



EVALUATION REPORT

FLORIDA BUILDING CODE, 6TH EDITION (2017)

Manufacturer: JOHNS MANVILLE CORPORATION
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Issued February 24, 2020

Manufacturing Plants: Scottsboro, AL
Pawtucket, RI
Lancaster, SC

Quality Assurance: UL LLC (QUA9625)

SCOPE

Category: Roofing
Subcategory: Single Ply Roof System
Code Sections: 1504.3.1, 1504.6, 1504.7, 1507.13, 1515.1.1, 1515.1.4, 1515.2.4, 1523.1.1, 1523.6.2, 1523.6.5.2.9
Properties: Wind Resistance, Physical Properties, Impact Resistance

PRODUCT DESCRIPTION

Products	Specification	Description
JM PVC-50 mil	ASTM D 4434	Nominal 50-mil thick polyvinyl chloride with DuPont™ Elvaloy KEE single-ply roof membrane with polyester scrim reinforcement
JM PVC-60 mil	ASTM D 4434	Nominal 60-mil thick polyvinyl chloride with DuPont™ Elvaloy KEE single-ply roof membrane with polyester scrim reinforcement
JM PVC-80 mil	ASTM D 4434	Nominal 80-mil thick polyvinyl chloride with DuPont™ Elvaloy KEE single-ply roof membrane with polyester scrim reinforcement
JM PVC Fleece Backed-50 mil	ASTM D 4434	Nominal 50-mil thick polyvinyl chloride with DuPont™ Elvaloy KEE single-ply roof membrane with polyester scrim reinforcement and polyester fleece backing
JM PVC Fleece Backed-60 mil	ASTM D 4434	Nominal 60-mil thick polyvinyl chloride with DuPont™ Elvaloy KEE single-ply roof membrane with polyester scrim reinforcement and polyester fleece backing
JM PVC Fleece Backed-80 mil	ASTM D 4434	Nominal 80-mil thick polyvinyl chloride with DuPont™ Elvaloy KEE single-ply roof membrane with polyester scrim reinforcement and polyester fleece backing
JM PVC SD Plus-50 mil	ASTM D 4434	Nominal 50-mil thick polyvinyl chloride single-ply roof membrane with polyester scrim reinforcement
JM PVC SD Plus-60 mil	ASTM D 4434	Nominal 60-mil thick polyvinyl chloride single-ply roof membrane with polyester scrim reinforcement
JM PVC SD Plus-80 mil	ASTM D 4434	Nominal 80-mil thick polyvinyl chloride single-ply roof membrane with polyester scrim reinforcement
JM TPO-45	ASTM D 6878 TAS 131	Nominal 45-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement
JM TPO-60	ASTM D 6878 TAS 131	Nominal 60-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement
JM TPO-80	ASTM D 6878 TAS 131	Nominal 80-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement



Products	Specification	Description
JM TPO FB 115	ASTM D 6878 TAS 131	Nominal 60-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement and polyester fleece backing
JM TPO FB 135	ASTM D 6878 TAS 131	Nominal 80-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement and polyester fleece backing
JM TPO FB 150	ASTM D 6878 TAS 131	Nominal 60-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement and heavy polyester fleece backing
JM TPO FB 175	ASTM D 6878 TAS 131	Nominal 80-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement and heavy polyester fleece backing
JM TPO SA-60 mil	ASTM D 6878 TAS 131	Nominal 60-mil thick thermoplastic polyolefin, heat-weldable, single-ply roof membrane with polyester scrim reinforcement and a self-adhesive backing

REFERENCES

Entity	Report No.	Standard
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-026	TAS 114(D) (1995)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-027	TAS 114(D) (1995)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-028	TAS 114(D) (1995)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-029	TAS 114(D) (1995)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-030	TAS 114(D) (1995)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-031	TAS 114(D) (1995)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-032	TAS 114(D) (1995)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-033	TAS 114(D) (1995)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-034	TAS 114(D) (1995)
Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-035	TAS 114(D) (1995)
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Atlantic & Caribbean Roof Consulting (TST4671)	ACRC 14-046	TAS 114(D) (1995)
FM Approvals (TST1867)	3009502	FM 4470 (2012)
FM Approvals (TST1867)	3012321	FM 4470 (2012)
FM Approvals (TST1867)	3014692	FM 4470 (2012)
FM Approvals (TST1867)	3014751	FM 4470 (2012)
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FM Approvals (TST1867)	3016629	FM 4470 (2012)
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FM Approvals (TST1867)	3030259	FM 4470 (2012)
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FM Approvals (TST1867)	3030383	FM 4470 (2012)
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FM Approvals (TST1867)	3033308	FM 4470 (2012)
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FM Approvals (TST1867)	3037540	FM 4450 (1989)
FM Approvals (TST1867)	3039813	FM 4470 (2012)
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FM Approvals (TST1867)	PR454134	FM 4470 (2012)
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FM Approvals (TST1867)	PR455897	FM 4470 (2012)
FM Approvals (TST1867)	PR455671	FM 4470 (2012)
Intertek – York (ATI) (TST1558)	J0079.01-109-18	FM 4474 (2011); TAS 114(J) (1995); UL 1897 (2012)
Intertek – York (ATI) (TST1558)	J0080.01-109-18	FM 4474 (2011); TAS 114(J) (1995); UL 1897 (2012)
Intertek – York (ATI) (TST1558)	J0082.01-109-18	FM 4474 (2011); TAS 114(J) (1995); UL 1897 (2012)
Intertek – York (ATI) (TST1558)	J0083.01-109-18	FM 4474 (2011); TAS 114(J) (1995); UL 1897 (2012)
Miami-Dade (EVL1528)	12-0216.01	TAS 114(J) (1995)
Miami-Dade (EVL1528)	13-0307.02	TAS 114(J) (1995)
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Momentum Technologies (TST2508)	CX23G3A	ASTM D 4434 (2012)
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PRI Construction Materials Technologies (TST5878)	JMC-086-02-01	FM 4474 (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-088-02-01	ASTM D 1876 (2008); TAS 117(B) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-107-02-01 Rev 4	ASTM D 903 (1998); ASTM D 1876 (2008); ASTM D 5147 (2011a); TAS 117(B & A) (1995); TAS 114(C) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-108-02-01	FM 4474 (2011); TAS 114 (J) (1995)
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PRI Construction Materials Technologies (TST5878)	JMC-114-02-01	FM 4474 (2011); TAS 114 (J) (1995)

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PRI Construction Materials Technologies (TST5878)	JMC-131-02-01	FM 4474 (2011); TAS 114 (D) (1995)
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PRI Construction Materials Technologies (TST5878)	JMC-132-02-02	FM 4474 (2011); TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-141-02-01	FM 4474 (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-143-02-01	FM 4474 (2011); TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-162-02-01	FM 4474 (2011); TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-163-02-01	FM 4474 (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-168-02-01	FM 4474 (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-193-02-01	FM 4474 (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-193-02-01A	FM 4474 (2011); TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-196-02-01	TAS 117(A) & (B) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-201-02-01A	FM 4474 (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-201-02-01B	FM 4474 (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-205-02-01	ASTM D 3746 [(1985)(2015)]
PRI Construction Materials Technologies (TST5878)	JMC-209-02-01	FM 4474 (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-216-02-01	ASTM D 6878 (2011a)
PRI Construction Materials Technologies (TST5878)	JMC-216-02-03	ASTM D 6878 (2011a)
PRI Construction Materials Technologies (TST5878)	JMC-225-02-01	FM 4474 (2011)
PRI Construction Materials Technologies (TST5878)	JMC-226-02-01	ASTM D 6878 (2011a)
PRI Construction Materials Technologies (TST5878)	JMC-242-02-01	FM 4474(D) (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-245-02-02	FM 4474(B) (2011); TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-246-02-01	FM 4474(B) (2011); TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-267-02-02	FM 4474(B) (2011); TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-277-02-01	FM 4474(B) (2011); TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-278-02-01A	FM 4474(C) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-278-02-02	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	JMC-278-02-03	FM 4474(D) (2011); TAS 114(J) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-303-02-01	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	JMC-306-02-01	FM 4474(B) (2011); TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-306-02-02	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	JMC-306-02-03	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
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PRI Construction Materials Technologies (TST5878)	JMC-339-02-03	ASTM C 1289 (2013E1); ASTM E 84 (2013a)
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PRI Construction Materials Technologies (TST5878)	JMC-343-02-01	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	JMC-343-02-01	ASTM D 413 (1998(2017)); TAS 117(B) (1995); FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	JMC-353-02-01	TAS 114(D) (1995)
PRI Construction Materials Technologies (TST5878)	JMC-353-02-02	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	JMC-354-02-01	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	JMC-360-02-01	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	507T0008	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	507T0019	ASTM D 1970/D 1970M (2015a)
PRI Construction Materials Technologies (TST5878)	507T0019	ASTM D 2178 (2013)
PRI Construction Materials Technologies (TST5878)	507T0009	FM 4474(C) (2011)
PRI Construction Materials Technologies (TST5878)	507T0031	FM 4474(C) (2011)
PRI Construction Materials Technologies (TST5878)	507T0031A.1	FM 4474(C) (2011)
PRI Construction Materials Technologies (TST5878)	507T0036	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
PRI Construction Materials Technologies (TST5878)	507T0036B	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)
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Trinity ERD (TST6049)	J33600.08.13	TAS 131 (1995)
Trinity ERD (TST6049)	J45020.05.13-1	TAS 114(C) (1995)
Trinity ERD (TST6049)	J45020.09.13-1-R1	TAS 114(C) (1995)
Trinity ERD (TST6049)	JM-SC11190.03.16	TAS 114(J) (1995)

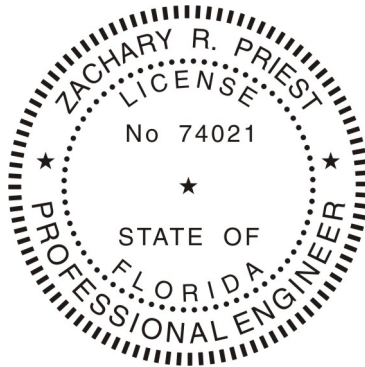
Entity	Report No.	Standard
Trinity ERD (TST6049)	JM-SC11320.03.16	TAS 114(D) (1995)
Trinity ERD (TST6049)	JM-SC12145.02.17	FM 4474(C) (2004)
Trinity ERD (TST6049)	SC4910	FM 4474 (2011); TAS 114(J) (1995)
Trinity ERD (TST6049)	SFS-SC10010.02.16-R1	FM 4474(D) (2011); TAS 114(J) (1995); UL 1897 (2012)

LIMITATIONS

1. Fire classification is not within the scope of this evaluation.
2. Foam plastic insulation shall be separated from the building interior in accordance with the FBC 2603.4 and 2603.6.
3. The roof deck and the roof deck attachment shall be designed by others to meet the minimum design loads established for components and cladding.
4. In the HVHZ, fastener spacing for insulation attachment is determined using a Minimum Characteristic Force (F') of 275 lbf as demonstrated via testing to TAS 105. If the field tested fastener value is below 275 lbf, then insulation attachment shall not be acceptable.
5. In the HVHZ, fastener spacing for base sheets or membrane attachment shall meet the minimum fastener resistance value and the *MDP* for the specified assembly. It is permissible for a qualified professional to submit a revised fastener spacing utilizing the withdrawal resistance value obtained from TAS 105 testing and calculations performed in accordance with RAS 117 and/or RAS 137, when the fastener resistance is found less than required.
6. In the HVHZ, if mechanical attachment through the lightweight insulating concrete to the structural deck is proposed, a field fastener withdrawal test shall be conducted in compliance with TAS 105 to determine equivalent or increased attachment densities. Revised fastener densities shall be submitted utilizing the withdrawal resistance value obtained from TAS 105 testing and calculations performed in accordance with RAS 117 and/or RAS 137.
7. For assemblies containing mechanical attachment, the allowable uplift pressure for the selected assembly shall meet or exceed the minimum design loads as determined in accordance with the FBC Chapter 16. For perimeter and corner roof zones 2 and 3, the attachment density may be increased by a qualified design professional, as necessary, to meet the design pressure requirements in these areas. In the HVHZ, calculations shall be conducted in compliance with RAS 117 and/or RAS 137. Outside the HVHZ, commonly used standards include RAS 117, FM LPDS 1-29, or ANSI/SPRI WD-1.
8. Reroofing applications shall be examined in accordance with FBC Section 1511 outside of the HVHZ and FBC Section 1521 within the HVHZ. For mechanically fastened systems, a field withdrawal resistance test (TAS 105 in the HVHZ; ANSI/SPRI FX-1 or TAS 105 in the non-HVHZ) shall be conducted by a qualified professional to ensure the fastener meets the minimum design load requirements of the system. For adhered systems, a field uplift resistance test (TAS 124 in the HVHZ; ASTM E 907, FM LPDS 1-52, ANSI/SPRI IA-1, or TAS 124 in the non-HVHZ) shall be conducted to confirm conformance of the existing to the minimum design loads.
9. For assemblies containing fully adhered or ribbon adhered attachment, or where extrapolation of the assembly is not permitted, the *MDP* for the selected assembly shall meet or exceed the minimum design loads as determined in accordance with the FBC Chapter 16 without augmentation.
10. Installation of the evaluated products shall comply with this report, the FBC, and the manufacturer's published application instructions. Where discrepancies exist between these sources, the more restrictive and FBC compliant installation detail shall prevail.
11. The minimum roof slope shall be 1/4:12 for new construction.
12. All products listed in this report shall be manufactured under a quality assurance program in compliance with Rule 61G20-3.

COMPLIANCE STATEMENT

The products evaluated herein by Zachary R. Priest, P.E. have demonstrated compliance with the Florida Building Code, 6th Edition (2017) as evidenced in the referenced documents submitted by the named manufacturer.



Zachary R. Priest, P.E.
Florida Registration No. 74021
Organization No. ANE9641

CERTIFICATION OF INDEPENDENCE

CREEK Technical Services, LLC does not have, nor will it acquire, a financial interest in any company manufacturing or distributing products under this evaluation.

CREEK Technical Services, LLC is not owned, operated, or controlled by any company manufacturing or distributing products under this evaluation.

Zachary R. Priest, P.E. does not have, nor will acquire, a financial interest in any company manufacturing or distributing products under this evaluation.

Zachary R. Priest, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.

APPENDICES

- 1) [APPENDIX A](#) – Installation (6 pages)
- 2) [APPENDIX B](#) – Nomenclature (4 pages)
- 3) [APPENDIX C](#) – Approved Assemblies for JM TPO Single-Ply Membranes (51 pages)
- 4) [APPENDIX D](#) – Approved Assemblies for JM PVC Single-Ply Membranes (38 pages)



APPENDIX A - INSTALLATION

INSTALLATION

Note - Refer to the [APPROVED ASSEMBLIES](#) section of this report for specific installation details of a selected assembly.

Unless otherwise specified in this report the following installation details shall be met for the named products:

Component	Product	Installation Detail
Fasteners, Battens & Plates	JM All Purpose Fastener	#14 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck; Min. 1-inch penetration into concrete deck
	JM APB Plates	2-inch diameter; Galvalume steel plate with reinforcing ribs and barbs
	JM Extra High Load Fastener	#21 fastener; Min. 3/4-inch penetration through the top rib of the steel deck;
	JM Extra High Load Plates	3-inch diameter; Galvalume steel plate with eyehooks
	JM High Load Plates	2 3/8-inch diameter; Galvalume steel plate with eyehooks
	JM High Load Plus Plates	2 3/4-inch diameter; Galvalume steel plate with barbs
	JM High Load Fastener	#15 fastener; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck;
	JM High Load LH Fastener	#15 fastener with oversized head; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck;
	JM UltraFast Fastener	#12 fastener; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck
	JM UltraFast Plate (Round)	3-inch diameter round; Galvalume steel plate; Only for use with the following products: ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, ENRGY 3 FR, ENRGY 3 C1, ENRGY 3 C1 CGF, RetroPlus, Retro-Fit, SeparatoR, SeparatoR CGF, SeparatoR CGF FR, DuraBoard, DuraFoam, Fesco, and Fesco Foam
	JM UltraFast Plate (Square)	3-inch square; Galvalume steel plate
	JM UltraLok Fastener	Min. 1.8-inch galvanized steel tube and coated-steel locking staple pre-assembled with 2.7-inch diameter Galvalume steel plate
	JM Polymer Membrane Batten	Membrane anchors and plastic strips
	JM Purlin Fastener	Min. 3/4-inch penetration through purlin
	JM PVC RhinoPlate	Min. 3-inch diameter for PVC membranes; Induction welded in the field of membrane; welds not permitted at lap seams; For use only with bareback membrane
	JM TPO RhinoPlate	Min. 3-inch diameter for TPO membranes; Induction welded in the field of membrane; welds not permitted at lap seams; For use only with min. 60 mil thick bareback membrane
	OMG CR Base Sheet Fastener	Base sheet fastener with 1.75-inch galvanized steel shank coated with CR-10 and integrated 2.75-inch diameter Galvalume plate.
	SFS Intec Dekfast DF-#12-PH3 Fastener	#12 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck;
	SFS Intec Dekfast DF-#14-PH3 Fastener	#15 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck; Min. 1-inch penetration into concrete deck
	SFS Intec Dekfast DF-#15-PH3 Fastener	#15 fasteners; Min. 3/4-inch penetration through the top rib of the steel deck or wood deck; Min. 1-inch penetration into concrete deck
	SFS Intec FI-P-6.8-PVC	Min. 3-inch diameter for PVC membranes; Induction welded in the field of membrane; welds not permitted at lap seams; For use only with min. 60 mil thick bareback membrane
	SFS Intec FI-P-6.8-TPO	Min. 3-inch diameter for TPO membranes; Induction welded in the field of membrane; welds not permitted at lap seams; For use only with min. 60 mil thick bareback membrane



APPENDIX A - INSTALLATION

Component	Product	Installation Detail
Fasteners, Battens & Plates (Cont'd)	Trufast Deep Well Batten Bar	Galvalume steel membrane batten with recessed holes
	Trufast Straight Line Batten Bar	Galvalume steel membrane batten for use with Twin-Loc Nail without integrated plate
	Trufast Twin Loc-Nail	Min. 1.4-inch shank; Base sheet fastener with and without integrated 2.7-inch diameter plate.
Insulation Adhesives	JM MBR Bonding Adhesive	Fully adhered at a rate of 1.5-2.0 gal/100 ft ²
	JM One-Step Foamable Adhesive	Ribbon adhered in 3/4 to 1-inch wide beads
	ICP Adhesives CR-20	
	OMG OlyBond 500	Ribbon adhered in 3/4 to 1-inch wide beads
	JM Two Part Urethane Insulation Adhesive Canister or JM Two-Part UIA Canister	
	JM Two Part Urethane Insulation Adhesive or JM Two-Part UIA	
	JM Roofing System Urethane Adhesive	Ribbon adhered in 1/2-inch wide beads
	JM Urethane Insulation Adhesive	
	ASTM D 312, Type IV asphalt	Fully adhered within the EVT range at a rate of 25-40 lbs/100 ft ²
Insulation/Cover Boards	EPS	Min. 0.5-inch, min. 1.8 pcf (HVHZ) or min. 1.5 pcf (non-HVHZ) expanded polystyrene; Adhered boards shall be a maximum 4-ft x 4-ft
	Georgia-Pacific DensDeck	Min. 1/4-inch thick
	JM ENRGY 3	Min. 1/2-inch thick; Min. 20 psi; Adhered boards shall be a maximum 4 ft x 4 ft
	JM ENRGY 3 C1	
	JM ENRGY 3 AGF	
	JM ENRGY 3 CGF	
	JM ENRGY 3 C1 CGF	
	JM ENRGY 3 FR	Min. 3/4-inch thick; Min. 20 psi
	JM Fesco Board	
	JM Fesco Foam	Min. 1.5-inch thick; Min. 20 psi; Adhered boards shall be a maximum 4 ft x 4 ft
	JM Invinsa Roof Board	1/4-inch thick; Adhered boards shall be a maximum 4 ft x 4 ft
	JM Invinsa Foam Roof Board	
	JM Invinsa FR Roof Board	1/2-inch thick; Min. 80 psi; Adhered boards shall be a maximum 4 ft x 4 ft
	JM ProtectoR HD	
	JM ProtectoR HD FR	1/2-inch thick; Adhered boards shall be a maximum 4 ft x 4 ft
	JM Retro-Fit Board	
	JM RetroPlus Roof Board	Min. 1/4-inch thick
	JM SECUROCK Glass-Mat Roof Board	
	JM SECUROCK Gypsum-Fiber Roof Board	1/2-inch thick; Min. 25 psi; Adhered boards shall be a maximum 4 ft x 4 ft
	JM SeparatoR	
	JM SeparatoR CGF	
	JM SeparatoR FR	Min. 7/16-inch thick; Adhered boards shall be a maximum 4 ft x 4 ft
	National Gypsum DEXcell Cement Roof Board	
	National Gypsum DEXcell Glass Mat Roof Board	
	National Gypsum DEXcell FA Glass Mat Roof Board	Min. 1/4-inch thick
PVC Membrane Adhesives	ASTM D 312, Type IV asphalt	Fully adhered within the EVT range at a rate of 25-40 lbs/100 ft ² ; For use only with JM PVC Fleece Backed membranes
	JM PVC Membrane Adhesive (Low VOC)	Fully adhered at rate of 50-90 ft ² /gal (1.1-2.0 gal/100ft ²); Applied simultaneously to underside of membrane and substrate



APPENDIX A - INSTALLATION

Component	Product	Installation Detail
PVC Membrane Adhesives (Cont'd)	JM PVC Membrane Adhesive (Water Based)	Fully adhered at a rate of 90-130 ft ² /gal(0.77-1.1 gal/100ft ²); Two-side application required for bareback TPO; Applied only to substrate when used with fleeceback TPO
	JM PVC Water Based Membrane Adhesive	Bareback PVC shall be fully adhered in one-sided application applied to the substrate at a rate of 0.4-0.5 gal/100ft ² ; Fleeceback PVC shall be fully adhered in one-sided application applied to the substrate at a rate of 0.6-0.8 gal/100ft ²
	JM Roofing System Urethane Adhesive	Ribbon adhered in 1/2 to 3/4-inch wide beads
	JM MBR Bonding Adhesive	Fully adhered at a rate of 1.5-2.0 gal/100 ft ²
TPO Membrane Adhesives	ASTM D 312, Type IV asphalt	Fully adhered within the EVT range at a rate of 25-40 lbs/100 ft; For use only with JM TPO FB 150 and 175 membranes
	JM All Season Sprayable Bonding Adhesive	Applied at a rate of 1,000ft ² /canister
	JM Roofing System Urethane Adhesive	Ribbon adhered in 3/4 to 1-inch wide beads
	JM Membrane Bonding Adhesive (TPO & EPDM)	Fully adhered at rate of 50-90 ft ² /gal(1.1-2.0 gal/100ft ²); Applied simultaneously to underside of membrane and substrate
	JM LVOC Membrane Adhesive (TPO & EPDM)	Fully adhered at rate of 50-90 ft ² /gal(1.1-2.0 gal/100ft ²); Applied simultaneously to underside of membrane and substrate
	JM TPO 1168 Membrane Adhesive	Fully adhered at rate of 50-90 ft ² /gal(1.1-2.0 gal/100ft ²); Applied simultaneously to underside of membrane and substrate
	JM TPO Water Based Membrane Adhesive	Bareback TPO shall be fully adhered in two-sided application at a combined rate of 0.6-0.8 gal/100ft ² or one-sided application applied to the substrate at a rate of 0.4-0.5 gal/100ft ² ; Fleeceback TPO shall be fully adhered in one-sided application applied to the substrate at a rate of 0.6-0.8 gal/100ft ²
	JM Two Part Urethane Insulation Adhesive Canister	Applied in spatter pattern at a rate of 0.32 gal/100ft ² or 1/2-inch wide beads
SA Primer	JM SA Primer Low VOC	Applied at rate of 0.5 gal/sq.
Vapor Barriers	JM DynaBase HW	Min. 3-inch wide side-laps; Min. 6-inch end laps; Torch adhered to primed concrete deck
	JM DynaBase	Min. 3-inch wide side-laps; Min. 6-inch end laps; Applied with hot or cold <i>approved</i> adhesives
	JM Vapor Barrier SA	Self-adhered to primed wood, gypsum or concrete decks; Min. 3-inch sides laps; Min. 6-inch end laps
	JM Vapor Barrier SAR	Self-adhered to primed wood, gypsum or concrete decks; Min. 3-inch sides laps; Min. 6-inch end laps
Base Sheets	JM DynaBase	Min. 3-inch wide side-laps; Min. 6-inch end laps; Applied with hot or cold <i>approved</i> adhesives
	JM DynaBase HW	Min. 3-inch wide side-laps; Min. 6-inch end laps; Torch adhered
	JM DynaFast 180 S	Min. 3-inch wide side-laps; Min. 6-inch end laps; Side-laps shall be installed perpendicular to the direction of the steel deck ribs and parallel to the direction of the wood trusses for mechanically attached systems
TPO Single-Ply Membranes	JM TPO-45	Min. 2-inch wide side-laps with min. 1.5-inch wide heat weld for adhered systems; In-lap fastened systems shall have min. 6-inch wide side-laps with min. 1.5-inch wide heat weld; Side-laps shall be installed perpendicular to the direction of the steel deck ribs and parallel to the direction of the wood trusses for mechanically attached systems
	JM TPO-60	
	JM TPO-80	
	JM TPO FB 115	
	JM TPO FB 135	
	JM TPO FB 150	
	JM TPO FB 175	
	JM TPO SA-60 mil	

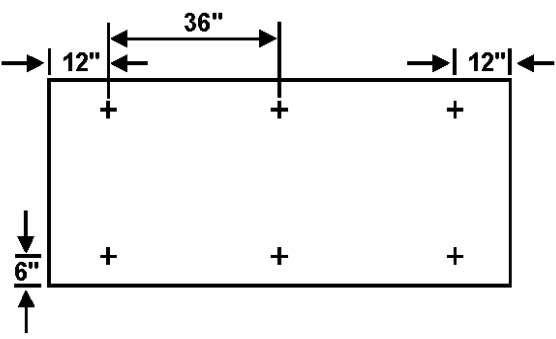
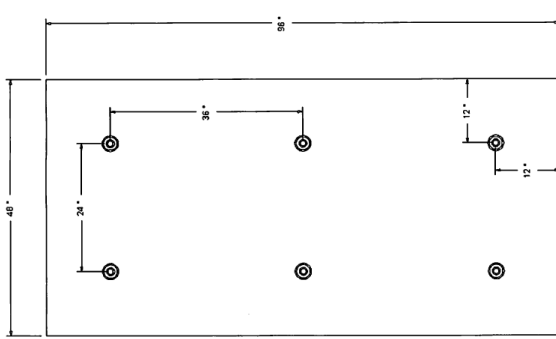
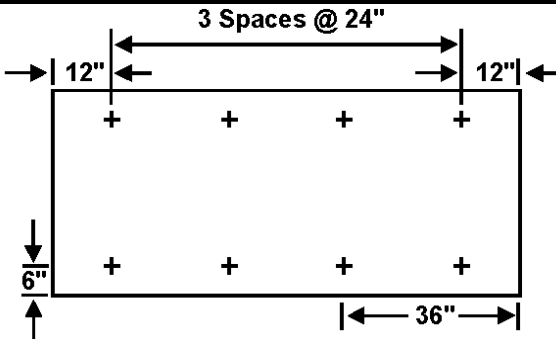
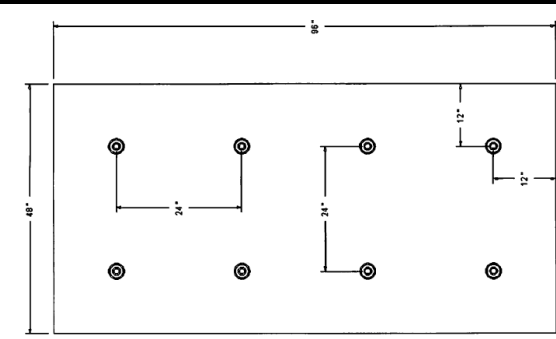
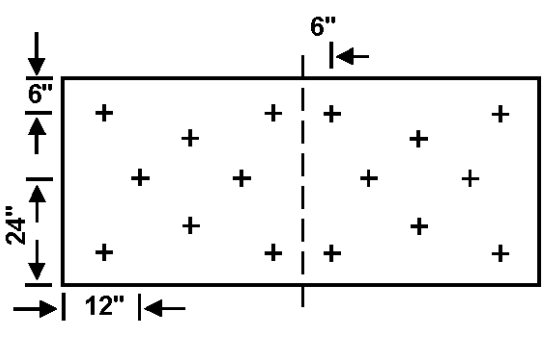
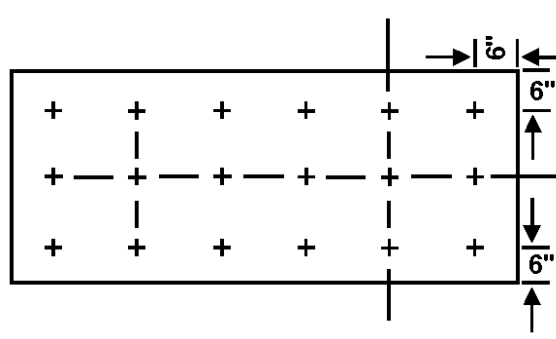
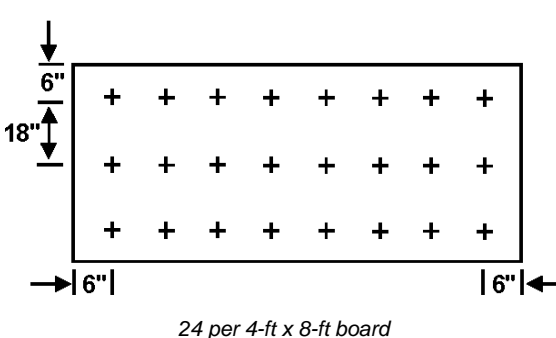
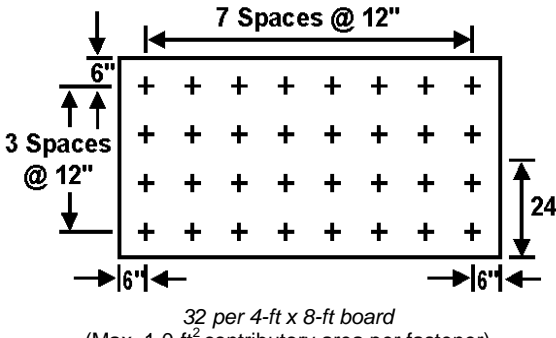


APPENDIX A - INSTALLATION

Component	Product	Installation Detail
PVC Single-Ply Membranes	JM PVC-50 mil	Min. 2-inch wide side-laps with min. 1.5-inch wide heat weld for adhered systems; In-lap fastened systems shall have min. 6-inch wide side-laps with min. 1.5-inch wide heat weld; Side-laps shall be installed perpendicular to the direction of the steel deck ribs and parallel to the direction of the wood trusses for mechanically attached systems
	JM PVC-60 mil	
	JM PVC-80 mil	
	JM PVC Fleece Backed-50 mil	
	JM PVC Fleece Backed-60 mil	
	JM PVC Fleece Backed-80 mil	
	JM PVC SD Plus-50 mil	
	JM PVC SD Plus-60 mil	
	JM PVC SD Plus-80 mil	
Cellular Lightweight Concrete	Celcore MF with HS Rheology Admixture	Slurry coat min. 1/8-inch thick; 1-inch thick EPS board (1 lbs/ft ³); Min. 2-inch thick top coat; Celcore PVA curing compound applied at rate of 300 ft ² /gal.
	Mearlcrete	Slurry coat min. 1/8-inch thick; 1" thick EPS board (1 lbs/ft ³); Min. 2-inch thick top coat;
	Elastizell	
	Concrecel	
	Cellular Lightweight Concrete	

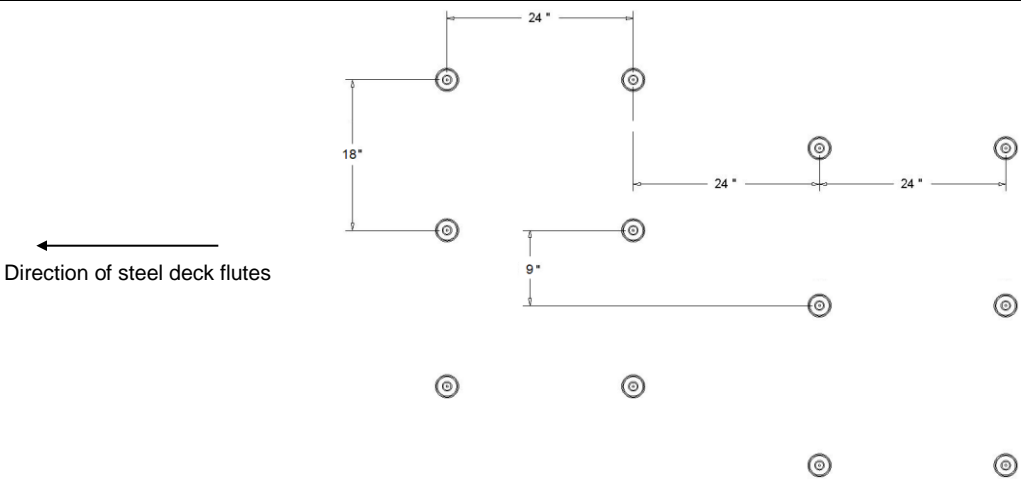
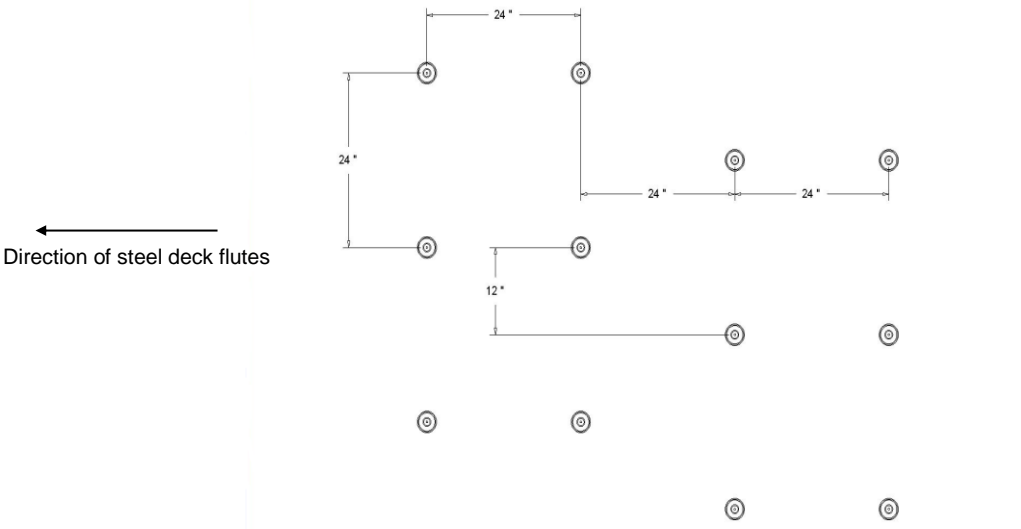
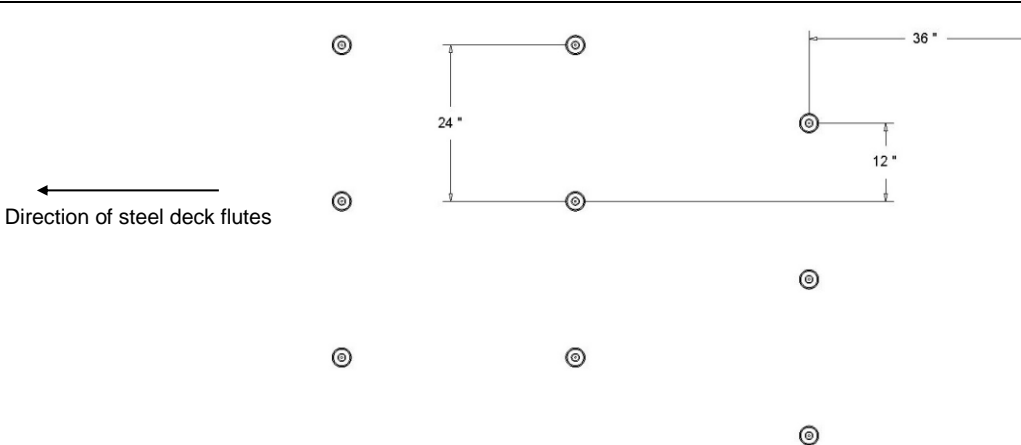


APPENDIX A - INSTALLATION

Insulation/Cover Board Fastening Patterns	
 <p>6 per 4-ft x 8-ft board Pattern #1 (Max. 5.33-ft² contributory area per fastener)</p>	 <p>6 per 4-ft x 8-ft board Pattern #2 (Max. 5.33-ft² contributory area per fastener)</p>
 <p>8 per 4-ft x 8-ft board Pattern #1 (Max. 4.0-ft² contributory area per fastener)</p>	 <p>8 per 4-ft x 8-ft board Pattern #2 (Max. 4.0-ft² contributory area per fastener)</p>
 <p>16 per 4-ft x 8-ft board (Max. 2.0-ft² contributory area per fastener)</p>	 <p>18 per 4-ft x 8-ft board (Max. 1.78-ft² contributory area per fastener)</p>
 <p>24 per 4-ft x 8-ft board (Max. 1.33-ft² contributory area per fastener)</p>	 <p>32 per 4-ft x 8-ft board (Max. 1.0-ft² contributory area per fastener)</p>



APPENDIX A - INSTALLATION

Alternate Fastener Patterns for Induction Weld Assemblies Only	
Description	Fastening Array Repeated Using the Geometric Grid Shown Below
1.5-ft x 2-ft staggered grid	
2-ft x 2-ft staggered grid	
2-ft x 3-ft staggered grid	

APPENDIX B – NOMENCLATURE
NOMENCLATURE

The following naming conventions are utilized to specify products in the [APPROVED ASSEMBLIES](#) section of this report. Refer to the nomenclature below when deciphering the allowable products for use in the selected assembly. Installation requirements shall be as noted in the [APPROVED ASSEMBLIES](#) section of this report.

Name	Definition
1168	JM 1168 Membrane Adhesive
2-Part UIA	JM Two Part Urethane Insulation Adhesive, JM Two-Part UIA, JM Two Part Urethane Insulation Adhesive Canister, or JM Two-Part UIA Canister
2-Part UIA-C(B)	JM Two Part Urethane Insulation Adhesive Canister or JM Two-Part UIA Canister applied in 1/2-inch wide beads
2-Part UIA-C(S)	JM Two Part Urethane Insulation Adhesive Canister or JM Two-Part UIA Canister applied in spatter application at a rate of 3.5-3.9 lbs/100ft ²
AP Fasteners & Plates	All Purpose Fastener or Structural Concrete Deck Fastener (concrete only) and UltraFast 3" Round Metal Plate or UltraFast Square Recessed Metal Plate
AP Fasteners & Plates (Square)	All Purpose Fastener or Structural Concrete Deck Fastener (concrete only) and UltraFast Square Recessed Metal Plate
APB Fasteners & Plates	JM APB Plates and JM High Load Fasteners (<i>Wood Deck</i> or <i>Steel Deck</i>) or JM All Purpose Fasteners (<i>Concrete Deck</i>)
As Tested	Information provided to the report user based on the as tested condition of the roof system
ASBA	JM All Season Sprayable Bonding Adhesive
Cover Board	One layer of any of the following products: -Georgia-Pacific DensDeck -Georgia-Pacific DensDeck Prime -JM Invinsa Roof Board -JM Invinsa FR Roof Board -JM ProtectorR HD -JM ProtectorR HD FR -JM SECUROCK Glass-Mat Roof Board -JM SECUROCK Gypsum-Fiber Roof Board -National Gypsum DEXcell FA Glass Mat Roof Board -National Gypsum DEXcell Glass Mat Roof Board -National Gypsum DEXcell Cement Roof Board
Deck Detail	All decks shall be designed by others in accordance with FBC requirements. As Tested deck construction details are described as follows:
	Concrete Deck Min. $f'_c = 2,500$ psi at 28 days
	CWF Deck Min. 2.5-inch thick Tectum I cementitious wood fiber panels

APPENDIX B – NOMENCLATURE

Name	Definition
<i>Deck Detail (Cont'd)</i>	Min. 22 ga, Wide Rib Deck (Type WR) conforming to ANSI/SDI-RD1.0 & FBC; 0.5% Vented for <i>LWIC</i> applications only. The following nomenclature is used to further describe the <i>As Tested</i> condition.
	<i>F<#></i> <#> of #12-24 HWH self-drilling screws or equivalent fasteners at each flute used to secure the deck to the structural supports; Min. 1/4-inch penetration
	<i>G<#></i> Min. Grade <#> of <i>Steel Deck</i>
	<i>H<#></i> <#> of Hilti X-HSN 24 fastener or equivalent fasteners at each flute used to secure the deck to the structural supports; Min. 1/4-inch penetration
	<i>L<#></i> Max. span of <#> ft
	<i>P</i> Min. 5/8-inch diameter puddle welds at each flute used to secure the deck to the structural supports
	<i>S<#></i> 1/4 "-14 HWH x7/8" self-drilling screws or equivalent fastener secured <#>-inch o.c. along the panel side laps
	<i>SD<#></i> <#> of SFS Intec SD5-#12-HW5/16 Fasteners at each flute used to secure the deck to the structural supports; Min. 1/4-inch penetration
	<i>SDL<#></i> SDL-#14-HW5/16 secured <#>-inch o.c. along the panel side laps
	<i>HS<#></i> Hilti S0SLC 01M fastener or equivalent fastener secured <#>-inch o.c. along the panel side laps
	<i>W</i> 3/4-inch O.D. flat washer used with indicated fastener
	HVHZ: APA Span-Rated sheathing. The following nomenclature is used to further describe the <i>As Tested</i> condition:
	<i>T<#>P</i> Min. <#>-inch thickness of the plywood
	<i>T<#>O</i> Min. <#>-inch thickness of the OSB
	<i>L<#></i> Max. span of <#> inches
	<i>N<#></i> Min. 0.113-inch diameter x 2-3/8-inch ring shank nails spaced <#>-inch o.c. at all intermediate supports and at the perimeter of each board
	<i>16S<#></i> Min. 16 ga. staples, 1.5-inch x 1-inch crown spaced <#>-inch o.c. at all intermediate supports and at the perimeter of each board
<i>DensDeck</i>	Min. 1/4-inch Georgia-Pacific DensDeck
<i>DensDeck Prime</i>	Min. 1/4-inch Georgia-Pacific DensDeck Prime
<i>DEXcell CB</i>	Min. 1/4-inch National Gypsum DEXcell Cement Roof Board
<i>DEXcell FA</i>	Min. 1/4-inch National Gypsum DEXcell FA Glass Mat Roof Board
<i>E3</i>	JM ENRGY 3, JM ENRGY 3 AGF, JM ENRGY 3 CGF or JM ENRGY 3 FR
<i>E3 C1</i>	JM ENRGY 3 C1 or JM ENRGY 3 C1 CGF
<i>Extra HL Fasteners & Plates</i>	JM Extra High Load Fasteners (<i>Wood Deck</i> or <i>Steel Deck</i>) or JM All Purpose Fasteners (<i>Concrete Deck</i>) and JM Extra High Load Plates
<i>HL Fasteners & Plates</i>	JM High Load Fasteners (<i>Wood Deck</i> or <i>Steel Deck</i>) or JM All Purpose Fasteners (<i>Concrete Deck</i>) and JM High Load Plates

APPENDIX B – NOMENCLATURE

Name	Definition
<i>INSULATION</i>	One of more layers in any combination of the following products: -ENRGY 3 -ENRGY 3 AGF -ENRGY 3 CGF -ENRGY 3 FR -Fesco Board -Fesco Foam -Invinsa Roof Board -Invinsa FR Roof Board -Protector R HD -Protector R HD FR -Retro-Fit Board -RetroPlus Roof Board -SECUROCK Glass-Mat Roof Board -SECUROCK Gypsum-Fiber Roof Board -EPS (flute fill only)
<i>INVINSA</i>	JM Invinsa or JM Invinsa FR Roof Board
<i>ISOWELD -#15</i>	For TPO membranes: isoweld FI-P-6.8-TPO plates and DEKFAST DF-#15-PH3 Fasteners For PVC membranes: isoweld FI-P-6.8-PVC plates and DEKFAST DF-#15-PH3 Fasteners
<i>ISOWELD-#12</i>	For TPO membranes: isoweld FI-P-6.8-TPO plates and DEKFAST DF-#12-PH3 Fasteners For PVC membranes: isoweld FI-P-6.8-PVC plates and DEKFAST DF-#12-PH3 Fasteners
<i>JM PVC</i>	One ply of any one of the following products: JM PVC-50 mil, JM PVC-60 mil, or JM PVC-80 mil
<i>JM PVC FB</i>	One ply of any one of the following products: JM PVC Fleece Backed-50 mil, JM PVC Fleece Backed-60 mil or JM PVC Fleece Backed-80 mil
<i>JM PVC FB/DynaFast</i>	One ply of JM PVC Fleece Backed-50 mil or JM PVC Fleece Backed-60 mil fully adhered in ASTM D 312 Type asphalt over DynaFast 180 S. DynaFast 180 S fastened to deck as described in <i>Approved Assembly</i>
<i>JM PVC SD Plus</i>	One ply of any one of the following products: JM PVC SD Plus-50 mil, JM PVC SD Plus-60 mil, or JM PVC SD Plus-80 mil
<i>JM TPO</i>	One ply of any one of the following products: JM TPO-45, JM TPO-60, or JM TPO-80
<i>JM TPO FB</i>	One ply of any one of the following products: JM TPO FB 115 or JM TPO FB 135
<i>JM TPO HFB</i>	One ply of any one of the following products: JM TPO FB 150 or JM TPO FB 175
<i>JM TPO SA</i>	One ply of any one of the following products: JM TPO SA-60 mil
<i>LVOC MA</i>	JM LVOC Membrane Adhesive (TPO & EPDM)
<i>LWIC</i>	Poured-in-place Cellular Lightweight Concrete with encapsulated insulation board
<i>MBA</i>	JM Membrane Bonding Adhesive (TPO & EPDM)
<i>MCRF</i>	Minimum Characteristic Resistance Force as determined by TAS 105 for the named fastener in the selected assembly
<i>MDP</i>	Maximum Design Pressure
<i>OSFA</i>	JM One-Step Foamable Adhesive

APPENDIX B – NOMENCLATURE

Name	Definition
<i>Preliminarily Secured</i>	Fastened at minimum rate of 5 per 4 ft x 8 ft board or 4 per 4 ft x 4 ft board.
<i>ProtectoR</i>	JM ProtectoR HD or JM ProtectoR HD FR Roof Board
<i>PVC MA (LowVOC)</i>	JM PVC Membrane Adhesive (Low VOC)
<i>PVC MA (WB)</i>	JM PVC Membrane Adhesive (Water Based)
<i>PVC WBMA</i>	JM PVC Water Based Membrane Adhesive
<i>Recover</i>	Where assemblies are used to recover an existing roof, the existing roof shall consist of only one layer of roofing, i.e. recovering a previously recovered roof is not permitted. Recover roofing shall be conducted in compliance with FBC Section 1511 outside of the HVHZ and FBC Section 1521 within the HVHZ. For mechanically fastened roof assemblies and induction welded assemblies, i.e. systems x-M-# and x-W-#, the insulation layer is optional, or any INSULATION board or slip sheet may be used as separation layer prior to installing the approved roof assembly.
<i>Retro-Fit</i>	JM Retro-Fit Board
<i>RetroPlus</i>	JM RetroPlus Roof Board
<i>RSUA</i>	JM Roofing System Urethane Adhesive
<i>SECUROCK</i>	Min. 1/4-inch JM SECUROCK Gypsum-Fiber Roof Board
<i>TPO Bonding Adhesives</i>	Any one of the following products: -JM Membrane Bonding Adhesive (TPO & EPDM) -JM LVOC Membrane Adhesive (TPO & EPDM) -JM TPO Water Based Membrane Adhesive
<i>TPO WBMA</i>	JM TPO Water Based Membrane Adhesive
<i>UIA</i>	JM Urethane Insulation Adhesive
<i>UltraFast Fasteners & Plates</i>	JM UltraFast Fasteners (<i>Steel Deck</i> and <i>Wood Deck</i>) or JM All Purpose Fasteners (<i>Concrete Deck</i>) and JM UltraFast Plates (Round or Square)
<i>UltraFast Fasteners & Plates (Square)</i>	JM UltraFast Fasteners (<i>Steel Deck</i> and <i>Wood Deck</i>) or JM All Purpose Fasteners (<i>Concrete Deck</i>) and JM UltraFast Plates (Square)
<i>UltraFast Plates</i>	JM UltraFast Plates (Round or Square)
<i>Vapor Barrier</i>	One of the following vapor barriers installed over the deck: -4mil or 6mil Polyethylene, loose laid -JM Vapor Barrier SA or JM Vapor Barrier SAR, self-adhered to minimum 0.5-inch thick SECUROCK Gypsum-Fiber Roof Board, DEXcell FA Glass Mat Roof Board or DEXcell Cement Roof Board. The thermal barrier may be primed with JM SA Primer Low VOC. -DynaGrip Base SD/SA, self-adhered to minimum 0.5-inch thick SECUROCK Gypsum-Fiber Roof Board or DEXcell FA Glass Mat Roof Board -DynaBase HW, torch applied to minimum 0.5-inch thick DEXcell FA Glass Mat Roof Board
<i>VB SAR</i>	One ply of JM Vapor Barrier SAR applied to deck primed with JM SA Primer Low VOC up to a maximum <i>MDP</i> as shown below. The <i>MDP</i> of the roof assembly shall be limited to the lesser of rating of the <i>Approved Assembly</i> and the <i>MDP</i> below. 1. Board layers adhered to Vapor Barrier SAR in <i>OSFA</i> applied at 12" o.c.; <i>MDP</i> = -135psf 2. Board layers adhered to Vapor Barrier SAR in <i>2-Part UIA</i> applied at 12" o.c.; <i>MDP</i> = -82.5psf 3. Not for use with <i>RSUA</i>

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES
APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

The following notes shall be observed when using the assembly tables below.

1. Allowable pressures were calculated using a 2:1 margin of safety per FBC Section 1504.9.
2. Refer to [LIMITATIONS](#) and [NOMENCLATURE](#) sections of this evaluation when using the table(s) below.
3. Refer to [INSTALLATION](#) section of this report for installation detail when the information is not explicitly stated for the selected assembly.
4. The on-center (o.c.) spacing given is the maximum allowable attachment spacing for the rated system.
5. JM Vapor Barrier SA or JM Vapor Barrier SAR may be installed direct to deck prior to installing the roof assembly components for the following assembly types: C-M-#, C-W-#, LC-M-#, LC-W-#, LS-M-#, LS-W-#, S-M-#, S-W-#, W-M-#, and W-W-#
6. As Tested information for roof deck construction is provided for information only. The addition of the As Tested deck information does not obviate the requirement for rational design of the roof deck and roof deck attachment in accordance with FBC requirements.

Assembly System Numbers and Definitions	
C-A-#	Adhered Assemblies over <i>Concrete Deck</i> (New or Existing)
C-AM-#	Assemblies with Adhered Membranes over Insulated <i>Concrete Deck</i> (New, Existing, or <i>Recover</i>)
C-M-#	Mechanically Fastened Assemblies over <i>Concrete Deck</i>
C-W-#	Induction Welded Assemblies over <i>Concrete Deck</i>
CW-A-#	Adhered Assemblies over Cementitious Wood Fiber Decks (New or Existing)
G-A-#	Assemblies with All Layers Adhered over Gypsum Deck (New or Existing)
G-AM-#	Assemblies with Adhered Membranes over Insulated Gypsum Deck (New or Existing)
LC-A-#	Adhered Lightweight Concrete Assemblies over <i>Concrete Deck</i> (New or Existing)
LC-AM-#	Lightweight Concrete Assemblies with Adhered Membranes over <i>Concrete Deck</i> (New or Existing)
LC-M-#	Mechanically Fastened Lightweight Concrete Assemblies over <i>Concrete Deck</i> (New, Existing, or <i>Recover</i>)
LC-W-#	Induction Welded Lightweight Concrete Assemblies over <i>Concrete Deck</i> (New, Existing, or <i>Recover</i>)
LS-A-#	Adhered Lightweight Concrete Assemblies over <i>Steel Deck</i> (New or Existing)
LS-AM-#	Lightweight Concrete Assemblies with Adhered Membranes over <i>Steel Deck</i> (New or Existing)
LS-M-#	Mechanically Fastened Lightweight Concrete Assemblies over <i>Steel Deck</i> (New, Existing, or <i>Recover</i>)
LS-W-#	Induction Welded Lightweight Concrete Assemblies over <i>Steel Deck</i> (New, Existing, or <i>Recover</i>)
R-A-#	Adhered <i>Recover</i> Assemblies
R-M-#	Mechanically Fastened <i>Recover</i> Assemblies
R-W-#	Induction Welded <i>Recover</i> Assemblies
S-AM-#	Assemblies with Adhered Membranes over Insulated <i>Steel Deck</i> (New, Existing, or <i>Recover</i>)
S-M-#	Mechanically Fastened Assemblies over <i>Steel Deck</i> (New, Existing or <i>Recover</i>)
S-W-#	Induction Welded Assemblies over <i>Steel Deck</i>
W-M-#	Mechanically Fastened Assemblies over <i>Wood Deck</i> (New or Existing)
W-W-#	Induction Welded Assemblies over <i>Wood Deck</i> (New or Existing)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Concrete Deck (New or Existing)						
System No.	Vapor Barrier	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
C-A-1	OPTIONAL JM Vapor Barrier SA applied over deck primed with JM SA Primer Low VOC	Min. 1.5-inch E3 in RSUA or 2-Part UIA applied 12-inch o.c.	OPTIONAL SECUROCK or JM Invinsa in RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO FB	RSUA applied 12-inch o.c. or 2-Part UIA-C(S)	-67.5 (Lim. 9)
C-A-2	OPTIONAL JM Vapor Barrier SA applied over deck primed with JM SA Primer Low VOC	Min. 1.5-inch E3 in RSUA or 2-Part UIA applied 12-inch o.c.	OPTIONAL SECUROCK, JM Invinsa or Protector HD in RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-67.5 (Lim. 9)
C-A-3	OPTIONAL VB SAR	Min. 1.5-inch ENRGY 3 in OSFA or 2-Part UIA applied 12-inch o.c.	OPTIONAL JM Invinsa or Protector HD in 2-Part UIA applied 12-inch o.c.	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate, TPO WBMA, ASBA or LVOC MA (not with JM Invinsa or Protector HD)	-105 (Lim. 9)
C-A-4	OPTIONAL VB SAR	Min. 1.5-inch ENRGY 3 in OSFA or 2-Part UIA applied 12-inch o.c.	OPTIONAL JM Invinsa or Protector HD in 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-105 (Lim. 9)
C-A-5	OPTIONAL VB SAR	INVINSA in 2-Part UIA, OSFA, or RSUA applied 12-inch o.c.	-	JM TPO SA	Self-adhered	-105 (Lim. 9)
C-A-6	OPTIONAL VB SAR	Min. 1.5-inch E3 in OSFA, RSUA or 2-Part UI applied 12-inch o.c.	-	JM TPO SA	Self-adhered	-105 (Lim. 9)
C-A-7	-	RetroPlus in ASTM D 312, Type IV asphalt	-	JM TPO	MBA	-105 (Lim. 9)
C-A-8	OPTIONAL VB SAR	Min. 1.5-inch E3 in OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	-	JM TPO FB	RSUA or 2-Part UIA applied 4-inch o.c.; or 2-Part UIA-C(S)	-112.5 (Lim. 9)
C-A-9	OPTIONAL VB SAR	Min. 1.5-inch ENRGY 3 CGF, or ENRGY 3 FR in 2-Part UIA applied 12-inch o.c.	-	JM TPO	TPO WBMA or ASBA	-142.5 (Lim. 9)
C-A-10	OPTIONAL VB SAR	Min. 1.5-inch ENRGY 3 in OSFA, RSUA or 2-Part UIA; applied 12-inch o.c.	Min. 1-inch ENRGY 3 in OSFA, RSUA or 2-Part UIA; applied 12-inch o.c.	JM TPO	ASBA	-157.5 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Concrete Deck (New or Existing)						
System No.	Vapor Barrier	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
C-A-11	OPTIONAL VB SAR	Min. 1.5-inch ENRGY 3 applied in 2-Part UIA at 12-inch o.c.	-	JM TPO	TPO WBMA or ASBA	-165 (Lim. 9)
C-A-12	OPTIONAL VB SAR	Min. 1.5-inch E3 in 2-Part UIA applied 12-inch o.c.	-	JM TPO	LVOC MA	-172.5 (Lim. 9)
C-A-13	OPTIONAL VB SAR	OPTIONAL Min. 1.5-inch ENRGY 3, ENRGY 3 CGF or ENRGY 3 FR in 2-Part UIA applied 12-inch o.c.	SECUROCK in 2-Part UIA applied 12-inch o.c.	JM TPO	TPO WBMA, ASBA, or 1168	-180 (Lim. 9)
C-A-14	OPTIONAL VB SAR	OPTIONAL Min. 1.5-inch ENRGY 3, ENRGY 3 CGF or ENRGY 3 FR in 2-Part UIA applied 12-inch o.c.	DEXcell CB or DEXcell FA in 2-Part UIA applied 12-inch o.c.	JM TPO	TPO WBMA or ASBA	-180 (Lim. 9)
C-A-15	OPTIONAL VB SAR	Min. 1-inch ENRGY 3, in OSFA, RSUA or 2-Part UIA; applied 12-inch o.c.	ProtectoR in OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO	TPO WBMA or ASBA	-187.5 (Lim. 9)
C-A-16	OPTIONAL VB SAR	Min. 1.5-inch ENRGY 3, ENRGY 3 CGF or ENRGY 3 FR in 2-Part UIA applied 12-inch o.c.	-	JM TPO FB	TPO WBMA	-187.5 (Lim. 9)
C-A-17	OPTIONAL VB SAR	Min. 1.5-inch ENRGY 3, ENRGY 3 CGF or ENRGY 3 FR in 2-Part UIA applied 12-inch o.c.	-	JM TPO	TPO WBMA (Two-sided application only) or ASBA	-195 (Lim. 9)
C-A-18	OPTIONAL VB SAR	Min. 1.5-inch ENRGY 3, in OSFA or RSUA applied 12-inch o.c.	ProtectoR in OSFA or RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: LVOC MA or MBA JM TPO FB: 2-Part UIA-C(S)	-210 (Lim. 9)
C-A-19	OPTIONAL VB SAR	Min. 1.5-inch ENRGY 3, in OSFA or RSUA applied 12-inch o.c.	ProtectoR in OSFA or RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-210 (Lim. 9)
C-A-20	OPTIONAL VB SAR	Min. 1.5-inch ENRGY 3 in OSFA, RSUA or 2-Part UIA; applied 12-inch o.c.	DEXcell FA in OSFA or RSUA; applied 12-inch o.c.	JM TPO	ASBA	-217.5 (Lim. 9)
C-A-21	OPTIONAL VB SAR	Min. 1.5-inch ENRGY 3 in OSFA, RSUA or 2-Part UIA; applied 12-inch o.c.	ProtectoR HD in OSFA, RSUA or 2-Part UIA; applied 12-inch o.c.	JM TPO	ASBA	-225 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Concrete Deck (New or Existing)						
System No.	Vapor Barrier	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
C-A-22	OPTIONAL VB SAR	Min. 1-inch ENRGY 3 in OSFA, RSUA or 2-Part UIA; applied 12-inch o.c.	<i>DensDeck Prime</i> in OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO	TPO WBMA, ASBA, or 1168	-232.5 (Lim. 9)
C-A-23	DynaBase HW	SECUROCK in RSUA applied 12-inch o.c.	-	JM TPO SA	Self-adhered	-247.5 (Lim. 9)
C-A-24	DynaBase HW torch adhered over deck primed with ASTM D 41 primer	Min. 1.5-inch ENRGY 3 CGF in RSUA applied 12-inch o.c.	SECUROCK in RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-247.5 (Lim. 9)
C-A-25	OPTIONAL VB SAR	SECUROCK in 2-Part UIA, OSFA, or RSUA applied 12-inch o.c.	-	JM TPO SA	Self-adhered	-247.5 (Lim. 9)
C-A-26	OPTIONAL VB SAR	INVINSA in 2-Part UIA, OSFA, or RSUA applied 12-inch o.c.	-	JM TPO	TPO WBMA (Two-sided application only) or ASBA	-255 (Lim. 9)
C-A-27	OPTIONAL VB SAR	INVINSA in 2-Part UIA, OSFA or RSUA applied 12-inch o.c.	-	JM TPO FB	TPO WBMA	-277.5 (Lim. 9)
C-A-28	DynaBase HW	SECUROCK in RSUA applied 12-inch o.c.	-	JM TPO or JM TPO FB	JM TPO: TPO WBMA (Two-sided application only), LVOC MA, ASBA, or 1168 JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-292.5 (Lim. 9)
C-A-29	DynaBase HW torch adhered over deck primed with ASTM D 41 primer	Min. 1.5-inch ENRGY 3 CGF in RSUA applied 12-inch o.c.	SECUROCK in RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA (Two-sided application only), LVOC MA, ASBA, or 1168 JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-292.5 (Lim. 9)
C-A-30	OPTIONAL VB SAR	Min. 1.5-inch E3 in 2-Part UIA applied 12-inch o.c.	-	JM TPO	MBA	-322.5 (Lim. 9)
C-A-31	OPTIONAL VB SAR	DEXcell CB in 2-Part UIA or OlyBond 500 applied 12-inch o.c.	-	JM TPO FB	TPO WBMA	-322.5 (Lim. 9)
C-A-32	OPTIONAL VB SAR	Min. 1-inch ENRGY 3 in 2-Part UIA applied 12-inch o.c.	<i>DensDeck Prime</i> in 2-Part UIA applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-337.5 (Lim. 9)
C-A-33	OPTIONAL VB SAR	SECUROCK in 2-Part UIA, OSFA or RSUA applied 12-inch o.c.	-	JM TPO FB	TPO WBMA or 2-Part UIA-C(S)	-345 (Lim. 9)
C-A-34	OPTIONAL VB SAR	SECUROCK in 2-Part UIA, OSFA or RSUA applied 12-inch o.c.	-	JM TPO	LVOC MA	-360 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Concrete Deck (New or Existing)						
System No.	Vapor Barrier	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
C-A-35	OPTIONAL VB SAR	DEXcell CB or DEXcell FA in 2-Part UIA or OlyBond 500 applied 12-inch o.c.	-	JM TPO	LVOC MA, TPO WBMA (Two-sided application only), MBA, or 1168 (DEXcell FA only)	-390 (Lim. 9)
C-A-36	OPTIONAL VB SAR	DEXcell FA in 2-Part UIA or OlyBond 500 applied 12-inch o.c.	-	JM TPO SA	Self-adhered	-390 (Lim. 9)
C-A-37	OPTIONAL VB SAR	DEXcell FA in 2-Part UIA or OlyBond 500 applied 12-inch o.c.	-	JM TPO	ASBA	-390 (Lim. 9)
C-A-38	OPTIONAL VB SAR	DEXcell FA in 2-Part UIA or OlyBond 500 applied 12-inch o.c.	-	JM TPO FB	TPO WBMA or 2-Part UIA-C(S)	-390 (Lim. 9)
C-A-39	OPTIONAL VB SAR	DEXcell FA in 2-Part UIA or OlyBond 500 applied 12-inch o.c.	-	JM TPO HFB	ASTM D 312, Type IV Asphalt	-390 (Lim. 9)
C-A-40	-	-	-	JM TPO FB	2-Part UIA-C(S)	-457.5 (Lim. 9)
C-A-41	OPTIONAL VB SAR	SECUROCK in 2-Part UIA, OSFA or RSUA applied 12-inch o.c.	-	JM TPO	TPO WBMA	-465 (Lim. 9)
C-A-42	OPTIONAL VB SAR	INVinsa in 2-Part UIA, OSFA or RSUA applied 12-inch o.c.	-	JM TPO	MBA applied 0.83 gal/100ft ²	-465 (Lim. 9)
C-A-43	OPTIONAL VB SAR	SECUROCK in 2-Part UIA, OSFA, or RSUA applied 12-inch o.c.	-	JM TPO	MBA applied 0.83 gal/100ft ²	-495 (Lim. 9)
C-A-44	-	-	-	JM TPO FB	2-Part UIA-C(B) applied 6-inch o.c.	-495 (Lim. 9)
C-A-45	-	-	-	JM TPO FB	RSUA applied 12-inch o.c.	-502.5 (Lim. 9)

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-1	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.375-inch SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 2.67ft ²	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-45 (Lim. 7; Non-HVHZ)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-2	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 4.0ft ²	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-45 (Lim. 7; Non-HVHZ)
C-AM-3	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 2.0ft ²	-	-	JM TPO	MBA applied at 0.83 gal/100ft ² , TPO WBMA, ASBA or LVOC MA	-45 (Lim. 7; Non-HVHZ)
C-AM-4	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 2.0ft ²	RetroPlus	RSUA or 2-Part UIA applied 12-inch o.c	JM TPO	MBA	-45 (Lim. 7; Non-HVHZ)
C-AM-5	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch ENRGY 3	AP Fasteners & Plates (Square) secured 1 fastener per 2.67ft ²	ProtectoR HD	RSUA or 2-Part UIA applied 12-inch o.c	JM TPO SA	Self-adhered	-45 (Lim. 7)
C-AM-6	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch ENRGY 3	AP Fasteners & Plates (Square) secured 1 fastener per 2.67ft ²	ProtectoR HD	RSUA or 2-Part UIA applied 12-inch o.c	JM TPO or JM TPO FB	JM TPO: TPO WBMA; MBA applied at 0.83 gal/100ft ² ; LVOC MA or ASBA JM TPO FB: RSUA applied 12-inch o.c., 2-Part UIA-C(S) or TPO WBMA	-45 (Lim. 7)
C-AM-7	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	AP Fasteners & Plates (Square) secured 1 fastener per 4ft ²	JM TPO SA	Self-adhered	-45 (Lim. 9)
C-AM-8	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	AP Fasteners & Plates (Square) secured 1 fastener per 4ft ²	JM TPO (Min. 60 mil) or JM TPO FB	JM TPO: TPO WBMA; MBA applied at 0.83 gal/100ft ² ; LVOC MA or ASBA JM TPO FB: RSUA applied 12-inch o.c., 2-Part UIA-C(S) or TPO WBMA	-45 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-9	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 4.0ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-45 (Lim. 7)
C-AM-10	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 4.0ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-45 (Lim. 7)
C-AM-11	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	AP Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM TPO FB	TPO WBMA or RSUA applied 12-inch o.c.	-45 (Lim. 7)
C-AM-12	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-52.5 (Lim. 7)
C-AM-13	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
C-AM-14	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-52.5 (Lim. 7)
C-AM-15	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-52.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-16	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 1 fastener per 1.45ft ²	JM Invinsa	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO FB	RSUA applied 12-inch o.c.	-52.5 (Lim. 7)
C-AM-17	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 1 fastener per 1.45ft ²	JM Invinsa or Protector HD	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
C-AM-18	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	AP Fasteners & Plates (Square) secured 1 fastener per 2.67ft ²	JM TPO	MBA applied 0.83 gal/100ft ² to both membrane and substrate, TPO WBMA or ASBA	-52.5 (Lim. 7)
C-AM-19	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	AP Fasteners & Plates (Square) secured 1 fastener per 2.67ft ²	JM TPO FB	2-Part UIA-C(S)	-52.5 (Lim. 7)
C-AM-20	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	AP Fasteners & Plates (Square) secured 1 fastener per 2.67ft ²	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
C-AM-21	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch ENRGY 3 CGF or ENRGY 3 FR	AP Fasteners & Plates (Square) secured 1 fastener per 1.78ft ²	JM TPO	MBA applied 0.83 gal/100ft ² to both membrane and substrate or TPO WBMA	-52.5 (Lim. 7)
C-AM-22	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
C-AM-23	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	Base Ply: DynaBase HW Membrane: JM TPO HFB	Base Ply: Torch Adhered Membrane: ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
C-AM-24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO HFB	ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-25	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	Base Ply: DynaBase HW Membrane: JM TPO HFB	Base Ply: Torch Adhered Membrane: ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
C-AM-26	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch E3	AP Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
C-AM-27	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ProtectoR HD	AP Fasteners & Plates (Square) secured 1 fastener per 1.78ft ²	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
C-AM-28	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ProtectoR HD	AP Fasteners & Plates (Square) secured 1 fastener per 1.78ft ²	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA applied at 0.83 gal/100ft ² ; LVOC MA, or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-52.5 (Lim. 7)
C-AM-29	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 1 fastener per 1.78ft ²	Min 1/2-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft, LVOC MA, or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-60 (Lim. 7)
C-AM-30	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 1 fastener per 1.78ft ²	Min 1/2-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-60 (Lim. 7)
C-AM-31	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-60 (Lim. 7)
C-AM-32	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.00ft ²	JM TPO SA	Self-adhered	-60 (Lim. 7)
C-AM-33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch E3	AP Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO	LVOC MA	-60 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-34	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch ENRGY 3 CGF or ENRGY 3 FR	AP Fasteners & Plates (Square) secured 1 fastener per 1.78ft ²	JM TPO SA	Self-adhered	-60 (Lim. 7)
C-AM-35	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch E3	AP Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-60 (Lim. 7)
C-AM-36	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ProtectoR HD	AP Fasteners & Plates (Square) secured 1 fastener per 1.78ft ²	JM TPO SA	Self-adhered	-60 (Lim. 7)
C-AM-37	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ProtectoR HD	AP Fasteners & Plates (Square) secured 1 fastener per 1.78ft ²	JM TPO or JM TPO FB	JM TPO: MBA, LVOC MA, or ASBA JM TPO FB: 2-Part UIA-C(S)	-60 (Lim. 7)
C-AM-38	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	AP Fasteners & Plates secured 1 fastener per 1ft ²	SECUROCK, or JM InvinSA	RSUA or 2-Part UIA applied 6-inch o.c.	JM TPO FB	RSUA applied 12-inch o.c.	-67.5 (Lim. 7)
C-AM-39	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	Min. 1/2-inch SECUROCK	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	TPO WBMA or ASBA	-67.5 (Lim. 7)
C-AM-40	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	Min. 1/2-inch SECUROCK	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-67.5 (Lim. 7)
C-AM-41	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	AP Fasteners & Plates (Square) secured 1 fastener per 2.0ft ²	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate, TPO WBMA or ASBA	-67.5 (Lim. 7)
C-AM-42	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	AP Fasteners & Plates (Square) secured 1 fastener per 2.0ft ²	JM TPO SA	Self-adhered	-67.5 (Lim. 7)
C-AM-43	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 2ft ²	JM TPO	MBA or LVOC MA applied at 1.1 gal/100ft ² , TPO WBMA (two-sided application only) or ASBA	-67.5 (Lim. 7)
C-AM-44	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 2ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-67.5 (Lim. 7)
C-AM-45	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	AP Fasteners & Plates (Square) secured 1 fastener per 2.0ft ²	JM TPO	TPO WBMA or ASBA	-67.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-46	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	ProtectoR HD	AP Fasteners & Plates (Square) at a rate of 1 fastener per 1.33ft ²	JM TPO SA	Self-adhered	-75 (Lim. 7)
C-AM-47	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	ProtectoR HD	AP Fasteners & Plates (Square) at a rate of 1 fastener per 1.33ft ²	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA applied 0.83 gal/100ft ² , LVOC MA or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-75 (Lim. 7)
C-AM-48	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	AP Fasteners & Plates secured 1 fastener per 1.6ft ²	JM TPO	MBA, LVOC MA applied at 1.1 gal/100ft ² , TPO WBMA (two-sided application only) or ASBA	-75 (Lim. 7)
C-AM-49	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	AP Fasteners & Plates secured 1 fastener per 1.6ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-75 (Lim. 7)
C-AM-50	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Invinsa Foam	AP Fasteners & Plates (Square) secured 1 fastener per 2.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA, or ASBA	-75 (Lim. 7)
C-AM-51	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Invinsa Foam	AP Fasteners & Plates (Square) secured 1 fastener per 2.0ft ²	JM TPO SA	Self-adhered	-75 (Lim. 7)
C-AM-52	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA, or ASBA	-75 (Lim. 7)
C-AM-53	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-75 (Lim. 7)
C-AM-54	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO	TPO WBMA or ASBA	-82.5 (Lim. 7)
C-AM-55	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO FB	2-Part UIA-C(S)	-82.5 (Lim. 7)
C-AM-56	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO SA	Self-adhered	-82.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-57	OPTIONAL Vapor Barrier	Min. 1-inch E3	Simultaneously secured with top layer	ProtectoR HD	AP Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	JM TPO	MB, LVOC MA, or ASBA	-82.5 (Lim. 7)
C-AM-58	OPTIONAL Vapor Barrier	Min. 1-inch E3	Simultaneously secured with top layer	ProtectoR HD	AP Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	JM TPO SA	Self-adhered	-82.5 (Lim. 7)
C-AM-59	OPTIONAL Vapor Barrier	Min. 1-inch E3	Simultaneously secured with top layer	ProtectoR HD	AP Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	JM TPO FB	2-Part UIA-C(S)	-82.5 (Lim. 7)
C-AM-60	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	AP Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate or TPO WBMA	-105 (Lim. 7)
C-AM-61	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	AP Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	JM TPO SA	Self-adhered	-105 (Lim. 7)
C-AM-62	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	AP Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA, or ASBA	-105 (Lim. 7)
C-AM-63	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	AP Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA, ASBA, or 1168	-112.5 (Lim. 7)
C-AM-64	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	AP Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO SA	Self-adhered	-112.5 (Lim. 7)
C-AM-65	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	AP Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO	MBA, LVOC MA applied at 1.1 gal/100ft ² or TPO WBMA (Two-sided application only)	-120 (Lim. 7)
C-AM-66	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	AP Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-120 (Lim. 7)
C-AM-67	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	AP Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM TPO	TPO WBMA (rate 0.6-0.8 gal/100-ft ² for one-sided and two-sided application), MBA, or LVOC MA	-120 (Lim. 7)
C-AM-68	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	AP Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM TPO	ASBA	-127.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-69	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO or JM TPO FB	TPO WBMA (Two-sided application only for JM TPO)	-150 (Lim. 7)
C-AM-70	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO SA	Self-adhered	-150 (Lim. 7)

Mechanically Fastened Assemblies over Concrete Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
C-M-1	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 12-inch o.c. with JM All Purpose Fasteners and JM High Load Plus Plates; Fastener rows max. 114-inch o.c.	-30 (Lim. 7; Non-HVHZ)
C-M-2	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Fastener rows max. 138-inch o.c.	-30 (Lim. 7; Non-HVHZ)
C-M-3	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
C-M-4	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Fastener rows max. 66-inch .c.	(-45 Lim. 7)
C-M-5	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 12-inch o.c. with JM All Purpose Fasteners and JM High Load Plus Plates; Fastener rows max. 90-inch o.c.	-45 (Lim. 7)
C-M-6	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)
C-M-7	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Assemblies over Concrete Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
C-M-8	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-52.5 (Lim. 7)
C-M-9	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)
C-M-10	OPTIONAL INSULATION under min. 1-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-60 (Lim. 7)
C-M-11	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 138-inch o.c.	(-60 Lim. 7)
C-M-12	OPTIONAL INSULATION under min. 1-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-75 (Lim. 7)
C-M-13	OPTIONAL INSULATION under min. 1-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 54-inch o.c.	-97.5 (Lim. 7)
C-M-14	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 66-inch o.c.	(-105 Lim. 7)

Induction Welded Assemblies over Concrete Deck (New, Existing, or Recover)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
C-W-1	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with JM All Purpose Fasteners and JM TPO RhinoPlates at a rate of 8 per 4-ft x 8-ft board Pattern #1 (1 fastener per 4.0-ft ²)	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-45 (Lim. 7)
C-W-2	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	JM TPO RhinoPlates fastened 12-inch o.c. with JM All Purpose Fasteners; Fastener rows max. 72-inch o.c.	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Concrete Deck (New, Existing, or Recover)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
C-W-3	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 at a rate of 1 fastener per 4.0-ft ²	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-45 (Lim. 7)
C-W-4	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced 24" o.c. in rows 24" o.c.	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-45 (Lim. 7)
C-W-5	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced 12" o.c. in rows 60" o.c.	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-45 (Lim. 7)
C-W-6	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced in a 2-ft x 3-ft staggered grid	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-45 (Lim. 7)
C-W-7	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with JM All Purpose Fasteners and JM TPO RhinoPlates at a rate of 6 per 4-ft x 8-ft board Pattern #2 (1 fastener per 5.33-ft ²); Board installed with 6-inch stagger from preceding course	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-52.5 (Lim. 7)
C-W-8	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced in a 2-ft x 2-ft staggered grid	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-60 (Lim. 7)
C-W-9	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with JM All Purpose Fasteners and JM TPO RhinoPlates at a rate of 8 per 4-ft x 8-ft board Pattern #2 (1 fastener per 4.0-ft ²); Board installed with 6-inch stagger from preceding course	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-67.5 (Lim. 7)
C-W-10	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with JM All Purpose Fasteners and JM TPO RhinoPlates at a rate of 12 per 4-ft x 8-ft board (1 fastener per 2.67-ft ²)	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-75 (Lim. 7)
C-W-11	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 at a rate of 1 fastener per 3.2-ft ²	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-75 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Concrete Deck (New, Existing, or Recover)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
C-W-12	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced in a 1.5-ft x 2-ft staggered grid	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-82.5 (Lim. 7)
C-W-13	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with JM All Purpose Fasteners and JM TPO RhinoPlates in a 24-inch by 16-inch grid pattern	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-90 (Lim. 7)
C-W-14	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with JM All Purpose Fasteners and JM TPO RhinoPlates at a rate of 15 per 4-ft x 8-ft board (1 fastener per 2.13-ft ²)	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-90 (Lim. 7)
C-W-15	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with JM All Purpose Fasteners and JM TPO RhinoPlates at a rate of 12 per 4-ft x 8-ft board (1 fastener per 2.67-ft ²); Board installed with 6-inch stagger from preceding course	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-90 (Lim. 7)
C-W-16	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced 18" o.c. in rows 18" o.c.	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-97.5 (Lim. 7)
C-W-17	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced 6" o.c. in rows 60" o.c.	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-97.5 (Lim. 7)

Adhered Assemblies over Cementitious Wood Fiber Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
CW-A-1	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA or RSUA applied 12-inch o.c.	JM InvinSA or Protector R HD	OSFA, 2-Part UIA, or RSUA applied 12-inch o.c.	JM TPO FB	RSUA applied 12-inch o.c., TPO WBMA or ASBA	-122.5 (Lim. 9)
CW-A-2	Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	OPTIONAL SECURROCK	RSUA, OSFA, or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA or ASBA JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-135 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Assemblies over Cementitious Wood Fiber Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
CW-A-3	Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	OPTIONAL SECUROCK	RSUA, OSFA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-135 (Lim. 9)
CW-A-4	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	SECUROCK	RSUA, OSFA or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: LVOC MA, ASBA, or 1168 JM TPO FB: RSUA applied 12-inch o.c.	-140 (Lim. 9)
CW-A-5	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	SECUROCK	RSUA, OSFA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-140 (Lim. 9)
CW-A-6	SECUROCK	RSUA, OSFA, or 2-Part UIA applied 12-inch o.c.	-	-	JM TPO or JM TPO FB	JM TPO: TPO WBMA LVOC MA, ASBA, or 1168 JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-157.5 (Lim. 9)
CW-A-7	SECUROCK	RSUA, OSFA, or 2-Part UIA applied 12-inch o.c.	-	-	JM TPO SA	Self-adhered	-157.5 (Lim. 9)
CW-A-8	Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	-	-	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC or ASBA JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-157.5 (Lim. 9)
CW-A-9	JM Invinsa	RSUA applied 12-inch o.c.	-	-	JM TPO FB	TPO WBMA	-160 (Lim. 9)
CW-A-10	Min. 475 psi Celcore MF with HS Rheology Admixture installed	Poured-in-place	-	-	JM TPO FB	RSUA applied 12-inch o.c.	-167.5 (Lim. 9)
CW-A-11	Min. 475 psi Celcore MF with HS Rheology Admixture installed	Poured-in-place	-	-	JM TPO FB	RSUA applied 4-inch o.c.	-197.5 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with All Layers Adhered over Gypsum Deck (New or Existing)							
System No.	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
G-A-1	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	-	-	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA or ASBA JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-75 (Lim. 9)
G-A-2	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	JM Invinsa	2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83 gal/100ft ² to both membrane and substrate or ASBA JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-75 (Lim. 9)
G-A-3	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	ProtectoR HD	2-Part UIA applied 12-inch o.c.	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate or ASBA	-75 (Lim. 9)
G-A-4	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	JM Invinsa or ProtectoR HD	2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-75 (Lim. 9)
G-A-5	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	SECUROCK	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA or 1168 JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-75 (Lim. 9)
G-A-6	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	SECUROCK	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-75 (Lim. 9)
G-A-7	Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	-	-	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA or ASBA JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-77.5 (Lim. 9)
G-A-8	Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	JM Invinsa	OSFA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83 gal/100ft ² to both membrane and substrate JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-77.5 (Lim. 9)
G-A-9	Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	ProtectoR HD	OSFA applied 12-inch o.c.	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate or ASBA	-77.5 (Lim. 9)
G-A-10	Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	JM Invinsa or ProtectoR HD	OSFA applied 12-inch o.c.	JM TPO SA	Self-adhered	-77.5 (Lim. 9)
G-A-11	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	SECUROCK	RSUA or OSFA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, or 1168 JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-77.5 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with All Layers Adhered over Gypsum Deck (New or Existing)							
System No.	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
G-A-12	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	SECUROCK	RSUA or OSFA applied 12-inch o.c.	JM TPO SA	Self-adhered	-77.5 (Lim. 9)
G-A-13	-	-	-	-	JM TPO FB	RSUA applied 12-inch o.c.	-85 (Lim. 9)
G-A-14	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	-	-	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-90 (Lim. 9)
G-A-15	JM Invinsa	OSFA applied 12-inch o.c.	-	-	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83 gal/100ft ² or ASBA JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-92.5 (Lim. 9)
G-A-16	Min. 1.5-inch E3	OSFA applied 12-inch o.c.	-	-	JM TPO FB	TPO WBMA or 2-Part UIA-C(S)	-150 (Lim. 9; Non- HVZH)
G-A-17	Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	-	-	JM TPO	MBA applied at 0.55 gal/100ft ²	-150 (Lim. 9; Non- HVZH)
G-A-18	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	ProtectoR	OSFA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, MBA or ASBA JM TPO FB: 2-Part UIA-C(S)	-150 (Lim. 9; Non- HVZH)
G-A-19	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	ProtectoR	OSFA applied 12-inch o.c.	JM TPO SA	Self-adhered	-150 (Lim. 9; Non- HVZH)
G-A-20	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	DensDeck Prime	OSFA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, MBA, ASBA, or 1168 JM TPO FB: 2-Part UIA-C(S)	-150 (Lim. 9; Non- HVZH)
G-A-21	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	DensDeck Prime	OSFA applied 12-inch o.c.	JM TPO SA	Self-adhered	-150 (Lim. 9; Non- HVZH)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with All Layers Adhered over Gypsum Deck (New or Existing)							
System No.	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
G-A-22	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	<i>DensDeck Prime</i>	OSFA applied 12-inch o.c.	<i>JM TPO HFB</i>	ASTM D 312, Type IV Asphalt	-150 (Lim. 9; Non-HVZH)
G-A-23	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	<i>SECUROCK</i>	OSFA applied 12-inch o.c.	<i>JM TPO SA</i>	Self-adhered	-150 (Lim. 9; Non-HVZH)
G-A-24	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	<i>SECUROCK</i>	OSFA applied 12-inch o.c.	<i>JM TPO or JM TPO FB</i>	<i>JM TPO: TPO WBMA, LVOC MA, ASBA, or 1168</i> <i>JM TPO FB: TPO WBMA or 2-Part UIA-C(S)</i>	-150 (Lim. 9; Non-HVZH)
G-A-25	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	<i>SECUROCK</i>	OSFA applied 12-inch o.c.	<i>JM TPO HFB</i>	ASTM D 312, Type IV Asphalt	-150 (Lim. 9; Non-HVZH)
G-A-26	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	<i>INVINSA</i>	OSFA applied 12-inch o.c.	<i>JM TPO or JM TPO FB</i>	<i>JM TPO: MBA applied at 0.83 gal/100ft²</i> <i>JM TPO FB: TPO WBMA or 2-Part UIA-C(S)</i>	-150 (Lim. 9; Non-HVZH)
G-A-27	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	<i>DEXcell CB</i>	OSFA applied 12-inch o.c.	<i>JM TPO or JM TPO FB</i>	<i>JM TPO: TPO MA (LowVOC), LVOC MA, TPO WBMA, MBA or ASBA</i> <i>JM TPO FB: TPO WBMA</i>	-150 (Lim. 9; Non-HVZH)
G-A-28	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	<i>DEXcell FA</i>	OSFA applied 12-inch o.c.	<i>JM TPO or JM TPO FB</i>	<i>JM TPO: TPO MA (LowVOC), LVOC MA, TPO WBMA, MBA, ASBA, or 1168</i> <i>JM TPO FB: TPO WBMA or 2-Part UIA-C(S)</i>	-150 (Lim. 9; Non-HVZH)
G-A-29	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	<i>DEXcell FA</i>	OSFA applied 12-inch o.c.	<i>JM TPO SA</i>	Self-adhered	-150 (Lim. 9; Non-HVZH)
G-A-30	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	<i>DEXcell FA</i>	OSFA applied 12-inch o.c.	<i>JM TPO HFB</i>	ASTM D 312, Type IV Asphalt	-150 (Lim. 9; Non-HVZH)
G-A-31	-	-	-	-	<i>JM TPO FB</i>	<i>RSUA applied 6-inch o.c.</i>	-155 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with All Layers Adhered over Gypsum Deck (New or Existing)							
System No.	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
G-A-32	Min. 1.5-inch E3	RSUA applied 12-inch o.c.	-	-	JM TPO FB	TPO WBMA or 2-Part UIA-C(S)	-187.5 (Lim. 9; Non-HVHZ)
G-A-33	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	ProtectoR	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, MBA or ASBA JM TPO FB: 2-Part UIA-C(S)	-187.5 (Lim. 9; Non-HVHZ)
G-A-34	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	ProtectoR	RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-187.5 (Lim. 9; Non-HVHZ)
G-A-35	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DensDeck Prime	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, MBA, ASBA, or 1168 JM TPO FB: 2-Part UIA-C(S)	-210 (Lim. 9; Non-HVHZ)
G-A-36	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DensDeck Prime	RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-210 (Lim. 9; Non-HVHZ)
G-A-37	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DensDeck Prime	RSUA applied 12-inch o.c.	JM TPO HFB	ASTM D 312, Type IV Asphalt	-210 (Lim. 9; Non-HVHZ)
G-A-38	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	SECUROCK	RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-210 (Lim. 9; Non-HVHZ)
G-A-39	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	SECUROCK	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA (Two-sided application only), LVOC MA, ASBA, or 1168 JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-210 (Lim. 9; Non-HVHZ)
G-A-40	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	SECUROCK	RSUA applied 12-inch o.c.	JM TPO HFB	ASTM D 312, Type IV Asphalt	-210 (Lim. 9; Non-HVHZ)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with All Layers Adhered over Gypsum Deck (New or Existing)							
System No.	Base Sheet or Insulation	Base Sheet or Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
G-A-41	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	INVinsa	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83 gal/100ft ² JM TPO FB: TPO WBMA	-210 (Lim. 9; Non-HVHZ)
G-A-42	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DEXcell CB	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO MA (LowVOC), LVOC MA, TPO WBMA (Two-sided application only) or MBA JM TPO FB: TPO WBMA	-210 (Lim. 9; Non-HVHZ)
G-A-43	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DEXcell FA	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO MA (LowVOC), LVOC MA, TPO WBMA (Two-sided application only), MBA, ASBA, or 1168 JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-210 (Lim. 9; Non-HVHZ)
G-A-44	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DEXcell FA	RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-210 (Lim. 9; Non-HVHZ)
G-A-45	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DEXcell FA	RSUA applied 12-inch o.c.	JM TPO HFB	ASTM D 312, Type IV Asphalt	-210 (Lim. 9; Non-HVHZ)
G-A-46	Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	-	-	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.55 gal/100ft ² JM TPO FB: 2-Part UIA-C(S)	-210 (Lim. 9; Non-HVHZ)

Assemblies with Adhered Membranes over Insulated Gypsum Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
G-AM-1	-	-	PermaPly 28	Min. 1.8-inch JM UltraLok Fastener secured 7-inch o.c. at the lap and 7-inch o.c. in two (2) equally spaced and staggered rows in the field	JM TPO HFB	ASTM D 312, Type IV hot asphalt	-52.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Concrete Deck (New or Existing)						
System No.	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LC-A-1	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83 gal/100ft ² , TPO WBMA (two-sided application only), LVOC MA or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-77.5 (Lim. 9)
LC-A-2	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-77.5 (Lim. 9)
LC-A-3	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF Top Layer: SECUROCK	Base and Top layer secured with RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA ASBA, or 1168 JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-77.5 (Lim. 9)
LC-A-4	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF Top Layer: SECUROCK	Base and Top layer secured with RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-77.5 (Lim. 9)
LC-A-5	Min. 300 psi LWIC	Min. 1.5-inch ENRGY 3	2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83 gal/100ft ² , TPO WBMA, LVOC MA or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-80 (Lim. 9)
LC-A-6	Min. 300 psi LWIC	Min. 1.5-inch ENRGY 3	2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-80 (Lim. 9)
LC-A-7	Min. 300 psi LWIC	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: SECUROCK	2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, or 1168 JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-80 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Concrete Deck (New or Existing)						
System No.	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LC-A-8	Min. 300 psi LWIC	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: <i>SECUROCK</i>	<i>2-Part UIA</i> applied 12-inch o.c.	<i>JM TPO SA</i>	Self-adhered	-80 (Lim. 9)
LC-A-9	Min. 383.5 psi Celcore MF with HS Rheology Admixture installed over OPTIONAL JM Vapor Barrier SA or DynaBase HW over ASTM D 41 primed concrete	-	-	<i>JM TPO FB</i>	<i>RSUA</i> applied 6-inch o.c.	-112.5 (Lim. 9)
LC-A-10	Min. 700psi cellular lightweight concrete (<i>MCRF</i> = 152lbf with JM Lightweight Concrete (LWC) CR Base Fasteners)	-	-	<i>JM TPO FB</i>	<i>2-Part UIA-C(S)</i>	-180 (Lim. 9)
LC-A-11	Min. 310 psi Elastizell with Zell-Crete Fibers	Min. 1.5-inch ENRGY 3	<i>2-Part UIA</i> applied 12-inch o.c.	<i>JM TPO or JM TPO FB</i>	<i>JM TPO: MBA</i> applied at 0.83 gal/100ft ² , <i>TPO WBMA</i> , <i>LVOC MA</i> or <i>ASBA</i> <i>JM TPO FB: TPO WBMA</i> or <i>2-Part UIA-C(S)</i>	-130 (Lim. 9)
LC-A-12	Min. 310 psi Elastizell with Zell-Crete Fibers	Min. 1.5-inch ENRGY 3	<i>2-Part UIA</i> applied 12-inch o.c.	<i>JM TPO SA</i>	Self-adhered	-130 (Lim. 9)
LC-A-13	Min. 310 psi Elastizell with Zell-Crete Fibers	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: <i>SECUROCK</i>	<i>2-Part UIA</i> applied 12-inch o.c.	<i>JM TPO or JM TPO FB</i>	<i>JM TPO: TPO WBMA</i> , <i>LVOC MA</i> , <i>ASBA</i> , or 1168 <i>JM TPO FB: TPO WBMA</i> or <i>2-Part UIA-C(S)</i>	-130 (Lim. 9)
LC-A-14	Min. 310 psi Elastizell with Zell-Crete Fibers	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: <i>SECUROCK</i>	<i>2-Part UIA</i> applied 12-inch o.c.	<i>JM TPO SA</i>	Self-adhered	-130 (Lim. 9)
LC-A-15	Min. 375 psi Concrecel	-	-	<i>JM TPO FB</i>	<i>RSUA</i> applied 12-inch o.c.	-147.5 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Concrete Deck (New or Existing)						
System No.	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LC-A-16	Min. 475 psi Celcore MF with HS Rheology Admixture installed over OPTIONAL DynaBase HW	-	-	JM TPO FB	RSUA applied 12-inch o.c.	-167.5 (Lim. 9)
LC-A-17	Min. 375 psi Concrecel	-	-	JM TPO FB	RSUA applied 6-inch o.c.	-172.5 (Lim. 9)
LC-A-18	Min. 375 psi Concrecel	-	-	JM TPO	LVOC MA	-257.5 (Lim. 9)
LC-A-19	Min. 475 psi Celcore MF with HS Rheology Admixture installed over OPTIONAL DynaBase HW	-	-	JM TPO FB	RSUA applied 4-inch o.c.	-257.5 (Lim. 9)
LC-A-20	Min. 213.5 Elastizell with Zell-Crete Fibers (no EPS Board)	-	-	JM TPO FB	RSUA applied 6-inch o.c.	-290 (Lim. 9)

Lightweight Concrete Assemblies with Adhered Membranes over Concrete Deck (New or Existing)							
System No.	Deck Detail	LWIC	Base Sheet	Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
LC-AM-1	G33, P, L6, S18	Min. 200 psi Elastizell with Zell-Crete Fibers	PermaPly 28	Min. 1.7-inch LWC CR Base Sheet Fasteners secured 9-inch o.c. at the lap and 9-inch o.c. in two (2) equally spaced staggered rows in the field	JM TPO HFB	Fully adhered in ASTM D 312 hot asphalt	-45 (Lim. 7)

Mechanically Fastened Lightweight Concrete Assemblies over Concrete Deck (New, Existing, or Recover)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LS-M-1	G40, P, L6, S18	Min. 200 psi Elastizell with Zell-Crete Fibers	-	-	JM TPO	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-67.5 (Lim. 7)

Induction Welded Lightweight Concrete Assemblies over Concrete Deck (New or Existing) (New, Existing, or Recover)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LS-W-1	G40, P, L6, S18	Min. 200 psi Elastizell with Zell-Crete Fibers	-	-	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates and JM All Purpose Fasteners secured 6-inch o.c. in rows spaced 96-inch o.c.	-60 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Steel Deck (New or Existing)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LS-A-1	G33	Min. 475 psi Celcore MF with HS Rheology	-	-	JM TPO FB	RSUA applied 12-inch o.c.	-45 (Lim. 9)
LS-A-2	G33, P, L6, S18	Min. 700psi cellular lightweight concrete (MCRF = 121lbf with JM Lightweight Concrete (LWC) CR Base Fasteners)	-	-	JM TPO FB	2-Part UIA-C(S)	-52.5 (Lim. 9)
LS-A-3	G33	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83 gal/100ft ² , TPO WBMA, LVOC MA or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-77.5 (Lim. 9)
LS-A-4	G33	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-77.5 (Lim. 9)
LS-A-5	G33	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF Top Layer: SECUROCK	Base and Top layer secured with RSUA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, or 1168 JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-77.5 (Lim. 9)
LS-A-6	G33	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF Top Layer: SECUROCK	Base and Top layer secured with RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-77.5 (Lim. 9)
LS-A-7	G33	Min. 300 psi LWIC	Min. 1.5-inch ENRGY 3	2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83 gal/100ft ² , TPO WBMA, LVOC MA or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-80 (Lim. 9)
LS-A-8	G33	Min. 300 psi LWIC	Min. 1.5-inch ENRGY 3	2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-80 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Steel Deck (New or Existing)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LS-A-9	G33	Min. 300 psi LWIC	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: SECUROCK	2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, or 1168 JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-80 (Lim. 9)
LS-A-10	G33	Min. 300 psi LWIC	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: SECUROCK	2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-80 (Lim. 9)
LS-A-11	G80, P, L5, S15	Min. 250 psi Elastizell with Zell-Crete Fibers	-	-	JM TPO FB	RSUA applied 6-inch o.c.	-97.5 (Lim. 9)
LS-A-12	G80, P, L5, S15	Min. 250 psi Elastizell with Zell-Crete Fibers	-	-	JM TPO	LVOC MA	-97.5 (Lim. 9)
LS-A-13	G33	Min. 310 psi Elastizell with Zell-Crete Fibers	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: SECUROCK	2-Part UIA ribbons spaced 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA, LVOC MA, ASBA, or 1168 JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-130 (Lim. 9)
LS-A-14	G33	Min. 310 psi Elastizell with Zell-Crete Fibers	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: SECUROCK	2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-130 (Lim. 9)
LS-A-15	G33	Min. 200 psi Elastizell with Zell-Crete Fibers	-	-	JM TPO	MBA applied at 0.83 gal/100ft ²	-180 (Lim. 9; HVHZ only)
LS-A-16	G33	Min. 700psi cellular lightweight concrete (MCRF = 152lbf with JM Lightweight Concrete (LWC) CR Base Fasteners)	-	-	JM TPO FB	2-Part UIA-C(S)	-180 (Lim. 9; HVHZ only)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Steel Deck (New or Existing)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LS-A-17	G33	Min. 150 psi LWIC	-	-	JM TPO	MBA applied at 0.83 gal/100ft ²	-265 (Lim. 9; HVHZ only)

Lightweight Concrete Assemblies with Adhered Membranes over Steel Deck (New or Existing)							
System No.	Deck Detail	LWIC	Base Sheet	Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
LS-AM-1	G33, P, L6, S18	Min. 200 psi Elastizell with Zell-Crete Fibers	PermaPly 28	Min. 1.7-inch LWC CR Base Sheet Fasteners secured 9-inch o.c. at the lap and 9-inch o.c. in two (2) equally spaced staggered rows in the field	JM TPO FB	ASTM D 312 hot asphalt	-45 (Lim. 7)

Mechanically Fastened Lightweight Concrete Assemblies over Steel Deck (New, Existing, or Recover)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LS-M-1	G40, P, L6, S18	Min. 200 psi Elastizell with Zell-Crete Fibers	-	-	JM TPO	Attached in-lap 6-inch o.c. with HL Fastener & Plates; Fastener rows max. 90-inch o.c.	-67.5 (Lim. 7)

Induction Welded Lightweight Concrete Assemblies over Steel Deck (New or Existing) (New, Existing, or Recover)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LS-W-1	G40, P, L6, S18	Min. 200 psi Elastizell with Zell-Crete Fibers	-	-	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates and High Load Fasteners secured 6-inch o.c. in rows spaced 96-inch o.c.	-60 (Lim. 7)

Adhered Recover Assemblies						
System No.	Existing Roof	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
R-A-1	BUR or Mod-Bit Roofing with mineral surfacing	-	-	JM TPO FB	RSUA applied 12-inch o.c.	-45 (Lim. 9)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Adhered Recover Assemblies						
System No.	Existing Roof	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
R-A-2	Concrete Deck	OPTIONAL INSULATION under Min. 1.5-inch E3	AP Fasteners & Plates (Square) secured 1 fastener per 2ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-45 (Lim. 7)
R-A-3	Concrete Deck	OPTIONAL INSULATION under Min. 1.5-inch E3	AP Fasteners & Plates (Square) secured 1 fastener per 1.78ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
R-A-4	BUR over Concrete Deck	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	JM TPO HFB	ASTM D 312 Type IV Asphalt	-217.5 (Lim. 9)

Mechanically Fastened Recover Assemblies								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-M-1	Steel Deck (G33) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board (Insulation is OPTIONAL with JM TPO FB)	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 12-inch o.c. with High Load Fasteners and JM High Load Plus Plates for Steel Deck or JM All Purpose Fasteners and JM High Load Plus Plates for Concrete Deck; Fastener rows max. 114-inch o.c.	-30 (Lim. 7; Non-HVHZ)
R-M-2	Steel Deck (G80) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fastener & Plates; Fastener rows max. 90-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
R-M-3	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	Min. 1-inch INSULATION over fill or Cover Board (Insulation is OPTIONAL with JM TPO FB)	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 12-inch o.c. with JM Purlin Fasteners and High Load Plates to structural supports; Fastener rows max. 60-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
R-M-4	Wood Deck (T19/32)	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board (Insulation is OPTIONAL with JM TPO FB)	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 4-inch o.c. with APB Fasteners & Plates; Fastener rows max. 114-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
R-M-5	Existing metal roof having Min. 14 ga. steel purlins at max. 5ft o.c.	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	Min. 1-inch INSULATION over fill or Cover Board (Insulation is OPTIONAL with JM TPO FB)	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 12-inch o.c. with JM Purlin Fasteners and High Load Plates to structural supports; Fastener rows max. 60-inch o.c.	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Recover Assemblies								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-M-6	Steel Deck (G80, F2W, L6, S24) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 12-inch o.c. with High Load Fasteners and JM High Load Plus Plates for Steel Deck or JM All Purpose Fasteners and JM High Load Plus Plates for Concrete Deck; Fastener rows max. 90-inch o.c.	-45 (Lim. 7)
R-M-7	Steel Deck (G80, F1, L6, S18) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board (Insulation is OPTIONAL with JM TPO FB)	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 12-inch o.c. with Extra HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)
R-M-8	Steel Deck (G80, F1, L6, S18) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board (Insulation is OPTIONAL with JM TPO FB)	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)
R-M-9	Steel Deck (G80, F1, L6, S18) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board (Insulation is OPTIONAL with JM TPO FB)	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with Extra HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-52.5 (Lim. 7)
R-M-10	Wood Deck (T19/32, L24, N6)	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board (Insulation is OPTIONAL with JM TPO FB)	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 54-inch o.c.	-60 (Lim. 7)
R-M-11	Steel Deck (G80, F1, L6, S18) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)
R-M-12	Steel Deck (G33, L6, P) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board (Insulation is OPTIONAL with JM TPO FB)	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-60 (Lim. 7)
R-M-13	Steel Deck (G33, L6, P) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-75 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Recover Assemblies								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-M-14	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	OPTIONAL <i>INSULATION</i> under min. 1.5-inch <i>E3</i>	<i>Preliminarily Secured</i> or secured with top layer	Min. 1-inch <i>INSULATION</i> over fill or <i>Cover Board</i>	<i>Preliminarily Secured</i>	<i>JM TPO</i>	Attached in-lap 6-inch o.c. with JM Purlin Fasteners and High Load Plates to structural supports; Fastener rows max. 60-inch o.c.	-82.5 (Lim. 7)
R-M-15	<i>Steel Deck (G33, L6, P)</i> or <i>Concrete Deck</i>	OPTIONAL <i>INSULATION</i>	<i>Preliminarily Secured</i> or secured with top layer	Min. 0.5-inch <i>E3</i> or <i>Cover Board</i> (Insulation is OPTIONAL with <i>JM TPO FB</i>)	<i>Preliminarily Secured</i>	<i>JM TPO</i> or <i>JM TPO FB</i>	Attached in-lap 6-inch o.c. with <i>HL Fasteners & Plates</i> ; Fastener rows max. 54-inch o.c.	-97.5 (Lim. 7)

Induction Welded Recover Assemblies								
System No.	Existing Roof	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-W-1	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	<i>INSULATION</i>	<i>Preliminarily Secured</i> or secured with top layer	Min. 1-inch <i>INSULATION</i> over fill or <i>Cover Board</i>	JM Purlin Fasteners and JM TPO RhinoPlates secured to structural supports 18-inch o.c.; Fastener rows max. 60-inch o.c.	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-45 (Lim. 7)
R-W-2	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	<i>INSULATION</i>	<i>Preliminarily Secured</i> or secured with top layer	Min. 1-inch <i>INSULATION</i> over fill or <i>Cover Board</i>	JM Purlin Fasteners and JM TPO RhinoPlates secured to structural supports 6-inch o.c.; Fastener rows max. 120-inch o.c.	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-45 (Lim. 7)
R-W-3	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	<i>INSULATION</i>	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL <i>Cover Board</i>	Attached with <i>ISOWELD-#12</i> or <i>ISOWELD-#15</i> spaced 12" o.c. in rows 60" o.c.	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-45 (Lim. 7)
R-W-4	<i>Steel Deck (G33, L6, P)</i> or <i>Concrete Deck</i>	OPTIONAL <i>INSULATION</i>	<i>Preliminarily Secured</i> or secured with top layer	Min. 0.5-inch <i>E3</i> or <i>Cover Board</i>	Attached with High Load Fasteners and JM TPO RhinoPlates at a rate of 8 per 4-ft x 8-ft board Pattern #1 (1 fastener per 4.0-ft ²)	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-45 (Lim. 7)
R-W-5	<i>Wood Deck (T15/32, L24, N6)</i>	OPTIONAL <i>INSULATION</i>	<i>Preliminarily Secured</i> or secured with top layer	Min. 0.5-inch <i>E3</i> or <i>Cover Board</i>	Min. 2.25-inch JM All Purpose Fastener and JM TPO RhinoPlates secured max. 24-inch o.c. through sheathing into wood structural supports in rows max. 24" o.c.	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-52.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Induction Welded Recover Assemblies								
System No.	Existing Roof	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-W-6	Wood Deck (T15/32, L24, N6)	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Min. 2.25-inch JM All Purpose Fastener and JM TPO RhinoPlates secured max. 9- inch o.c. through sheathing into wood structural supports in rows max. 48" o.c.	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-60 (Lim. 7)
R-W-7	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	INSULATION	Preliminarily Secured or secured with top layer	Min. 1-inch INSULATION over fill or Cover Board	JM Purlin Fasteners and JM TPO RhinoPlates secured to structural supports 12-inch o.c.; Fastener rows max. 60-inch o.c.	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-67.5 (Lim. 7)
R-W-8	Steel Deck (G33, L6, P) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Attached with High Load Fasteners and JM TPO RhinoPlates at a rate of 12 per 4-ft x 8-ft board (1 fastener per 2.67-ft ²)	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-75 (Lim. 7)
R-W-9	Steel Deck (G33, F2W, L6) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Attached with High Load Fasteners and JM TPO RhinoPlates at a rate of 15 per 4-ft x 8-ft board (1 fastener per 2.13-ft ²)	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-90 (Lim. 7)
R-W-10	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#12 or ISOWELD-#15 spaced 6" o.c. in rows 60" o.c.	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-97.5 (Lim. 7)
R-W-11	Wood Deck (T15/32, L24, N6)	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Min. 2.25-inch JM All Purpose Fastener and JM TPO RhinoPlates secured max. 6- inch o.c. through sheathing into wood structural supports in rows max. 48" o.c.	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-112.5 (Lim. 7)
R-W-12	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	INSULATION	Preliminarily Secured or secured with top layer	Min. 1-inch INSULATION over fill or Cover Board	JM Purlin Fasteners and JM TPO RhinoPlates secured to structural supports 6-inch o.c.; Fastener rows max. 60-inch o.c.	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-120 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-1	G33, P, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR HD	UltraFast Fasteners & Plates (Square) at a rate of 1 fastener per 2.67ft ²	JM TPO SA	Self-adhered	-30 (Lim. 7 Non-HVHZ)
S-AM-2	G33, P, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR HD	UltraFast Fasteners & Plates (Square) at a rate of 1 fastener per 2.67ft ²	JM TPO or JM TPO FB	JM TPO: TPO WBMA; MBA applied at 0.83 gal/100ft ² ; LVOC MA or ASBA JM TPO FB: RSUA applied 12-inch o.c., 2-Part UIA-C(S) or TPO WBMA	-30 (Lim. 7 Non-HVHZ)
S-AM-3	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 2-inch Fesco Foam	UltraFast Fasteners & Plates secured 1 fastener per 5.3ft ²	JM TPO	MBA, or LVOC MA	-37.5 (Lim. 7; Non-HVHZ)
S-AM-4	G33	ProtectoR attached with UltraFast Fasteners & Plates (Square) at 8 per 4-ft x 8-ft board Pattern #2; JM Vapor SA or JM Vapor Barrier SAR with JM SA Primer or JM SA Primer Low VOC	ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	OSFA, RSUA, or 2-Part UIA applied 12-inch o.c.	ProtectoR, Retro-Fit, RetroPlus, SeparatorR CGF, Separator FR, INVINSA, DensDeck, DensDeck Prime, DEXcell FA, or SECUROCK	OSFA, RSUA, or 2-Part UIA applied 12-inch o.c.	JM TPO, JM TPO FB, JM TPO SA, or JM TPO HFB	JM TPO: TPO WBMA, MBA LVOC MA, or ASBA JM TPO FB: RSUA applied 12-inch o.c., 2-Part UIA-C(S) or TPO WBMA JM TPO: self-adhered JM TPO HFB: ASTM D 312 Type IV Asphalt	-37.5 (Lim. 7; Non-HVHZ)
S-AM-5	G33, P, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch ENRGY 3	UltraFast Fasteners & Plates (Square) at a rate of 1 fastener per 2.67ft ²	ProtectoR HD	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-6	G33, P, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch ENRGY 3	UltraFast Fasteners & Plates (Square) at a rate of 1 fastener per 2.67ft ²	ProtectoR HD	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: TPO WBMA; MBA applied at 0.83 gal/100ft ² ; LVOC MA or ASBA JM TPO FB: RSUA applied 12-inch o.c., 2-Part UIA-C(S) or TPO WBMA	-45 (Lim. 7)
S-AM-7	G33	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	UltraFast Fasteners & Plates (Square) secured 1 fastener per 4ft ²	JM TPO SA	Self-adhered	-45 (Lim. 9)
S-AM-8	G33	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	UltraFast Fasteners & Plates (Square) secured 1 fastener per 4ft ²	JM TPO (Min. 60 mil) or JM TPO FB	JM TPO: TPO WBMA; MBA applied at 0.83 gal/100ft ² ; LVOC MA or ASBA JM TPO FB: RSUA applied 12-inch o.c., 2-Part UIA-C(S) or TPO WBMA	-45 (Lim. 9)
S-AM-9	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 2-inch Invinso Foam	UltraFast Fasteners & Plates (Square) secured 1 fastener per 5.3ft ²	JM TPO	MBA, TPO WBMA, LVOC MA, or ASBA	-45 (Lim. 7; Non-HVHZ)
S-AM-10	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 2-inch Invinso Foam	UltraFast Fasteners & Plates (Square) secured 1 fastener pr 5.3ft ²	JM TPO SA	Self-adhered	-45 (Lim. 7; Non-HVHZ)
S-AM-11	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.375-inch SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 2.67ft ²	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² or ASBA JM TPO FB: TPO WBMA	-45 (Lim. 7; Non-HVHZ)
S-AM-12	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.375-inch SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 2.67ft ²	JM TPO SA	Self-adhered	-45 (Lim. 7; Non-HVHZ)
S-AM-13	G33	OPTIONAL JM Vapor Barrier SA or SAR	-	-	Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF	RSUA applied 12-inch o.c.	JM TPO SA	Self-adhered	-45 (Lim. 7; Non-HVHZ)
S-AM-14	G33	OPTIONAL JM Vapor Barrier SA or SAR	-	-	Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF	RSUA applied 12-inch o.c.	JM TPO	MBA, LVOC MA, TPO WBMA or ASBA	-45 (Lim. 7; Non-HVHZ)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-15	G33	OPTIONAL JM Vapor Barrier SA or SAR	-	-	Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF	RSUA applied 12-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-45 (Lim. 7; Non-HVHZ)
S-AM-16	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 4.0ft ²	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-45 (Lim. 9)
S-AM-17	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 4.0ft ²	JM TPO SA	Self-adhered	-45 (Lim. 9)
S-AM-18	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	UltraFast Fasteners & Plates secured 1 fastener per 2.0ft ²	-	-	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate, TPO WBMA, ASBA or LVOC MA	-45 (Lim. 9)
S-AM-19	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	UltraFast Fasteners & Plates secured 1 fastener per 2.0ft ²	-	-	JM TPO SA	Self-adhered	-45 (Lim. 9)
S-AM-20	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	UltraFast Fasteners & Plates secured 1 fastener per 2.0ft ²	RetroPlus	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO	MBA	-45 (Lim. 9)
S-AM-21	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch ENRGY 3	UltraFast Fasteners & Plates secured 1 fastener per 4.0ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA; Applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA or ASBA JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-45 (Lim. 7)
S-AM-22	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 2-inch ENRGY 3	UltraFast Fasteners & Plates secured 1 fastener per 4.0ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-23	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-52.5 (Lim. 7)
S-AM-24	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
S-AM-25	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	UltraFast Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA, RSUA applied 12-inch o.c., or 2-Part UIA-C(S)	-52.5 (Lim. 7)
S-AM-26	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	UltraFast Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
S-AM-27	G40, P, L6, S20	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	UltraFast Fasteners & Plates secured at a rate of 1 fastener per 1.45ft ²	JM Invinsa	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO FB	RSUA applied 12-inch o.c.	-52.5 (Lim. 7)
S-AM-28	G40, P, L6, S20	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	UltraFast Fasteners & Plates secured at a rate of 1 fastener per 1.45ft ²	JM Invinsa or ProtectoR HD	RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
S-AM-29	G33, P, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch ENRGY 3 CGF or ENRGY 3 FR	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.78ft ²	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate or TPO WBMA or ASBA	-52.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-30	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	UltraFast Fasteners & Plates (Square) secured 1 fastener per 2.67ft ²	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate, TPO WBMA or ASBA	-52.5 (Lim. 7)
S-AM-31	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	UltraFast Fasteners & Plates (Square) secured 1 fastener per 2.67ft ²	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
S-AM-32	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	JM TPO HFB	Base Ply: Torch Adhered Membrane: ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
S-AM-33	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
S-AM-34	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	UltraFast Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO HFB	ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
S-AM-35	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	UltraFast Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO HFB	Base Ply: Torch Adhered Membrane: ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
S-AM-36	G33, F2, L6, S18	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch E3	UltraFast Fasteners & Plates secured 1 fastener per 1.78ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
S-AM-37	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ProtectoR HD	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.78ft ²	JM TPO SA	Self-adhered	-52.5 (Lim. 7)
S-AM-38	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ProtectoR HD	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.78ft ²	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA applied at 0.83 gal/100ft ² , LVOC MA applied at 0.83 gal/100ft ² or ASBA JM TPO FB: TPO WBMA	-52.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-39	G33, F1, L6, S30	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	<i>UltraFast Fasteners & Plates</i> secured at a rate of 1 fastener per 1.78ft ²	Min 1/2-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-60 (Lim. 7)
S-AM-40	G33, F1, L6, S30	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	<i>UltraFast Fasteners & Plates</i> secured at a rate of 1 fastener per 1.78ft ²	Min 1/2-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-60 (Lim. 7)
S-AM-41	G33, F2W, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	<i>UltraFast Fasteners & Plates (Square)</i> secured 1 fastener per 1.00ft ²	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-60 (Lim. 7)
S-AM-42	G80, F1W, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	<i>UltraFast Fasteners & Plates (Square)</i> secured 1 fastener per 1.00ft ²	JM TPO or JM TPO FB	JM TPO: MBA applied at 0.83-1.10 gal/100ft ² , LVOC MA, or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-60 (Lim. 7)
S-AM-43	G33, F2W, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	<i>UltraFast Fasteners & Plates (Square)</i> secured 1 fastener per 1.00ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-60 (Lim. 7)
S-AM-44	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch E3	<i>UltraFast Fasteners & Plates</i> secured 1 fastener per 1.78ft ²	JM TPO	LVOC MA or MBA applied at 0.55 gal/100ft ²	-60 (Lim. 7)
S-AM-45	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch ENRGY 3 CGF or ENRGY 3 FR	<i>UltraFast Fasteners & Plates (Square)</i> secured 1 fastener per 1.78ft ²	JM TPO SA	Self-adhered	-60 (Lim. 7)
S-AM-46	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch E3	<i>UltraFast Fasteners & Plates</i> secured 1 fastener per 1.78ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-60 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-47	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ProtectoR HD	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.78ft ²	JM TPO SA	Self-adhered	-60 (Lim. 7)
S-AM-48	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	ProtectoR HD	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.78ft ²	JM TPO or JM TPO FB	JM TPO: MBA, LVOC MA, or ASBA JM TPO FB: 2-Part UIA-C(S)	-60 (Lim. 7)
S-AM-49	G33, F2W, L6, S18	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	UltraFast Fasteners & Plates secured at a rate of 24 per 1ft ²	SECUROCK or JM InvinSA	RSUA or 2-Part UIA applied 6-inch o.c.	JM TPO FB	RSUA applied 12-inch o.c.	-67.5 (Lim. 7)
S-AM-50	L6, G80, F1, S30	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	UltraFast Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	Min. 1/2-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO	TPO WBMA	-67.5 (Lim. 7)
S-AM-51	L6, G80, F1, S30	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	UltraFast Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	Min. 1/2-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO FB	TPO WBMA or 2-Part UIA-C(S)	-67.5 (Lim. 7)
S-AM-52	L6, G80, F1, S30	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	UltraFast Fasteners & Plates secured at a rate of 24 per 4-ft x 8-ft Board	Min. 1/2-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM TPO SA	Self-adhered	-67.5 (Lim. 7)
S-AM-53	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	UltraFast Fasteners & Plates (Square) secured 1 fastener per 2.0ft ²	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate, TPO WBMA or ASBA	-67.5 (Lim. 7)
S-AM-54	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	UltraFast Fasteners & Plates (Square) secured 1 fastener per 2.0ft ²	JM TPO SA	Self-adhered	-67.5 (Lim. 7)
S-AM-55	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	UltraFast Fasteners & Plates (Square) secured 1 fastener per 2.0ft ²	JM TPO	TPO WBMA or ASBA	-67.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-56	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENERGY 3	UltraFast Fasteners & Plates secured 1 fastener per 2ft ²	JM TPO	MBA, LVOC MA applied at 1.1 gal/100ft ² , TPO WBMA (two-sided application only) or ASBA	-67.5 (Lim. 7)
S-AM-57	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENERGY 3	UltraFast Fasteners & Plates secured 1 fastener per 2ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-67.5 (Lim. 7)
S-AM-58	G33, P, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR HD	UltraFast Fasteners & Plates (Square) at a rate of 1 fastener per 1.33ft ²	JM TPO SA	Self-adhered	-75 (Lim. 7)
S-AM-59	G33, P, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR HD	UltraFast Fasteners & Plates (Square) at a rate of 1 fastener per 1.33ft ²	JM TPO or JM TPO FB	JM TPO: TPO WBMA, MBA applied at 0.83 gal/100ft ² , LVOC MA or ASBA JM TPO FB: TPO WBMA or 2-Part UIA-C(S)	-75 (Lim. 7)
S-AM-60	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	UltraFast Fasteners & Plates secured 1 fastener per 1.6ft ²	JM TPO	MBA, LVOC MA applied at 1.1 gal/100ft ² , TPO WBMA (two-sided application only) or ASBA	-75 (Lim. 7)
S-AM-61	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	UltraFast Fasteners & Plates secured 1 fastener per 1.6ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-75 (Lim. 7)
S-AM-62	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Invinso Foam	UltraFast Fasteners & Plates (Square) secured 1 fastener per 2.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA or ASBA	-75 (Lim. 7)
S-AM-63	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Invinso Foam	UltraFast Fasteners & Plates (Square) secured 1 fastener per 2.0ft ²	JM TPO SA	Self-adhered	-75 (Lim. 7)
S-AM-64	G33, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA or ASBA	-75 (Lim. 7)
S-AM-65	G33, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-75 (Lim. 7)
S-AM-66	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO FB	2-Part UIA-C(S)	-82.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-67	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO SA	Self-adhered	-82.5 (Lim. 7)
S-AM-68	G80, F1W, L6, S24	Min. 0.5-inch DEXcell FA; UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.0ft ² ; JM Vapor Barrier SA self-adhered over SA Primer	Min. 1.5-inch E3	RSUA or 2-Part UIA applied 6-inch o.c.	Min. 0.5-inch DEXcell FA	RSUA applied 6-inch o.c.	JM TPO FB	RSUA applied 6-inch o.c.	-82.5 (Lim. 7)
S-AM-69	G33, F2, L6, S24	Min. 0.5-inch DEXcell FA secured with top layer; JM Vapor Barrier SA self-adhered	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO FB	RSUA applied 4-inch o.c.	-82.5 (Lim. 7)
S-AM-70	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	UltraFast Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO	MBA or LVOC MA applied at 1.1 gal/100ft ² or TPO WBMA (two-sided application only)	-82.5 (Lim. 7)
S-AM-71	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	UltraFast Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-82.5 (Lim. 7)
S-AM-72	G33, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA, or ASBA	-82.5 (Lim. 7)
S-AM-73	G33, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA, or ASBA	-82.5 (Lim. 7)
S-AM-74	G33, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO SA	Self-adhered	-82.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-75	G33, H1, L6, SH24	OPTIONAL Vapor Barrier	Min. 1-inch E3	Simultaneously secured with top layer	ProtectoR HD	UltraFast Fasteners & Plates (Square) 1 fastener per 1.33ft ²	JM TPO	MBA, LVOC MA, or ASBA	-82.5 (Lim. 7)
S-AM-76	G33, H1, L6, SH24	OPTIONAL Vapor Barrier	Min. 1-inch E3	Simultaneously secured with top layer	ProtectoR HD	UltraFast Fasteners & Plates (Square) 1 fastener per 1.33ft ²	JM TPO SA	Self-adhered	-82.5 (Lim. 7)
S-AM-77	G33, H1, L6, SH24	OPTIONAL Vapor Barrier	Min. 1-inch E3	Simultaneously secured with top layer	ProtectoR HD	UltraFast Fasteners & Plates (Square) 1 fastener per 1.33ft ²	JM TPO FB	2-Part UIA-C(S)	-82.5 (Lim. 7)
S-AM-78	G33, F1, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	UltraFast Fasteners & Plate) 1 fastener per 1.6ft ²	ProtectoR HD	RSUA or 2-Part UIA applied 6-inch o.c.	JM TPO	MBA, LVOC MA, or ASBA	-82.5 (Lim. 7)
S-AM-79	G33, F1, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	UltraFast Fasteners & Plate) 1 fastener per 1.6ft ²	ProtectoR HD	RSUA or 2-Part UIA applied 6-inch o.c.	JM TPO SA	Self-adhered	-82.5 (Lim. 7)
S-AM-80	G33, F1, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	UltraFast Fasteners & Plate) 1 fastener per 1.6ft ²	ProtectoR HD	RSUA or 2-Part UIA applied 6-inch o.c.	JM TPO FB	2-Part UIA-C(S)	-82.5 (Lim. 7)
S-AM-81	G33, F1W, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	UltraFast Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM TPO	TPO WBMA (rate 0.6-0.8 gal/100-ft ² for one-sided and two-sided application), MBA, ASBA, or LVOC MA	-82.5 (Lim. 7)
S-AM-82	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3	UltraFast Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO	TPO WBMA (rate 0.6-0.8 gal/100-ft ² for one-sided and two-sided application), MBA, or LVOC MA	-82.5 (Lim. 7)
S-AM-83	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3	UltraFast Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO	ASBA	-82.5 (Lim. 7)
S-AM-84	G80, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	UltraFast Fasteners & Plates (Square) 1 fastener per 1.33ft ²	JM TPO	MBA applied at 0.83 gal/100ft ² to both membrane and substrate or TPO WBMA	-105 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-85	G80, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	JM TPO SA	Self-adhered	-105 (Lim. 7)
S-AM-86	G80, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA, or ASBA	-105 (Lim. 7)
S-AM-87	G80, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO	MBA, LVOC MA applied at 1.67 gal/100ft ² , TPO WBMA (two-sided application only), or ASBA	-112.5 (Lim. 7)
S-AM-88	G80, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO SA	Self-adhered	-112.5 (Lim. 7)
S-AM-89	G80, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	UltraFast Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO	TPO WBMA (rate 0.6-0.8 gal/100-ft ² for one-sided and two-sided application), MBA, or LVOC MA	-112.5 (Lim. 7)
S-AM-90	G80, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF)	UltraFast Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO	ASBA	-112.5 (Lim. 7)
S-AM-91	G80, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	UltraFast Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO	MBA or LVOC MA applied at 1.1 gal/100ft ² or TP WBMA (two-sided application only)	-120 (Lim. 7)
S-AM-92	G80, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	UltraFast Fasteners & Plates secured 1 fastener per 1.0ft ²	JM TPO HFB	ASTM D 312 Type IV Asphalt	-120 (Lim. 7)
S-AM-93	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR HD	UltraFast Fasteners & Plates (Square) at a rate of 1 fastener per 1ft ²	JM TPO	MBA or ASBA	-120 (Lim. 7)
S-AM-94	G80, F1W, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	UltraFast Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM TPO	TPO WBMA (rate 0.6-0.8 gal/100-ft ² for one-sided and two-sided application), MBA, or LVOC MA	-120 (Lim. 7)
S-AM-95	G80, F1W, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	UltraFast Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM TPO	ASBA	-127.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-96	G80, F2, L6, S24	Min. 0.5-inch DEXcell FA secured with top layer; JM Vapor Barrier SA self-adhered	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM TPO FB	RSUA applied 4-inch o.c.	-142.5 (Lim. 7)
S-AM-97	G80, F1W, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.00ft ²	JM TPO or JM TPO FB	TPO WBMA (two-sided application only for JM TPO)	-150 (Lim. 7)
S-AM-98	G80, F1W, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.00ft ²	JM TPO SA	Self-adhered	-150 (Lim. 7)

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
S-M-1	G33, L6	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 12-inch o.c. with High Load Fasteners and JM High Load Plus Plates; Fastener rows max. 114-inch o.c.	-30 (Lim. 7; Non-HVHZ)
S-M-2	G33, F, L6, S24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Fastener rows max. 138-inch o.c.	-30 (Lim. 7; Non-HVHZ)
S-M-3	G80, L6	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
S-M-4	G33, F, L6, S24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
S-M-5	G33, H1, L6, SH24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
S-M-6	G33, P, L6, S24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with Extra HL Fasteners & Plates; Fastener rows max. 138-inch o.c.	-30 (Lim. 7; Non-HVHZ)
S-M-7	G33, P, L6, S24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Fastener rows max. 66-inch o.c.	(-45 Lim. 7)
S-M-8	G80, F2W, L6, S24	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 12-inch o.c. with High Load Fasteners and JM High Load Plus Plates; Fastener rows max. 90-inch o.c.	-45 (Lim. 7)
S-M-9	G80, F1, L6, S18	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 12-inch o.c. with Extra HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)
S-M-10	G80, F1, L6, S18	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)
S-M-11	G80, F1, L6, S18	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with Extra HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-52.5 (Lim. 7)
S-M-12	G33, H1, L6, SH24	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-52.5 (Lim. 7)
S-M-13	G80, F1, L6, S18	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-60 (Lim. 7)
S-M-14	G33, P, L6	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-60 (Lim. 7)
S-M-15	G33, H1, L6, SH24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 138-inch o.c.	-60 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
S-M-16	G33, P, L6, S24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 138-inch o.c.	-60 (Lim. 7)
S-M-17	G80, P, L6, S24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 138-inch o.c.	-67.5 (Lim. 7)
S-M-18	G33, H1, L6, SH24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with Extra HL Fasteners & Plates; Fastener rows max. 138-inch o.c.	-67.5 (Lim. 7)
S-M-19	G33, P, L6	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 90-inch o.c.	-75 (Lim. 7)
S-M-20	G33, P, L6	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO or JM TPO FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 54-inch o.c.	-97.5 (Lim. 7)
S-M-21	G33, H1, L6, SH24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO (Min. 60 mil)	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 66-inch o.c.	(-105 Lim. 7)

Induction Welded Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
S-W-1	G33, P, L6	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with High Load Fasteners and JM TPO RhinoPlates at a rate of 8 per 4-ft x 8-ft board Pattern #1 (1 fastener per 4.0-ft ²)	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-45 (Lim. 7)
S-W-2	G33, H1, L6, SH24	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with JM TPO RhinoPlates fastened 12-inch o.c. with High Load Fasteners; Fastener rows max. 72-inch o.c.	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-45 (Lim. 7)
S-W-3	G33, F1, L6, S30	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#15 at a rate of 1 fastener per 4.0-ft ²	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-45 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
S-W-4	G80, SD1W, L6, SDL24	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced 24" o.c. in rows 24" o.c.	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-45 (Lim. 7)
S-W-5	G80, SD1W, L6, SDL24	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#12 or ISOWELD-#15 spaced 12" o.c. in rows 60" o.c.	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-45 (Lim. 7)
S-W-6	G80, F1, L6, S36	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#12 or ISOWELD-#15 spaced in a 2-ft x 3-ft staggered grid	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-45 (Lim. 7)
S-W-7	G33, H1, L6, SH24	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with High Load Fasteners and JM TPO RhinoPlates at a rate of 6 per 4-ft x 8-ft board Pattern #2 (1 fastener per 5.33-ft ²); Board length perpendicular to deck flutes with 6-inch stagger from preceding course	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-52.5 (Lim. 7)
S-W-8	G40, P, L6, S36	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced in a 2-ft x 2-ft staggered grid	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-60 (Lim. 7)
S-W-9	G33, H1, L6, SH24	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with High Load Fasteners and JM TPO RhinoPlates at a rate of 8 per 4-ft x 8-ft board Pattern #2 (1 fastener per 4.0-ft ²); Board length perpendicular to deck flutes with 6-inch stagger from preceding course	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-67.5 (Lim. 7)
S-W-10	G33, F2, L6, S18	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with High Load Fasteners and JM TPO RhinoPlates at a rate of 8 per 4-ft x 8-ft board Pattern #1 (1 fastener per 4.0-ft ²)	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-67.5 (Lim. 7)
S-W-11	G33, P, L6	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with High Load Fasteners and JM TPO RhinoPlates at a rate of 12 per 4-ft x 8-ft board (1 fastener per 2.67-ft ²)	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-75 (Lim. 7)
S-W-12	G33, F1, L6, S30	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#15 at a rate of 1 fastener per 3.2-ft ²	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-75 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
S-W-13	G33, F2, L6, S24	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with High Load Fasteners and JM TPO RhinoPlates in a 24-inch by 16-inch grid pattern	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-82.5 (Lim. 7)
S-W-14	G40, P, L6, S36	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced in a 1.5-ft x 2-ft staggered grid	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-82.5 (Lim. 7)
S-W-15	G80, F2, L6, S24	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with High Load Fasteners and JM TPO RhinoPlates in a 24-inch by 16-inch grid pattern	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-90 (Lim. 7)
S-W-16	G33, F2W, L6	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with High Load Fasteners and JM TPO RhinoPlates at a rate of 15 per 4-ft x 8-ft board (1 fastener per 2.13-ft ²)	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-90 (Lim. 7)
S-W-17	G33, H1, L6, S24	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with High Load Fasteners and JM TPO RhinoPlates at a rate of 12 per 4-ft x 8-ft board (1 fastener per 2.67-ft ²); Board length perpendicular to deck flutes with 6-inch stagger from preceding course	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-90 (Lim. 7)
S-W-18	G40, F1, L5, S30	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced 6" o.c. in rows 60" o.c.	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-90 (Lim. 7)
S-W-19	G80, SD1W, L6, SDL24	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced 18" o.c. in rows 18" o.c.	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-97.5 (Lim. 7)
S-W-20	G80, SD1W, L6, SDL24	INSULATION	<i>Preliminarily Secured or secured with top layer</i>	OPTIONAL Cover Board	Attached with ISOWELD-#12 or ISOWELD-#15 spaced 6" o.c. in rows 60" o.c.	JM TPO (Min. 60 mil)	Induction welded to Isoweld plates	-97.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Wood Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
W-AM-1	T7/16O, L24, N6	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR HD	UltraFast Fasteners & Plates (Square) at a rate of 1 fastener per 2-ft ²	JM TPO SA	Self-adhered	-37.5 (Lim. 7; Non-HVHZ)
W-AM-2	T7/16O, L24, N6	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR HD	UltraFast Fasteners & Plates (Square) at a rate of 1 fastener per 2-ft ²	JM TPO (Min. 60 mil) or JM TPO FB	JM TPO: TPO WBMA, MBA applied at 0.83 gal/100ft ² , LVOC MA or ASBA JM TPO FB: RSUA applied 12-inch o.c. or 2-Part UIA-C(S)	-37.5 (Lim. 7; Non-HVHZ)
W-AM-3	T7/16O, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ProtectoR	JM All Purpose Fasteners and JM TPO Rhino Plates secured at a rate of 1 per 2.13ft ²	JM TPO or JM TPO FB	JM TPO: MBA, TPO WBMA, LVOC MA, or ASBA JM TPO FB: 2-Part UIA-C(S)	-37.5 (Lim. 7; Non-HVHZ)
W-AM-4	T7/16O, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	ProtectoR	JM All Purpose Fasteners and JM TPO Rhino Plates secured at a rate of 1 per 2.13ft ²	JM TPO SA	Self-adhered	-37.5 (Lim. 7; Non-HVHZ)

Mechanically Fastened Assemblies over Wood Deck (New or Existing)									
System No.	Deck Detail	Thermal Barrier	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
W-M-1	T19/32P, L24	As required	Min. 0.25-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 4-inch o.c. with JM APB Plates and High Load Fasteners; Fastener rows max. 114-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
W-M-2	T19/32P, L24, N6	As required	Min. 0.25-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM TPO	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 54-inch o.c.	-60 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over <i>Wood Deck (New or Existing)</i>									
System No.	Deck Detail	Thermal Barrier	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
W-W-1	T7/160 or T15/32P, L24	As required	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	JM All Purpose Fasteners (min. 1-inch embedment into wood supports) and JM TPO Rhino Plates secured max. 12-inch o.c. through sheathing into wood structural supports in row max. 8-ft o.c.	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-37.5 (Lim. 7; Non-HVHZ)
W-W-2	T7/160 or T15/32P, L24	As required	OPTIONAL INSULATION	Loose laid	ProtectoR	JM All Purpose Fasteners (min. 1-inch embedment into wood supports) and JM TPO Rhino Plates secured max. 48-inch o.c. through sheathing into wood structural supports in rows max. 24" o.c.	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-37.5 (Lim. 7; Non-HVHZ)
W-W-3	T7/160 or T15/32P, L24	As required	Min. 1-inch E3 or E3 C1	Loose laid	OPTIONAL Cover Board	JM All Purpose Fasteners (min. 1.5-inch embedment into wood supports) and JM TPO Rhino Plates secured max. 48-inch o.c. through sheathing into wood structural supports in rows max. 24" o.c.	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-45 (Lim. 7; Non-HVHZ)
W-W-4	T7/160 or T15/32P, L24	As required	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	JM All Purpose Fasteners (min. 1.75-inch embedment into wood supports) and JM TPO Rhino Plates secured max. 18-inch o.c. through sheathing into wood structural supports in row max. 4-ft o.c.	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-45 (Lim. 7; Non-HVHZ)
W-W-5	T15/32P, L24, N6	As required	Min. 0.25-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	JM All Purpose Fasteners (min. 1.5-inch embedment into wood supports) and JM TPO Rhino Plates secured max. 24-inch o.c. through sheathing into wood structural supports in rows max. 24" o.c.	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-52.5 (Lim. 7)

APPENDIX C – APPROVED ASSEMBLIES FOR JM TPO SINGLE-PLY MEMBRANES

Induction Welded Assemblies over <i>Wood Deck (New or Existing)</i>									
System No.	Deck Detail	Thermal Barrier	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
W-W-6	T15/32P, L24, N6	As required	Min. 0.25-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	JM All Purpose Fasteners (min. 1.5-inch embedment into wood supports) and JM TPO Rhino Plates secured max. 9-inch o.c. through sheathing into wood structural supports in rows max. 48" o.c.	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-60 (Lim. 7)
W-W-7	T15/32P, L24, N6	As required	Min. 0.25-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	JM All Purpose Fasteners (min. 1.5-inch embedment into wood supports) and JM TPO Rhino Plates secured max. 6-inch o.c. through sheathing into wood structural supports in rows max. 48" o.c.	JM TPO (Min. 60 mil)	Induction welded to JM TPO RhinoPlates	-112.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES
APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

The following notes shall be observed when using the assembly tables below.

1. Allowable pressures were calculated using a 2:1 margin of safety per FBC Section 1504.9.
2. Refer to [LIMITATIONS](#) and [NOMENCLATURE](#) sections of this evaluation when using the table(s) below.
3. Refer to [INSTALLATION](#) section of this report for installation detail when the information is not explicitly stated for the selected assembly.
4. The on-center (o.c.) spacing given is the maximum allowable attachment spacing for the rated system.
5. JM Vapor Barrier SA or JM Vapor Barrier SAR may be installed direct to deck prior to installing the roof assembly components for the following assembly types: C-M-#, C-W-#, G-M-#, LC-M-#, LS-M-#, S-M-#, S-W-#, W-M-#, and W-W-#
6. As Tested information for roof deck construction is provided for information only. The addition of the As Tested deck information does not obviate the requirement for rational design of the roof deck and roof deck attachment in accordance with FBC requirements.

Assembly System Numbers and Definitions	
C-A-#	Adhered Assemblies over <i>Concrete Deck</i> (New or Existing)
C-AM-#	Assemblies with Adhered Membranes over Insulated <i>Concrete Deck</i> (New, Existing or <i>Recover</i>)
C-M-#	Mechanically Fastened Assemblies over <i>Concrete Deck</i>
C-W-#	Induction Welded Assemblies over <i>Concrete Deck</i>
CW-A-#	Adhered Assemblies over <i>CWF Deck</i> (New or Existing)
CW-M-#	Mechanically Fastened Assemblies over <i>CWF Deck</i> (New, Existing, or <i>Recover</i>)
G-A-#	Adhered Assemblies over Poured Gypsum Deck (New or Existing)
G-M-#	Mechanically Fastened Assemblies over Poured Gypsum Deck (New, Existing or <i>Recover</i>)
LC-A-#	Adhered Lightweight Concrete Assemblies over <i>Concrete Deck</i> (New or Existing)
LC-M-#	Mechanically Fastened Lightweight Concrete Assemblies over <i>Concrete Deck</i> (New, Existing, or <i>Recover</i>)
LS-A-#	Adhered Lightweight Concrete Assemblies over <i>Steel Deck</i> (New or Existing)
LS-M-#	Mechanically Fastened Lightweight Concrete Assemblies over <i>Steel Deck</i> (New, Existing, or <i>Recover</i>)
R-A-#	Adhered <i>Recover</i> Assemblies
R-M-#	Mechanically Fastened <i>Recover</i> Assemblies
R-W-#	Induction Welded <i>Recover</i> Assemblies
S-AM-#	Assemblies with Adhered Membranes over Insulated <i>Steel Deck</i> (New, Existing or <i>Recover</i>)
S-M-#	Mechanically Fastened Assemblies over <i>Steel Deck</i> (New, Existing or <i>Recover</i>)
S-W-#	Induction Welded Assemblies over <i>Steel Deck</i>
W-AM-#	Assemblies with Adhered Membranes over Insulated <i>Wood Deck</i> (New, Existing or <i>Recover</i>)
W-M-#	Mechanically Fastened Assemblies over <i>Wood Deck</i> (New or Existing)
W-W-#	Induction Welded Assemblies over <i>Wood Deck</i> (New or Existing)

Adhered Assemblies over Concrete Deck (New or Existing)						
System No.	Vapor Barrier	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
C-A-1	OPTIONAL JM Vapor Barrier SA applied over deck primed with JM SA Primer Low VOC	Min. 1.5-inch E3 in RSUA or 2-Part UIA applied 12-inch o.c.	OPTIONAL SECUROCK, RetroPlus, or JM InvinSA in RSUA or 2-Part UIA applied 12-inch o.c.	JM PVC FB	RSUA applied 12-inch o.c.	-67.5 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Adhered Assemblies over Concrete Deck (New or Existing)						
System No.	Vapor Barrier	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
C-A-2	OPTIONAL DynaBase HW or JM Vapor Barrier SA applied over deck primed with JM SA Primer Low VOC	Min. 1.5-inch <i>E3</i> in <i>RSUA</i> applied 12-inch o.c.	<i>SECUROCK</i> in <i>OSFA</i> , <i>RSUA</i> , or 2-Part <i>UIA</i> applied 12-inch o.c. followed by OPTIONAL DynaBase HW	<i>JM PVC FB</i>	<i>RSUA</i> applied 12-inch o.c.	-67.5 (Lim. 9)
C-A-3	OPTIONAL VB SAR	Min. 1.5-inch <i>E3</i> (no FR) in <i>UIA</i> , 2-Part <i>UIA</i> , <i>OSFA</i> , or <i>RSUA</i> applied 12-inch o.c.	OPTIONAL JM InvinSA or ProtectoR HD in <i>UIA</i> or 2-Part <i>UIA</i> applied 12-inch o.c.	<i>JM PVC FB</i>	<i>PVC MA (WB)</i>	-105 (Lim. 9)
C-A-4	OPTIONAL VB SAR	Min. 1.5-inch <i>E3</i> (no FR) in <i>UIA</i> , 2-Part <i>UIA</i> , <i>OSFA</i> or <i>RSUA</i> applied 12-inch o.c.	OPTIONAL JM InvinSA or ProtectoR HD in <i>UIA</i> or 2-Part <i>UIA</i> applied 12-inch o.c.	<i>JM PVC</i>	<i>PVC MA (LowVOC)</i> or <i>PVC MA (WB)</i> applied at 0.67 gal/100ft ²	-105 (Lim. 9)
C-A-5	OPTIONAL VB SAR	Min. 1.5-inch <i>E3</i> (no FR) in <i>UIA</i> , 2-Part <i>UIA</i> , <i>OSFA</i> or <i>RSUA</i> applied 12-inch o.c.	OPTIONAL JM InvinSA or ProtectoR HD in <i>UIA</i> or 2-Part <i>UIA</i> applied 12-inch o.c.	<i>JM PVC SD Plus</i>	<i>PVC MA (LowVOC)</i>	-105 (Lim. 9)
C-A-6	OPTIONAL VB SAR	Min. 1.5-inch <i>E3</i> (no FR) adhered with <i>UIA</i> , or 2-Part <i>UIA</i> , <i>OSFA</i> or <i>RSUA</i> at 12-inch o.c.	JM InvinSA or ProtectoR HD adhered with <i>UIA</i> at 12-inch o.c.	<i>JM PVC</i>	<i>PVC MA (LowVOC)</i> applied at 0.83 gal/100ft ² or <i>PVC MA (WB)</i> applied at 0.67 gal/100ft ²	-112.5 (Lim. 9)
C-A-7	OPTIONAL VB SAR	Min. 1.5-inch <i>E3</i> (no FR) adhered with <i>UIA</i> , or 2-Part <i>UIA</i> , <i>OSFA</i> or <i>RSUA</i> at 12-inch o.c.	JM InvinSA or ProtectoR HD adhered with <i>UIA</i> at 12-inch o.c.	<i>JM PVC SD Plus</i>	<i>PVC MA (LowVOC)</i> applied at 0.83 gal/100ft ²	-112.5 (Lim. 9)
C-A-8	OPTIONAL VB SAR	Min. 1.5-inch <i>E3</i> (no FR) applied in <i>RSUA</i> , <i>OSFA</i> or 2-Part <i>UIA</i> applied 12-inch o.c.	-	<i>JM PVC FB</i>	<i>RSUA</i> or 2-Part <i>UIA</i> applied 4-inch o.c.	-112.5 (Lim. 9)
C-A-9	OPTIONAL VB SAR	Min. 1.5-inch ENRGY 3 adhered with <i>OSFA</i> or <i>RSUA</i> at 12-inch o.c.	Min. 1-inch ENRGY 3 adhered with <i>OSFA</i> or <i>RSUA</i> at 12-inch o.c.	<i>JM PVC</i> <i>JM PVC SD Plus</i>	<i>PVC WBMA</i> or <i>PVC MA (LowVOC)</i>	-127.5 (Lim. 9)
C-A-10	-	Min. 1.5-inch <i>E3</i> (no FR), min. 1-inch Fesco Foam, or Retro-Fit in ASTM D 312 Type asphalt	-	<i>JM PVC FB</i>	ASTM D 312 Type IV Asphalt	-150 (Lim. 9)
C-A-11	OPTIONAL VB SAR	Min. 1.5-inch ENRGY 3 adhered with <i>OSFA</i> or <i>RSUA</i> at 12-inch o.c.	Min. 1-inch ENRGY 3 adhered with <i>OSFA</i> or <i>RSUA</i> at 12-inch o.c.	<i>JM PVC FB</i>	2-Part <i>UIA-C(S)</i> or <i>PVC WBMA</i>	-180 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Adhered Assemblies over Concrete Deck (New or Existing)						
System No.	Vapor Barrier	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
C-A-12	OPTIONAL VB SAR	Min. 1.5-inch ENRGY 3 adhered with OSFA or RSUA at 12-inch o.c.	Min. 1-inch ENRGY 3 adhered with OSFA or RSUA at 12-inch o.c.	JM PVC JM PVC SD Plus	2-Part UIA-C(S) or PVC WBMA	-180 (Lim. 9)
C-A-13	OPTIONAL VB SAR	Min. 1.5-inch E3 (no FR) adhered with OSFA or RSUA at 12-inch o.c.	ProtectoR HD adhered with RSUA at 12-inch o.c.	JM PVC JM PVC SD Plus	PVC WBMA or PVC MA (LowVOC)	-180 (Lim. 9)
C-A-14	OPTIONAL VB SAR	Min. 1.5-inch E3 (no FR) adhered with OSFA or RSUA at 12-inch o.c.	ProtectoR HD adhered with RSUA at 12-inch o.c.	JM PVC FB	2-Part UIA-C(S) or PVC WBMA	-180 (Lim. 9)
C-A-15	OPTIONAL DynaBase HW torch adhered over deck primed with ASTM D 41 primer	Min. 1.5-inch E3 (no FR) in RSUA applied 12-inch o.c.	SECUROCK in RSUA applied 12-inch o.c.	JM PVC JM PVC SD Plus	PVC WBMA	-180 (Lim. 9)
C-A-16	OPTIONAL DynaBase HW torch adhered over deck primed with ASTM D 41 primer	Min. 1.5-inch E3 (no FR) in RSUA applied 12-inch o.c.	SECUROCK in RSUA applied 12-inch o.c.	JM PVC FB	2-Part UIA-C(S) or PVC WBMA	-180 (Lim. 9)
C-A-17	OPTIONAL VB SAR	Min. 1.5-inch E3 (no FR) in 2-Part UIA, OSFA or RSUA applied 12-inch o.c. or ASTM D 312 Type IV Asphalt	-	JM PVC	PVC MA (LowVOC)	-217.5 (Lim. 9)
C-A-18	OPTIONAL VB SAR	Min. 1.5-inch E3 (no FR) in 2-Part UIA, OSFA or RSUA applied 12-inch o.c. or ASTM D 312 Type IV Asphalt	-	JM PVC FB	ASTM D 312 Type IV Asphalt or 2-Part UIA-C(S)	-217.5 (Lim. 9)
C-A-19	-	-	-	JM PVC FB	PVC MA (WB)	-217.5 (Lim. 9)
C-A-20	DynaBase HW	SECUROCK in RSUA applied 12-inch o.c.	DynaBase HW	JM PVC FB	RSUA applied 12-inch o.c.	-217.5 (Lim. 9)
C-A-21	DynaBase HW torch adhered over deck primed with ASTM D 41 primer	Min. 1.5-inch ENRGY 3 CGF in RSUA applied 12-inch o.c.	SECUROCK in RSUA applied 12-inch o.c.	JM PVC JM PVC SD Plus	PVC MA (LowVOC)	-292.5 (Lim. 9)
C-A-22	DynaBase HW torch adhered over deck primed with ASTM D 41 primer	Min. 1.5-inch ENRGY 3 CGF in RSUA applied 12-inch o.c.	SECUROCK in RSUA applied 12-inch o.c.	JM PVC FB	2-Part UIA-C(S)	-292.5 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Adhered Assemblies over Concrete Deck (New or Existing)						
System No.	Vapor Barrier	Base Insulation	Top Insulation or Base Ply	Membrane	Membrane Attachment	MDP (psf)
C-A-23	OPTIONAL VB SAR	DEXcell CB or DEXcell FA in 2-Part UIA or OlyBond 500 applied 12-inch o.c.	-	JM PVC JM PVC SD Plus	PVC MA (LowVOC)	-390 (Lim. 9)
C-A-24	OPTIONAL VB SAR	DEXcell CB or DEXcell FA in 2-Part UIA or OlyBond 500 applied 12-inch o.c.	-	JM PVC FB	PVC MA (WB)	-390 (Lim. 9)
C-A-25	OPTIONAL VB SAR	DEXcell FA in 2-Part UIA or OlyBond 500 applied 12-inch o.c.	-	JM PVC FB	2-Part UIA-C(S)	-390 (Lim. 9)

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-1	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	AP Fasteners & Plates (Square) secured 1 fastener per 2.67ft ²	JM PVC	PVC MA (WB) applied at 0.67 gal/100ft ² or PVC MA (LowVOC)	-30 (Lim. 7; Non-HVHZ)
C-AM-2	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	AP Fasteners & Plates (Square) secured 1 fastener per 2.67ft ²	JM PVC SD Plus	PVC MA (LowVOC)	-30 (Lim. 7; Non-HVHZ)
C-AM-3	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	AP Fasteners & Plates (Square) secured 1 fastener per 2.67ft ²	JM PVC FB	RSUA applied 12-inch o.c. or 2-Part UIA-C(S)	-30 (Lim. 7; Non-HVHZ)
C-AM-4	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	AP Fasteners & Plates (Square) secured 1 fastener per 4ft ²	JM PVC	PVC MA (WB) applied at 0.67 gal/100ft ² or PVC MA (LowVOC)	-45 (Lim. 9)
C-AM-5	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	AP Fasteners & Plates (Square) secured 1 fastener per 4ft ²	JM PVC SD Plus	PVC MA (LowVOC)	-45 (Lim. 9)
C-AM-6	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	AP Fasteners & Plates (Square) secured 1 fastener per 4ft ²	JM PVC FB	RSUA applied 12-inch o.c. or 2-Part UIA-C(S)	-45 (Lim. 9)
C-AM-7	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	AP Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM PVC or PVC SD Plus	PVC MA (WB) or PVC WBMA	-45 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-8	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	AP Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM PVC FB	RSUA applied 12-inch o.c., PVC MA (WB) or PVC WBMA	-45 (Lim. 7)
C-AM-9	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	JM PVC or JM PVC SD Plus	PVC MA (LowVOC) applied at 1-1.1 gal/100ft ²	-52.5 (Lim. 7)
C-AM-10	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	JM PVC FB	PVC MA (WB) or 2-Part UIA-C(S)	-52.5 (Lim. 7)
C-AM-11	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	Base Ply: DynaBase HW Membrane: JM PVC FB	Base Ply: Torch Adhered Membrane: RSUA applied 12-inch o.c.	-52.5 (Lim. 7)
C-AM-12	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC) applied 1-1.1 gal/100ft ²	-52.5 (Lim. 7)
C-AM-13	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM PVC FB	PVC MA (WB)	-52.5 (Lim. 7)
C-AM-14	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	Base Ply: DynaBase HW Membrane: JM PVC FB	Base Ply: Torch Adhered Membrane: RSUA applied 12-inch o.c.	-52.5 (Lim. 7)
C-AM-15	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch E3	AP Fasteners & Plates secured 1 fastener per 1.78ft ²	JM PVC FB	ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
C-AM-16	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.00ft ²	JM PVC or JM PVC SD Plus	PVC MA (LowVOC) applied at 1-1.1 gal/100ft ²	-60 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-17	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.00ft ²	JM PVC FB	JM PVC MA (WB) or 2-Part UIA-C(S)	-60 (Lim. 7)
C-AM-18	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 1 fastener per 1.78ft ²	Min 1/2-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	Base Ply: DynaBase HW Membrane: JM PVC FB	Base Ply: Torch Adhered Membrane: RSUA applied 12-inch o.c.	-60 (Lim. 7)
C-AM-19	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 1 fastener per 1.78ft ²	Min 1/2-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC) applied at 1-1.1 gal/100ft ²	-60 (Lim. 7)
C-AM-20	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	AP Fasteners & Plates secured at a rate of 1 fastener per 1.78ft ²	Min 1/2-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM PVC FB	PVC MA (WB) or 2-Part UIA-C(S)	-60 (Lim. 7)
C-AM-21	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	Simultaneously secured with top layer	SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.78ft ²	Base Ply: DynaBase HW Membrane: JM PVC FB	Base Ply: Torch Adhered Membrane: RSUA applied 12-inch o.c.	-60 (Lim. 7)
C-AM-22	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	AP Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM PVC FB	2-Part UIA-C(S)	-60 (Lim. 7)
C-AM-23	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	AP Fasteners & Plates secured 1 fastener per 1ft ²	SECUROCK, RetroPlus, or JM Invinisa	RSUA or 2-Part UIA applied 6-inch o.c.	JM PVC FB	RSUA applied 12-inch o.c.	-67.5 (Lim. 7)
C-AM-24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	AP Fasteners & Plates secured 1 fastener per 1ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 6-inch o.c.	Base Ply: DynaBase HW Membrane: JM PVC FB	Base Ply: Torch Adhered Membrane: RSUA applied 12-inch o.c.	-67.5 (Lim. 7)
C-AM-25	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	AP Fasteners & Plates (Square) secured 1 fastener per 2.0ft ²	JM PVC or JM PVC SD Plus	PVC MA (LowVOC)	-67.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/ Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-26	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	AP Fasteners & Plates secured 1 fastener per 1.6ft ²	JM PVC or JM PVC SD Plus	PVC MA (LowVOC)	-75 (Lim. 7)
C-AM-27	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	AP Fasteners & Plates secured 1 fastener per 1.6ft ²	JM PVC FB	ASTM D 312 Type IV Asphalt or 2-Part UIA-C(S)	-75 (Lim. 7)
C-AM-28	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Invinso Foam	AP Fasteners & Plates (Square) secured 1 fastener per 2.0ft ²	JM PVC SD Plus	PVC MA (LowVOC)	-75 (Lim. 7)
C-AM-29	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	AP Fasteners & Plates (Square) secured 1 fastener per 1.6ft ²	JM PVC SD Plus	PVC MA (LowVOC)	-75 (Lim. 7)
C-AM-30	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	AP Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM PVC or JM PVC SD Plus	PVC MA (LowVOC) applied at 1.0 gal/100ft ²	-105 (Lim. 7)
C-AM-31	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	AP Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM PVC FB	ASTM D 312 Type IV Asphalt or 2-Part UIA-C(S)	-105 (Lim. 7)
C-AM-32	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	AP Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	JM PVC SD Plus	PVC MA (LowVOC)	-105 (Lim. 7)
C-AM-33	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	AP Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM PVC or JM PVC SD Plus	PVC MA (LowVOC)	-112.5 (Lim. 7)
C-AM-34	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	AP Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM PVC FB	ASTM D 312 Type IV Asphalt or 2-Part UIA-C(S)	-112.5 (Lim. 7)
C-AM-35	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	AP Fasteners & Plates secured 1 fastener per 1.0ft ²	JM PVC or JM PVC SD Plus	PVC MA (LowVOC)	-120 (Lim. 7)
C-AM-36	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	AP Fasteners & Plates secured 1 fastener per 1.0ft ²	JM PVC FB	ASTM D 312 Type IV Asphalt or 2-Part UIA-C(S)	-120 (Lim. 7)
C-AM-37	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	AP Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM PVC or PVC SD Plus	PVC MA (LowVOC)	-120 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Concrete Deck (New, Existing, or Recover)								
System No.	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Base Sheet	Top Insulation or Base Sheet Attachment	Membrane	Membrane Attachment	MDP (psf)
C-AM-38	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	AP Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM PVC FB	ASTM D 312 Type IV Asphalt	-120 (Lim. 7)

Mechanically Fastened Assemblies over Concrete Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
C-M-1	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC	Attached in-lap 6-inch o.c. with Extra HL Fastener & Plates; Fastener rows max. 114-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
C-M-2	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Min. 5-inch wide side laps; Fastener rows max. 73-inch o.c.	-45 (Lim. 7)
C-M-3	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC or PVC SD Plus	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Min. 6-inch wide side laps; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)
C-M-4	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC SD Plus	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Min. 6-inch wide side laps; Fastener rows max. 54-inch o.c.	-45 (Lim. 7)
C-M-5	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 72-inch o.c.	-45 (Lim. 7)
C-M-6	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Min. 5-inch wide side laps with min. 2-inch wide heat welds; Fastener rows max. 73-inch o.c.	-52.5 (Lim. 7)
C-M-7	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC FB/ DynaFast	HL Fasteners & Plates spaced 6-inch o.c within each min. 4-inch heat welded side laps in rows max. 70-inch o.c.	-52.5 (Lim. 9)
C-M-8	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Min. 5-inch wide side laps; Fastener rows max. 73-inch o.c.	-60 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Mechanically Fastened Assemblies over Concrete Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
C-M-9	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM PVC SD Plus	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Min. 6-inch wide side laps; Fastener rows max. 54-inch o.c.	-60 (Lim. 7)
C-M-10	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM PVC or JM PVC FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Min. 4.5-inch wide side laps with min. 2-inch wide heat welds; Fastener rows max. 114-inch o.c.	-60 (Lim. 7)
C-M-11	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM PVC	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Min. 5.5-inch wide side laps with min. 2-inch wide heat welds; Fastener rows max. 114-inch o.c.	-60 (Lim. 7)
C-M-12	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM PVC	Attached in-lap 6-inch o.c. with Extra High Load Fasteners & OMG Super XHD 2-3/4 Barbed Plates; Min. 5.5-inch wide side laps with min. 2-inch wide heat welds; Fastener rows max. 114-inch o.c.	-60 (Lim. 7)
C-M-13	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM PVC FB/ DynaFast	APB Fasteners & Plates spaced 6-inch o.c within each min. 4-inch heat welded side lap.	-60 (Lim. 9)
C-M-14	OPTIONAL INSULATION under min. 1-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM PVC FB/ DynaFast	HL Fasteners & Plates spaced 12-inch o.c within each min. 4-inch heat welded side lap.	-60 (Lim. 9)
C-M-15	OPTIONAL INSULATION under min. 1-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM PVC FB/ DynaFast	High Load LH Fasteners and Polymer Membrane Batten OR High Load Fasteners and Deep Well Batten strip spaced 6-inch o.c. within min. 4-inch heat welded side laps in rows max. 71-inch o.c.	-60 (Lim. 9)
C-M-16	OPTIONAL INSULATION under min. 1-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM PVC (Min. 60 mil)	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Min. 6-inch wide side laps with min. 2-inch wide heat welds; Fastener rows max. 72-inch o.c.	-75 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Concrete Deck (New, Existing, or Recover)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
C-W-1	OPTIONAL INSULATION under min. 1-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM PVC SD Plus (Min. 60 mil)	Induction welded to JM PVC RhinoPlates with All Purpose Fasteners placed max. 12" o.c. in rows max. 72" o.c.	-37.5 (Lim. 7; Non-HVHZ)
C-W-2	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced 12" o.c. in rows 60" o.c.	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-37.5 (Lim. 7; Non-HVHZ)
C-W-3	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced in a 2-ft x 3-ft staggered grid	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-37.5 (Lim. 7; Non-HVHZ)
C-W-4	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced in a 2-ft x 3-ft staggered grid	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-37.5 (Lim. 7; Non-HVHZ)
C-W-5	OPTIONAL INSULATION under min. 1-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM PVC SD Plus (Min. 60 mil)	Induction welded to JM PVC RhinoPlates with All Purpose Fasteners placed max. 12" o.c. in rows max. 60" o.c.	-45 (Lim. 7)
C-W-6	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced 24" o.c. in rows 24" o.c.	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-45 (Lim. 7)
C-W-7	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced 12" o.c. in rows 60" o.c.	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-45 (Lim. 7)
C-W-8	OPTIONAL INSULATION under min. 1-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with All Purpose Fasteners and JM PVC RhinoPlates in a 2-ft x 2-ft staggered grid pattern	JM PVC SD Plus (Min. 60 mil)	Induction welded to JM PVC RhinoPlates	-52.5 (Lim. 7)
C-W-9	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced 6" o.c. in rows 60" o.c.	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-60 (Lim. 7)
C-W-10	OPTIONAL INSULATION under min. 1-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with All Purpose Fasteners and JM PVC RhinoPlates at a rate of 8 per 4-ft x 8-ft board Pattern #1 (1 fastener per 4.0-ft ²)	JM PVC (Min. 60 mil)	Induction welded to JM PVC RhinoPlates	-67.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Concrete Deck (New, Existing, or Recover)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
C-W-11	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced 18" o.c. in rows 24" o.c.	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-67.5 (Lim. 7)
C-W-12	OPTIONAL INSULATION under min. 1-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM PVC SD Plus (Min. 60 mil)	Induction welded to JM PVC RhinoPlates with All Purpose Fasteners placed max. 6" o.c. in rows max. 72" o.c.	-82.5 (Lim. 7)
C-W-13	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced in a 1.5-ft x 2-ft staggered grid	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-82.5 (Lim. 7)
C-W-14	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced 18" o.c. in rows 18" o.c.	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-82.5 (Lim. 7)
C-W-15	OPTIONAL INSULATION under min. 1-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	<i>Preliminarily Secured</i>	JM PVC SD Plus (Min. 60 mil)	Induction welded to JM PVC RhinoPlates with All Purpose Fasteners placed max. 6" o.c. in rows max. 60" o.c.	-90 (Lim. 7)
C-W-16	OPTIONAL INSULATION under min. 1-inch E3	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with All Purpose Fasteners and JM PVC RhinoPlates at a rate of 15 per 4-ft x 8-ft board (1 fastener per 2.13-ft ²)	JM PVC (Min. 60 mil)	Induction welded to JM PVC RhinoPlates	-90 (Lim. 7)
C-W-17	INSULATION	<i>Preliminarily Secured</i> or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#14 or ISOWELD-#15 spaced 6" o.c. in rows 60" o.c.	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-90 (Lim. 7)

Adhered Assemblies over CWF Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
CW-A-1	OPTIONAL Min. 1-inch ENRGY 3	OSFA applied 12-inch o.c.	JM Invinsa or ProtectoR HD	OSFA or 2-Part UIA applied 12-inch o.c.	JM PVC	PVC MA (LowVOC) applied at 0.83 gal/100ft ² , PVC MA (WB) applied at 0.67 gal/100ft ² , or PVC WBMA	-112.5 (Lim. 9)
CW-A-2	OPTIONAL Min. 1-inch ENRGY 3	OSFA applied 12-inch o.c.	JM Invinsa or ProtectoR HD	OSFA or 2-Part UIA applied 12-inch o.c.	JM PVC SD Plus	PVC MA (LowVOC) applied at 0.83 gal/100ft ² or PVC WBMA	-112.5 (Lim. 9)
CW-A-3	OPTIONAL Min. 1-inch ENRGY 3	OSFA applied 12-inch o.c.	SECUROCK	RSUA, OSFA, or 2-Part UIA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC) or PVC WBMA	-140 (Lim. 9)

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This evaluation report is provided for State of Florida product approval under Rule 61G20-3. The manufacturer shall notify CREEK Technical Services, LLC of any product changes or quality assurance changes throughout the duration for which this report is valid. This evaluation report does not express nor imply warranty, installation, recommended use, or other product attributes that are not specifically addressed herein.

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Adhered Assemblies over CWF Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
CW-A-4	Min. 1-inch ENRGY 3	OSFA applied 12-inch o.c.	-	-	JM PVC	PVC MA (LowVOC) applied at 0.83 gal/100ft ² or PVC MA (WB) applied at 0.67 gal/100ft ²	-157.5 (Lim. 9)
CW-A-5	Min. 1-inch ENRGY 3	OSFA applied 12-inch o.c.	-	-	JM PVC SD Plus	PVC MA (LowVOC) applied at 0.83 gal/100ft ²	-157.5 (Lim. 9)
CW-A-6	Min. 475 psi Celcore MF with HS Rheology Admixture installed	Poured-in-place	-	-	JM PVC FB	RSUA applied 12-inch o.c.	-167.5 (Lim. 9)
CW-A-7	Min. 475 psi Celcore MF with HS Rheology Admixture installed	Poured-in-place	-	-	JM PVC FB	RSUA applied 4-inch o.c.	-197.5 (Lim. 9)

Mechanically Fastened Assemblies over CWF Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
CW-M-1	-	-	-	-	JM PVC FB/ DynaFast	1.8" Twin Loc-Nail without integrated plate fastened 6-inch o.c. along Straight Line Batten Bar within min. 4-inch heat welded side laps and in one intermediate row centered between side laps	-60 (Lim. 9)

Adhered Assemblies over Poured Gypsum Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
G-A-1	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	-	-	JM PVC	PVC MA (LowVOC)	-60 (Lim. 9)
G-A-2	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	-	-	JM PVC FB	RSUA applied 12-inch o.c.	-60 (Lim. 9)
G-A-3	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	JM Invinso or Protector HD	2-Part UIA applied 12-inch o.c.	JM PVC	PVC MA (LowVOC) applied at 0.83 gal/100ft ² , PVC MA (WB) applied at 0.67 gal/100ft ² , or PVC WBMA	-60 (Lim. 9)
G-A-4	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	JM Invinso or Protector HD	2-Part UIA applied 12-inch o.c.	JM PVC SD Plus	PVC MA (LowVOC) applied at 0.83 gal/100ft ² or PVC WBMA	-60 (Lim. 9)
G-A-5	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	SECUROCK	RSUA or 2-Part UIA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC) or PVC WBMA	-60 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Adhered Assemblies over Poured Gypsum Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
G-A-6	Min. 1-inch ENRGY 3	OSFA applied 12-inch o.c.	-	-	JM PVC or JM PVC SD Plus	PVC MA (LowVOC); Applied 1.67 gal/100ft ² or PVC WBMA	-77.5 (Lim. 9)
G-A-7	Min. 1-inch ENRGY 3	OSFA applied 12-inch o.c.	JM Invinsa or Protector HD	OSFA applied 12-inch o.c.	JM PVC	PVC MA (LowVOC) applied at 0.83 gal/100ft ² , PVC MA (WB) applied at 0.67 gal/100ft ² , or PVC WBMA	-77.5 (Lim. 9)
G-A-8	Min. 1-inch ENRGY 3	OSFA applied 12-inch o.c.	JM Invinsa or Protector HD	OSFA applied 12-inch o.c.	JM PVC SD Plus	PVC MA (LowVOC) applied at 0.83 gal/100ft ² or PVC WBMA	-77.5 (Lim. 9)
G-A-9	Min. 1-inch ENRGY 3	OSFA applied 12-inch o.c.	JM Invinsa or Protector HD	OSFA applied 12-inch o.c.	JM PVC FB	2-Part UIA-C(S) or PVC WBMA	-77.5 (Lim. 9)
G-A-10	OPTIONAL Min. 1-inch ENRGY 3	OSFA applied 12-inch o.c.	SECUROCK	RSUA or OSFA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC) or PVC WBMA	-77.5 (Lim. 9)
G-A-11	OPTIONAL Min. 1-inch ENRGY 3	OSFA applied 12-inch o.c.	SECUROCK	RSUA or OSFA applied 12-inch o.c.	JM PVC FB	2-Part UIA-C(S) or PVC WBMA	-77.5 (Lim. 9)
G-A-12	JM Invinsa	OSFA applied 12-inch o.c.	-	-	JM PVC	PVC MA (LowVOC) applied at 0.83 gal/100ft ² , PVC MA (WB) applied at 0.67 gal/100ft ² , or PVC WBMA	-92.5 (Lim. 9)
G-A-13	JM Invinsa	OSFA applied 12-inch o.c.	-	-	JM PVC SD Plus	PVC MA (LowVOC) applied at 0.83 gal/100ft ² or PVC WBMA	-92.5 (Lim. 9)
G-A-14	Min. 1.5-inch E3 (no FR)	UIA at 12-inch o.c.	JM Invinsa or Protector HD	UIA applied 12-inch o.c.	JM PVC	PVC MA (LowVOC) applied at 0.83 gal/100ft ² , PVC MA (WB) applied at 0.67 gal/100ft ² , or PVC WBMA	-112.5 (Lim. 9)
G-A-15	Min. 1.5-inch E3 (no FR)	UIA at 12-inch o.c.	JM Invinsa or Protector HD	UIA applied 12-inch o.c.	JM PVC SD Plus	PVC MA (LowVOC) applied at 0.83 gal/100ft ² or PVC WBMA	-112.5 (Lim. 9)
G-A-16	Min. 1.5-inch E3	OSFA applied 12-inch o.c.	-	-	JM PVC FB	2-Part UIA-C(S) or PVC WBMA	-150 (Lim. 9; Non-HVZH)
G-A-17	Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	-	-	JM PVC or JM PVC SD Plus	PVC MA (LowVOC)	-150 (Lim. 9; Non-HVZH)
G-A-18	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	ProtectoR	OSFA applied 12-inch o.c.	JM PVC FB	2-Part UIA-C(S) or PVC WBMA	-150 (Lim. 9; Non-HVZH)
G-A-19	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	ProtectoR	OSFA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC WBMA or PVC MA (LowVOC)	-150 (Lim. 9; Non-HVZH)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Adhered Assemblies over Poured Gypsum Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
G-A-20	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	<i>DensDeck Prime</i>	OSFA applied 12-inch o.c.	<i>JM PVC</i> or <i>JM PVC SD Plus</i>	<i>PVC MA (LowVOC)</i>	-150 (Lim. 9; Non- HVZH)
G-A-21	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	<i>DensDeck Prime</i>	OSFA applied 12-inch o.c.	<i>JM PVC FB</i>	<i>2-Part UIA-C(S)</i> or ASTM D 312, Type IV Asphalt	-150 (Lim. 9; Non- HVZH)
G-A-22	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	<i>SECUROCK</i>	OSFA applied 12-inch o.c.	<i>JM PVC FB</i>	<i>RSUA</i> applied 12-inch o.c. after <i>DynaBase HW</i> torched adhered	-150 (Lim. 9; Non- HVZH)
G-A-23	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	<i>SECUROCK</i>	OSFA applied 12-inch o.c.	<i>JM PVC</i> or <i>JM PVC SD Plus</i>	<i>PVC MA (LowVOC)</i> or <i>PVC WBMA</i>	-150 (Lim. 9; Non- HVZH)
G-A-24	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	<i>SECUROCK</i>	OSFA applied 12-inch o.c.	<i>JM PVC FB</i>	<i>2-Part UIA-C(S)</i> , ASTM D 312, Type IV Asphalt, or <i>PVC WBMA</i>	-150 (Lim. 9; Non- HVZH)
G-A-25	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	<i>DEXcell CB</i>	OSFA applied 12-inch o.c.	<i>JM PVC</i> or <i>JM PVC SD Plus</i>	<i>PVC MA (LowVOC)</i>	-150 (Lim. 9; Non- HVZH)
G-A-26	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	<i>DEXcell CB</i>	OSFA applied 12-inch o.c.	<i>JM PVC FB</i>	<i>PVC MA (WB)</i>	-150 (Lim. 9; Non- HVZH)
G-A-27	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	<i>DEXcell FA</i>	OSFA applied 12-inch o.c.	<i>JM PVC</i> or <i>JM PVC SD Plus</i>	<i>PVC MA (LowVOC)</i>	-150 (Lim. 9; Non- HVZH)
G-A-28	OPTIONAL Min. 1.5-inch ENRGY 3	OSFA applied 12-inch o.c.	<i>DEXcell FA</i>	OSFA applied 12-inch o.c.	<i>JM PVC FB</i>	<i>PVC MA (WB)</i> , <i>2-Part UIA-C(S)</i> , or ASTM D 312, Type IV Asphalt	-150 (Lim. 9; Non- HVZH)
G-A-29	Min. 1.5-inch <i>E3</i>	<i>RSUA applied</i> 12-inch o.c.	-	-	<i>JM PVC FB</i>	<i>2-Part UIA-C(S)</i> or <i>PVC WBMA</i>	-180 (Lim. 9; Non- HVZH)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Adhered Assemblies over Poured Gypsum Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
G-A-30	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	ProtectoR	RSUA applied 12-inch o.c.	JM PVC FB	2-Part UIA-C(S) or PVC WBMA	-180 (Lim. 9; Non- HVHZ)
G-A-31	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	ProtectoR	RSUA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC WBMA or PVC MA (LowVOC)	-180 (Lim. 9; Non- HVHZ)
G-A-32	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DensDeck Prime	RSUA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC)	-210 (Lim. 9; Non- HVHZ)
G-A-33	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DensDeck Prime	RSUA applied 12-inch o.c.	JM PVC FB	2-Part UIA-C(S) or ASTM D 312, Type IV Asphalt	-210 (Lim. 9; Non- HVHZ)
G-A-34	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	SECUROCK	RSUA applied 12-inch o.c.	JM PVC FB	RSUA applied 12-inch o.c. after DynaBase HW torched adhered	-210 (Lim. 9; Non- HVHZ)
G-A-35	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	SECUROCK	RSUA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC)	-210 (Lim. 9; Non- HVHZ)
G-A-36	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	SECUROCK	RSUA applied 12-inch o.c.	JM PVC FB	2-Part UIA-C(S) or ASTM D 312, Type IV Asphalt	-210 (Lim. 9; Non- HVHZ)
G-A-37	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DEXcell CB	RSUA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC)	-210 (Lim. 9; Non- HVHZ)
G-A-38	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DEXcell CB	RSUA applied 12-inch o.c.	JM PVC FB	PVC MA (WB)	-210 (Lim. 9; Non- HVHZ)
G-A-39	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DEXcell FA	RSUA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC)	-210 (Lim. 9; Non- HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Adhered Assemblies over Poured Gypsum Deck (New or Existing)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
G-A-40	OPTIONAL Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	DEXcell FA	RSUA applied 12-inch o.c.	JM PVC FB	PVC MA (WB), 2-Part UIA-C(S), or ASTM D 312, Type IV Asphalt	-210 (Lim. 9; Non- HVHZ)
G-A-41	Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	-	-	JM PVC or JM PVC SD Plus	PVC MA (LowVOC)	-210 (Lim. 9; Non- HVHZ)
G-A-42	Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	-	-	JM PVC FB	ASTM D 312 Type IV Asphalt	-210 (Lim. 9; Non- HVHZ)

Mechanically Attached Assemblies over Poured Gypsum Deck (New, Existing, or Recover)							
System No.	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
G-M-1	-	-	-	-	JM PVC FB/ DynaFast	1.8" Twin Loc-Nail without integrated plate fastened 6-inch o.c. along Straight Line Batten Bar within min. 4-inch heat welded side laps and in one intermediate row centered between side laps	-60 (Lim. 9)

Adhered Lightweight Concrete Assemblies over <i>Concrete Deck</i> (New or Existing)						
System No.	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LC-A-1	Min. 250 psi Elastizell with Zell-Crete Fibers installed over DynaBase HW over ASTM D 41 primed concrete	-	-	JM PVC FB	RSUA applied 6-inch o.c.	-75 (Lim. 9)
LC-A-2	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC) or PVC WBMA	-77.5 (Lim. 9)
LC-A-3	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	JM PVC FB	RSUA applied 4-inch o.c.	-77.5 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Concrete Deck (New or Existing)						
System No.	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LC-A-4	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF Top Layer: <i>SECUROCK</i>	Base and Top layer in RSUA applied 12-inch o.c.	JM PVC	PVC MA (LowVOC), PVC MA (WB) applied at 0.67 gal/100ft ² , or PVC WBMA	-77.5 (Lim. 9)
LC-A-5	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF Top Layer: <i>SECUROCK</i>	Base and Top layer in RSUA applied 12-inch o.c.	JM PVC SD Plus	PVC MA (LowVOC) or PVC WBMA	-77.5 (Lim. 9)
LC-A-6	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF Top Layer: <i>SECUROCK</i>	Base and Top layer in RSUA applied 12-inch o.c.	JM PVC FB	2-Part UIA-C(S) or PVC WBMA	-77.5 (Lim. 9)
LC-A-7	Min. 300 psi LWIC	Min. 1.5-inch ENRGY 3	2-Part UIA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC) or PVC WBMA	-80 (Lim. 9)
LC-A-8	Min. 300 psi LWIC	Min. 1.5-inch ENRGY 3	2-Part UIA applied 12-inch o.c.	JM PVC FB	2-Part UIA applied 4-inch o.c. or PVC WBMA	-80 (Lim. 9)
LC-A-9	Min. 300 psi LWIC	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: <i>SECUROCK</i>	2-Part UIA applied 12-inch o.c.	JM PVC	PVC MA (LowVOC) or PVC MA (WB) applied at 0.67 gal/100ft ²	-80 (Lim. 9)
LC-A-10	Min. 300 psi LWIC	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: <i>SECUROCK</i>	2-Part UIA applied 12-inch o.c.	JM PVC SD Plus	PVC MA (LowVOC)	-80 (Lim. 9)
LC-A-11	Min. 250 psi Elastizell with Zell-Crete Fibers installed over DynaBase HW over ASTM D 41 primed concrete	-	-	JM PVC FB	RSUA applied 12-inch o.c.	-85 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Concrete Deck (New or Existing)						
System No.	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LC-A-12	Min. 330 psi LWIC	-	-	JM PVC FB	PVC MA (WB)	-90 (Lim. 9)
LC-A-13	Min. 383.5 psi Celcore MF with HS Rheology Admixture installed over OPTIONAL JM Vapor Barrier SA or DynaBase HW over ASTM D 41 primed concrete	-	-	JM PVC FB	RSUA applied 6-inch o.c.	-92.5 (Lim. 9)
LC-A-14	Min. 383.5 psi Celcore MF with HS Rheology Admixture installed over OPTIONAL JM Vapor Barrier SA or DynaBase HW over ASTM D 41 primed concrete	-	-	JM PVC FB	RSUA applied 12-inch o.c.	-102.5 (Lim. 9)
LC-A-15	Min. 160 psi Elastizell	Base Layer: Min. 1.5-inch E3 (no FR) Top Layer: JM Invinsa or ProtectoR HD	Base Layer: UIA applied 6-inch o.c. or 2-Part UIA applied 12-inch o.c. Top Layer: UIA applied 12-inch o.c.	JM PVC	PVC MA (LowVOC) applied at 0.83 gal/100ft ² , PVC MA (WB) applied at 0.67 gal/100ft ² , or PVC WBMA	-112.5 (Lim. 9)
LC-A-16	Min. 160 psi Elastizell	Base Layer: Min. 1.5-inch E3 (no FR) Top Layer: JM Invinsa or ProtectoR HD	Base Layer: UIA applied 6-inch o.c. or 2-Part UIA applied 12-inch o.c. Top Layer: UIA applied 12-inch o.c.	JM PVC SD Plus	PVC MA (LowVOC) applied at 0.83 gal/100ft ² or PVC WBMA	-112.5 (Lim. 9)
LC-A-17	Min. 250 psi Elastizell with Zell-Crete Fibers	-	-	JM PVC FB	RSUA applied 12-inch o.c.	-117.5 (Lim. 9)
LC-A-18	Min. 310 psi Elastizell with Zell-Crete Fibers	Min. 1.5-inch ENRGY 3	2-Part UIA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC) or PVC WBMA	-130 (Lim. 9)
LC-A-19	Min. 310 psi Elastizell with Zell-Crete Fibers	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: SECUROCK	2-Part UIA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC) or PVC WBMA	-130 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Concrete Deck (New or Existing)						
System No.	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LC-A-20	Min. 310 psi Elastizell with Zell-Crete Fibers	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: <i>SECUROCK</i>	<i>2-Part UIA</i> applied 12-inch o.c.	<i>JM PVC FB</i>	<i>2-Part UIA-C(S)</i> or <i>PVC WBMA</i>	-130 (Lim. 9)
LC-A-21	Min. 375 psi Concrecel	-	-	<i>JM PVC FB</i>	<i>RSUA</i> applied 12-inch o.c.	-147.5 (Lim. 9)
LC-A-22	Min. 475 psi Celcore MF with HS Rheology Admixture installed over OPTIONAL DynaBase HW	-	-	<i>JM PVC FB</i>	<i>RSUA</i> applied 12-inch o.c.	-167.5 (Lim. 9)
LC-A-23	Min. 375 psi Concrecel	-	-	<i>JM PVC FB</i>	<i>RSUA</i> applied 6-inch o.c.	-172.5 (Lim. 9)
LC-A-24	Min. 550 psi Elastizell with Zell-Fibers	-	-	<i>JM PVC FB</i>	<i>RSUA</i> applied 12-inch o.c.	-177.5 (Lim. 9)
LC-A-25	Min. 262 psi <i>LWIC</i>	<i>SECUROCK</i>	<i>2-Part UIA</i> applied 12-inch o.c.	<i>JM PVC</i>	<i>PVC MA (WB)</i> applied at 0.67 gal/100ft ²	-210 (Lim. 9; Non-HVHZ)
LC-A-26	Min. 262 psi <i>LWIC</i>	<i>SECUROCK</i>	<i>2-Part UIA</i> applied 12-inch o.c.	Base Ply: DynaBase HW Membrane: <i>JM PVC FB</i>	Base Ply: Torch adhered Membrane: <i>RSUA</i> applied 12-inch o.c.	-210 (Lim. 9; Non-HVHZ)
LC-A-27	Min. 550 psi Elastizell with Zell-Fibers	-	-	<i>JM PVC FB</i>	<i>RSUA</i> applied 6-inch o.c.	-225 (Lim. 9)
LC-A-28	Min. 475 psi Celcore MF with HS Rheology Admixture installed over OPTIONAL DynaBase HW	-	-	<i>JM PVC FB</i>	<i>RSUA</i> applied 4-inch o.c.	-257.5 (Lim. 9)
LC-A-29	Min. 383.5 psi Celcore MF with HS Rheology Admixture (No EPS Board) installed over DynaBase HW over ASTM D 41 primed concrete	-	-	<i>JM PVC FB</i>	<i>RSUA</i> applied 6-inch o.c.	-262.5 (Lim. 9)
LC-A-30	Min. 250 Elastizell with Zell-Crete Fibers (no EPS Board)	-	-	<i>JM PVC FB</i>	<i>RSUA</i> applied 6-inch o.c.	-290 (Lim. 9)
LC-A-31	Min. 375 psi Concrecel	-	-	<i>JM PVC FB</i>	MBR Low VOC Membrane Adhesive	-342.5 (Lim. 9)
LC-A-32	Celcore MF with HS Rheology Admixture (min. 49 pcf wet cast density)	-	-	<i>JM PVC FB</i>	<i>PVC MA (WB)</i>	-367.5 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Concrete Deck (New or Existing)						
System No.	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LC-A-33	Min. 370 psi Concrecel (No EPS Board)	-	-	JM PVC FB	RSUA applied 12-inch o.c.	-375 (Lim. 9)
LC-A-34	Min. 250 psi Elastizell with Zell-Crete Fibers (no EPS Board)	-	-	JM PVC FB	RSUA applied 4-inch o.c.	-390 (Lim. 9)
LC-A-35	Min. 383.5 psi Celcore MF with HS Rheology Admixture (no EPS board) installed over ASTM D 41 primed concrete	-	-	JM PVC FB	RSUA applied 12-inch o.c.	-417.5 (Lim. 9)
LC-A-36	Min. 370 psi Concrecel (No EPS board)	-	-	JM PVC FB	RSUA applied 6-inch o.c.	-480 (Lim. 9)
LC-A-37	Min. 383.5 psi Celcore MF with HS Rheology Admixture (No EPS Board)	-	-	JM PVC FB	RSUA applied 6-inch o.c.	-502.5 (Lim. 9)

Mechanically Attached Lightweight Concrete Assemblies over Concrete Deck (New, Existing, or Recover)						
System No.	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LC-M-1	Min. 475 psi Celcore MF with HS Rheology	-	-	JM PVC FB/ DynaFast	1.8" Twin Loc-Nail without integrated plate fastened 6-inch o.c. along Straight Line Batten Bar within min. 4-inch heat welded side laps and in one intermediate row centered between side laps	-60 (Lim. 9)

Adhered Lightweight Concrete Assemblies over Steel Deck (New or Existing)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LS-A-1	G33, P, L5, S15	Min. 475 psi Celcore MF with HS Rheology	-	-	JM PVC FB	RSUA applied 12-inch o.c.	-60 (Lim. 9)
LS-A-2	G80, P, L5, S15	Min. 383.5 psi Celcore MF with HS Rheology Admixture	-	-	JM PVC FB	RSUA applied 12-inch o.c.	-75 (Lim. 9)
LS-A-3	G80, P, L5, S15	Min. 383.5 psi Celcore MF with HS Rheology Admixture	-	-	JM PVC FB	RSUA applied 6-inch o.c.	-75 (Lim. 9)
LS-A-4	G33	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC) or PVC WBMA	-77.5 (Lim. 9)
LS-A-5	G33	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Min. 1.5-inch ENRGY 3	RSUA applied 12-inch o.c.	JM PVC FB	RSUA applied 4-inch o.c. or PVC WBMA	-77.5 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Steel Deck (New or Existing)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LS-A-6	G33	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF Top Layer: <i>SECUROCK</i>	Base and Top layer in <i>RSUA</i> applied 12-inch o.c.	<i>JM PVC</i>	<i>PVC MA (LowVOC), PVC MA (WB)</i> applied at 0.67 gal/100ft ² , or <i>PVC WBMA</i>	-77.5 (Lim. 9)
LS-A-7	G33	Min 340 psi Celcore MF with HS Rheology Admixture over deck treated with Celcore S-1	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 CGF Top Layer: <i>SECUROCK</i>	Base and Top layer in <i>RSUA</i> applied 12-inch o.c.	<i>JM PVC SD Plus</i>	<i>PVC MA (LowVOC)</i> or <i>PVC WBMA</i>	-77.5 (Lim. 9)
LS-A-8	G33	Min. 300 psi <i>LWIC</i>	Min. 1.5-inch ENRGY 3	<i>2-Part UIA</i> applied 12-inch o.c.	<i>JM PVC</i> or <i>JM PVC SD Plus</i>	<i>PVC MA (LowVOC)</i> or <i>PVC WBMA</i>	-80 (Lim. 9)
LS-A-9	G33	Min. 300 psi <i>LWIC</i>	Min. 1.5-inch ENRGY 3	<i>2-Part UIA</i> applied 12-inch o.c.	<i>JM PVC FB</i>	<i>2-Part UIA</i> applied 4-inch o.c. or <i>PVC WBMA</i>	-80 (Lim. 9)
LS-A-10	G33	Min. 300 psi <i>LWIC</i>	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: <i>SECUROCK</i>	<i>2-Part UIA</i> applied 12-inch o.c.	<i>JM PVC</i>	<i>PVC MA (LowVOC), PVC MA (WB)</i> applied at 0.67 gal/100ft ² , or <i>PVC WBMA</i>	-80 (Lim. 9)
LS-A-11	G33	Min. 300 psi <i>LWIC</i>	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: <i>SECUROCK</i>	<i>2-Part UIA</i> applied 12-inch o.c.	<i>JM PVC SD Plus</i>	<i>PVC MA (LowVOC)</i> or <i>PVC WBMA</i>	-80 (Lim. 9)
LS-A-12	G80, P, L5, S12	Min. 370 psi Concrecel	-	-	<i>JM PVC FB</i>	<i>RSUA</i> applied 12-inch o.c.	-97.5 (Lim. 9)
LS-A-13	G80, P, L5, S15	Min. 250 psi Elastizell with Zell-Crete Fibers	-	-	<i>JM PVC FB</i>	<i>RSUA</i> applied 12-inch o.c.	-97.5 (Lim. 9)
LS-A-14	G80, P, L5, S15	Min. 250 psi Elastizell with Zell-Crete Fibers	-	-	<i>JM PVC FB</i>	<i>RSUA</i> applied 6-inch o.c.	-97.5 (Lim. 9)
LS-A-15	G33	Min. 310 psi Elastizell with Zell-Crete Fibers	Min. 1.5-inch ENRGY 3	<i>2-Part UIA</i> applied 12-inch o.c.	<i>JM PVC</i> or <i>JM PVC SD Plus</i>	<i>PVC MA (LowVOC)</i> or <i>PVC WBMA</i>	-130 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Adhered Lightweight Concrete Assemblies over Steel Deck (New or Existing)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LS-A-16	G33	Min. 310 psi Elastizell with Zell-Crete Fibers	Base Layer: Min. 1.5-inch ENRGY 3 or ENRGY 3 AGF Top Layer: SECUROCK	2-Part UIA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC) or PVC WBMA	-130 (Lim. 9)

Mechanically Attached Lightweight Concrete Assemblies over Steel Deck (New, Existing, or Recover)							
System No.	Deck Detail	LWIC	Insulation/Cover Board	Insulation/Cover Board Attachment	Membrane	Membrane Attachment	MDP (psf)
LS-M-1	G33, P, L5, S15	Min. 475 psi Celcore MF with HS Rheology	-	-	JM PVC FB/ DynaFast	1.8" Twin Loc-Nail without integrated plate fastened 6-inch o.c. along Straight Line Batten Bar within min. 4-inch heat welded side laps and in one intermediate row centered between side laps	-60 (Lim. 9)

Adhered Recover Assemblies						
System No.	Deck Detail	Insulation	Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-A-1	BUR or Mod-Bit Roofing with mineral surfacing	-	-	JM PVC FB	RSUA applied 12-inch o.c.	-45 (Lim. 9)
R-A-2	Concrete Deck	OPTIONAL INSULATION under min. 1.5-inch E3	AP Fasteners & Plates (Square) secured 1 fastener per 2ft²	JM PVC FB	PVC MA (WB) or ASTM D 312 Type IV Asphalt	-45 (Lim. 7)
R-A-3	Concrete Deck	OPTIONAL INSULATION under min. 1.5-inch E3	AP Fasteners & Plates (Square) secured 1 fastener per 1.78ft²	JM PVC or JM PVC SD Plus	JM PVC: PVC MA (LowVOC)	-52.5 (Lim. 7)
R-A-4	Concrete Deck	OPTIONAL INSULATION under min. 1.5-inch E3	AP Fasteners & Plates (Square) secured 1 fastener per 1.78ft²	JM PVC FB	JM PVC FB: PVC MA (WB) or ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
R-A-5	BUR over Concrete Deck	Base Layer: Min. 1.5-inch E3 (no FR) Top Layer: Optional JM Invisa	Base Layer: 2-Part UIA applied 12-inch o.c. Top Layer: 2-Part UIA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC)	-105 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Adhered Recover Assemblies						
System No.	Deck Detail	Insulation	Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-A-6	BUR over Concrete Deck	Base Layer: Min. 1.5-inch E3 (no FR) Top Layer: Optional JM Invinsa	Base Layer: 2-Part UIA applied 12-inch o.c. Top Layer: 2-Part UIA applied 12-inch o.c.	JM PVC FB	PVC MA (WB) or ASTM D 312 Type IV Asphalt	-105 (Lim. 9)
R-A-7	BUR over Concrete Deck	JM Invinsa	JM MBR Bonding Adhesive	JM PVC	PVC MA (LowVOC) applied 0.83 gal/100ft ² or PVC MA (WB) applied at 0.67 gal/100ft ²	-112.5 (Lim. 9)
R-A-8	BUR over Concrete Deck	JM Invinsa	JM MBR Bonding Adhesive	JM PVC SD Plus	PVC MA (LowVOC) applied 0.83 gal/100ft ²	-112.5 (Lim. 9)
R-A-9	BUR over Concrete Deck	Base Layer: Min. 1.5-inch E3 (no FR) Top Layer: JM Invinsa or Protector HD	Base Layer: UIA applied 6-inch o.c. or 2-Part UIA applied 12-inch o.c. Top Layer: UIA applied 12-inch o.c.	JM PVC	PVC MA (LowVOC) applied at 0.83 gal/100ft ² , PVC MA (WB) applied at 0.67 gal/100ft ² , or PVC WBMA	-112.5 (Lim. 9)
R-A-10	BUR over Concrete Deck	Base Layer: Min. 1.5-inch E3 (no FR) Top Layer: JM Invinsa or Protector HD	Base Layer: UIA applied 6-inch o.c. or 2-Part UIA applied 12-inch o.c. Top Layer: UIA applied 12-inch o.c.	JM PVC SD Plus	PVC MA (LowVOC) applied at 0.83 gal/100ft ² or PVC WBMA	-112.5 (Lim. 9)
R-A-11	BUR over Concrete Deck	Base Layer: Min. 1.5-inch E3 (no FR) Top Layer: JM Invinsa or Protector HD	Base Layer: UIA applied 6-inch o.c. or 2-Part UIA applied 12-inch o.c. Top Layer: UIA applied 12-inch o.c.	JM PVC FB	2-Part UIA-C(S) or PVC WBMA	-112.5 (Lim. 9)
R-A-12	BUR over Concrete Deck	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC)	-217.5 (Lim. 9)
R-A-13	BUR over Concrete Deck	Min. 1.5-inch E3 (no FR)	2-Part UIA applied 12-inch o.c.	JM PVC FB	ASTM D 312 Type IV Asphalt	-217.5 (Lim. 9)

Mechanically Fastened Recover Assemblies								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-M-1	Steel Deck (G33, P, L6, S24) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Preliminarily Secured	JM PVC SD Plus	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Min. 6-inch wide side laps; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Mechanically Fastened Recover Assemblies								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-M-2	Steel Deck (G33, F1, L6, S24) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Preliminarily Secured	JM PVC SD Plus	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Min. 6-inch wide side laps; Fastener rows max. 54-inch o.c.	-45 (Lim. 7)
R-M-3	Steel Deck (G33, F1, L6) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Preliminarily Secured	JM PVC FB/ DynaFast	HL Fasteners & Plates spaced 6-inch o.c. within each min. 4-inch heat welded side laps in rows max. 70-inch o.c.	-52.5 (Lim. 9)
R-M-4	Steel Deck (G33, F1, L6, S24) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Preliminarily Secured	JM PVC SD Plus	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Min. 6-inch wide side laps; Fastener rows max. 54-inch o.c.	-60 (Lim. 7)
R-M-5	LWIC over Steel Deck (G33, F1, L5, S12) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL INSULATION	Preliminarily Secured	JM PVC FB (min. 60 mil)	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 114-inch o.c.	-60 (Lim. 7)
R-M-6	Steel Deck (G33, P, L6)	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Preliminarily Secured	JM PVC FB/ DynaFast	High Load LH Fasteners and Polymer Membrane Batten OR High Load Fasteners and Deep Well Batten strip spaced 6-inch o.c. within min. 4-inch heat welded side laps in rows max. 71-inch o.c.	-60 (Lim. 9)
R-M-7	Steel Deck (G33, F1, L6) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Preliminarily Secured	JM PVC FB/ DynaFast	APB Fasteners & Plates spaced 6-inch o.c. within each min. 4-inch heat welded side lap.	-60 (Lim. 9)
R-M-8	Steel Deck (G33, F1 or P, L6) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3 or Cover Board	Preliminarily Secured	JM PVC FB/ DynaFast	HL Fasteners & Plates spaced 12-inch o.c. within each min. 4-inch heat welded side lap.	-60 (Lim. 9)

Induction Welded Recover Assemblies								
System No.	Existing Roof	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-W-1	Steel Deck (G33, L6) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3, or Cover Board	Preliminarily Secured	JM PVC SD Plus (Min. 60 mil)	Induction welded to JM PVC RhinoPlates placed max. 12" o.c. in rows max. 72" o.c.	-37.5 (Lim. 7; Non-HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Induction Welded Recover Assemblies								
System No.	Existing Roof	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-W-2	Steel Deck (G33, F1, L6, S24) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3, or Cover Board	Preliminarily Secured	JM PVC SD Plus (Min. 60 mil)	Induction welded to JM PVC RhinoPlates placed max. 12" o.c. in rows max. 60" o.c.	-45 (Lim. 7)
R-W-3	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	Min. 1-inch E3, or Cover Board	JM Purlin Fasteners and JM PVC RhinoPlates secured to structural supports 6-inch o.c.; Fastener rows max. 120-inch o.c.	JM PVC (Min. 60 mil)	Induction welded to JM PVC RhinoPlates	-45 (Lim. 7)
R-W-4	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	Min. 1-inch E3, or Cover Board	JM Purlin Fasteners and JM PVC RhinoPlates secured to structural supports 18-inch o.c.; Fastener rows max. 60-inch o.c.	JM PVC (Min. 60 mil)	Induction welded to JM PVC RhinoPlates	-45 (Lim. 7)
R-W-5	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#12 or ISOWELD-#15 spaced 12" o.c. in rows 60" o.c.	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-45 (Lim. 7)
R-W-6	Steel Deck (G33, F1, L6, S24) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3, or Cover Board	High Load Fasteners and JM PVC RhinoPlates at a rate of 8 per 4-ft x 8-ft board (staggered) (1 fastener per 4.0-ft ²)	JM PVC SD Plus (Min. 60 mil)	Induction welded to JM PVC RhinoPlates	-52.5 (Lim. 7)
R-W-7	Concrete Deck	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	Optional SECUROCK	JM All Purpose Fasteners and JM PVC RhinoPlates secured at a rate of 8 per 4-ft x 8-ft board Pattern #1 (1 fastener per 4.0-ft ²)	JM PVC (Min. 60 mil)	Induction welded to JM PVC RhinoPlates	-67.5 (Lim. 7)
R-W-8	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	Min. 1-inch E3, or Cover Board	JM Purlin Fasteners and JM PVC RhinoPlates secured to structural supports 12-inch o.c.; Fastener rows max. 60-inch o.c.	JM PVC (Min. 60 mil)	Induction welded to JM PVC RhinoPlates	-67.5 (Lim. 7)
R-W-9	Steel Deck (G33, F1, L6, S24) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3, or Cover Board	Preliminarily Secured	JM PVC SD Plus (Min. 60 mil)	Induction welded to JM PVC RhinoPlates placed max. 6" o.c. in rows max. 72" o.c.	-82.5 (Lim. 7)
R-W-10	Steel Deck (G33, F1, L6, S24) or Concrete Deck	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 0.5-inch E3, or Cover Board	Preliminarily Secured	JM PVC SD Plus (Min. 60 mil)	Induction welded to JM PVC RhinoPlates placed max. 6" o.c. in rows max. 60" o.c.	-90 (Lim. 7)
R-W-11	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced 6" o.c. in rows 60" o.c.	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-90 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Induction Welded Recover Assemblies								
System No.	Existing Roof	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
R-W-12	Existing metal roof having Min. 16 ga. steel purlins at max. 5ft o.c.	OPTIONAL INSULATION under min. 1.5-inch E3	<i>Preliminarily Secured or secured with top layer</i>	Min. 1-inch E3, or Cover Board	JM Purlin Fasteners and JM PVC RhinoPlates secured to structural supports 6-inch o.c.; Fastener rows max. 60-inch o.c.	JM PVC (Min. 60 mil)	Induction welded to JM PVC RhinoPlates	-120 (Lim. 7)

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-1	G33, P, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	UltraFast Fasteners & Plates (Square) secured 1 fastener per 2.67ft ²	JM PVC	PVC MA (WB) applied at 0.67 gal/100ft ² , PVC MA (LowVOC)	-30 (Lim. 7; Non-HVHZ)
S-AM-2	G33, P, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	UltraFast Fasteners & Plates (Square) secured 1 fastener per 2.67ft ²	JM PVC SD Plus	PVC MA (LowVOC)	-30 (Lim. 7; Non-HVHZ)
S-AM-3	G33, P, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	UltraFast Fasteners & Plates (Square) secured 1 fastener per 2.67ft ²	JM PVC FB	RSUA applied 12-inch o.c. or 2-Part UIA-C(S)	-30 (Lim. 7; Non-HVHZ)
S-AM-4	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Fesco Foam	UltraFast Fasteners & Plates secured 1 fastener per 5.3ft ²	JM PVC	PVC MA (WB) applied at 0.67 gal/100ft ² or PVC MA (LowVOC)	-37.5 (Lim. 9; Non-HVHZ)
S-AM-5	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Fesco Foam	UltraFast Fasteners & Plates secured 1 fastener per 5.3ft ²	JM PVC SD Plus	PVC MA (LowVOC)	-37.5 (Lim. 9; Non-HVHZ)
S-AM-6	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Fesco Foam	UltraFast Fasteners & Plates secured 1 fastener per 5.3ft ²	JM PVC FB	PVC MA (WB)	-37.5 (Lim. 9; Non-HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-7	G33	ProtectoR attached with UltraFast Fasteners & Plates (Square) at 8 per 4-ft x 8-ft board Pattern #2; JM Vapor SA or JM Vapor Barrier SAR with JM SA Primer or JM SA Primer Low VOC	ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	OSFA, RSUA, or 2-Part UIA applied 12-inch o.c.	ProtectoR, Retro-Fit, RetroPlus, SeparatorR CGF, SeparatorR FR, INVINSA, DensDeck, DensDeck Prime, DEXcell FA, or SECUROCK	OSFA, RSUA, or 2-Part UIA applied 12-inch o.c.	JM PVC, or JM PVC SD Plus	PVC MA (WB) or PVC MA (LowVOC)	-37.5 (Lim. 7; Non-HVHZ)
S-AM-8	G33	ProtectoR attached with UltraFast Fasteners & Plates (Square) at 8 per 4-ft x 8-ft board Pattern #2; JM Vapor SA or JM Vapor Barrier SAR with JM SA Primer or JM SA Primer Low VOC	ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, ENRGY 3 C1, or ENRGY 3 C1 CGF	OSFA, RSUA, or 2-Part UIA applied 12-inch o.c.	ProtectoR, Retro-Fit, RetroPlus, SeparatorR CGF, SeparatorR FR, INVINSA, DensDeck, DensDeck Prime, DEXcell FA, or SECUROCK	OSFA, RSUA, or 2-Part UIA applied 12-inch o.c.	JM PVC FB	PVC MA (WB), RSUA applied 12-inch o.c. or 2-Part UIA-C(S)	-37.5 (Lim. 7; Non-HVHZ)
S-AM-9	G33	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	UltraFast Fasteners & Plates (Square) secured 1 fastener per 4ft ²	JM PVC	PVC MA (WB) applied at 0.67 gal/100ft ² or PVC MA (LowVOC)	-45 (Lim. 7)
S-AM-10	G33	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	UltraFast Fasteners & Plates (Square) secured 1 fastener per 4ft ²	JM PVC SD Plus	PVC MA (LowVOC)	-45 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-11	G33	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	ProtectoR	UltraFast Fasteners & Plates (Square) secured 1 fastener per 4ft ²	JM PVC FB	RSUA applied 12-inch o.c. or 2-Part UIA-C(S)	-45 (Lim. 7)
S-AM-12	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Invinsa Foam	UltraFast Fasteners & Plates secured 1 fastener per 5.3ft ²	JM PVC or JM PVC SD Plus	PVC MA (WB) or PVC MA (LowVOC)	-45 (Lim. 7; Non-HVHZ)
S-AM-13	G33	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch Invinsa Foam	UltraFast Fasteners & Plates secured 1 fastener per 5.3ft ²	JM PVC FB	PVC MA (WB)	-45 (Lim. 7; Non-HVHZ)
S-AM-14	G33, F1W, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	UltraFast Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM PVC or PVC SD Plus	PVC MA (WB) or PVC WBMA	-45 (Lim. 7)
S-AM-15	G33, F1W, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	UltraFast Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM PVC FB	RSUA applied 12-inch o.c., PVC MA (WB) or PVC WBMA	-45 (Lim. 7)
S-AM-16	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	Base Ply: DynaBase HW Membrane: JM PVC FB	Base Ply: Torch Adhered Membrane: RSUA applied 12-inch o.c.	-52.5 (Lim. 7)
S-AM-17	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	JM PVC or JM PVC SD Plus	PVC MA (LowVOC) applied at 1-1.1 gal/100ft ²	-52.5 (Lim. 7)
S-AM-18	G33, F1, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.33ft ²	JM PVC FB	PVC MA (WB) or 2-Part UIA-C(S)	-52.5 (Lim. 7)
S-AM-19	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	UltraFast Fasteners & Plates secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC) applied at 1-1.1 gal/100ft ²	-52.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-20	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	<i>UltraFast Fasteners & Plates</i> secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM PVC FB	PVC MA (WB) or 2-Part UIA-C(S)	-52.5 (Lim. 7)
S-AM-21	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	<i>UltraFast Fasteners & Plates</i> secured 1 fastener per 1.33ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	Base Ply: DynaBase HW Membrane: JM PVC FB	Base Ply: Torch Adhered Membrane: RSUA applied 12-inch o.c.	-52.5 (Lim. 7)
S-AM-22	G33, F2, L6, S18	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 1.5-inch E3	<i>UltraFast Fasteners & Plates</i> secured 1 fastener per 1.78ft ²	JM PVC FB	ASTM D 312 Type IV Asphalt	-52.5 (Lim. 7)
S-AM-23	G33, F2W, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	<i>UltraFast Fasteners & Plates (Square)</i> secured 1 fastener per 1.00ft ²	JM PVC or JM PVC SD Plus	PVC MA (LowVOC) applied at 1-1.1 gal/100ft ²	-60 (Lim. 7)
S-AM-24	G33, F2W, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	<i>UltraFast Fasteners & Plates (Square)</i> secured 1 fastener per 1.00ft ²	JM PVC FB	PVC MA (WB) or 2-Part UIA-C(S)	-60 (Lim. 7)
S-AM-25	G33, F1, L6, S30	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	<i>UltraFast Fasteners & Plates</i> secured at a rate of 1 fastener per 1.78ft ²	Min 1/2-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	Base Ply: DynaBase HW Membrane: JM PVC FB	Base Ply: Torch Adhered Membrane: RSUA applied 12-inch o.c.	-60 (Lim. 7)
S-AM-26	G33, F1, L6, S30	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	<i>UltraFast Fasteners & Plates</i> secured at a rate of 1 fastener per 1.78ft ²	Min 1/2-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM PVC or JM PVC SD Plus	PVC MA (LowVOC) applied at 1-1.1 gal/100ft ²	-60 (Lim. 7)
S-AM-27	G33, F1, L6, S30	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch ENRGY 3	<i>UltraFast Fasteners & Plates</i> secured at a rate of 1 fastener per 1.78ft ²	Min 1/2-inch SECUROCK	OSFA, RSUA or 2-Part UIA applied 12-inch o.c.	JM PVC FB	PVC MA (WB) or 2-Part UIA-C(S)	-60 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-28	G40, P, L6, S20	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	Simultaneously secured with top layer	SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.78ft ²	Base Ply: DynaBase HW Membrane: JM PVC FB	Base Ply: Torch Adhered Membrane: RSUA applied 12-inch o.c.	-60 (Lim. 7)
S-AM-29	G33, F1W, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	UltraFast Fasteners & Plates secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM PVC FB	2-Part UIA-C(S)	-60 (Lim. 7)
S-AM-30	G33, F2W, L6, S18	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	UltraFast Fasteners & Plates secured 1 fastener per 1ft ²	SECUROCK, RetroPlus, or JM Invinsa	RSUA or 2-Part UIA applied 6-inch o.c.	JM PVC FB	RSUA applied 12-inch o.c.	-67.5 (Lim. 7)
S-AM-31	G33, F2W, L6, S18	OPTIONAL Vapor Barrier	OPTIONAL INSULATION under min. 1.5-inch E3	UltraFast Fasteners & Plates secured 1 fastener per 1ft ²	SECUROCK	OSFA, RSUA or 2-Part UIA applied 6-inch o.c.	Base Ply: DynaBase HW Membrane: JM PVC FB	Base Ply: Torch Adhered Membrane: RSUA applied 12-inch o.c.	-67.5 (Lim. 7)
S-AM-32	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	UltraFast Fasteners & Plates (Square) secured 1 fastener per 2.0ft ²	JM PVC or PVC SD Plus	PVC MA (LowVOC)	-67.5 (Lim. 7)
S-AM-33	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	UltraFast Fasteners & Plates (Square) secured 1 fastener per 2.0ft ²	JM PVC FB	2-Part UIA-C(S)	-67.5 (Lim. 7)
S-AM-34	G33, F, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	UltraFast Fasteners & Plates secured 1 fastener per 1.6ft ²	JM PVC or PVC SD Plus	PVC MA (LowVOC)	-75 (Lim. 7)
S-AM-35	G33, F, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	UltraFast Fasteners & Plates secured 1 fastener per 1.6ft ²	JM PVC FB	2-Part UIA-C(S)	-75 (Lim. 7)
S-AM-36	G33, F, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	UltraFast Fasteners & Plates secured 1 fastener per 1.6ft ²	JM PVC FB	ASTM D 312 Type IV Asphalt	-75 (Lim. 7)
S-AM-37	G33, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 2-inch Invinsa Foam	UltraFast Fasteners & Plates (Square) secured 1 fastener per 2.0ft ²	JM PVC SD Plus	PVC MA (LowVOC)	-75 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-38	G33, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch SECUROCK	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.6ft ²	JM PVC SD Plus	PVC MA (LowVOC)	-75 (Lim. 7)
S-AM-39	G80, F1W, L6, S24	Min. 0.5-inch DEXcell FA; UltraFast Fasteners & Plates secured 1 fastener per 1.0ft ² ; JM Vapor Barrier SA self-adhered over SA Primer	Min. 1.5-inch E3	RSUA or 2-Part UIA; Applied 6-inch o.c.	Min. 0.5-inch DEXcell FA	RSUA applied 6-inch o.c.	JM PVC FB (Min. 60 mil)	RSUA applied 6-inch o.c. or 2-Part UIA-C(S)	-82.5 (Lim. 7)
S-AM-40	G33, F2, L6, S24	Min. 0.5-inch DEXcell FA secured with top layer; JM Vapor Barrier SA self-adhered	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM PVC FB (Min. 60 mil)	RSUA applied 4-inch o.c. or 2-Part UIA-C(S)	-82.5 (Lim. 7)
S-AM-41	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	UltraFast Fasteners & Plates secured 1 fastener per 1.0ft ²	JM PVC or PVC SD Plus	PVC MA (LowVOC)	-82.5 (Lim. 7)
S-AM-42	G33, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	UltraFast Fasteners & Plates secured 1 fastener per 1.0ft ²	JM PVC FB	ASTM D 312 Type IV Asphalt or 2-Part UIA-C(S)	-82.5 (Lim. 7)
S-AM-43	G33, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM PVC or PVC SD Plus	PVC MA (LowVOC) applied at 1.0 gal/100ft ²	-82.5 (Lim. 7)
S-AM-44	G33, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM PVC or PVC SD Plus	PVC MA (LowVOC) applied at 1.0 gal/100ft ²	-82.5 (Lim. 7)
S-AM-45	G33, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM PVC FB	ASTM D 312 Type IV Asphalt or 2-Part UIA-C(S)	-82.5 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-46	G33, F1W, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	<i>UltraFast Fasteners & Plates</i> secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM PVC or PVC SD Plus	PVC MA (LowVOC)	-82.5 (Lim. 7)
S-AM-47	G33, F1W, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	<i>UltraFast Fasteners & Plates</i> secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM PVC FB	ASTM D 312 Type IV	-82.5 (Lim. 7)
S-AM-48	G80, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	<i>UltraFast Fasteners & Plates (Square)</i> secured 1 fastener per 1.0ft ²	JM PVC or PVC SD Plus	PVC MA (LowVOC) applied at 1.0 gal/100ft ²	-105 (Lim. 7)
S-AM-49	G80, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch ENRGY 3 CGF or ENRGY 3 FR	<i>UltraFast Fasteners & Plates (Square)</i> secured 1 fastener per 1.33ft ²	JM PVC SD Plus	PVC MA (LowVOC)	-105 (Lim. 7)
S-AM-50	G80, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	<i>UltraFast Fasteners & Plates (Square)</i> secured 1 fastener per 1.0ft ²	JM PVC or PVC SD Plus	PVC MA (LowVOC) applied at 1.0 gal/100ft ²	-112.5 (Lim. 7)
S-AM-51	G80, F2, L6, S24	OPTIONAL Vapor Barrier	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DensDeck Prime	<i>UltraFast Fasteners & Plates (Square)</i> secured 1 fastener per 1.0ft ²	JM PVC FB	ASTM D 312 Type IV Asphalt	-112.5 (Lim. 7)
S-AM-52	G80, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	<i>UltraFast Fasteners & Plates</i> secured 1 fastener per 1.0ft ²	JM PVC or PVC SD Plus	PVC MA (LowVOC)	-120 (Lim. 7)
S-AM-53	G80, F2, L6, S24	OPTIONAL Vapor Barrier	OPTIONAL INSULATION	Simultaneously secured with top layer	Min. 2-inch E3 (no AGF) or E3 C1	<i>UltraFast Fasteners & Plates</i> secured 1 fastener per 1.0ft ²	JM PVC FB	ASTM D 312 Type IV Asphalt	-120 (Lim. 7)
S-AM-54	G80, F1W, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	<i>UltraFast Fasteners & Plates</i> secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM PVC or PVC SD Plus	PVC MA (LowVOC)	-120 (Lim. 7)
S-AM-55	G80, F1W, L6, S24	OPTIONAL Vapor Barrier	Min. 2-inch ENRGY 3, ENRGY 3 CGF, ENRGY 3 FR or E3 C1	<i>UltraFast Fasteners & Plates</i> secured 1 fastener per 1ft ²	Min. 1.5-inch ENRGY 3	OSFA, RSUA or 2-Part UIA applied 4-inch o.c.	JM PVC FB	ASTM D 312 Type IV Asphalt	-120 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Assemblies with Adhered Membranes over Insulated Steel Deck (New, Existing, or Recover)									
System No.	Deck Detail	Thermal/Vapor Barrier	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
S-AM-56	G80, F2, L6, S24	Min. 0.5-inch DEXcell FA secured with top layer; JM Vapor Barrier SA self-adhered	Min. 1.5-inch E3	Simultaneously secured with top layer	Min. 0.5-inch DEXcell FA	UltraFast Fasteners & Plates (Square) secured 1 fastener per 1.0ft ²	JM PVC FB	RSUA applied 4-inch o.c.	-142.5 (Lim. 7)

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
S-M-1	G33, H1, L6, SH24	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Fastener rows max. 138-inch o.c.	-30 (Lim. 7; Non-HVHZ)
S-M-2	G33, L6	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC	Attached in-lap 6-inch o.c. with Extra HL Fastener & Plates; Min. 6-inch wide side laps; Fastener rows max. 114-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
S-M-3	G33, F1 or P, L6, S24	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC or JM PVC SD Plus	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Min. 6-inch wide side laps; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)
S-M-4	G33, F1, L6, S24	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC SD Plus	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Min. 6-inch wide side laps; Fastener rows max. 54-inch o.c.	-45 (Lim. 7)
S-M-5	G33, F1 or P, L6, S24	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Min. 6-inch wide side laps; Fastener rows max. 114-inch o.c.	-45 (Lim. 7)
S-M-6	G80, F1, L6, S30	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Min. 5-inch wide side laps; Fastener rows max. 73-inch o.c.	-45 (Lim. 7)
S-M-7	G33, P, L6	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Min. 6-inch wide side laps; Fastener rows max. 72-inch o.c.	-45 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
S-M-8	G33, H1, L6, SH24	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC (Min. 60 mil)	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 138-inch o.c.	-52.5 (Lim. 7)
S-M-9	G80, F1, L6, S30	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC (Min. 60 mil)	Attached in-lap 12-inch o.c. with HL Fasteners & Plates; Min. 5-inch wide side laps with min. 2-inch wide heat welds; Fastener rows max. 73-inch o.c.	-52.5 (Lim. 7)
S-M-10	G33, F1, L6, S24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC FB/ DynaFast	HL Fasteners & Plates spaced 6-inch o.c. within each min. 4-inch heat welded side laps in rows max. 70-inch o.c.	-52.5 (Lim. 9)
S-M-11	G33, F1, L6, S24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC SD Plus	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Min. 6-inch wide side laps; Fastener rows max. 54-inch o.c.	-60 (Lim. 7)
S-M-12	G80, F1, L6, S30	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Min. 5-inch wide side laps; Fastener rows max. 73-inch o.c.	-60 (Lim. 7)
S-M-13	G80, F1, L6, S30	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC or JM PVC FB	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Min. 4.5-inch wide side laps with min. 2-inch wide heat welds; Fastener rows max. 114-inch o.c.	-60 (Lim. 7)
S-M-14	G80, F1, L6, S24	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Min. 5.5-inch wide side laps with min. 2-inch wide heat welds; Fastener rows max. 114-inch o.c.	-60 (Lim. 7)
S-M-15	G80, F1, L6, S24	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC	Attached in-lap 6-inch o.c. with Extra High Load Fasteners & OMG Super XHD 2-3/4 Barbed Plates; Min. 5.5-inch wide side laps with min. 2-inch wide heat welds; Fastener rows max. 114-inch o.c.	-60 (Lim. 7)
S-M-16	G33, P, L6	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC FB/ DynaFast	APB Fasteners & Plates spaced 6-inch o.c. within each min. 4-inch heat welded side lap.	-60 (Lim. 9)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Mechanically Fastened Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
S-M-17	G33, P, L6	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC FB/ DynaFast	HL Fasteners & Plates spaced 12-inch o.c. within each min. 4-inch heat welded side lap.	-60 (Lim. 9)
S-M-18	G33, P, L6	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC FB/ DynaFast	High Load LH Fasteners and Polymer Membrane Batten OR High Load Fasteners and Deep Well Batten strip spaced 6-inch o.c. within min. 4-inch heat welded side laps in rows max. 71-inch o.c.	-60 (Lim. 9)
S-M-19	G80, F1, L6, S30	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC (Min. 60 mil)	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Min. 6-inch wide side laps with min. 2-inch wide heat welds; Fastener rows max. 72-inch o.c.	-75 (Lim. 7)

Induction Welded Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
S-W-1	G33, L6	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC SD Plus (Min. 60 mil)	Induction welded to JM PVC RhinoPlates with High Load Fasteners placed max. 12" o.c. in rows max. 72" o.c.	-37.5 (Lim. 7; Non-HVHZ)
S-W-2	G33, SD1W, L6, SDL24	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced 12" o.c. in rows 60" o.c.	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-37.5 (Lim. 7; Non-HVHZ)
S-W-3	G80, F1, L6, S36	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#12 or ISOWELD-#15 spaced in a 2-ft x 3-ft staggered grid	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-37.5 (Lim. 7; Non-HVHZ)
S-W-4	G40, P, L6, S36	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced in a 2-ft x 3-ft staggered grid	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-37.5 (Lim. 7; Non-HVHZ)
S-W-5	G33, F1, L6, S24	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC SD Plus (Min. 60 mil)	Induction welded to JM PVC RhinoPlates with High Load Fasteners placed max. 12" o.c. in rows max. 60" o.c.	-45 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
S-W-6	G33, SD1W, L6, SDL24	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced 24" o.c. in rows 24" o.c.	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-45 (Lim. 7)
S-W-7	G80, F1, L6, S36	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#12 or ISOWELD-#15 spaced 12" o.c. in rows 60" o.c.	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-45 (Lim. 7)
S-W-8	G33, P, L6, S24	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	High Load Fasteners and JM PVC RhinoPlates in a 2-ft x 2-ft staggered grid pattern	JM PVC SD Plus (Min. 60 mil)	Induction welded to JM PVC RhinoPlates	-52.5 (Lim. 7)
S-W-9	G33, SD1W, L6, SDL24	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced 6" o.c. in rows 60" o.c.	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-60 (Lim. 7)
S-W-10	G33, F1, L6, S18	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	High Load Fasteners and JM PVC RhinoPlates at a rate of 8 per 4-ft x 8-ft board Pattern #1 (1 fastener per 4.0-ft ²)	JM PVC (Min. 60 mil)	Induction welded to JM PVC RhinoPlates	-67.5 (Lim. 7)
S-W-11	G33, SD1W, L6, SDL24	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#15 or ISOWELD-#14 spaced 18" o.c. in rows 24" o.c.	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-67.5 (Lim. 7)
S-W-12	G33, F1, L6, S24	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC SD Plus (Min. 60 mil)	Induction welded to JM PVC RhinoPlates with High Load Fasteners placed max. 6" o.c. in rows max. 72" o.c.	-82.5 (Lim. 7)
S-W-13	G40, P, L6, S36	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced in a 1.5-ft x 2-ft staggered grid	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-82.5 (Lim. 7)
S-W-14	G33, SD1W, L6, SDL24	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced 18" o.c. in rows 18" o.c.	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-82.5 (Lim. 7)
S-W-15	G33, F1, L6, S24	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC SD Plus (Min. 60 mil)	Induction welded to JM PVC RhinoPlates with High Load Fasteners placed max. 6" o.c. in rows max. 60" o.c.	-90 (Lim. 7)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Induction Welded Assemblies over Steel Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
S-W-16	G33, F2W, L6	OPTIONAL INSULATION under min. 1-inch E3	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	High Load Fasteners and JM PVC RhinoPlates at a rate of 15 per 4-ft x 8-ft board (1 fastener per 2.13-ft ²)	JM PVC (Min. 60 mil)	Induction welded to JM PVC RhinoPlates	-90 (Lim. 7)
S-W-17	G40, F1, L5, S30	INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Attached with ISOWELD-#15 spaced 6" o.c. in rows 60" o.c.	JM PVC JM PVC SD Plus (Min. 60 mil)	Induction welded to Isoweld plates	-90 (Lim. 7)

Assemblies with Adhered Membranes over Insulated Wood Deck (New, Existing, or Recover)								
System No.	Deck Detail	Base Insulation	Base Insulation Attachment	Top Insulation or Coverboard	Top Insulation or Coverboard Attachment	Membrane	Membrane Attachment	MDP (psf)
W-AM-1	T19/32O, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	DEXcell FA	AP Fasteners & Plates (Square) at a rate of 6 per 4-ft x 4-ft board (1 fastener per 2.67-ft ²)	JM PVC or JM PVC SD Plus	PVC MA (LowVOC)	-37.5 (Lim. 7; Non-HVHZ)
W-AM-2	T7/16O, L24, N6	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR HD	UltraFast Fasteners & Plates (Square) at a rate of 1 fastener per 2-ft ²	JM PVC	PVC MA (WB) applied at 0.67 gal/100ft ² or PVC MA (LowVOC)	-37.5 (Lim. 7; Non-HVHZ)
W-AM-3	T7/16O, L24, N6	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR HD	UltraFast Fasteners & Plates (Square) at a rate of 1 fastener per 2-ft ²	JM PVC SD Plus	PVC MA (LowVOC)	-37.5 (Lim. 7; Non-HVHZ)
W-AM-4	T7/16O, L24, N6	OPTIONAL INSULATION under min. 1.5-inch E3	Preliminarily Secured or secured with top layer	ProtectoR HD	UltraFast Fasteners & Plates (Square) at a rate of 1 fastener per 2-ft ²	JM PVC FB	RSUA applied 12-inch o.c. or 2-Part UIA-C(S)	-37.5 (Lim. 7; Non-HVHZ)
W-AM-5	T7/16O or T15/32P, L24	OPTIONAL INSULATION	Preliminarily Secured or secured with top layer	Min. 1.5-inch ENRGY 3	AP Fasteners & Plates (Square) at a rate of 16 per 4-ft x 8-ft board (1 fastener per 2-ft ²)	JM PVC or JM PVC SD Plus	PVC MA (LowVOC)	-45 (Lim. 7; Non-HVHZ)

APPENDIX D – APPROVED ASSEMBLIES FOR JM PVC SINGLE-PLY MEMBRANES

Mechanically Fastened Assemblies over Wood Deck (New or Existing)									
System No.	Deck Detail	Thermal Barrier	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
W-M-1	T19/32P, L25	As required	Min. 0.25-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC	Attached in-lap 6-inch o.c. with HL Fasteners & Plates; Fastener rows max. 72-inch o.c.	-37.5 (Lim. 7; Non-HVHZ)
W-M-2	T15/32P, L24, N6	As required	Min. 0.25-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	Preliminarily Secured	JM PVC	Attached in-lap 12-inch o.c. with All Purpose Fasteners and High Load Plates through deck into wood supports; Fastener shall have sufficient length to penetrate min. 1.5-inch into wood supports; Fastener rows max. 72-inch o.c.	-45 (Lim. 7)

Induction Welded Assemblies over Wood Deck (New or Existing)									
System No.	Deck Detail	Thermal Barrier	Base Insulation	Base Insulation Attachment	Top Insulation	Top Insulation Attachment	Membrane	Membrane Attachment	MDP (psf)
W-W-1	T7/16O or T15/32P, L24	As required	Min. 1-inch E3 or E3 C1	Loose laid	OPTIONAL Cover Board	JM All Purpose Fasteners (min. 1.5-inch embedment into wood supports) and JM PVC RhinoPlates secured max. 48-inch o.c. through sheathing into wood structural supports in rows max. 24" o.c.	JM PVC (Min. 60 mil)	Induction welded to JM PVC RhinoPlates	-37.5 (Lim. 7; Non-HVHZ)
W-W-2	T15/32P, L24, N6	As required	Min. 0.25-inch INSULATION	Preliminarily Secured or secured with top layer	OPTIONAL Cover Board	JM All Purpose Fasteners (min. 1.5-inch embedment into wood supports) and JM PVC RhinoPlates secured max. 24-inch o.c. through sheathing into wood structural supports in rows max. 24" o.c.	JM PVC (Min. 60 mil)	Induction welded to JM PVC RhinoPlates	-52.5 (Lim. 7)

END OF REPORT