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EVALUATION REPORT

Johns Manville

P.O. Box 5108
Denver, CO 80217
(303) 978-4879

Evaluation Report J9340.10.08-R9

FL11475-R9

Date of Issuance: 10/16/2008

Revision 9: 10/15/2019

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 **6th Edition (2017) Florida Building Code** sections noted herein.

DESCRIPTION: JM TPO Single Ply 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.

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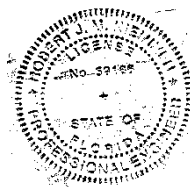
INSPECTION: Upon request, a copy of this entire Evaluation Report shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This Evaluation Report consists of pages 1 through 4, plus a 42-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 10/15/2019. This does not serve as an electronically signed document.

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ROOFING SYSTEMS EVALUATION:
1. SCOPE:

Product Category: Roofing

Sub-Category: Single Ply Roof Systems

Compliance Statement: JM TPO Single Ply Roof Systems, as produced by Johns Manville, have demonstrated compliance with the following sections of the 6th 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:

<u>Section</u>	<u>Property</u>	<u>Standard</u>	<u>Year</u>
1504.3.1	Wind	FM 4474	2011
1504.7	Impact	FM 4470	2012
1507.13.2	Physical Properties	ASTM D6878	2011
1523.6.2	Wind	TAS 114	2011

3. REFERENCES:

<u>Entity</u>	<u>Examination</u>	<u>Reference</u>	<u>Date</u>
ACRC, LLC (TST4671)	TAS 114	14-044	12/05/2014
ERD (TST 6049)	FM 4470 / TAS 114	2009.J30820SC	11/19/2009
ERD (TST 6049)	FM 4470/4474	SC4910.02.14	02/10/2014
ERD (TST 6049)	FM 4474	SFS-SC10010.02.16-R1	07/06/2016
ERD (TST 6049)	FM 4474	JM-SC12145.02.17	02/06/2017
ERD (TST 6049)	FM 4474	JM-SC13465.04.17	04/19/2017
ERD (TST 6049)	FM 4474	JM-SC13465.08.17	08/25/2017
FM (TST 1867)	FM 4470	3009502	12/21/2000
FM (TST 1867)	FM 4470	3014692	08/05/2003
FM (TST 1867)	FM 4470/4474	3023458	07/18/2006
FM (TST 1867)	FM 4470/4474	3025881	08/09/2006
FM (TST 1867)	FM 4470/4474	3031917	02/20/2008
FM (TST 1867)	FM 4470/4474	3030383	05/13/2008
FM (TST 1867)	FM 4470/4474	3030259	06/02/2008
FM (TST 1867)	FM 4470/4474	3032235	06/27/2008
FM (TST 1867)	FM 4470/4474	1000004339	07/08/2008
FM (TST 1867)	FM 4470/4474	3033700	10/10/2008
FM (TST 1867)	FM 4470/4474	3034810	09/10/2009
FM (TST 1867)	FM 4470/4474	3035538	10/02/2009
FM (TST 1867)	FM 4470/4474	3036559	10/02/2009
FM (TST 1867)	FM 4470/4474	3036842	10/02/2009
FM (TST 1867)	FM 4470/4474	3037110	10/02/2009
FM (TST 1867)	FM 4470/4474	3037540	10/20/2010
FM (TST 1867)	FM 4470/4474	3043824	04/06/2012
FM (TST 1867)	FM 4470/4474	3044716	10/19/2012
FM (TST 1867)	FM 4470/4474	3046174	04/03/2013
FM (TST 1867)	FM 4470/4474	3051609	08/24/2014
FM (TST 1867)	FM 4470/4474	3053026	01/20/2015
FM (TST1867)	FM 4470/4474	3055227	05/21/2015
FM (TST 1867)	FM 4470/4474	3056303	11/05/2015
FM (TST1867)	FM 4470/4474	3056049	01/13/2016
FM (TST 1867)	FM 4470/4474	3056677	02/22/2016
FM (TST1867)	FM 4470/4474	3058374	04/13/2016
FM (TST1867)	FM 4470/4474	3059030	04/29/2016
FM (TST1867)	FM 4470/4474	3055845	05/25/2016
FM (TST1867)	FM 4470/4474	3058201	08/29/2016

<u>Entity</u>	<u>Examination</u>	<u>Reference</u>	<u>Date</u>
FM (TST1867)	FM 4470/4474	3058326	09/30/2016
FM (TST1867)	FM 4470/4474	3060138	01/11/2017
FM (TST1867)	FM 4470/4474	3060614	04/14/2017
FM (TST1867)	FM 4470/4474	3060573	05/12/2017
FM (TST1867)	FM 4470/4474	3059662	02/05/2019
FM (TST1867)	FM 4470/4474	RR219849	08/15/2019
Johns Manville	Physical Properties	Formulation declaration	10/02/2017
MTI (TST 2508)	Physical Properties	RX14C8A	09/15/2008
MTI (TST 2508)	Physical Properties	RX10A8A	03/29/2010
MTI (TST 2508)	Physical Properties	RX10A8B	03/29/2010
PRI (TST 5878)	Physical Properties	JMC-216-02-01	05/05/2015
PRI (TST 5878)	Physical Properties	JMC-226-02-01	11/11/2015
PRI (TST 5878)	Physical Properties	Test declaration	10/09/2017
PRI (TST 5878)	FM 4470/4474	JMC-163-02-01	09/06/2013
PRI (TST 5878)	FM 4470/4474	JMC-193-02-01	04/01/2014
PRI (TST 5878)	FM 4470/4474	JMC-193-02-01A	04/28/2014
PRI (TST 5878)	FM 4470/4474	JMC-237-02-01	08/24/2015
UL LLC (QUA 9625)	Quality Control	Service Confirmation	04/24/2019

4. PRODUCT DESCRIPTION:

The following roof covers are mechanically attached or fully adhered to Approved substrates using fasteners, stress plates and adhesives, as outlined in the Limitations / Conditions of Use herein.

- 4.1 **JM TPO 45, JM TPO 60, JM TPO 72 and JM TPO 80** are a nominal 45-mil (1.1 mm), 60-mil (1.5 mm), 72-mil (1.8 mm) or 80-mil (2.0 mm) thick, polyester scrim reinforced, thermoplastic polyolefin, single-ply roof membranes.
- 4.2 **JM TPO FB 100, JM TPO FB 115 and JM TPO FB 135** are a nominal 45-mil (1.1 mm), 60-mil (1.5 mm) or 80-mil (2.0 mm) thick, polyester scrim reinforced, thermoplastic polyolefin, single-ply roof membranes with a fleece backing.
- 4.3 **JM TPO FB 150 and JM TPO FB 175** are a nominal 60-mil (1.5 mm) and 80-mil (2.0 mm) thick, polyester scrim reinforced, thermoplastic polyolefin, single-ply roof membranes with a fleece backing, for use in hot asphalt applications.
- 4.4 **JM TPO SA** is a nominal 60-mil (1.5 mm) thick, polyester scrim reinforced, thermoplastic polyolefin, single-ply roof membrane, with a self-adhering back surface.

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**. For non-JM components listed within wind uplift rated assemblies in Appendix 1, refer to the Product Approval of the component manufacturer.

6. INSTALLATION:

- 6.1 **JM TPO Single Ply Roof Systems** shall be installed in accordance with **Johns Manville** published installation instructions, subject to the Limitations / Conditions of Use noted herein.
- 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.
- 6.3 For mechanically fastened membrane systems (Type D) over profiled steel deck, membrane shall be installed running perpendicular to steel deck flutes.

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 FAC Rule 61G20-3 QA requirements.

9. QUALITY ASSURANCE ENTITY:

UL LLC– QUA9625; (613) 371-2765; Jacob.Stewart@ul.com

- THE 42-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), Recover	C	Mechanically Attached Insulation, Bonded Roof Cover	5
1B	Wood	New, Reroof (Tear-Off), Recover	C-2	Mechanically Attached Insulation, Plate-Bonded Roof Cover	6
1B	Wood	New, Reroof (Tear-Off), Recover	D-1	Insulated, Mechanically Attached 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	7-9
2B	Steel or Structural Concrete	New, Reroof (Tear-Off), Recover	B-1	Mechanically Attached Base Insulation, Bonded Top Insulation, Hybrid System	10
2C	Steel or Structural Concrete	New, Reroof (Tear-Off) or Recover	B-2	Mechanically Attached Thermal Barrier, Bonded Temp Roof, Bonded Insulation, Bonded Roof Cover	11-12
2D	Steel or Structural Concrete	New, Reroof (Tear-Off), Recover	C-1	Mechanically Attached Insulation, Bonded Roof Cover	13-20
2E	Steel or Structural Concrete	New, Reroof (Tear-Off), Recover	C-1	Mechanically Attached Insulation, Hybrid System	20
2F	Steel	New, Reroof (Tear-Off), Recover	C-2	Mechanically Attached Insulation, Plate-Bonded Roof Cover	21-23
2G	Steel or Structural Concrete	New, Reroof (Tear-Off), Recover	D-1	Insulated, Mechanically Attached Roof Cover (Stress Plates)	23-25
2H	Steel or Structural Concrete	New, Reroof (Tear-Off), Recover	D-2	Insulated, Mechanically Attached Roof Cover (RPS Strips)	25
3A	Structural Concrete	New, Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Roof Cover	26-32
3B	Structural Concrete	New, Reroof (Tear-Off)	A-1	Bonded Insulation, Hybrid System	33
3C	Structural Concrete	New, Reroof (Tear-Off), Recover	C-2	Mechanically Attached Insulation, Plate-Bonded Roof Cover	34-35
4A	Lightweight concrete / steel	New, Reroof (Tear-Off)	F	LWC to Steel Deck, Bonded Roof Cover	36
4B	Lightweight concrete / concrete	New, Reroof (Tear-Off)	F	LWC to Structural Concrete Deck, Bonded Roof Cover	36
4C	Lightweight concrete / concrete	New, Reroof (Tear-Off)	F	Vapor Barrier to Structural Concrete Deck, LWC to Vapor Barrier, Bonded Roof Cover	37
5A	Existing gypsum	Reroof (Tear-Off)	A-1	Bonded Insulation, Bonded Roof Cover	38
6A	Various	Recover	A-1	Bonded Insulation, Bonded Roof Cover	39-40
6B	Various	Recover Over Existing Metal Roof	C-2	Mech. Attached Insulation, Plate-Bonded Roof Cover	41
6C	Various	Recover Over Existing Metal Roof	D-1	Insulated, Mechanically Attached Roof Cover	42
6D	Various	Recover	F	Non-Insulated, Bonded Roof Cover	42

The following notes apply to the systems outlined herein:

- The 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.
- 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 ¾-inch plywood penetration or minimum 1-inch wood plank embedment.
 - Steel Deck: UltraFast Fasteners or All Purpose Fasteners with UltraFast Metal Plates. Minimum ¾-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.
- Unless otherwise noted, insulation may be any one layer or combination of polyisocyanurate, polystyrene, wood fiberboard, perlite or gypsum-based coverboard 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 rigid insulation board for System Type D-1 (mechanically attached membrane), whereby the membrane 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.

5. Preliminary insulation attachment = Unless otherwise noted, refer to current FM Loss Prevention Data Sheet 1-29.
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 lbs/sq.
 - JM MBR Bonding Adhesive [MBR-BA]: Continuous 0.75-inch ribbons, 12-inch o.c.
 - JM One-Step Foamable Adhesive [JM-OSFA]: 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 Polyset CR-20 [CR-20]: Continuous 2½ to 3½-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 One-Step Foamable Adhesive [JM-OSFA]: MDP: -157.5 psf (Min. 0.5-inch thick)
 - JM Roofing System Urethane Adhesive (JM 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 ENRGY 3 or JM ISO 3)
 - ICP Adhesives Polyset CR-20 [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 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 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, 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 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 System Type D-1, steel deck applications, the roof membrane shall be run with its length perpendicular to the steel deck flutes.
14. For Recover Applications using System Type C-2 or D-1, the insulation is optional. Alternatively, Invinsa Roof Board, DensDeck, DensDeck Prime, DEXCell FA Glass Mat Roof Board or SECUROCK Gypsum-Fiber Roof Board 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.
15. 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.

16. For adhered membrane systems, side laps shall be minimum 2-inch wide sealed with min. 1.5-inch heat weld. Adhesive application rates are as follows:

JM ROOF COVER / ADHESIVE COMBINATIONS			
MEMBRANE	ADHESIVE	METHOD	RATE
JM TPO	JM TPO Membrane Adhesive (Solvent Based) [JM TPO MA-SB]	Contact (both sides)	1.67 gal/square (½ applied to substrate and ½ applied to membrane)
JM TPO	JM TPO Membrane Adhesive (Low VOC) [JM TPO MA-LVOC]	Contact (both sides)	1.67 gal/square (½ applied to substrate and ½ applied to membrane)
JM TPO	JM TPO Low VOC Membrane Adhesive [JM TPO Low-VOC MA]	Contact (both sides)	1.1 gal/square (½ applied to substrate and ½ applied to membrane)
JM TPO	JM TPO LVOC Membrane Adhesive [JM TPO LVOC MA]	Contact (both sides)	1.1 gal/square (½ applied to substrate and ½ applied to membrane)
JM TPO	JM Membrane Bonding Adhesive (TPO & EPDM) [JM MBA (TPO&EPDM)]	Contact (both sides)	ENRGY 3 & other polyisocyanurate: 1.1 gal/square (½ applied to substrate and ½ applied to membrane) Invinsa Roof Board, Dens Deck Prime & SECUROCK Gypsum Fiber Roof Board: 1.67 gal/square (½ applied to substrate and ½ applied to membrane)
JM TPO	TACC FA-141	Contact (both sides)	1.67 gal/square (½ applied to substrate and ½ applied to membrane)
JM TPO	JM TPO Membrane Adhesive (Water Based) [JM TPO MA-WB]	Wet lay (substrate)	0.83 to 1 gal/square
JM TPO	JM TPO Water Based Membrane Adhesive [JM TPO WBMA]	Contact (both sides)	Invinsa Roof Board: 0.56 – 0.71 gal/square SECUROCK Gypsum-Fiber Roof Board: 0.59 – 0.77 gal/square ENRGY 3, ValuTherm: 0.63 – 0.83 gal/square
JM TPO FB 100, 115 or 135	JM TPO Membrane Adhesive (Water Based) [JM TPO MA-WB]	Wet lay (substrate)	0.83 to 1 gal/square
JM TPO FB 100, 115 or 135	JM TPO Water Based Membrane Adhesive [JM TPO WBMA]	Wet lay (substrate)	Invinsa Roof Board: 0.56 – 0.71 gal/square SECUROCK Gypsum-Fiber Roof Board: 0.59 – 0.77 gal/square ENRGY 3, ValuTherm: 0.63 – 0.83 gal/square
JM TPO FB 100, 115 or 135	JM Roofing System Urethane Adhesive (JM-RSUA)	Wet lay (substrate)	0.5 to 0.75-inch wide ribbons spaced as noted in tables herein.
JM TPO FB 100, 115 or 135	JM Single Ply Two Part Urethane Insulation Adhesive (JM-SP-UIA-TWO-PART)	Wet lay (substrate)	0.5 to 0.75-inch wide ribbons spaced as noted in tables herein.
JM TPO FB 150 or 175	Hot asphalt	Wet lay (substrate)	Hot asphalt at 20 lbs/square.

17. For Hybrid Systems, consisting of JM TPO FB 150 or 175 applied in hot-asphalt full-mop over modified bitumen base ply(s), the following base ply references apply.

JOHNS MANVILLE BASE / PLY SHEETS FOR USE IN HYBRID JM TPO FB 150 OR 175 APPLICATIONS			
REFERENCE	LAYER	MATERIAL	APPLICATION
BP-AA (Base and Ply sheets, Asphalt-Applied)	Base	One or more GlasBase Plus, PermaPly 28	Hot asphalt at 20-40 lbs/square
	Ply	One or more GlasPly IV, GlasPly Premier, GlasBase Plus, PermaPly 28	
SBS-AA (SBS, Asphalt-Applied)	Base / Ply:	One or more DynaPly T1, DynaBase, DynaBase XT, DynaBase PR, DynaLastic 180 S, DynaLastic 250 S, DynaLastic 250 FR S	Hot asphalt at 20-40 lbs/square
SBS-TA (SBS, Torch-Applied)	Base / Ply:	One or more DynaBase HW, DynaWeld Base, DynaWeld 180 S	Torch-Applied

18. Modified bitumen vapor barrier options for use over **structural concrete deck** followed by adhered insulation **applied as follows** carry the following Maximum Design Pressure (MDP) limitations. The lesser of the MDP listings below vs. those in **Table 3A** applies:

VAPOR BARRIER OPTIONS; STRUCTURAL CONCRETE DECK; FOLLOWED BY ADHERED INSULATION PER TABLE 3A:				
OPTION #	PRIMER	VAPOR BARRIER	INSULATION ADHESIVE	MDP (PSF)
1	ASTM D41	Two plies GlasPly IV, GlasPly Premier in hot asphalt	JM Roofing System Urethane Adhesive (RSUA), 12-inch o.c.	-180.0
2	ASTM D41	Two plies GlasPly IV, GlasPly Premier in hot asphalt	JM One-Step Foamable Adhesive (OSFA), 12-inch o.c.	-180.0
3	ASTM D41	DynaPly T1, DynaBase, DynaBase XT, DynaBase PR, DynaLastic 180 S, DynaLastic 250 S, DynaLastic 250 FR S in hot asphalt or DynaBase HW, DynaWeld Base, DynaWeld 180 S torch-applied	JM One-Step Foamable Adhesive (OSFA), 12-inch o.c.	-180.0
4	JM SA Primer Low VOC	JM Vapor Barrier SA, self-adhered	JM Two-Part Urethane Insulation Adhesive (UIA-TWO-PART), 12-inch o.c.	-277.5
5	JM SA Primer Low VOC	JM Vapor Barrier SA, self-adhered	JM Roofing System Urethane Adhesive (RSUA), 12-inch o.c.	-277.5
6	ASTM D41	DynaPly T1, DynaBase, DynaBase XT, DynaBase PR, DynaLastic 180 S, DynaLastic 250 S, DynaLastic 250 FR S in hot asphalt or DynaBase HW, DynaWeld Base, DynaWeld 180 S torch-applied	JM Two-Part Urethane Insulation Adhesive (UIA-TWO-PART), 12-inch o.c.	-277.5
7	ASTM D41	DynaPly T1, DynaBase, DynaBase XT, DynaBase PR, DynaLastic 180 S, DynaLastic 250 S, DynaLastic 250 FR S in hot asphalt	JM Roofing System Urethane Adhesive (RSUA), 12-inch o.c.	-277.5
8	ASTM D41	DynaBase HW, DynaWeld Base, DynaWeld 180 S torch-applied	JM Roofing System Urethane Adhesive (RSUA), 12-inch o.c.	-292.5

19. "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, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, BONDED ROOF COVER**

System No.	Deck (Note 1)	Base Insulation Layer	Top Insulation Layer			Roof Cover (Note 16)		MDP (psf)
			Type	Fasteners	Attach	Type	Attach	
JM TPO APPLICATIONS:								
W-1	Min. 19/32" APA rated OSB or min. 15/32" APA rated plywood	(Optional) One or more layers, any type, thickness or combination, loose laid	Min. 0.25-inch DEXcell FA Glass Mat Roof Board or Min. 7/16-inch DEXcell Cement Roof Board	All Purpose Fasteners with UltraFast Square Metal Plates	1 per 2.67 ft2	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC	-37.5*
W-2	Min. 23/32-inch plywood or wood plank at max 24" spans	One or more layers, any combination, loose laid	Min. 7/16-inch OSB	Note 2	1 per 2 ft²	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-45.0*
W-3	Min. 15/32" TECO rated plywood or OSB	(Optional) One or more layers, any type, thickness or combination, loose laid	Min. 0.25-inch DEXcell FA Glass Mat Roof Board or Min. 7/16-inch DEXcell Cement Roof Board	All Purpose Fasteners with UltraFast Square Metal Plates	1 per 2.67 ft2	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC	-45.0*
W-4	Min. 7/16" APA rated OSB or min. 15/32" APA rated plywood	(Optional) One or more layers, any type, thickness or combination, loose laid	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	All Purpose Fasteners with UltraFast Square Metal Plates	1 per 2 ft2	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA	-45.0*
JM TPO FB APPLICATIONS:								
W-5	Min. 19/32" APA rated OSB or min. 15/32" APA rated plywood	(Optional) One or more layers, any type, thickness or combination, loose laid	Min. 0.25-inch DEXcell FA Glass Mat Roof Board or Min. 7/16-inch DEXcell Cement Roof Board	All Purpose Fasteners with UltraFast Square Metal Plates	1 per 2.67 ft2	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-37.5*
W-6	Min. 15/32" TECO rated plywood or OSB	(Optional) One or more layers, any type, thickness or combination, loose laid	Min. 0.25-inch DEXcell FA Glass Mat Roof Board or Min. 7/16-inch DEXcell Cement Roof Board	All Purpose Fasteners with UltraFast Square Metal Plates	1 per 2.67 ft2	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-45.0*
JM TPO FB 150 OR 175 APPLICATIONS:								
W-7	Min. 19/32" APA rated OSB or min. 15/32" APA rated plywood	(Optional) One or more layers, any type, thickness or combination, loose laid	Min. 0.25-inch DEXcell FA Glass Mat Roof Board or Min. 7/16-inch DEXcell Cement Roof Board	All Purpose Fasteners with UltraFast Square Metal Plates	1 per 2.67 ft2	JM TPO FB 150 or 175	Hot asphalt	-37.5*
W-8	Min. 15/32" TECO rated plywood or OSB	(Optional) One or more layers, any type, thickness or combination, loose laid	Min. 0.25-inch DEXcell FA Glass Mat Roof Board or Min. 7/16-inch DEXcell Cement Roof Board	All Purpose Fasteners with UltraFast Square Metal Plates	1 per 2.67 ft2	JM TPO FB 150 or 175	Hot asphalt	-45.0*

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

System No.	Deck (Note 1)	Insulation Layer (Note 14)	Attach		Roof Cover	MDP (psf)
			Fasteners	Density		
RHINO BOND SYSTEMS:						
W-9	Min. 19/32" APA rated OSB	One or more layers, any combination	All Purpose Fasteners with JM TPO RhinoPlates	1 per 5.33 ft² (6 parts per 4x8 ft board)	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer's published instructions. Laps sealed with 1.5-inch heat weld.	-22.5*
W-10	Min. 15/32" APA rated plywood at 24" span	One or more layers, any combination	All Purpose Fasteners with JM TPO RhinoPlates	1 per 2.67 ft² (16" x 24" grid)	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer's published instructions. Laps sealed with 1.5-inch heat weld.	-37.5
W-11	Min. 7/16" APA rated OSB at 24" span	One or more layers, any combination	All Purpose Fasteners with JM TPO RhinoPlates, installed to engage wood joists	18" o.c. in rows spaced 48" o.c. (Fasteners engage wood joists)	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer's published instructions. Laps sealed with 1.5-inch heat weld.	-45.0*
W-12	Min. 15/32" TECO rated OSB or Min. 19/32" APA rated plywood	One or more layers, any combination	All Purpose Fasteners with JM TPO RhinoPlates	1 per 4 ft² (24" x 24" grid)	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer's published instructions. Laps sealed with 1.5-inch heat weld.	-45.0*

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

System No.	Deck (Note 1)	Insulation (Note 14)		Roof Cover			MDP (psf)
		Type	Attach (Note 5)	Membrane	Fasteners	Attach	
W-13	Min. 19/32" APA rated plywood at 24" span	One or more layers, any combination with top layer of Invinsa Roof Board	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	All Purpose Fasteners with High Load Plates	6-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-37.5
W-14	Min. 19/32" plywood at max. 24" spans with blocking at unsupported joints	One or more layers, any combination with top layer of Dens Deck, Dens Deck Prime, DEXCell FA Glass Mat Roof Board or SECURROCK Gypsum Fiber Roof Board	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	High Load Fasteners with High Load Plates	6-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-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 16)		MDP (psf)
		Type	Fasten	Attach	Type	Attach (Notes 6,7,8)	Type	Attach	
JM TPO APPLICATIONS:									
S-1.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 2 ft²	Min. 0.5-inch RetroPlus Board	JM-RSUA	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA	-45.0*
S-2.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 2-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2 (square plates)	1 per 4 ft²	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-LVOC, JM TPO LVOC MA	-45.0*
S-3.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 2 ft²	Min. 0.5-inch RetroPlus Board	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA	-45.0*
S-4.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 2 ft²	Min. 0.25-inch DEXcell FA Glass Mat Roof Board or min. 7/16-inch DEXcell Cement Roof Board	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC	-45.0*
S-5.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch ENRGY 3, ValuTherm	Note 2	1 per 1.33 ft²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, JM TPO Low-VOC MA	-52.5
JM TPO FB APPLICATIONS:									
S-6.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 2 ft²	Additional layer(s) base insulation	Hot Asphalt	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-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 16)		MDP (psf)
		Type	Fasten	Attach	Type	Attach (Notes 6,7,8)	Type	Attach	
S-7.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 2-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 4 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	JM-OSFA	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-37.5*
S-8.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 2-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 2.67 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	JM-OSFA	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-45.0*
S-9.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 2 ft ²	Min. 0.5-inch RetroPlus Board	JM-RSUA	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-45.0*
S-10.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 1 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	JM-RSUA, 6-inch o.c.	JM TPO FB 100, 115 or 135	JM-RSUA, 12-inch o.c.	-67.5
S-11.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 2-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 4 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-37.5*
S-12.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 2 ft ²	Additional layer(s) base insulation	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-45.0*
S-13.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 2 ft ²	Min. 0.5-inch RetroPlus Board	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-45.0*
S-14.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 2-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 2.67 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-45.0*
S-15.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 2 ft ²	Min. 0.25-inch DEXcell FA Glass Mat Roof Board or min. 7/16-inch DEXcell Cement Roof Board	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-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 16)		MDP (psf)
		Type	Fasten	Attach	Type	Attach (Notes 6,7,8)	Type	Attach	
S-16.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch ENRGY 3, ValuTherm	Note 2	1 per 1.33 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-52.5
S-17.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 2-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 4 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-37.5*
S-18.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 2-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 2.67 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-45.0*
JM TPO FB 150 OR 175 APPLICATIONS:									
S-19.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 2 ft ²	0.5-inch RetroPlus Board, Dens Deck Prime or SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	JM TPO FB 150 or 175	Hot asphalt	-45.0*
S-20.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 2 ft ²	Min. 0.25-inch DEXcell FA Glass Mat Roof Board	UIA-TWO-PART	JM TPO FB 150 or 175	Hot asphalt	-45.0*
JM TPO SA APPLICATIONS:									
S-21.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 2-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2 (square plates)	1 per 4 ft ²	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	JM TPO SA – 60 MIL	Self-adhering	-45.0*
S-22.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 2 ft ²	Min. 0.25-inch DEXcell FA Glass Mat Roof Board	UIA-TWO-PART	JM TPO SA – 60 MIL	Self-adhering	-45.0*
S-23.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	Min. 1.5-inch ENRGY 3, ValuTherm	Note 2	1 per 1.33 ft ²	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	JM TPO SA – 60 MIL	Self-adhering	-52.5

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

System No.	Deck (Note 1)	Base Insulation Layer			Top Insulation Layer		Roof Cover (Notes 16 & 17)		MDP (psf)
		Type	Fasten	Attach	Type	Attach (Notes 6,7,8)	Base Ply(s)	Roof Cover / Adhesive	
S-24.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	Min. 1.5-inch ENRGY 3, Fesco Foam or DuraFoam	Note 2	1 per 2 ft ²	Min. 0.5-inch Retro-Fit Board or DuraBoard, min. 0.75-inch Fesco Board (flat or tapered) or min. 1.5-inch Fesco Foam or DuraFoam	HA	BP-AA, SBS-AA	JM TPO FB 150 or 175 / Hot asphalt	-52.5
S-25.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	Min. 1.5-inch ENRGY 3, Fesco Foam or DuraFoam	Note 2	1 per 1.78 ft ²	Min. 0.5-inch Retro-Fit Board or DuraBoard or min. 1.5-inch Fesco Foam or DuraFoam	HA	BP-AA, SBS-AA	JM TPO FB 150 or 175 / Hot asphalt	-60.0
S-26.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	Min. 2-inch ENRGY 3	Note 2	1 per 2 ft ²	Min. 3/8-inch SECUROCK Gypsum-Fiber Roof Board	HA	BP-AA, SBS-AA, SBS-TA	JM TPO FB 150 or 175 / Hot asphalt	-60.0
S-27.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	Min. 2-inch ENRGY 3	Note 2	1 per 2 ft ²	Min. 3/8-inch SECUROCK Gypsum-Fiber Roof Board	RSUA, 6-inch o.c.	BP-AA, SBS-AA, SBS-TA	JM TPO FB 150 or 175 / Hot asphalt	-60.0
S-28.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi concrete	Min. 2-inch ENRGY 3	Note 2	1 per 2 ft ²	Min. 3/8-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	BP-AA, SBS-AA, SBS-TA	JM TPO FB 150 or 175 / Hot asphalt	-60.0

TABLE 2C: STEEL DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF)
SYSTEM TYPE B-2: MECHANICALLY ATTACHED THERMAL BARRIER, BONDED TEMP ROOF, BONDED TOP INSULATION, BONDED ROOF COVER

Sys. No.	Deck (Note 1)	Thermal Barrier			Temp Roof		Base Insulation		Top Insulation		Roof Cover (Note 16)		MDP (psf)
		Type	Fasten	Attach	Type	Attach	Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Type	Attach	
JM TPO APPLICATIONS:													
S-29.	Min. 22 ga., Type B, Grade 33 steel	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 4 ft²	JM SA Primer Low VOC followed by JM Vapor Barrier SA	Self-adhered	One or more layers, min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	UIA-TWO-PART	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-LVOC, JM TPO LVOC MA	-45.0*
S-30.	Min. 22 ga., Type B, Grade 33 steel	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 4 ft²	JM SA Primer Low VOC followed by JM Vapor Barrier SA	Self-adhered	One or more layers, min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	UIA-TWO-PART	Min. 0.5-inch RetroPlus Board	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA	-45.0*
S-31.	Min. 22 ga., Type B, Grade 33 steel	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 4 ft²	JM SA Primer Low VOC followed by JM Vapor Barrier SA	Self-adhered	One or more layers, min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	UIA-TWO-PART	Min. 0.25-inch DEXcell FA Glass Mat Roof Board or min. 7/16-inch DEXcell Cement Roof Board	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC	-45.0*
S-32.	Min. 22 ga., Type B, Grade 33 steel	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 4 ft²	JM SA Primer Low VOC followed by JM Vapor Barrier SA	Self-adhered	One or more layers, min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	UIA-TWO-PART	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, JM TPO Low-VOC MA	-45.0*
JM TPO FB APPLICATIONS:													
S-33.	Min. 22 ga., Type B, Grade 33 steel	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 4 ft²	JM SA Primer Low VOC followed by JM Vapor Barrier SA	Self-adhered	One or more layers, min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	UIA-TWO-PART	Additional layer(s) base insulation	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-45.0*
S-34.	Min. 22 ga., Type B, Grade 33 steel	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 4 ft²	JM SA Primer Low VOC followed by JM Vapor Barrier SA	Self-adhered	One or more layers, min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	UIA-TWO-PART	Min. 0.5-inch RetroPlus Board	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-45.0*
S-35.	Min. 22 ga., Type B, Grade 33 steel	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 4 ft²	JM SA Primer Low VOC followed by JM Vapor Barrier SA	Self-adhered	One or more layers, min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	UIA-TWO-PART	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-45.0*

TABLE 2C: STEEL DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF)
SYSTEM TYPE B-2: MECHANICALLY ATTACHED THERMAL BARRIER, BONDED TEMP ROOF, BONDED TOP INSULATION, BONDED ROOF COVER

Sys. No.	Deck (Note 1)	Thermal Barrier			Temp Roof		Base Insulation		Top Insulation		Roof Cover (Note 16)		MDP (psf)
		Type	Fasten	Attach	Type	Attach	Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Type	Attach	
S-36.	Min. 22 ga., Type B, Grade 33 steel	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 4 ft ²	JM SA Primer Low VOC followed by JM Vapor Barrier SA	Self-adhered	One or more layers, min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	UIA-TWO-PART	Min. 0.25-inch DEXcell FA Glass Mat Roof Board or min. 7/16-inch DEXcell Cement Roof Board	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-45.0*
S-37.	Min. 22 ga., Type B, Grade 80 steel	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 1 ft ²	JM SA Primer followed by JM Vapor Barrier SA	Self-adhered	Min. 1.5-inch ENRGY 3, ENRGY 3.E, ValuTherm, JM ISO 3, R-Panel, SeparatoR, ENRGY 3 25 PSI, ENRGY 3.E 25 PSI, ValuTherm 25 PSI, R-Panel 25 PSI	RSUA, 6-inch o.c.	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	RSUA, 6-inch o.c.	JM TPO FB 100, 115 or 135	JM-RSUA, 6-inch o.c.	-82.5
JM TPO FB 150 OR 175 APPLICATIONS:													
S-38.	Min. 22 ga., Type B, Grade 33 steel	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 4 ft ²	JM SA Primer Low VOC followed by JM Vapor Barrier SA	Self-adhered	One or more layers, min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	UIA-TWO-PART	Min. 0.25-inch DEXcell FA Glass Mat Roof Board	UIA-TWO-PART	JM TPO FB 150 or 175	Hot asphalt	-45.0*
JM TPO SA APPLICATIONS:													
S-39.	Min. 22 ga., Type B, Grade 33 steel	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 4 ft ²	JM SA Primer Low VOC followed by JM Vapor Barrier SA	Self-adhered	One or more layers, min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	UIA-TWO-PART	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	JM TPO SA – 60 MIL	Self-adhering	-45.0*
S-40.	Min. 22 ga., Type B, Grade 33 steel	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 4 ft ²	JM SA Primer Low VOC followed by JM Vapor Barrier SA	Self-adhered	One or more layers, min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	UIA-TWO-PART	Min. 0.25-inch DEXcell FA Glass Mat Roof Board or SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	JM TPO SA – 60 MIL	Self-adhering	-45.0*

TABLE 2D: 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	Top Insulation Layer			Roof Cover (Note 16)		MDP (psf)
			Type	Fasteners	Attach	Type	Attach	
JM TPO APPLICATIONS:								
S-41.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 1.75-inch Invinsa Foam	Note 2	1 per 4 ft²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, TACC FA-141	-30.0*
S-42.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination, loose laid	Min. 0.25-inch Invinsa Roof Board	Note 2	1 per 2 ft²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), TACC FA-141	-30.0*
S-43.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination, loose laid	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 2.67 ft²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, JM TPO Low-VOC MA	-37.5*
S-44.	Min. 22 ga., Type B, Grade 33 steel	(Optional) ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 2-inch Fesco Foam	Note 2; All Purpose Fastener only	1 per 5.3 ft2	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA	-37.5*
S-45.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 4 ft²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), TACC FA-141	-45.0*
S-46.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 2 ft²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), TACC FA-141	-45.0*
S-47.	Min. 22 ga., Type B, Grade 33 steel	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 0.25-inch InvinsaPlus	Note 2	1 per 4 ft2	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA	-45.0*
S-48.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 1.75-inch Invinsa Foam	Note 2	1 per 2.9 ft²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, TACC FA-141	-45.0*

TABLE 2D: 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	Top Insulation Layer			Roof Cover (Note 16)		MDP (psf)
			Type	Fasteners	Attach	Type	Attach	
S-49.	Min. 22 ga., Type B, Grade 33 steel	(Optional) ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 2-inch Invinso Foam	Note 2; All Purpose Fastener only	1 per 5.3 ft ²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA	-45.0*
S-50.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination, loose laid	Min. 0.625-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 4 ft ²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, JM TPO Low-VOC MA	-45.0*
S-51.	Min. 22 ga., Type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	Note 2 (square plates)	1 per 4 ft ²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, JM TPO Low-VOC MA	-45.0*
S-52.	Min. 22 ga., Type B, Grade 33 steel	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 0.25-inch DEXcell FA Glass Mat Roof Board or 7/16-inch DEXcell Cement Roof Board	Note 2	1 per 3.2 ft ²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC	-45.0*
S-53.	Min. 22 ga., Type B, Grade 33 steel	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 4 ft ²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC	-45.0*
S-54.	Min. 22 ga., Type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 0.375-inch SECUROCK Gypsum-Fiber Roof Board	Note 2 (square plates)	1 per 2.67 ft ²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, JM TPO Low-VOC MA	-45.0*
S-55.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 7/16-inch APA rated OSB	Note 2	1 per 2 ft ²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), TACC FA-141	-45.0*
S-56.	Min. 22 ga., Type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 1.5-inch ENRGY 3, ValuTherm	Note 2 (square plates)	1 per 1.78 ft ²	JM TPO 45, 60, 72 or 80	JM TPO Low VOC MA	-45.0
S-57.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSA CGF	Note 2	1 per 1.78 ft ²	JM TPO 45, 60, 72 or 80	JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, TACC FA-141	-52.5

TABLE 2D: 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	Top Insulation Layer			Roof Cover (Note 16)		MDP (psf)
			Type	Fasteners	Attach	Type	Attach	
S-58.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2-inch ENRGY 3 CGF, ValuTherm CGF, ENRGY 3 FR	Note 2 (square plates)	1 per 2.67 ft ²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA	-52.5
S-59.	Min. 22 ga., Type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Note 2 (square plates)	1 per 1.33 ft ²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, JM TPO Low-VOC MA	-52.5
S-60.	Min. 22 ga., Type B, Grade 33 steel	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 0.25-inch InvinsaPlus	Note 2	1 per 2.67 ft ²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA	-52.5
S-61.	Min. 22 ga., Type B, Grade 80 steel	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 0.25-inch InvinsaPlus	Note 2	1 per 2 ft ²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA	-60.0
S-62.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ENRGY 3, ENRGY 3.E, ENRGY 3.E 25 PSI ValuTherm, JM ISO 3, R-Panel, ENRGY 3 25 PSI, ValuTherm 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF, ValuTherm AGF, ENRGY 3 25 PSI AGF, ValuTherm 25 PSI AGF, ENRGY 3 CGF, ValuTherm CGF, ENRGY 3 25 PSI CGF, ValuTherm 25 PSI CGF, ENRGY 3 FR, ENRGY 3 25 PSI FR	Note 2 (square plates)	1 per 1.78 ft ²	JM TPO 45, 60, 72 or 80	JM MBA (TPO&EPDM), JM TPO LVOC MA	-60.0
S-63.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2-inch ENRGY 3 CGF, ValuTherm CGF, ENRGY 3 FR	Note 2 (square plates)	1 per 2 ft ²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA	-67.5
S-64.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination, loose laid	Min. 7/16-inch APA rated OSB	Note 2	1 per 1.78 ft ²	JM TPO 45, 60, 72 or 80	JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, TACC FA-141	-75.0
S-65.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2-inch ENRGY 3 CGF, ValuTherm CGF	Note 2 (square recessed plates)	1 per 1 ft ²	JM TPO 45, 60, 72 or 80	JM TPO MA-SB, JM MBA (TPO&EPDM)	-75.0
S-66.	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2-inch ENRGY 3 CGF, ValuTherm CGF, ENRGY 3 FR	Note 2 (square plates)	1 per 1.33 ft ²	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA	-105.0

TABLE 2D: 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	Top Insulation Layer			Roof Cover (Note 16)		MDP (psf)
			Type	Fasteners	Attach	Type	Attach	
S-67.	Min. 22 ga., Type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	Note 2 (square plates)	1 per 1 ft ²	JM TPO 45, 60, 72 or 80	JM TPO Low VOC MA	-135.0*
S-68.	Min. 22 ga., Type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	Note 2 (square plates)	1 per 1 ft ²	JM TPO 45, 60, 72 or 80	JM TPO WBMA	-150.0*
JM TPO FB APPLICATIONS:								
S-69.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination, loose laid	Min. 2-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 4 ft ²	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-37.5*
S-70.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination, loose laid	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 2.67 ft ²	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-37.5*
S-71.	Min. 22 ga., Type B, Grade 33 steel	(Optional) ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 2-inch Fesco Foam	Note 2; All Purpose Fastener only	1 per 5.3 ft ²	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-37.5*
S-72.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination, loose laid	Min. 2-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 2 ft ²	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-45.0*
S-73.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination, loose laid	Min. 7/16-inch OSB	Note 2	1 per 2 ft ²	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-45.0*
S-74.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination, loose laid	Min. 0.625-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 4 ft ²	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-45.0*
S-75.	Min. 22 ga., Type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	Note 2 (square plates)	1 per 4 ft ²	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-45.0*
S-76.	Min. 22 ga., Type B, Grade 33 steel	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 0.25-inch DEXcell FA Glass Mat Roof Board or 7/16-inch DEXcell Cement Roof Board	Note 2	1 per 3.2 ft ²	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-45.0*
S-77.	Min. 22 ga., Type B, Grade 33 steel	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 4 ft ²	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-45.0*

TABLE 2D: 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	Top Insulation Layer			Roof Cover (Note 16)		MDP (psf)
			Type	Fasteners	Attach	Type	Attach	
S-78.	Min. 22 ga., Type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 0.375-inch SECUROCK Gypsum-Fiber Roof Board	Note 2 (square plates)	1 per 2.67 ft ²	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-45.0*
S-79.	Min. 22 ga., Type B, Grade 33 steel	(Optional) ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 2-inch Invinso Foam	Note 2; All Purpose Fastener only	1 per 5.3 ft ²	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-45.0*
S-80.	Min. 22 ga., Type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Note 2 (square plates)	1 per 1.33 ft ²	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-52.5
S-81.	Min. 22 ga., Type B, Grade 33 steel	Min. 0.5-inch DEXcell FA Glass Mat Roof Board, loose laid, followed by JM Vapor Barrier SA, self-adhered, followed by Min. 1.5-inch ENRGY 3, ENRGY 3.E, ValuTherm, JM ISO 3, R-Panel, SeparatoR, ENRGY 3 25 PSI, ENRGY 3.E 25 PSI, ValuTherm 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF, ValuTherm AGF, ENRGY 3 25 PSI AGF, ValuTherm 25 PSI AGF, ENRGY 3 CGF, ValuTherm CGF, ENRGY 3 25 PSI CGF, ValuTherm 25 PSI CGF, ENRGY 3 FR, ENRGY 3 25 PSI FR, loose laid	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 1 ft ²	JM TPO FB 100, 115 or 135	JM-RSUA, 4-inch o.c.	-82.5
S-82.	Min. 22 ga., Type B, Grade 80 steel	Min. 0.5-inch DEXcell FA Glass Mat Roof Board, loose laid, followed by JM Vapor Barrier SA, self-adhered, followed by Min. 1.5-inch ENRGY 3, ENRGY 3.E, ValuTherm, JM ISO 3, R-Panel, SeparatoR, ENRGY 3 25 PSI, ENRGY 3.E 25 PSI, ValuTherm 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF, ValuTherm AGF, ENRGY 3 25 PSI AGF, ValuTherm 25 PSI AGF, ENRGY 3 CGF, ValuTherm CGF, ENRGY 3 25 PSI CGF, ValuTherm 25 PSI CGF, ENRGY 3 FR, ENRGY 3 25 PSI FR, loose laid	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 1 ft ²	JM TPO FB 100, 115 or 135	JM-RSUA, 4-inch o.c.	-142.5
S-83.	Min. 22 ga., Type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	Note 2 (square plates)	1 per 1 ft ²	JM TPO FB 100, 115 or 135	JM TPO WBMA	-150.0*
JM TPO FB 150 OR 175 APPLICATIONS:								
S-84.	Min. 22 ga., Type B, Grade 33 steel	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 0.25-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 3.2 ft ²	JM TPO FB 150 or 175	Hot asphalt	-45.0*
S-85.	Min. 22 ga., Type B, Grade 33 steel	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 4 ft ²	JM TPO FB 150 or 175	Hot asphalt	-45.0*

TABLE 2D: 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	Top Insulation Layer			Roof Cover (Note 16)		MDP (psf)
			Type	Fasteners	Attach	Type	Attach	
S-86.	Min. 22 ga., Type B, Grade 40 steel or min. 2,500 psi structural concrete	One or more layers, any combination, loose laid	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	Note 2 (square plates)	1 per 2 ft ²	JM TPO FB 150 or 175	Hot asphalt	-60.0
JM TPO SA APPLICATIONS:								
S-87.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 1.75-inch Invinsa Foam	Note 2	1 per 4 ft ²	JM TPO SA – 60 MIL	Self-adhering	-30.0*
S-88.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination, loose laid	Min. 0.25-inch Invinsa Roof Board	Note 2	1 per 2 ft ²	JM TPO SA – 60 MIL	Self-adhering	-30.0*
S-89.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination, loose laid	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 2.67 ft ²	JM TPO SA – 60 MIL	Self-adhering	-37.5*
S-90.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 4 ft ²	JM TPO SA – 60 MIL	Self-adhering	-45.0*
S-91.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	Note 2	1 per 2 ft ²	JM TPO SA – 60 MIL	Self-adhering	-45.0*
S-92.	Min. 22 ga., Type B, Grade 33 steel	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 0.25-inch InvinsaPlus	Note 2	1 per 4 ft ²	JM TPO SA – 60 MIL	Self-adhering	-45.0*
S-93.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 1.75-inch Invinsa Foam	Note 2	1 per 2.9 ft ²	JM TPO SA – 60 MIL	Self-adhering	-45.0*
S-94.	Min. 22 ga., Type B, Grade 33 steel	(Optional) ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 2-inch Invinsa Foam	Note 2; All Purpose Fastener only	1 per 5.3 ft ²	JM TPO SA – 60 MIL	Self-adhering	-45.0*
S-95.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination, loose laid	Min. 0.625-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 4 ft ²	JM TPO SA – 60 MIL	Self-adhering	-45.0*
S-96.	Min. 22 ga., Type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	Note 2 (square plates)	1 per 4 ft ²	JM TPO SA – 60 MIL	Self-adhering	-45.0*

TABLE 2D: 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	Top Insulation Layer			Roof Cover (Note 16)		MDP (psf)
			Type	Fasteners	Attach	Type	Attach	
S-97.	Min. 22 ga., Type B, Grade 33 steel	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 0.25-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 3.2 ft ²	JM TPO SA – 60 MIL	Self-adhering	-45.0*
S-98.	Min. 22 ga., Type B, Grade 33 steel	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 0.5-inch DEXcell FA Glass Mat Roof Board	Note 2	1 per 4 ft ²	JM TPO SA – 60 MIL	Self-adhering	-45.0*
S-99.	Min. 22 ga., Type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 0.375-inch SECUROCK Gypsum-Fiber Roof Board	Note 2 (square plates)	1 per 2.67 ft ²	JM TPO SA – 60 MIL	Self-adhering	-45.0*
S-100.	Min. 22 ga., Type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 1.5-inch ENRGY 3, ValuTherm	Note 2 (square plates)	1 per 1.78 ft ²	JM TPO 45, 60, 72 or 80	JM TPO Low VOC MA	-45.0
S-101.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSA CGF	Note 2	1 per 1.78 ft ²	JM TPO SA – 60 MIL	Self-adhering	-52.5
S-102.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2-inch ENRGY 3 CGF, ValuTherm CGF, ENRGY 3 FR	Note 2 (square plates)	1 per 2.67 ft ²	JM TPO SA – 60 MIL	Self-adhering	-52.5
S-103.	Min. 22 ga., Type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	Note 2 (square plates)	1 per 1.33 ft ²	JM TPO SA – 60 MIL	Self-adhering	-52.5
S-104.	Min. 22 ga., Type B, Grade 33 steel	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 0.25-inch InvinsaPlus	Note 2	1 per 2.67 ft ²	JM TPO SA – 60 MIL	Self-adhering	-52.5
S-105.	Min. 22 ga., Type B, Grade 80 steel	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3 or 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, loose laid	Min. 0.25-inch InvinsaPlus	Note 2	1 per 2 ft ²	JM TPO SA – 60 MIL	Self-adhering	-60.0
S-106.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 1.5-inch ENRGY 3, ENRGY 3.E, ENRGY 3.E 25 PSI ValuTherm, JM ISO 3, R-Panel, ENRGY 3 25 PSI, ValuTherm 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF, ValuTherm AGF, ENRGY 3 25 PSI AGF, ValuTherm 25 PSI AGF, ENRGY 3 CGF, ValuTherm CGF, ENRGY 3 25 PSI CGF, ValuTherm 25 PSI CGF, ENRGY 3 FR, ENRGY 3 25 PSI FR	Note 2 (square plates)	1 per 1.78 ft ²	JM TPO SA – 60 MIL	Self-adhering	-60.0

TABLE 2D: 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	Top Insulation Layer			Roof Cover (Note 16)		MDP (psf)
			Type	Fasteners	Attach	Type	Attach	
S-107.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2-inch ENRGY 3 CGF, ValuTherm CGF, ENRGY 3 FR	Note 2 (square plates)	1 per 2 ft ²	JM TPO SA – 60 MIL	Self-adhering	-67.5
S-108.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2-inch ENRGY 3 CGF, ValuTherm CGF	Note 2 (square recessed plates)	1 per 1 ft ²	JM TPO SA – 60 MIL	Self-adhering	-75.0
S-109.	Min. 22 ga., type B, Grade 80 steel or min. 2,500 psi structural concrete	(Optional) One or more layers, any combination, loose laid	Min. 2-inch ENRGY 3 CGF	Note 2 (square plates)	1 per 1.33 ft ²	JM TPO SA – 60 MIL	Self-adhering	-90.0
S-110.	Min. 22 ga., Type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	Note 2 (square plates)	1 per 1 ft ²	JM TPO SA – 60 MIL	Self-adhering	-150.0*

TABLE 2E: STEEL DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-1: MECHANICALLY ATTACHED INSULATION, HYBRID SYSTEM

System No.	Deck (Note 1)	Base Insulation Layer	Top Insulation Layer			Roof Cover (Notes 16 & 17)		MDP (psf)
			Type	Fasteners	Attach	Base Ply(s)	Roof Cover / Adhesive	
S-111.	Min. 22 ga., type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 0.5-inch Retro-Fit Board or DuraBoard, min. 0.75-inch Fesco Board or min. 1.5-inch Fesco Foam or DuraFoam	Note 2	1 per 2 ft ²	BP-AA, SBS-AA	JM TPO FB 150 or 175 / hot asphalt	-52.5
S-112.	Min. 22 ga., type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 0.75-inch DuraBoard	Note 2	1 per 1.45 ft ²	BP-AA, SBS-AA	JM TPO FB 150 or 175 / hot asphalt	-60.0
S-113.	Min. 22 ga., type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 0.5-inch Retro-Fit Board or min. 0.75-inch Fesco Board	Note 2	1 per 1.33 ft ²	BP-AA, SBS-AA	JM TPO FB 150 or 175 / hot asphalt	-60.0
S-114.	Min. 22 ga., type B, Grade 33 steel	One or more layers, any combination, loose laid	Min. 0.5-inch SECUROCK Gypsum-Fiber Roof Board	Note 2	1 per 1.78 ft ²	BP-AA, SBS-AA, SBS-TA	JM TPO FB 150 or 175 / hot asphalt	-60.0

TABLE 2F: STEEL DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-2: MECHANICALLY ATTACHED INSULATION, PLATE-BONDED ROOF COVER

System No.	Deck (Note 1)	Insulation Layer (Note 14)	Attachment		Roof Cover	MDP (psf)
			Fasteners	Spacing		
RHINO BOND SYSTEMS:						
S-115.	Min. 22 ga., type B, Grade 33 steel	Min. 1.5-inch, one or more layers, any combination, preliminarily attached (Note 5)	JM TPO RhinoPlates and High Load Fasteners	18-inch o.c. at rows spaced 60-inch o.c.	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions.	-37.5
S-116.	Min. 22 ga., type B, Grade 33 steel	Min. 1.5-inch, one or more layers, any combination	JM TPO RhinoPlates and High Load Fasteners	1 per 5.33 ft² (6 parts per 4 x 8 ft board)	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions.	-45.0*
S-117.	Min. 22 ga., type B, Grade 33 steel	Min. 1.5-inch, one or more layers, any combination, preliminarily attached (Note 5)	JM TPO RhinoPlates and High Load Fasteners	6-inch o.c. at rows spaced 120-inch o.c.	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions.	-45.0
S-118.	Min. 22 ga., type B, Grade 33 steel	Min. 1.5-inch, one or more layers, any combination, preliminarily attached (Note 5)	JM TPO RhinoPlates and High Load Fasteners	12-inch o.c. at rows spaced 60-inch o.c.	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions.	-52.5
S-119.	Min. 22 ga., type B, Grade 33 steel	Min. 1.5-inch, one or more layers, any combination	JM TPO RhinoPlates and High Load Fasteners	1 per 4 ft² (8 parts per 4 x 8 ft board)	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions.	-67.5
S-120.	Min. 22 ga., type B, Grade 33 steel	Min. 1.5-inch, one or more layers, any combination	JM TPO RhinoPlates and High Load Fasteners	1 per 2.67 ft² (12 parts per 4 x 8 ft board) Fasteners are 6-, 24- and 42-inches from the board’s long edge and 12-, 36-, 60- and 84-inches from the board’s short edge.	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions.	-75.0
S-121.	Min. 22 ga., type B, Grade 33 steel	Min. 1.5-inch, one or more layers, any combination	JM TPO RhinoPlates and High Load Fasteners	16-inch o.c. in rows spaced 24-inch o.c.	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions.	-82.5
S-122.	Min. 22 ga., type B, Grade 33 steel	Min. 1.5-inch, one or more layers, any combination	JM TPO RhinoPlates and High Load Fasteners	1 per 2.13 ft² (15 parts per 4 x 8 ft board) Fasteners are 6-, 24- and 42-inches from the board’s long edge and 12-, 30-, 48-, 66- and 84-inches from the board’s short edge.	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions.	-90.0
S-123.	Min. 22 ga., type B, Grade 80 steel	Min. 1.5-inch, one or more layers, any combination	JM TPO RhinoPlates and High Load Fasteners	16-inch o.c. in rows spaced 24-inch o.c.	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions.	-90.0
S-124.	Min. 22 ga., type B, Grade 33 steel	Min. 1.5-inch, one or more layers, any combination, preliminarily attached (Note 5)	JM TPO RhinoPlates and High Load Fasteners	6-inch o.c. at rows spaced 60-inch o.c.	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions.	-105.0
ISOWELD INDUCTION WELDING SYSTEM:						
S-125.	Min. 22 ga., type B, Grade 33 steel	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#12-PH3 or DF-#14-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 5.33 ft² (6 parts per 4x8 ft board per FM LPDS 1-29)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-30.0*

TABLE 2F: STEEL DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-2: MECHANICALLY ATTACHED INSULATION, PLATE-BONDED ROOF COVER

System No.	Deck (Note 1)	Insulation Layer (Note 14)	Attachment		Roof Cover	MDP (psf)
			Fasteners	Spacing		
S-126.	Min. 22 ga., type B, Grade 33 steel	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#15-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 8 ft ² (2 x 4 ft grid, staggered)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-30.0*
S-127.	Min. 22 ga., type B, Grade 80 steel	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#15-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 8 ft ² (2 x 4 ft grid, staggered)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-37.5*
S-128.	Min. 22 ga., type B, Grade 80 steel	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#12-PH3 or DF-#14-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 5.33 ft ² (6 parts per 4x8 ft board per FM LPDS 1-29)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-37.5*
S-129.	Min. 22 ga., type B, Grade 40 steel	Min. 1.5-inch, one or more layers, any combination, preliminarily attached (Note 5)	Dekfast DF-#15-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	12-inch o.c. at rows spaced 60-inch o.c.	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-37.5
S-130.	Min. 22 ga., type B, Grade 33 steel	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#15-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 5.33 ft ² (6 parts per 4x8 ft board per FM LPDS 1-29)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-45.0*
S-131.	Min. 22 ga., type B, Grade 80 steel	Min. 1.5-inch, one or more layers, any combination, preliminarily attached (Note 5)	Dekfast DF-#12-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	12-inch o.c. in rows spaced 60-inch o.c.	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-45.0
S-132.	Min. 22 ga., type B, Grade 33 steel	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#15-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 4 ft ² (2 x 2-ft grid, staggered)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-45.0
S-133.	Min. 22 ga., type B, Grade 40 steel	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#15-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 6 ft ² (2 x 3-ft grid, staggered)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-45.0
S-134.	Min. 22 ga., type B, Grade 80 steel	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#12-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 6 ft ² (2 x 3-ft grid, staggered)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-45.0
S-135.	Min. 22 ga., type B, Grade 40 steel	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#15-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 4 ft ² (2 x 2-ft grid, staggered)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-60.0
S-136.	Min. 22 ga., type B, Grade 80 steel	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#12-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 4 ft ² (2 x 2-ft grid, staggered)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-60.0
S-137.	Min. 22 ga., type B, Grade 33 steel	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#15-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 3.2 ft ² (10 parts per 4x8 ft board per FM LPDS 1-29)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-75.0
S-138.	Min. 22 ga., type B, Grade 40 steel	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#15-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 3 ft ² (1.5 x 2-ft grid, staggered)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-82.5

TABLE 2F: STEEL DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-2: MECHANICALLY ATTACHED INSULATION, PLATE-BONDED ROOF COVER

System No.	Deck (Note 1)	Insulation Layer (Note 14)	Attachment		Roof Cover	MDP (psf)
			Fasteners	Spacing		
S-139.	Min. 22 ga., type B, Grade 80 steel	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#12-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 3 ft ² (1.5 x 2-ft grid, staggered)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-82.5
S-140.	Min. 22 ga., type B, Grade 40 steel	Min. 1.5-inch, one or more layers, any combination, preliminarily attached (Note 5)	Dekfast DF-#15-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	6-inch o.c. in rows spaced 60-inch o.c.	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-90.0
S-141.	Min. 22 ga., type B, Grade 80 steel	Min. 1.5-inch, one or more layers, any combination, preliminarily attached (Note 5)	Dekfast DF-#12-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	6-inch o.c. in rows spaced 60-inch o.c.	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-97.5
S-142.	Min. 22 ga., type B, Grade 80 steel	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#15-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 2.25 ft ² (1.5 x 1.5-ft grid, staggered)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-97.5

TABLE 2G: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE D-1: INSULATED, MECHANICALLY ATTACHED ROOF COVER (STRESS PLATES)

System No.	Deck (Note 1)	Insulation (Note 14)		Roof Cover			MDP (psf)
		Type	Attach (Note 5)	Membrane	Fasteners	Attach	
SYSTEMS OVER MIN. GRADE 33 STEEL DECK OR STRUCTURAL CONCRETE (AS NOTED)							
S-143.	Min. 22 ga., type B, Grade 33 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	12-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-30.0
S-144.	Min. 22 ga., type B, Grade 33 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (10 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	12-inch o.c. within 6-inch wide laps spaced 114-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-30.0
S-145.	Min. 22 ga., type B, Grade 33 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (10 ft sheet)	Extra High Load Fasteners (steel only) or JM Structural Concrete Deck Fasteners (concrete only) with Extra High Load Plates	12-inch o.c. within 6-inch wide laps spaced 114-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-37.5
S-146.	Min. 22 ga., type B, Grade 33 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	Extra High Load Fasteners (steel only) or JM Structural Concrete Deck Fasteners (concrete only) with Extra High Load Plates	12-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-45.0
S-147.	Min. 22 ga., type B, Grade 33 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (10 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	6-inch o.c. within 6-inch wide laps spaced 114-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-45.0
S-148.	Min. 22 ga., type B, Grade 33 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (10 ft sheet)	Extra High Load Fasteners (steel only) or JM Structural Concrete Deck Fasteners (concrete only) with Extra High Load Plates	6-inch o.c. within 6-inch wide laps spaced 114-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-52.5

TABLE 2G: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE D-1: INSULATED, MECHANICALLY ATTACHED ROOF COVER (STRESS PLATES)

System No.	Deck (Note 1)	Insulation (Note 14)		Roof Cover			MDP (psf)
		Type	Attach (Note 5)	Membrane	Fasteners	Attach	
S-149.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	6-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-60.0
S-150.	Min. 22 ga., type B, Grade 33 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	Extra High Load Fasteners (steel only) or JM Structural Concrete Deck Fasteners (concrete only) with Extra High Load Plates	6-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-75.0
S-151.	Min. 22 ga., type B, Grade 33 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (5 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	6-inch o.c. within 6-inch wide laps spaced 54-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-97.5
SYSTEMS OVER MIN. GRADE 60 STEEL DECK OR STRUCTURAL CONCRETE (AS NOTED)							
S-152.	Min. 22 ga., type B, Grade 60 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (10 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with OMG 2-3/4" Super XHD Barbed Plates	12-inch o.c. within 6-inch wide laps spaced 114-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-30.0
S-153.	Min. 22 ga., type B, Grade 60 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with OMG 2-3/4" Super XHD Barbed Plates	12-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-37.5
S-154.	Min. 22 ga., type B, Grade 60 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (10 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	6-inch o.c. within 6-inch wide laps spaced 114-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-60.0
S-155.	Min. 22 ga., type B, Grade 60 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	6-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-75.0
SYSTEMS OVER MIN. GRADE 80 STEEL DECK OR STRUCTURAL CONCRETE (AS NOTED)							
S-156.	Min. 22 ga., type B, Grade 80 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	12-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-37.5
S-157.	Min. 22 ga., type B, Grade 80 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (10 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	12-inch o.c. within 6-inch wide laps spaced 114-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-37.5
S-158.	Min. 22 ga., type B, Grade 80 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with OMG 2-3/4" Super XHD Barbed Plates	12-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-45.0
S-159.	Min. 22 ga., type B, Grade 80 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	Extra High Load Fasteners (steel only) or JM Structural Concrete Deck Fasteners (concrete only) with Extra High Load Plates	12-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-45.0

TABLE 2G: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE D-1: INSULATED, MECHANICALLY ATTACHED ROOF COVER (STRESS PLATES)

System No.	Deck (Note 1)	Insulation (Note 14)		Roof Cover			MDP (psf)
		Type	Attach (Note 5)	Membrane	Fasteners	Attach	
S-160.	Min. 22 ga., type B, Grade 80 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (10 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	6-inch o.c. within 6-inch wide laps spaced 114-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-45.0
S-161.	Min. 22 ga., type B, Grade 80 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (10 ft sheet)	Extra High Load Fasteners (steel only) or JM Structural Concrete Deck Fasteners (concrete only) with Extra High Load Plates	12-inch o.c. within 6-inch wide laps spaced 114-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-45.0
S-162.	Min. 22 ga., type B, Grade 80 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (10 ft sheet)	Extra High Load Fasteners (steel only) or JM Structural Concrete Deck Fasteners (concrete only) with Extra High Load Plates	6-inch o.c. within 6-inch wide laps spaced 114-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-52.5
S-163.	Min. 22 ga., type B, Grade 80 steel or min. 3,000 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80 (8 ft sheet)	High Load Fasteners (steel or concrete) or JM Structural Concrete Deck Fasteners (concrete only) with High Load Plates	6-inch o.c. within 6-inch wide laps spaced 90-inch o.c. Laps sealed with 1.5-inch heat weld outside lap	-52.5

TABLE 2H: STEEL OR STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE D-2: INSULATED, MECHANICALLY ATTACHED ROOF COVER (RPS STRIPS)

System No.	Deck (Note 1)	Insulation		Roof Cover			MDP (psf)
		Type	Attach (Note 5)	Membrane	Fasteners	Attachment	
S-164.	Min. 22 ga., type B, Grade 33 steel or min. 2,500 psi structural concrete	One or more layers, any combination	Prelim. attached	JM TPO 45, 60, 72 or 80	JM High Load Plates and High Load Fasteners	JM TPO 10" RPS are applied over the insulation spaced 114-inch o.c. The plates are centered over each strip and fastened 6-inch o.c. Roof cover adhered to each strip by first priming with Primer 240 or ADCO SPC-3 Primer at the RPS location, then rolling into place in accordance with JM requirements.	-52.5

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

SEE NOTE 18 FOR VAPOR BARRIER OPTIONS

System No.	Deck (Note 1)	Prime	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 16)		MDP (psf)
			Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Type	Attach	
JM TPO APPLICATIONS:									
C-1	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	JM-OSFA	(Optional) Min. 0.25-inch DensDeck or Invinsa Roof Board	JM-OSFA	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), TACC FA-141	-75.0
C-2	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	JM-OSFA	(Optional) Min. 0.25-inch Invinsa Roof Board	JM-OSFA	JM TPO 45, 60, 72 or 80	JM TPO WBMA	-75.0
C-3	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	JM-OSFA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	JM-OSFA	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, JM TPO Low-VOC MA	-247.5
C-4	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	JM-RSUA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	JM-RSUA	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, JM TPO Low-VOC MA	-247.5
C-5	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	(Optional) Min. 0.25-inch DensDeck or Invinsa Roof Board	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), TACC FA-141	-105.0
C-6	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	(Optional) Min. 0.25-inch Invinsa Roof Board	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO WBMA	-105.0
C-7	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 0.25-inch Invinsa Roof Board	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM)	-105.0
C-8	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 0.25-inch Invinsa Roof Board	MBR-BA	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM)	-105.0

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

SEE NOTE 18 FOR VAPOR BARRIER OPTIONS

System No.	Deck (Note 1)	Prime	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 16)		MDP (psf)
			Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Type	Attach	
C-9	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 0.25-inch Invinsa Roof Board	MBR-BA (full coverage at 1.5 gal/sq)	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM)	-112.5
C-10	Min. 2,500 psi structural concrete	None	One or more layers, min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3, 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 0.25-inch DEXcell FA Glass Mat Roof Board or min. 7/16-inch DEXcell Cement Roof Board	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC	-120.0
C-11	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	(Optional) Additional layers of base insulation	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO Low-VOC MA, JM TPO LVOC MA	-172.5
C-12	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	(Optional) Additional layers of base insulation	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO WBMA	-195.0
C-13	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, JM TPO Low-VOC MA	-247.5
C-14	Min. 2,500 psi structural concrete	None	Min. 0.25-inch Invinsa Roof Board or Invinsa Plus	UIA-TWO-PART	None	N/A	JM TPO 45, 60, 72 or 80	JM TPO WBMA	-255.0
C-15	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3.E, ENRGY 3.E 25 PSI ValuTherm, JM ISO 3, R-Panel, ENRGY 3 25 PSI, ValuTherm 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF, ValuTherm AGF, ENRGY 3 25 PSI AGF, ValuTherm 25 PSI AGF, ENRGY 3 CGF, ValuTherm CGF, ENRGY 3 25 PSI CGF, ValuTherm 25 PSI CGF, ENRGY 3 FR, ENRGY 3 25 PSI FR	UIA-TWO-PART	(Optional) Additional layers of base insulation	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM MBA (TPO&EPDM)	-322.5
C-16	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	(Optional) Additional layers of base insulation	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-LVOC, JM TPO LVOC MA, TACC FA-141	-330.0
C-17	Min. 2,500 psi structural concrete	None	(Optional) Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 1.5-inch Invinsa Foam	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, TACC FA-141	-330.0

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

SEE NOTE 18 FOR VAPOR BARRIER OPTIONS

System No.	Deck (Note 1)	Prime	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 16)		MDP (psf)
			Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Type	Attach	
C-18	Min. 2,500 psi structural concrete	None	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	None	N/A	JM TPO 45, 60, 72 or 80	JM TPO Low-VOC MA, JM TPO LVOC MA	-360.0
C-19	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 25 PSI, ValuTherm	UIA-TWO-PART	Min. 0.25-inch DEXcell FA Glass Mat Roof Board or min. 7/16-inch DEXcell Cement Roof Board	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC	-390.0
C-20	Min. 2,500 psi structural concrete	None	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	None	N/A	JM TPO 45, 60, 72 or 80	JM TPO WBMA	-465.0
C-21	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	Min. 0.25-inch DensDeck	CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), TACC FA-141	-105.0
C-22	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	(Optional) Min. 0.25-inch DensDeck	MBR-BA	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), TACC FA-141	-105.0
C-23	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	Min. 0.25-inch Invinsa Roof Board	CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM)	-112.5
C-24	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	Min. 0.25-inch Invinsa Roof Board	MBR-BA (full coverage at 1.5 gal/sq)	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM)	-112.5
C-25	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	(Optional) Additional layers of base insulation	CR-20	JM TPO 45, 60, 72 or 80	JM TPO Low-VOC MA, JM TPO LVOC MA	-172.5
C-26	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	(Optional) Additional layers of base insulation	CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, TACC FA-141	-217.5

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

SEE NOTE 18 FOR VAPOR BARRIER OPTIONS

System No.	Deck (Note 1)	Prime	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 16)		MDP (psf)
			Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Type	Attach	
C-27	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, JM TPO Low-VOC MA	-247.5
JM TPO FB APPLICATIONS:									
C-28	Min. 2,500 psi structural concrete	ASTM D41	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	HA	(Optional) Additional layers of base insulation	HA	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-105.0
C-29	Min. 2,500 psi structural concrete	ASTM D41	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	HA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-105.0
C-30	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	JM-OSFA	(Optional) Additional layers of base insulation	JM-OSFA	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-105.0
C-31	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	JM-OSFA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	JM-OSFA	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-105.0
C-32	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3.E, ENRGY 3.E 25 PSI, ValuTherm, JM ISO 3, R-Panel, ENRGY 3 25 PSI, ValuTherm 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF, ValuTherm AGF, ENRGY 3 25 PSI AGF, ValuTherm 25 PSI AGF, ENRGY 3 CGF, ValuTherm CGF, ENRGY 3 25 PSI CGF, ValuTherm 25 PSI CGF, ENRGY 3 FR, ENRGY 3 25 PSI FR	JM-OSFA	(Optional) Additional layers of base insulation	JM-OSFA	JM TPO FB 100, 115 or 135	JM-RSUA or JM-SP-UIA-TWO-PART, 4-inch o.c.	-112.5
C-33	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ValuTherm	JM-RSUA	(Optional) Additional layers of base insulation	JM-RSUA	JM TPO FB 100, 115 or 135	JM-RSUA, 12-inch o.c.	-67.5
C-34	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	JM-RSUA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	JM-RSUA	JM TPO FB 100, 115 or 135	JM-RSUA, 12-inch o.c.	-67.5
C-35	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3.E, ENRGY 3.E 25 PSI, ValuTherm, JM ISO 3, R-Panel, ENRGY 3 25 PSI, ValuTherm 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF, ValuTherm AGF, ENRGY 3 25 PSI AGF, ValuTherm 25 PSI AGF, ENRGY 3 CGF, ValuTherm CGF, ENRGY 3 25 PSI CGF, ValuTherm 25 PSI CGF, ENRGY 3 FR, ENRGY 3 25 PSI FR	JM-RSUA	(Optional) Additional layers of base insulation	JM-RSUA	JM TPO FB 100, 115 or 135	JM-RSUA or JM-SP-UIA-TWO-PART, 4-inch o.c.	-112.5

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

SEE NOTE 18 FOR VAPOR BARRIER OPTIONS

System No.	Deck (Note 1)	Prime	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 16)		MDP (psf)
			Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Type	Attach	
C-36	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ValuTherm	UIA-TWO-PART	(Optional) Additional layers of base insulation	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM-RSUA, 12-inch o.c.	-67.5
C-37	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM-RSUA, 12-inch o.c.	-67.5
C-38	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	(Optional) Additional layers of base insulation	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-105.0
C-39	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-105.0
C-40	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3.E, ENRGY 3.E 25 PSI, ValuTherm, JM ISO 3, R-Panel, ENRGY 3 25 PSI, ValuTherm 25 PSI, R-Panel 25 PSI, ENRGY 3 AGF, ValuTherm AGF, ENRGY 3 25 PSI AGF, ValuTherm 25 PSI AGF, ENRGY 3 CGF, ValuTherm CGF, ENRGY 3 25 PSI CGF, ValuTherm 25 PSI CGF, ENRGY 3 FR, ENRGY 3 25 PSI FR	UIA-TWO-PART	(Optional) Additional layers of base insulation	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM-RSUA or JM-SP-UIA-TWO-PART, 4-inch o.c.	-112.5
C-41	Min. 2,500 psi structural concrete	None	One or more layers, min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3, 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 0.25-inch DEXcell FA Glass Mat Roof Board or min. 7/16-inch DEXcell Cement Roof Board	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-120.0
C-42	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	(Optional) Additional layers of base insulation	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM TPO WBMA	-187.5
C-43	Min. 2,500 psi structural concrete	None	Min. 0.25-inch Invinsa Roof Board or Invinsa Plus	UIA-TWO-PART	None	N/A	JM TPO FB 100, 115 or 135	JM TPO WBMA	-277.5
C-44	Min. 2,500 psi structural concrete	None	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	None	N/A	JM TPO FB 100, 115 or 135	JM TPO WBMA	-345.0
C-45	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 25 PSI, ValuTherm	UIA-TWO-PART	Min. 0.25-inch DEXcell FA Glass Mat Roof Board	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM TPO MA-WB	-390.0
C-46	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	(Optional) Additional layers of base insulation	CR-20	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-105.0

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

SEE NOTE 18 FOR VAPOR BARRIER OPTIONS

System No.	Deck (Note 1)	Prime	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 16)		MDP (psf)
			Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Type	Attach	
C-47	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-105.0
JM TPO FB 150 OR 175 APPLICATIONS:									
C-48	Min. 2,500 psi structural concrete	None	One or more layers, min. 1.5-inch ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 0.25-inch DEXcell FA Glass Mat Roof Board	UIA-TWO-PART	JM TPO FB 150 or 175	Hot asphalt	-120.0
C-49	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 25 PSI, ValuTherm	UIA-TWO-PART	Min. 0.25-inch DEXcell FA Glass Mat Roof Board	UIA-TWO-PART	JM TPO FB 150 or 175	Hot asphalt	-390.0
JM TPO SA APPLICATIONS:									
C-50	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	JM-OSFA	(Optional) Min. 0.25-inch or Invinsa Roof Board	JM-OSFA	JM TPO SA – 60 MIL	Self-Adhering	-75.0
C-51	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	JM-OSFA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	JM-OSFA	JM TPO SA – 60 MIL	Self-Adhering	-247.5
C-52	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	JM-RSUA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	JM-RSUA	JM TPO SA – 60 MIL	Self-Adhering	-247.5
C-53	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	(Optional) Additional layers of base insulation and/or Min. 0.25-inch Invinsa Roof Board	UIA-TWO-PART	JM TPO SA – 60 MIL	Self-Adhering	-105.0
C-54	Min. 2,500 psi structural concrete	None	Min. 0.25-inch Invinsa Roof Board or Invinsa Plus	UIA-TWO-PART	None	N/A	JM TPO SA – 60 MIL	Self-Adhering	-105.0
C-55	Min. 2,500 psi structural concrete	None	(Optional) Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 1.5-inch Invinsa Foam	UIA-TWO-PART	JM TPO SA – 60 MIL	Self-Adhering	-105.0
C-56	Min. 2,500 psi structural concrete	None	One or more layers, min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, JM ISO 3, 25 PSI, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 0.25-inch DEXcell FA Glass Mat Roof Board	UIA-TWO-PART	JM TPO SA – 60 MIL	Self-Adhering	-120.0

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

SEE NOTE 18 FOR VAPOR BARRIER OPTIONS

System No.	Deck (Note 1)	Prime	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 16)		MDP (psf)
			Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Type	Attach	
C-57	Min. 2,500 psi structural concrete	None	(Optional) Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	JM TPO SA – 60 MIL	Self-Adhering	-247.5
C-58	Min. 2,500 psi structural concrete	None	Min. 0.25-inch Dens Deck Prime	UIA-TWO-PART	None	N/A	JM TPO SA – 60 MIL	Self-adhering	-330.0
C-59	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 25 PSI, ValuTherm	UIA-TWO-PART	Min. 0.25-inch DEXcell FA Glass Mat Roof Board	UIA-TWO-PART	JM TPO SA – 60 MIL	Self-adhering	-390.0
C-60	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	Min. 0.25-inch Invinsa Roof Board	CR-20	JM TPO SA – 60 MIL	Self-Adhering	-105.0
C-61	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	(Optional) Additional layers of base insulation	CR-20	JM TPO SA – 60 MIL	Self-Adhering	-105.0
C-62	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	JM TPO SA – 60 MIL	Self-Adhering	-105.0

TABLE 3B: STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE A-1: BONDED INSULATION, HYBRID SYSTEM

NOTE: REFER TO NOTE 18 FOR VAPOR BARRIER OPTIONS

System No.	Deck (Note 1)	Primer	Base Insulation Layer		Top Insulation Layer		Roof Cover (Notes 16 & 17)		MDP (psf)
			Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Base Ply(s)	Roof Cover / Adhesive	
C-63	Min. 2,500 psi structural concrete	ASTM D41	Min. 0.75-inch FescoBoard or DuraBoard (homogeneous)	HA	(Optional) Min. 0.75-inch FescoBoard or DuraBoard (homogeneous)	HA	BP-AA, SBS-AA	JM TPO FB 150 or 175 / hot asphalt	-167.5
C-64	Min. 2,500 psi structural concrete	ASTM D41	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	HA	Min. 0.5-inch Retro-Fit Board or min. 0.75-inch Fesco Board or DuraBoard	HA	BP-AA, SBS-AA	JM TPO FB 150 or 175 / hot asphalt	-217.5
C-65	Min. 2,500 psi structural concrete	ASTM D41	(Optional) Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	HA	Min. 1.5-inch Fesco Foam or DuraFoam	HA	BP-AA, SBS-AA	JM TPO FB 150 or 175 / hot asphalt	-217.5
C-66	Min. 2,500 psi structural concrete	ASTM D41	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	HA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	HA	BP-AA, SBS-AA, SBS-TA	JM TPO FB 150 or 175 / hot asphalt	-217.5
C-67	Min. 2,500 psi structural concrete	None	(Optional) Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	UIA	Min. 0.75-inch FescoBoard (homogeneous)	UIA or MBR-BA, 12-inch o.c.	BP-AA, SBS-AA	JM TPO FB 150 or 175 / hot asphalt	-112.5
C-68	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	JM-RSUA	Min. 0.5-inch Retro-Fit Board	JM-RSUA	BP-AA, SBS-AA	JM TPO FB 150 or 175 / hot asphalt	-105.0
C-69	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	JM-RSUA	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	JM-RSUA	BP-AA, SBS-AA	JM TPO FB 150 or 175 / hot asphalt	-217.5
C-70	Min. 2,500 psi structural concrete	None	(Optional) Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	UIA-TWO-PART	Min. 0.75-inch FescoBoard (homogeneous)	UIA-TWO-PART	BP-AA, SBS-AA	JM TPO FB 150 or 175 / hot asphalt	-217.5
C-71	Min. 2,500 psi structural concrete	None	(Optional) Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	UIA-TWO-PART	Min. 0.5-inch Retro-Fit Board or DuraBoard	UIA-TWO-PART	BP-AA, SBS-AA	JM TPO FB 150 or 175 / hot asphalt	-217.5
C-72	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	UIA-TWO-PART	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	BP-AA, SBS-AA	JM TPO FB 150 or 175 / hot asphalt	-217.5
C-73	Min. 2,500 psi structural concrete	None	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	CR-20	Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	BP-AA, SBS-AA, SBS-TA	JM TPO FB 150 or 175 / hot asphalt	-217.5

TABLE 3C: STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-2: MECHANICALLY ATTACHED INSULATION, PLATE-BONDED ROOF COVER

System No.	Deck (Note 1)	Insulation Layer (Note 14)	Attachment		Roof Cover	MDP (psf)
			Fasteners	Spacing		
RHINO BOND SYSTEMS:						
C-74	Min. 2,500 psi structural concrete	Min. 1.5-inch, one or more layers, any combination, preliminarily attached (Note 5)	JM TPO RhinoPlates and High Load Fasteners	18-inch o.c. at rows spaced 60-inch o.c.	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions. Laps sealed with 1.5-inch heat weld	-37.5
C-75	Min. 2,500 psi structural concrete	Min. 1.5-inch, one or more layers, any combination	JM TPO RhinoPlates and High Load Fasteners	1 per 5.33 ft² (6 parts per 4 x 8 ft board)	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions. Laps sealed with 1.5-inch heat weld.	-45.0*
C-76	Min. 2,500 psi structural concrete	Min. 1.5-inch, one or more layers, any combination, preliminarily attached (Note 5)	JM TPO RhinoPlates and High Load Fasteners	6-inch o.c. at rows spaced 120-inch o.c.	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions. Laps sealed with 1.5-inch heat weld.	-45.0
C-77	Min. 2,500 psi structural concrete	Min. 1.5-inch, one or more layers, any combination, preliminarily attached (Note 5)	JM TPO RhinoPlates and High Load Fasteners	12-inch o.c. at rows spaced 60-inch o.c.	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions. Laps sealed with 1.5-inch heat weld.	-52.5
C-78	Min. 2,500 psi structural concrete	Min. 1.5-inch, one or more layers, any combination	JM TPO RhinoPlates and High Load Fasteners	1 per 4 ft² (8 parts per 4 x 8 ft board)	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions. Laps sealed with 1.5-inch heat weld.	-67.5
C-79	Min. 2,500 psi structural concrete	Min. 1.5-inch, one or more layers, any combination	JM TPO RhinoPlates and High Load Fasteners	1 per 2.67 ft² (12 parts per 4 x 8 ft board) Fasteners are 6-, 24- and 42-inches from the board’s long edge and 12-, 36-, 60- and 84-inches from the board’s short edge.	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions. Laps sealed with 1.5-inch heat weld.	-75.0
C-80	Min. 2,500 psi structural concrete	Min. 1.5-inch, one or more layers, any combination	JM TPO RhinoPlates and High Load Fasteners	1 per 2.13 ft² (15 parts per 4 x 8 ft board) Fasteners are 6-, 24- and 42-inches from the board’s long edge and 12-, 30-, 48-, 66- and 84-inches from the board’s short edge.	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions. Laps sealed with 1.5-inch heat weld.	-90.0
C-81	Min. 2,500 psi structural concrete	Min. 1.5-inch, one or more layers, any combination, preliminarily attached (Note 5)	JM TPO RhinoPlates and High Load Fasteners	6-inch o.c. at rows spaced 60-inch o.c.	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions. Laps sealed with 1.5-inch heat weld.	-105.0
ISOWELD INDUCTION WELDING SYSTEM:						
C-82	Min. 2,500 psi structural concrete	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#14-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 5.33 ft² (6 parts per 4x8 ft board per FM LPDS 1-29)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-37.5*
C-83	Min. 2,500 psi structural concrete	Min. 1.5-inch, one or more layers, any combination, preliminarily attached (Note 5)	Dekfast DF-#14-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	12-inch o.c. at rows spaced 60-inch o.c.	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-37.5
C-84	Min. 2,500 psi structural concrete	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#15-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 8 ft² (2 x 4 ft grid, staggered))	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-45.0*

TABLE 3C: STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION, REROOF (TEAR-OFF) OR RECOVER
SYSTEM TYPE C-2: MECHANICALLY ATTACHED INSULATION, PLATE-BONDED ROOF COVER

System No.	Deck (Note 1)	Insulation Layer (Note 14)	Attachment		Roof Cover	MDP (psf)
			Fasteners	Spacing		
C-85	Min. 2,500 psi structural concrete	Min. 1.5-inch, one or more layers, any combination, preliminarily attached (Note 5)	Dekfast DF-#15-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	12-inch o.c. in rows spaced 60-inch o.c.	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-45.0
C-86	Min. 2,500 psi structural concrete	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#14-PH3 or DF-#15-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 6 ft ² (2 x 3-ft grid, staggered)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-45.0
C-87	Min. 2,500 psi structural concrete	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#14-PH3 or DF-#15-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 4 ft ² (2 x 2-ft grid, staggered)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-60.0
C-88	Min. 2,500 psi structural concrete	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#14-PH3 or DF-#15-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 3 ft ² (1.5 x 2-ft grid, staggered)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-82.5
C-89	Min. 2,500 psi structural concrete	Min. 1.5-inch, one or more layers, any combination, preliminarily attached (Note 5)	Dekfast DF-#14-PH3 or DF-#15-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	6-inch o.c. in rows 60-inch o.c.	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-90.0
C-90	Min. 2,500 psi structural concrete	Min. 1.5-inch, one or more layers, any combination	Dekfast DF-#15-PH3 with <i>isoweld</i> F1-P-6.8-TPO Plates	1 per 2.25 ft ² (1.5 x 1.5-ft grid, staggered)	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-97.5

TABLE 4A: LIGHTWEIGHT CONCRETE OVER STEEL DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE F: NON-INSULATED, BONDED ROOF COVER

System No.	Deck (Note 1)	LWC (Note 15)	Roof Cover (Note 16)		MDP (psf)
			Type	Attach	
CELCORE (FL2037):					
LWC-1	Min. 22 ga., Type BV, Grade 33 vented steel at max 6 ft spans	Min. 380 psi, min. 2-inch thick Celcore Cellular Concrete with optional 1” thick, 1.0 pcf EPS holey board. Treated with Celcore Curing Compound	JM TPO FB 100, 115 or 135	JM-RSUA, 12-inch o.c.	-67.5
CONCRECEL (FL5584 & FL10500):					
LWC-2	Min. 22 ga., Type BV, Grade 33 vented steel at max 6 ft spans	Min. 370 psi, min. 2-inch thick Concrecel Concrete with optional 1” thick, 1.0 pcf EPS holey board. Treated with Concrecel Curing Compound.	JM TPO FB 100, 115 or 135	JM-RSUA, 12-inch o.c.	-67.5
ELASTIZELL (FL4994):					
LWC-3	Min. 22 ga., Type BV, Grade 33 vented steel at max 6 ft spans	Min. 210 psi, min. 2-inch thick Elastizell Range II Lightweight Insulating Concrete with optional 1” thick, 1.0 pcf EPS holey board.	JM TPO FB 100, 115 or 135	JM-RSUA, 12-inch o.c.	-67.5

TABLE 4B: LIGHTWEIGHT CONCRETE OVER STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE F: NON-INSULATED, BONDED ROOF COVER

System No.	Deck (Note 1)	LWC (Note 15)	Roof Cover (Note 16)		MDP (psf)
			Type	Attach	
CELCORE (FL2037):					
LWC-4	Min. 2,500 psi structural concrete	Min. 380 psi, min. 2-inch thick Celcore Cellular Concrete with optional 1” thick, 1.0 pcf EPS holey board. Treated with Celcore Curing Compound	JM TPO FB 100, 115 or 135	JM-RSUA, 12-inch o.c.	-67.5
LWC-5	Min. 2,500 psi structural concrete	Min. 380 psi, min. 2-inch thick Celcore Cellular Concrete with optional 1” thick, 1.0 pcf EPS holey board. Treated with Celcore Curing Compound	JM TPO FB 100, 115 or 135	JM-RSUA, 4-inch o.c. (full coverage)	-290.0
LWC-6	Min. 2,500 psi structural concrete	Min. 350 psi, min. 2-inch thick Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture, with optional 1” thick, 1.0 pcf EPS holey board and surfacing of Celcore PVA Curing Compound.	JM TPO 45, 60, 72 or 80	JM TPO MA-LVOC, JM TPO LVOC MA	-367.5
CONCRECEL (FL5584 & FL10500):					
LWC-7	Min. 2,500 psi structural concrete	Min. 370 psi, min. 2-inch thick Concrecel Concrete with optional 1” thick, 1.0 pcf EPS holey board. Treated with Concrecel Curing Compound.	JM TPO FB 100, 115 or 135	JM-RSUA, 12-inch o.c.	-67.5
LWC-8	Min. 2,500 psi structural concrete	Min. 379 psi, min. 2-inch thick Concrecel Concrete, with optional 1” thick, 1.0 pcf EPS holey board and surfacing of Concrecel Curing Compound.	JM TPO 45, 60, 72 or 80	JM TPO MA-LVOC, JM TPO LVOC MA	-285.0
LWC-9	Min. 2,500 psi structural concrete	Min. 370 psi, min. 2-inch thick Concrecel Concrete with optional 1” thick, 1.0 pcf EPS holey board. Treated with Concrecel Curing Compound.	JM TPO FB 100, 115 or 135	JM-RSUA, 4-inch o.c. (full coverage)	-290.0
ELASTIZELL (FL4994):					
LWC-10	Min. 2,500 psi structural concrete	Min. 210 psi, min. 2-inch thick Elastizell Range II Lightweight Insulating Concrete with optional 1” thick, 1.0 pcf EPS holey board.	JM TPO FB 100, 115 or 135	JM-RSUA, 12-inch o.c.	-67.5
LWC-11	Min. 2,500 psi structural concrete	Min. 210 psi, min. 2-inch thick Elastizell Range II Lightweight Insulating Concrete with optional 1” thick, 1.0 pcf EPS holey board.	JM TPO FB 100, 115 or 135	JM-RSUA, 4-inch o.c. (full coverage)	-290.0

TABLE 4C: LIGHTWEIGHT CONCRETE DECKS OVER STRUCTURAL CONCRETE DECKS - NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE F: VAPOR BARRIER TO DECK, LWC TO VAPOR BARRIER, BONDED ROOF COVER

System No.	Deck (Note 1)	Vapor Barrier	LWC (Note 15)	Roof Cover (Note 16)		MDP (psf)
				Type	Attach	
CELCORE (FL2037):						
LWC-12	Min. 2,500 psi structural concrete primed with ASTM D41 primer	DynaBase HW, torch-applied	Min. 380 psi, min. 2-inch thick Celcore Cellular Concrete with optional 1" thick, 1.0 pcf EPS holey board. Treated with Celcore Curing Compound	JM TPO FB 100, 115 or 135	JM-RSUA, 12-inch o.c.	-67.5
LWC-13	Min. 2,500 psi structural concrete primed with ASTM D41 primer	DynaBase HW, torch-applied	Min. 380 psi, min. 2-inch thick Celcore Cellular Concrete with optional 1" thick, 1.0 pcf EPS holey board. Treated with Celcore Curing Compound	JM TPO FB 100, 115 or 135	JM-RSUA, 4-inch o.c. (full coverage)	-262.5
ELASTIZELL (FL4994):						
LWC-14	Min. 2,500 psi structural concrete primed with ASTM D41 primer	DynaBase HW, torch-applied	Min. 210 psi, min. 2-inch thick Elastizell Range II Lightweight Insulating Concrete with optional 1" thick, 1.0 pcf EPS holey board.	JM TPO FB 100, 115 or 135	JM-RSUA, 12-inch o.c.	-67.5
LWC-15	Min. 2,500 psi structural concrete primed with ASTM D41 primer	DynaBase HW, torch-applied	Min. 210 psi, min. 2-inch thick Elastizell Range II Lightweight Insulating Concrete with optional 1" thick, 1.0 pcf EPS holey board.	JM TPO FB 100, 115 or 135	JM-RSUA, 4-inch o.c. (full coverage)	-85.0

TABLE 5A: 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 16)		MDP (psf)
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Type	Attach	
JM TPO APPLICATIONS:								
G-1.	Existing poured gypsum or gypsum plank	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	(Optional) Min. 0.25-inch DensDeck or Invinsa Roof Board or min. 1.5-inch Invinsa Foam	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), TACC FA-141	-105.0
G-2.	Existing poured gypsum or gypsum plank	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	(Optional) Min. 0.25-inch Invinsa Roof Board or min. 1.5-inch Invinsa Foam	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO WBMA	-105.0
G-3.	Existing poured gypsum or gypsum plank	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	(Optional) Additional layers of base insulation	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, JM TPO Low-VOC MA, TACC FA-141	-112.5
G-4.	Existing poured gypsum or gypsum plank	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	(Optional) Min. 0.25-inch DensDeck	CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), TACC FA-141	-105.0
G-5.	Existing poured gypsum or gypsum plank	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	(Optional) Additional layers of base insulation	CR-20	JM TPO 45, 60, 72 or 80	JM TPO Low-VOC MA, JM TPO LVOC MA	-172.5
G-6.	Existing poured gypsum or gypsum plank	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	(Optional) Additional layers of base insulation	CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, TACC FA-141	-217.5
JM TPO FB APPLICATIONS:								
G-7.	Existing poured gypsum or gypsum plank	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	(Optional) Additional layers of base insulation or Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-105.0
G-8.	Existing poured gypsum or gypsum plank	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	(Optional) Additional layers of base insulation or Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-105.0

TABLE 6A: RECOVER APPLICATIONS
SYSTEM TYPE A: BONDED INSULATION, BONDED ROOF COVER

System No.	Substrate (Notes 1 & 12)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 16)		MDP (psf)
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Type	Attach	
JM TPO APPLICATIONS:								
R-1	Existing asphaltic BUR	Min. 0.25-inch Invinsa Roof Board	MBR-BA <i>(full coverage at 1.5 gal/sq)</i>	N/A	N/A	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO WBMA, JM TPO MA-SB, JM MBA (TPO&EPDM)	-112.5
R-2	Existing asphaltic BUR	(Optional if coverboard used) Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	JM-OSFA	(Optional if base insulation used) Min. 0.25-inch DensDeck or Invinsa Roof Board	JM-OSFA	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), TACC FA-141	-75.0
R-3	Existing asphaltic BUR	(Optional if coverboard used) Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	JM-OSFA	(Optional if base insulation used) Min. 0.25-inch Invinsa Roof Board	JM-OSFA	JM TPO 45, 60, 72 or 80	JM TPO WBMA	-75.0
R-4	Existing asphaltic BUR	(Optional if coverboard used) Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	(Optional if base insulation used) Min. 0.25-inch DensDeck or Invinsa Roof Board or min. 1.5-inch Invinsa Foam	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), TACC FA-141	-105.0
R-5	Existing asphaltic BUR	(Optional) Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	Min. 0.25-inch Invinsa Roof Board or min. 1.5-inch Invinsa Foam	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO WBMA	-105.0
R-6	Existing asphaltic BUR	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	(Optional) Additional layers of base insulation	UIA-TWO-PART	JM TPO 45, 60, 72 or 80	JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, JM TPO Low-VOC MA, TACC FA-141	-120.0
R-7	Existing asphaltic BUR or mineral surface cap sheet	Min. 0.25-inch DensDeck	CR-20	N/A	N/A	JM TPO 45, 60, 72 or 80	JM TPO MA-WB, JM TPO MA-SB, JM MBA (TPO&EPDM), TACC FA-141	-105.0
R-8	Existing asphaltic BUR or mineral surface cap sheet	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	(Optional) Additional layers of base insulation	CR-20	JM TPO 45, 60, 72 or 80	JM TPO Low-VOC MA, JM TPO LVOC MA	-172.5
R-9	Existing asphaltic BUR or mineral surface cap sheet	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	(Optional) Additional layers of base insulation	CR-20	JM TPO 45, 60, 72 or 80	JM TPO MA-SB, JM MBA (TPO&EPDM), JM TPO MA-LVOC, JM TPO LVOC MA, TACC FA-141	-217.5
JM TPO FB APPLICATIONS:								

TABLE 6A: RECOVER APPLICATIONS
SYSTEM TYPE A: BONDED INSULATION, BONDED ROOF COVER

System No.	Substrate (Notes 1 & 12)	Base Insulation Layer		Top Insulation Layer		Roof Cover (Note 16)		MDP (psf)
		Type	Attach (Notes 6,7,8)	Type	Attach (Notes 6,7,8)	Type	Attach	
R-10	Existing asphaltic BUR	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	UIA-TWO-PART	(Optional) Additional layers of base insulation or Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	UIA-TWO-PART	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-105.0
R-11	Existing asphaltic BUR	Min. 1.5-inch ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF	CR-20	(Optional) Additional layers of base insulation or Min. 0.25-inch SECUROCK Gypsum-Fiber Roof Board	CR-20	JM TPO FB 100, 115 or 135	JM TPO MA-WB, JM TPO WBMA	-105.0

TABLE 6B: RECOVER OVER EXISTING METAL PANEL ROOF
SYSTEM TYPE C-2: MECHANICALLY ATTACHED INSULATION, PLATE-BONDED ROOF COVER

System No.	Deck (Note 1)	Insulation Layer (Note 14)	Attachment		Roof Cover	MDP (psf)
			Fasteners	Density		
RHINO BOND SYSTEMS:						
R-12	Existing wood, steel or concrete deck atop min. 16 ga. (0.0598”) purlins or steel supports spaced max. 5 ft o.c.	ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF between ribs or over panels of existing non-structural metal roof followed by additional base layer or Min. 0.25-inch DensDeck, Invinsa Roof Board or SECUROCK Gypsum-Fiber Roof Board or min. 7/16-inch OSB	Preliminary Securement: UltraFast Plate-Bonded Securment: JM Purlin Fasteners with JM TPO RhinoPlates	Insulation preliminarily secured with fasteners/plates in Note 2. JM Purlin Fasteners with JM TPO Rhino Plates spaced 6-inch o.c. at every-other structural steel support (max. 120-inch o.c.)	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions.	-45.0
R-13	Existing wood, steel or concrete deck atop min. 16 ga. (0.0598”) purlins or steel supports spaced max. 5 ft o.c.	ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF between ribs or over panels of existing non-structural metal roof followed by additional base layer or Min. 0.25-inch DensDeck, Invinsa Roof Board or SECUROCK Gypsum-Fiber Roof Board or min. 7/16-inch OSB	Preliminary Securement: UltraFast Plate-Bonded Securment: JM Purlin Fasteners with JM TPO RhinoPlates	Insulation preliminarily secured with fasteners/plates in Note 2. JM Purlin Fasteners with JM TPO Rhino Plates spaced 18-inch o.c. at every structural steel support (max. 60-inch o.c.)	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions.	-45.0
R-14	Existing wood, steel or concrete deck atop min. 16 ga. (0.0598”) purlins or steel supports spaced max. 5 ft o.c.	ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF between ribs or over panels of existing non-structural metal roof followed by additional base layer or Min. 0.25-inch DensDeck, Invinsa Roof Board or SECUROCK Gypsum-Fiber Roof Board or min. 7/16-inch OSB	Preliminary Securement: UltraFast Plate-Bonded Securment: JM Purlin Fasteners with JM TPO RhinoPlates	Insulation preliminarily secured with fasteners/plates in Note 2. JM Purlin Fasteners with JM TPO Rhino Plates spaced 12-inch o.c. at every structural steel support (max. 60-inch o.c.)	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions.	-67.5
R-15	Existing wood, steel or concrete deck atop min. 16 ga. (0.0598”) purlins or steel supports spaced max. 5 ft o.c.	ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF between ribs or over panels of existing non-structural metal roof followed by additional base layer or Min. 0.25-inch DensDeck, Invinsa Roof Board or SECUROCK Gypsum-Fiber Roof Board or min. 7/16-inch OSB	Preliminary Securement: UltraFast Plate-Bonded Securment: JM Purlin Fasteners with JM TPO RhinoPlates	Insulation preliminarily secured with fasteners/plates in Note 2. JM Purlin Fasteners with JM TPO Rhino Plates spaced 6-inch o.c. at every structural steel support (max. 60-inch o.c.)	JM TPO 60, 72 or 80 bonded to JM TPO RhinoPlates with RhinoPlates with RhinoBond Portable Bonding Tool, per manufacturer’s published instructions.	-120.0
ISOWELD INDUCTION WELDING SYSTEM:						
R-16	Existing standing seam or lap seam metal roof covers having min. 16 gauge (0.0598 inch), 50 ksi steel purlins spaced max. 60-inch o.c.	Min. 1.5-inch, one or more layers, any combination, preliminarily attached (Note 5)	SFS Purlin Fastener with <i>isoweld</i> F1-P-6.8-TPO Plates are fastened through to purlins	12-inch o.c. at rows spaced 60-inch o.c.	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-37.5
R-17	Existing standing seam or lap seam metal roof covers having min. 16 gauge (0.0598 inch), 50 ksi steel purlins spaced max. 60-inch o.c.	Min. 1.5-inch, one or more layers, any combination, preliminarily attached (Note 5)	SFS Purlin Fastener with <i>isoweld</i> F1-P-6.8-TPO Plates are fastened through to purlins	6-inch o.c. in rows 60-inch o.c.	JM TPO 60, 72 or 80 bonded to <i>isoweld</i> F1-P-6.8-TPO Plates with SFS <i>isoweld</i> 3000 stand-up tool.	-90.0

**TABLE 6C: RECOVER OVER EXISTING METAL PANEL ROOF
SYSTEM TYPE D-1: INSULATED, MECHANICALLY ATTACHED ROOF COVER**

System No.	Deck (Note 1)	Insulation (Note 14)			Roof Cover			MDP (psf)
		Base Layer	Top Layer	Attach (Note 5)	Membrane	Fasteners	Attachment	
R-18	Existing wood, steel or concrete deck atop min. 16 ga. (0.0598") purlins or steel supports spaced max. 5 ft o.c.	ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF between ribs or over panels of existing non-structural metal roof	Additional base layer or Min. 0.25-inch DensDeck, Invinsa Roof Board or SECUROCK Gypsum-Fiber Roof Board or min. 7/16-inch OSB	Prelim. Attached	JM TPO 45, 60, 72 or 80	JM Purlin Fasteners with High Load Plates	Fasteners spaced 12-inch o.c. within 5-inch wide laps engage structural supports spaced 60-inch o.c. Laps sealed with 1.5-inch heat weld.	-37.5
R-19	Existing wood, steel or concrete deck atop min. 16 ga. (0.0598") purlins or steel supports spaced max. 5 ft o.c.	ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF between ribs or over panels of existing non-structural metal roof	Additional base layer or Min. 0.25-inch DensDeck, Invinsa Roof Board or SECUROCK Gypsum-Fiber Roof Board or min. 7/16-inch OSB	Prelim. Attached	JM TPO 45, 60, 72 or 80	JM Purlin Fasteners with Extra High Load Plates	Fasteners spaced 12-inch o.c. within 5-inch wide laps engage structural supports spaced 60-inch o.c. Laps sealed with 1.5-inch heat weld.	-45.0
R-20	Existing wood, steel or concrete deck atop min. 16 ga. (0.0598") purlins or steel supports spaced max. 5 ft o.c.	ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, PSI-25, ENRGY 3 25 PSI AGF, ENRGY 3 25 PSI CGF, JM ISO 3, ValuTherm, ValuTherm AGF, ValuTherm CGF, ValuTherm 25 PSI AGF, ValuTherm 25 PSI CGF between ribs or over panels of existing non-structural metal roof	Additional base layer or Min. 0.25-inch DensDeck, Invinsa Roof Board or SECUROCK Gypsum-Fiber Roof Board or min. 7/16-inch OSB	Prelim. Attached	JM TPO 45, 60, 72 or 80	JM Purlin Fasteners with High Load Plates	Fasteners spaced 6-inch o.c. within 5-inch wide laps engage structural supports spaced 60-inch o.c. Laps sealed with 1.5-inch heat weld.	-82.5

**TABLE 6D: RECOVER APPLICATIONS
SYSTEM TYPE F: NON-INSULATED, BONDED ROOF COVER**

System No.	Substrate (Notes 1 & 12)	Roof Cover (Note 16)		MDP (psf)
		Type	Attach	
R-21	Existing asphaltic granule surface cap sheet	JM TPO FB 100, 115 or 135	JM-RSUA, 12-inch o.c.	-45.0
R-22	Existing granule-surfaced, SBS modified bitumen roof system over structural concrete deck	JM TPO FB 100, 115 or 135	JM-RSUA, 6-inch o.c.	-165.0