



TGFU.R9734 Roofing Systems

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Roofing Systems

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KELLY CO-2001 INC

R9734

325 THOMASTON AVE
WATERBURY, CT 06702 USA

SINGLE PLY MEMBRANE SYSTEMS

Unless otherwise indicated, insulation is mechanically fastened to the roof deck with metal insulation anchors. Membranes in these Class A, B or C systems may be mechanically fastened, fully adhered or ballasted when so indicated.

When adhered, the membrane is secured to deck or insulation with "Bonding Adhesive #8101" at 1 gal/60 sq ft. When mechanically fastened the membrane is secured to the deck with metal plates or straps and metal anchors or metal plates, bonding plates or pads and metal anchors. When ballasted, the membrane is laid loosely and secured at roof penetrations and roof perimeter and covered with ballast as indicated.

Membrane splices are adhered with "Rubber to Rubber Splicing Cement #8102" at 1 gal/75 sq ft and joint edges are caulked with "EPDM Paste Sealant #8103" applied approximately 1 in. wide and 1/8 in thick. The laps may also be sealed with 2001 Inc. "Zip Tape Cover/ Flashing" or Z001 Inc. "Zip Tape".

Optionally a layer of 1/2 or 5/8 in. gypsum board or 3/4 in. perlite may be placed between the deck and insulation or vapor retarder or membrane unless otherwise indicated.

1/4 in. thick G-P Gypsum DensDeck® may be used in lieu of 1/2 or 5/8 in. gypsum board in all applicable classifications.

Unless otherwise indicated, TPA membranes used in these systems are mechanically fastened with large head metal or plastic fasteners spaced 18 in. OC and max 2 in. from membrane's edge. Adjacent sheets are lapped 4 in., covering fasteners. Laps are then heat sealed.

Any of the following Classifications which contain the designation "2001TPA" may also include "2001TPA-FB".

All PVC seams are hot air welded. Membrane is 48 or 60 mils thick.

As an option in modified bitumen systems, the base sheet, ply sheel and membrane may be adhered with Henry No. 902 or Gibson-Homans No. 6160-900 adhesives at 1-1/2 gal/sq.

Modified bitumen classifications stating both insulation and ply sheet as optional, must incorporate either the insulation or ply shee or both.

Vapor barriers or ply sheets in modified bitumen systems are optional beneath roof insulations on all systems. Type G3 fiberglass reinforced cap sheet may be used in lieu of the Type G2 base sheet specified below.

Any system listed for use over a combustibile deck can be installed over a non-combustible deck and achieve the same classification.

Class A - Ballasted

"2001 Fireguard Nylon Gravel Mat", may be used under the membrane in any of the following ballasted systems.

1. Deck: NC

Incline: 2

Insulation: — Perlite, polystyrene, polyurethane, perlite/polyurethane composite, glass fiber, isocyanurate, phenolic or wood fiber, any thickness, laid loosely or mechanically fastened.

Membrane: — "Standard EPDM", "Premium Whaleskin/81 (black)" or "Premium Whaleskin/81 (white)", laid loosely.

Surfacing: — River bottom stone (3/4 to 1-1/2 in. diam) at 1000 lb/sq.

2. Deck: C-15/32

Incline: 2

Membrane: — "Standard EPDM", "Premium Whaleskin/81 (black)" or "Premium Whaleskin/81 (white)", laid loosely.

Insulation: — Dow Chemical "Styrofoam RM", 1 in. min, laid loosely.

Surfacing: — One of the following: a)Min 900 lb/sq crushed stone (1/2 to 3/4 in. diam) or river bottom stone (3/4 to 1-3/4 in. diam). b) Concrete blocks, min 10 lb/sq ft, with max 1/8 in. spacing. c)Styrofoam panels surfaced with min 3/8 in. thick concrete mortar, butted together.

Optionally a 2 oz/sq yd scrim (not Classified) — "Fabrene", "International Paper D689" or "Rufon Polypropylene Scrim" - may be inserted between the insulation and ballast material.

3. **Deck:** C-15/32

Incline: 1

Vapor Retarder (Optional): — Min 4 mil "Pyroethylene Air Seal" (not Classified).

Insulation (Optional): — Perlite, polystyrene, polyurethane, perlite/polyurethane composite, glass fiber, isocyanurate, phenolic or wood fiber, any thickness, laid loosely or mechanically fastened.

Membrane: — "Standard EPDM", "Premium Whaleskin/81 (black)" or "Premium Whaleskin/81 (white)", laid loosely or mechanically fastened.

Surfacing: — River bottom stone (3/4 to 1 1/2 in diam) at 1000 lb/sq.

4. **Deck:** NC

Incline: 3

Insulation: — a)Polystyrene, 2 in. max. b)Isocyanurate, any thickness, laid loosely.

Membrane: — "2001TPA or 2001TPA-FB", 40-100 mil (TPA), laid loosely.

Surfacing: — River bottom stone (3/4 - 1-1/2 in. diam) at 1000 lbs/sq or concrete roof pavers.

5. **Deck:** NC

Incline: 2

Insulation: — Polystyrene (any thickness), glass fiber, perlite/polyurethane composite, perlite, polyurethane or wood fiber, any thickness, laid loosely.

Membrane: — "2001CPA or Kelly CPA", (PVC), laid loosely.

Surfacing: — River bottom stone, 3/4 to 1-1/2 in. diam, 1000 lbs/sq.

6. **Deck:** C-15/32

Incline: 1

Insulation: — Perlite, glass fiber or polyisocyanurate 3/4 in. min.

Membrane: — "2001CPA or Kelly CPA", (PVC), laid loosely.

Surfacing: — River bottom stone, 3/4 to 1-1/2 in. diam, 1000 lbs/sq.

7. **Deck:** C-15/32

Incline: 2

Membrane: — "2001CPA or Kelly CPA", (PVC), laid loosely or mechanically fastened.

Slip Sheet (Optional): — Dry or dry inorganic glass fiber mat.

Insulation: — Dow Chemicals USA, Styrofoam RM, PD, SM, TG, Grayboard or Styrorib (plastic), any thickness. As an alternate, the membrane may be loose laid over the insulation.

Scrim (Optional): — "Fabrene", "International Paper D689" or "Rufon Polypropylene Scim", 2 oz/yd.

Surfacing: — Crushed stone, river bottom stone (3/4 to 1-3/4 in. diam), 900 lbs/sq, concrete blocks 10 lb/sq min, spread not more than 1/8 in. apart or Styrofoam panels surfaced with 3/8 in. min concrete mortar butted together.

8. **Deck:** NC

Incline: 2

Insulation: — Johns Manville Barrier Board Plus, Plus -A, -D or -M, uniform thickness or tapered composite, any thickness laid loosely or mechanically fastened.

Membrane: — "2001CPA or Kelly CPA" (PVC), laid loosely.

Surfacing: — River bottom stone (3/4 to 1-1/2 in. diam) at 1000 lbs/sq.

9. **Deck:** C-15/32

Incline: 1/2

Insulation: — One layer perlite or glass fiber, 3/4 to 1-1/2 in, Celotex "Hy-Tec", 3 in max.

Base Sheet-(Optional): — One or more layers Type G1 or G2 glass fiber base sheet or "M15GS", "M2GS" or "M3GS" base sheet.

Membrane: — "T4.5CS", "T4.5CM", "M4.5PM", "M4PS" or "M3.0PM" (modified bitumen), torched or hot asphalt applied.

Surfacing: — River bottom stone, 1000 lbs/sq.

10. **Deck:** NC

Incline: 1/2

Insulation-(Optional): — One layer perlite or glass fiber, 3/4 to 1-1/2 in, Celotex "Hy-Tec", 3 in max.

Base Sheet-(Optional): — One or more layers Type G1 or G2 glass fiber base sheet or "M15GS", "M2GS" or "M3GS" base sheet.

Membrane: — "T4.5CS", "T4.5CM", "M4.5PM", "M4PS" or "M3.0PM" (modified bitumen), torched or hot asphalt applied.

Surfacing: — River bottom stone, 1000 lbs/sq.

11. **Deleted.**

12. **Deleted.**

13. Deleted.

Class A - Fully Adhered

The "2001TPA-FB" membrane in the following classifications may be hot mopped in place. The "C-EPDM-C" membranes are adhered with "2001 Bonding Adhesive". Laps are adhered with "2001 Splicing Cement" and edges are sealed with "2110 Paste Sealant".

1. Deck: NC

Incline: 1-1/2**Gypsum Board:** — 1/2 in., mechanically fastened.**Membrane:** — "2001TPA-FB", 40-100 mil (TPA).

2. Deck: NC

Incline: 2**Gypsum Board (Optional):** — 1/2 in., mechanically fastened.**Insulation:** — Johns Manville "ENRGY 1G", Firestone Building Products "Iso 95+GW" or "Iso 95+GL", Apache Building Products "Pyrox White Line", any thickness.**Membrane:** — "2001 TPA-FB", 40-100 mil (TPA).

3. Deck: NC

Incline: 1-1/2**Gypsum Board (Optional):** — 1/2 in., mechanically fastened.**Insulation:** — Rmax Inc. "Thermarof Plus-3", any thickness.**Membrane:** — "2001 TPA-FB", 40-100 mil (TPA).

4. Deck: C-15/32

Incline: 1**Insulation (Optional):** — Isocyanurate, extruded or expanded polystyrene, any thickness.**Barrier Board:** — 1/2 in. gypsum wallboard.**Membrane:** — "2001 TPA-FB", 40-100 mil (TPA).

5. Deck: NC

Incline: 2-1/2**Insulation:** — Celotex "Thermax Hy-Tec", any thickness.**Membrane:** — "2001TPA-FB", 40-100 mil (TPA).

6. Deck: NC

Incline: 2**Insulation:** — Celotex "Hy-Therm AP", any thickness.**Membrane:** — "2001 TPA-FB", 40-100 mil (TPA).

7. Deck: NC

Incline: 2**Insulation:** — Johns Manville "ENRGY 1G", Atlas Roofing "ACFoam II", Rmax Inc. "Thermarof Plus-3" or "Multi-Max-3", any thickness.**Membrane:** — "2001 TPA-FB", 40-100 mil (TPA).

8. Deck: NC (Concrete)

Incline: 1**Insulating Concrete (Optional):** — Deck covered with one of the following insulating concretes (poured in place): Cellular, vermiculite, perlite, gypsum or structural.**Membrane:** — "2001 TPA-FB", 40-100 mil (TPA).

9. Deck: C-15/32

Incline: 1-1/2**Insulation (Optional):** — Any UL Classified, any thickness.**Barrier Board:** — Gypsum wallboard, 1/2 in. min, joints in wallboard offset 6 in. with joints in deck.**Membrane:** — "2001 TPA-FB", 40-100 mil (TPA).

10. Deck: NC

Incline: 3-1/2**Insulation (Optional):** — Any UL Classified, any thickness.**Barrier Board:** — Regular or water resistant wallboard, 1/2 in. min.**Membrane:** — "2001 TPA-FB", 40-100 mil (TPA).

11. Deck: Structural Cement Fiber Unit

Incline: 2

Insulation (Optional): — One or more of the following or combinations, any thickness: Johns Manville "ENRGY 1G", Rmax Inc. "Thermarook Plus-3" or "Multi-Max-3", Atlas Roofing "ACFoam II".

Membrane: — "2001 TPA-FB", 40-100 mil (TPA).

12. **Deck:** NC

Incline: 2

Vapor Retarders (Optional, not UL Classified): — a)6 mil polyethylene, b)Kraft or c)Kraft laminate.

Insulation: — One or more of the following or combinations, mechanically fastened, any thickness: Rmax Inc. "Multi-Max-3", Atlas Roofing "ACFoam II", Johns Manville "ENRGY 1G".

Membrane: — "2001 TPA-FB", 40-100 mil (TPA).

13. **Deck:** NC

Incline: 2-1/2

Vapor Barrier (Optional): — Polyethylene or polypropylene, any thickness.

Insulation: — Celotex "Hy-Therm AP", 2 in. thick max.

Membrane: — "2001 TPA-FB", 40-100 mil (TPA).

14. **Deck:** C-15/32

Incline: 2

Barrier Board: — Gypsum wallboard, 1/2 in. min, joints in wallboard offset 6 in. with joints in deck.

Insulation: — Johns Manville "ENRGY 1G", Atlas Roofing "ACFoam II", Rmax Inc. "Thermarook Plus-3" or "Multi-Max-3", any thickness.

Membrane: — "2001 TPA-FB", 40-100 mil (TPA).

15. **Deck:** NC

Incline: 2

Vapor Barrier (Optional): — Polyethylene, Kraft or PVC film (not Classified).

Insulation: — One of the following or combinations, mechanically fastened or hot mopped in place (any thickness): a) Perlite. b) Fiberboard. c) Rmax Inc. Multi-Max-3 or "Thermarook Plus-3". d) Firestone "ISO 95+GL", "ISO 95+GW". e) Apache Products "Apache Pyrox", "Apache White Line" or "Apache Tapered Pyrox". f) Johns Manville "ISO I". g) Atlas Roofing "ACFoam II".

Membrane: — "2001 CPA or Kelly CPA" (PVC), fully adhered with "Sarnacol 2121" at 1-3/4 to 2-1/4 gal/100 sq ft or "Sarnacol 2170" or "Sarnacol V949" at 1-1/2 to 2-1/2 gal/100 sq ft.

16. **Deck:** C-15/32

Incline: 2

Barrier Board: — 1/2 in. min thickness gypsum board or 1/4 in. G-P Gypsum DensDeck®, mechanically fastened with insulation fasteners (6 in. offset of the gypsum board joints from the plywood joints).

Vapor Barrier (Optional): — Polyethylene or Kraft (not Classified) or G1 and G2.

Insulation: — One of the following or combinations, mechanically fastened or hot mopped in place, any thickness: a) Perlite. b) Fiberboard. c) Rmax Inc. Multi-Max-3 or "Thermarook Plus-3". d) Firestone "ISO 95+GL", "ISO 95+GW". e) Apache Products "Apache Pyrox", "Apache White Line" or "Apache Tapered Pyrox". f) Johns Manville "ISO I". g) Atlas Roofing "ACFoam II".

Membrane: — "2001 CPA or Kelly CPA" (PVC), fully adhered with "Sarnacol 2121" at 1-3/4 to 2-1/4 gal/100 sq ft or "Sarnacol 2170" or "Sarnacol V949" at 1-1/2 to 2-1/2 gal/100 sq ft.

17. **Deck:** Structural Cement Fiber Unit

Incline: 2

Vapor Barrier (Optional): — G1 and G2 base sheet.

Insulation (Optional): — One of the following or combinations, mechanically fastened or hot mopped in place, any thickness: a) Perlite. b) Fiberboard. c) Rmax Inc. Multi-Max-3 or "Thermarook Plus-3". d) Firestone "ISO 95+GL", "ISO 95+GW". e) Apache Products "Apache AP" or "Apache White Line". f) Johns Manville "ISO I". g) Atlas Roofing "ACFoam II".

Membrane: — "2001 CPA or Kelly CPA" (PVC), fully adhered with "Sarnacol 2121" at 1-3/4 to 2-1/4 gal/100 sq ft or "Sarnacol 2170" or "Sarnacol V949" at 1-1/2 to 2-1/2 gal/100 sq ft.

18. **Deck:** NC

Incline: 1-1/2

Vapor Barrier (Optional): — Polyethylene, Kraft or PVC film (not Classified).

Insulation: — One of the following or combinations, mechanically fastened or hot mopped in place (any thickness): Celotex "Top RII", "Hy-Tec", "Hy-Tec II" or "Hy-Therm AP".

Membrane: — "2001 CPA or Kelly CPA" (PVC), fully adhered with "Sarnacol 2121" at 1-3/4 to 2-1/4 gal/100 sq ft or "Sarnacol 2170" or "Sarnacol V949" at 1-1/2 to 2-1/2 gal/100 sq ft.

19. **Deck:** C-15/32

Incline: 1-1/2

Barrier Board: — 5/8 in. min thickness gypsum board or 1/4 in. G-P Gypsum DensDeck®, mechanically fastened with insulation fasteners (6 in. offset of the gypsum board joints from the plywood joints).

Vapor Barrier (Optional): — Polyethylene or Kraft (not Classified) or G1 and G2.

Insulation: — One of the following or combinations, mechanically fastened or hot mopped in place (any thickness): Celotex "Top RII", "Hy-Tec", "Hy-Tec II" or "Hy-Therm AP".

Membrane: — "2001 CPA or Kelly CPA" (PVC), fully adhered with "Sarnacol 2121" at 1-3/4 to 2-1/4 gal/100 sq ft or "Sarnacol 2170" or "Sarnacol V949" at 1-1/2 to 2-1/2 gal/100 sq ft.

20. **Deck:** Structural Cement Fiber Unit **Incline:** 1-1/2

Vapor Barrier (Optional): — G1 or G2 base sheet.

Insulation (Optional): — One of the following or combinations, mechanically fastened or hot mopped in place (any thickness): Celotex "Top RII", "Hy-Tec", "Hy-Tec II" or "Hy-Therm AP".

Membrane: — "2001 CPA or Kelly CPA" (PVC), fully adhered with "Sarnacol 2121" at 1-3/4 to 2-1/4 gal/100 sq ft or "Sarnacol 2170" or "Sarnacol V949" at 1-1/2 to 2-1/2 gal/100 sq ft.

21. **Deck:** NC **Incline:** 1/2

Insulation-(Optional): — One layer perlite, wood fiber or glass fiber, 3/4 to 1-1/2 in.

Base Sheet-(Optional): — One or more layers Type G1 or G2 glass fiber base sheet or "M15GS", "M2GS", "M3PS" or "M3GS".

Membrane: — "T4.5CS", "T4.5CM", "M4PS" or "M3.0PM" (modified bitumen), torched or hot asphalt applied.

Surfacing: — OCF "20F Asphalt Emulsion" at 2 gal/sq.

22. **Deck:** NC **Incline:** 1/4

Insulation-(Optional): — One layer perlite, wood fiber or glass fiber, 3/4 to 1-1/2 in.

Base Sheet-(Optional): — One or more layers Type G1 or G2 glass fiber base sheet or "M15GS", "M2GS", "M3PS" or "M3GS".

Membrane: — "T4.5CS", "T4.5CM", "M4PS" or "M3.0PM" (modified bitumen), torched or hot asphalt applied.

Surfacing: — Asphalt Products Oil "APOC 400 Sunbrite", at 2 gal/sq.

23. **Deck:** NC **Incline:** 1

Insulation-(Optional): — Perlite, wood fiberboard, glass fiber, polyisocyanurate, polyisocyanurate composite, urethane, urethane composite, EPS/perlite, any thickness.

Base Sheet: — One or more layers Type G1 or G2 glass fiber base sheet or "M15GS", "M2GS", "M3PS" or "M3GS".

Membrane: — "M4.5CMFR", "M4GMFR", "M4PGMFR", "T4GMFR" or "T4CMFR" (modified bitumen).

24. **Deck:** NC **Incline:** 1

Insulation-(Optional): — Perlite, glass fiber, wood fiberboard, polyisocyanurate, polyisocyanurate composite, urethane, urethane composite, EPS/perlite, any thickness.

Base Sheet-(Optional): — One or more layers Type G1 or G2 glass fiber base sheet or "M15GS" or "M2GS" base sheet.

Ply Sheet: — "M3GS" (hot mopped).

Membrane: — "M3.8GMFR" (hot mopped).

25. **Deck:** C-15/32 **Incline:** 1/2

Insulation: — Perlite, 3/4 in. min; Polyisocyanurate, polyisocyanurate composite, urethane, urethane composite, or glass fiber; 1 in. min. All insulation joints offset from plywood joints by 6 in.

Base Sheet: — One or more layers Type G1 or G2 glass fiber base sheet or "M15GS", "M2GS", "M3GS", "M4PS", "M3.0PM", "T4.5SCS" or "T4.5SCM".

Membrane: — "4.5CMFR", "M4GMFR", "M4PGMFR", "T4GMFR" or "T4CMFR" (modified bitumen).

26. **Deck:** C-15/32C **Incline:** 1/2

Insulation: — Perlite, 3/4 in. min; Polyisocyanurate, polyisocyanurate composite, urethane, urethane composite or glass fiber; 1 in. min.

Base Sheet (Optional): — One or more layers Type G1 or G2 glass fiber base sheet or "M15FS" or "M2GS" base sheet.

Ply Sheet: — "M3GS" (modified bitumen).

Membrane: — "M3.8GMFR" (modified bitumen).

27. **Deck:** NC **Incline:** 1/2

Insulation (Optional): — One layer perlite, wood fiber or glass fiber, 3/4 to 1-1/2 in.

Base Sheet (Optional): — One or more layers Type G1 or G2 glass fiber base sheet or "M15GS", "M2GS", "M3PS" or "M3GS" base sheet.

Membrane: — "T4.5CS", "T4.5CM" or "M3.0PM" (modified bitumen), torched or hot asphalt applied.

Surfacing: — Karnak Chemical Corp. "No. 97 Fibrated Aluminum Roof Coating", 1-1/2 gal/sq.

28. **Deck:** NC **Incline:** 1

Insulation (Optional): — Perlite, wood fiberboard, glass fiber, polyisocyanurate, polyisocyanurate composite, urethane, urethane composite, EPS/perlite, any thickness.

Base Sheet (Optional): — One or more layers Type G1 or G2 glass fiber base sheet or "M15GS", "M2GS", "M3GS", "M4PS" or "T4.5CS" base sheet.

Membrane: — "M4.5CMFR", "M4PMFR", "M4GMFR", "T4GMFR" or "T4CMFR" (modified bitumen).

29. **Deck:** NC **Incline:** 1

Insulation: — Carlisle HP Recovery Board, 1/2 to 3 in.; Carlisle Recovery Board, 1/2 in. min, over any Classified insulation, any thickness; cellular concrete, pre-cast concrete with grouted joints or structural (poured-in-place) concrete.

Membrane: — "C-EPDM-C" or "C-EPDM-C Type 1", 0.045 or 0.060 in.

30. **Deck:** C-15/32 **Incline:** 1/2

Barrier Board: — Gypsum board.

Insulation: — See Referenced Insulation, any combination, any thickness.

Membrane: — "C-EPDM-C", 0.045 or 0.060 in.

31. **Deck:** C-15/32 **Incline:** 1

Insulation: — One of or combination of the following:

A) Gypsum board

B) Gypsum board over any combination of Classified insulation, any thickness; Carlisle HP Recovery Board, 1/2 in. min over gypsum board; Carlisle HP Recovery Board, 1/2 in. min, polyisocyanurate or urethane, any total thickness, over gypsum board.

Membrane: — "C-EPDM-C", 0.045 or 0.060 in.

32. **Deck:** NC **Incline:** 2

Insulation: — See "Referenced Insulations".

Membrane: — "C-EPDM-C Type 1", 0.045 or 0.060 in.

33. **Deck:** NC **Incline:** 1

Insulation: — Carlisle HP Recovery Board, 1/2 in. min over polystyrene, any thickness.

Membrane: — "C-EPDM-C Reinforced", 0.045 or 0.060 in.

34. **Deck:** C-15/32 **Incline:** Unlimited

Insulation: — One of or combination of the following, any thickness:

A) Gypsum board

B) Gypsum board over any Classified insulation, any combination, any thickness; Carlisle HP Recovery Board, 1/2 in. min over gypsum board; Carlisle HP Recovery Board, 1/2 in. min over polyisocyanurate or urethane, any combination, any total thickness, over gypsum board.

Membrane: — "C-EPDM-C Reinforced", 0.045 or 0.060 in.

35. **Deck:** C-15/32 **Incline:** 1

Insulation: — Gypsum board over polystyrene, any thickness.

Membrane: — "C-EPDM-C Reinforced", 0.045 or 0.060 in.

36. **Deck:** NC **Incline:** 2

Insulation: — See "Referenced Insulations".

Membrane: — "C-EPDM-C Reinforced", 0.045 or 0.060 in.

37. **Deck:** C-15/32 **Incline:** 2

Barrier Board: — Gypsum board.

Insulation: — See "Referenced Insulations".

Membrane: — "C-EPDM-C Reinforced", 0.045 or 0.060 in.

38. **Deck:** NC **Incline:** Unlimited

Insulation: — Carlisle HP Recovery Board, 1/2 to 3 in.; Carlisle Recovery Board, 1/2 in. min over polyisocyanurate or urethane, any combination, any thickness; cellular concrete, precast concrete with grouted joints or structural (poured in place) concrete.

Membrane: — "C-EPDM-C Reinforced", 0.045 or 0.060 in.

39. **Deck:** C-15/32 **Incline:** 1/2

Slip Sheet: — Two layers Atlas Roofing "FR-50".
Membrane: — "C-EPCM-C Type 2" or "C-EPDM-C Reinforced".

40. **Deck:** NC **Incline:** 1-1/2

Insulation: — Wood fiberboard, 1/2 to 3 in., Wood fiberboard, 1/2 in. min, over any Classified insulation, any combination, any thickness, cellular concrete, precast concrete with grouted joints or structural (poured-in-place) concrete.
Membrane: — "TPO-K", fully adhered with "TPO Bonding Adhesive", at 1-1/3 gal/sq.

41. **Deck:** NC **Incline:** 1/4

Insulation: — "Polyiso HP-W" or Atlas Roofing "ACFoamII", any thickness.
Membrane: — "TPO-K", fully adhered with "TPO Bonding Adhesive" at 1-1/3 gal/sq.

42. **Deck:** NC **Incline:** 1/8

Insulation: — Atlas Roofing "ACFoam II", "ACFoam III", Apache Products "Apache White Line" or "Apache Pyrox", Hunter Panels "H-Shield", Johns Manville "ENRGY- 2 ", Rhoflex "Isocyanurate GL, GW or HF", Rmax Inc. "Multi-Max-3", any combination, any thickness.
Membrane: — "TPO-K", fully adhered with "TPO Bonding Adhesive" at 1-1/3 gal/sq.

43. **Deck:** NC **Incline:** 3

Insulation (Optional): — Atlas Roofing "ACFoam II", "ACFoam III", Apache Products "Apache White Line" or "Apache Pyrox", Hunter Panels "H-Shield", Johns Manville "ENRGY- 2 ", Rhoflex "Isocyanurate GL, GW or HF", Rmax Inc. "Multi-Max-3", any thickness.
Barrier Board: — 1/2 in. min gypsum board.
Membrane: — "TPO-K", fully adhered with "TPO Bonding Adhesive" at 1-1/3 gal/sq.

44. **Deck:** NC **Incline:** 2-1/2 **Impact:** 2

Insulation (Optional): — Atlas Roofing "ACFoam II", "ACFoam III", Apache Products "Apache White Line" or "Apache Pyrox", Hunter Panels "H-Shield", Johns Manville "ENRGY- 2 ", Rhoflex "Isocyanurate GL, GW or HF", Rmax Inc. "Multi-Max-3", any thickness.
Barrier Board: — 1/2 in. min gypsum board.
Membrane: — "72 mil TPO-K Plus 1" or "80 mil TPO-K Plus 1", fully adhered with "TPO Bonding Adhesive" at 1-1/3 gal/sq.

Class A - Fully Adhered (TPO) - Bonding Adhesives

Unless otherwise indicated, "Low VOC Bonding Adhesive" or "Low VOC Bonding Adhesive 1168" may be used in lieu of "Sure-Weld Bonding Adhesive" in any of the systems mentioned below.

1. **Deck:** NC **Incline:** 1-1/2

Insulation: — Carlisle HP Recovery Board, 1/2 to 3 in., Carlisle Recovery Board, 1/2 in. min, over any Classified insulation, any combination, any thickness, cellular concrete, precast concrete with grouted joints or structural (poured-in-place) concrete.
Membrane: — "Reinforced TPO", "White TPO Membrane" or Carlisle Syntec "Sure-Weld" fully adhered with Carlisle Syntec "Sure-Weld Bonding Adhesive", at 1-1/3 gal/sq.

2. **Deck:** NC **Incline:** 1/4

Insulation: — See "Referenced Insulations" (except Johns Manville and Polyiso HP-N), any combination, any thickness.
Membrane: — "Reinforced TPO", "White TPO Membrane" or Carlisle Syntec "Sure-Weld", fully adhered with Carlisle Syntec "Sure-Weld Bonding Adhesive" at 1-1/3 gal/sq.

3. **Deck:** C-15/32 **Incline:** 3

Insulation (Optional): — Any UL Classified , any combination, any thickness.
Barrier Board: — 1/2 in. min gypsum board.
Membrane: — "Reinforced TPO", "White TPO Membrane" or Carlisle Syntec "Sure-Weld", fully adhered with Carlisle Syntec "Sure-Weld Bonding Adhesive" at 1-1/3 gal/sq.

4. **Deck:** NC **Incline:** 3/8

Insulation: — See "Referenced Insulations", any combination, any thickness.
Membrane: — "Reinforced TPO", "White TPO Membrane" or Carlisle Syntec "Sure-Weld", fully adhered with Carlisle Syntec "Aqua Base 120 Bonding Adhesive", at 120 ft²/gal.

5. **Deck:** NC **Incline:** 1/2

Insulation: — Carlisle HP Recovery Board, 1/2 to 3 in., Carlisle Recovery Board, 1/2 in. min, over any Classified insulation, any combination, any thickness, cellular concrete, precast concrete with grouted joints or structural (poured-in-place) concrete.

Membrane: — "Reinforced TPO", "White TPO Membrane" or Carlisle Syntec "Sure-Weld", fully adhered with Carlisle Syntec "Aqua Base 120 Bonding Adhesive", at 120 ft²/gal.

6. **Deck:** NC

Incline: 1

Insulation (Optional): — Any UL Classified, any combination, any thickness.

Barrier Board: — 1/2 in. min gypsum board or 1/4 in. thick G-P Gypsum DensDeck®.

Membrane: — "Reinforced TPO", "White TPO Membrane" or Carlisle Syntec "Sure-Weld", fully adhered with Carlisle Syntec "Aqua Base 120 Bonding Adhesive" at 120 ft²/gal.

7. **Deck:** C-15/32

Incline: 1

Insulation (Optional): — Any UL Classified, any combination, any thickness.

Barrier Board: — 1/2 in. min gypsum board or 1/4 in. thick G-P Gypsum DensDeck®.

Membrane: — "Reinforced TPO", "White TPO Membrane" or Carlisle Syntec "Sure-Weld", fully adhered with Carlisle Syntec "Aqua Base 120 Bonding Adhesive" at 120 ft²/gal.

Class B - Fully Adhered

1. **Deck:** C-15/32

Incline: 1-1/2

Gypsum Board (Optional): — 1/2 in., mechanically fastened.

Slip Sheet: — Atlas Roofing "FR-50".

Insulation: — Apache Building Products "Pyrox White", 2 in. min, mechanically fastened.

Membrane: — "2001 TPA-FB", 40-100 mil (TPA).

2. **Deck:** NC

Incline: 1

Base Sheet: — Type G3, hot mopped or nailed.

Insulation: — Firestone Building Products "Iso-95+GL", Atlas Roofing "ACFoam II", any thickness.

Membrane: — "2001 TPA-FB", 40-100 mil (TPA).

3. **Deck:** NC

Incline: 1/2

Base Sheet: — Type G3, hot mopped or nailed.

Insulation: — Celotex "Top-R-II", any thickness.

Membrane: — "2001 TPA-FB", 40-100 mil (TPA).

4. **Deck:** C-15/32

Incline: Unlimited

Vapor Barrier (Optional): — Polyethylene, kraft or PVC (not UL Classified).

Insulation (Optional): — One or more layers polyisocyanurate, polystyrene or combinations, any thickness.

Barrier: — G-P Gypsum DensDeck®, 1/4 in. min, mechanically fastened.

Membrane: — "2001 CPA or Kelly CPA" (PVC), adhered with "Sarnacol 2170" or "Sarnacol V949" adhesive at 1-1/2 to 2-1/2 gal/sq.

5. **Deck:** C-15/32

Incline: 1/2

Insulation (Optional): — Perlite, glass fiber, polyisocyanurate, polyisocyanurate composite, urethane, urethane composite, EPS/perlite, any thickness.

Base Sheet: — One or more layers Type G1 or G2 glass fiber base sheet or "M15GS", "M2GS", "M4PS" or "T4.5CS".

Membrane: — "M4.5CMFR", "M4GMFR", "M4PGMFR", "T4GMFR" or "T4CMFR" (modified bitumen).

6. **Deck:** C-15/32

Incline: 1/2

Insulation (Optional): — Perlite, glass fiber, polyisocyanurate, polyisocyanurate composite, urethane, urethane composite, EPS/perlite, any thickness.

Base Sheet (Optional): — One or more layers Type G1 or G2 glass fiber base sheet or "M15GS", "M2GS", "M4PS" or "T4.5CS".

Ply Sheet: — One to three layers Type G1 or G2 glass fiber ply sheet or "M15GS" or "M2GS" ply sheet or "M3GS" ply sheet.

Membrane: — "M3.8GMFR" (modified bitumen).

7. **Deck:** NC

Incline: 3/4

Insulation: — Wood fiberboard, 1/2 to 3 in., Wood fiberboard, 1/2 in. min, over any Classified insulation, any combination, any thickness, cellular concrete, precast concrete with grouted joints or structural (poured-in-place) concrete.

Membrane: — "72 mil TPO-K Plus 1" or "80 mil TPO-K Plus 1", fully adhered with "TPO Bonding Adhesive", at 1-1/3 gal/sq.

Class C - Fully Adhered1. **Deck:** C-15/32**Incline:** 1-1/2**Gypsum Board (Optional):** — 1/2 in., mechanically fastened.**Insulation:** — Johns Manville "ENRGY 1G", Rmax Inc. "Multi-Max-3", Apache Building Products "Pyrox White", Firestone Building Products "Iso 95+GL", Atlas Roofing "ACFoam II", 1-1/2 in. thick min.**Membrane:** — "2001 TPA-FB", 40-100 mil (TPA).**Class C - Fully Adhered (TPO) - Bonding Adhesives**1. **Deck:** NC**Incline:** Unlimited**Insulation:** — See "Referenced Insulations", any combination, any thickness.**Membrane:** — "Reinforced TPO", "White TPO Membrane" or Carlisle Syntec "Sure-Weld", 45 to 80 mil thickness, adhered with Carlisle Syntec "Sure-Weld Bonding Adhesive" or "Sure-Seal 90-8-30A Bonding Adhesive" at 1-1/3 gal/sq.2. **Deck:** C-15/32**Incline:** Unlimited**Insulation:** — See "Referenced Insulations", any combination, min 2" thickness.**Membrane:** — "Reinforced TPO", "White TPO Membrane" or Carlisle Syntec "Sure-Weld", 45 to 80 mil thickness, adhered with Carlisle Syntec "Sure-Weld Bonding Adhesive" or "Sure-Seal 90-8-30A Bonding Adhesive" at 1-1/3 gal/sq.**Class A - Fully Adhered or Mechanically Fastened**1. **Deck:** NC**Incline:** 1/4**Insulation (Optional):** — Polystyrene, isocyanurate any thickness, hot mopped or mechanically attached.**Insulation:** — Glass fiber, perlite or wood fiber (OCF or Huebert) 1 in.**Barrier Board (Optional):** — 7/16 in. thick (min) oriented strand board may be used in place of insulation.**Membrane:** — "C-EPDM (black)", mechanically fastened or fully adhered.2. **Deck:** NC**Incline:** 3/4**Insulation (Optional):** — Polystyrene, isocyanurate any thickness, hot mopped or mechanically attached.**Insulation:** — Glass fiber, perlite or wood fiber, 1 to 2 in. or 7/16 in. thick (min) oriented strand board may be used in place insulation.**Membrane:** — "C-EPDM Type 1 (black)" or "C-EPDM Type 2 (white)", mechanically fastened or fully adhered.3. **Deck:** NC**Incline:** 3/4**Insulation:** — Rmax Inc. Multi-Max-3, Multi-Max-FA-3, 4 in. max or Thermal Systems foil or glass mat faced foam "R1" or "G4", any thickness, laid loosely or mechanically fastened. (Optional) Polystyrene insulation any thickness may be used under min 1 in. Thermal Systems foil or glass mat faced foam "R1" or "G4".**Membrane:** — "C-EPDM Type 1 (black)", "C-EPDM Type 2 (white)" or "Great White Hypalon", mechanically fastened or fully adhered.4. **Deck:** NC**Incline:** 1-1/2**Insulation:** — Wood fiber, glass fiber, perlite, 1 in. max.**Membrane:** — "C-EPDM Type 2 (black or white)", mechanically fastened or fully adhered.5. **Deck:** NC**Incline:** 2**Vapor Retarder:** — Min 4 mil "Pyroethylene Air Seal" (not Classified).**Insulation (Optional):** — Perlite, polystyrene, polyurethane, perlite/polyurethane composite, glass fiber, isocyanurate, phenolic or wood fiber, any thickness.**Barrier Board:** — Min 3/8 in. gypsum board or 3/8 in. exterior treated plywood, mechanically fastened.**Membrane:** — "C-EPDM Type 2 (black)" or "C-EPDM Type 2 (white)", mechanically fastened or fully adhered.6. **Deleted.**7. **Deleted.**8. **Deleted.**9. **Deleted.**10. **Deck:** C-15/32**Incline:** 2**Vapor Retarder (Optional):** — Min 4 mil "Pyroethylene Air Seal" (not Classified).**Insulation (Optional):** — Perlite, polystyrene, polyurethane, perlite/polyurethane composite, glass fiber, isocyanurate, phenolic or wood fiber, any thickness, laid loosely.

Gypsum Board: — Min 5/8 in., mechanically fastened.

Membrane: — "C-EPDM Type 2 (black)" or "C-EPDM Type 2 (white)", mechanically fastened or fully adhered.

11. **Deck:** NC **Incline:** 1/4 in.

Insulation (Optional): — EPS, phenolic or isocyanurate, any thickness.

Barrier board: — Wood fiber board, 1/2 to 1 in. thick, gypsum board, 1/2 in. thick or oriented Strand board, 7/16 in. thick (min).

Membrane: — "C-EPDM Black", "C-EPDM Type I black" or "C-EPDM Type II white", mechanically fastened or fully adhered.

12. **Deck:** NC **Incline:** 1/4 in.

Insulation: — Polyisocyanurate, any thickness.

Insulation: — Wood fiber, 1/2 to 2 in.

Barrier board (Optional): — 7/16 in. thick (min) oriented strand board may replace wood fiber board.

Membrane: — "C-EPDM Type 1 (Black)", "C-EPDM Type 2 (White)", mechanically fastened or fully adhered.

13. Deleted.

14. **Deck:** NC **Incline:** 1/4

Insulation: — Vermiculite concrete, perlite concrete or cellular concrete, 1 in. min. Optional polystyrene, 1 in. min, laid within the concrete insulation.

Slip Sheet (Optional): — "Pyromat", 10 mil min.

Membrane: — "C-EPDM (black)", "C-EPDM Type 2 (white)" or "Great White Hypalon", mechanically fastened or fully adhered.

15. **Deck:** C-15/32 **Incline:** 3/4

Vapor Retarder (Optional): — Min 4 mil "Pyroethylene Air Seal" (not Classified).

Insulation (Optional): — Perlite, polystyrene, polyurethane, perlite/polyurethane composite, glass fiber, isocyanurate, phenolic or wood fiber, any thickness, laid loosely.

Gypsum Board: — Min 5/8 in., mechanically fastened.

Membrane: — "C-EPDM Type 1 (black)", mechanically fastened or fully adhered.

16. **Deck:** C-15/32 **Incline:** 1/4

Vapor Retarder (Optional): — Min 4 mil "Pyroethylene Air Seal" (not Classified).

Insulation (Optional): — Perlite, polystyrene, perlite/polyurethane composite, glass fiber, isocyanurate, phenolic or wood fiber, 3 in. max, laid loosely.

Gypsum Board: — Min 5/8 in., mechanically fastened.

Membrane: — "C-EPDM (black)", mechanically fastened or fully adhered.

Class B - Fully Adhered or Mechanically Fastened

1. **Deck:** NC **Incline:** 1

Insulation: — Thermal Systems foil or glass mat faced isocyanurate "R1" or "G4", any thickness, laid loosely or mechanically fastened.

Membrane: — "C-EPDM Type 1 (black)", "C-EPDM Type 2 (white)", "Great White Hypalon", mechanically fastened or fully adhered.

2. Deleted.

3. **Deck:** C-15/32 **Incline:** 1/4

Slip Sheet: — "PyroMat", 70 mil min.

Membrane: — "C-EPDM Type 2 (black)" or "C-EPDM Type 2 (white)", mechanically fastened or fully adhered.

4. **Deck:** C-15/32 **Incline:** 2

Vapor Retarder (Optional): — Min 4 mil "Pyroethylene Air Seal" (not Classified).

Insulation (Optional): — Perlite, polystyrene, polyurethane, perlite/polyurethane composite, glass fiber, isocyanurate, phenolic or wood fiber, any thickness, laid loosely.

Gypsum Board: — Min 1/2 in., mechanically fastened.

Membrane: — "C-EPDM Type 2 (black)" or "C-EPDM Type 2 (white)", mechanically fastened or fully adhered.

5. Deleted.

6. **Deck:** C-15/32 **Incline:** 3/4

Vapor Retarder (Optional): — Min 4 mil "Pyroethylene Air Seal" (not Classified).

Insulation (Optional): — Perlite, polystyrene, polyurethane, perlite/polyurethane composite, glass fiber, isocyanurate, phenolic or wood fiber, any thickness, laid loosely.

Gypsum Board: — Min 1/2 in., mechanically fastened.

Membrane: — "C-EPDM Type 1 (black)", mechanically fastened or fully adhered.

7. **Deck:** C-15/32

Incline: 1/4

Vapor Retarder (Optional): — Min 4 mil "Pyroethylene Air Seal" (not Classified).

Insulation (Optional): — Perlite, polystyrene, polyurethane, perlite/polyurethane composite, glass fiber, isocyanurate, phenolic or wood fiber, 3 in. max, laid loosely.

Gypsum Board: — Min 1/2 in., mechanically fastened.

Membrane: — "C-EPDM (black)", mechanically fastened or fully adhered.

8. **Deck:** C-5/8

Incline: 0

Insulation: — Rmax Inc. "Multi-Max-3", no max limitation, min 1.9 in. thick.

Barrier Board: — 7/16 in. thick (min) oriented strand board.

Membrane: — "C-EPDM (black)", mechanically fastened or fully adhered.

Class C - Fully Adhered or Mechanically Attached

1. **Deck:** Tectum Type III

Incline: 1

Slip Sheet: — Atlas Roofing "FR-10".

Membrane: — "C-EPDM Type 2 (white or black)", mechanically fastened or fully adhered.

2. **Deck:** NC

Incline: 0

Insulation: — Firestone "ISO 95+GL", mechanically fastened, any thickness.

Membrane: — "C-EPDM", fully adhered.

Class A - Mechanically Fastened

1. **Deck:** NC

Incline: 2

Gypsum Board (Optional): — 1/2 in., mechanically fastened.

Insulation: — Apache Building Products "Pyrox White" or Johns Manville "ENRGY 2G", any thickness.

Membrane: — "2001 TPA", 40-100 mil (TPA).

2. **Deck:** NC

Incline: 1-1/2

Gypsum Board (Optional): — 1/2 in., mechanically fastened.

Insulation: — Rmax Inc. "Thermarook Plus-3" or Atlas Roofing "ACFoam II", any thickness.

Membrane: — "2001 TPA", 40-100 mil (TPA).

3. **Deck:** C-15/32

Incline: 1

Insulation (Optional): — Isocyanurate, extruded or expanded polystyrene, any thickness.

Barrier Board: — 1/2 in. gypsum wallboard.

Membrane: — "2001-TPA", 40-100 mil (TPA).

4. **Deck:** NC

Incline: 1/4

Insulation: — Polystyrene (1 to 2.5 lb per cu ft), 1 in. min.

Slip Sheet: — Atlas Roofing "FR-10".

Membrane: — "2001-TPA", 40-100 mil (TPA).

5. **Deck:** NC

Incline: 2-1/2

Insulation: — Celotex "Thermax Hy-Tec", 1 in. min.

Membrane: — "2001 TPA", 40-100 mil (TPA).

6. **Deck:** NC

Incline: 1

Insulation: — Firestone Building Products "Iso 95+GL", Atlas Roofing "ACFoam II", Rmax Inc. "Thermarook Plus-3" or "Multi-Max-3", any thickness.

Membrane: — "2001 TPA", 40-100 mil (TPA).

7. **Deck:** NC (Concrete)

Incline: 1

Insulating Concrete (Optional): — Deck covered with one of the following insulating concretes (poured in place): Cellular, vermiculite, perlite, gypsum or structural.

Membrane: — "2001 TPA", 40-100 mil (TPA).

8. **Deck:** C-15/32 **Incline:** 1-1/2

Insulation (Optional): — Any UL Classified, any thickness.

Barrier Board: — Gypsum wallboard, 1/2 in. nom, joints in wallboard offset 6 in. with joints in deck.

Membrane: — "2001 TPA", 40-100 mil (TPA).

9. **Deck:** NC **Incline:** 3-1/2

Insulation (Optional): — Any UL Classified, any thickness.

Barrier Board: — Regular or water resistant wallboard, 1/2 in. nom.

Membrane: — "2001 TPA", 40-100 mil (TPA).

10. **Deck:** Structural Cement Fiber Unit **Incline:** 2

Insulation (Optional): — One or more of the following or combinations, any thickness: Rmax Inc. "Thermarroof Plus-3" or "Multi-Max-3", Atlas Roofing "ACFoam II", Johns Manville "ENRGY 2G".

Membrane: — "2001 TPA", 40-100 mil (TPA).

11. **Deck:** Structural Cement Fiber Unit **Incline:** 1/4

Insulation: — Polystyrene (1 to 2.5 lb per cu ft), 1 in. min.

Slip Sheet: — Atlas Roofing "FR-10".

Membrane: — "2001 TPA", 40-100 mil (TPA).

12. **Deck:** NC **Incline:** 2

Vapor Retarders (Not UL Classified): — a)6 mil polyethylene, b)Johns Manville "Asbestogard", d)Fortifiber "Pyro-Kure 600" or e)Fortifiber "Vaporstop 298".

Insulation: — One or more of the following or combinations, any thickness: Rmax Inc. "Thermarroof Plus-2" or "Multi-Max-2", Atlas Roofing "ACFoam II" or Johns Manville "ENRGY 2G".

Membrane: — "2001 TPA", 40-100 mil (TPA).

13. **Deck:** NC **Incline:** 2-1/2

Vapor Barrier (Optional): — Polyethylene or polypropylene, any thickness.

Insulation: — Celotex "Hy-Therm AP", 2 in. thick max.

Membrane: — "2001 TPA", 40-100 mil (TPA).

14. **Deck:** NC **Incline:** 3/4

Insulation: — Hunter Panels "H-Shield", "H-Shield-WF" or Johns Manville "ENRGY 2", any thickness.

Membrane: — "Kelly TPO" or "2001 TPO", 45 or 60 mil.

15. **Deck:** C-15/32 **Incline:** Unlimited

Insulation (Optional): — Atlas Roofing "ACFoam I", Apache Products "Apache White Line" or "Apache Pyrox", Hunter Panels "H-Shield", "H-Shield-WF" or Johns Manville "ENRGY 2", "ENRGY-IIA", "ENRGY-1G" or "Barrier Board Plus", Rhoflex "Isocyanurate GL, GW or HF", Rmax Inc. "Multi-Max-3", any thickness.

Barrier Board: — 1/2 in. min gypsum board with staggered joints (6 in. offset).

Membrane: — "Kelly TPO" or "2001 TPO", 45 or 60 mil.

16. **Deck:** NC **Incline:** 1

Insulation: — Glass fiber, wood fiber or perlite, any thickness, mechanically fastened with metal insulation anchors.

Membrane: — "2001 CPA or Kelly CPA" (PVC).

17. **Deck:** NC **Incline:** 1

Insulation: — GAF Gaftemp, glass fiber, wood fiber, any combination, 3/4 to 3-3/4 in., mechanically fastened with metal insulation anchors.

Separation Sheet: — Fertibier.

Membrane: — "2001 CPA or Kelly CPA" (PVC).

18. **Deck:** NC **Incline:** 1

Insulation: — Cellular concrete, gypsum concrete, vermiculite concrete, perlite concrete or structural concrete.

Membrane: — "2001 CPA or Kelly CPA" (PVC).

19. **Deck:** NC

Incline: 1-1/2

Insulation (Optional): — Polystyrene or polyisocyanurate, any thickness.

Barrier Board: — Plywood (0.50 in. min) or 1/4 in. (min) G-P Gypsum DensDeck®, mechanically fastened with metal, insulation anchors.

Membrane: — "2001 CPA or Kelly CPA" (PVC).

20. **Deck:** NC

Incline: 1

Barrier Board (Optional): — Gypsum board, 5/8 in. min or 1/4 in. (min) G-P Gypsum DensDeck®.

Insulation: — Dow Chemical USA RM Styrofoam or EPS, any thickness.

Barrier Board: — Huebert Fiberboard 1in. fiberboard.

Membrane: — "2001 CPA or Kelly CPA" (PVC).

21. **Deck:** NC

Incline: 2

Vapor Barrier (Optional): — Polyethylene Kraft or PVC film (not Classified).

Insulation: — One of the following or combinations, any thickness, mechanically fastened or hot mopped in place with hot roofing asphalt:

a) Perlite. b) Fiberboard. c) Rmax Inc. Multi-Max-3 or "Thermarof Plus-3". d) Firestone "ISO 95+GL", "ISO 95+GW". e) Apache Products "Apache Pyrox", "Apache White Line" or "Apache Tapered Pyrox". f) Johns Manville "ISO 1". g) Atlas Roofing "ACFoam II".

Membrane: — "2001 CPA or Kelly CPA" (PVC).

22. **Deck:** C-15/32

Incline: 1/2

Barrier Board: — 1/2 in. min thickness gypsum board, mechanically fastened with insulation fasteners (6 in. offset at the gypsum board joints from the plywood joints).

Membrane: — "2001 CPA or Kelly CPA" (PVC).

23. **Deck:** C-15/32

Incline: 2

Barrier Board: — 1/2 in. min thickness gypsum board 1/4 in. G-P Gypsum DensDeck®, mechanically fastened with insulation fasteners (6 in. offset of the gypsum board joints from the plywood joints).

Vapor Barrier (Optional): — Polyethylene or Kraft (not Classified).

Insulation: — One of the following or combinations, any thickness, mechanically fastened or hot mopped in place: a) Perlite. b) Fiberboard. c) Rmax Inc. Multi-Max-3 or "Thermarof Plus-3". d) Firestone "ISO 95+GL", "ISO 95+GW". e) Apache Products "Apache Pyrox", "Apache White Line" or "Apache Tapered Pyrox". f) Johns Manville "ISO 1". g) Atlas Roofing "ACFoam II".

Membrane: — "2001 CPA or Kelly CPA" (PVC).

24. **Deck:** NC

Incline: 4

Insulation: — "Celotex Hy-Therm Ap", any thickness.

Membrane: — "2001 CPA or Kelly CPA" (PVC).

25. **Deck:** NC

Incline: 1-1/4

Insulation: — Johns Manville "Barrier Board Plus-M", uniform thickness or tapered composite, any thickness, mechanically fastened.

Membrane: — "2001 CPA or Kelly CPA" (PVC).

26. **Deck:** NC

Incline: 3/4

Insulation: — Johns Manville "Barrier Board Plus-M", uniform thickness or tapered composite, any thickness, mechanically fastened.

Membrane: — "2001 CPA or Kelly CPA" (PVC).

27. **Deck:** C-15/32

Incline: 2

Insulation: — Polystyrene, any thickness.

Barrier Board: — 5/8 in. gypsum or 1/4 in. (min) G-P Gypsum DensDeck®, mechanically fastened with 6 in. offset of the gypsum joint from the plywood joints.

Membrane: — "2001 CPA or Kelly CPA" (PVC).

28. **Deck:** C-15/32

Incline: 2

Barrier Board: — 1/2 in. gypsum board, mechanically fastened with 6 in. offset of the gypsum joint from the plywood joints.

Insulation: — Polystyrene, any thickness.

Barrier Board: — 3/4 in. perlite board.

Membrane: — "2001 CPA or Kelly CPA" (PVC).

29. **Deck:** NC**Incline:** 4**Insulation:** — Cellular concrete, gypsum concrete, vermiculite concrete, perlite concrete or structural concrete.**Membrane:** — "2001 CPA or Kelly CPA" (PVC).30. **Deck:** C-15/32**Incline:** 1/2**Barrier Board:** — 1/2 in. gypsum board with joints 6 in. from joints in plywood.**Insulation (Optional):** — Rmax Inc. "Multi-Max-3" or "Thermarroof Plus-3", Firestone "ISO 95+GL" or "ISO 95+GW", Apache Products "Apache Pyrox" or "Apache White Line", Johns Manville "ENRGY IM, IA or IG", Atlas Roofing "ACFoam II", any thickness.**Membrane:** — "2001 CPA or Kelly CPA" (PVC).31. **Deck:** C-15/32**Incline:** 1/2**Insulation (Optional):** — Rmax Inc. "Multi-Max-3" or "Thermarroof Plus-3", Firestone "ISO 95+GL" or "ISO 95+GW", Apache Products "Apache Pyrox" or "Apache White Line", Johns Manville "ENRGY IM", Atlas Roofing "ACFoam II", any thickness.**Barrier Board:** — 1/2 in. gypsum board.**Membrane:** — "2001 CPA or Kelly CPA" (PVC).32. **Deck:** C-15/32**Incline:** 1/2**Vapor Barrier (Optional):** — Polyethylene or Kraft (not Classified).**Insulation (Optional):** — One of the following or combinations, mechanically fastened, any thickness: a) Perlite. b) Rmax Inc. "Multi-Max-3" or "Thermarroof Plus-3". c) Firestone "ISO 95+GL", "ISO 95+GW". d) Apache Products "Apache Pyrox", "Apache White Line" or "Apache Tapered Pyrox". e) Johns Manville "ENRGY1". f) Atlas Roofing "ACFoam II".**Barrier Board:** — Parotek Insulation "Paroc Capboard", 3/4 in. min with joints staggered 6 in. from the plywood deck joints, mechanically fastened.**Membrane:** — "2001 CPA or Kelly CPA" (PVC).33. **Deck:** C-15/32**Incline:** 3**Insulation:** — Parotek "Paroc Capboard", 3/4 in. with insulation joints staggered 6 in. from the plywood deck joints, mechanically fastened.**Membrane:** — "2001 CPA or Kelly CPA" (PVC).34. **Deck:** C-15/32**Incline:** No Limitations**Insulation (Optional):** — Polyisocyanurate, any thickness.**Barrier Board:** — 1/4 in. min G-P Gypsum DensDeck® with all joints staggered a min of 6 in. from the plywood joints.**Membrane:** — "2001 CPA or Kelly CPA" (PVC).35. **Deck:** NC**Incline:** 2**Vapor Barrier (Optional):** — Polyethylene Kraft or Sarnavap PVC film (not Classified).**Insulation (Optional):** — UL Classified EPS, any thickness.**Insulation:** — One of the following or combinations, 1 in. thick min, mechanically fastened: a) Perlite. b) Fiberboard. c) Rmax Inc. Multi-Max-3 or "Thermarroof Plus-3". d) Firestone "ISO 95+GL", "ISO 95+GW". e) Apache Products "Apache Pyrox", "Apache White Line" or "Apache Tapered Pyrox". f) Johns Manville "ENRGY 2" or "Barrier Board Plus". g) Johns Manville "ISO 1". h) Atlas Roofing "ACFoam II".**Membrane:** — "2001 CPA or Kelly CPA" (PVC).36. **Deck:** NC**Incline:** 1-1/2**Vapor Barrier (Optional):** — Polyethylene Kraft or Sarnavap PVC film (not Classified).**Insulation:** — One of the following or combinations, any thickness, mechanically fastened or hot mopped in place with hot roofing asphalt: Celotex "Top RII", "Hy-Tec", "Hy-Tec II" or "Hy-Therm AP".**Membrane:** — "2001 CPA or Kelly CPA" (PVC).37. **Deck:** C-15/32**Incline:** 1-1/2**Barrier Board:** — 1/2 in. min thickness gypsum board 1/4 in. G-P Gypsum DensDeck®, mechanically fastened with insulation fasteners (6 in. offset of the gypsum board joints from the plywood joints).**Vapor Barrier (Optional):** — Polyethylene or Kraft (not Classified).**Insulation:** — One of the following or combinations, any thickness, mechanically fastened or hot mopped in place: Celotex "Top RII", "Hy-Tec", "Hy-Tec II" or "Hy-Therm AP".**Membrane:** — "2001 CPA or Kelly CPA" (PVC).38. **Deck:** C-15/32**Incline:** 1/4**Barrier Board:** — 1/2 in. gypsum board with joints offset 6 in. from joints in plywood.**Insulation (Optional):** — Celotex "Top RII", "Hy-Tec", "Hy-Tec II", "Hy-Therm AP", any thickness.

Membrane: — "2001 CPA or Kelly CPA" (PVC).

39. **Deck:** C-15/32

Incline: 1/4

Vapor Barrier (Optional): — Polyethylene or Kraft (not Classified).

Insulation (Optional): — One of the following or combinations, mechanically fastened, any thickness: Celotex "Top RII", "Hy-Tec", "Hy-Tec II" or "Hy-Therm AP".

Barrier Board: — Parteck Insulations "Paroc Capboard", 3/4 in. min with joints staggered 6 in. from the plywood deck joints, mechanically fastened.

Membrane: — "2001 CPA or Kelly CPA" (PVC).

40. **Deck:** NC

Incline: 1/2

Vapor Board (Optional): — Polyethylene Kraft or Sarnavap PVC film (not Classified).

Insulation (Optional): — UL Classified EPS, any thickness.

Insulation: — One of the following or combinations, 1 in. thick min, mechanically fastened: Celotex "Top RII", "Hy-Tec", "Hy-Tec II" or "Hy-Therm AP".

Membrane: — "2001 CPA or Kelly CPA" (PVC).

41. **Deleted.**

42. **Deleted.**

43. **Deleted.**

44. **Deleted.**

45. **Deleted.**

46. **Deleted.**

47. **Deleted.**

48. **Deleted.**

49. **Deleted.**

50. **Deleted.**

51. **Deleted.**

52. **Deleted.**

53. **Deleted.**

54. **Deck:** NC

Incline: 2

Insulation: — See "Referenced Insulations".

Membrane: — "C-EPDM-C Reinforced", 0.045 or 0.060 in.

55. **Deck:** NC

Incline: 3-1/2

Insulation: — Carlisle HP Recovery Board, 1/2 to 3 in.; Carlisle Recovery Board, 1/2 in. min, over polyisocyanurate or urethane, any thickness, any combination; cellular concrete, precast concrete with grouted joints or structural (poured-in-place) concrete.

Membrane: — "C-EPDM-C Reinforced", 0.045 or 0.060 in.

56. **Deck:** NC

Incline: 1

Insulation: — Carlisle HP Recovery Board, 1/2 in. min, over polystyrene, any thickness.

Membrane: — "C-EPDM-C Reinforced", 0.045 or 0.060 in.

57. **Deck:** C-15/32

Incline: 3-1/2

Insulation: — One of or combination of the following, any thickness:

A. Gypsum board.

B. Gypsum board over polyisocyanurate or urethane, any thickness; Carlisle HP Recovery Board, 1/2 in. min over gypsum board; Carlisle HP Recovery Board, 1/2 in. min over polyisocyanurate or urethane, any total thickness, over gypsum board.

Membrane: — "C-EPDM-C Reinforced", 0.045 or 0.060 in.

58. **Deck:** C-15/32

Incline: 1

Insulation: — Gypsum board over polystyrene, any thickness.

Membrane: — "C-EPDM-C Reinforced", 0.045 or 0.060 in.

59. **Deck:** C-15/32**Incline:** 2

Barrier Board: — Gypsum board.
Insulation: — See "Referenced Insulations".
Membrane: — "C-EPDM-C Reinforced", 0.045 or 0.060 in.

60. **Deck:** NC**Incline:** 1/2

Insulation: — "Polyiso HP-H", "Tapered Polyiso HP-H", "Polyiso HP-HP", "Tapered Polyiso HP-HP", "Polyiso HP-H Composite", "Tapered Polyiso HP-H Composite" or "Polyiso HP-HNB", any thickness.
Membrane: — "C-EPDM-C Reinforced", .045 or .060 in.

61. **Deck:** C-15/32**Incline:** 1/2

Slip Sheet: — Two layers Atlas Roofing "FR-50".
Membrane: — "C-EPDM-C Reinforced".

62. **Deck:** NC**Incline:** 1/2

Insulation: — Atlas Roofing "ACFoam II", "ACFoam III", Apache Products "Apache White Line" or "Apache Pyrox", Hunter Panels "H-Shield", Johns Manville "ENRGY- 2 ", Rhoflex "Isocyanurate GL, GW or HF", Rmax Inc. "Multi-Max-3", any combination, any thickness.
Membrane: — "TPO-K".

63. **Deck:** NC**Incline:** 1-1/2

Insulation: — Wood fiberboard, 1/2 to 3 in.; Wood fiberboard, 1/2 in. min, over any Classified insulation, any combination, any thickness; cellular concrete, precast concrete with grouted joints or structural (poured-in-place) concrete.
Membrane: — "TPO-K".

64. **Deck:** NC**Incline:** 1-1/2

Insulation: — Atlas Roofing "ACFoam II", "ACFoam III", Apache Products "Apache White Line" or "Apache Pyrox", Hunter Panels "H-Shield", Johns Manville "ENRGY- 2 ", Rhoflex "Isocyanurate GL, GW or HF", Rmax Inc. "Multi-Max-3", any combination, any thickness.
Membrane: — "TPO-K FR".

65. **Deck:** NC**Incline:** 1-1/2

Insulation: — Wood fiberboard, 1/2 to 3 in.; Wood fiberboard, 1/2 in. min, over any Classified insulation, any combination, any thickness; cellular concrete, precast concrete with grouted joints or structural (poured-in-place) concrete.
Membrane: — "TPO-K FR".

66. **Deck:** NC**Incline:** 3

Insulation (Optional): — Any UL Classified, any combination, any thickness.
Barrier Board: — 1/2 in. thick gypsum wallboard or 1/4 in. thick G-P Gypsum DensDeck®.
Membrane: — "TPO-K".

67. **Deck:** C-15/32**Incline:** Unlimited

Insulation (Optional): — Atlas Roofing "ACFoam II", "ACFoam III", Apache Products "Apache White Line" or "Apache Pyrox", Hunter Panels "H-Shield", Johns Manville "ENRGY- 2 ", Rhoflex "Isocyanurate GL, GW or HF", Rmax Inc. "Multi-Max-3", any combination, any thickness.
Barrier Board: — 1/2 in. min gypsum board or 1/4 in. thick G-P Gypsum DensDeck® with staggered joints (6 in. offset).
Membrane: — "TPO-K FR".

68. **Deck:** C-15/32**Incline:** 2-1/2

Insulation (Optional): — Atlas Roofing "ACFoam II", "ACFoam III", Apache Products "Apache White Line" or "Apache Pyrox", Hunter Panels "H-Shield", Johns Manville "ENRGY-2", Rhoflex "Isocyanurate GL, GW or HF", Rmax Inc. "Multi-Max-3", any thickness.
Barrier Board: — 1/2 in. min gypsum board.
Membrane: — "72 mil TPO-K Plus 1" or "80 mil TPO-K Plus 1".

69. **Deck:** NC**Incline:** 1-1/2

Insulation: — Wood fiberboard, 1/2 in. to 3 in., Carlisle Recover Board, 1/2 in. min, over any Classification insulation, any combination, any thickness, cellular concrete, precast concrete with grouted joists or structural (poured-in-place) concrete.
Membrane: — "72 mil TPO-K Plus 1" or "80 mil TPO-K Plus 1".

70. **Deck:** NC**Incline:** 1/2

Insulation: — Atlas Roofing "ACFoam II", "ACFoam III", Apache Products "Apache White Line" or "Apache Pyrox", Hunter Panels "H-Shield", Johns Manville "ENRGY-2", Rhoflex "Isocyanurate GL, GW or HF", Rmax Inc. "Multi-Max-3", any thickness.

Membrane: — "72 mil TPO-K Plus 1" or "80 mil TPO-K Plus 1".

Class A - Mechanically Fastened (T P O)1. **Deck:** NC**Incline:** 1/2

Insulation: — See "Referenced Insulations", any combination, any thickness.

Membrane: — "Reinforced TPO", "White TPO Membrane" or Carlisle Syntec "Sure-Weld".

2. **Deck:** NC**Incline:** 1-1/2

Insulation: — Carlisle HP Recovery Board, 1/2 to 3 in.; Carlisle Recovery Board, 1/2 in. min, over any Classified insulation, any combination, any thickness; cellular concrete, precast concrete with grouted joints or structural (poured-in-place) concrete.

Membrane: — "Reinforced TPO", "White TPO Membrane" or Carlisle Syntec "Sure-Weld".

3. **Deck:** C-15/32 or NC**Incline:** 3

Insulation (Optional): — Any UL Classified, any combination, any thickness.

Barrier Board: — 1/2 in. thick gypsum wallboard or 1/4 in. thick G-P Gypsum DensDeck®

Membrane: — "Reinforced TPO", "White TPO Membrane" or Carlisle Syntec "Sure-Weld".

4. **Deck:** NC**Incline:** 3/4

Insulation: — "Polyiso HP-DWD", any thickness.

Membrane: — "Reinforced TPO", "White TPO Membrane" or Carlisle Syntec "Sure-Weld".

Class B - Mechanically Fastened1. **Deck:** C-15/32**Incline:** 1-1/2

Gypsum Board (Optional): — 1/2 in., mechanically fastened.

Slip Sheet: — Atlas Roofing "FR-50", mechanically fastened.

Insulation: — Apache Building Products "Pyrox White", 2 in min., mechanically fastened.

Membrane: — "2001-TPA", 40-100 mil (TPA).

2. **Deck:** NC**Incline:** 1

Base Sheet: — Type G3, hot mopped or nailed.

Insulation: — Firestone Building Products "Iso-95+GL", Atlas Roofing "ACFoam II" or Johns Manville "ENRGY 2G", any thickness.

Membrane: — "2001-TPA", 40-100 mil (TPA).

3. **Deck:** NC**Incline:** 1/2

Base Sheet: — Type G3, hot mopped or nailed.

Insulation: — "Energy-Loc" or Top-R-II, any thickness.

Membrane: — "2001-TPA", 40-100 mil (TPA).

4. **Deck:** NC**Incline:** 1-1/2

Insulation: — Rmax "Ply-1", any thickness.

Membrane: — "2001-CPA or Kelly CPA", (CPA).

5. **Deck:** C 1-1/2 TG**Incline:** 1/2

Barrier Board: — 5/8 in. min gypsum board, mechanically fastened with insulatoin fasteners.

Membrane: — "2001-CPA or Kelly CPA", (CPA).

6. **Deck:** C 3/4 Sheathing boards**Incline:** 1/2

Barrier Board: — 5/8 in. min gypsum board, mechanically fastened with insulatoin fasteners (gypsum board joints and paper tape embedded in cementitious compound).

Membrane: — "2001-CPA or Kelly CPA", (CPA).

7. **Deck:** C 1-1/2 TG

Incline: No Limitation

Insulation: — One of the following or combinations (1in. min thickness): a) Rmax Inc. Multi-Max-3 or "Therमारoo Plus-3". b) Firestone "ISO 95+GL", "ISO 95+GW". c) Apache Products "Apache Pyrox", "Apache White Line" or "Apache Tapered Pyrox". d) Johns Manville "ENRGY 1-A, 1-M or 1G". e) Atlas Roofing "ACFoam II".

Barrier: — 3/8 in. min gypsum board, mechanically fastened with metal insulation fasteners (6 in. offset gypsum board joints from insulation board joints).

Membrane: — "2001 CPA or Kelly CPA" (PVC).

8. **Deck:** NC

Incline: No Limitation

Barrier Board: — 3/8 in. min gypsum board or G-P Gypsum DensDeck®.

Membrane: — "2001-CPA or Kelly CPA", (CPA).

9. **Deck:** 15/32

Incline: No Limitation

Barrier Board: — 5/8 in. min gypsum board, mechanically fastened with metal insulatoin fasteners 6 in. offset gypsum board joints from the plywood joints.

Membrane: — "2001-CPA or Kelly CPA", (CPA).

10. **Deleted.**

11. **Deleted.**

12. **Deck:** C-3/8

Incline: No Limitation

Insulation: — 3/4 in. min perlite with all joints staggered 6 in. min from the plywood joints.

Barrier Board: — 1/4 in. G-P Gypsum DensDeck® with all joints staggered 6 in. min from the insulation joints.

Membrane: — "2001-CPA or Kelly CPA", (CPA).

13. **Deck:** C 1-1/2 TG

Incline: 4-1/2

Insulation: — "Thermax Top RII", "Thermax Hy-Tec", "Thermax Hy-Tec II".

Barrier Board: — 3/8 in. min gypsum board, mechanically fastened with metal insulatoin fasteners (6 in. offset gypsum board joints from insulation board joints).

Membrane: — "2001-CPA or Kelly CPA", (CPA).

14. **Deleted.**

15. **Deck:** NC

Incline: No Limitations

Insulation: — Atlas Roofing "ACFoam II", Firestone Building Products "ISO 95+GL", Apache "Pyrox", Johns Manville "ENRGY-2" polyisocyanurate or Roxul "Toprock", any thickness, loose laid or mechanically attached.

Barrier (Optional): — Tritex "Rocroof", Atlas Roofing "FR-50" or min 1/4 in. G-P Gypsum DensDeck®.

Membrane: — "Kelly CPA-1", 45 -60 mil.

16. **Deck:** NC

Incline: No Limitations

Insulation: — Polystyrene insulation, any thickness, loose laid or mechanically attached.

Barrier: — Tritex "Rocroof", Atlas Roofing "FR-10", "FR-11", "FR-50" or min 1/4 in. G-P Gypsum DensDeck®.

Membrane: — "Kelly CPA-1", 45 -60 mil.

17. **Deck:** C-15/32

Incline: No Limitations

Insulation (Optional): — Atlas Roofing "ACFoam II", Firestone Building Products "ISO 95+GL", Apache "Pyrox", Johns Manville "ENRGY-2", polyisocyanurate, any thickness, with 6 in. offset joint from the plywood joints.

Slip Sheet: — Tritex "Rocroof".

Membrane: — "Kelly CPA-1", 45 -60 mil.

18. **Deck:** C-15/32

Incline: No Limitations

Slip Sheet: — Atlas Roofing "FR-50".

Membrane: — "Kelly CPA-1", 45 -60 mil.

19. **Deck:** NC

Incline: 4-1/2

Insulation: — Celotex "Hy-Therm AP", any thickness, loose laid or mechanically attached.

Barrier (Optional): — Tritex "Rocroof", Atlas Roofing "FR-50" or min 1/4 in. G-P Gypsum DensDeck®.

Membrane: — "Kelly CPA-1", 45 -60 mil.

20. **Deck:** C-15/32 **Incline:** 4-1/2

Insulation (Optional): — Celotex "Hy-Therm AP", any thickness, with 6 in. offset joint from the plywood joints.

Slip Sheet: — Tritex "Rocroof".

Membrane: — "Kelly CPA-1", 45 -60 mil.

21. **Deck:** NC **Incline:** 4

Insulation: — Carlisle HP Recovery Board, 1/2 to 3 in.; Carlisle Recovery Board, 1/2 in. min over polyisocyanurate or urethane, any combination, any thickness; cellular concrete, precast concrete with grouted joints or structural (poured in place) concrete.

Membrane: — "C-EPDM-C Reinforced", 0.045 or 0.060 in.

22. **Deck:** C-15/32 **Incline:** 4

Insulation: — One of or combination of the following, any thickness:

A. Gypsum board.

B. Gypsum board over polyisocyanurate or urethane, any thickness; Carlisle HP Recovery Board, 1/2 in. min over gypsum board; Carlisle HP Recovery Board, 1/2 in. min over phenolic, polyisocyanurate, urethane, any total thickness, over gypsum board.

Membrane: — "C-EPDM-C Reinforced", 0.045 or 0.060 in.

23. **Deck:** C-15/32 **Incline:** 1

Base Sheet: — One layer, mechanically fastened, of one of the following:

A. Owens Corning "Perma Ply No. 28".

B. GAF "Gafglas #75 Base Sheet".

C. Johns Manville "Glasbase".

D. Tamko "Glass Base".

E. Celotex Type G2 "Vaporbar GB".

Membrane: — "C-EPDM-C Reinforced", 0.045 or 0.060 in.

24. **Deck:** C-15/32 **Incline:** 1/2

Insulation (Optional): — Polyisocyanurate, min 1 in. thickness.

Slip Sheet: — Two layers Atlas Roofing "FR 50".

Membrane: — "TPO-K" or "TPO-K FR".

25. **Deck:** C-15/32 **Incline:** 1/2

Slip Sheet: — One ply Atlas Roofing "FR-50".

Membrane: — "TPO-K FR".

Class C - Mechanically Fastened

1. **Deck:** C-15/32 **Incline:** 1-1/2

Gypsum Board (Optional): — 1/2 in., mechanically fastened.

Insulation: — Rmax Inc. "Multi-Max-3", Apache Building Products "Pyrox White", Firestone Building Products "Iso 95+GL", Atlas Roofing "ACFoam II" or Johns Manville "ENRGY 2G", 1-1/2 in. thick min, mechanically fastened or hot mopped.

Membrane: — "2001 TPA", 40-100 mil (TPA).

2. **Deck:** NC **Incline:** 1-1/2

Gypsum Wallboard (Optional): — 1/2 in., mechanically fastened.

Insulation/Slip Sheet: — Polystyrene, 1-4 in. thick, covered with glass fiber slip sheet.

Membrane: — "2001 TPA", 40-100 mil (TPA).

3. **Deck:** C-1-1/2 T & G

Incline: 1

Barrier Board: — 3/8 in., min plywood.

Membrane: — "2001 TPA", 40-100 mil (TPA).

4. **Deck:** C-1-1/2 T&G

Incline: 1

Barrier Board: — 15/32 in. min plywood.

Insulation (Optional): — Any thickness: a) Apache Products "Apache Pyrox". b) Rmax Inc. "Multi-Max FA-3". c) Johns Manville "ENRGY 2-A" or "2G". d) Atlas Roofing "ACFoam II".

Membrane: — "2001 CPA or Kelly CPA" (PVC).

5. **Deck:** NC

Incline: 2

Insulation (Optional): — Any UL Classified, any thickness.

Insulation: — "HP Recovery Board" or any UL Classified wood fiberboard, 1/2 in. thick min.

Membrane: — "C-EPDM-C EPDM", .060 in.

6. **Deck:** C-15/32

Incline: 1

Base Sheet: — One layer, mechanically fastened, of one of the following:

A. Johns Manville "Perma Ply No. 28".

B. GAF "GAFGLAS #75 Base Sheet".

C. Johns Manville "Glasbase".

D. Tamko "Glass Base".

E. Celotex Type G2 "Vaporbar GB".

Membrane: — "TPO-K", "TPO-K FR", 0.045 or 0.060 in., or TPO-K Plus 1, .072 or .080 in., mechanically fastened.

Class C - Mechanically Fastened (T P O)

1. **Deck:** NC

Incline: Unlimited

Insulation: — See "Referenced Insulations", any combination, any thickness.

Membrane: — "Reinforced TPO", "White TPO Membrane" or Carlisle Syntec "Sure-Weld", 45 to 80 mil thickness.

2. **Deck:** C-15/32

Incline: Unlimited

Insulation: — See "Referenced Insulations", any combination, min 2" thickness.

Membrane: — "Reinforced TPO", "White TPO Membrane" or Carlisle Syntec "Sure-Weld", 45 to 80 mil thickness.

SPRAY APPLIED FOAM AND COATING SYSTEMS

Class A

1. **Deck:** NC

Incline: 1-1/2

Foam: — "2001 591 Spray Foam", any thickness.

Surfacing: — Two applications General Electric "SCM 3300 Series", 2 gal/sq total.

A catalyst or curing agent and primer may be utilized with the "SCM 3300 Series". It is not necessary that the UL label appear on the containers.

2. **Deck:** NC

Incline: 1

Foam: — "2001 591 Spray Foam", any thickness.

Surfacing: — Two applications Dow Corning "3-5000 Construction Coating", 2.5 gal/sq total.

3. **Deck:** NC

Incline: 1-1/2

Foam: — "2001 591 Spray Foam", any thickness.

Coating: — Two applications Dow Corning "3-5000 Construction Coating", 2.5 gal/sq total.

Surfacing: — No. 11 granules, 50 lb/sq.

4. **Deck:** NC

Incline: 1/2

Foam: — "2001 591 Spray Foam", any thickness.

Surfacing: — Two applications United Coatings "Diathon Elastomer Acrylic Coating", 3 gal/sq total.

5. **Deck:** NC

Incline: 2-1/2

Foam: — "2001 591 Spray Foam", any thickness.

Surfacing: — Futura Coatings "Acro Bond 442", 1-1/4 gal/sq.

6. **Deck:** NC **Incline:** 2
Foam: — "2001 591 Spray Foam", any thickness.
Surfacing: — Futura Coatings "Elasto Bond 875", 2 gal/sq.
7. **Deck:** NC **Incline:** 1/2
Foam: — "2001 591 Spray Foam", any thickness.
Base Coat: — Futura Coatings "Futura Flex 500", (one part 500A to two parts 500B), 2 gal/sq.
Surfacing: — Futura Coatings "Futura Flex 550", (one part 550A to two parts 550B), 1/2 gal/sq.
8. **Deck:** NC **Incline:** 1/2
Foam: — "2001 591 Spray Foam", any thickness.
Base Coat: — 3M "#5762", 2-1/2 gal/sq.
Surfacing: — 3M "#5747", 1 gal/sq.
9. **Deck:** NC **Incline:** 1-1/2
Foam: — "2001 591 Spray Foam", any thickness.
Base Coat: — 3M "#5762", 1-1/2 gal/sq.
Surfacing: — 3M "#5747", 1 gal/sq.
10. **Deck:** NC **Incline:** 1
Foam: — "2001 591 Spray Foam", any thickness.
Surfacing: — United Coatings "Elastall 900/985", 2.25 gal/sq.
11. **Deck:** NC **Incline:** 1/2
Foam: — "2001 591 Spray Foam", any thickness.
Base Coat: — Two applications Neogard "Perma-Gard 7420", 2 gal/sq total.
Surfacing: — Neogard "Perma-Thane 7441", 3/4 gal/sq.
12. **Deck:** NC **Incline:** 1
Foam: — "2001 591 Spray Foam", any thickness.
Surfacing: — Three applications Gaco Western "Gacoflex U66", 1 gal/sq applications.
13. **Deck:** NC **Incline:** 1/2
Foam: — "2001 591 Spray Foam", any thickness.
Base Coat: — Two applications Gaco Westerns "Gacoflex A-5411", 1 gal/sq applications.
Surfacing: — Gaco Western "Gacoflex A-5400", 1 gal/sq.
14. **Deck:** NC **Incline:** 1-1/2
Foam: — "2001 591 Spray Foam", any thickness.
Base Coat: — United Coatings "Vibron Base Coating", 1-1/2 gal/sq.
Surfacing: — United Coatings "Vibron Top Coating", 2 gal/sq.
15. **Deck:** NC **Incline:** 1
Foam: — "2001 591 Spray Foam", any thickness.
Surfacing: — Two applications United Coatings "Elastuff 800 Metallic Coating" (Parts B and C combined at a ratio of 4:1 by volume and mixed with Part A at a ratio of 1:1 by volume), 2-3/4 gal/sq total.
16. **Deck:** NC **Incline:** 0
Foam: — "2001 591 Spray Foam", any thickness.
Surfacing: — Two applications San Antonio Developers "Monoflex Smooth", 3 gal/sq total.
17. **Deck:** NC **Incline:** 1
Foam: — "2001 591 Spray Foam", any thickness.
Base Coat: — Futura Coatings "Futura Flex 500", 2 gal/sq.
Surfacing: — Futura Coatings "Futura Flex 550", 1/2 gal/sq.
18. **Deck:** NC **Incline:** 1
Foam: — "2001 591 Spray Foam", any thickness.
Base Coat: — Futura Coatings "Futura Thane 524", 3/4 gal/sq.
Surfacing: — Futura Coatings "Futura Flex 550", 3/4 gal/sq.
19. **Deck:** NC **Incline:** 1
Foam: — "2001 591 Spray Foam", any thickness.
Base Coat: — Futura Coatings "Futura-Thane 522", 1-3/4 gal/sq.
Surfacing: — Futura Coatings "Futura Flex 501", 1 gal/sq.
20. **Deck:** NC **Incline:** 1
Foam: — "2001 591 Spray Foam", any thickness.
Base Coat: — Futura Coatings "Futura-Thane 5000", 1-1/2 gal/sq.
Surfacing: — Futura Coatings "Futura Flex 550", 3/4 gal/sq.
21. **Deck:** NC **Incline:** 1
Foam: — "2001 591 Spray Foam", any thickness.
Base Coat: — Futura Coatings "Futura Flex 500", 2 gal/sq.
Surfacing: — Futura Coatings "Futura Flex 500", 2 gal/sq.
22. **Deck:** NC **Incline:** 1/2
Foam: — "2001 591 Spray Foam", any thickness.
Base Coat: — Futura Coatings "Futura-Thane 5007", 1-1/2 gal/sq.
Surfacing: — Futura Coatings "Futura Flex 550", 3/4 gal/sq.
23. **Deck:** NC **Incline:** 1
Foam: — "2001 591 Spray Foam-2.5 or -2.8", any thickness.
Base Coat (Optional): — Any UL Classified Fibered Asphalt Coating, 3 gal/sq.
Surfacing: — Gravel or crushed stone, 400 lbs/sq into wet coating.
24. **Deck:** C-15/32 **Incline:** 1
Foam: — "2001 591 Spray Foam-2.5 or -2.8", any thickness.
Base Coat: — "Dead Level Fibrated Asphalt Roof Coating", 1 to 3 gal/sq.
Surfacing: — Slag or gravel, 400 lbs/sq into wet coating.
25. **Deck:** NC **Incline:** 1
Foam: — "2001 591 Spray Foam" any thickness.

Base Coat: — Chem-Elast Coatings "Chem-Elast 2819", 1-3/4 gal/sq.
Surfacing: — Chem-Elast Coatings "Chem Elast 2820", 1.2 gal/sq.

26. **Deck:** NC **Incline:** 1
Foam: — "2001 591 Spray Foam", any thickness.
Base Coat: — Futura Coating "Futura Flex 500", 2 gal/sq.
Surfacing: — Futura Coatings "Futura Flex 550", 1/2 gal/sq.
27. **Deck:** NC **Incline:** 2
Foam: — "2001 591 Spray Foam", 2 in. thick max.
Surfacing: — Neogard "7200 Elastacryl" or "7251 Elastacryl", 3 gal/sq.

MAINTENANCE AND REPAIR SYSTEMS

Class A

1. **Deck:** C-15/32 **Incline:** 2
Existing Roof System: — Class A shingles or Class A Cap Sheet system covered with:
Slip Sheet (Optional): — "PyroMat", 10 mil min.
Membrane: — "C-EPDM Type 2 (black)", mechanically fastened or fully adhered.
2. **Deck:** C-15/32 **Incline:** 2
Existing Roof System: — Class A, B or C covered with:
Vapor Retarder (Optional): — Min 4 mil "Pyroethylene Air Seal" (not Classified).
Insulation (Optional): — Perlite, polystyrene, polyurethane, perlite/polyurethane composite, glass fiber, isocyanurate, phenolic or wood fiber, any thickness, laid loosely.
Gypsum Board: — Min 5/8 in., mechanically fastened.
Membrane: — "C-EPDM Type 2 (black)" or "C-EPDM Type 2 (white)", mechanically fastened or fully adhered.
3. **Deck:** C-15/32 **Incline:** 2
Existing Roof System: — Class A covered with:
Slip Sheet (Optional): — "PyroMat", 10 mil min.
Membrane: — "C-EPDM Type 2 (black)" or "C-EPDM Type 2 (white)", mechanically fastened or fully adhered.
4. Deleted.
5. **Deck:** C-15/32 **Incline:** 3/4
Existing Roof System: — Class A, B or C covered with:
Vapor Retarder (Optional): — Min 4 mil "Pyroethylene Air Seal" (not Classified)
Insulation (Optional): — Perlite, polystyrene, polyurethane, perlite/polyurethane composite, glass fiber isocyanurate, phenolic or wood fiber, any thickness, laid loosely.
Gypsum Board: — Min 5/8 in., mechanically fastened
Membrane: — "C-EPDM Type 1 (black)", mechanically fastened or fully adhered.
6. **Deck:** C-15/32 **Incline:** 1/4
Existing Roof System: — Class A, B or C covered with:
Vapor Retarder (Optional): — Min 4 mil "Pyroethylene Air Seal" (not Classified)
Insulation (Optional): — Perlite, polystyrene, polyurethane, perlite/polyurethane composite, glass fiber isocyanurate, phenolic or wood fiber, 3 in. max, laid loosely.
Gypsum Board: — Min 5/8 in., mechanically fastened
Membrane: — "C-EPDM (black)", mechanically fastened or fully adhered.
7. **Deck:** C-15/32 **Incline:** 3/4
Existing Roof System: — Class A covered with:
Slip Sheet (Optional): — "PyroMat", 10 mil min.
Membrane: — "C-EPDM Type 1 (black)", mechanically fastened or fully adhered.
8. **Deck:** C-15/32 **Incline:** 1/4
Existing Roof System: — Class A covered with:
Slip Sheet (Optional): — "PyroMat", 10 mil min.
Membrane: — "C-EPDM (black)", mechanically fastened or fully adhered.
9. **Deck:** C-15/32 **Incline:** 2
Existing Roof Systems: — Class A Spray Applied Foam and Coating System covered with:
Slip Sheet: — "Pyromat", 10 mil min.
Membrane: — "C-EPDM Type 2 (black)" or "C-EPDM Type 2 (white)" mechanically fastened or fully adhered.
10. **Deck:** C-15/32 **Incline:** 1
Existing Roof: — Class A BUR covered with:
Insulation: — Isocyanurate, 1 in. min, covered with 1/2 in. fiberboard.
Membrane: — "2001 TPA", 40-100 mil (TPA), mechanically fastened.
11. **Deck:** C-15/32 **Incline:** 2
Existing Roof System: — Insulated or noninsulated cap sheet, Class A, B or C system to retain the existing Classification covered with:
Membrane: — "2001 TPA", 40-100 mil (TPA).
12. **Deck:** C-15/32 **Incline:** 1
Existing Roof: — Class A BUR covered with:
Insulation: — Isocyanurate, 1 in. min, covered with 1/2 in. fiberboard.
Membrane: — "2001 TPA-FB", 40-100 mil (TPA).
13. **Deck:** C-15/32 **Incline:** 2
Existing Roof System: — Insulated or noninsulated cap sheet, Class A, B or C system to retain the existing Classification covered with:
Membrane: — "2001 TPA-FB", 40-100 mil (TPA).
14. **Deck:** C-15/32 **Incline:** 2
Existing Roof System: — Insulated or noninsulated cap sheet, Class A, B or C system to retain the existing Classification covered

with:

Insulation (Optional): — One of the following, any thickness: a) Perlite. b) Fiberboard. c) Rmax Inc. Multi-Max-3 or "Therमारoo Plus-3". d) Firestone "ISO 95+GL", "ISO 95+GW". e) Apache Products "Apache Pyrox", "Apache White Line" or "Apache Tapered Pyrox". f) Johns Manville "ISO 1". g) Atlas Roofing "ACFoam II".

Membrane: — "2001 CPA or Kelly CPA" (PVC).

15. **Deck:** C-15/32

Incline: 1/2

Existing Roof System: — Class A gravel surfaced B-U-R (gravel to remain intact).

Insulation: — Polystyrene/perlite or polystyrene/wood fiber (perlite 3/4 in. min thickness or 1/2 in. min USG Interiors "Micore ML 180", Hubert wood fiber, Georgia-Pacific Sturdi-top or Wood Fiber Industries "Structodeck", Celotex wood fiber, Temple-Inland "Fiber Base" or other wood fiber at 1 in. min thickness). The polystyrene is to be 3 in. max thickness.

Membrane: — "2001 CPA or Kelly CPA" (PVC), mechanically fastened.

16. **Deck:** C-15/32

Incline: 1/2

Existing Roof System: — Class A gravel surfaced B-U-R (gravel to remain intact).

Insulation: — One of the following, any thickness: a) Perlite. b) Fiberboard. c) Rmax Inc. Multi-Max-3 or "Therमारoo Plus-3". d) Firestone "ISO 95+GL", "ISO 95+GW". e) Apache Products "Apache Pyrox", "Apache White Line" or "Apache Tapered Pyrox". f) Johns Manville "ISO 1". g) Atlas Roofing "ACFoam II".

Membrane: — "2001 CPA or Kelly CPA" (PVC), mechanically fastened.

17. **Deck:** C-15/32

Incline: 1-1/2

Existing Roof System: — Insulated or noninsulated cap sheet, Class A, B or C system to retain the existing Classification covered with:

Insulation (Optional): — One of the following, any thickness: Celotex - "Top RII", "Hy-Tec", "Hy-Tec II" or "Hy-Therm AP".

Membrane: — "2001 CPA or Kelly CPA" (PVC), mechanically fastened.

18. **Deck:** C-15/32

Incline: 1/2

Existing Roofing System: — Class A BUR with gravel or smooth surfaced-covered with:

Insulation: — One layer Johns Manville "Retrofit Board", (1/2 in).

Base Sheet (Optional): — One or more layers Type G1 or G2 glass fiber base sheet or "M15GS", "M2GS" or "M3GS" base sheet.

Membrane: — "T4.5CS", "T4.5 CM" or "M3.0PS" (modified bitumen), (torch or hot asphalt applied).

Surfacing: — Gravel-400 lbs/sq.

19. **Deck:** C-15/32

Incline: 1/2

Existing Roofing System: — Class A gravel or smooth surfaced-covered with:

Insulation: — One layer Johns Manville "Retrofit Board" (1/2 in), Perlite, 3/4 in. min, polyisocyanurate, polyisocyanurate composite, urethane, urethane composite or glass fiber; 1 in. min. All insulation joints offset from plywood joints by 6 in.

Base Sheet (Optional): — One or more layers Type G1 or G2 glass fiber base sheet or "M15GS" or "M2GS" base sheet.

Ply Sheet: — "M3GS" (modified bitumen).

Membrane: — "M3.8GMFR" (modified bitumen).

20. **Deck:** C-15/32

Incline: 1/2

Existing Roof System: — Class A, B or C roofing system, is covered with:

Barrier Board: — Gypsum board.

Membrane: — "C-EPDM-C Type 1" or "C-EPDM-C Reinforced", 0.045 or 0.060 in., mechanically fastened.

21. **Deck:** NC

Incline: 1

Existing Roof System: — Class A, B or C roofing system, gravel may be removed on gravel built-up system.

Insulation: — Owens Corning Specialty & Foam Products "Fan-Fold" or one layer of "Durapink", 1 in. max, mechanically fastened.

Slip Sheet (Optional): — Lydall "Manniglas 1200".

Membrane: — "C-EPDM-C Reinforced", 0.045 or 0.060 in.

22. **Deck:** NC

Incline: 1/2

Existing Roof System: — Class A, B or C mineral or smooth surfaced cap sheet roofing system covered with:

Membrane: — "C-EPDM-C", fully adhered.

23. **Deck:** NC

Incline: 1

Existing Roof System: — Class A, B or C roofing system (gravel may be removed from gravel built-up system).

Insulation: — Tenneco "AMOCOR@-PB6, PB6W, PG38 or PG39", mechanically fastened.

Membrane: — "C-EPDM-C Reinforced" membrane, mechanically fastened.

24. **Deck:** C-15/32

Incline: 1/4

Existing Roof System: — Class A, roofing system gravel maintained on gravel built-up system, covered with:

Insulation: — Tenneco "AMOCOR@-PB6, PG38 or PG39".

Membrane: — "TPO-K", "TPO-K FR" or "TPO-K Plus 1", mechanically fastened.

25. **Deck:** NC

Incline: 1/4

Existing Roof System: — Class A, B or C roofing (gravel may be removed from gravel built-up system).

Insulation: — Tenneco "AMOCOR@-PB6, PB6W, PG38 or PG39", mechanically fastened.

Slip Sheet: — Atlas Roofing "FR 10", mechanically fastened.

Membrane: — "TPO-K FR", mechanically fastened.

Class A

1. **Deck:** C-15/32

Incline: ¼

Existing Roof System: — Class A, roofing system gravel maintained on gravel built-up system, covered with:

Insulation: — Tenneco "AMOCOR@-PB6, PG38 or PG39".

Membrane: — "Reinforced TPO", "White TPO Membrane" or Carlisle Syntec "Sure-Weld", mechanically fastened.

Class B

1. **Deck:** C-15/32

Incline: 1/4

Existing Roof System: — Class A, B or C covered with:

Vapor Retarder (Optional): — Min 4 mil "Pyroethylene Air Seal" (not Classified)

Insulation (Optional): — Perlite, polystyrene, polyurethane, polyurethane/perlite composite, glass fiber, isocyanurate, phenolic or wood fiber, 3 in. max, laid loosely.

- Gypsum Board:** — Min 1/2 in., mechanically fastened
Membrane: — "C-EPDM (black)", mechanically fastened or fully adhered.
2. **Deck:** C-15/32 **Incline:** 3/4
Existing Roof System: — Class B covered with:
Slip Sheet (Optional): — "PyroMat", 10 mil min.
Membrane: — "C-EPDM Type 1 (black)", mechanically fastened or fully adhered.
3. **Deck:** C-15/32 **Incline:** 1/4
Existing Roof System: — Class B covered with:
Slip Sheet (Optional): — "PyroMat", 10 mil min.
Membrane: — "C-EPDM (black)", mechanically fastened or fully adhered.
4. **Deck:** C-15/32 **Incline:** 2
Existing Roof System: — Class B system to retain the existing Classification.
Insulation (Optional): — One or more layers glass fiber, polyisocyanurate, perlite/polyisocyanurate composite polyurethane or perlite/polyurethane composite, 6.5 in. max.
Ply Sheet: — Three layers Type G1 GAF Gafglas Ply 4 or Gafglas Ply 3, hot mopped.
Surfacing: — Grundy Fibered Aluminum Coating 1-1/2 gal/sq. covered with:
Membrane: — "2001 CPA or Kelly CPA" (PVC).
5. **Deck:** C-15/32 **Incline:** 1/2
Existing Roofing System: — Class A or B gravel or smooth surfaced-covered with:
Insulation (Optional): — One layer Johns Manville "Retrofit Board", (1/2 in), Perlite, glass fiber, polyisocyanurate, polyisocyanurate composite, urethane, urethane composite, EPS/perlite, any thickness.
Base Sheet (Optional): — One or more layers Type G1 or G2 glass fiber base sheet or "M15GS", "M2GS", "M3GS", "M4PS" or "T4.5CS".
Membrane: — "M4.5CMFR", "M4GMFR", "M4PGFR", "T4GMFR" or "T4CMFR" (modified bitumen).
Surfacing: — Gravel-400 lbs/sq.
6. **Deck:** C-15/32 **Incline:** 1/2
Existing Roofing System: — Class A or B gravel or smooth surfaced-covered with:
Insulation (Optional): — One layer Johns Manville "Retrofit Board" (1/2 in), Perlite, glass fiber, polyisocyanurate, polyisocyanurate composite, urethane, urethane composite, EPS/perlite, any thickness.
Base Sheet (Optional): — One or more layers Type G1 or G2 glass fiber base sheet or "M15GS" or "M2GS" base sheet.
Ply Sheet: — One to three layers Type G1 or G2 glass fiber ply sheet or "M15GS", "M2GS" or "M3GS" (modified bitumen).
Membrane: — "M3.8GMFR" (modified bitumen).
7. **Deck:** C-15/32 **Incline:** 1/2
Existing Roof System: — Class A or B roofing system covered with:
Insulation: — Carlisle HP Recovery Board, 1/2 to 3 in.; Carlisle HP Recovery Board over any Classified insulation, any combination, any thickness.
Membrane: — "C-EPDM-C Reinforced", 0.045 or 0.060 in., may be mechanically fastened.

Class A, B and C

1. **Deck:** NC **Incline:** 1
Existing Roofing System: — Class A, B or C with gravel or smooth surfaced-covered with:
Insulation (Optional): — One layer Johns Manville "Retrofit Board", (1/2 in), Perlite, glass fiber, wood fiber board, "Retrofit board", polyisocyanurate, polyisocyanurate composite, urethane, urethane composite, EPS/perlite, any thickness.
Base Sheet (Optional): — One or more layers Type G1 or G2 glass fiber base sheet or "M15GS", "M2GS", "M3GS", "M4PS" or "T4.5CS".
Membrane: — "M4.5CMFR", "M4GMFR", "M4PGMFR", "T4GMFR" or "T4CMFR" (modified bitumen).
2. **Deck:** C-15/32 **Incline:** 1/2
Existing Roofing System: — Class A, B or C gravel or smooth surfaced-covered with:
Insulation (Optional): — One layer Johns Manville "Retrofit Board" (1/2 in), Perlite, glass fiber, wood fiber board, "Retrofit board", polyisocyanurate, polyisocyanurate composite, urethane, urethane composite, EPS/perlite, any thickness.
Base Sheet (Optional): — One or more layers Type G1 or G2 glass fiber base sheet or "M15GS" or "M2GS" base sheet.
Ply Sheet: — "M3GS" (modified bitumen).
Membrane: — "M3.8GMFR" (modified bitumen).
3. **Deck:** C-15/32 **Incline:** 1/2
Existing Roof System: — Class A, B or C mineral or smooth surfaced non-modified asphalt coated cap sheet roofing system, to retain the existing Classification, is covered with:
Slip Sheet (Optional): — One or more layers of the following: Lydall "Manniglas 1200" mat, 15 mil, Atlas Roofing "FR-10", Elk "Versashield" or Type G2 base sheet, laid loosely.
Membrane: — "C-EPDM-C Reinforced", mechanically fastened.
4. **Deck:** C-15/32 **Incline:** 1/2
Existing Roof System: — Class A, B or C roofing system, to retain the existing Classification, is covered with:
Slip Sheet: — One or more layers of the following - Lydall "Manniglas 1200" mat, 15 mil, Atlas Roofing "FR-10", Elk "Versashield" or Type G2 base sheet, laid loosely.
Membrane: — "TPO-K" or "TPO-K Plus 1", mechanically fastened.
5. **Deck:** C-15/32 **Incline:** 3/4
Existing Roof System: — Class A, B or C roofing system, to retain the existing Classification, is covered with:
Slip Sheet: — One or more layers of the following - Lydall "Manniglas 1200" mat, 15 mil, Atlas Roofing "FR-10", Elk "Versashield" or Type G2 base sheet, laid loosely.
Membrane: — "TPO-K FR", mechanically fastened.
6. **Deck:** C-15/32 **Incline:** 1/2
Existing Roof System: — Class A, B or C roofing system, to retain the existing Classification, is covered with:
Slip Sheet: — One or more layers of the following - Lydall "Manniglas 1200" mat, 15 mil, Atlas Roofing "FR-10", Elk "Versashield", Carlisle "FR Base Sheet 1s", Carlisle "FR Base Sheet 2S" or Type G2 base sheet, laid loosely.
Membrane: — "Reinforced TPO", "White TPO Membrane" or Carlisle Syntec "Sure-Weld", mechanically fastened .

OTHERS SYSTEMS**Class A****1. Deck: NC****Incline: 1**

Slip Sheet (Optional): — Elk "VersaShield", mechanically attached.

Base Sheet (Optional): — Type 15, 30, G1 or G2, mechanically attached or hot mopped.

Membrane: — "Kelly CPA" or "2001 CPA".

Building Unit: — Field-Assembled Photovoltaic (Solar) Module Systems, United Solar Ovonic "PVL-29, -31, -58, -60, -62, -64, -68, -87, -93, -116, -120, -124, -128, 136," self-adhered.

2. Deck: NC**Incline: 1**

Barrier Board (Optional): — G-P Gypsum DensDeck® or gypsum wallboard, 1/4 in. thick min.

Slip Sheet (Optional): — Elk "VersaShield", mechanically attached.

Base Sheet (Optional): — Type 15, 30, G1 or G2, mechanically attached or hot mopped.

Membrane: — "Standard EPDM", "Premium Whaleskin/81 (black)", "C-EPDM (black)", "Premium Whaleskin/81 (white)", "C-EPDM Type 2 (white)" or "C-EPDM Type 1 (black)" 45 or 60 mil.

Surfacing: — Field-Assembled Photovoltaic (Solar) Module Systems, United Solar Ovonic "PVL-29, -31, -58, -60, -62, -64, -68, -87, -93, -116, -120, -124, -128, -136," self-adhered.

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