



**NEMO|etc.**

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**EVALUATION REPORT**

**Johns Manville Corporation**

717 17<sup>th</sup> Street  
Denver, CO 80202  
**(303) 978-4879**

**Evaluation Report J9340.07.08-R6**

**FL1046-R9**

**Date of Issuance: 07/08/2008**

**Revision 6: 12/16/2019**

**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 **6<sup>th</sup> Edition (2017) 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 documentation changes, or provisions of the Code that relate to the product change. Acceptance of this Evaluation Report by the named client constitutes agreement to notify Robert Nieminen, P.E. of any changes to the product(s), the Quality Assurance or the production facility location(s). NEMO|etc. requires a complete review of this Evaluation Report relative to updated Code requirements with each Code Cycle.

**ADVERTISEMENT:** The Evaluation Report number 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 4, 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 12/16/2019. 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. 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 6<sup>th</sup> Edition (2017) 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	FM 4474	2011
1504.7	Impact	FM 4470	2012
1507.11.2	Physical Properties	ASTM D6164	2011
1507.11.2	Physical Properties	ASTM D6222	2011
1507.11.2	Physical Properties	ASTM D6223	2011
1507.11.2	Physical Properties	ASTM D6509	2009

**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	OW6A2.AM	02/05/1993
FM Approvals (TST1867)	FM 4470	OX7A4.AM	08/26/1993
FM Approvals (TST1867)	FM 4470	OX0A9.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
PRI (TST5878)	Physical Properties	JMC-055-02-01	05/29/2012
PRI (TST5878)	Physical Properties	JMC-054-02-01.04.04	06/04/2012
PRI (TST5878)	Physical Properties	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)	Physical Properties	JMC-113-02-01	04/19/2013
PRI (TST5878)	FM 4470/4474	JMC-118-02-02	04/19/2013
PRI (TST5878)	Physical Properties	JMC-053-02-01	05/01/2013

Entity	Examination	Reference	Date
PRI (TST5878)	FM 4470/4474	JMC-141-02-01	05/13/2013
PRI (TST5878)	Physical Properties	JMC-147-02-01	05/28/2013
UL LLC (QUA9625)	Quality Assurance	Service Confirmation	04/24/2019

#### 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. The following membranes make up the subject systems.

TABLE 1: ROLL-GOODS FOR JOHNS MANVILLE APP MODIFIED BITUMEN ROOF SYSTEMS				
Type	Product	Specification		
		Reference	Grade	Type
Base / Ply Sheets	JM APP Base	ASTM D6509	N/A	N/A
	PermaPly 28	ASTM D4601	N/A	II
	Ventsulation	ASTM D4897	N/A	II
	GlasPly Premier	ASTM D2178	N/A	VI
	GlasPly IV	ASTM D4601	N/A	IV
	JM BaseGrip SD/SA	ASTM D4601	N/A	II
SBS Base Membranes	DynaFast 180 HW	ASTM D6164	S	I
	DynaFast 250 HW	ASTM D6164	S	II
APP Membranes	APPeX 4S	ASTM D6222	S	I
	APPeX 4.5M	ASTM D6222	G	I
	APPeX 4.5M FR	ASTM D6222	G	I
	APPeX 4.5M FR CR	ASTM D6222	G	I
	Tricor S	ASTM D6223	S	II
	Tricor M FR	ASTM D6223	G	II
	Tricor M FR CR	ASTM D6223	G	II

#### 5. LIMITATIONS:

- 5.1 This is a building code evaluation. Neither NEMO|etc. 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 HVHZ jurisdictions.
- 5.3 Refer to a current UL Roofing Materials Directory for fire ratings of this product.
- 5.4 For steel deck installations, foam plastic insulation shall be separated from the building interior in accordance with FBC 2603.4 unless the exceptions stated in FBC 2603.4.1 and 2603.6 apply.
- 5.5 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. Load resistance of the roof deck shall be documented through proper codified and/or FBC Approval documentation.
- 5.6 For recover installations, the existing roof shall be examined in accordance with FBC 1511.

- 5.7 For mechanically attached insulation or membrane or strip-bonded insulation, the maximum design pressure for the selected assembly shall meet or exceed the Zone 1 design pressure determined in accordance with FBC Chapter 16. Zones 2 and 3 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 (January 2016) for Zone 2/3 enhancements.
- 5.8 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.
- 5.9 For mechanically attached insulation or membrane 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 and analysis shall be in accordance with ANSI/SPRI FX-1 or Testing Application Standard TAS 105.
- 5.10 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.
- 5.11 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.
- 5.12 Metal edge attachment (except gutters), shall be designed and installed for wind loads in accordance with FBC Chapter 16 and tested for resistance in accordance with ANSI/SPRI ES-1 or Roofing Application Standard RAS 111, except the basic wind speed shall be determined from FBC Figure 1609.3(1), 1609.3(2) or 1609.3(3).
- 5.13 All products in the roof assembly shall have quality assurance in accordance with FAC Rule 61G20-3.

**6. INSTALLATION:**

- 6.1 **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.
- 6.2 System attachment requirements for wind load resistance are set forth in Appendix 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.

**7. BUILDING PERMIT REQUIREMENTS:**

As required by the Building Official or Authority Having Jurisdiction in order 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.

**9. QUALITY ASSURANCE ENTITY:**

UL LLC – QUA9625; (847) 664-3623; [LeAnna.Gradecki@ul.com](mailto:LeAnna.Gradecki@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-1	Wood	New, Reroof (Tear-Off)	A-2	Mech. Attached Anchor Sheet, Bonded Insulation, Bonded Roof Cover	4
1A-2	Wood	New, Reroof (Tear-Off), Recover	A-2	Mech. Attached Anchor Sheet, Bonded Insulation, Bonded Roof Cover	4
1B	Wood	New, Reroof (Tear-Off), Recover	B	Mech. Attached Base Insulation, Bonded Top Insulation, Bonded Roof Cover	4
1C	Wood	New, Reroof (Tear-Off), Recover	C	Mech. Attached Insulation, Bonded Roof Cover	5
1D	Wood	New, Reroof (Tear-Off), Recover	D	Prelim. Attached Insulation, Mech. Attached Base Sheet, Bonded Roof Cover	5
1E-1	Wood	New, Reroof (Tear-Off)	E	Non-Insulated, Mech. Attached Base Sheet, Bonded Roof Cover	6
1E-2	Wood	New, Reroof (Tear-Off), Recover	E	Non-Insulated, Mech. Attached Base Sheet, Bonded Roof Cover	6
2A	Steel or Structural concrete	New, Reroof (Tear-Off), Recover	B	Mech. Attached Base Insulation, Bonded Top Insulation, Bonded Roof Cover	7-11
2B	Steel or Structural concrete	New, Reroof (Tear-Off), Recover	C	Mech. Attached Insulation, Bonded Roof Cover	12
2C	Steel or Structural concrete	New, Reroof (Tear-Off), Recover	D	Prelim. Attached Insulation, Mech. 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-1	LWIC	New, Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Roof Cover	16
4A-2	LWIC	New, Reroof (Tear-Off)	A-2	Mech. Attached Anchor Sheet, Bonded Insulation, Bonded Roof Cover	17-18
4B	LWIC	New, Reroof (Tear-Off)	E	Non-Insulated, Mech. Attached Base Sheet, Bonded Roof Cover	19
5A	CWF	Reroof (Tear-Off), Recover	E	Non-Insulated, Mech. 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	Non-Insulated, Mech. 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:**

- The roof system evaluation herein pertains to above-deck roof components. Roof decks shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction. Wind load resistance of the roof deck shall be documented through proper codified and/or FBC Approval documentation.
- Unless otherwise noted, fasteners and stress plates for insulation attachment 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. Minimum 0.75-inch plywood penetration or minimum 1-inch wood plank embedment.
  - Steel Deck: UltraFast Fasteners or All Purpose Fasteners with UltraFast Metal Plates. Minimum 0.75-inch steel penetration and engage the top flute of the steel deck.
  - Structural concrete: All Purpose Fasteners with UltraFast Metal Plates or Struct conc. 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.
- Unless otherwise noted, insulation may be any one layer or combination of polyisocyanurate, polystyrene, wood fiberboard, perlite, gypsum-based roof board, Invinsa Roof Board or Invinsa Foam that meets the QA requirements of F.A.C. Rule 61G20-3 and is documented as meeting FBC 1505.1 and, for foam plastic, FBC Chapter 26, when installed with the roof cover.
- Minimum 200 psi, minimum 2-inch thick lightweight insulating concrete may be substituted for, or installed below the rigid insulation board for System Type D (mechanically attached base sheet, bonded roof cover), whereby the base sheet fasteners are installed through the LWIC to engage the structural steel or concrete deck. The structural deck shall be of equal or greater configuration to the steel and concrete deck listings. Roof decks and structural members shall be in accordance with FBC requirements to the satisfaction of the Authority Having Jurisdiction. Load resistance of the roof deck shall be documented through proper codified and/or FBC Approval documentation.
- Preliminary insulation attachment for System Type D: Refer to Section 2.2.10.1.3 of FM Loss Prevention Data Sheet 1-29 (January 2016).

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 (HA): Full coverage at 25-30 lbs/square
  - JM MBR Bonding Adhesive (MBR-BA): Continuous 0.75-inch wide ribbons, 12-inch o.c. or full coverage at 2.0 gal/square
  - JM Roofing System Urethane Adhesive (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 wide ribbons, 12-inch o.c. *Note: JM Green Two-Part Urethane Insulation Adhesive or 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 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, adhesive ribbons shall be staggered from layer-to-layer a distance of one-half the ribbon spacing.*
  - *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 Roofing System Urethane Adhesive (RSUA):              | MDP | -157.5 psf | (Min. 0.5-inch thick) |
| ➤ JM Two-Part Urethane Insulation Adhesive (UIA-TWO-PART): | MDP | -315.0 psf | (Min. 0.5-inch thick) |
| ➤ ICP Adhesives Polyset CR-20:                             | MDP | -117.5 psf | (Min. 1.0-inch thick) |
8. Bonded polyisocyanurate insulation boards shall be maximum 4 x 4 ft.
9. For mechanically attached components or partially bonded insulation, the maximum design pressure for the selected assembly shall meet or exceed the Zone 1 design pressure determined in accordance with FBC Chapter 16, and Zones 2 and 3 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 (January 2016) for Zone 2/3 enhancements.
10. For assemblies where all components are fully adhered, the maximum design pressure for the selected assembly shall meet or exceed critical design pressure determined in accordance with FBC Chapter 16, and no rational analysis is permitted.
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 existing substrates in a bonded recover or re-roof installation, the existing roof surface or existing roof deck shall be examined for compatibility and bond performance with the selected adhesive, and the existing roof system (for recover) 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 ANSI/SPRI IA-1, ASTM E907, FM Loss Prevention Data Sheet 1-52 or Testing Application Standard TAS 124.
13. For Recover Applications using System Type D, the insulation is optional. Alternatively, an FBC Approved coverboard may be used as a separator board, preliminarily attached prior to roof cover installation. The existing roof system shall be suitable for a recover application.
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" LWC 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). Unless otherwise noted, 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. Unless otherwise noted, refer to the following references for bonded base, ply or cap sheet applications.

JOHNS MANVILLE ROOF COVERS			
REFERENCE	LAYER	MATERIAL	APPLICATION
BP-AA (Base and Ply sheets, Asphalt-Applied)	Base	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	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-TA (APP, Torch-Applied)	Base/Ply	JM APP Base, APPeX 4S	Torch applied
	Cap	APPeX 4S, APPeX 4.5M, APPeX 4.5M FR, APPeX 4.5M FR CR, Tricor S, Tricor M FR, Tricor M FR CR	
APP-CA1 (APP, Cold-Applied, 1-part)	Base/Ply	JM APP Base	JM MBR Cold Application Adhesive at 1.5 to 2.0 gal/square
	Cap	Tricor M FR, Tricor M FR CR	
APP-CA2 (APP, Cold-Applied, 2-part)	Base/Ply	JM APP Base	JM MBR Bonding Adhesive at 1.5 to 2.0 gal/square
	Cap	Tricor M FR, Tricor M FR CR	

16. "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-1: 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	Attach	Type	Attach	Type	Attach	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	HA	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	HA	BP-AA	(Optional) APP-TA	APP-TA	-52.5

**TABLE 1A-2: 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	Attach	Type	Attach	Type	Attach	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	HA	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	HA	BP-AA	(Optional) APP-TA	APP-TA	-52.5

**TABLE 1B: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER**  
**SYSTEM TYPE B: 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	Attach	Type	Attach	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 ft <sup>2</sup>	Min. 0.75-inch Fesco Board (homogeneous), min. 0.5-inch Retro-Fit Board or DuraBoard or min. 1.5-inch Fesco Foam	HA	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 1.33 ft <sup>2</sup>	Min. 0.75-inch Fesco Board (homogeneous) or min. 0.5-inch Retro-Fit Board or DuraBoard	HA	BP-AA	(Optional) APP-TA	APP-TA	-52.5



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

System No.	Deck (Note 1)	Base Insulation Layer	Top Insulation Layer			Roof Cover (Note 15)			MDP (psf)
			Type	Fasteners	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 ft <sup>2</sup>	BP-AA	(Optional) APP-TA	APP-TA	-45.0*

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

System No.	Deck (Note 1)	Slip Sheet	Insulation Layer(s)		Base Sheet			Roof Cover (Note 15)		MDP (psf)
			Type	Attach	Base	Fasteners	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 1E-1: WOOD DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)  
SYSTEM TYPE E: 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	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 1E-2: WOOD DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER  
SYSTEM TYPE E: 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	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: 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	Attach	Type	Attach	Base	Ply	Cap	
<b>HOT OR TORCH APPLIED BASE:</b>										
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 ft <sup>2</sup>	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA	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 ft <sup>2</sup>	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA	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 ft <sup>2</sup>	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	HA	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 1.33 ft <sup>2</sup>	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	HA	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 <sup>2</sup>	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA	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 1.45 ft <sup>2</sup>	Min. 0.5-inch Retro-Fit Board or DuraBoard or min. 1.5-inch DuraFoam	HA	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 ft <sup>2</sup>	Min. 0.5-inch DuraBoard	MBR-BA	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: 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	Attach	Type	Attach	Base	Ply	Cap	
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 ft <sup>2</sup>	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-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 ft <sup>2</sup>	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 <sup>2</sup>	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 ft <sup>2</sup>	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	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 ft <sup>2</sup>	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	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 ft <sup>2</sup>	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	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 <sup>2</sup>	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	BP-AA or APP-TA	(Optional) APP-TA	APP-TA	-60.0
<b>COLD APPLIED BASE:</b>										
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 5.33 ft <sup>2</sup>	Min. 0.5-inch RetroPlus Board	HA	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 ft <sup>2</sup>	Min. 0.5-inch RetroPlus Board	HA	APP-CA2	None	APP-CA2	-45.0*

**TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER**  
**SYSTEM TYPE B: 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	Attach	Type	Attach	Base	Ply	Cap	
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 5.33 ft <sup>2</sup>	Min. 0.5-inch RetroPlus Board	HA	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 1.78 ft <sup>2</sup>	Min. 0.5-inch RetroPlus Board	HA	APP-CA2	None	APP-CA2	-60.0
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 1.33 ft <sup>2</sup>	Min. 0.5-inch RetroPlus Board	HA	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 ft <sup>2</sup>	Min. 0.5-inch RetroPlus Board	HA	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 1.45 ft <sup>2</sup>	Min. 0.5-inch RetroPlus Board	HA	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 5.33 ft <sup>2</sup>	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 ft <sup>2</sup>	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 5.33 ft <sup>2</sup>	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 1.78 ft <sup>2</sup>	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 1.33 ft <sup>2</sup>	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 ft <sup>2</sup>	Min. 0.5-inch RetroPlus Board	MBR-BA, full coverage	APP-CA2	None	APP-CA2	-90.0

**TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER**  
**SYSTEM TYPE B: 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	Attach	Type	Attach	Base	Ply	Cap	
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 1.45 ft <sup>2</sup>	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 5.33 ft <sup>2</sup>	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 5.33 ft <sup>2</sup>	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*
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 ft <sup>2</sup>	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 ft <sup>2</sup>	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 5.33 ft <sup>2</sup>	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 5.33 ft <sup>2</sup>	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 1.78 ft <sup>2</sup>	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 1.78 ft <sup>2</sup>	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 1.33 ft <sup>2</sup>	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 1.33 ft <sup>2</sup>	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

**TABLE 2A: STEEL OR STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER**  
**SYSTEM TYPE B: 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	Attach	Type	Attach	Base	Ply	Cap	
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 ft <sup>2</sup>	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 ft <sup>2</sup>	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 1.45 ft <sup>2</sup>	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 1.45 ft <sup>2</sup>	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-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 5.33 ft <sup>2</sup>	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	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 ft <sup>2</sup>	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	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 5.33 ft <sup>2</sup>	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	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 1.78 ft <sup>2</sup>	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	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 1.33 ft <sup>2</sup>	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	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 ft <sup>2</sup>	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	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 1.45 ft <sup>2</sup>	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	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: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER**

System No.	Deck (Note 1)	Base Insulation Layer	Top Insulation Layer			Roof Cover (Note 15)			MDP (psf)
			Type	Fasteners	Attach	Base	Ply	Cap	
<b>HOT OR TORCH APPLIED BASE:</b>									
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 ft <sup>2</sup>	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 ft <sup>2</sup>	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 1.78 ft <sup>2</sup>	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 1.33 ft <sup>2</sup>	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 1.33 ft <sup>2</sup>	APP-TA	(Optional) APP-TA	APP-TA	-75.0
<b>COLD APPLIED BASE:</b>									
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 2.67 ft <sup>2</sup>	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 ft <sup>2</sup>	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 1.45 ft <sup>2</sup>	BP-CA1, APP-CA1	(Optional) BP-CA1, APP-CA1	APP-CA1	-82.5
<b>SELF-ADHERING BASE:</b>									
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 ft <sup>2</sup>	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: PRELIMINARILY ATTACHED INSULATION, MECHANICALLY ATTACHED BASE SHEET, BONDED ROOF COVER**

System No.	Deck (Note 1)	Insulation Layer(s)		Base or Anchor Sheet			Roof Cover (Note 15)		MDP (psf)
		Type	Attach	Base	Fasteners	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**

System No.	Deck (Note 1)	Primer	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
			Type	Attach	Type	Attach	Base	Ply	Cap	
<b>HOT OR TORCH APPLIED BASE:</b>										
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	HA	Min 0.5-inch DuraBoard	HA	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	HA	Min. 0.75-inch FescoBoard or min. 0.5-inch DuraBoard	HA	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	HA	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	HA	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	HA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA	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	HA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA	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	HA	Min. 0.5-inch DuraBoard	HA	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	HA	Min. 0.5-inch DuraBoard	HA	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
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

**TABLE 3A: STRUCTURAL CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)  
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER**

System No.	Deck (Note 1)	Primer	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
			Type	Attach	Type	Attach	Base	Ply	Cap	
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 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	RSUA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	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	RSUA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	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	RSUA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	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	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	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	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	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-1: LIGHTWEIGHT CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)  
SYSTEM TYPE A-1: BONDED INSULATION, BONDED ROOF COVER**

System No.	Deck (Note 1)	LWC (Note 14)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 15)			MDP (psf)
			Type	Attach	Type	Attach	Base	Ply	Cap	
LWC-1	Min. 2,500 psi concrete	Min. 200 psi, min 2-inch Elastizell	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-2	Min. 2,500 psi concrete	Min. 200 psi, min 2-inch Elastizell	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-3	Min. 2,500 psi concrete	Min. 200 psi, min 2-inch Elastizell	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-4	Min. 2,500 psi concrete	Min. 200 psi, min 2-inch Elastizell	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	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	BP-AA or APP-TA	(Optional) BP-AA or APP-TA	APP-TA	-180.0
LWC-5	Min. 2,500 psi concrete	Min. 200 psi, min 2-inch Celcore	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	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	BP-AA or APP-TA	(Optional) BP-AA or APP-TA	APP-TA	-222.5
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	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	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	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	APP-TA	(Optional) APP-TA	APP-TA	-232.5

**TABLE 4A-2: 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)	LWC (Note 14)	Anchor Sheet			Insulation			Roof Cover (Note 15)			MDP (psf)
			Type	Fasteners	Attach	Base	Top	Attach	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 per Note 11.</i>	JM PermaPly 28, DynaBase, GlasPly Premier or Ventsulation	JM LWC Base Sheet Fasteners (Note 11)	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	HA	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 per Note 11.</i>	JM PermaPly 28, DynaBase, GlasPly Premier or Ventsulation	JM LWC Base Sheet Fasteners (Note 11)	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	HA	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 per Note 11.</i>	JM PermaPly 28, DynaBase, GlasPly Premier or Ventsulation	JM LWC Base Sheet Fasteners (Note 11)	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	HA	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	HA	BP-AA	(Optional) APP-TA	APP-TA	-75.0

**TABLE 4A-2: 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)	LWC (Note 14)	Anchor Sheet			Insulation			Roof Cover (Note 15)			MDP (psf)
			Type	Fasteners	Attach	Base	Top	Attach	Base	Ply	Cap	
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	HA	APP-TA	(Optional) APP-TA	APP-TA	-75.0
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	HA	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 Concrecel LWIC	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	HA	BP-AA	(Optional) APP-TA	APP-TA	-82.5



**TABLE 4B: LIGHTWEIGHT CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)  
SYSTEM TYPE E: 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	Attach	Ply	Cap	
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 per Note 11.</i>	PermaPly 28 or Ventsulation	JM LWC Base Sheet Fasteners (Note 11)	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 per Note 11.</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	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
LWC-18	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 LWC.</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
LWC-19	Min. 22 ga. steel or min. 2,500 psi structural concrete	Min. 300 psi, min. 2-inch thick Celcore LWIC	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. 22 ga. steel or min. 2,500 psi structural concrete	Min. 300 psi, minimum 2.25-inch thick Concrecel LWIC	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
LWC-22	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

**TABLE 5A: CEMENTITIOUS WOOD FIBER DECKS – REROOF (TEAR-OFF) OR RECOVER  
SYSTEM TYPE E: 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	Type	Attach	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	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	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	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	APP-TA	(Optional) APP-TA	APP-TA	-232.5

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

System No.	Deck (Note 1)	Base Sheet			Roof Cover (Note 15)		Max. Design Pressure
		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 ≥ 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 ≥ 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	Type	Attach	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	HA	Min 0.5-inch DuraBoard	HA	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	HA	Min. 0.75-inch FescoBoard or min. 0.5-inch DuraBoard	HA	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	HA	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	HA	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	HA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA	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	HA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA	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	HA	Min. 0.5-inch DuraBoard	HA	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	HA	Min. 0.5-inch DuraBoard	HA	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

**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	Type	Attach	Base	Ply	Cap	
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	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	BP-AA	(Optional) BP-AA or APP-TA	APP-TA	-225.0
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	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	APP-TA	(Optional) APP-TA	APP-TA	-232.5