizell Lightweight Insulating Concrete	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF or JM ISO 3	UIA-TWO-PART	Min. 0.5-inch DuraBoard	UIA-TWO-PART	BP-AA	(Optional) BP-AA or APP-TA	APP-TA	-105.0
LWC-4	Min. 2,500 psi concrete	Min. 200 psi, min 2-inch Range II Elastizell Lightweight Insulating Concrete	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	BP-AA or APP-TA	(Optional) BP-AA or APP-TA	APP-TA	-225.0
LWC-5	Min. 2,500 psi concrete	Min. 200 psi, min 2-inch Range II Elastizell Lightweight Insulating Concrete	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Polyset CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Polyset CR-20	BP-AA or APP-TA	(Optional) BP-AA or APP-TA	APP-TA	-180.0
MEARLCRETE (FL13492):										
LWC-6	Min. 2,500 psi concrete	Min. 200 psi, min 2-inch Mearlcrete	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Polyset CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Polyset CR-20	BP-AA	(Optional) BP-AA or APP-TA	APP-TA	-225.0
LWC-7	Min. 2,500 psi concrete	Min. 200 psi, min 2-inch Mearlcrete	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Polyset CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Polyset CR-20	APP-TA	(Optional) APP-TA	APP-TA	-232.5

**TABLE 4B: LIGHTWEIGHT CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-2: MECHANICALLY ATTACHED ANCHOR SHEET, BONDED INSULATION, BONDED ROOF COVER**

System No.	Deck (Note 1)	Lightweight Concrete (Note 14)	Anchor Sheet			Insulation			Roof Cover (Note 15)			MDP (psf)
			Type	Fasteners (Note 11)	Attach	Base	Top	Attach (Notes 6,7,8)	Base	Ply	Cap	
LWC-8	Min. 22 ga. steel or min. 2,500 psi structural concrete	Pre-existent, Min. 300 psi, min. 2-inch thick cellular LWIC. <i>To qualify the LWC, the fastener shall document min. 62 lbf</i>	JM PermaPly 28, DynaBase, GlasPly Premier or Ventsulation	JM LWC Base Sheet Fasteners	7-inch o.c. at the 3-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF, JM ISO 3, Fesco Foam or DuraFoam, min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Retro-Fit Board or DuraBoard	(Optional) Any base insulation except polyiso	hot asphalt	BP-AA	(Optional) APP-TA	APP-TA	-52.5
LWC-9	Min. 22 ga. steel or min. 2,500 psi structural concrete	Pre-existent, Min. 300 psi, min. 2-inch thick cellular LWIC. <i>To qualify the LWC, the fastener shall document min. 62 lbf</i>	JM PermaPly 28, DynaBase, GlasPly Premier or Ventsulation	JM LWC Base Sheet Fasteners	7-inch o.c. at the 3-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	Min. 1.5-inch DuraFoam	None	hot asphalt	APP-TA	(Optional) APP-TA	APP-TA	-52.5
LWC-10	Min. 22 ga. steel or min. 2,500 psi structural concrete	Pre-existent, Min. 300 psi, min. 2-inch thick cellular LWIC. <i>To qualify the LWC, the fastener shall document min. 62 lbf</i>	JM PermaPly 28, DynaBase, GlasPly Premier or Ventsulation	JM LWC Base Sheet Fasteners	7-inch o.c. at the 3-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF, JM ISO 3	Min. 0.5-inch DuraBoard	hot asphalt	APP-TA	(Optional) APP-TA	APP-TA	-52.5
LWC-11	Min. 22 ga. steel or min. 2,500 psi structural concrete	Pre-existent, Min. 300 psi, min. 2-inch thick cellular LWIC	JM PermaPly 28, DynaBase, GlasPly Premier or Ventsulation	Note 2 <i>Fasteners to engage structural deck below LWIC.</i>	7-inch o.c. at the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows.	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF, JM ISO 3, Fesco Foam or DuraFoam, min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Retro-Fit Board or DuraBoard	(Optional) Any base insulation except polyiso	hot asphalt	BP-AA	(Optional) APP-TA	APP-TA	-75.0
LWC-12	Min. 22 ga. steel or min. 2,500 psi structural concrete	Pre-existent, Min. 300 psi, min. 2-inch thick cellular LWIC	JM PermaPly 28, DynaBase, GlasPly Premier or Ventsulation	Note 2 <i>Fasteners to engage structural deck below LWIC.</i>	7-inch o.c. at the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows.	Min. 1.5-inch DuraFoam	None	hot asphalt	APP-TA	(Optional) APP-TA	APP-TA	-75.0

**TABLE 4B: LIGHTWEIGHT CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-2: MECHANICALLY ATTACHED ANCHOR SHEET, BONDED INSULATION, BONDED ROOF COVER**

System No.	Deck (Note 1)	Lightweight Concrete (Note 14)	Anchor Sheet			Insulation			Roof Cover (Note 15)			MDP (psf)
			Type	Fasteners (Note 11)	Attach	Base	Top	Attach (Notes 6,7,8)	Base	Ply	Cap	
LWC-13	Min. 22 ga. steel or min. 2,500 psi structural concrete	Pre-existent, Min. 300 psi, min. 2-inch thick cellular LWIC	JM PermaPly 28, DynaBase, GlasPly Premier or Ventsulation	Note 2 <i>Fasteners to engage structural deck below LWIC.</i>	7-inch o.c. at the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows.	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF, JM ISO 3	Min. 0.5-inch DuraBoard	hot asphalt	APP-TA	(Optional) APP-TA	APP-TA	-75.0
LWC-14	Min. 22 ga. steel or min. 2,500 psi structural concrete	Min. 300 psi, min. 2.25-inch thick Concrete (FL5584 or 10500)	GlasPly Premier	JM LWC Base Sheet Fasteners	7-inch o.c. at the 3-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF, JM ISO 3, Fesco Foam or DuraFoam, min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Retro-Fit Board or DuraBoard	(Optional) Any base insulation except polyiso	hot asphalt	BP-AA	(Optional) APP-TA	APP-TA	-82.5

**TABLE 4C: LIGHTWEIGHT CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE E-2: MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER**

System No.	Deck (Note 1)	Lightweight Concrete (Note 14)	Base Sheet			Roof Cover (Note 15)		MDP (psf)
			Type	Fasteners (Note 11)	Attach	Ply	Cap	
PRE-EXISTENT CELLULAR LWC (NOTE 14):								
LWC-15	Min. 22 ga. steel or min. 2,500 psi structural concrete	Pre-existent, Min. 300 psi, min. 2-inch thick cellular LWIC <i>Note: To qualify the LWC, the fastener shall document min. 60 lbf</i>	PermaPly 28 or Ventsulation	JM LWC Base Sheet Fasteners	7-inch o.c. at the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	(Optional) APP-TA	APP-TA	-52.5
LWC-16	Min. 22 ga. steel or min. 2,500 psi structural concrete	Pre-existent, Min. 300 psi, min. 2-inch thick cellular LWIC <i>Note: To qualify the LWC, the fastener shall document min. 88 lbf</i>	PermaPly 28 or DynaBase	JM UltraLok or Trufast Twin Loc-Nail (Note 11)	9-inch o.c. at the 4-inch lap and 9-inch o.c. in two, equally spaced, staggered center rows	(Optional) APP-TA	APP-TA	-60.0
LWC-17	Min. 22 ga. steel or min. 2,500 psi structural concrete	Pre-existent, Min. 200 psi, min. 2-inch thick cellular LWIC	PermaPly 28 or Ventsulation	Note 2 <i>Fasteners to engage structural deck below LWIC.</i>	7-inch o.c. at the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows.	(Optional) APP-TA	APP-TA	-75.0
CELCORE (FL2037):								
LWC-18	Min. 22 ga. steel or min. 2,500 psi structural concrete	Min. 498 psi, minimum 2-inch thick Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture	DynaFast 180 HW or DynaFast 250 HW	Trufast Twin Loc Tubes or JM UltraLok Tubes (min. 1.8-inch) through Trufast Batten Bar or JM Metal Batten TL	6-inch o.c. within the min. 4-inch wide, heat-welded side laps.	(Optional) APP-TA	APP-TA	-60.0

**TABLE 4C: LIGHTWEIGHT CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE E-2: MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER**

System No.	Deck (Note 1)	Lightweight Concrete (Note 14)	Base Sheet			Roof Cover (Note 15)		MDP (psf)
			Type	Fasteners (Note 11)	Attach	Ply	Cap	
LWC-19	Min. 22 ga. steel or min. 2,500 psi structural concrete	Min. 300 psi, min. 2-inch thick Celcore Cellular Concrete	DynaBase, GlasPly Premier, PermaPly 28 or Ventsulation	JM LWC Base Sheet Fasteners	7-inch o.c. at the 4-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	(Optional) APP-TA	APP-TA	-75.0
LWC-20	Min. 22 ga. steel or min. 2,500 psi structural concrete	Min. 498 psi, minimum 2-inch thick Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture	DynaFast 180 HW or DynaFast 250 HW	Trufast Twin Loc Tubes or JM UltraLok Tubes (min. 1.8-inch) through Trufast Batten Bar or JM Metal Batten TL	6-inch o.c. within the min. 4-inch wide, heat-welded side laps and 6-inch o.c. in one center row	(Optional) APP-TA	APP-TA	-75.0
LWC-21	Min. 2,500 psi structural concrete	Min. 498 psi, minimum 2-inch thick Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture	DynaFast 180 HW or DynaFast 250 HW	Trufast Twin Loc Tubes or JM UltraLok Tubes (min. 1.8-inch) through Trufast Batten Bar or JM Metal Batten TL	6-inch o.c. within the min. 4-inch wide, heat-welded side laps and 6-inch o.c. in one center row	(Optional) APP-TA	APP-TA	-90.0
CONCRECEL (FL5584 or FL10500):								
LWC-22	Min. 22 ga. steel or min. 2,500 psi structural concrete	Min. 300 psi, minimum 2.25-inch thick Concrecel Concrete	GlasPly Premier	JM LWC Base Sheet Fasteners	7-inch o.c. at the 3-inch lap and 7-inch o.c. in two, equally spaced, staggered center rows	(Optional) APP-TA	APP-TA	-82.5

**TABLE 5A: CEMENTITIOUS WOOD FIBER DECKS – REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE E-2: MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER**

System No.	Deck (Note 1)	Base Sheet			Roof Cover (Note 15)		MDP (psf)
		Type	Fasteners (Note 11)	Attach	Ply	Cap	
CWF-1.	Existing 3-inch Tectum I Plank	DynaFast 180 HW or DynaFast 250 HW	Trufast Twin Loc Tubes or JM UltraLok Tubes (1.8-inch) through Trufast Batten Bar or JM Metal Batten TL	6-inch o.c. within the min. 4-inch wide, heat-welded side laps and 6-inch o.c. in one center row	(Optional) APP-TA	APP-TA	-90.0

**TABLE 6A: GYPSUM DECKS – REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER**

System No.	Deck (Notes 1 & 12)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base	Ply	Cap	
G-1.	Existing sound gypsum or gypsum plank	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF or JM ISO 3	UIA-TWO-PART	Min 0.5-inch DuraBoard	UIA-TWO-PART	APP-TA	(Optional) APP-TA	APP-TA	-67.5
G-2.	Existing sound gypsum or gypsum plank	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF or JM ISO 3	UIA-TWO-PART	Min. 0.5-inch DuraBoard	UIA-TWO-PART	BP-AA	(Optional) BP-AA or APP-TA	APP-TA	-105.0
G-3.	Existing sound gypsum or gypsum plank	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	BP-AA or APP-TA	(Optional) BP-AA or APP-TA	APP-TA	-112.5
G-4.	Existing sound gypsum or gypsum plank	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Polyset CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Polyset CR-20	BP-AA	(Optional) BP-AA or APP-TA	APP-TA	-225.0
G-5.	Existing sound gypsum or gypsum plank	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Polyset CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Polyset CR-20	APP-TA	(Optional) APP-TA	APP-TA	-232.5

**TABLE 6B: GYPSUM DECKS – REROOF (Tear-Off) or RECOVER
SYSTEM TYPE E-2: MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER**

System No.	Deck (Note 1)	Base Sheet			Roof Cover (Note 15)		MDP (psf)
		Type	Fasteners (Note 11)	Attach	Ply	Cap	
G-6.	Existing sound gypsum or gypsum plank	DynaFast 180 HW or DynaFast 250 HW	Trufast Twin Loc Tubes or JM UltraLok Tubes through Trufast Batten Bar or JM Metal Batten TL (Field W/D \geq 177 lbf)	6-inch o.c. within the min. 4-inch wide, heat-welded side laps.	(Optional) APP-TA	APP-TA	-60.0
G-7.	Existing sound gypsum or gypsum plank	DynaFast 180 HW or DynaFast 250 HW	Trufast Twin Loc Tubes or JM UltraLok Tubes through Trufast Batten Bar or JM Metal Batten TL (Field W/D \geq 133 lbf)	6-inch o.c. within the min. 4-inch wide, heat-welded side laps and 6-inch o.c. in one center row	(Optional) APP-TA	APP-TA	-90.0

TABLE 7: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

System No.	Substrate (Notes 1 & 12)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base	Ply	Cap	
R-1.	Existing asphaltic BUR	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF or JM ISO 3	hot asphalt	Min 0.5-inch DuraBoard	hot asphalt	APP-TA	(Optional) APP-TA	APP-TA	-67.5
R-2.	Existing asphaltic BUR	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF or JM ISO 3	hot asphalt	Min. 0.75-inch FescoBoard or min. 0.5-inch DuraBoard	hot asphalt	BP-AA	(Optional) BP-AA or APP-TA	APP-TA	-120.0
R-3.	Existing asphaltic BUR	Min. 1.4-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF, JM ISO 3 or Min 1.5-inch Fesco Foam or DuraFoam or Min. 0.75-inch Fesco Board (homogeneous) or Min 0.5-inch Retro-Fit Board or DuraBoard	hot asphalt	Min 1.5-inch Fesco Foam or DuraFoam or Min. 0.75-inch Fesco Board (homogeneous) or Min 0.5-inch Retro-Fit Board or DuraBoard	hot asphalt	BP-AA	(Optional) APP-TA	APP-TA	-150.0
R-4.	Existing asphaltic BUR	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	hot asphalt	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	hot asphalt	BP-AA	(Optional) BP-AA or APP-TA	APP-TA	-225.0
R-5.	Existing asphaltic BUR	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	hot asphalt	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	hot asphalt	APP-TA	(Optional) APP-TA	APP-TA	-232.5
R-6.	Existing asphaltic BUR	Min. 1.5-inch ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm CGF, ValuTherm 25 PSI CGF	hot asphalt	Min. 0.5-inch DuraBoard	hot asphalt	BP-AA	(Optional) APP-TA	APP-TA	-277.5
R-7.	Existing asphaltic BUR	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, JM ISO 3, ValuTherm AGF, ValuTherm 25 PSI AGF	hot asphalt	Min. 0.5-inch DuraBoard	hot asphalt	BP-AA	(Optional) APP-TA	APP-TA	-305.0
R-8.	Existing asphaltic BUR	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF or JM ISO 3	MBR-BA, full	Min. 0.75-inch FescoBoard or min. 0.5-inch DuraBoard	MBR-BA	BP-AA	(Optional) BP-AA or APP-TA	APP-TA	-112.5
R-9.	Existing asphaltic BUR	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF or JM ISO 3	UIA-TWO-PART	Min 0.5-inch DuraBoard	UIA-TWO-PART	APP-TA	(Optional) APP-TA	APP-TA	-67.5
R-10.	Existing asphaltic BUR	Min. 1.5-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF or JM ISO 3	UIA-TWO-PART	Min. 0.5-inch DuraBoard	UIA-TWO-PART	BP-AA	(Optional) BP-AA or APP-TA	APP-TA	-105.0
R-11.	Existing asphaltic BUR	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	BP-AA or APP-TA	(Optional) BP-AA or APP-TA	APP-TA	-120.0
R-12.	Existing asphaltic BUR	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Polyset CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Polyset CR-20	BP-AA	(Optional) BP-AA or APP-TA	APP-TA	-225.0

TABLE 7: RECOVER APPLICATIONS
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER

System No.	Substrate (Notes 1 & 12)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base	Ply	Cap	
R-13.	Existing asphaltic BUR	Min. 2-inch ENRGY 3, PSI-25, ENRGY 3 AGF, ENRGY 3 25 PSI AGF, ENRGY 3 CGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm 25 PSI AGF, ValuTherm CGF, ValuTherm 25 PSI CGF	Polysset CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Polysset CR-20	APP-TA	(Optional) APP-TA	APP-TA	-232.5