

TGFU.R8992 - Roofing Systems

Note: We are enhancing our systems and you may notice missing/outdated data. During this interim period, please refer to your Certificate of Compliance or contact our Customer Service at <https://www.ul.com/about/locations>.

Roofing Systems

[See General Information for Roofing Systems](#)

SIKA SARNAFIL INC

R8992

CANTON COMMERCE CENTER

100 DAN RD

CANTON, MA 02021-2842 USA

References to "Sikacoat" include "Sikacoat FC3500", "Sikacoat BC400", "Sikacoat FC3400", "Sikacoat BC420".

Reference to "Sarnatherm m" include "Tapered Sarnatherm m" or "Sarnatherm m 25 psi".

"Sarnatherm m Cover Board" may be placed over the "Sarnatherm m" in any of the following classifications.

Reference to "Sarnatherm-R Insulation" include "Sarnatherm-R Tapered Insulation".

Reference to "Sarnatherm-R CG Insulation" include "Sarnatherm-R CG Tapered Insulation".

"Sarnatherm-A Roof Board" may be used over any "Sarnatherm" polyisocyanurate insulation product in any of the following Classifications.

"Sarnatherm Roof Board-R" may be used over any Sika Sarnafil Inc. polyisocyanurate insulation product in any of the following Classifications.

"Sarnatherm i", "Sarnatherm i CG" and "Sarnatherm i Roof Board" insulation may be used wherever polyisocyanurate insulation is specified.

"G 410-48 TEXTURED", "G 410-54 TEXTURED", "G 410-54 FELTBACK TEXTURED", "G 410-60 TEXTURED", "G 410-72 TEXTURED" and "G 410-80 TEXTURED" are acceptable alternates to "G 410-48", "G410-14", "G410-14/Felt", "G 410-60", "G 410-72" and "G 410-80" respectively.

A minimum 1-in. thick layer of "SarnathermM CG", "SarnathermM 25 PSI CG", "SarnathermM AGF", "SarnathermM 25 PSI AGF" or Johns Manville "ENRGY 3" in any existing non-combustible roof deck Classification. This can be above or below additional insulation layers described in the Classified roof covering system. The resulting roof covering assembly can be used over a combustible roof deck (minimum 15/32-in. thick plywood). All insulation joints must be staggered a minimum of 6-in. from the roof deck joints and from the insulation joints directly below. The maximum incline shall be in accordance with the Classification established for the original roof covering system as published on UL's Product iQ™ database for the Classifications published for the product category of Roofing Systems (TGFU); however, the incline cannot exceed 3:12.

"RetroPlus" is an acceptable alternate to "SarnathermM CG", "SarnathermM 25 PSI CG", "SarnathermM AGF", "SarnathermM 25 PSI AGF" or Johns Manville "ENRGY 3" in any applicable Classification. "RetroPlus" may be placed over "SarnathermM CG", "SarnathermM 25 PSI CG", "SarnathermM AGF", "SarnathermM 25 PSI AGF" or Johns Manville "ENRGY 3" in any applicable Classification.

Any of the following insulations may be used in lieu of Johns Manville "ENRGY 3" in any applicable Classification: "SarnathermM AGF", "SarnathermM 25 PSI AGF", "SarnathermM CG", "SarnathermM 25 PSI CG" or Johns Manville "ENRGY 3 CGF", "ENRGY 3 AGF", "ENRGY 3 25 psi AGF" or "ENRGY 3 25 psi CGF".

"InvinsaFoam" or "Tapered InvinsaFoam" may be used in lieu of the combination of "Invinsa" and "SarnathermM CG", "SarnathermM 25 PSI CG", "SarnathermM AGF", "SarnathermM 25 PSI AGF" or Johns Manville "ENRGY 3" in any Classified system where "Invinsa" is directly over "SarnathermM CG", "SarnathermM 25 PSI CG", "SarnathermM AGF", "SarnathermM 25 PSI AGF" or Johns Manville "ENRGY 3".

Johns Manville "ENRGY 3 FR" is a suitable alternate to "SarnathermM CG", "SarnathermM 25 PSI CG", "SarnathermM AGF", "SarnathermM 25 PSI AGF" or Johns Manville "ENRGY 3" in any applicable Classification. Johns Manville "Invinsa FR" is a suitable alternate to Johns Manville "Invinsa" in any applicable Classification.

Johns Manville "Invinsa" may be used over "SarnathermM CG", "SarnathermM 25 PSI CG", "SarnathermM AGF", "SarnathermM 25 PSI AGF" or Johns Manville "ENRGY 3" or as an acceptable alternate to "SarnathermM CG", "SarnathermM 25 PSI CG", "SarnathermM AGF", "SarnathermM 25 PSI AGF" or Johns Manville "ENRGY 3", in any of the following Classifications.

Minimum 1/2-in. thick gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" may be used in any existing noncombustible roof deck Classification. When this is done, the resulting roof covering system is acceptable for use over combustible (15/32-in. thick minimum) roof decks. The joints in the gypsum board and barrier board are offset a minimum of 6-in. with the joints in the roof deck.

Minimum 1/2-in. thick gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" may be used in any existing noncombustible roof deck Classification. When this is done, the resulting roof covering system is acceptable for use over combustible (15/32-in. thick minimum) roof decks. The joints in the gypsum board or barrier board are offset a minimum of 6-in. with the joints in the roof deck. If polystyrene insulation is used in the existing noncombustible roof deck Classification, it must be placed beneath the gypsum board Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard"

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

Uniform thickness or tapered insulation may be used in the following systems provided they do not exceed the indicated incline or thickness.

Unless otherwise indicated, on non-combustible roof decks, "Sarnatherm Roofboard H" or "Sarnatherm Composite Roofboard H" or Hunter Panels "H-Shield HD" or "H-Shield HD Composite" may replace or be used in addition to, any "Sarnatherm" product or Hunter Panels "H-Shield" product or any UL Classified wood fiberboard, in any UL Classified insulated roof covering system assembly and retain the classification of that assembly, though the maximum slope cannot exceed 1/2:12 if "Sarnatherm Roofboard H" or "Sarnatherm Composite Roofboard H" or Hunter Panels "H-Shield HD" or "H-Shield HD Composite" is used directly below TPO membrane. Unless otherwise indicated, on combustible roof decks, "Sarnatherm Roofboard H" or "Sarnatherm Composite Roofboard H" or Hunter Panels "H-Shield HD" or "H-Shield HD Composite" may be used in addition to any "Sarnatherm" or Hunter Panels H-Shield product or any UL Classified wood fiber board, in any insulated UL Classified roof covering system assembly and retain the classification of that assembly, though the maximum slope cannot exceed 1/2:12 if "Sarnatherm Roofboard H" or "Sarnatherm Composite Roofboard H" or Hunter Panels "H-Shield HD" or "H-Shield HD Composite" is used directly below TPO membrane.

"Sarnatherm Roofboard H" or "Sarnatherm Composite Roofboard H" or Hunter Panels "H-Shield HD" or "H-Shield HD Composite" may be used over any UL Classified polystyrene on non-combustible roof decks. Maximum incline shall be in accordance with the Classification established for the insulation/membrane roof covering system, but cannot exceed 2:12.

"Sarnacol 2170R" is an acceptable alternate to "Sarnacol 2170".

"Vapor Retarder SA 31", "Ply Sheet HA 87" adhered with hot roof covering asphalt, "Ply Sheet TA 87" heat fused, "Vapor Barrier SA 106" self-adhered, "Ply Sheet HA 118" adhered with hot roof covering asphalt, and "Vapor Retarder TA 138" heat fused installed directly to the deck may be used in all applicable non-combustible roof deck roof covering systems or combustible roof deck roof covering systems where minimum 1/4-in. thick Georgia-Pacific Gypsum Corp. "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck Prime 2™ Roofboard" or "DensDeck DuraGuard® Roofboard" or CertainTeed Gypsum Inc "GlasRoc", United States Gypsum Co. "SECUROCK® Glass-Mat Roof Board (Type SGMRX)" or National Gypsum Co "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" used as a barrier board is installed above the sheet.

Unless otherwise indicated, the insulation and barrier board adhesive designated "Sarnacol LRA" may be used to adhere insulation or barrier boards to the roof deck, to adhere insulation and barrier boards together or to adhere layers of insulation together, in all applicable Classification.

For Combustible Roof Decks - Class A:

1. A minimum 3-in. thick layer or a minimum two layers of 1.5-in. thick "Sarnatherm Composite Roofboard H" or Hunter Panels, "H-Shield HD Composite" is placed directly over a combustible roof deck and is covered with any UL Classified roof covering membrane used in any UL Class A roof covering assembly to achieve a Class A fire Classification. As an alternative, any UL Classified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used below the 3-in. minimum total thickness of "Sarnatherm Composite Roofboard H" or Hunter Panels "H-Shield HD Composite". The insulation may be loosely laid or attached with fasteners and plates, hot roof covering asphalt or cold adhesive. A vapor barrier (non-UL classified) may also be used below the insulation. All insulation joints must be staggered a minimum of 6-in. from the roof deck joints or from the insulation joints directly below. The maximum incline shall be in accordance with the Classification established for the membrane/insulation roof covering assembly, however the incline cannot exceed 1/2:12.

2. A minimum 1.9-in. thick layer of "Sarnatherm Composite Roofboard H or Hunter Panels "H-Shield HD Composite" is placed over a minimum 1 layer of Carlisle Syntec Inc. "FR Base Sheet 1S" or GAF "VersaShield FB-1S" over a combustible roof deck. The insulation is covered with any UL Classified roof covering membrane used in any UL Class A roof covering assembly to achieve a Class A fire Classification. As an alternative, any UL Classified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used below the 1.9-in. minimum total thickness of "Sarnatherm Composite Roofboard H" or Hunter Panels "H-Shield HD Composite". The insulation may be loosely laid or attached with fasteners and plates, hot roof covering asphalt or cold adhesive. A vapor barrier (non-UL classified) may also be used below the insulation. All insulation joints must be staggered a minimum of 6-in. from the roof deck joints or from the insulation joints directly below. The maximum incline shall be in accordance with the Classification established for the membrane/insulation roof covering assembly, however the incline cannot exceed 1/2:12.

3. A minimum 1/2-in. thick layer of "Sarnatherm Roofboard H" or Hunter Panels "H-Shield HD" over a minimum 2.5-in. thick layer of any Sika Sarnafil Inc. or Hunter Panels Classified polyisocyanurate insulation is placed directly over a combustible roof deck and is covered with any UL Classified roof covering membrane used in any UL Class A roof covering assembly to achieve a Class A fire Classification. As an alternative, any UL Classified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used below the 3-in. minimum total

thickness. The insulation may be loosely laid or attached with fasteners and plates, hot roof covering asphalt or cold adhesive. A vapor barrier (non-UL classified) may also be used below the insulation. All insulation joints must be staggered a minimum of 6-in. from the deck joints or from the insulation joints directly below. The maximum incline shall be in accordance with the Classification established for the membrane/insulation roof covering assembly, however the incline cannot exceed 1/2:12.

4. A minimum 1/2-in. thick layer of "Sarnatherm Roofboard H" or Hunter Panels "H-Shield HD" over a minimum 1.4-in. thick layer of any Sika Sarnafil Inc or Hunter Panels Classified polyisocyanurate insulation is placed over a minimum 1 layer of Carlisle Syntec Inc. "FR Base Sheet 1S" or GAF "VersaShield FB-1S" over a combustible roof deck. The insulation is covered with any UL Classified roof covering membrane used in any UL Class A roof covering assembly to achieve a Class A fire Classification. As an alternative, any UL Classified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used below the 1.9-in. minimum total thickness. The insulation may be loosely laid or attached with fasteners and plates, hot roof covering asphalt or cold adhesive. A vapor barrier (non-UL classified) may also be used below the insulation. All insulation joints must be staggered a minimum of 6-in. from the roof deck joints or from the insulation joints directly below. The maximum incline shall be in accordance with the Classification established for the membrane/insulation roof covering assembly, however the incline cannot exceed 1/2:12.

5. A minimum 1/4-in. thick layer of Johns Manville "Invinsa FR" is placed directly over a combustible roof deck (minimum 15/32-in. thick plywood) and is covered with any UL Classified roof covering membrane used in any UL Class A roof covering assembly to achieve a Class A fire Classification. As an alternative, "SarnathermM CG", "SarnathermM 25 PSI CG", "SarnathermM AGF", "SarnathermM 25 PSI AGF" or Johns Manville "ENRGY 3", any thickness, may be used below minimum 1/4-in. thick "Invinsa FR". All insulation joints must be staggered a minimum of 6-in. from the roof deck joints and from the insulation joints directly below. The maximum incline shall be in accordance with the Classification established for the membrane/insulation(s) roof covering assembly as published on UL's Product iQ™ database for the Classifications published for the product category of Roofing Systems (TGFU); however, the incline cannot exceed 3:12.

6. A minimum 1-in. thick layer of Johns Manville "ENRGY 3 FR" is placed directly over a combustible roof deck (minimum 15/32-in. thick plywood) and is covered with any UL Classified roof covering membrane used in any UL Class A roof covering assembly to achieve a Class A fire Classification. As an alternative, "SarnathermM CG", "SarnathermM 25 PSI CG", "SarnathermM AGF", "SarnathermM 25 PSI AGF" or Johns Manville "ENRGY 3", any thickness, may be used below minimum 1-in. thickness of Johns Manville "ENRGY 3 FR". All insulation joints must be staggered a minimum of 6-in. from the roof deck joints and from the insulation joints directly below. The maximum incline shall be in accordance with the Classification established for the membrane/insulation(s) roof covering assembly as published on UL's Product iQ™ database for the Classifications published for the product category of Roofing Systems (TGFU); however, the incline cannot exceed 3:12.

7. A minimum 1-in. layer of Atlas Roofing Corp. "AC Foam IV" or "Sarnatherm a CG Plus" placed directly over a combustible roof deck and covered with any UL Classified roof covering membrane used in any UL Class A roof covering assembly to achieve a Class A fire Classification. As an alternate, any UL Classified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used above or below minimum 1-in. total thickness of Atlas Roofing Corp "AC Foam IV" or "Sarnatherm a CG Plus" All insulation joints must be staggered a minimum of 6-in. from the roof deck joints or from the insulation joints directly below. The maximum incline shall be in accordance with the Classification established for the membrane/insulation roof covering assembly, however, the incline cannot exceed 1:12.

8. A minimum 3-in. layer or a minimum two layers of 1.5 in. thick of Atlas Roofing Corp. "AC Foam III" or "Sarnatherm a CG" is placed directly over a combustible roof deck and is covered with any UL Classified roof covering membrane used in any UL Class A roof covering assembly to achieve a Class A fire Classification. As an alternative, any UL Classified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used below minimum 3-in. total thickness of Atlas Roofing Corp "AC Foam III" or "Sarnatherm a CG". The insulation may be loosely laid or attached with fasteners and plates, hot roof covering asphalt or cold adhesive. A vapor barrier (non-UL classified) may also be used below the insulation. All insulation joints must be staggered a minimum of 6-in. from the roof deck joints or from the insulation joints directly below. The maximum incline shall be in accordance with the Classification established for the membrane/insulation roof covering assembly, however the incline cannot exceed 1/2:12.

9. A minimum 1/2 in. thick layer of "Sarnatherm Roof Board-H FR" is placed directly over a combustible roof deck and is covered with any UL Classified roof covering membrane used in any UL Class A roof covering assembly to achieve a Class A fire Classification. As an alternative, any UL Classified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used below the minimum 1/2 in. minimum thickness of "Sarnatherm Roof Board-H FR". All layers may be loosely laid or attached with fasteners and plates, hot roof covering asphalt or cold adhesive. A vapor barrier (non-UL classified) may also be used below the insulation. All insulation joints must be staggered a minimum of 6- in. from the roof deck joints or from the insulation joints directly below. The maximum incline shall be in accordance with the Classification established for the membrane/insulation roof covering assembly, however the incline cannot exceed 1/2:12.

10. A minimum 1/2 in. thick layer of "Sarnatherm Roof Board-H FR" over a minimum 3-1/2 in. layer of any UL Classified EPS insulation is placed directly over a combustible roof deck and is covered with any UL Classified roof covering membrane used in any UL Class A roof covering assembly to achieve a Class A fire Classification. Any UL Classified insulation, any combination, any thickness, may be used below the 4-1/2 in. minimum total thickness. Insulation may be loosely laid or attached with fasteners and plates, hot roof covering asphalt or cold adhesive. "Sarnatherm Roof Board-H FR" must be attached with fasteners and plates. A vapor barrier (non-UL classified) may also be used below the insulation. All insulation joints must be staggered a minimum of 6-in. from the roof deck joints or from the insulation joints directly below. The maximum incline shall be in accordance with the Classification established for the membrane/insulation roof covering assembly as published on UL's Product iQ™ database for the Classifications published for the product category of Roofing Systems (TGFU); however, the incline cannot exceed 1/2:12.

11. A minimum 1/2 in. thick layer of "Sarnatherm Roofboard H" is placed directly over a combustible roof deck and is covered with any UL Classified roofing membrane used in any UL Class A roof covering assembly to achieve a Class A fire Classification. As an alternative, any UL Classified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used below the minimum 1/2 in.

minimum thick. All layers may be loosely laid or attached with fasteners and plates, hot roofing asphalt or cold adhesive. A vapor barrier (non-UL classified) may also be used below the insulation. All insulation butt joints must be staggered a minimum of 12 in. from the roof deck butt joints or from the insulation butt joints directly below. The maximum incline shall be in accordance with the Classification established for the membrane/insulation roofing assembly as published on UL's Product iQ for the product category Roofing Systems (TGFU); however the incline cannot exceed 1:12.

For Combustible Roof Decks - Class B:

1. A minimum 1.9-in. layer of "Sarnatherm Composite Roofboard H" or Hunter Panels "H-Shield-CG", "H-Shield HD Composite" is placed directly over a combustible roof deck and is covered with any UL Classified roof covering membrane used in any UL Class B roof covering assembly to achieve a Class B fire Classification. As an alternative, any UL Classified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used below the 1.9-in. minimum thickness layer of Sika Sarnafil Inc. or Hunter Panels Classified polyisocyanurate insulation. The insulation may be loosely laid or attached with fasteners and plates, hot roof covering asphalt or cold adhesive. A vapor barrier (non-UL classified) may also be used below the insulation. All insulation joints must be staggered a minimum of 6-in. from the deck joints or from the insulation joints directly below. The maximum incline shall be in accordance with the Classification established for the membrane/insulation roof covering assembly, however the incline cannot exceed 1/2:12.

2. A minimum 1/2-in. thick layer of "Sarnatherm Roofboard H", or Hunter Panels "H-Shield HD" over a minimum of 1.4-in. layer of any Sika Sarnafil Inc or Hunter Panels Classified polyisocyanurate insulation is placed directly over a combustible roof deck and is covered with any UL Classified roof covering membrane used in any UL Class B roof covering assembly to achieve a Class B fire Classification. As an alternative, any UL Classified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used below the 1.9-in. minimum thickness layer. The insulation may be loosely laid or attached with fasteners and plates, hot roof covering asphalt or cold process adhesive. A vapor barrier (non-UL classified) may also be used below the insulation. All insulation joints must be staggered a minimum of 6-in. from the roof deck joints or from the insulation joints directly below. The maximum incline shall be in accordance with the Classification established for the membrane/insulation roof covering assembly, however the incline cannot exceed 1/2:12.

3. A minimum 1/2 in. layer of "Sarnatherm Roof Board-H FR " is placed directly over a combustible roof deck and is covered with any UL Classified roof covering membrane used in any UL Class A or B roof covering assembly to achieve a Class B fire Classification. Any UL Classified insulation, any combination, any thickness, may be used below the "Sarnatherm Roof Board-H FR ". All layers may be loosely laid or attached with fasteners and plates, hot roofing asphalt or cold adhesive. A vapor barrier (non-UL classified) may also be used below the insulation. All insulation joints must be staggered a minimum of 6- in. from the roof deck joints or from the insulation joints directly below. The maximum incline shall be in accordance with the Classification established for the membrane/insulation roof covering assembly published on UL's Product iQ™ database for the Classifications published for the product category of Roofing Systems (TGFU).

FLUID APPLIED COATING SYSTEMS

Class A

1. **Deck:** NC

Incline: 2

Surfacing: — "Sikacoat", applied in two or more coats, for a total of 2 to 5-gal./100-ft.². May be reinforced with polyester fabric (maximum 3-oz/yd.²).

2. **Deck:** NC

Incline: 2

Surfacing: — "Sikacoat", 6 to 12-gal./100-ft.², reinforced with polyester fabric (maximum 3-oz/yd.²).

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

Incline: 2

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard", mechanically fastened.

Coating: — "Sikacoat", applied at 6 to 12-gal./100-ft.², reinforced with polyester fabric (maximum 3-oz/yd.²).

4. **Deck:** NC

Incline: Unlimited

Surfacing: — "Sikacoat FC3600" applied at 2.5-gal per 100-ft.².

MAINTENANCE AND REPAIR SYSTEMS

Class A, B, C

1. **Deck:** NC

Incline: 3/4

Existing Roof System: — Class A, B or C (gravel may be removed) to retain the existing Classification covered with:

Insulation: — "Sarnatherm I" (tapered or uniform thickness), mechanically fastened.

Membrane: — "G 410-12", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96" (PVC), fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC"

adhesive applied at 1-1/2 gal./100-ft.², "S 327-48", "S 327-60", "S 327-72" and "S 327-80" products are mechanically fastened.

2. **Deleted.**

3. **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 is covered with:

Slip Sheet (Optional): — "Sarnafelt NWP", loose laid.

Insulation (Optional): — One of the following, any thickness:

- a. Perlite
- b. Fiberboard
- c. "Sarnatherm a CG Plus"
- d. Firestone Building Products Co. LLC "Iso 95+GL", "Iso 95+GW"
- e. Deleted
- f. Johns Manville "ENRGY 3"
- g. "Sarnatherm I" or "Sarnatherm II"
- h. Atlas Roofing Corp. "ACFoam II"
- i. "Sarnatherm a"
- j. "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard"
- k. "Sarnatherm m"
- l. "Sarnatherm-R Insulation"
- m. "Sarnatherm Roof Board A-III"

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54/Felt", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK", "S 327-96" (PVC) mechanically fastened.

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

Incline: 2

Existing Roof System: — Insulated or non-insulated cap sheet, Class A, B or C System to retain the existing Classification is covered with:

Insulation (Optional): — One of the following, any thickness:

- a. Perlite
- b. Fiberboard
- c. "Sarnatherm a CG Plus"
- d. Firestone Building Products Co. LLC "Iso 95+GL", "Iso 95+GW"
- e. Deleted
- f. Johns Manville "ENRGY 3"
- g. "Sarnatherm I" or "Sarnatherm II"
- h. Atlas Roofing Corp. "ACFoam II"
- i. "Sarnatherm a"
- j. "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard"
- k. "Sarnatherm m"
- l. "Sarnatherm-R Insulation"
- m. "Sarnatherm Roof Board A-III"

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96" (PVC), fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1.5 to 2.5-gal./100-ft.², "Sarnacol V949" at 1.5 to 2.5-gal./100-ft.² or "Sarnacol 2121" adhesive applied at 1.75-gal./100-ft.², "S327", mechanically fastened.

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

Incline: 1/2

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

Insulation (Optional): — One of the following, any thickness:

- a. Perlite
- b. Fiberboard
- c. "Sarnatherm a CG Plus"
- d. Firestone Building Products Co. LLC "Iso 95+GL", "Iso 95+GW"
- e. Deleted
- f. Johns Manville "ENRGY 3"
- g. "Sarnatherm I" or "Sarnatherm II"
- h. Atlas Roofing Corp. "ACFoam II"
- i. "Sarnatherm a"
- j. "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard"
- k. "Sarnatherm m"
- l. "Sarnatherm-R Insulation"
- m. "Sarnatherm Roof Board A-III"

Membrane: — "FASTENED-45", "FASTENED-60", "FASTENED-80", "FASTENED-45 FELTBACK", "FASTENED-60 FELTBACK" or "FASTENED-80 FELTBACK", mechanically fastened.

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

Incline: 2

Existing Roof System: — Insulated or noninsulated combination hot and cold Class A, B or C system to retain the existing Classification is covered with:

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96" (PVC), fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1.5 to 2.5-gal./100-ft.², "S 327-48", "S 327-60", "S 327-72" and "S 327-80" products are mechanically fastened.

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

Incline: 1/2

Existing Roof System: — Class A gravel surfaced BUR (gravel to remain intact).

Insulation: — Polystyrene/perlite or polystyrene/wood fiber (perlite 3/4-in. minimum thickness or 1/2-in. minimum United States Gypsum Co. 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. minimum thickness). The polystyrene is to be 3-in. maximum thickness.

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96" (PVC), fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1.5 to 2.5-gal./100-ft.², "Sarnacol 2121" adhesive applied at 1.75-gal./100-ft.² or "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK", "S 327-96", "FASTENED-45", "FASTENED-60", "FASTENED-80", "FASTENED-45 FELTBACK", "FASTENED-60 FELTBACK" or "FASTENED-80 FELTBACK", mechanically fastened.

7. **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. "Sarnatherm a CG Plus"
- d. Firestone Building Products Co. LLC "Iso 95+GL", "Iso 95+GW"
- e. Deleted
- f. Johns Manville "ENRGY 3"
- g. "Sarnatherm I" or "Sarnatherm II"
- h. Atlas Roofing Corp. "ACFoam II"
- i. "Sarnatherm a"
- j. "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard"
- k. "Sarnatherm m"
- l. "Sarnatherm-R Insulation"
- m. "Sarnatherm Roof Board A-III"

Slip Sheet (Optional): — "Sarnafelt NWP", loose laid.

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96" (PVC), fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1.5 to 2.5-gal./100-ft.², "Sarnacol 2121" adhesive applied at 1.75-gal./100-ft.² or "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK", "S 327-96" (PVC), FASTENED-45", "FASTENED-60", "FASTENED-80", "FASTENED-45 FELTBACK", "FASTENED-60 FELTBACK" or "FASTENED-80 FELTBACK, mechanically fastened.

8. **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 is covered with:

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

Slip Sheet (Optional): — "Sarnafelt NWP", loose laid.

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK", "S 327-96"(PVC).

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

Incline: 1-1/2

Existing Roof System: — Insulated or non-insulated cap sheet, Class A, B or C System to retain the existing Classification is covered with:

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

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96" (PVC), fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1.5 to 2.5-gal./100-ft.² or "Sarnacol 2121" adhesive applied at 1.75-gal./100-ft.², "S 327-48", "S 327-60", "S 327-72" and "S 327-80" products are mechanically fastened.

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

Incline: 1/4

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

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

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96" (PVC), fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1.5 to 2.5-gal./100-ft.² or "Sarnacol 2121" adhesive applied at 1.75-gal./100-ft.², "S 327-48", "S 327-60", "S 327-72" and "S 327-80" products are mechanically fastened.

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

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

Insulation (Optional): — One of the following, any thickness: "Sarnatherm", "Tapered Sarnatherm", "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard".

Slip Sheet (Optional): — "Sarnafelt NWP", loose laid.

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK", "S 327-96" (PVC) mechanically fastened.

12. 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 is covered with:

Insulation (Optional): — One of the following, any thickness: "Sarnatherm", "Tapered Sarnatherm", "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard".

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96" (PVC), fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1.5 to 2.5-gal./100-ft.², "Sarnacol V949" at 1.5 to 2.5-gal./100-ft.² or "Sarnacol 2121" adhesive applied at 1.75-gal./100-ft.², "S 327-48", "S 327-60", "S 327-72" and "S 327-80" products are mechanically fastened.

12a. Deck: C-15/32**Incline:** 1/2

Existing Roof System: — Insulated or non-insulated cap sheet, Class A, B or C System to retain the existing Classification is covered with:

Insulation (Optional): — One of the following, any thickness: "Sarnatherm", "Tapered Sarnatherm", "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard".

Membrane: — FASTENED-45", "FASTENED-60", "FASTENED-80", "FASTENED-45 FELTBACK", "FASTENED-60 FELTBACK" or "FASTENED-80 FELTBACK" mechanically fastened.

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 is covered with:

Insulation (Optional): — One of the following, any thickness:

- a. Perlite
- b. Fiberboard
- c. "Sarnatherm a CG Plus"
- d. Firestone Building Products Co. LLC "Iso 95+GL", "Iso 95+GW"
- e. Deleted
- f. Johns Manville "ENRGY 3"
- g. "Sarnatherm I" or "Sarnatherm II"
- h. Atlas Roofing Corp. "ACFoam II"
- i. "Sarnatherm a"
- j. "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard"
- k. "Sarnatherm m"
- l. "Sarnatherm-R Insulation"
- m. "Sarnatherm Roof Board A-III"

Membrane: — "ADHERED-60" (PVC), fully adhered with "Sikaplan Single Step" at 1.75-gal./100-ft.², "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive at 1.5 to 2.5-gal./100-ft.².

14. **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. thick minimum or 1/2-in. thick minimum United States Gypsum Co. 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. thick minimum thickness). The polystyrene is to be 3-in. thickness maximum.

Membrane: — "ADHERED-60" (PVC), fully adhered with "Sikaplan Single Step" adhesive applied at 1.75-gal./100-ft.², "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1.5 to 2.5-gal./100-ft.².

15. **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. "Sarnatherm a CG Plus"
- d. Firestone Building Products Co. LLC "Iso 95+GL", "Iso 95+GW"
- e. Deleted
- f. Johns Manville "ENRGY 3"
- g. "Sarnatherm I" or "Sarnatherm II"
- h. Atlas Roofing Corp. "ACFoam II"
- i. "Sarnatherm a"
- j. "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard"
- k. "Sarnatherm m"
- l. "Sarnatherm-R Insulation"
- m. "Sarnatherm Roof Board A-III"

Membrane: — ADHERED-60" (PVC), fully adhered with "Sikaplan Single Step" adhesive applied at 1.75-gal./100-ft.², "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1.5 to 2.5-gal./100-ft.².

16. **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 is covered with:

Insulation (Optional): — One of the following, any thickness: "Sarnatherm", "Tapered Sarnatherm", "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard".

Membrane: — "ADHERED-60" (PVC), fully adhered with "Sikaplan Single Step" adhesive applied at 1.75-gal./100-ft.², "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1.5 to 2.5-gal./100-ft.².

18. **Deleted.**

19. **Deleted.**

20. **Deleted.**

21. **Deleted.**

22. **Deleted.**

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

Incline: See Note

Existing Roof System: — Any Class A, B or C roof covering system, to retain the existing Classification, is covered with:

Membrane: — Any UL Classified membrane.

Note 1: Maximum incline shall be in accordance with Classification established for insulation/membrane roof covering system, but cannot exceed 2:12. TPO membranes are limited to 1/2:12 maximum slope.

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

Existing Roof System: — To maintain existing Classifications) - Any Class A, B or C, uncoated, insulated or uninsulated, Type G3 mineral surfaced cap BUR system or modified bitumen membrane system.

Insulation: — (Optional) "Sarnatherm", "Sarnatherm a", "Sarnatherm m", "Sarnatherm-R Insulation", Hunter Panels "H-Shield", "H-Shield CG", "H-Shield HD Composite CG", Atlas Roofing Corp. "ACFoamII", "ACFoamIII", "ACFoamIV", IKO "IKOTherm", "IKOTherm III", Johns-Manville "ENRGY 3" or Rmax Operating LLC "Multi-Max FA-3" or "Ultra-Max".

Cover Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)", Temple-Inland "GreenGlass" or CertainTeed "GlasRoc".

Membrane: — "G 410 FELTBACK" or "S 327 FELTBACK" adhered with "Sarnacol Low Rise Membrane Adhesive (A)" or Sarnacol OM Feltback Membrane Adhesive

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

Existing Roof System: — To maintain existing Classifications) - Any Class A, B or C, uncoated, insulated or uninsulated, Type G3 mineral surfaced cap BUR system or modified bitumen membrane system.

Membrane: — "G 410 FELTBACK" or "S 327 FELTBACK" adhered with "Sarnacol AD Feltback Membrane Adhesive" or "Sarnacol OM Feltback Membrane Adhesive"

26. Deck: NC**Incline:** 4

Existing Roof System: — To maintain existing Classifications) - Any Class A, B or C, uncoated, insulated or uninsulated, Type G3 mineral surfaced cap BUR system or modified bitumen membrane system.

Insulation: — (Optional) "Sarnatherm", "Sarnatherm a", "Sarnatherm m", "Sarnatherm-R Insulation", Hunter Panels "H-Shield", "H-Shield CG", "H-Shield HD Composite CG", Atlas Roofing Corp. "ACFoamII", "ACFoamIII", "ACFoamIV", IKO "IKOTherm III", Johns-Manville "ENRGY 3", Rmax Operating LLC "Multi-Max FA-3" or Ultra-Max".

Cover Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)", Temple-Inland "GreenGlass" or CertainTeed "GlasRoc".

Membrane: — "G 410 FELTBACK" or "S 327 FELTBACK" adhered with "Sarnacol AD Feltback Membrane Adhesive" or "Sarnacol OM Feltback Membrane Adhesive".

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

Existing Roof System: — To maintain existing Classifications - Any Class A, B or C, uncoated, insulated or uninsulated, Type G3 mineral surfaced cap BUR system or modified bitumen membrane system.

Insulation: — "Sarnatherm", "Sarnatherm a", "Sarnatherm m", "Sarnatherm-R Insulation", Hunter Panels "H-Shield", "H-Shield CG", "H-Shield HD Composite CG", Atlas Roofing Corp. "ACFoamII", "ACFoamIII", "ACFoamIV", IKO "IKOTherm III", Johns-Manville "ENRGY 3", Rmax Operating LLC "Multi-Max FA-3" or "Ultra-Max".

Cover Board: — Hunter Panels "Hunter HD" or Johns Manville "Invinsa Roof Board".

Membrane: — "G 410 FELTBACK" or "S 327 FELTBACK" adhered with "Sarnacol AD Feltback Membrane Adhesive" or "Sarnacol OM Feltback Membrane Adhesive".

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

Existing Roof System: — To maintain existing Classifications - Any Class A, B or C, uncoated, insulated or uninsulated, Type G3 mineral surfaced cap BUR system or modified bitumen membrane system.

Membrane: — "G 410 FELTBACK" or "S 327 FELTBACK" adhered with "Sarnacol AD Feltback Membrane Adhesive" or "Sarnacol OM Feltback Membrane Adhesive".

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

Existing Roof System: — To maintain existing Classification Any Class A, B or C, coated or uncoated, insulated or uninsulated, smooth surfaced or Type G3 mineral surfaced cap sheet BUR or modified bitumen roof system covered with:

Ply Sheet (Optional): — Maximum of 3 plies of polyester fabric (Not UL Classified), (23/4 to 3-ounces) embedded in emulsion.

Surfacing: — "Sikacoat FC 3400", "Sikacoat BC400", "Sikacoat FC3500" or "Sikacoat BC420", applied at a maximum rate of 3-gal./100-ft.².

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

Existing Roof System: — To maintain existing Classification Any Class A, B or C, coated or uncoated, insulated or uninsulated, smooth surfaced or Type G3 mineral surfaced cap sheet BUR or modified bitumen roof system.

Ply Sheet (Optional): — Maximum of 3 plies of polyester fabric (Not UL Classified), (23/4 to 3-ounces) embedded in emulsion.

Surfacing: — "Sikacoat FC 3400" or "Sikacoat BC400" applied at a rate of 4 to 8-gal./100-ft.².

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

Incline: 1-1/2

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

Slip Sheet (Optional): — "Sarnafelt NWP", loose laid.

Insulation (Optional): — Rmax Operating LLC "Multi-Max FA-3" or "Thermarroof Plus"

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK", "S 327-96"(PVC).

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

Incline: 1-1/2

Existing Roof System: — Insulated or non-insulated cap sheet, Class A, B or C System to retain the existing Classification is covered with:

Insulation (Optional): — Rmax Operating LLC "Multi-Max FA-3" or "Thermarroof Plus" any thickness:

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96" (PVC), fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive at 1.5 to 2.5-gal/100-ft.² or "Sarnacol 2121" adhesive at 1.75-gal./100-ft.², "S327", mechanically fastened.

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

Incline: 1-1/2

Existing Roof System: — Insulated or non-insulated cap sheet, Class A, B or C System to retain the existing Classification is covered with:

Insulation (Optional): — Rmax Operating LLC "Multi-Max FA-3" or "Thermarroof Plus", any thickness.

Membrane: — "ADHERED-60" (PVC), fully adhered with "Sikaplan Single Step" at 1.75-gal/100-ft.², "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1.5 to 2.5-gal./100-ft.².

Class A

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

Incline: 1/2

Existing Roof System: — Any Class A, B or C roof covering system, covered with:

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck Roofboard", "DensDeck Prime Roofboard", adhered with any UL Classified insulation adhesive or mechanically fastened.

Ply Sheet: — "Ply Sheet TA 87" or "Vapor Retarder TA 138", torch applied.

Cap Sheet: — "G 410 Feltback", "S327 Feltback", or "Sikaplan Fastened Feltback" or "Sikaplan Adhered Feltback" adhered with "Sarnacol OM Feltback Membrane Adhesive" or "Sarnacol AD Feltback Membrane Adhesive."

Class B

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

Incline: 2

Existing Class B Roof System — as follows 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. maximum.

Ply Sheet: — Three plies Type G1 GAF "GAFGALS Ply 4" or "GAFGALS Ply 3", hot mopped.

Surfacing: — Grundy "Fibered Aluminum Coating" 1-1/2 gal./100-ft.² covered with:

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S327-54", "S327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK", "S 327-96" (PVC).

2. **Deck:** C1-1/2 TG

Incline: Unlimited

Existing Roof: — Class A shingles

Barrier Board: — 3/8-in. thick gypsum board, mechanically fastened.

Membrane: — 5327 (PVC).

SINGLE PLY MEMBRANE SYSTEMS

All PVC seams are hot air welded.

The following classified membranes may be produced in thicknesses of 45-mils to 96-mils for the "G 410" ("G 410-48", "G 410-60", "G 410-72", "G 410-80" and "G 410-96) and "S 327" ("S 327-48", "S 327-60", "S 327-72", "S 327-80" and "S327-96) membrane families in thicknesses of 45-mils to 120-mils for "G476".

The following "G 410" family of membranes are interchangeable: "G 410-48", "G 410-60", "G 410-72", "G 410-80", "G 410-48 TEXTURED", "G 410-60 TEXTURED", "G 410-72 TEXTURED" and "G 410-80", including colors.

The following "G 410 FELTBACK" membranes are interchangeable: "G 410-48 FELTBACK", "G 410-60 FELTBACK", "G 410-72 FELTBACK" and "G 410-80 FELTBACK", including colors.

The following "S 327" membranes are interchangeable: "S 327-48", "S 327-60", "S 327-72" and "S 327-80", including colors.

The following "S 327 FELTBACK" membranes are interchangeable: "S 327-48 FELTBACK", "S 327-60 FELTBACK", "S 327-72 FELTBACK" and "S 327-80 FELTBACK", including colors.

The following "FASTENED" membranes are interchangeable: "FASTENED-45", "FASTENED-60" and "FASTENED-80".

The following "FASTENED FELTBACK" membranes are interchangeable: "FASTENED-45 FELTBACK", "FASTENED-60 FELTBACK" and "FASTENED-80 FELTBACK".

The following "G 476" membranes are interchangeable: "G 476-48", "G 476-60", "G 476-72" and "G 476-80" are interchangeable.

The following "G 476 FELTBACK" membranes are interchangeable: "G 476-48 FELTBACK", "G 476-60 FELTBACK", "G 476-72 FELTBACK" and "G 476-80 FELTBACK".

Class A - Ballasted

1. Deck: NC

Incline: 2

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

Membrane: — One or more of the following, laid loosely or mechanically fastened:

"G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96" or

"S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC)

Surfacing: — River bottom stone, 3/4 to 1-1/2 in. diameter applied at a rate of 1000-lb/100-ft.².

2. Deck: NC

Incline: 1

Insulation: — Perlite, glass fiber or polyisocyanurate 3/4-in. thick minimum.

Membrane: — One or more of the following, laid loosely or mechanically fastened:

"G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK" or

"S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96"(PVC)

Surfacing: — River bottom stone, 3/4 to 1-1/2 in. diameter applied at a rate of 1000-lb/100-ft.².

3. Deck: NC

Incline: 2

Membrane: — One or more of the following, laid loosely or mechanically fastened:

"G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC)

Slip Sheet (Optional): — 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 Scrim", 2-oz/yd or "Sarnabarrier," 1.5-oz/yd².

Surfacing: — Crushed stone, river bottom stone (3/4 to 1-3/4 in. diameter) applied at a rate of 900-lbs/100-ft.² concrete blocks minimum 10-lb/ft.², spread not more than 1/8-in. apart or Styrofoam panels surfaced with 3/8-in. minimum concrete mortar butted together.

4. Deck: NC

Incline: 2

Insulation: — "Sarnatherm I", uniform thickness or tapered foamed plastic, any thickness or Johns Manville "Barrier Board Plus, Plus - A, -D or -M," uniform thickness or tapered composite.

"Sarnatherm a", "Sarnatherm I" or "Sarnatherm II", uniform thickness or tapered, any thickness or "Sarnatherm", "Tapered Sarnatherm", "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard" or "Sarnatherm Foil", any thickness laid loosely or mechanically fastened.

Membrane: — One or more of the following, laid loosely or mechanically fastened:

"G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC)

Surfacing: — River bottom stone (3/4 to 1-1/2 in. diameter) applied at a rate of 1000-lb/100-ft.².

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

Incline: 2

Slip Sheet: — Polypropylene felt or polyester felt (not UL Classified).

Membrane: — One or more of the following, laid loosely or mechanically fastened:

"G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC)

Surfacing: — Concrete blocks minimum 10-lb/ft.² spread not more than 1/4-in. apart or river bottom stone (3/4 to 1-3/4 in. diameter) applied at a rate of 1200-lbs/100-ft.² or river bottom stone (3/4 to 1-1/2 in. diameter) applied at a rate of 1000-lb/100-ft.².

Class A, B or C (See Note)

1. **Deck:** NC (See Note 1)

Incline: See Note 1

Insulation: — Any UL Classified, any thickness, adhered with "Sarnacol AD Board Adhesive" or "Sarnacol 2163".

Membrane: — Any UL Classified modified bitumen system, BUR system or CPE, CSM, CSPE, EPDM, NBP, PIB, PVC, TPA, TPO or TRE membrane system suitable for use with any roof insulation.

Note 1: Classification (A, B or C) and maximum incline will be the same as that of the Classified Roof Covering System (TGFU) currently limited to noncombustible roof deck.

Class A - Fully Adhered (PVC/TPA)

1. **Deck:** NC

Incline: 1

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

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96" (PVC) fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.².

2. **Deck:** NC

Incline: 1

Insulation: — Rmax Operating LLC "Ply-1", any thickness, mechanically fastened with metal insulation anchors.

Membrane: — "G 410-48", "G 410-54", "G 410-60", "G 410-72", "G 410-80" or "G 410-96" (PVC), fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.².

3. **Deck:** NC

Incline: 1

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

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96" (PVC) or "ADHERED-60 FELTBACK", fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.² or "Sarnacol 2121" adhesive applied at 1-3/4 to 2-1/4 gal./100-ft.².

4. **Deck:** NC

Incline: 1-1/2

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

Vapor Barrier: — "Vapor Stop 298" (not Classified), laid loosely with laps sealed according to the manufacturer's instructions.

Insulation: — Rmax Operating LLC "Ply-1" (foil faced) 2-1/2 in. thick maximum, mechanically fastened with metal insulation anchors.

Membrane: — "G 410-48", "G 410-54", "G 410-60", "G 410-72", "G 410-80" or "G 410-96" (PVC), fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.² or "Sarnacol 2121" adhesive applied at 1.75-gal./100-ft.².

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

Insulation: — "Sarnatherm m" or Johns Manville "ENRGY 3", any thickness.

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96" (PVC), fully adhered with "Sarnacol 2121" adhesive applied at 1.75-gal./100-ft.².

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

Insulation: — Wood fiberboard, 0.5-in. thick minimum.

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96" (PVC), fully adhered with "Sarnacol 2121" adhesive applied at 2-1/4 gal./100-ft.².

7. Deck: NC**Incline:** 2

Vapor Barrier (Optional): — Polyethylene, Kraft or Sarnavap 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. "Sarnatherm-R Insulation"

d. Firestone Building Products Co. LLC "Iso 95+GL", "Iso 95+GW"

e. Deleted

f. Johns Manville "ENRGY 3"

g. "Sarnatherm I" or "Sarnatherm II"

h. Atlas Roofing Corp. "ACFoam II"

i. "Sarnatherm a"

j. "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard"

k. "Sarnatherm m"

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC), fully adhered with "Sarnacol 2121" applied at 1-3/4 to 2-1/4 gal./100-ft.², or "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.².

8. Deleted.**9. Deleted.****10. Deck:** NC**Incline:** 3/4

Insulation: — "Sarnatherm I," uniform thickness or tapered foamed plastic, 8.2-in. max or Johns Manville "Barrier Board Plus-M", uniform thickness or tapered composite, any thickness, mechanically fastened.

Membrane: — "G 410-48", "G 410-54", "G 410-60", "G 410-72", "G 410-80" or "G 410-96" (PVC), fully adhered with Sarnafil "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.².

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

Insulation: — "Sarnatherm I", uniform thickness or tapered foamed plastic, 0.9-in. minimum, no maximum or Johns Manville "Barrier Board Plus or Plus-M", any thickness, no max, mechanically fastened.

Membrane: — "G 410-48", "G 410-54", "G 410-60", "G 410-72", "G 410-80" or "G 410-96" (PVC), fully adhered with Sarnafil "Sarnacol 2170" or "Sarnacol 2170 VC" or "Sarnacol V949" adhesive applied at 1-1/2 to 2-1/2 gal./100-ft.².

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

Barrier Board: — Minimum 1/2-in. thick gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" mechanically fastened with insulation fasteners (6-in. offset of the barrier board joints from the plywood joints).

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

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

- a. Perlite
- b. Fiberboard
- c. "Sarnatherm-R Insulation"
- d. Firestone Building Products Co. LLC "Iso 95+GL", "Iso 95+GW"
- e. Deleted
- f. Johns Manville "ENRGY 3"
- g. "Sarnatherm I" or "SarnaTherm II"
- h. Atlas Roofing Corp. "ACFoam II"
- i. "Sarnatherm a"
- j. "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard"
- k. "Sarnatherm m"

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC), fully adhered with "Sarnacol 2121" applied at 1-3/4 to 2-1/4 gal./100-ft.² or "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.²

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

Vapor Barrier (Optional): — Type G1 or Type 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. "Sarnatherm a CG Plus"
- d. Firestone Building Products Co. LLC "Iso 95+GL", "Iso 90+GW"
- e. Deleted
- f. Johns Manville "ENRGY 3"
- g. "Sarnatherm I" or "Sarnatherm II"
- h. Atlas Roofing Corp. "ACFoam II".
- i. "Sarnatherm a"
- j. "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard"
- k. "Sarnatherm m"
- l. "Sarnatherm-R Insulation"
- m. "Sarnatherm Roof Board A-III"

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC), fully adhered with "Sarnacol 2121" applied at 1-3/4 to 2-1/4 gal./100-ft.² or "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.²

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

Vapor Barrier (Optional): — Polyethylene or kraft (Not Classified).

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

Barrier Board: — 1-in. thick wood fiberboard, 15/32-in. thick plywood, 7/16-in. thick oriented strand board or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard".

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96" (PVC), fully adhered with either "Sarnacol 2121" applied at 1-3/4 to 2-1/4 gal./100-ft.² "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.².

15. **Deck:** NC

Incline: 3

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

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

- a. Perlite
- b. Fiberboard
- c. "Sarnatherm a CG Plus"
- d. Firestone Building Products Co. LLC "Iso 95+GL", "Iso 95+GW"
- e. Deleted
- f. Johns Manville "ENRGY 3"
- g. "Sarnatherm I" or "Sarnatherm II"
- h. Atlas Roofing Corp. "ACFoam II"
- i. "Sarnatherm a"
- j. "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard"
- k. "Sarnatherm m"
- l. "Sarnatherm-R Insulation"
- m. "Sarnatherm Roof Board A-III"

Membrane: — "G410".

16. **Deck:** NC

Incline: 2

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

Barrier: — Granular surfaced asphalt cap sheet or Type G2 base sheet set in hot asphalt or mechanically attached.

Membrane: — "G 410-48 FELTBACK", "G 410-54 FELTBACK", "G 410-60 FELTBACK", "G 410-72 FELTBACK", "G 410-80 FELTBACK", fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1-1/2 to 2-1/4 gal./100-ft.².

17. **Deck:** C-3 11/16

Incline: 1

Base Sheet: — Type G2, nailed or hot mopped.

Insulation: — Minimum 3-in. thick Johns Manville "ENRGY 2G".

Membrane: — "G410" (PVC), fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1-1/2 to 2-1/2 gal./100-ft.².

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

Incline: 2

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/2-in. thick gypsum board with all joints staggered a minimum of 6-in. from the plywood joints.

Membrane: — "G 410" or "G 410 FELTBACK" fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at a rate of 1-1/2 to 2-1/2 gal./100-ft.² or "Sarnacol 2121" adhesive applied at a rate of 1-3/4 to 2-1/4 gal./100-ft.².

19. **Deck:** NC

Incline: 1-1/2

Vapor Barrier (Optional): — Polyethylene, Kraft or Sarnavap 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", "Hy-Therm AP".

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC), fully adhered with "Sarnacol 2121" applied at 1-3/4 to 2-1/4 gal./100-ft.², or "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.²

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

Incline: 1-1/2

Barrier Board: — Minimum 5/8-in. thick gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard", 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 Type G1 and Type 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", "Hy-Therm AP".

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC), fully adhered with "Sarnacol 2121" applied at 1-3/4 to 2-1/4 gal./100-ft.², or "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.²

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

Incline: 1-1/2

Vapor Barrier (Optional): — Type G1 or Type 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 Ultra".

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC), fully adhered with "Sarnacol 2121" applied at 1-3/4 to 2-1/4 gal./100-ft.², or "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.²

22. **Deck:** NC

Incline: 2-1/2

Vapor Barrier (Optional): — Polyethylene or Kraft (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", "Hy-Therm AP".

Membrane: — "G410".

23. **Deck:** C-3-11/16

Incline: 1/2

Base Sheet: — Type G2, nailed or hot mopped.

Insulation: — Minimum 3-in. thick Celotex "Hy-Therm AP".

Membrane: — "G410" (PVC), adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive at 1-1/2 to 2-1/2 gal./100-ft.².

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

Incline: Unlimited

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" with 6-in. staggered joints, mechanically fastened.

Membrane: — "G 410-48", "G 410-60", "G 410-72", "G 410-80" or "G 410-96" (PVC), fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 2-gal./100-ft.².

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

Incline: 2

Vapor Barrier (Optional): — Rosin paper (not UL Classified) and Type 15 or 30 felt, Type G1 or Type G2 two to four plies mechanically fastened or hot mopped.

Insulation: — One or more layers of one of the following (1/8 in. tapered) any thickness, mechanically fastened or hot mopped in place:

1. Deleted

2. John Manville "ENRGY 3"
3. Atlas Roofing Corp. "ACFoam II"
4. "Sarna Therm I"
5. "Sarna Therm II"
6. "Sarnatherm a"
7. "Sarnatherm m"
8. "Sarnatherm Roof Board A-III"
9. "Sarnatherm a CG Plus"

Membrane: — "G 410" or "S 327", fully adhered with "Sarnacol 2121" applied at 1-3/4 to 2-1/4 gal./100-ft.² or "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal.

26. **Deleted.**

27. **Deleted.**

28. **Deck:** NC

Incline: 1-1/2

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

Insulation: — One of the following or combinations, mechanically fastened or hot mopped in place (any thickness): "Sarnatherm", "Tapered Sarnatherm", "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard".

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC), fully adhered with "Sarnacol 2121" at 1-3/4 to 2-1/4 gal./100-ft.² or "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.²

29. **Deleted.**

30. **Deleted.**

31. **Deleted.**

32. **Deleted.**

33. **Deleted.**

33a. **Deleted.**

34. **Deleted.**

34a. **Deleted.**

35. **Deck:** NC

Incline: 1/2

Insulation (Optional): — Any UL Classified Extruded Polystyrene, any thickness, mechanically fastened or adhered with UL Classified insulation adhesive.

Membrane: — "G476-60 SA" (PVC) 120-mil, self-adhered.

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

Incline: 1/2

Insulation (Optional): — Any UL Classified Polyisocyanurate or UL Classified Polystyrene, any thickness, mechanically fastened or adhered with UL Classified insulation adhesive.

Grounding Screen (Optional): — Aluminum 18 by 16 screen mesh (not UL Classified).

Barrier Board: — Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard", minimum 1/4-in. thick, mechanically fastened or adhered with UL Classified insulation adhesive with butt joints in barrier board off-set a minimum of 6-in. from plywood roof decks butt joints.

Membrane: — "G476-60 SA" (PVC) 120-mil, self-adhered.

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

Incline: 2

Barrier Board: — Minimum 1/2-in. thick gypsum board or minimum 1/4-in. Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard", mechanically fastened with insulation fasteners (6-in. offset of the barrier board joints from the plywood joints).

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

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

a. Perlite

- b. Fiberboard
- c. "Sarnatherm a CG Plus"
- d. Firestone Building Products Co. LLC "Iso 95+GL", "Iso 95+GW"
- e. Deleted
- f. Johns Manville "ENRGY 3"
- g. "Sarnatherm I" or "Sarnatherm II"
- h. Atlas Roofing Corp. "ACFoam II"
- i. "Sarnatherm a"
- j. "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard"
- k. "Sarnatherm m"
- l. "Sarnatherm-R Insulation"
- m. "Sarnatherm Roof Board A-III"

Membrane: — "ADHERED-60" (PVC), fully adhered with "Sikaplan Single Step" applied at 1-3/4 to 2-1/4 gal./100-ft.², "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1-1/2 to 2-1/2 gal./100-ft.².

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

Vapor Barrier (Optional): — Type G1 or Type 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. "Sarnatherm a CG Plus"
- d. Firestone Building Products Co. LLC "Iso 95+GL", "Iso 90+GW"
- e. Deleted
- f. Johns Manville "ENRGY 3"
- g. "Sarnatherm I" or "Sarnatherm II"
- h. Atlas Roofing Corp. "ACFoam II".
- i. "Sarnatherm a"
- j. "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard"
- k. "Sarnatherm m"
- l. "Sarnatherm-R Insulation"
- m. "Sarnatherm Roof Board A-III"

Membrane: — "ADHERED-60" (PVC), fully adhered with "Sikaplan Single Step" applied at 1-3/4 to 2-1/4 gal./100-ft.², "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1-1/2 to 2-1/2 gal./100-ft.².

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

Vapor Barrier (Optional): — Polyethylene or kraft (Not Classified).

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

Barrier: — 1-in. thick wood fiberboard or 15/32-in. thick plywood or 7/16-in. thick oriented strand board or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard".

Membrane: — "ADHERED-60" (PVC), fully adhered with "Sikaplan Single Step" applied at 1-3/4 to 2-1/4 gal./100-ft.², "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1-1/2 to 2-1/2 gal./100-ft.².

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

Incline: 2

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/2-in. thick gypsum board with all joints staggered a min of 6-in. from the plywood joints.

Membrane: — "ADHERED-60" (PVC) fully adhered with "Sikaplan Single Step" adhesive applied at a rate of 1-3/4 to 2-1/4 gal./100-ft.², "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1-1/2 to 2-1/2 gal./100-ft.².

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

Incline: 2

Vapor Barrier (Optional): — Rosin paper (not UL Classified) and Type 15 or Type 30 felt, Type G1 or Type G2 two to four plies mechanically fastened or hot mopped.

Insulation: — One or more layers of one of the following (1/8 in. tapered) any thickness, mechanically fastened or hot mopped in place:

1. Deleted

2. John Manville "ENRGY 3"

3. Atlas Roofing Corp. "ACFoam II"

4. "Sarna Therm I"

5. "Sarna Therm II"

6. "Sarnatherm a"

7. "Sarnatherm m"

8. "Sarnatherm Roof Board A-III"

9. "Sarnatherm a CG Plus"

Membrane: — "ADHERED-60" (PVC), fully adhered with "Sikaplan Single Step" at 1-3/4 to 2-1/4 gal./100-ft.², "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive at 1-1/2 to 2-1/2 gal./100-ft.².

42. **Deck:** NC

Incline: 1-1/2

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

Insulation: — One of the following or combinations, mechanically fastened or hot mopped in place (any thickness): "Sarnatherm", "Tapered Sarnatherm", "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard".

Membrane: — "ADHERED-60" (PVC), fully adhered with "Sikaplan Single Step" at 1-3/4 to 2-1/4 gal./100-ft.², "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive at 1-1/2 to 2-1/2 gal./100-ft.².

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

Incline: 1/2

Insulation (Optional): — Any UL Classified Polyisocyanurate or UL Classified Polystyrene, any thickness, mechanically fastened or adhered with UL Classified insulation adhesive.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum Corp. "DensDeck DuraGuard™ Roofboard," or "DensDeck® Roofboard" or "DensDeck Prime® Roofboard," mechanically fastened or adhered with UL Classified insulation adhesive with butt joints in barrier board off-set a minimum of 6-in. from plywood decks butt joints.

Grounding Screen (Optional): — Aluminum 18 by 16 screen mesh (not UL Classified).

Membrane: — "G 476-60", "G 476-72" or "G 476-80", fully adhered with "Sarnacol 2121" applied at 1-3/4 to 2-1/4 gal./100-ft.² or "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.².

44. **Deck:** NC

Incline: Unlimited

Vapor Barrier: — Optional

Insulation: — (Optional) Any UL Classified isocyanurate or polystyrene insulation.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Roofboard", "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)", Temple-Inland "GreenGlass" or CertainTeed "GlasRoc".

Membrane: — "G 410 FELTBACK" or "S 327 FELTBACK" adhered with "Sarnacol OM Feltback Membrane Adhesive"

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

Incline: Unlimited

Vapor Barrier: — Optional

Insulation: — (Optional) Any UL Classified isocyanurate or polystyrene insulation.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Roofboard", "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)", Temple-Inland "GreenGlass" or CertainTeed "GlasRoc".

Membrane: — "G 410 FELTBACK" or "S 327 FELTBACK" adhered with "Sarnacol OM Feltback Membrane Adhesive"

46. **Deck:** NC

Incline: 4

Vapor Barrier: — Optional

Insulation: — Any UL Classified isocyanurate or polystyrene insulation

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Roofboard", "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)", Temple-Inland "GreenGlass" or CertainTeed "GlasRoc".

Membrane: — "G 410 FELTBACK" or "S 327 FELTBACK" adhered with "Sarnacol AD Feltback Membrane Adhesive".

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

Incline: 4

Vapor Barrier: — Optional

Insulation: — (Optional) Any UL Classified isocyanurate or polystyrene insulation.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Roofboard", "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)", Temple-Inland "GreenGlass" or CertainTeed "GlasRoc".

Membrane: — "G 410 FELTBACK" or "S 327 FELTBACK" adhered with "Sarnacol AD Feltback Membrane Adhesive".

48. **Deck:** NC

Incline: Unlimited

Vapor Barrier: — Optional.

Membrane: — "G 410 FELTBACK" or "S 327 FELTBACK" adhered with "Sarnacol OM Feltback Membrane Adhesive".

49. **Deck:** NC

Incline: 4

Vapor Barrier: — Optional.

Membrane: — "G 410 FELTBACK" or "S 327 FELTBACK" adhered with "Sarnacol AD Feltback Membrane Adhesive".

50. **Deck:** NC

Incline: 2

Vapor Barrier: — Optional.

Insulation: — "Sarnatherm", "Sarnatherm a", "Sarnatherm m", "Sarnatherm-R Insulation", Hunter Panels "H-Shield", "H-Shield CG", "H-Shield HD Composite CG", Atlas Roofing Corp. "ACFoamII", "ACFoamIII", "ACFoamIV", IKO "IKOTherm III", Johns-Manville "ENRGY 3".

Membrane: — "G 410 FELTBACK" or "S 327 FELTBACK" adhered with "Sarnacol AD Feltback Membrane Adhesive" or "Sarnacol OM Feltback Membrane Adhesive".

51. **Deck:** NC

Incline: 2

Vapor Barrier: — Optional.

Insulation: — Any UL Classified isocyanurate or polystyrene insulation.

Cover Board: — Hunter Panels "Hunter HD" or Johns Manville "Invinsa Roof Board".

Membrane: — "G 410 FELTBACK" or "S 327 FELTBACK" adhered with "Sarnacol AD Feltback Membrane Adhesive" or "Sarnacol OM Feltback Membrane Adhesive".

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

Incline: Unlimited

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

Insulation (Optional): — Any UL Classified polyisocyanurate or polystyrene insulation, any thickness, mechanically fastened or adhered with any UL Classified insulation adhesive.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck Prime Roofboard" or United States Gypsum Co., "SECUROCK® Glass-Mat Roof Board (Type SGMRX)" with all joints staggered a minimum of 6-in. from the plywood joints, mechanically fastened or adhered with any UL Classified insulation adhesive.

Membrane: — "G 410", "S 327", "G 410 FELTBACK" or "S 327 FELTBACK", fully adhered with Sarnacol 2121 adhesive at 3/4 to 1-1/4 gal./100-ft.².

53. **Deck:** NC

Incline: 2

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

Base Sheet: — "Base Sheet NB 48", mechanically fastened.

Ply Sheet: — "Ply Sheet HA 87" or "Ply Sheet HA 118", adhered with "Vapor Retarder Adhesive CA" or "Vapor Retarder Adhesive CA-SB", applied at 2-gal./100-ft² or hot roof covering asphalt or "Ply Sheet TA 87", torch applied.

Membrane: — "G 410-60 FELTBACK", "G 410-72 FELTBACK" or "G 410-80 FELTBACK", adhered with "Sarnacol OM Feltback Membrane Adhesive" or "Sarnacol AD Feltback Membrane Adhesive".

54. **Deck:** NC

Incline: 3

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

Base Sheet: — "Base Sheet NB 48", mechanically fastened.

Insulation: — Any UL Classified, any thickness, adhered with any UL Classified insulation adhesive.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck Roofboard", "DensDeck Prime Roofboard", adhered with any UL Classified insulation adhesive.

Ply Sheet: — "Ply Sheet HA 87" or "Ply Sheet HA 118", adhered with "Vapor Retarder Adhesive CA" or "Vapor Retarder Adhesive CA-SB", applied at 2-gal./100-ft² or hot roof covering asphalt or "Ply Sheet TA 87", torch applied.

Cap Sheet: — "G 410-60 FELTBACK", "G 410-72 FELTBACK" or "G 410-80 FELTBACK", adhered with "Sarnacol OM Feltback Membrane Adhesive" or "Sarnacol AD Feltback Membrane Adhesive".

55. **Deck:** NC

Incline: 3

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

Base Sheet: — "Base Sheet NB 48", mechanically fastened.

Insulation: — Any UL Classified, any thickness, adhered with any UL Classified insulation adhesive.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck Roofboard", "DensDeck Prime Roofboard", adhered with any UL Classified insulation adhesive.

Ply Sheet: — "Vapor Retarder SA 106" self-adhered.

Cap Sheet: — "G 410-60 FELTBACK", "G 410-72 FELTBACK" or "G 410-80 FELTBACK", adhered with "Sarnacol OM Feltback Membrane Adhesive" or "Sarnacol AD Feltback Membrane Adhesive".

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

Incline: 3

Insulation: — Any UL Classified, any thickness mechanically attached or adhered with any UL Classified insulation adhesive.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck Roofboard", "DensDeck Prime Roofboard" mechanically fastened or adhered with any UL Classified insulation adhesive.

Ply Sheet: — "Ply Sheet HA 87" or "Ply Sheet HA 118", adhered with "Vapor Retarder Adhesive CA" or "Vapor Retarder Adhesive CA-SB", applied at 2-gal./100-ft² or hot roofing asphalt or "Ply Sheet TA 87", torch applied.

Cap Sheet: — "G 410-60 FELTBACK", "G 410-72 FELTBACK" or "G 410-80 FELTBACK", adhered with "Sarnacol OM Feltback Membrane Adhesive" or "Sarnacol AD Feltback Membrane Adhesive".

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

Incline: 3

Insulation: — Any UL Classified polyisocyanurate insulation, mechanically fastened or adhered with any UL Classified insulation adhesive.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck Roofboard", "DensDeck Prime Roofboard", mechanically fastened or adhered with any UL Classified insulation adhesive.

Ply Sheet: — "Vapor Retarder SA 106" self-adhered.

Membrane: — "G 410-60 FELTBACK", "G 410-72 FELTBACK" or "G 410-80 FELTBACK", adhered with "Sarnacol OM Feltback Membrane Adhesive" or "Sarnacol AD Feltback Membrane Adhesive".

58. **Deck:** NC

Incline: 1

Thermal Barrier (Optional): — 1/2 in. thick gypsum board or 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Roofboard", "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)" mechanically fastened with insulation fasteners or adhered with urethane based low rise adhesive or hot asphalt, with joints in the gypsum board and barrier board offset a minimum of 6-in. with the joints in the roof deck.

Vapor Barrier (Optional): — Polyethylene, Kraft (not Classified), Type G1, Type G2 or self-adhered SBS base sheet.

Insulation: — "Sarnatherm", "Sarnatherm a", Hunter Panels, "H-Shield", "H-Shield HD" "H-Shield CG", "H-Shield HD Composite CG", Atlas Roofing Corp. "ACFoamII", "ACFoamIII", "ACFoamIV", any thickness, mechanically fastened or adhered with any UL Classified insulation adhesive.

Membrane: — "G 410-60 SA", self-adhered.

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

Thermal Barrier: — Minimum 1/2 in. thick gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Roofboard", "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)" mechanically fastened with insulation fasteners or adhered with urethane based low rise adhesive or hot asphalt, with joints in the gypsum board and barrier board offset a minimum of 6-in. with the joints in the roof deck.

Vapor Barrier (Optional): — Polyethylene, Kraft (not Classified), Type G1, Type G2 or self-adhered SBS base sheet.

Insulation: — "Sarnatherm", "Sarnatherm a", "Sarnatherm m", Hunter Panels, "H-Shield", "H-Shield HD" "H-Shield CG", "H-Shield HD Composite CG", Atlas Roofing Corp. "ACFoamII", "ACFoamIII", "ACFoamIV", IKO "IKOTherm III", any thickness, mechanically fastened or adhered with any UL Classified insulation adhesive.

Membrane: — "G 410-60 SA", self-adhered.

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

Thermal Barrier (Optional): — Minimum 1/2 in. thick gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Roofboard", "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)" mechanically fastened with insulation fasteners or adhered with urethane based low rise adhesive or hot asphalt, with joints in the gypsum board and barrier board offset a minimum of 6-in. with the joints in the roof deck.

Vapor Barrier (Optional): — Polyethylene, Kraft (not Classified), Type G1, Type G2 or self-adhered SBS base sheet.

Insulation: — Any UL Classified insulation, any thickness, mechanically fastened or adhered with any UL Classified insulation adhesive.

Cover Board: — "Sarnatherm Roof Board A-III", "Sarnatherm Roofboard H", Atlas Roofing Corp. "ACFoam-III HD CoverBoard", Hunter Panels, "H-Shield HD", 1/2 in. thick, mechanically fastened or adhered with any UL Classified insulation adhesive.

Membrane: — "G 410-60 SA", self-adhered.

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

Thermal Barrier (Optional): — Minimum 1/2 in. thick gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Roofboard", "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)" mechanically fastened with insulation fasteners or adhered with urethane based low rise adhesive or hot asphalt, with joints in the gypsum board and barrier board offset a minimum of 6-in. with the joints in the roof deck.

Vapor Barrier (Optional): — Polyethylene, Kraft (not Classified), Type G1, Type G2 or self-adhered SBS base sheet.

Insulation: — Any UL Classified insulation, any thickness, mechanically fastened or adhered with any UL Classified insulation adhesive.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)", mechanically fastened or adhered with any UL Classified insulation adhesive.

Membrane: — "G 410-60 SA", self-adhered.

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

Thermal Barrier (Optional): — Minimum 1/2 in. thick gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Roofboard", "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)" mechanically fastened with insulation fasteners or adhered with urethane based low rise adhesive or hot asphalt, with joints in the gypsum board and barrier board offset a minimum of 6-in. with the joints in the roof deck.

Vapor Barrier (Optional): — Polyethylene, Kraft (not Classified), Type G1, Type G2 or self-adhered SBS base sheet.

Insulation: — "Sarnatherm", "Sarnatherm a", Hunter Panels, "H-Shield", "H-Shield HD" "H-Shield CG", "H-Shield HD Composite CG", Atlas Roofing Corp. "ACFoamII", "ACFoamIII", "ACFoamIV", any thickness, mechanically fastened or adhered with any UL Classified insulation adhesive.

Membrane: — "G 410-60 SA", self-adhered.

63. Deck: NC**Incline:** 3

Thermal Barrier (Optional): — Minimum 1/2 in. thick gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Roofboard", "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)" mechanically fastened with insulation fasteners or adhered with urethane based low rise adhesive or hot asphalt, with joints in the gypsum board and barrier board offset a minimum of 6-in. with the joints in the roof deck.

Vapor Barrier (Optional): — Polyethylene, Kraft (not Classified), Type G1, Type G2 or self-adhered SBS base sheet.

Insulation: — Any UL Classified insulation, any thickness, mechanically fastened or adhered with any UL Classified insulation adhesive.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)", mechanically fastened or adhered with any UL Classified insulation adhesive.

Membrane: — "G 410-60 SA", self-adhered.

64. **Deck:** NC

Incline: 1

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

Insulation: — Rmax Operating LLC "Multi-Max FA-3" or "Thermarroof Plus", mechanically fastened or hot mopped in place (any thickness):

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC), fully adhered with "Sarnacol 2121" applied at 1-3/4 to 2-1/4 gal./100-ft.² or "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.²

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

Incline: 1-1/2

Barrier Board: — Minimum 1/2-in. thick gypsum board or minimum 1/4-in. Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" mechanically fastened with insulation fasteners (6-in. offset of the barrier board joints from the plywood joints).

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

Insulation: — Rmax Operating LLC "Multi-Max FA-3" or "Thermarroof Plus", mechanically fastened or hot mopped in place any thickness):

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC), fully adhered with "Sarnacol 2121" applied at 1-3/4 to 2-1/4 gal./100-ft.² or "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.²

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

Incline: 1-1/2

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

Insulation: — Rmax Operating LLC "Multi-Max FA-3" or "Thermarroof Plus", mechanically fastened or hot mopped in place any thickness:

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC), fully adhered with "Sarnacol 2121" applied at 1-3/4 to 2-1/4 gal./100-ft.² or "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.²

67. **Deck:** NC

Incline: 2-1/2

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

Insulation: — Rmax Operating LLC "Multi-Max FA-3" or "Thermarroof Plus", mechanically fastened or hot mopped in place, any thickness:

Membrane: — "G 410-48", "G 410-60", "G 410-72", "G 410-80" and "G410-96"

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

Incline: 1-1/2

Barrier Board: — Minimum 1/2-in. thick gypsum board or minimum 1/4-in. Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard", mechanically fastened with insulation fasteners (6-in. offset of the barrier board joints from the plywood joints).

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

Insulation: — Rmax Operating LLC "Multi-Max FA-3" or "Thermarroof Plus", mechanically fastened or hot mopped in place any thickness):

Membrane: — "ADHERED-60" (PVC), fully adhered with "Sikaplan Single Step" applied at 1-3/4 to 2-1/4 gal./100-ft.², "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1-1/2 to 2-1/2 gal./100-ft.².

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

Incline: 1-1/2

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

Insulation (Optional): — Rmax Operating LLC "Multi-Max FA-3" or "Thermarroof Plus", mechanically fastened or hot mopped in place any thickness:

Membrane: — "ADHERED-60" (PVC), fully adhered with "Sikaplan Single Step" applied at 1-3/4 to 2-1/4 gal./100-ft.², "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 1-1/2 to 2-1/2 gal./100-ft.².

70. **Deck:** NC

Incline: 1-1/2

Vapor Barrier (Optional): —

Insulation: — "Sarnatherm", "Sarnatherm a", "Sarnatherm m", "Sarnatherm-R Insulation", Hunter Panels "H-Shield", "H-Shield CG", "H-Shield HD Composite CG", Atlas Roofing Corp. "ACFoamII", "ACFoamIII", "ACFoamIV", IKO "IKOTherm III", Johns-Manville "ENRGY 3", Rmax Operating LLC "Multi-Max FA-3" or "Ultra-Max".

Membrane: — "G 410 FELTBACK" or "S 327 FELTBACK" adhered with "Sarnacol AD Feltback Membrane Adhesive" or "Sarnacol OM Feltback Membrane Adhesive".

71. **Deck:** NC

Incline: 1/2

Thermal Barrier (Optional): — Minimum 1/2 in. thick gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Roofboard", "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)" mechanically fastened with insulation fasteners or adhered with urethane based low rise adhesive or hot asphalt, with joints in the gypsum board and barrier board offset a minimum of 6-in. with the joints in the roof deck.

Vapor Barrier (Optional): — Polyethylene, Kraft (not Classified), Type G1, Type G2 or self-adhered SBS base sheet.

Insulation: — Rmax Operating LLC "Multi-Max FA-3" or "Ultra Max", any thickness, mechanically fastened or adhered with any UL Classified insulation adhesive.

Membrane: — "G 410-60 SA", self-adhered.

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

Incline: 1/2

Thermal Barrier: — Minimum 1/2 in. thick gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Roofboard", "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)" mechanically fastened with insulation fasteners or adhered with urethane based low rise adhesive or hot asphalt, with joints in the gypsum board and barrier board offset a minimum of 6-in. with the joints in the roof deck.

Vapor Barrier (Optional): — Polyethylene, Kraft (not Classified), Type G1, Type G2 or self-adhered SBS base sheet.

Insulation: — Rmax Operating LLC "Multi-Max FA-3" or "Ultra Max", any thickness, mechanically fastened or adhered with any UL Classified insulation adhesive.

Membrane: — "G 410-60 SA", self-adhered.

73. **Deck:** NC

Incline: 1/2

Thermal Barrier (Optional): — Minimum 1/2 in. thick gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Roofboard", "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)" mechanically fastened with insulation fasteners or adhered with urethane based low rise adhesive or hot asphalt, with joints in the gypsum board and barrier board offset a minimum of 6-in. with the joints in the roof deck.

Vapor Barrier (Optional): — Polyethylene, Kraft (not Classified), Type G1, Type G2 or self-adhered SBS base sheet.

Insulation: — "Rmax Operating LLC "Multi-Max FA-3" or "Ultra Max", any thickness, mechanically fastened or adhered with any UL Classified insulation adhesive.

Membrane: — "G 410-60 SA", self-adhered.

74. **Deck:** NC

Incline: 1

Thermal Barrier (Optional): — 1/2 inch thick gypsum board, minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Coated Glass Mat Roof Board" (Type SGMRX), mechanically fastened with insulation fasteners or adhered with urethane based low rise adhesive, or asphalt (6" offset of the gypsum board joints from the plywood joints).

Vapor Barrier (Optional): — Polyethylene or Kraft (not Classified), Type G1, Type G2 or self-adhered SBS base sheet.

Insulation: — "Sarnatherm", "Sarnatherm a", "Sarnatherm m", "Sarnatherm Roofboard A-III", "Sarnatherm m Cover Board", "Sarnatherm Roof Board-R", Hunter Panels H-Shield or "H-Shield HD", Atlas Roofing ACFoam II, III, IV or "ACFoam-III HD CoverBoard" or Johns Manville "ENRGY 3" or "Invinsa Roof Board" or RMAX Operating LLC "Ultra-Max HD", any thickness, mechanically fastened or adhered with UL Classified insulation adhesive.

Membrane: — "G 410-60 SA"

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

Thermal Barrier: — 1/2 inch thick gypsum board, minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/4" thick United States Gypsum Co. "SECUROCK® Coated Glass Mat Roof Board" (Type SGMRX), mechanically fastened with insulation fasteners , or adhered with urethane based low rise adhesive, or asphalt (6" offset of the gypsum board joints from the plywood joints).

Vapor Barrier (Optional): — Polyethylene or Kraft (not Classified), Type G1, Type G2 or self-adhered SBS base sheet.

Insulation: — Sarnatherm, Sarnatherm a, Sarnatherm m, Sarnatherm Roofboard A-III, Sarnatherm m Cover Board, Sarnatherm Roof Board-R, Hunter Panels H-Shield, or "H-Shield HD", Atlas Roofing "ACFoam II", "ACFoam III", "ACFoam IV" or "ACFoam-III HD CoverBoard" or Johns Manville "ENRGY 3" or "Invinsa Roof Board" or Rmax Operating LLC "Ultra-Max HD, any thickness, mechanically fastened or adhered with UL Classified insulation adhesive.

Membrane: — "G 410-60 SA".

76. Deck: NC**Incline:** 2

Thermal Barrier (Optional): — 1/2 inch thick gypsum board, minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Coated Glass Mat Roof Board" (Type SGMRX), mechanically fastened with insulation fasteners , or adhered with urethane based low rise adhesive, or asphalt (6" offset of the gypsum board joints from the plywood joints).

Vapor Barrier (Optional): — Polyethylene or Kraft (not Classified), Type G1, Type G2 or self-adhered SBS base sheet.

Insulation: — Any UL Classified insulation board, mechanically fastened or adhered with UL Classified insulation adhesive.

Barrier Board: — "Sarnatherm Roof Board-R", Rmax Operating LLC "Ultra-Max HD" and Hunter Panels "H-Shield HD", 1/2 inch thick, mechanically fastened or adhered with UL Classified insulation adhesive.

Membrane: — "G 410-60 SA"

77. Deck: C**Incline:** 2-1/2

Thermal Barrier (Optional): — 1/2 inch thick gypsum board, minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Coated Glass Mat Roof Board" (Type SGMRX), mechanically fastened with insulation fasteners , or adhered with urethane based low rise adhesive, or asphalt (6" offset of the gypsum board joints from the plywood joints).

Vapor Barrier (Optional): — Polyethylene or Kraft (not Classified), Type G1, Type G2 or self-adhered SBS base sheet.

Insulation: — Any UL Classified insulation board, mechanically fastened or adhered with UL Classified insulation adhesive.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Coated Glass Mat Roof Board" (Type SGMRX), mechanically fastened or adhered with UL Classified insulation adhesive.

Membrane: — "G 410-60 SA"

78. Deck: Structural Cement Fiber Unit**Incline:** 1

Thermal Barrier (Optional): — 1/2 inch thick gypsum board, minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/4" thick United States Gypsum Co. "SECUROCK® Coated Glass Mat Roof Board" (Type SGMRX), mechanically fastened with insulation fasteners , or adhered with urethane based low rise adhesive, or asphalt (6" offset of the gypsum board joints from the plywood joints).

Vapor Barrier (Optional): — Polyethylene or Kraft (not Classified), Type G1, Type G2 or self-adhered SBS base sheet.

Insulation: — "Sarnatherm", "Sarnatherm a", "Sarnatherm m", "Sarnatherm Roofboard A-III", "Sarnatherm m Cover Board", "Sarnatherm Roof Board-R", Hunter Panels "H-Shield" or "H-Shield HD", Atlas Roofing Corp. "ACFoam II", "ACFoam III", "ACFoam IV" or "ACFoam-III HD CoverBoard" or Johns Manville "ENRGY 3" or "Invinsa Roof Board" or Rmax Operating LLC "Ultra-Max HD", mechanically fastened or adhered with UL Classified insulation adhesive.

Membrane: — "G 410-60 SA"

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

Thermal Barrier (Optional): — 1/2 inch thick gypsum board, minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Coated Glass Mat Roof Board" (Type SGMRX), mechanically fastened with insulation fasteners , or adhered with urethane based low rise adhesive, or asphalt (6" offset of the gypsum board joints from the plywood joints).

Vapor Barrier (Optional): — Polyethylene or Kraft (not Classified), Type G1, Type G2 or self-adhered SBS base sheet.

Insulation: — Any UL Classified insulation board, mechanically fastened or adhered with UL Classified insulation adhesive.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Coated Glass Mat Roof Board"

Membrane: — "G 410-60 SA"

Class B - Fully Adhered (PVC/TPA)

1. **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: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" mechanically fastened.

Membrane: — "G 410-48", "G 410-54", "G 410-60", "G 410-72", "G 410-80" or "G 410-96", "S 327-48", "S 327-54", "S 327-60", "S 327-72", "S 327-80" or "S 327-96", fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.².

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

Incline: Unlimited

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" with 6-in. staggered joints, mechanically fastened.

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK" or "S 327-96" (PVC), fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" adhesive applied at 2-gal./100-ft.² or "Sarnacol 2121" adhesive applied at 3/4 to 1-3/4 gal./100-ft.².

3. **Deleted.**

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

Incline: 4

Thermal Barrier (Optional): — Minimum 1/2 in. thick gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Roofboard", "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)" mechanically fastened with insulation fasteners or adhered with urethane based low rise adhesive or hot asphalt, with joints in the gypsum board and barrier board offset a minimum of 6-in. with the joints in the roof deck.

Vapor Barrier (Optional): — Polyethylene, Kraft (not Classified), Type G1, Type G2 or self-adhered SBS base sheet.

Insulation: — Any UL Classified insulation, any thickness, mechanically fastened or adhered with any UL Classified insulation adhesive.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)", mechanically fastened or adhered with any UL Classified insulation adhesive.

Membrane: — "G 410-60 SA, self-adhered

5. **Deck:** NC

Incline: 4

Thermal Barrier (Optional): — Minimum 1/2 in. thick gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Roofboard", "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)" mechanically fastened with insulation fasteners or adhered with urethane based low rise adhesive or hot asphalt, with joints in the gypsum board and barrier board offset a minimum of 6-in. with the joints in the roof deck.

Vapor Barrier (Optional): — Polyethylene, Kraft (not Classified), Type G1, Type G2 or self-adhered SBS base sheet.

Insulation: — Any UL Classified insulation, any thickness, mechanically fastened or adhered with any UL Classified insulation adhesive.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum "DensDeck Prime Roofboard" or United States Gypsum Co. "SECUROCK Gypsum-Fiber Roof Board (Type FRX-G)", "SECUROCK Glass-Mat Roof Board (Type SGMRX)", mechanically fastened or adhered with any UL Classified insulation adhesive.

Membrane: — "G 410-60 SA", self-adhered.

Class C - Fully Adhered (PVC/TPA)

1. **Deck:** C (Tectum Deck) 4-in.

Incline: 2-1/2

Separation Sheet: — Type G1, Type G2 or Type G3 sheet nailed.

Insulation: — Johns Manville "ENRGY-IM", any thickness, mechanically fastened with metal insulation anchors or hot mopped in place.

Membrane: — "G 410-48", "G 410-54", "G 410-60", "G 410-72", "G 410-80" or "G 410-96" (PVC), fully adhered with "Sarnacol 2170" or "Sarnacol 2170 VC" applied at 1-1/2 to 2-1/2 gal./100-ft.².

Class A - Mechanically Fastened (PVC/TPA)

Membrane is secured to the roof deck with metal bars or metal plates and screws in accordance with the manufacturer's recommended installation instructions.

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

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

Membrane: — "G 410", "G 410-60", "S 327" or "S327-60" (PVC).

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

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

Separation Sheet: — "Sarnafelt 400" or Fortifiber

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC) mechanically fastened.

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

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

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC) mechanically fastened.

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

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

Barrier Board: — Plywood (0.50-in. minimum) or minimum 1/4-in.thick Georgia-Pacific Gypsum LLC "DensDeck ®", mechanically fastened with metal insulation anchors.

Membrane: — "G 410-48", "G 410-54", "G 410-60", "G 410-72", "G 410-80" or "G 410-96", "S 327-48", "S327-54", "S 327-60", "S 327-72", "S 327-80" or S 327-96" (PVC) mechanically fastened.

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

Barrier Board (Optional): — Minimum 5/8-in. thick Gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard".

Insulation: — Dow Chemical USA RM Styrofoam or E.P.S, any thickness.

Barrier Board: — Huebert Fiberboard 1-in. fiberboard.

Membrane: — "S 327-48", "S 327-54", "S 327-60", "S 327-72", "S 327-80" or S 327-96" (PVC) mechanically fastened.

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

Insulation: — GAF "Gaftemp", glass fiber or wood fiber, any thickness, mechanically fastened with metal insulation anchors.

Membrane: — "S 327-48 FELTBACK", "S 327-54 FELTBACK", "S 327-60 FELTBACK", "S 327-72 FELTBACK" or "S 327-80 FELTBACK" (PVC) mechanically fastened.

8. Deck: NC**Incline:** 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 roof covering asphalt:

- a. Perlite
- b. Fiberboard
- c. "Sarnatherm a CG Plus"
- d. Firestone Building Products Co. LLC "Iso 95+GL", "Iso 95+GW"
- e. Deleted
- f. Johns Manville "ENRGY 3"

g. "Sarnatherm I" or "Sarnatherm II"

h. Atlas Roofing Corp. "ACFoam II"

i. "Sarnatherm a"

j. "Sarnatherm", Tapered Sarnatherm", "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard"

k. "Sarnatherm m"

l. "Sarnatherm-R Insulation"

m. "Sarnatherm Roof Board A-III"

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC), laid loosely.

9. **Deleted.**

10. **Deleted.**

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

Incline: 1/2

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

Membrane: — ""G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC) mechanically fastened.

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

Incline: 2

Barrier Board: — Minimum 1/2-in. thick gypsum board or minimum 1/4- in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard", mechanically fastened with insulation fasteners (6-in. offset of the barrier 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. "Sarnatherm a CG Plus"

d. Firestone Building Products Co. LLC "Iso 95+GL", Iso 95+GW"

e. Deleted

f. Johns Manville "ENRGY 3"

g. "Sarnatherm I" or "Sarnatherm II"

h. Atlas Roofing Corp. "ACFoam II"

i. "Sarnatherm a"

j. "Sarnatherm", Tapered Sarnatherm", "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard"

k. "Sarnatherm m"

l. "Sarnatherm-R Insulation"

m. "Sarnatherm Roof Board A-III"

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC) mechanically fastened.

13. **Deleted.**

14. **Deleted.**

15. **Deleted.**

16. **Deck:** NC

Incline: 1-1/4

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

Membrane: — "S 327-48", "S 327-54", "S 327-60", "S 327-72", "S 327-80" or S 327-96" (PVC), mechanically fastened as per manufacturer's instructions.

17. **Deck:** NC

Incline: 3/4

Insulation: — "Sarnatherm I", uniform thickness or tapered foamed plastic, 0.9 in. thick minimum, no maximum or Johns Manville "Barrier Board Plus-M", uniform thickness or tapered composite, any thickness, mechanically fastened.

Membrane: — "S 327-48", "S 327-54", "S 327-60", "S 327-72", "S 327-80" or S 327-96" (PVC), mechanically fastened.

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

Incline: 2

Insulation: — Polystyrene, any thickness.

Barrier Board: — Minimum 5/8-in. thick gypsum or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard", mechanically fastened with 6-in. offset of the barrier board joint from the plywood joints.

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC) mechanically fastened.

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

Incline: 2

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

Insulation: — Polystyrene, any thickness.

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

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC) mechanically fastened.

20. **Deck:** NC

Incline: 4

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

Membrane: — "G 410-48", "G 410-60", "G 410-72", "G 410-80" and "G410-96" or "S 327-48", "S 327-60", "S 327-72", "S 327-80" and "S 327-96" (PCV)) mechanically fastened.

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

Incline: 1/2

Barrier Board: — Minimum 1/2- in. thick gypsum board with joints offset 6-in. from joints in plywood.

Insulation (Optional): — Operating LLC "Multi-Max" or "Thermarroof Plus," Firestone Building Products Co. LLC "Iso 95+GL" or "Iso 95+GW" or Johns Manville "ENRGY IM, IA or IG", Sarnafil "Sarnatherm I", "Sarnatherm II" or "Sarnatherm Composite", Atlas Roofing Corp. "ACFoam II", any thickness.

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "S 327-48", "S 327-48 FELTBACK", "S 327-60", "S 327-60 FELTBACK", (PVC) mechanically fastened.

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

Incline: 1/2

Insulation (Optional): — Operating LLC "Multi-Max" or "Thermarroof Plus", Firestone Building Products Co. LLC "ISO 95+GL" or "ISO 95+GW" or Johns Manville "ENRGY IM", "Sarna Therm II" or "Sarna Therm Composite", Atlas Roofing Corp. "ACFoam II", any thickness.

Barrier Board: — Minimum 1/2-in. thick gypsum board.

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "S 327-48", "S 327-48 FELTBACK", "S 327-60", "S 327-60 FELTBACK" (PVC), mechanically fastened.

23. **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. "Sarnatherm a CG Plus"
- c. Firestone Building Products Co. LLC "Iso 95 + GL", "Iso 95 + GW"
- d. Deleted
- e. Johns Manville " ENRGY 3 "
- f. "Sarnatherm I" or "Sarnatherm II"
- g. Atlas Roofing Corp. "ACFoam II"
- i. "Sarnatherm a"
- j. "Sarnatherm", Tapered Sarnatherm", "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard"
- k. "Sarnatherm m"
- l. "Sarnatherm-R Insulation"
- m. "Sarnatherm Roof Board A-III"

Barrier Board: — Partek Insulation "Paroc Capboard", 3/4-in. thick with joints staggered 6-in. from the plywood deck joints, mechanically fastened.

Membrane: — "G 410-48", "G 410-54", "G 410-60", "G 410-72", "G 410-80" or "G 410-96", "S 327-48", "S 327-54", "S 327-60", "S 327-72" or "S 327-80" (PVC) mechanically fastened.

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

Incline: 3

Insulation: — Partec " Paroc Capboard" 3/4-in. thick with insulation joints staggered 6-in. from the plywood deck joint, mechanically fastened.

Membrane: — "G 410-48", "G 410-54", "G 410-60", "G 410-96", "S 327-48", "S 327-54", "S 327-60", "S 327-72" or "S 327-80" (PVC) mechanically fastened.

25. **Deck:** C15/32

Incline: Unlimited

Insulation (Optional): — Polyisocyanurate, any thickness.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" with all joints staggered a minimum of 6-in. from the plywood joints.

Membrane: — "S 327-48", "S 327-54", "S 327-60", "S 327-72", "S 327-80" or S 327-96" (PVC) mechanically fastened.

26. **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 minimum, mechanically fastened.

- a. Perlite
- b. Fiberboard
- c. "Sarnatherm a CG Plus"
- d. Firestone Building Products Co. LLC "Iso 95+GL", "Iso 95+GW"
- e. Deleted
- f. Johns Manville "ENRGY 2" or "Barrier Board Plus"
- g. Johns Manville "ENRGY 3"
- h. "Sarnatherm I" or "Sarnatherm II"
- i. Atlas Roofing Corp. "ACFoam II"
- j. "Sarnatherm a"
- k. "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard"

l. "Sarnatherm m"

m. "Sarnatherm-R Insulation"

n. "Sarnatherm Roof Board A-III"

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK", "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-80" or S 327-96" (PVC), laid loosely.

27. **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 roof covering asphalt:

Celotex "Top RII", "Hy-Tec", "Hy-Tec II" or "Hy-Therm AP".

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-80" or S 327-96" (PVC), laid loosely.

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

Incline: 1-1/2

Barrier Board: — Minimum 1/2-in. thick gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard", mechanically fastened with insulation fasteners (6-in. offset of the barrier 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", "Hy-Therm AP".

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-14", "G410-14/Felt", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S327-14", "S327-14/Felt", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK" or S 327-96" (PVC) mechanically fastened.

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

Incline: 1/4

Barrier Board: — Minimum 1/2-in. thick gypsum board with joints offset 6-in. from joints in plywood roof deck.

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

Membrane: — G 410-48", "G 410-48 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "S 327-48", "S 327-48 FELTBACK", "S 327-60", "S 327-60 FELTBACK" (PVC), mechanically fastened.

30. **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", "Hy-Therm AP".

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

Membrane: — "G 410-48", "G 410-54", "G 410-60", "G 410-96", "S 327-48", "S 327-54", "S 327-60", "S 327-72" or "S 327-80" (PVC) mechanically fastened.

31. **Deck:** NC

Incline: 1-1/2

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 minimum, mechanically fastened:

Celotex "Top RII", "Hy-Tec", "Hy-Tec II" or "Hy-Therm AP".

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK", "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC), laid loosely.

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

Incline: Unlimited

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" with 6-in. staggered joints, mechanically fastened.

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC) mechanically fastened.

33. **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 roof covering asphalt: "Sarnatherm", "Tapered Sarnatherm", "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard".

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC), laid loosely.

34. **Deck:** NC

Incline: 1/2

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

Insulation: — One or more layers "Sarnatherm", "Sarnatherm a", Hunter Panels "H-Shield", Atlas Roofing Corp. "ACFoamII" or Johns Manville "ENRGY 3", any thickness, mechanically fastened or hot mopped.

Membrane: — "FASTENED-45", "FASTENED-45 FELTBACK", "FASTENED-60", "FASTENED-60 FELTBACK", "FASTENED-80" or "FASTENED-80 FELTBACK" (PVC) mechanically fastened.

34a. **Deck:** C-15/32

Incline: 1/2

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

Insulation: — One or more layers polystyrene, any thickness, mechanically fastened or hot mopped.

Slip Sheet: — Atlas Roofing Corp. "FR 10" or "FR 50".

Membrane: — "FASTENED-45", "FASTENED-45 FELTBACK", "FASTENED-60", "FASTENED-60 FELTBACK", "FASTENED-80" or "FASTENED-80 FELTBACK" (PVC) mechanically fastened.

35. **Deck:** NC

Incline: 4

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard" or "DensDeck Prime 2™ Roofboard" or "DensDeck DuraGuard® Roofboard" or United States Gypsum Co. "SECUROCK™ Roof Board (Type FRX-G), mechanically fastened.

Membrane: — "FASTENED-45", "FASTENED-45 FELTBACK", "FASTENED-60", "FASTENED-60 FELTBACK", "FASTENED-80" or "FASTENED-80 FELTBACK" (PVC), mechanically fastened.

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

Incline: 4

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

Insulation: — One or more layers polyisocyanurate, polystyrene or combinations, any thickness, mechanically fastened or hot mopped.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Glass-Mat Roof Board (Type SGMRX)" or CertainTeed Gypsum Inc. "GlasRoc", mechanically fastened with all barrier board butt joints staggered a minimum of 6-in. from plywood deck butt joints, mechanically fastened.

Membrane: — "FASTENED-45 FELTBACK", "FASTENED-60 FELTBACK" or "FASTENED-80 FELTBACK" (PVC) mechanically fastened.

36a. **Deck:** C-15/32

Incline: Unlimited

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Glass-Mat Roof Board (Type SGMRX)" or CertainTeed Gypsum Inc. "GlasRoc", mechanically fastened with all barrier board butt joints staggered a minimum of 6-in. from plywood deck butt joints, mechanically fastened.

Membrane: — "FASTENED-45", "FASTENED-60" or "FASTENED-80" (PVC) mechanically fastened.

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

Incline: 1

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Roof Board" (Type FRX-G) with all barrier board butt joints staggered a minimum of 6-in. from plywood deck butt joints, mechanically fastened.

Membrane: — "FASTENED-45", "FASTENED-45 FELTBACK", "FASTENED-60", "FASTENED-60 FELTBACK", "FASTENED-80" or "FASTENED-80 FELTBACK" (PVC) mechanically fastened.

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

Incline: 3

Base Sheet: — One ply Type G2, mechanically fastened.

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Roof Board" (Type FRX-G) with all barrier board butt joints staggered a minimum of 6-in. from plywood deck butt joints, mechanically fastened.

Membrane: — "FASTENED-45", "FASTENED-45 FELTBACK", "FASTENED-60", "FASTENED-60 FELTBACK", "FASTENED-80" or "FASTENED-80 FELTBACK" (PVC) mechanically fastened.

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

Incline: 1/2

Base Sheet: — One ply Type G2, mechanically fastened.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Roof Board" (Type FRX-G) with all barrier board butt joints staggered a minimum of 6-in. from plywood deck butt joints, mechanically fastened.

Insulation (Optional): — "Sarnatherm", "Sarnatherm a", Hunter Panel "H-Shield", Atlas Roofing Corp. "ACFoam II", any thickness.

Membrane: — "FASTENED-45", "FASTENED-45 FELTBACK", "FASTENED-60", "FASTENED-60 FELTBACK", "FASTENED-80" or "FASTENED-80 FELTBACK" (PVC), mechanically fastened.

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

Incline: 3

Insulation: — Fiberglass, polyisocyanurate, perlite or wood fiber, UL Classified, any thickness.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Roof Board" (Type FRX-G) with all barrier board butt joints staggered a minimum of 6-in. from plywood deck butt joints, mechanically fastened.

Membrane: — "FASTENED-45", "FASTENED-45 FELTBACK", "FASTENED-60", "FASTENED-60 FELTBACK", "FASTENED-80" or "FASTENED-80 FELTBACK" (PVC) mechanically fastened.

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

Incline: 1/2

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Roof Board" (Type FRX-G) with all barrier board butt joints staggered a minimum of 6-in. from plywood deck butt joints, mechanically fastened.

Insulation: — "Sarnatherm", "Sarnatherm a", Hunter Panel "H-Shield" or Atlas Roofing Corp. "ACFoam II", any thickness.

Membrane: — "FASTENED-45", "FASTENED-45 FELTBACK", "FASTENED-60", "FASTENED-60 FELTBACK", "FASTENED-80" or "FASTENED-80 FELTBACK" (PVC) mechanically fastened.

42. **Deleted.**

43. **Deleted.**

44. **Deleted.**

45. **Deleted.**

46. **Deleted.**

47. **Deleted.**

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

Incline: 1/2

Insulation (Optional): — Any UL Classified Polyisocyanurate or UL Classified Polystyrene, any thickness loose laid, mechanically fastened or adhered with UL Classified insulation adhesive.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" mechanically fastened, loose laid or adhered with UL Classified insulation adhesive with butt joints in barrier board off-set a minimum of 6-in. from plywood decks butt joints.

Separator Mat (Optional): — One ply polypropylene mat (not UL Classified), 18-oz/yd² maximum, mechanically fastened or loose laid.

Grounding Screen (Optional) — Aluminum 18 x 16 screen mesh (not UL Classified).

Membrane: — "G 476-60" or "G 476-72" or "G 476-80" (PVC) mechanically fastened.

49. **Deck:** NC

Incline: 1/2

Separator Mat (Optional): — One ply polypropylene mat (not UL Classified), 18-oz/yd² maximum, mechanically fastened or loose laid.

Membrane: — "G 476-60" or "G 476-72" or "G 476-80", mechanically fastened.

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

Incline: See note

Insulation: — Rmax Operating LLC "Ultra-Max FR", 2-in. thick minimum. All insulation joints must be staggered a minimum of 6-in. from the roof deck joints.

Membrane: — Any UL Classified membrane that currently has a Class A noncombustible roof deck rating with "Sarnatherm r", "Sarnatherm-R CG Insulation" Rmax Operating LLC "Multi-Max FA-3" or "Ultra-Max".

Note: The maximum incline shall be in accordance with the Classification established for the membrane/insulation roof covering assembly, however the incline shall not exceed 1-1/2:12.

51. **Deck:** NC

Incline: 1/2

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

Insulation: — One or more layers polystyrene, any thickness, mechanically fastened or hot mopped.

Insulation: — One or more layers "Sarnatherm" or Hunter Panels "H-Shield", minimum 1 in thick, mechanically fastened or adhered with hot roof covering asphalt.

Membrane: — "FASTENED-45", "FASTENED-45 FELTBACK", "FASTENED-60", "FASTENED-60 FELTBACK", "FASTENED-80" or "FASTENED-80 FELTBACK" (PVC) mechanically fastened.

52. **Deck:** NC

Incline: 2

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

Insulation: — Rmax Operating LLC "Multi-Max FA-3" or "Thermarroof Plus", any thickness, mechanically fastened or hot mopped in place with hot roof covering asphalt:

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC), laid loosely.

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

Incline: 2

Barrier Board: — Minimum 1/2-in. thick gypsum board or minimum 1/4- in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard", mechanically fastened with insulation fasteners (6-in. offset of the barrier board joints from the plywood joints).

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

Insulation: — Rmax Operating LLC "Multi-Max FA-3" or "Thermarroof Plus", any thickness, mechanically fastened or hot mopped in place:

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC) mechanically fastened.

54. **Deck:** NC

Incline: 2

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

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

Insulation: — Rmax Operating LLC "Multi-Max FA-3" or "Thermarroof Plus", 1-in. thick minimum, mechanically fastened.

Membrane: — "G 410-48", "G 410-48 FELTBACK", "G 410-54", "G 410-54 FELTBACK", "G 410-60", "G 410-60 FELTBACK", "G 410-72", "G 410-72 FELTBACK", "G 410-80", "G 410-80 FELTBACK" or "G 410-96", "S 327-48", "S 327-48 FELTBACK", "S 327-54", "S 327-54 FELTBACK", "S 327-60", "S 327-60 FELTBACK", "S 327-72", "S 327-72 FELTBACK", "S 327-80", "S 327-80 FELTBACK or S 327-96" (PVC), laid loosely.

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

Incline: 1/2

Membrane: — "S 327-60 FR FELTBACK" (PVC) mechanically fastened.

Class A - Mechanically Fastened or Fully Adhered

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

Incline: See Note 1

Insulation (Optional): — "Sarnatherm a" or "Sarnatherm a CG", any thickness, mechanically fastened.

Insulation: — Min. 1/2 in. "Sarnatherm Roof Board A FR", mechanically fastened with butt joints in the insulation staggered 6-in. from butt joints in the plywood roof deck.

Insulation (Optional): — "Sarnatherm a" or "Sarnatherm a CG", any thickness, mechanically fastened.

Membrane: — Any UL Classified TPO, PVC or EPDM membrane (any thickness), that is currently Classified to be use with "Sarnatherm a" or "Sarnatherm a CG" insulations, mechanically fastened or fully adhered.

Note 1: Incline is limited to the current rating of the UL Classified TPO, PVC or EPDM membranes with "Sarnatherm a" or "Sarnatherm a CG" insulations but cannot exceed 1/2 in.

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

Incline: See Note 1

Insulation (Optional): — "Sarnatherm a" or "Sarnatherm a CG", any thickness, mechanically fastened.

Insulation: — Min. 1/2 in. "Sarnatherm Roof Board A FR", mechanically fastened with butt joints in the insulation staggered 6-in. from butt joints in the plywood roof deck.

Insulation (Optional): — "Sarnatherm a" or "Sarnatherm a CG", any thickness, mechanically fastened.

Membrane: — Any UL Classified Modified Bitumen, BUR and Fluid Applied roofing systems (any thickness), that is currently Classified to be use with "Sarnatherm a" or "Sarnatherm a CG" insulations, mechanically fastened, heat fused or fully adhered.

Note 1: Incline is limited to the current rating of the UL Classified Modified Bitumen, BUR and Fluid Applied roofing system with "Sarnatherm a" or "Sarnatherm a CG" insulations but cannot exceed 1/2 in.

Class B - Mechanically Fastened (PVC/TPA)

1. **Deck:** NC

Incline: 1

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

Membrane: — "S 327-48", "S 327-54", "S 327-60", "S 327-72", "S 327-80" or S 327-96" (PVC), mechanically fastened with metal bars and screws.

2. **Deleted.**

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

Incline: 1/2

Barrier Board: — Minimum 5/8-in. thick gypsum board, mechanically fastened with insulation fasteners.

Membrane: — "G 410-48", "G 410-54", "G 410-60", "G 410-72", "G 410-80" or "G 410-96", "S 327-48", "S 327-54", "S 327-60", "S 327-72", "S 327-80" or S 327-96" (PVC) mechanically fastened.

4. **Deck:** C 3/4 Sheathing boards

Incline: 1/2

Barrier Board: — Minimum 5/8-in. thick gypsum board, mechanically fastened with insulation fasteners (gypsum board joints are paper tape embedded in cementitious compound).

Membrane: — "G 410-48", "G 410-54", "G 410-60", "G 410-72", "G 410-80" or "G 410-96", "S 327-48", "S 327-54", "S 327-60", "S 327-72", "S 327-80" or S 327-96" (PVC) mechanically fastened.

5. **Deleted.**

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

Incline: Unlimited

Insulation: — One of the following or combinations (1-inch minimum thickness):

a. "Sarnatherm-R Insulation"

b. Firestone Building Products Co. LLC "Iso 95+GL", "Iso 95+GW"

c. Deleted

d. Johns Manville "ENRGY 3"

e. "Sarnatherm I", "Sarnatherm II"

f. Atlas Roofing Corp. ACFoam II

g. "Sarnatherm a"

h. "Sarnatherm", Tapered Sarnatherm", "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard"

i. "Sarnatherm m"

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

Membrane: — "S 327-48", "S 327-54", "S 327-60", "S 327-72", "S 327-80" or S 327-96" (PVC) mechanically fastened.

7. Deleted.

8. **Deck:** NC

Incline: Unlimited

Barrier Board: — Minimum 3/8-in. thick gypsum board or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard".

Membrane: — "S 327-48", "S 327-54", "S 327-60", "S 327-72", "S 327-80" or S 327-96" (PVC)

9. **Deck:** 15/32

Incline: Unlimited

Barrier Board: — Minimum 5/8-in. thick gypsum board, mechanically fastened with metal insulation fasteners 6-in. offset barrier board joints from the plywood joints.

Membrane: — "S 327-48", "S 327-54", "S 327-60", "S 327-72", "S 327-80" or S 327-96" (PVC) mechanically fastened.

10. Deleted.

11. **Deck:** NC

Incline: 3

Membrane: — "G 410-48 FELTBACK" or "G 410-60 FELTBACK" or "S 327-48 FELTBACK" or "S 327-60 FELTBACK" (PVC) mechanically fastened.

12. Deleted.

13. Deleted.

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

Incline: Unlimited

Insulation: — Minimum 3/4-in. thick perlite with all joints staggered a minimum of 6-in. from the plywood joints.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard" with all joints staggered 6-in. minimum from the insulation joints.

Membrane: — "S327" (PVC).

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

Incline: 4

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

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

Membrane: — "S 327-48", "S 327-54", "S 327-60", "S 327-72", "S 327-80" or S 327-96" (PVC) mechanically fastened.

16. **Deck:** C-2 T&G

Incline: 2

Insulation: — Atlas Roofing Corp. "ACFoam II", 2.7-in. thick minimum.

Membrane: — "S 327" (PVC).

17. **Deck:** C-2 T&G

Incline: 1-1/2

Insulation: — Hunter Panels "H-Shield", "Sarnatherm", Tapered Sarnatherm", "Sarnatherm Perlite Composite", "Tapered Sarnatherm Perlite Composite", "Sarnatherm Woodfiber Composite", "Tapered Sarnatherm Woodfiber Composite" or "Sarnatherm Nailboard", 2.7-in. thick minimum.

Membrane: — "S 327-48", "S 327-60", "S 327-72", "S 327-80" and "S 327-96" (PVC) mechanically fastened.

18. Deleted.

19. Deleted.

20. Deleted.

21. Deleted.

22. Deck: NC**Incline:** Unlimited**Barrier Board (Optional):** — Polyethylene or Kraft (not Classified).**Insulation:** — One or more layers polystyrene, polystyrene or combinations, any thickness, mechanically fastened or hot mopped.**Barrier Board:** — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard", "DensDeck DuraGuard™ Roofboard", "DensDeck Prime 2™" or minimum 1/4-in. thick United States Gypsum Co. "SECUROCK® Glass-Mat Roof Board (Type SGMRX)" or CertainTeed Gypsum Inc. "GlasRoc", mechanically fastened with all barrier board butt joints staggered a minimum of 6-in. from plywood deck butt joints, mechanically fastened.**Membrane:** — "FASTENED-45 FELTBACK", "FASTENED-60 FELTBACK" or "FASTENED-80 FELBACK" (PVC) mechanically fastened.**23. Deck:** C-15/32**Incline:** See note**Insulation (Optional):** — "Sarnatherm a" or Atlas Roofing Corp. "ACFoam II" or "Sarnatherm a CG" or Atlas Roofing Corp. "AC Foam III", any thickness.**Insulation:** — "Sarnatherm Roof Board A-III" with minimum. 1/2 inch thick polyisocyanurate insulation. All insulation joints must be staggered a minimum of 6 inches from the deck joints or from the insulation joints directly below.**Insulation (Optional):** — "Sarnatherm a" or Atlas Roofing Corp. "AC Foam II" or "Sarnatherm a CG" or Atlas Roofing Corp. "AC Foam III" or any thickness.**Membrane:** — Any UL Classified membrane, 40 mil thickness minimum, that currently has a noncombustible rating with "Sarnatherm a" or Atlas Roofing Corp. "AC Foam II" or "Sarnatherm a CG" or "AC Foam III" or insulation.**Note:** The maximum incline shall be in accordance with the Class A Classification established for the membrane/insulation ("Sarnatherm a" or Atlas Roofing Corp. "AC Foam II" or "Sarnatherm a CG" or Atlas Roofing Corp. "AC Foam III"), roof covering assembly, however the incline cannot exceed 1:12.**24. Deck:** C-15/32**Incline:** 1/2**Insulation:** — "Sarnatherm Roof Board A-III" with minimum. 1/2 inch thick, polyisocyanurate insulation. All insulation joints must be staggered a minimum of 6 inches from the deck joints or from the insulation joints directly below.**Membrane:** — Any UL Classified PVC, CPE, CSM, CSPE, EPDM, NBP, PIB, EIP, TRE, TPO or CPA membrane . (Note: Actual incline is determined by the maximum existing membrane Classification incline, but cannot exceed 1/2:12.)**Note:** The maximum incline shall be in accordance with the Class A or Class B Classification established for the membrane/insulation, however the incline cannot exceed 1/2:12.**25. Deck:** C 1-1/2 TG**Incline:** 4-1/2**Insulation:** — Rmax Operating LLC Multi-Max FA-3 or "Therमारoof Plus" (1-inch minimum thickness):**Barrier Board:** — Minimum 3/8-in. thick gypsum board, mechanically fastened with metal insulation fasteners (minimum 6-in. offset gypsum board joints from insulation board joints).**Membrane:** — "S 327-48", "S 327-54", "S 327-60", "S 327-72", "S 327-80" or S 327-96" (PVC) mechanically fastened.**Class C - Mechanically Fastened (PVC/TPA)****1. Deck:** C-1-1/2 T&G**Incline:** 1**Barrier Board:** — Minimum 15/32-in. thick plywood.**Insulation (Optional):** — Any thickness:

a. "Sarnatherm I" or "Sarnatherm II"

b. Deleted

c. "Sarnatherm-R Insulation"

d. Johns Manville "ENRGY3"

e. Atlas Roofing Corp. "ACFoam II"

f. "Sarnafil a"

g. "Sarnatherm m"

Membrane: — "S 327-48", "S327-14", "S 327-60", "S 327-72", "S 327-80" or S 327-96" (PVC).**2. Deck:** C-15/32**Incline:** 2**Insulation:** — One of the following or combinations-one or multiple layers 1.2-in. minimum thick with the bottom layer insulation board with the joints staggered 6-in. from the plywood joints.

a. "Sarnatherm I" or "Sarnatherm II"

- b. Deleted
- c. "Sarnatherm-R Insulation"
- d. Johns Manville "ENRGY 3"
- e. Atlas Roofing Corp. "ACFoam II" or "ACFoam III"
- f. "Sarnafil a"
- g. "Sarnatherm m"

Membrane: — "S 327-48", "S 327-54", "S 327-60", "S 327-72", "S 327-80" or S 327-96" (PVC) mechanically fastened.

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

Incline: 1/2

Barrier Board: — Minimum 15/32-in. thick plywood.

Insulation (Optional): — Rmax Operating LLC "Multi-Max FA-3", any thickness:

Membrane: — "S 327-48", "S 327-54", "S 327-60", "S 327-72", "S 327-80" or S 327-96" (PVC) mechanically fastened.

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

Incline: 1-1/2

Insulation: — Rmax Operating LLC "Multi-Max FA-3", 1.2-in. minimum thick with the bottom layer insulation board with the joints staggered 6-in. from the plywood joints.

Membrane: — "S 327-48", "S 327-54", "S 327-60", "S 327-72", "S 327-80" or S 327-96" (PVC) mechanically fastened.

Class A, B or C (See Note)

1. **Deck:** NC (See Note 1)

Incline: See Note 1

Insulation: — Any UL Classified, any thickness, adhered with "Sarnacol AD Feltback Membrane Adhesive", "Sarnacol Low Rise Insulation Adhesive" or "Sarnacol OM Feltback Membrane Adhesive".

Membrane: — Any UL Classified modified bitumen system, BUR system or CPE, CSM, CSPE, EPDM, NBP, PIB, PVC, TPO or TRE membrane system suitable for use with any roof insulation.

Note 1: Classification (A, B or C) and maximum incline will be the same as that of the Classified roof covering System (TGFU) currently limited to noncombustible roof deck.

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