Product iQ®

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Roofing Systems

COMPANY
Amrize Building Envelope LLC dba Duro-Last
525 W. Morley Dr.
Saginaw, MI 48601-9485 United States

R10128

“Duro-Last” (PVC) or “Duro-Last X” 40 to 80-mil thick membrane includes white, gray, dark gray, tan and terracotta colors or Designer Series: Rock-Ply, Slate Gray Shingle-Ply and Sandstone Shingle-Ply in 50-mil thick for all Certifications.

"Duro-Tuff" includes the following colors, unless otherwise noted: white, grey, patina, light tan, charcoal, green, dark copper and blue. References to "Duro-Tuff" include 50-mil and 60-mil thick product, unless otherwise noted.

"Duro-Fleece" includes the following colors, unless otherwise noted: white, grey, patina, light tan, charcoal, green, dark copper and blue. References to "Duro-Fleece" include 50-mil and 60-mil thick product, unless otherwise noted.

References to "Duro-Last EV" include 50-mil, 60-mil and 80 mil thick products, unless otherwise noted.

References to "Duro-Last EV Fleece" include 50-mil, 60-mil and 80 mil thick products, unless otherwise noted.

Unless otherwise noted, "Duro-Fleece Plus" can be used in lieu of “Duro-Last” (PVC) or “Duro-Last X”, in any system where “Duro-Last” (PVC) or “Duro-Last X” is mechanically attached or adhered with "Duro-Last WB Adhesive II"

Unless otherwise noted, "Duro-Fleece Plus" can be adhered with OMG Inc. "Fleece Membrane Adhesive", applied in beads spaced 6-in. on center minimum, in any system which the membrane can be mechanically attached.

Unless otherwise noted, “Duro-Last” (PVC) or “Duro-Last X” can be used in lieu of “Duro-Tuff” in any system where “Duro-Tuff” is mechanically attached or adhered with “Duro-Last SB IV” or “Duro-Last Solvent-Grip Plus Spray Adhesive” but limited to a maximum incline of 2:12

Unless otherwise noted, a vapor barrier or air barrier (non-UL Certified) may be used below the insulation, barrier board or slip sheet in any of the following Certifications.

Unless otherwise noted, barrier boards and insulation may be mechanically fastened or adhered with UL Classified adhesive in any of the following Certifications.

Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or minimum 1/4-in. thick National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or 7/16-inch thick "DEXcell Cement Roof Board" or minimum 1/4-in. thick United States Gypsum Co. SecuRock® Glass-Mat Roof Board, may be used in lieu of Atlas Roofing Corp. "FR-10" or "FR-50" slip sheets, 1/2-in. thick gypsum wallboard, perlite, polyisocyanurate, and wood fiber in all applicable Certifications.

Any system listed for use over a combustible roof deck can be installed over a non-combustible roof deck to achieve the same Certification.

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

One or more plies GAF "VersaShield Solo Fire Resistant Slipsheet" mechanically fastened or loose laid may be used in lieu of GAF "VersaShield™ FB-1S" and "VersaShield™ FB-2S" in all applicable Certifications.

"Duro-Guard Iso HD-H" (minimum 1/2-in. thick), "Duro-Guard Iso Composite-H" may be used over any UL Certified polystyrene on non-combustible roof decks. Maximum incline shall be in accordance with the Certification established for the insulation/membrane roof covering system but cannot exceed 2:12.

“Duro-Guard ISO-II-H”, "Duro-Guard ISO II", and "Duro-Guard ISO-G Tapered" may be used in any UL Certified insulated roof covering system assembly that incorporates the use of any UL Certified polyisocyanurate insulation.

Any UL Certified EPS, any thickness, may be used below Duro-Last polyisocyanurate insulations on non-combustible decks provided a minimum 1-in. thick layer of Duro-Last polyisocyanurate is used. Maximum incline shall be in accordance with Certification established for the insulation/membrane roof covering system but cannot exceed 1:12.

"Duro-Guard ISO-III-A" may be substituted for "Duro-Guard ISO-II-A" polyisocyanurate insulation in any of the following Certifications.

"Duro-Guard ISO-IV-A" may be substituted for "Duro-Guard ISO-III-A" or "Duro-Guard ISO II-A" polyisocyanurate insulation in any of the following Certifications.

"Duro-Guard HD-A" may be used over polyisocyanurate insulation product in any of the following Certifications.

"Duro-Guard EPS Tapered-A Board" is an acceptable alternate to all EPS insulations utilized in the following Certifications. These boards are available as "Type I", "Type VIII", "Type II" or "Type IX".

Minimum 1/2-in. thick UL Certified gypsum board; or minimum 1/4-in. thick UL Certified Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" roof board may be substituted for any cover board material shown in these Certifications when placed immediately under any UL Certified Membrane. When this is done, the resulting roof covering system is acceptable for use over any combustible or noncombustible roof deck. The butt joints of the gypsum and/or barrier board are offset 6-in. minimum with the joints of the roof deck. The gypsum and/or barrier board must overlay the polystyrene.

A noncombustible roof deck roof covering system Certification that includes 1/2-in. thick wood fiberboard as cover board over EPS may have as an alternate to the minimum 1/2-in. thick fiberboard, a layer of minimum 1-in. thick polyisocyanurate. To maintain the Certification, proper membrane/polyisocyanurate compatibility must be maintained and inclines restrictions observed.

For Combustible Roof Decks - Class A:

1. A minimum 3-in. thick layer or a minimum two layers of 1.5-in. thick of "Duro-Guard Iso III-H" or "Duro-Guard Iso Composite-H" is placed directly over a combustible roof deck and is covered with any Duro-Last roofing membranes used in any UL Class A roof covering assembly to achieve a Class A fire Certification. As an alternative, any UL Certified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used below the 3-in. minimum total thickness of "Duro-Guard Iso III-H" or "Duro-Guard Iso Composite-H". The insulation may be loosely laid or attached with fasteners and plates, hot roofing asphalt or cold adhesive. A vapor barrier or air barrier (non-UL Certified) 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 butt joints directly below. The maximum incline shall be in accordance with the Certification 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 "Duro-Guard Iso III-H" or "Duro-Guard Iso Composite-H" is placed over a minimum 1 layer of GAF "VersaShield FB-1S" over a combustible roof deck. The insulation is covered with any UL Certified roofing membrane used in any UL Class A roof covering assembly to achieve a Class A fire Certification. As an alternative, any UL Certified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used below the 1.9-in. minimum total thickness of "Duro-Guard Iso III-H" or "Duro-Guard Iso Composite-H". The insulation may be loosely laid or attached with fasteners and plates, hot roofing asphalt or cold adhesive. A vapor barrier or air barrier (non-UL Certified) 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 butt joints directly below. The maximum incline shall be in accordance with the Certification 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 "Duro-Guard Iso HD-H" over a minimum 2.5-in. thick layer of any Duro-Last Certified polyisocyanurate insulation is placed directly over a combustible roof deck and is covered with Duro-Last roofing membranes used in any UL Class A roof covering assembly to achieve a Class A fire Certification. As an alternative, any UL Certified 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 roofing asphalt or cold adhesive. A vapor barrier or air barrier (non-UL Certified) may also be used below the insulation. All insulation butt joints must be staggered a minimum of 6-in. from the roof deck joints or from the insulation butt joints directly below. The maximum incline shall be in accordance with the Certification 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 "Duro-Guard Iso HD-H" over a minimum 1.4-in. thick layer of any Duro-Last Certified polyisocyanurate insulation is placed over a minimum 1 layer of GAF "VersaShield FB-1S" over a combustible roof deck. The insulation is covered with Duro-Last roofing membranes used in any UL Class A roof covering assembly to achieve a Class A fire Certification. As an alternative, any UL Certified 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 roofing asphalt or cold adhesive. A vapor barrier or air barrier (non-UL Certified) 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 butt joints directly below. The maximum incline shall be in accordance with the Certification established for the membrane/insulation roof covering assembly; however, the incline cannot exceed 1/2:12.
5. A minimum 1-in. thick layer of "Duro-Guard ISO-IV-A" placed directly over a combustible roof deck and covered with any Duro-Last membrane used in any UL Class A roof covering assembly to achieve a Class A fire Certification. As an alternate, any UL Certified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used above or below the 1-in. minimum total thickness of "Duro-Guard ISO-IV-A". All insulation butt joints must be staggered a minimum of 6-in. from the roof deck joints or from the insulation butt joints directly below. The maximum incline shall be in accordance with the

Certification established for the membrane/insulation roof covering assembly; however, the incline cannot exceed 1:12.

6. A minimum 1-in. thick layer of "Duro-Guard ISO HSP" is placed directly over a combustible roof deck and is covered with any UL Certified roofing membrane used in any UL Class A roof covering assembly to achieve a Class A fire Certification. As an alternative, any UL Certified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used below the 1-in. minimum thickness of Duro-Last "Duro-Guard ISO HSP". The insulation may be loosely laid or attached with fasteners and plates, hot roofing asphalt or cold adhesive. A vapor barrier (non-UL Certified) may also be used below the insulation. All insulation butt joints must be staggered a minimum of 6-in. from the roof deck joints or from the insulation butt joints directly below. The maximum incline shall be in accordance with the Certification established for the membrane/insulation roof covering assembly; however, the incline cannot exceed 1/2:12.
7. A minimum 1-in. thick layer of "Duro-Guard ISO HSP" over a minimum 3-1/2 in. thick layer of any UL Certified EPS insulation is placed directly over a combustible roof deck and is covered with any UL Certified roof covering membrane used in any UL Class A roof covering assembly to achieve a Class A fire Certification. Any UL Certified 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 roofing asphalt or cold adhesive. "Duro-Guard ISO HSP" must be attached with fasteners and plates. A vapor barrier (non-UL Certified) may also be used below the insulation. All insulation butt joints must be staggered a minimum of 6-in. from the roof deck joints or from the insulation butt joints directly below. The maximum incline shall be in accordance with the Certification established for the membrane/insulation roof covering assembly as published on UL's Product iQ™ Data Base; however, the incline cannot exceed 1/2:12.
8. A minimum 1/2-in. thick layer of "Duro-Guard HD FR" 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 1/2-in. minimum thickness of "Duro-Guard HD 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 butt joints must be staggered a minimum of 6-in. from the roof deck joints or from the insulation butt 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 "Duro-Guard HD FR" over a minimum 3-1/2 in. thick 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 roofing asphalt or cold adhesive. "Duro-Guard HD FR" must be attached with fasteners and plates. A vapor barrier (non-UL classified) may also be used below the insulation. All insulation butt joints must be staggered a minimum of 6-in. from the roof deck 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® Data Base; however, the incline cannot exceed 1/2:12.
10. A minimum 1/2 in. layer of "Duro-Guard HD FR" over a minimum 3-1/2 in. layer of any UL Classified EPS insulation is placed directly over a combustible deck and is covered with any UL Classified roofing membrane used in any UL Class A roofing 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 roofing asphalt or cold adhesive. 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 roofing assembly as listed in UL's Roofing Materials & Systems Directory; however, the incline cannot exceed 1/2:12.

1. A minimum 1 in. layer of “Duro-Guard Iso III-H” is placed directly over a combustible deck and is covered with any UL Classified roofing membrane used in any UL Class A roofing 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 in. minimum thickness of “Duro-Guard Iso III-H”. The insulation 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 12 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 roofing assembly, however, the incline cannot exceed 1/2:12.
2. A minimum 1 in. layer of “Duro-Guard Iso III-H” over a minimum 3-1/2 in. layer of any UL Classified EPS insulation is placed directly over a combustible deck and is covered with any UL Classified roofing membrane used in any UL Class A roofing 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. 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 12 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 roofing assembly as listed in UL's Roofing Materials & Systems Directory; however, the incline cannot exceed 1/2:12.
3. A minimum 1/2 in. thick layer of "Duro-Guard Iso HD-H" is placed directly over a combustible 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 1/2 in. minimum thickness. 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 12 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 roofing assembly as published on UL's On-Line Certification Directory 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. thick layer of "Duro-Guard Iso III", "Duro-Guard Iso Composite-H" is placed directly over a combustible roof deck and is covered with Duro-Last roofing membranes used in any UL Class B roof covering assembly to achieve a Class B fire Certification. As an alternative, any UL Certified insulation (except expanded or extruded polystyrene), any combination, any thickness, may be used below the 1.9-in. minimum thickness layer of "Duro-Guard Iso III", "Duro-Guard Iso Composite-H". The insulation may be loosely laid or attached with fasteners and plates, hot roofing asphalt or cold adhesive. A vapor barrier or air barrier (non-UL Certified) may also be used below the insulation. All insulation butt joints must be staggered a minimum of 6-in. from the roof deck joints or from the insulation butt joints directly below. The maximum incline shall be in accordance with the Certification 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 "Duro-Guard Iso HD-H" over a minimum of 1.4-in. thick layer of any Duro-Last Certified polyisocyanurate insulation is placed directly over a combustible roof deck and is covered with Duro-Last roofing membranes used in any UL Class B roof covering assembly to achieve a Class B fire Certification. As an alternative, any UL Certified 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 roofing asphalt or cold adhesive. A vapor barrier or air barrier (non-UL Certified) may also be used below the insulation. All insulation butt joints must be staggered a minimum of 6-in. from the roof deck joints or from the insulation butt joints directly below. The maximum incline shall be in accordance with the Certification established for the membrane/insulation roof covering assembly, however the incline cannot exceed 1/2:12.

3. A minimum 1-in. thick layer of "Duro-Guard ISO HSP" is placed directly over a combustible roof deck and is covered with any UL Certified roofing membrane used in any UL Class A or B roof covering assembly to achieve a Class B fire Certification. Any UL Certified insulation, any combination, any thickness, may be used below the "Duro-Guard ISO HSP". Insulation may be loosely laid or attached with fasteners and plates, hot roofing asphalt or cold adhesive. A vapor barrier (non-UL Certified) may also be used below the insulation. All insulation butt joints must be staggered a minimum of 6-in. from the roof deck joints or from the insulation butt joints directly below. The maximum incline shall be in accordance with the Certification established for the membrane/insulation roof covering assembly as published on UL's Product iQ™ Data Base for the product category Roofing Systems.
4. A minimum 1/2 in. thick layer of "Duro-Guard HD FR" is placed directly over a combustible roof deck and is covered with any UL Classified roofing 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 "Duro-Guard HD 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 butt joints must be staggered a minimum of 6-in. from the roof deck joints or from the insulation butt 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™ Data Base for the product category Roofing Systems.

A vapor barrier may be optionally installed under all systems utilizing any "Duro-Guard ISO" insulation.

Unless otherwise indicated "Duro-Last® Roof Pavers" may be placed over the surface of any UL Certified Duro-Last membrane roofing system and maintain the rating of the Certification, limited to a 2.5 in. incline.

Unless otherwise indicated, "Duro-Last Roof Pavers" may be placed over the surface of any UL Certified TPO, EPDM, or PVC roofing systems and maintain the rating of the Certification, limited to a 2.5 in. incline.

ASPHALT FELT SYSTEMS WITH HOT ROOFING ASPHALT (TPO)

Class A (TPO)

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

Insulation: — "Duro-Guard ISO II-E2", "Duro-Guard ISO III-E2", "Duro-Guard ISO HD-E2", any thickness, loose-laid or mechanically fastened.

Base Sheet: — One ply Elevate "SBS Premium Poly Base", mechanically fastened.

Inter Ply Sheet: — One ply Elevate "SBS Premium Poly Base", fully adhered with hot mopping asphalt.

Membrane: — “Duro-Tech™ TPO Fleece”, fully adhered with hot mopping asphalt.

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

Insulation: — "Duro-Guard ISO II-E2", "Duro-Guard ISO III-E2", any thickness, mechanically fastened.

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

Base Sheet: — One ply Elevate "SBS Premium Poly Base", mechanically fastened.

Ply Sheet: — One ply Elevate "SBS Premium Poly Base", fully adhered with hot mopping asphalt.

Membrane: — “Duro-Tech™ TPO Fleece”, fully adhered with hot mopping asphalt.

SINGLE PLY MEMBRANE SYSTEMS (TPO)

Class A - Fully Adhered (TPO)

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

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

Insulation: — Glass fiber, wood fiber or perlite, 1/2-in. minimum thickness.

Membrane: — “Duro-Tech™ TPO”.

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

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

Barrier Board: — Gypsum wallboard, 1/2 in. thick minimum or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard", “DensDeck®StormX™ Prime Roofboard” or "DensDeck DuraGuard™ Roofboard", joints in barrier board offset 6 in. with joints in deck.

Membrane: — “Duro-Tech™ TPO”.

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

Slip Sheet: — Two layers GAF "VersaShield Underlayment" or "VersaShield FB-2S", preliminary attachment.

Insulation: — Elevate "ISO 95+ GL" (any thickness), mechanically attached.

Membrane: — “Duro-Tech™ TPO” (1/2 :12); EPDM membranes may be coated with "AcryliTop™ PC-100" at 1 gal/100-ft.^{2} or “Elevate AcryliTop PC-100 1.0 to 3 gal/100-ft.^{2} and maintain rating.

4. **Deck:** C-15/32 **Incline:** See below

Slip Sheet: — Two layers GAF "VersaShield FB-1S", preliminary attachment.

Insulation: — Elevate "ISO 95+ GL" (any thickness), mechanically attached.

Membrane: — .045 or .060; “Duro-Tech™ TPO” (1/2 :12); EPDM membranes may be coated with "AcryliTop™ PC-100" at 1 gal/100-ft.^{2} or “Elevate AcryliTop PC-100 1.0 to 3 gal/100-ft.^{2} and maintain rating.

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

Insulation — Any UL Classified, any thickness, mechanically fastened.

Insulation: — Oriented strand board, minimum 7/16 in. thick, mechanically fastened.

Membrane: — “Duro-Tech™ TPO”.

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

Insulation: — Any Classified Lightweight Insulating concrete, minimum 2-in. thick coverage over internal insulation (if installed).

Membrane: — “Duro-Tech™ TPO Fleece”, adhered with Elevate "UltraPly™ TPO XR Bonding Adhesive".

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

Insulation: — Any Classified Lightweight Insulating concrete, minimum 2" coverage over internal insulation (if installed).

Membrane: — “Duro-Tech™ TPO Fleece”, adhered with Elevate "UltraPly™ TPO XR Bonding Adhesive".

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

Insulation (Optional): — "Duro-Guard ISO II-E2", any thickness.

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””, adhered with "Tech-Bond™ Bonding Adhesive", "Tech-Bond™ LVOC Bonding Adhesive", or Elevate "Single-Ply LVOC Bonding Adhesive -1168" at 45-ft^2/gal.

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

Insulation: — Lightweight Insulated concrete or structural concrete.

Membrane: — 45 or 60 mil “Duro-Tech™ TPO”, fully adhered with "Tech-Bond™ Bonding Adhesive" at 45-ft^2/gal.

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

Insulation: — Elevate "ISO 95+ GL" (any thickness), mechanically attached.

Membrane: — “Duro-Tech™ TPO Fleece” (fleece backed) fully adhered with hot asphalt or adhered with Millennium PG-1 pump Grade Adhesive in ribbons spaced 12-in. o.c.

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

Insulation: — "Duro-Guard ISO II-E2" (any thickness), mechanically attached.

Membrane: — “Duro-Tech™ TPO Fleece” (fleece backed) fully adhered with hot asphalt or adhered with Millennium PG-1 pump Grade Adhesive in ribbons spaced 4 in. o.c.

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

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

Insulation: — Minimum 1/2-in. thick "Duro-Guard ISO HD-E2", or 1/2-in. thick "Duro-Guard ISO III-E2"

Membrane: — “Duro-Tech™ TPO”, fully adhered with "Tech-Bond™ Bonding Adhesive", "Tech-Bond™ LVOC Bonding Adhesive", or Elevate "Single-Ply LVOC Bonding Adhesive -1168" or "Water Based Bonding Adhesive P".

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

Insulation (Optional): — "Duro-Guard ISO II-E2", any thickness

Insulation: — 1-in. thick "Duro-Guard ISO III-E2" offset 6 inches with joints in the deck.

Membrane: — “Duro-Tech™ TPO”, fully adhered with "Tech-Bond™ Bonding Adhesive", "Tech-Bond™ LVOC Bonding Adhesive", or Elevate "Single-Ply LVOC Bonding Adhesive -1168" or "Water Based Bonding Adhesive P".

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

Coverboard: — "Duro-Guard ISO HD-E2", or 1/2-in. "Duro-Guard ISO III-E2"

Insulation: — "ISO-95+ GL", minimum thickness 1 in.

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””, fully adhered with Elevate "Water Based Bonding Adhesive P."

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

Insulation (Optional): — "Duro-Guard ISO II-E2", any thickness

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

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil” adhesive.

16. **Deck:** NC **Incline:** 2

Insulation (Optional): — "Duro-Guard ISO II-E2", any thickness

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

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80” adhesive.

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

Membrane: — “Duro-Tech™ TPO Fleece”, adhered directly to structural concrete with hot asphalt.

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

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

Barrier Board: — Minimum 1/4-in. Georgia-Pacific LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard", “DensDeck®StormX™ Prime Roofboard” or "DensDeck DuraGuard™ Roofboard" with joint offset 6 inches from joints in the deck

Membrane: — “Duro-Tech™ TPO Fleece”, adhered with hot asphalt.

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

Insulation: — "Duro-Guard ISO II-E2", any thickness, "Duro-Guard ISO III-E2", "Duro-Guard ISO HD-E2".

Membrane: — “Duro-Tech™ TPO Fleece”, adhered with Elevate "I.S.O. Spray™ R" or "XR Stick™ Membrane Adhesive". Adhesive applied in ribbons/beads 12 in. o.c. , or "Duro-Grip® Low-Rise Foam 500", "Duro-Grip® Low-Rise Foam CRA" spray adhesive can be applied in ribbons or full coverage splatter.

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

Insulation: — Optional any UL Classified any thickness

Barrier Board: — Minimum 1/4-in. Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard", “DensDeck®StormX™ Prime Roofboard” or "DensDeck DuraGuard™ Roofboard"

Membrane: — “Duro-Tech™ TPO Fleece”, adhered with Elevate "I.S.O. Spray™ R" or" XR Stick™ Membrane Adhesive". Adhesive applied in ribbons/beads spaced 12 in. o.c. or "Duro-Grip® Low-Rise Foam 500", "Duro-Grip® Low-Rise Foam CRA" spray adhesive can be applied in ribbons or full coverage splatter.

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

Insulation: — Optional any UL Classified and thickness.

Barrier Board: — Minimum 1/4-in. Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard", “DensDeck®StormX™ Prime Roofboard” or "DensDeck DuraGuard™ Roofboard"

Membrane: — “Duro-Tech™ TPO Fleece”, adhered with Elevate "I.S.O. Spray™ R" or "XR Stick™ Membrane Adhesive", applied in a full coverage application. Or "Duro-Grip® Low-Rise Foam 500" spray adhesive can be applied in ribbons or full coverage splatter.

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

Decking: — Structural concrete deck, lightweight concrete or poured gypsum.

Membrane: — “Duro-Tech™ TPO Fleece”, adhered with Elevate "I.S.O. Spray™ R" or "XR Stick™ Membrane Adhesive" applied to the deck in a full coverage application or "Duro-Grip® Low-Rise Foam 500", "Duro-Grip® Low-Rise Foam CRA" spray adhesive can be applied in ribbons or full coverage splatter.

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

Decking: — Structural concrete deck, lightweight concrete or poured gypsum.

Membrane: — “Duro-Tech™ TPO Fleece” adhered with Elevate "I.S.O. Spray™ R" or "XR Stick™ Membrane Adhesive" applied to the deck in ribbons/beads spaced 12 in. o.c. or "Duro-Grip® Low-Rise Foam 500", "Duro-Grip® Low-Rise Foam CRA" spray adhesive can be applied in ribbons or full coverage splatter.

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

Insulation: — "Duro-Guard ISO II-E2", "Duro-Guard ISO III-E2", "Duro-Guard ISO HD-E2" any thickness, loose-laid or mechanically fastened

Base Sheet: — Elevate "SBS Premium Poly Base" mechanically fastened.

Ply Sheet: — Elevate "SBS Premium Poly Base" torched adhered.

Membrane: — “Duro-Tech™ TPO Fleece”, adhered with Elevate "I.S.O. Spray™ R" or "XR Stick™ Membrane Adhesive". Adhesive applied in ribbons/beads 12 in. o.c. or "Duro-Grip® Low-Rise Foam 500", "Duro-Grip® Low-Rise Foam CRA" spray adhesive can be applied in ribbons or full coverage splatter.

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

Insulation: — (Optional) "Duro-Guard ISO III-E2", any thickness, loose-laid or mechanically fastened.

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

Base Sheet: — Elevate "SBS Premium Poly Base" mechanically fastened.

Ply Sheet: — Elevate "SBS Premium Poly Base" torched adhered. Elevate

Membrane: — “Duro-Tech™ TPO Fleece”, adhered with Elevate "I.S.O. Spray™ R" or "XR Stick™ Membrane Adhesive". Adhesive applied in ribbons/beads 12 in. o.c. or "Duro-Grip® Low-Rise Foam 500""Duro-Grip® Low-Rise Foam CRA" spray adhesive can be applied in ribbons or full coverage splatter.

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

Insulation: — "Duro-Guard ISO II-E2", "Duro-Guard ISO III-E2", "Duro-Guard ISO HD-E2", any thickness, loose-laid or mechanically fastened

Base Sheet: — Elevate "SBS Premium Poly Base" mechanically fastened.

Ply Sheet: — Elevate "SBS Premium Poly Base" torched adhered.

Membrane: — “Duro-Tech™ TPO Fleece”, adhered with Elevate "I.S.O. Spray™ R" or "XR Stick™ Membrane Adhesive". Adhesive applied in ribbons/beads 4 in. o.c. or "Duro-Grip® Low-Rise Foam 500""Duro-Grip® Low-Rise Foam CRA" spray adhesive can be applied in ribbons or full coverage splatter.

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

Insulation: — Any UL Classified, any thickness.

Barrier Board: — Minimum 1/4-in. Georgia-Pacific Gypsum LLC "Dens Deck®

Membrane: — “Duro-Tech™ TPO Fleece”, adhered full coverage with "Tech-Bond™ Spray Adhesive", at a rate of 650 - 750 ft.^{2} per canister.

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

Insulation: — Any UL Classified, any thickness.

Barrier Board: — Minimum 1/4-in. Georgia-Pacific Gypsum LLC "Dens Deck®.

Membrane: — “Duro-Tech™ TPO” or ““Duro-Tech™ TPO 80 mil””, adhered full coverage with "Tech-Bond™ Spray Adhesive", at a rate of 800 - 1000 ft.^{2} per canister.

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

Insulation (Optional): — Any UL Classified any thickness

Barrier Board: — Minimum 1/4-in. Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard", “DensDeck®StormX™ Prime Roofboard” or "DensDeck DuraGuard™ Roofboard"

Membrane: — “Duro-Tech™ SA TPO", 45 to 80 mil.

30. **Deck:** NC **Incline:** ¼

Insulation: — "Duro-Guard ISO II-E2", any thickness.

Membrane: — "Duro-Tech™ SA TPO", 45 to 80 mil.

31. **Deck:** NC **Incline:** ¼

Insulation: — "Duro-Guard ISO III-E2", any thickness.

Membrane: — "Duro-Tech™ SA TPO", 45 to 80 mil.

32. **Deck:** NC **Incline:** ¼

Insulation: — "Duro-Guard ISO II-E2", any thickness.

Membrane: — "Duro-Tech™ SA TPO", 45 to 80 mil.

Class B - Fully Adhered (TPO)

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

Insulation: — Minimum 1-1/2 in. thick "Duro-Guard ISO III-E2" or minimum 1-1/2 in. thick UL Classified wood fiber or minimum 1/2 in. thick UL Classified wood .

Membrane: — “Duro-Tech™ TPO” adhesive.

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

Insulation: — Any UL Classified, any thickness.

Cover Board: — Minimum 7/16 in. thick APA rated OSB, mechanically fastened.

Membrane: — “Duro-Tech™ TPO Fleece”, fully adhered with Elevate "XR Bonding Adhesive" at 90 ft^2/gal.

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

Insulation (Optional): — "Duro-Guard ISO II-E2", any thickness

Insulation: — Minimum 1/2-in. thick "Duro-Guard ISO HD-E2" or 1/2-in. thick "Duro-Guard ISO III-E2" with butt joints in the insulation offset a minimum of 6-in. from the with the plywood butt joints in the roof deck.

Membrane: — “Duro-Tech™ TPO”, adhered with "Tech-Bond™ Bonding Adhesive" or Elevate "Water Based Bonding Adhesive P".

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

Coverboard: — Minimum 1/2-in. thick "Duro-Guard ISO HD-E2" or 1/2-in. thick Elevate "Duro-Guard ISO III-E2".

Insulation: — "ISO-95+ GL", any thickness.

Membrane: — “Duro-Tech™ TPO” fully adhered with "Tech-Bond™ Bonding Adhesive"

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

Insulation: (optional) — "Duro-Guard ISO II-E2", any thickness

Barrier Board: — Minimum 1/2-in. thick "Duro-Guard ISO II-E2"or 1/2-in. thick "Duro-Guard ISO III-E2"

Membrane: — “Duro-Tech™ TPO Fleece”, adhered with Elevate "XR Stick™ Membrane Adhesive" applied in ribbons/beads spaced 12 in. o.c.

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

Insulation: (optional) — "Duro-Guard ISO II-E2", any thickness.

Barrier Board: — Minimum 1/2-in. thick "Duro-Guard ISO HD-E2"or 1/2-in. thick "Duro-Guard ISO III-E2".

Membrane: — “Duro-Tech™ TPO Fleece”, adhered with Elevate "XR Stick™ Membrane Adhesive" applied in ribbons/beads spaced 12-in. o.c.

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

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

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

Membrane: — “Duro-Tech™ SA TPO”, 45 to 80 mil.

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

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

Insulation: — (Optional) "Duro-Guard ISO II-E2", any thickness.

Insulation: — Minimum 1/2-in. thick wood fiber.

Membrane: — “Duro-Tech™ TPO Fleece”, adhered with hot asphalt.

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

Insulation (Optional): — "Duro-Guard ISO II-E2", any thickness.

Insulation: — Minimum 1/2-in. thick wood fiber

Membrane: — “Duro-Tech™ TPO Fleece”, adhered with hot asphalt.

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

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

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

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””, adhered with "Tech-Bond™ Bonding Adhesive" 1-gal./45-ft.^{2}.

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

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

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

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””, adhered with "Tech-Bond™ Bonding Adhesive", 1-gal./45-ft.^{2}.

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

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

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

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””, adhered with "Water Based Bonding Adhesive P", 1-gal./120-ft.^{2}.

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

Insulation: — "Duro-Guard ISO II-E2", "Duro-Guard ISO III-E2", "Duro-Guard ISO HD-E2" any thickness.

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””, adhered full coverage with "Tech-Bond™ Spray Adhesive" at a rate of 800 - 1000 ft.^{2} per canister.

Class C - Fully Adhered (TPO)

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

Insulation: — "Duro-Guard ISO II-E2", any thickness.

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

Membrane: — “Duro-Tech™ TPO”, fully adhered with "Tech-Bond™ Bonding Adhesive", 1-gal./45-ft.^{2}

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

Insulation: — "Duro-Guard ISO II-E2", any thickness.

Membrane: — “Duro-Tech™ TPO Fleece”, adhered with Elevate "I.S.O. Spray™ R" or "XR Stick™ Membrane Adhesive" full coverage. or "Duro-Grip® Low-Rise Foam 500", "Duro-Grip® Low-Rise Foam CRA" spray adhesive can be applied in ribbons or full coverage splatter.

Class A - Mechanically Fastened (TPO)

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

Insulation: — "Duro-Guard ISO II-E2" any thickness

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””.

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

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

Membrane: — “Duro-Tech™ TPO”.

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

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

Insulation: — Minimum 1/2-in. thick glass fiber, wood fiber or perlite, 1/2-in. minimum thickness.

Membrane: — “Duro-Tech™ TPO”.

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

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

Barrier Board: — Minimum 1/2-in. thick water resistant or regular wallboard or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard", “DensDeck®StormX™ Prime Roofboard” or "DensDeck DuraGuard™ Roofboard" with butt joints in the barrier board offset a minimum of 6-in. from the with the plywood butt joints in the roof deck.

Membrane: — “Duro-Tech™ TPO”.

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

Insulation: — Elevate 1/2-in. thick "Duro-Guard ISO HD-E2" with butt joints in the insulation offset a minimum of 6-in. from the with the plywood butt joints in the roof deck.

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””.

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

Slip Sheet: — Two or more plies Atlas Roofing Corp. Roofing "FR 50", mechanically fastened.

Membrane: — Any one of the following:

a). “Duro-Tech™ TPO”.

b). "LS-FR RubberGard™" (EPDM), 45 or 60 mil.

c). "RubberGard™ MAX FR", 45 or 60 mil.

d). "RubberGard™ MAX", 45, 60 or 75 mil.

7. **Deck:** C-15/32 **Incline:** See below

Slip Sheet: — Two layers GAF "VersaShield Underlayment" or "VersaShield FB-2S", preliminary attachment.

Membrane: — “Duro-Tech™ TPO” (1:12); EPDM membranes may be coated with Elevate "AcryliTop™ PC-100" at 1 gal/100-ft.^{2} or “Elevate AcryliTop PC-100 1.0 to 3 gal/100-ft.^{2} and maintain rating.

8. **Deck:** C-15/32 **Incline:** See below

Slip Sheet: — Two layers GAF "VersaShield Underlayment" or "VersaShield FB-2S", preliminary attachment.

Insulation: — "ISO 95+ GL" (any thickness), preliminary attachment.

Membrane: — “Duro-Tech™ TPO” (1/2 :12); EPDM membranes may be coated with Elevate "AcryliTop™ PC-100" at 1 gal/100-ft.^{2} or “Elevate AcryliTop PC-100 1.0 to 3 gal/100-ft.^{2} and maintain rating.

9. **Deck:** C-15/32 **Incline:** See below

Slip Sheet: — Two layers GAF "VersaShield FB-1S", preliminary attachment.

Insulation (Optional): — "ISO 95+ GL" (any thickness), preliminary attachment.

Membrane: — “Duro-Tech™ TPO” (1/2 :12); EPDM membranes may be coated with Elevate "AcryliTop™ PC-100" at 1 gal/100-ft.^{2} or “Elevate AcryliTop PC-100 1.0 to 3 gal/100-ft.^{2} and maintain rating.

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

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

Insulation: — Minimum 1/2-in. thick "Duro-Guard ISO HD-E2"

Membrane: — “Duro-Tech™ TPO”, mechanically attached.

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

Insulation (Optional): — "Duro-Guard ISO II-E2", any thickness.

Insulation: — "Duro-Guard ISO HD-E2" with butt joints in the insulation offset a minimum of 6-in. from the with the plywood butt joints in the roof deck

Membrane: — “Duro-Tech™ TPO”, mechanically attached.

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

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

Insulation: — 1-in. thick "Duro-Guard ISO III-E2" Insulation

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””.

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

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

Insulation: — 1/2 in. thick "Duro-Guard ISO III-E2" Insulation.

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””.

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

Insulation Concrete: — Deck covered with either of the following insulating concretes (poured in place): cellular, vermiculite, perlite, gypsum or structural. Optionally, a base concrete deck may be used if all exposed surface joints are grouted.

Membrane: — 45 to 80 mil “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””.

Class B - Mechanically Fastened (TPO)

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

Slip Sheet: — One layer Atlas Roofing Corp. "FR 50".

Membrane: — Any one of the following:

a). “Duro-Tech™ TPO”.

b). Elevate "RubberGard™ LS-FR" (EPDM), 45 or 60 mil.

c). Elevate "RubberGard™ MAX FR", 45 or 60 mil.

d). Elevate "RubberGard™ MAX", 45, 60 or 75 mil.

Membrane: — “Duro-Tech™ TPO”.

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

Insulation: — Minimum 1-1/2 in. thick "FiberTop™ B" or minimum 1/2- in. thick "FiberTop™ B" over 1-1/2 in. thick "ISO 95+GL".

Membrane: — “Duro-Tech™ TPO”.

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

Slip Sheet: — One layer GAF "VersaShield Underlayment" or "VersaShield FB-2S", preliminary attachment.

Membrane: — “Duro-Tech™ TPO” (1:12);, EPDM membranes may be coated with Elevate "AcryliTop™ PC-100" at 1 gal/100-ft.^{2} or “Elevate AcryliTop PC-100 1.0 to 3 gal/100-ft.^{2} and maintain rating.

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

Insulation: — 4-in. thick "Duro-Guard ISO II-E2", mechanically fastened.

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

Ply Sheet: — One ply Type G3 fully adhered with hot mopping asphalt.

Membrane: — “Duro-Tech™ TPO Fleece”, mechanically fastened.

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

Insulation (Optional): — "Duro-Guard ISO II-E2", any thickness.

Insulation: — Minimum 1/2-in. thick "Duro-Guard ISO HD-E2" or 1/2-in. thick "Duro-Guard ISO III-E2with butt joints in the insulation offset a minimum of 6-in. from the plywood butt joints in the roof deck.

Membrane: — “Duro-Tech™ TPO”, mechanically attached.

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

Slip Sheet: — One ply Atlas Roofing Corp. "FR-10", mechanically fastened.

Membrane: — “Duro-Tech™ TPO” membranes. (Note: Actual incline is determined by the maximum existing membrane Classification incline but cannot exceed 1/2:12.)

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

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

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

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””, mechanically fastened.

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

Insulation: — Minimum 1-in. thick "Duro-Guard ISO III-E2" with butt joints in the insulation offset a minimum of 6-in. from the plywood butt joints in the roof deck.

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil”” mechanically fastened.

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

Insulation: — "Duro-Guard ISO II-E2", minimum 2-1/2 in. thick loose-laid or mechanically fastened with butt joints in the insulation offset a minimum of 6-in. from the plywood butt joints in the roof deck.

Cover Board: — Minimum 1/2-in. "Duro-Guard ISO HD-E2"with butt joints in the cover board offset a minimum of 24-in. from the plywood butt joints in the roof deck.

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””, mechanically fastened.

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

Insulation: — Minimum 1/2-in. thick "Duro-Guard ISO HD-E2"

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””, mechanically fastened.

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

Insulation: — Minimum 1/2-in. thick "Duro-Guard ISO HD-E2"

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””, mechanically fastened.

Class C - Mechanically Fastened (TPO)

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

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

Membrane: — “Duro-Tech™ TPO”.

2. **Deck:** NC **Incline:** Unlimited

Insulation: — "Duro-Guard ISO II-E2", any thickness.

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””, mechanically fastened

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

Insulation: — Minimum 3-in. thick "ISO 95+GL", loose laid or mechanically fastened.

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””, mechanically fastened.

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

Insulation: — Minimum 3-in. thick "ISO 95+GL", loose laid or mechanically fastened.

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””, mechanically fastened

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

Insulation: — Minimum 1/2-in. thick "Duro-Guard ISO HD-E2".

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””, mechanically fastened

6. **Deck:** NC **Incline:** Unlimited

Insulation: — Minimum 1/2-in. thick "Duro-Guard ISO HD-E2".

Membrane: — “Duro-Tech™ TPO”, or ““Duro-Tech™ TPO 80 mil””, mechanically fastened.

MAINTENANCE AND REPAIR SYSTEMS (TPO)

Class A (TPO)

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

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

Insulation: — Any Classified Lightweight Insulating concrete, minimum 2-in. thick coverage over internal insulation (if installed).

Membrane: — “Duro-Tech™ TPO Fleece”, adhered with "UltraPly™ TPO XR Bonding Adhesive" or with hot asphalt.

Class B (TPO)

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

Existing Roof System: — Class A, B or C insulated or un-insulated EPDM roofing system covered with:

Membrane: — “Duro-Tech™ TPO Fleece”, adhered with "UltraPly™ TPO XR Bonding Adhesive", 80-ft.^{2}/gal.

Class A, B or C (TPO)

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

Existing Roof System: — Class A, B or C, BUR (smooth surface or cap sheet), to retain existing Classification, covered with:

Slip Sheet: — Atlas Roofing Corp. "FR 10" or "FR 11", one layer.

Membrane: — “Duro-Tech™ TPO”, mechanically fastened.

2. **Deck:** C-15/32 **Incline:** See below

Existing Roof System: — Any Class A, B or C Build-Up Roof System, to retain rating place.

Slip Sheet: — One layer GAF "VersaShield Underlayment", preliminary attachment.

Membrane: — “Duro-Tech™ TPO” (1:12); EPDM membranes may be coated with Elevate "AcryliTop™ PC-100" at 1 gal/100-ft.^{2} or “Elevate AcryliTop PC-100 1.0 to 3 gal/100-ft.^{2} and maintain rating.

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

Existing Roof System: — Class A, B or C, BUR (mineral surfaced cap sheet), to retain existing Classification, covered with:

Membrane: — 60-mil. “Duro-Tech™ TPO Fleece”, fully adhered with Elevate "XR Bonding Adhesive" applied at 80-ft^2/gal.

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

Existing Roof System: — To Maintain existing Classification, Any Class A, B or C insulated or un-insulated.

Type G3 mineral surfaced cap sheet, BUR or modified bitumen membrane roofing system covered with:

Membrane: — “Duro-Tech™ TPO Fleece” adhered with Elevate "I.S.O. Spray™ R" or "XR Stick™" in full coverage or applied in ribbons/beads. Or "Duro-Grip® Low-Rise Foam 500", "Duro-Grip® Low-Rise Foam CRA" spray adhesive can be applied in ribbons or full coverage splatter.

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

Existing Roof System: — To Maintain existing Classification, Any Class A, B or C insulated or un-insulated.

Type G3 mineral surfaced cap sheet or APP modified bitumen membrane roofing system covered with:

Membrane: — “Duro-Tech™ TPO Fleece”, mechanically attached.

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

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

Slip Sheet (Optional): — One or more layers GAF "VersaShield", Atlas Roofing Corp. "FR 10" or "FR 50".

Insulation (Optional): — "Duro-Guard ISO III-E2", "Duro-Guard ISO HD-E2" any thickness.

Membrane: — “Duro-Tech™ TPO”, and “Duro-Tech™ TPO Fleece” membranes mechanically fastened.

Note: * Maximum incline not to exceed that for which the existing roofing system is currently Classified.

7. **Deck:** C-15/32 **Incline:** See below

Existing Roof Systems: — Class A, B or C, BUR (smooth surface of cap sheet) to retain existing classification covered with:

Insulation: — Minimum 1/2 in. thick "Duro-Guard ISO HD-E2".

Membrane: — “Duro-Tech™ TPO” (Fully adhered 1/4:12), “Duro-Tech™ TPO” (Mechanically attached 1/2:12), "RubberGard™ LS-FR" (3/4: 12), "RubberGard™ Platinum", "RubberGard™ MAX", (1/2: 12), "RubberGard™ MAX FR" (2-1/2:12) or "EcoWhite™" (1:12).

SINGLE PLY MEMBRANE SYSTEMS PVC

Class A, B or C

1. **Deck:** C-15/32 **Incline:** See Note 1

Vapor Barrier (Optional): — Elevate "V-Force™", Vapor Shield Membrane self-adhered.
Insulation (Optional): — "Duro-Guard ISO III-E2“ or “Duro-Guard ISO Composite-E2” or "Duro-Guard ISO II-E2" any thickness.
Barrier Board: — Minimum 1/2-in. thick gypsum wallboard, or minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard" or "DensDeck Prime® Roofboard", “DensDeck®StormX™ Prime Roofboard” or "DensDeck DuraGuard™ Roofboard", joints in barrier board offset 6 in. with joints in deck.
Roofing System: —“Duro-Last”, or “Duro-Last X”, or “Duro-Tuff”, or “Duro-Fleece”, or “Duro-Last EV”, or “Duro-Last EV Fleece” or “Duro-Fleece Plus”, insulated. Insulation may be adhered or mechanically attached with Elevate "I.S.O. Twin Pack™", "I.S.O. Twin Pack™ Green", "I.S.O. Stick™" or "I.S.O. Spray™ R" or "Duro-Grip® Low-Rise Foam 500", "Duro-Grip® Low-Rise Foam CRA" spray adhesive.

Note: 1: Classification (A, B or C) and maximum incline will be the same as that for the currently Classified insulated system, currently limited to a combustible roof deck.

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

Vapor Barrier (Optional): — Elevate "V-Force™", Vapor Shield Membrane self-adhered.
Insulation (Optional): — "Duro-Guard ISO III-E2“ or “Duro-Guard ISO Composite-E2” or "Duro-Guard ISO II-E2" any thickness.
Insulation: — 1.0 inch minimum thickness "Duro-Guard ISO III-E2", joints in insulation board offset 6 in. with joints in deck.
Roofing System: —“Duro-Last”, or “Duro-Last X”, or “Duro-Tuff”, or “Duro-Fleece”, or “Duro-Last EV”, or “Duro-Last EV Fleece” or “Duro-Fleece Plus”, insulated. Insulation may be adhered or mechanically attached with Elevate "I.S.O. Twin Pack™", "I.S.O. Twin Pack™ Green", "I.S.O. Stick™" or "I.S.O. Spray™ R" or "Duro-Grip® Low-Rise Foam 500", "Duro-Grip® Low-Rise Foam CRA" spray adhesive.

Note: 1: Classification (A, B or C) and maximum incline will be the same as that for the currently Classified insulated system, currently limited to a combustible roof deck.

Class A - Ballasted

Unless otherwise indicated, insulation may be loose laid or mechanically fastened; membrane may be loose laid; mechanically fastened or adhered in place.

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

Insulation: — Any UL Certified isocyanurate insulation (tapered or uniform thickness), any thickness, any UL Certified EPS insulation (tapered or uniform thickness), any thickness covered with 1-in. perlite or Owens-Corning "Roof Deck Board".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, laid loose.

Surfacing: — River bottom stone (3/4 to 1-1/2 in. diameter), 1000-lbs./100-ft.^{2}

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

Insulation: — "Duro-Guard EPS Flat Type VIII-C", "Duro-Guard EPS Taper Type VIII-C", "Duro-Guard EPS Flat Type II-C", "Duro-Guard EPS Taper Type II-C", any thickness.

Coverboard: — Minimum 3/4 in. thick perlite.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X” or any UL Classified membrane.

Surfacing: — River bottom stone (3/4 to 1-1/2 in. diameter), 1000-lbs/100-ft.^{2}

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

Note: Deck must be one of the following: A.) Monolithic poured cementitious deck. B.) Steel covered with minimum 1/2 in. thick gypsum board or perlite board. C.) Structural decks with all joints covered with Type 30 base sheet, extending a minimum of 6-in. on each side of joint. D.) Metal deck covered with cellular concrete, gypsum concrete, vermiculite concrete or perlite concrete.

Insulation: — "Duro-Guard EPS Flat Type VIII-C", "Duro-Guard EPS Taper Type VIII-C", "Duro-Guard EPS Flat Type II-C", "Duro-Guard EPS Taper Type II-C", any thickness,

Coverboard: — Minimum 1-in. thick wood fiber or perlite.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X” or any UL Classified membrane.

Surfacing: — River bottom stone (3/4 in. to 1-1/2 in. diameter), 1000-lbs./100-ft.^{2}.

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

Insulation: — “Duro-Guard ISO-II-H”, any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically attached.

Surfacing: — River bottom stone (3/4 to 1-1/2 in. diameter), 1000-lbs./100-ft.^{2}

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

Insulation: — "Duro-Guard Iso Foil-H" or "Duro-Guard Iso NB-H", any thickness.

Membrane: — Any UL Certified, laid loosely.

Surfacing: — River bottom stone (3/4 to 1-1/2 in. diameter), 1000-lbs./100-ft.^{2}

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

Insulation: — "Duro-Guard EPS Flat", "Duro-Guard EPS Tapered", any thickness, field covered with minimum 3/4 in. thick perlite.

Membrane: — "Duro-Last EV"

Surfacing: — River bottom stone (3/4 to 1-1/2 in. diameter), 1000-lb/100-ft.^{2}

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

Insulation: — "Duro-Guard EPS Flat", "Duro-Guard EPS Tapered", any thickness

Coverboard: — Minimum 3/4 in. thick field perlite.

Membrane: — "Duro-Last EV"

Surfacing: — River bottom stone (3/4 to 1-1/2 in. diameter), 1000-lbs/100-ft^2.

8. **Deck:** NC **Incline:** 2

Note: Deck must be one of the following: A.) Monolithic poured cementitious deck. B.) Steel covered with minimum 1/2-in. thick gypsum board or perlite board, minimum. C.) Structural decks with all joints covered with Type 30 base sheet, extending a minimum of 6 in. on each side of joint. D.) Metal deck covered with cellular concrete, gypsum concrete, vermiculite concrete or perlite concrete.

Insulation: — "Duro-Guard EPS Flat", "Duro-Guard EPS Tapered", any thickness.

Membrane: — "Duro-Last EV"

Surfacing: — River bottom stone (3/4 in. to 1-1/2 in. diameter), 1000-lbs./100-ft.^{2}

9. **Deck:** NC **Incline:** 2

Insulation: — Polyisocyanurate, glass fiber or perlite, any thickness, laid loosely or mechanically fastened or adhered with any UL Certified insulation adhesive.

Membrane: — Any UL Certified PVC single ply membrane fully adhered with "Duro-Last Solvent-Grip Spray Adhesive" bonding adhesive applied at a rate of 6 lb./100 ft^2 or 1 canister/500 ft^2.

Surfacing: — No. 6 River bottom stone 3/4 to 11/2-in. diameter applied at 1000-lbs/100-ft^2.

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

Insulation (Optional): — Perlite, glass fiber, wood fiber, isocyanurate, "Duro-Guard ISO III-E2“ or “Duro-Guard ISO Composite-E2” or "Duro-Guard ISO II-E2" insulation or any other UL Classified insulation, any combination.
Base Sheet (Optional): — Type G1, Type G2 or Type G3 or Elevate Protection Mat (not UL Classified).
Membrane: — “Duro-Last”, or “Duro-Last X”, or “Duro-Tuff”, or “Duro-Fleece”, or “Duro-Last EV”, or “Duro-Last EV Fleece” or “Duro-Fleece Plus”.
Insulation (Optional): — Dow Chemical "STYROFOAM RM, PD, SM, TG" or "STYRORIB", 1 in. minimum. When the insulation is applied in more than one layer, successive layers shall be installed without attachment to the preceding layer.
Slip Sheet (Optional): — Fiberglas mat may be laid between the insulation and membrane.
Scrim (Optional): — Elevate "Fabrene", "International Paper D689" or "Rufon Polypropylene", 2-oz/yd^2 (not Classified).
Surfacing: — One of the following: a.) 900-lb/100-ft.^{2} minimum of crushed stone or river bottom stone which is free from dirt and graded to a typical size of 3/4 in. with a minimum of 1/2 in. for crushed stone and 3/4 in. to 1-3/4 in. for river bottom stone. b.) Concrete blocks weighing not less than 10-lb/100-ft.^{2} ft and spread not more than 1/8 in. apart.

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

Insulation: — "Duro-Guard ISO III-E2“ or “Duro-Guard ISO Composite-E2”, any thickness, loose laid or mechanically fastened.
Membrane: — “Duro-Last”, or “Duro-Last X”, or “Duro-Tuff”, or “Duro-Fleece”, or “Duro-Last EV”, or “Duro-Last EV Fleece” or “Duro-Fleece Plus”, loose laid or mechanically fastened.
Surfacing: — River bottom stone (3/4 to 1-1/2 in. diameter), 1000-lbs/100-ft.^{2}.

Class A - Fully Adhered

"Duro-Last Solvent-Grip Spray Adhesive" adhesive may be used at an application rate of 7.25 lbs. to 9.6 lbs./sq. in any of the systems mentioned below.

1. Deleted

2. Deleted

3. Deleted

4. Deleted

5. Deleted

6. Deleted

7. Deleted

8. Deleted

9. Deleted

10. Deleted

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

Insulation: — Any UL Certified polyisocyanurate, any thickness, adhered with hot roofing asphalt or Dow Chemical's "Insta-Stik" or OMG Building Products LLC "Olybond 500".

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board", or United States Gypsum Co. "SECUROCK® Glass-Mat Roof Board (Type SGMRX)".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, adhered with "Duro-Last SB IV" at 1-1/3 gal./100-ft.^{2} or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 7.24 lbs./sq.

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

Insulation: — "Duro-Guard ISO-II-A", any thickness.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, adhered with "Duro-Last SB IV" at 1-1/3 gal./100-ft.^{2} or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 5.81 lbs./sq.

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

Insulation: — Any UL Certified polyisocyanurate, any thickness.

Barrier Board: — Minimum 1/2-in. thick gypsum board with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Fleece Plus", adhered with "Duro-Last WB Adhesive 2" at 1-gal./100-ft.^{2}

14. **Deleted.**

15. **Deck:** NC **Incline:** 2

Insulation: — Polystyrene, any thickness.

Coverboard: — Minimum 1/2-in. thick HD wood fiberboard.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X” adhered with "Duro-Last SB IV" at 1-1/3 gal./100-ft.^{2}

16. **Deck:** NC **Incline:** See note **Impact:** 3

Insulation: — Polyisocyanurate insulation (see note), 1 to 3-in. thick.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”

Note: See individual Certification of specific polyisocyanurate insulation, adhesive and adhesive application rate used.

17. **Deck:** NC **Incline:** See note **Impact:** 4

Insulation: — Polyisocyanurate insulation (see note), minimum 4-in. thick.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”

Note: See individual Certification of specific polyisocyanurate insulation, adhesive and adhesive application rate used.

18. **Deck:** C-15/32 **Incline:** See note **Impact:** 3

Insulation (Optional): — Polyisocyanurate insulation, any thickness.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”

Note: See individual Certification of specific adhesive and adhesive application rate used.

19. **Deck:** C-15/32 **Incline:** See Note 2 **Impact:** 3

Base Sheet: — One ply Type G2, Atlas Roofing Corp. "FR-10" or GAF "VersaShield", mechanically attached.

Barrier Board: — Minimum 1/4-in. thick United States Gypsum Co. "Securock Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck. (See Note 1).

Insulation (Optional): — Polyisocyanurate insulation (See Note 2).

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”

Note 1: If insulation is not used, barrier board is to be mechanically fastened with 2-in. polyplates and #14 screws.

Note 2: Maximum incline shall be in accordance with Certification established for insulation/membrane/adhesive roof covering system but is limited to 3:12.

20. **Deck:** NC **Incline:** 3

Insulation (Optional): — "Duro-Guard ISO-II-A", any thickness.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick, adhered with "Duro-Last SB IV" at 1-3/5-gal./100-ft.^{2}

21. **Deck:** NC **Incline:** 3

Insulation (Optional): — “Duro-Guard ISO-II-H”, any thickness.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick, adhered with "Duro-Last SB IV" at 1-3/5 gal./100-ft.^{2}

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick, adhered with "Duro-Last SB IV" at 1-3/5 gal./100-ft.^{2} or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 7.24 lbs./sq.

23. **Deck:** NC **Incline:** 3

Insulation (Optional): — "Duro-Guard ISO-II-A", any thickness.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick, adhered with "Duro-Last WB Adhesive II" at 1-gal./100-ft.^{2}

24. **Deck:** NC **Incline:** 3

Insulation (Optional): — “Duro-Guard ISO-II-H”, any thickness.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick, adhered with "Duro-Last WB Adhesive II" at 1-gal./100-ft.^{2}

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick, adhered with "Duro-Last WB Adhesive II" at 1-gal./100-ft.^{2} or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 7.24 lbs./sq.

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

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

Barrier Board: — Minimum 1/4-in. thick. Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Fleece Plus", adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft.^{2}

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Fleece", 50 or 60-mil thick, fully adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft.^{2}

28. **Deck:** NC **Incline:** 2

Insulation (Optional): — "Duro-Guard ISO-II-A", any thickness.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32 in. thick plywood

Membrane: — "Duro-Tuff" (PVC), 80-mil thick, adhered with "Duro-Last SB IV" at 1-3/5 gal./100-ft.^{2} or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 5.81 lbs./sq

29. **Deck:** NC **Incline:** 2

Insulation (Optional): — “Duro-Guard ISO-II-H”, any thickness.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — "Duro-Tuff" (PVC), 80-mil thick, adhered with "Duro-Last SB IV" at 1-3/5 gal./100-ft.^{2} or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 5.81 lbs./sq.

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Tuff" (PVC), 80-mil thick, adhered with "Duro-Last SB IV" at 1-3/5 gal./100-ft.^{2} or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 7.24 lbs./sq.

31. **Deck:** NC **Incline:** 2

Insulation (Optional): — "Duro-Guard ISO-II-A", any thickness.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — "Duro-Tuff" (PVC), 80-mil thick, adhered with "Duro-Last WB Adhesive II" at 1-gal./100-ft^2 or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 5.81 lbs./sq.

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

Insulation (Optional): — “Duro-Guard ISO-II-H”, any thickness.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — "Duro-Tuff" (PVC), 80-mil thick, adhered with "Duro-Last WB Adhesive II" at 1-gal./100-ft^2 or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 5.81 lbs./sq.

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Tuff" (PVC), 80-mil thick, adhered with "Duro-Last WB Adhesive II" at 1-gal/100-ft^2 or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 7.24 lbs./sq.

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

Insulation (Optional): — "Duro-Guard ISO-II-A", “Duro-Guard ISO II-E2”, “Duro-Guard ISO III-E2”, or “Duro-Guard ISO HD-E2”, any thickness.

Membrane: — "Duro-Last EV" (PVC), adhered with "Duro-Last SB IV" at 0.75-gal./100-ft^2 or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 5.81 lbs./sq.

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

Insulation (Optional): — “Duro-Guard ISO-II-H”, “Duro-Guard ISO II-E2”, “Duro-Guard ISO III-E2”, or “Duro-Guard ISO HD-E2”, any thickness.

Membrane: — "Duro-Last EV" (PVC), adhered with "Duro-Last SB IV" at 0.75-gal./100-ft^2 or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 5.81 lbs./sq.

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Last EV" (PVC), adhered with "Duro-Last SB IV" at 0.75-gal/100-ft^2 or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 7.24 lbs./sq.

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

Insulation (Optional): — "Duro-Guard ISO-II-A", “Duro-Guard ISO II-E2”, “Duro-Guard ISO III-E2”, or “Duro-Guard ISO HD-E2”, any thickness.

Membrane: — "Duro-Last EV" (PVC), adhered with "Duro-Last WB Adhesive II" at 0.45-gal./100-ft^2 or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 5.81 lbs./sq.

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

Insulation (Optional): — “Duro-Guard ISO-II-H”, “Duro-Guard ISO II-E2”, “Duro-Guard ISO III-E2”, or “Duro-Guard ISO HD-E2”, any thickness.

Membrane: — "Duro-Last EV" (PVC), adhered with "Duro-Last WB Adhesive II" at 0.45-gal./100-ft^2 or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 5.81 lbs./sq.

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with all joints staggered a minimum of 6 in. from the plywood joints.

Membrane: — "Duro-Last EV" (PVC), adhered with "Duro-Last WB Adhesive II" at 0.45-gal./100-ft^2 or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 7.24 lbs./sq.

40. **Deck:** NC **Incline:** Unlimited

Membrane: — "Duro-Fleece", 50 or 60-mil thick, adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft.^{2}

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Fleece", 50 to 80-mil thick, fully adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft^2 or H.B. Fuller Company “Millennium PG-1 EF ECO”, applied in a spatter pattern.

42. **Deck:** NC **Incline:** 3

Membrane: — "Duro-Fleece", 50 to 80-mil thick, fully adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft^2 or H.B. Fuller Company “Millennium PG-1 EF ECO”, applied in a spatter pattern.

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Base Sheet: — GAF "GAFGLAS Stratavent Nailable Venting Base Sheet" or GAF "GAFGLAS 75 Base Sheet" (Type G2), mechanically fastened.

Membrane: — "Duro-Fleece Plus", fully adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft^2

44. **Deck:** NC **Incline:** 2

Base Sheet: — GAF "GAFGLAS Stratavent Nailable Venting Base Sheet" or GAF "GAFGLAS 75 Base Sheet" (Type G2), mechanically fastened.

Membrane: — "Duro-Fleece Plus", fully adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft^2

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Base Sheet: — GAF "GAFGLAS Stratavent Nailable Venting Base Sheet" or GAF "GAFGLAS 75 Base Sheet" (Type G2), mechanically fastened.

Membrane: — "Duro-Fleece", 50 or 60-mil thick, fully adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft.^{2}

46. **Deck:** NC **Incline:** 2

Base Sheet: — GAF "GAFGLAS Stratavent Nailable Venting Base Sheet" or GAF "GAFGLAS 75 Base Sheet" (Type G2), mechanically fastened.

Membrane: — "Duro-Fleece", 50 or 60-mil thick, fully adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft.^{2}

47. **Deck:** NC **Incline:** 3 **Impact:** 4

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

Coverboard: — Continuus Materials Holdings "Everboard™ QB", minimum 5/16-in. thick adhered with OMG INC "Olybond 500" applied in ribbons 12 inches apart.

Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick, adhered with "Duro-Last SB IV" at 1-3/5-gal./100-ft.^{2} or "Duro-Last WB Adhesive II" at 1-gal./100-ft.^{2}

48. **Deck:** NC **Incline:** 3

Insulation (Optional): — "Duro-Guard ISO-II-A", any thickness.

Coverboard (Optional): — Continuus Materials Holdings LLC "Everboard HB+", min. 7/16 in. thick, mechanically fastened.

Membrane: — “Duro-Tuff" (PVC), 50 or 60-mil thick, adhered with "Duro-Last SB IV" at 1-3/5-gal./100-ft.^{2}

49. **Deck:** NC **Incline:** 3

Insulation (Optional): — "Duro-Guard ISO-II-H", any thickness.

Coverboard (Optional): — Continuus Materials Holdings LLC "Everboard HB+", min. 7/16 in. thick, mechanically fastened.

Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick, adhered with "Duro-Last WB Adhesive II" at 1-gal./100-ft.^{2}

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

Insulation (Optional): — "Duro-Guard ISO-II-H" or “Duro-Guard ISO-II-A” or “Duro-Guard ISO II-E^2”, any thickness.
Membrane: — "Duro-Fleece", adhered with "Duro-Last WB Adhesive II" at 0.50-gal./100-ft^2.

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.
Membrane: — "Duro-Last EV Fleece", 50 – 80 mil thick, fully adhered with "Duro-Grip CR-20", applied at a rate of 5 lb/100-ft^2 or H.B. Fuller Company “Millennium PG-1 EF ECO”, applied in a spatter pattern.

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.
Membrane: — "Duro-Last EV Fleece", 50 – 80 mil thick, fully adhered with Soprema “Duotack SPF”, applied at a rate of 3.7 lb/100-ft^2 or H.B. Fuller Company “Millennium PG-1 EF ECO”, applied in a spatter pattern.

53. **Deck:** NC **Incline:** 2

Insulation (Optional): — "Duro-Guard ISO-II-A" or “Duro-Guard ISO-II-H”, any thickness.
Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood
Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick, adhered with “Duro-Last Solvent-Grip Plus Spray Adhesive” at 5.81 lbs./sq.

54. **Deck:** NC **Incline:** 2 **Impact:** 4

Insulation (Optional): — Any UL Classified Polyisocyanurate insulation, any thickness.
Coverboard: — Continuus Materials Holdings "Everboard™ QB", minimum 5/16-in. thick adhered with OMG INC "Olybond 500" applied in ribbons 12 inches apart.
Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick, adhered with “Duro-Last Solvent-Grip Plus Spray Adhesive” at 5.81 lbs./sq.

55. **Deck:** NC **Incline:** 2

Insulation (Optional): — "Duro-Guard ISO-II-A" or “Duro-Guard ISO-II-H”, any thickness.
Coverboard (Optional): — Continuus Materials Holdings LLC "Everboard HB+", min. 7/16 in. thick, mechanically fastened.
Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick, adhered with “Duro-Last Solvent-Grip Plus Spray Adhesive” at 5.81 lbs./sq.

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

Barrier Board (Optional): — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.
Vapor Barrier (Optional): — Vapor barrier or air barrier (non-UL Certified) may be used below the insulation.
Insulation (Optional): — Any UL Certified polyisocyanurate, any thickness.
Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.
Membrane: — "Duro-Fleece", 50–80-mil thick, fully adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft.^{2}, "Duro-Tuff" (PVC), 50 or 60 mil thick, adhered with "Duro-Last WB Adhesive II" at 1-gal./100-ft.^{2} or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 7.24 lbs./sq., "Duro-Last EV", adhered with "Duro-Last SB IV" at 0.75-gal./100-ft.^{2} or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 7.24 lbs./sq., “Duro-Last” (PVC) or “Duro-Last X” , adhered with "Duro-Last SB IV" at 1-1/3-gal./100-ft.^{2} or “Duro-Last Solvent-Grip Plus Spray Adhesive” at 7.24 lbs./sq., “Duro-Fleece” or "Duro-Fleece Plus", adhered with "Duro-Last WB Adhesive II" at 1-gal./100-ft.^{2}, "Duro-Last EV Fleece", 50–80 mil thick, fully adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft.^{2}, "Duro-Last EV Fleece", 50–80 mil thick, fully adhered with Soprema “Duotack SPF”, applied at a rate of 3.7-lbs./100-ft.^{2}.

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

Insulation: "Duro-Guard ISO II-E2", "Duro-Guard ISO III-E2", or "Duro-Guard ISO HD-E2", any thickness, mechanically fastened.
Membrane: "Duro-Last" (PVC) adhered with "Duro-Last SB IV" at 1-1/3-gal/100-ft^2 or "Duro-Tuff" adhered with "Duro-Last SB IV" at 1-3/5-gal/100-ft^2 or "Duro-Last WB Adhesive II" at 1-gal/100-ft^2.

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

Insulation: "Duro-Guard ISO II-E2", "Duro-Guard ISO III-E2", or "Duro-Guard ISO HD-E2", any thickness, mechanically fastened.
Membrane: "Duro-Fleece" or "Duro-Last EV Fleece" adhered with "Duro-Grip CR-20" at 5-lbs/100-ft^2.

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

Barrier Board: — 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", mechanically fastened.
Membrane: — "Duro-Fleece" or "Duro-Last EV Fleece", fully adhered with OMG "OlyBond500", applied in a spatter pattern.

60. **Deck:** NC **Incline:** Unlimited

Membrane: — "Duro-Fleece", fully adhered with "Duro-Last WB II Adhesive" at rate of 1-gal/100-ft^2.

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

Insulation: — "Duro-Guard ISO-II-H", any thickness, mechanically fastened.
Membrane: — "Duro-Last" (PVC) or "Duro-Last X", fully adhered with "Duro-Last WB II Adhesive".

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

Insulation: — "Duro-Guard ISO II-E2" or "Duro-Guard ISO III-E2" or "Duro-Guard ISO HD-E2, any thickness, mechanically fastened.
Membrane: — "Duro-Last" (PVC) or "Duro-Last X", fully adhered with "Duro-Last WB II Adhesive".

63. **Deck:** NC **Incline:** 2

Insulation: — "Duro-Fast SmartFuse™ AnchorBoard", 1/2-in. thick, mechanically fastened.

Membrane: — "Duro-Fleece", 80-mil, welded with "Duro-Fast™ Volt™".

Class B - Fully Adhered

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

Insulation: — "Duro-Guard ISO-II-A", any thickness.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32 in. thick plywood

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, adhered with "Duro-Last SB IV" at 1-1/3-gal/100-ft^2

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

Insulation: — "Duro-Guard ISO-II-A", any thickness.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, 50-mil thick, adhered with "Duro-Last SB IV" at 1-1/3 gal/100-ft^2

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

Insulation: — "Duro-Guard ISO-II-A", any thickness.

Membrane: — "Duro-Fleece Plus" (PVC), adhered with Adco "Millennium PG-1 Pump Grade Adhesive", applied in beads spaced 6-in. OC minimum

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

Insulation: — "Duro-Guard ISO-II-A", any thickness.

Membrane: — "Duro-Fleece Plus" (PVC), adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft^2

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Fleece", 80-mil thick, adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft^2

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Tuff" (PVC), 80-mil thick, adhered with "Duro-Last SB IV" at 1-3/5 gal/100-ft.^{2}

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Tuff" (PVC), 80-mil thick, adhered with "Duro-Last WB Adhesive II" at 1-gal./100-ft.^{2}

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

Membrane: — "Duro-Fleece", 80-mil thick, adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft.^{2}

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Base Sheet: — GAF "GAFGLAS Stratavent Nailable Venting Base Sheet" or GAF "GAFGLAS 75 Base Sheet" (Type G2), mechanically fastened.

Membrane: — "Duro-Fleece Plus", fully adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft.^{2}

10. **Deck:** NC **Incline:** 3

Base Sheet: — GAF "GAFGLAS Stratavent Nailable Venting Base Sheet" or GAF "GAFGLAS 75 Base Sheet" (Type G2), mechanically fastened.

Membrane: — "Duro-Fleece Plus", fully adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft.^{2}

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Base Sheet: — GAF "GAFGLAS Stratavent Nailable Venting Base Sheet" or GAF "GAFGLAS 75 Base Sheet" (Type G2), mechanically fastened.

Membrane: — "Duro-Fleece", 50 or 60-mil thick, fully adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft.^{2}

12. **Deck:** NC **Incline:** 3

Base Sheet: — GAF "GAFGLAS Stratavent Nailable Venting Base Sheet" or GAF "GAFGLAS 75 Base Sheet" (Type G2), mechanically fastened.

Membrane: — "Duro-Fleece", 50 or 60-mil thick, fully adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft.^{2}

13. **Deck:** NC **Incline:** 3 **Impact:** 4

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

Coverboard: — Continuus Materials Holdings "Everboard™ QB", minimum 5/16-in. thick adhered with OMG INC "Olybond 500" applied in ribbons 12 inches apart.

Membrane: — "Duro-Fleece" (PVC), adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft.^{2}

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

Insulation: — “Duro-Guard ISO II-E2”, any thickness, mechanically fastened.

Membrane: — “Duro-Tuff”, 50 or 60-mil, adhered with “Duro-Last SB IV” at a rate of 1.60-gal/100-ft^2.

15. **Deck:** C-15/32 **Incline:** 1 (See Note)

Insulation (Optional): — Polystyrene, glass fiber, perlite, polyurethane, isocyanurate, perlite/isocyanurate, perlite/polyurethane composites, Rockwool "MonoBoard™", "ComfortBoard™", or "TopRock® DD", any thickness, mechanically fastened.

Barrier Board: — Rockwool "MonoBoard™", "ComfortBoard™", or "TopRock® DD", 1-in. thick minimum or "Multifix", 2-in. thick minimum. with insulation joints staggered a minimum of 6-in. from the plywood roof deck joints, mechanically fastened.

Membrane: — “Duro-Last” PVC or “Duro-Last X”, adhered with "Duro-Last SB IV" at 1-1/3 gal./100-ft.^{2}

Class C - Fully Adhered

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

Insulation: — "Duro-Guard Iso Foil-H", "Duro-Guard ISO HSP" or "Duro-Guard Iso NB-H", any combination, any thickness.

Membrane: — "Duro-Last", "Duro-Tuff", 50 or 60-mil, "Duro-Fleece Plus" or "Duro-Fleece", 50 or 60-mil thick.

Class A, B or C (See note) - Fully Adhered

Incline is reduced to 1:12 when Type G3 mineral surfaced cap sheet is used as the surfacing.

Unless otherwise indicated, insulation is mechanically fastened in place.

1. **Deck:** NC **Incline:** See note

Insulation: — EPS/perlite or EPS/wood fiber (perlite minimum 3/4-in. thick thickness or minimum 1/2-in. thick USG Interiors' "Micore MC 180", Huebert wood fiber, Georgia-Pacific Corp. "Strudi-Top", Wood Fiber Industries' "Structodeck", Celotex wood fiber, Temple-Inland "Fiber Base" or other wood fiber at 1-in. minimum thickness)

Membrane: — "Duro-Last", "Duro-Tuff", 50 or 60-mil thick, "Duro-Fleece Plus" or "Duro-Fleece", 50 or 60-mil thick.

Surfacing: — See note.

Note: Certification (A, B or C) will be the same as that for the original insulation/membrane roof covering system. Maximum incline, attachment of membrane, and surfacing of membrane shall be in accordance with Certification established for membrane/insulation roof covering system.

2. **Deck:** Deleted

3. **Deck:** NC **Incline:** See note

Insulation: — "Duro-Guard EPS Flat Type VIII-C", "Duro-Guard EPS Taper Type VIII-C", "Duro-Guard EPS Flat Type II-C", "Duro-Guard EPS Taper Type II-C", any thickness

Coverboard: — Minimum 1-in. thick perlite or wood fiber.

Membrane: —“Duro-Last” (PVC) or “Duro-Last X” or any UL Classified modified bitumen suitable for use with any roof insulation.

Surfacing: — See note.

Note: Classification (A, B or C) will be the same as that for the original insulation/membrane roofing system. Maximum incline and surfacing shall be in accordance with the classification established for the insulation/membrane roofing system. Base sheet (if any) shall be in accordance with the classification established for the insulation/membrane roof covering system.

Class A - Mechanically Fastened

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

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

Insulation (Optional): —

1. "Duro-Guard ISO-II-A", any thickness.
2. Owens-Corning "Roof Deck Boards".
3. Wood fiber.

4. Perlite, 1-1/2 to 3-in. thick inclusive

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Insulation (Optional): —

1. Any UL Certified polystyrene insulation (tapered or uniform thickness) any thickness covered with 1-in. thick perlite or 1-in. thick wood fiber or Atlas Roofing Corp. "FR10".
2. "Duro-Guard ISO-II-A", any thickness.
3. Owens-Corning "Roof Deck Boards".
4. Wood fiber.
5. Perlite 1-1/2 to 3-in. thick incl.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Slip Sheet: — One layer Atlas Roofing Corp. "FR50", 15-mil/minimum.

Insulation: — Two layers 3/4-in. thick perlite, butt joints staggered a minimum of 6-in.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”,

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

Slip Sheet: — Four layers Atlas Roofing Corp. "FR10", mechanically fastened.

Insulation (Optional): — Glass fiber, perlite,” Duro-Guard ISO-II-A”, Johns Manville "ENRGY 1" or Apache Products "Apache Pyrox", any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”,

5. **Deck:** NC **Incline:** Unlimited

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”,

6. **Deck:** NC **Incline:** 2

Insulation: — Apache Products "Apache White Line", "Apache Pyrox", any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Base Sheet: — Class C mineral surfaced sheet roll roofing, granule side up.

Slip Sheet: — Four layers Atlas Roofing Corp. "FR10", mechanically fastened.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Base Sheet: — Class C mineral surfaced sheet roofing, granule side up.

Slip Sheet: — Four layers Atlas Roofing Corp. "FR10", mechanically fastened.

Insulation (Optional): — Glass fiber or perlite, any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Insulation: — Any UL Certified EPS insulation (tapered or uniform thickness) or polyisocyanurate, any thickness.

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

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Insulation: — "Duro-Guard ISO-II-A", minimum 1.0-in. thickness.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

11. **Deck:** NC **Incline:** Unlimited

Insulation: — Polystyrene, any thickness.

Slip Sheet: — One layer Atlas Roofing Corp. "FR10".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Insulation: — Rmax Operating LLC "Multi-Max", any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

13. **Deck:** NC **Incline:** 2

Insulation: — Johns Manville "ENRGY 1", any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

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

Insulation (Optional): — "Duro-Guard ISO-II-A", Owens-Corning "Roof Deck Board", Johns Manville "ENRGY 1", perlite, any thickness, mechanically fastened or adhered with hot roofing asphalt.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

15. **Deck:** NC **Incline:** 2

Insulation: — Any UL Certified EPS insulation (tapered or uniform thickness), any thickness.

Coverboard: — Apache Products "Apache Pyrox" or "Duro-Guard ISO-II-A", minimum 1-1/2-in. thick.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

16. **Deck:** NC **Incline:** 2

Insulation: — "Duro-Guard ISO-II-A", any thickness.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Insulation: — 3/4-in. thick (minimum) Partek Insulation "Paroc Capboard" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

18. **Deck:** NC **Incline:** Unlimited

Insulation: — Polystyrene, any thickness.

Slip Sheet: — Atlas Roofing Corp. "FR-10".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Slip Sheet: — Four layers Atlas Roofing Corp. "FR-10".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Insulation: — Carpenter Insulation "Foamfold".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Slip Sheet: — One ply Atlas Roofing Corp. "FR50".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Last " (PVC).

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

Insulation: — “Duro-Guard ISO-II-H”, any thickness.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32 in. thick plywood

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

24. **Deck:** NC **Incline:** 2

Insulation: — Plymouth Foam Inc. "Ultra-Fold TPM", "Ultra Guard TPM" or Pactive LLC "Duro-Guard XPS Fan Fold-P".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

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

Insulation: — Plymouth Foam Inc. "Ultra-Fold TPM", "Ultra Guard TPM" or Pactive LLC "Duro-Fold".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Barrier Board: — Minimum 1/2-in. thick gypsum board with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Insulation (Optional): — Celotex "Star AP" or "Hy-Tec", any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Insulation (Optional): — Celotex "Star AP" or "Hy-Tec", any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Slip Sheet: — Two layers Atlas Roofing Corp. "FR10", mechanically fastened.

Insulation (Optional): — Celotex "Star AP", "Hy-Tec", "Hy-Therm AP" or Apache Products "Apache Pyrox", any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

29. **Deck:** NC **Incline:** 2

Insulation: — Celotex "Star AP" or "Hy-Tec", any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Barrier Board: — Minimum 1/2-in. thick gypsum board with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Insulation (Optional): — Celotex "Star AP" or "Hy-Tec", any thickness, mechanically fastened or adhered with hot roofing asphalt.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Insulation: — Any UL Certified EPS insulation (tapered or uniform thickness), any thickness.

Barrier Board: — Celotex "Hy-Therm AP", 1-1/2 in. thick

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Insulation: — Elevate "ISO 95+GL", any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Underlayment: — Two layers GAF "Versashield Underlayment".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Slip Sheet: — Two layers GAF "VersaShield Underlayment" or "VersaShield FB-2S".

Insulation: — Any UL Classifield, any thickness (except EPS).

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Slip Sheet: — Three layers GAF "VersaShield FB-1S".

Insulation: — Any UL Classifield, any thickness (except EPS).

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Slip Sheet: — Two layers GAF "VersaShield FB-1S".

Insulation: — Any UL Classifield, any thickness (except EPS and wood fiberboard).

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

37. **Deck:** NC **Incline:** See note **Impact:** 3

Insulation: — Polyisocyanurate insulation (see note), 1 to 3-in. thick.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened with 2-in. polyplates and #14 screws.

Note: See individual Certification of specific polyisocyanurate insulation used.

38. **Deck:** NC **Incline:** See note **Impact:** 4

Insulation: — Polyisocyanurate insulation (see note), minimum 4-in. thick.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened with 2-in. polyplates and #14 screws.

Note: See individual Certification of specific polyisocyanurate insulation used.

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

Insulation (Optional): — Polyisocyanurate insulation, any thickness.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened with 2-in. polyplates or 3-in. metal plates and #14 screws.

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

Insulation: — Polyisocyanurate insulation, minimum 1-in. thick.

Slip Sheet: — Leggett & Platt "Nova Rollout" - mechanically fastened.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened with 2-in. polyplates and #14 screws.

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

Insulation: — The Dow Chemical Co. "Styrofoam Deckmate", "Styrofoam Deckmate Plus" or "Styrofoam Square Edge", any thickness, mechanically attached or loose laid.

Slip Sheet: — Atlas Roofing Corp. "FR10", "FR 11" or "FR 50".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

42. **Deck:** NC **Incline:** 2

Insulation: — Polystyrene, EPS or beadboard, any thickness.

Slip Sheet: — One layer GAF "VersaShield FB-1S" or "VersaShield FB-2S".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

43. **Deck:** C-15/32 **Incline:** See Note 2 **Impact:** 4

Base Sheet: — One ply Type G2, Atlas Roofing Corp. "FR-10" or GAF "VersaShield", mechanically attached.

Barrier Board: — Minimum 1/4-in. thick United States Gypsum Co. "Securock Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck. (See Note 1).

Insulation (Optional): — Polyisocyanurate insulation (See Note 2).

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened with 2-in. polyplates and #14 screws.

Note 1: If insulation is not used, barrier board is to be mechanically fastened with 2-in. polyplates and #14 screws.

Note 2: Maximum incline shall be in accordance with Certification established for insulation/membrane roof covering system, but is limited to 3:12.

44. **Deck:** NC **Incline:** 3

Insulation (Optional): — Johns Manville "ENRGY 3", 4-in. thick.

Insulation: — Johns Manville "Invinsa Roof Board", 1/4-in. thick.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically attached.

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

Insulation (Optional): — Elevate "ISO 95+GL", any thickness.

Slip Sheet: — "Duro-Last Ballast Mat" mechanically attached.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically attached.

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

Insulation: — UL Certified EPS, any thickness, maximum 1.25 pcf, mechanically attached or loose laid.

Insulation: — "Duro-Guard ISO-II-A", minimum 1-in. thick.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically attached.

47. **Deck:** NC **Incline:** 2

Insulation: — UL Certified EPS, maximum 1.5-in. thick, maximum 1.25 pcf, mechanically attached or loose laid.

Insulation: — "Duro-Guard ISO-II-A", minimum 1-in. thick.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — "Duro-Last" PVC, mechanically attached.

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

Insulation: — UL Certified EPS, any thickness, maximum 1.25 pcf, mechanically attached or loose laid.

Insulation: — “Duro-Guard ISO-II-H”, minimum 1-in. thick.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically attached.

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

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

Membrane: — "Duro Last" (PVC), mechanically attached.

50. **Deck:** NC **Incline:** 3

Insulation: — Owens Corning Specialty Products "Foamular", any thickness.

Slip Sheet: — Atlas Roofing Corp. "FR-10" or "FR-11".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically attached.

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

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

Insulation: — "Duro-Guard ISO-III-A", minimum 1.5-in. thick with all joints staggered 6-in. minimum from plywood joints.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically attached.

52. **Deck:** C-15/32 **Incline:** See Note

Slip Sheet: — Two layers Atlas Roofing Corp. "FR-10", mechanically fastened.

Insulation (Optional): — Any UL Certified, any thickness (except EPS and wood fiberboard).

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically attached.

Note: Membrane must be currently Certified for use over the insulation used. Actual incline is determined by the maximum existing membrane/insulation Certification incline, however the incline cannot exceed 3/4:12.

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

Insulation (Optional): — Any UL Certified (except EPS and wood fiberboard), any combination, any thickness.

Insulation: — Atlas Roofing Corp. "AC Foam IV", minimum 1-in thick. All insulation joints must be staggered a minimum of 6-inches from the deck joints or from the insulation joints directly below.

Insulation (Optional): — Any UL Certified (except EPS and wood fiberboard), any combination, any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically attached, 40-mil thick minimum.

54. **Deck:** C-15/32 **Incline:** See note

Insulation (Optional): — "Duro-Guard ISO-II-A", "Duro-Guard ISO-II-A Tapered" or "Duro-Guard ISO-III-A" or "Duro-Guard ISO-III-A Tapered" any thickness.

Insulation: — "Duro-Guard ISO-IV-A", minimum 1-inch thick polyisocyuranate 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): — "Duro-Guard ISO-II-A", "Duro-Guard ISO-II-A Tapered" or "Duro-Guard ISO-III-A" or "Duro-Guard ISO-III-A Tapered" any thickness.

Membrane: — Any UL Certified membrane, 40-mil thick minimum, that currently has a noncombustible rating with "Duro-Guard ISO-II-A", "Duro-Guard ISO-II-A Tapered" or "Duro-Guard ISO-III-A" or "Duro-Guard ISO-III-A Tapered" or insulation.

Note: The maximum incline shall be in accordance with the Class A Certification established for the membrane/insulation ("Duro-Guard ISO-II-A", "Duro-Guard ISO-II-A Tapered", "Duro-Guard ISO-III-A" or "Duro-Guard ISO-III-A Tapered"), roof covering assembly, however the incline cannot exceed 1:12.

55. **Deck:** Deleted

56. **Deck:** Deleted

57. **Deck:** Deleted

58. **Deck:** NC **Incline:** See note

Insulation: — "Duro-Guard EPS Flat Type VIII-C", "Duro-Guard EPS Taper Type VIII-C", "Duro-Guard EPS Flat Type II-C", "Duro-Guard EPS Taper Type II-C", any thickness

Slip Sheet: — Atlas Roofing Corp. "FR-10"

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, or any UL Classified PVC.

Note: Maximum incline is determined by any existing insulation/membrane Classification, but cannot exceed 1:12.

59. **Deck:** NC **Incline:** 3

Insulation: — "Duro-Guard EPS Flat Type VIII-C", "Duro-Guard EPS Taper Type VIII-C", "Duro-Guard EPS Flat Type II-C", "Duro-Guard EPS Taper Type II-C", any thickness.

Slip Sheet: — Atlas Roofing Corp. "FR-10"

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

60. **Deleted.**

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

Insulation: — "Duro-Guard EPS Fiberglass Facer-C".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Insulation: — "Duro-Guard EPS Fiberglass Facer-C", any thickness and density.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, maximum 60-mil thick.

63. **Deck:** NC **Incline:** 2

Insulation (Optional): — "Duro-Guard ISO-II-A", any thickness.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick.

64. **Deck:** NC **Incline:** 2

Insulation (Optional): — “Duro-Guard ISO-II-H”, any thickness.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick.

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick.

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

Insulation (Optional): — "Duro-Guard ISO-II-A", any thickness.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — "Duro-Tuff" (PVC), 80-mil thick.

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

Insulation (Optional): — “Duro-Guard ISO-II-H”, any thickness.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — "Duro-Tuff" (PVC), 80-mil thick.

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Tuff" (PVC), 80-mil thick.

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

Insulation: — "Duro-Guard Iso Foil-H" or "Duro-Guard Iso NB-H", any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Insulation (Optional): — "Duro-Guard ISO-II-A", any thickness.

Membrane: — "Duro-Last EV" (PVC).

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

Insulation (Optional): — “Duro-Guard ISO-II-H”, any thickness.

Membrane: — "Duro-Last EV" (PVC).

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

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" or National Gypsum Co. "DEXcell Glass Mat Roof board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Last EV" (PVC).

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

Vapor Barrier: — Soprema Inc. "Sopravap'R", self-adhered

Slip Sheet (Fire Barrier): — One or more layers GAF "VersaShield® Solo™ Fire Resistant Slip Sheet", mechanically fastened.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X” or "Duro-Last EV" (PVC), mechanically fastened.

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

Slip Sheet: — Four layers Atlas Roofing Corp. "FR10", mechanically fastened.

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

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Barrier Board: — Minimum 1/2-in. thick gypsum, joints offset 6-in. minimum from joints in the roof deck.

Insulation (Optional): — Rmax Operating LLC "Multi-Max", any thickness, mechanically fastened or adhered with hot roofing asphalt.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

76. **Deck:** NC **Incline:** See note

Insulation: — "DURO-GUARD EPS FLAT", "DURO-GUARD EPS TAPERED", any thickness.

Slip Sheet: — Atlas Roofing Corp. Atlas "FR-10" or Elk "VersaShield FB-1S".

Membrane: — Any Duro-Last membranes

Note: Maximum incline is determined by any existing insulation/membrane Classification but cannot exceed 1:12.

77. **Deck:** NC **Incline:** 3

Insulation: — "Duro-Guard EPS Flat", "Duro-Guard EPS Tapered", any thickness.

Slip Sheet: — Atlas Roofing Corp. "FR-10" or "FR-11".

Membrane: — Duro-Last “Duro-Last” (PVC) or “Duro-Last X”.

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

Slip Sheet: — One or more plies GAF "VersaShield Solo Fire Resistant Slipsheet".

Membrane: — "Duro-Last" or "Duro-Tuff" or "Duro-Last EV" mechanically fastened (when insulation is utilized, the actual incline is determined by the existing membrane/insulation Classification).

79. **Deck:** C-15/32 **Incline:** See Note 1

Slip Sheet: — One or more plies GAF "VersaShield Solo Fire Resistant Slipsheet".

Insulation (Optional): — Any UL Classified, any thickness (except EPS and wood fiberboard).

Membrane: — "Duro-Last" or "Duro-Tuff" or "Duro-Last EV" mechanically fastened

Note 1: When insulation is utilized, the actual incline is determined by the existing membrane/insulation Classification.

80. **Deck:** NC **Incline:** 2

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

Slip Sheet: — One ply GAF "VersaShield Solo Fire Resistant Slipsheet" or "VersaShield Underlayment."

Membrane: — "Duro-Last" or "Duro-Tuff" or "Duro-Last EV" mechanically fastened (when insulation is utilized, the actual incline is determined by the existing membrane/insulation Classification).

81. **Deck:** NC **Incline:** 3

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

Coverboard: — Continuus Materials Holdings LLC "Everboard™ QB", minimum 5/16-in. thick.

Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick.

82. **Deck:** NC **Incline:** See Note

Insulation (Optional): — “Duro-Guard ISO-II-H” or "Duro-Guard Iso III-H " any combination, any thickness.

Coverboard: — 1/2-inch thick "Duro-Guard HD-MA"

Membrane: — Any UL Classified EPDM, PVC or TPO mechanically fastened membrane assembly.

Note: Maximum incline shall be in accordance with Classification established for insulation/membrane roofing system.

Class B - Mechanically Fastened

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

Slip Sheet: — Two layers Atlas Roofing Corp. "FR10", mechanically fastened.

Insulation (Optional): — Glass fiber or perlite, any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Base Sheet: — Class C mineral surfaced sheet roll roofing, granule side up.

Slip Sheet: — Two layers Atlas Roofing Corp. "FR10", mechanically fastened.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Base Sheet: — Class C mineral surfaced sheet roll roofing, granule side up.

Slip Sheet: — Two layers Atlas Roofing Corp. "FR10", mechanically fastened.

Insulation (Optional): — Glass fiber or perlite, any thickness.

Membrane: —“Duro-Last” (PVC) or “Duro-Last X”.

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

Insulation: — Johns Manville "ENRGY 1", any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

5. **Deck:** NC **Incline:** Unlimited

Insulation: — "Duro-Guard ISO-II-A", any thickness.

Slip Sheet: — Atlas Roofing Corp. "FR50".

Membrane: — "Duro-Last " (PVC).

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

Slip Sheet: — Atlas Roofing Corp. "FR10".

Insulation: — One of the following, minimum 2-in. thick with the butt joints in the insulation offset a minimum of 6-in. from the butt joints in the plywood roof deck.

A. "Duro-Guard ISO-II-A".

B. Apache Products "Apache Pyrox" or "Apache White Line".

C. Johns Manville "ENRGY 2G".

D. Elevate "ISO 95+GW".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Slip Sheet: — One layer Atlas Roofing Corp. "FR50".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Slip Sheet: — Atlas Roofing Corp. "FR10".

Insulation: — Celotex "Hy-Therm AP" or "Hy-Tec (Energy Lok)", minimum 2-in. thick with the butt joints in the insulation offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Underlayment: — Two layers GAF "Versashield Underlayment".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Slip Sheet: — One layer GAF "VersaShield Underlayment".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Slip Sheet: — One layer GAF "VersaShield Underlayment" or "VersaShield FB-2S".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

12. **Deck:** NC **Incline:** 3

Insulation: — UL Certified EPS, maximum 1.5-in. thick, maximum 1.25 pcf, mechanically attached or loose laid.

Insulation: — "Duro-Guard ISO-II-A", minimum 1-in. thick.

Coverboard (Optional): — Minimum 7/16-in. thick oriented strand board (OSB) or minimum 15/32-in. thick plywood

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically attached.

13. **Deck:** NC **Incline:** Unlimited

Insulation: — UL Certified EPS, maximum 1.5-in. thick, maximum 1.25 pcf, mechanically attached or loose laid.

Coverboard: — Roxul "MonoBoard", minimum 1-in. thick.

Membrane: — "Duro-Last" PVC, mechanically attached.

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

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

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically attached.

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

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

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically attached.

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

Slip Sheet: — One ply Atlas Roofing Corp. "FR-10," mechanically fastened.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically attached.

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

Insulation (Optional): — Atlas Roofing Corp. "AC Foam II" or "AC Foam III", any thickness.

Insulation: — Atlas Roofing Corp. "AC Foam IV", minimum 1/2-inch thick. All insulation joints must be staggered a minimum of 6-in. from the roof deck joints or from the insulation butt joints directly below.

Insulation (Optional): — Atlas Roofing Corp. "AC Foam II" or "AC Foam III", any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically attached, 40-mil thick minimum.

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

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

Insulation: — UL Certified polystyrene, minimum 3/4-in. thick.

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

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically attached, minimum 40-mil thick.

19. **Deck:** C-3/8 **Incline:** 1/2

Insulation: — Minimum 3/4-in. thick perlite with the butt joints in the insulation offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically attached.

20. **Deck:** C-15/32 **Incline:** See note

Insulation (Optional): — "Duro-Guard ISO-II-A" or "Duro-Guard ISO-III-A" or "Duro-Guard ISO-III-A Tapered", any thickness.

Insulation: — "Duro-Guard ISO-IV-A" minimum 1/2-in. thick. All insulation butt joints must be staggered a minimum of 6-in. from the roof deck joints or from the insulation butt joints directly below.

Insulation (Optional): — "Duro-Guard ISO-II-A" or "Duro-Guard ISO-III-A" or "Duro-Guard ISO-III-A Tapered", any thickness.

Membrane: — Any UL Certified membrane, 40-mil thick minimum, that currently has a noncombustible rating with "Duro-Guard ISO-II-A", "Duro-Guard ISO-II-A Tapered" or "Duro-Guard ISO-III-A" or "Duro-Guard ISO-III-A Tapered" or insulation.

Note: The maximum incline shall be in accordance with the Class A Certification established for the membrane/insulation ("Duro-Guard ISO-II-A", "Duro-Guard ISO-II-A Tapered" or "Duro-Guard ISO-III-A" or "Duro-Guard ISO-III-A Tapered"), roof covering assembly, however the incline cannot exceed 1:12.

21. **Deck:** Deleted

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

Insulation: — Rmax Operating LLC "Multi-Max" or Johns Manville "ENRGY 1", any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Slip Sheet: — Atlas Roofing Corp. "FR10".

Insulation: — Rmax Operating LLC "Multi-Max FA", minimum 2-in. thick with the butt joints in the insulation offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

24. **Deck:** NC **Incline:** 3

Insulation: — Duro-Guard ISO II-H, any thickness.

Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick.

25. **Deck:** NC **Incline:** 2

Insulation: — Duro-Guard ISO II-H, any thickness.

Membrane: — "Duro-Tuff" (PVC), 80-mil thick.

26. **Deck:** C-15/32 **Incline:** See Note

Insulation: — "Duro-Guard EPS Flat", "Duro-Guard EPS Tapered", minimum 3/4-in. thick.

Slip Sheet: — Two layers of GAF "VersaShield FB-1S".

Membrane: — Any Duro-Last membrane.

Note: Maximum incline is determined by any existing insulation/membrane Classification, but cannot exceed 1/2:12.

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

Insulation: — Polystyrene, EPS or beadboard, any thickness.

Slip Sheet: — One or more plies GAF "VersaShield Solo Fire Resistant Slipsheet."

Membrane: — "Duro-Last" or "Duro-Tuff" or "Duro-Last EV" mechanically fastened.

Class C - Mechanically Fastened

1. **Deck:** C-15/32(OSB or plywood) **Incline:** 1

Slip Sheet: — One layer Atlas Roofing Corp. FR10.

Insulation (Optional): — "Duro-Guard ISO-II-A", Johns Manville "ISO 1", Celotex "Hy-Tec", "Star AP" or "Hy-Therm AP", any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

2. **Deck:** C-15/32(OSB or plywood) **Incline:** 1/2

Slip Sheet: — One layer Atlas Roofing Corp. "FR10".

Insulation (Optional): — Rmax Operating LLC "Multi Max", any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Insulation: — "Duro-Guard Iso Foil-H", "Duro-Guard ISO HSP" or "Duro-Guard Iso NB-H", any combination, any thickness.

Membrane: — "Duro-Last", "Duro-Tuff", 50 or 60-mil thick, "Duro-Fleece Plus" or "Duro-Fleece", 50 or 60-mil thick.

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

Insulation: — UL Certified EPS, maximum 2.5 in. thick, maximum 1.5 pcf density, mechanically attached or loose laid.

Slip Sheet (Optional): — "Duro-Blue" (not UL Certified) or "Duro-Weave" (not UL Certified), mechanically fastened.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically attached.

5. **Deck:** NC **Incline:** Unlimited

Insulation: — Duro-Guard ISO II-H, any thickness.

Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick.

6. **Deck:** NC **Incline:** 3

Insulation: — Duro-Guard ISO II-H, any thickness.

Membrane: — "Duro-Tuff" (PVC), 80-mil thick.

Class A, B or C (See note) - Mechanically Fastened

1. **Deck:** Deleted

2. **Deck:** Deleted

3. **Deck:** NC **Incline:** See note

Insulation: — "Duro-Guard EPS Flat Type VIII-C", "Duro-Guard EPS Taper Type VIII-C", "Duro-Guard EPS Flat Type II-C", "Duro-Guard EPS Taper Type II-C", any thickness.

Coverboard: — Minimum 1-in. thick perlite or wood fiber.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, or any UL Classified PVC membrane suitable for use with any roof insulation.

Surfacing: — See note.

Note: Classification (A, B or C) will be the same as that for the original insulation/membrane roofing system. Maximum incline, attachment of membrane, and surfacing of membrane shall be in accordance with Classification established for membrane/insulation roofing system.

4. **Deck:** C-15/32 **Incline:** 1 (See Note)

Insulation (Optional): — Polystyrene, glass fiber, perlite, polyurethane, isocyanurate, perlite/isocyanurate, perlite/polyurethane composites, Rockwool "MonoBoard™", "ComfortBoard™", or "TopRock® DD", any thickness, mechanically fastened.

Barrier Board: — Rockwool "MonoBoard™", "ComfortBoard™", or "TopRock® DD", 1-in. thick minimum or "Multifix", 2-in. thick minimum. with insulation joints staggered a minimum of 6-in. from the plywood roof deck joints, mechanically fastened.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

Note: Classification (A, B or C) and maximum incline will be same as that for the original insulated membrane roof covering system but not exceeding 1:12. Limitations regarding incline for noncombustible roof decks are not applicable. Surfacing shall be in accordance with the mechanically attached Classification established for the original insulated membrane roof covering system.

MAINTENANCE AND REPAIR SYSTEMS

Class A, B or C

1 **Deck:** C-15/32 **Incline:** See Note 1

Existing Roof System: — Any Class A, B or C UL Classified EPDM, TPO, Hypalon, PVC, TPA, or CPE single ply membrane roof covering system, mechanically fastened or fully adhered, non-insulated or insulated, to retain existing Classification.

Primer: (optional) — "Duro-Shield Universal 2-Part Epoxy Primer".

Base coat: (optional) — "Duro-Shield Silicone Roof Coating" applied at 1.25 to 1.5 gal./ 100ft².

Top Coat: — "Duro-Shield Silicone Roof Coating" applied at 1.25 to 1.75 gal./ 100 ft².

Surfacing (Optional) - #11 ceramic coated roof granules applied at 30 lbs./100.ft.²

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

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

Existing Roof System: — Class A, B or C, insulated or non-insulated, modified bitumen membrane roof covering system or mineral surfaced cap sheet, smooth or gravel surfaced BUR roof covering system, mechanically fastened or fully adhered, non-insulated or insulated, to retain existing Classification.

Primer: (optional) — "Duro-Shield Universal 2-Part Epoxy Primer" and/or "Duro-Shield Bleed Block Primer" Based Coat primer.

Base coat: (optional) — "Duro-Shield Silicone Roof Coating" applied at 1.25 to 1.5 gal./ 100ft².

Top Coat: — "Duro-Shield Silicone Roof Coating" applied at 1.25 to 1.75 gal./ 100 ft².

Surfacing (Optional) - #11 ceramic coated roof granules applied at 30 lbs./100ft.²
Note 1: Classification (A, B or C) and maximum incline will be the same as that of the Classified Roof Covering System (TGFU).

Class A

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

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

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

Insulation (Optional): —

A. Any UL Certified polystyrene insulation (tapered or uniform thickness) any thickness covered with minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or one layer of GAF "VersaShield FB-1S" or "VersaShield FB-2S".

B. Duro-Guard ISO-II-A, any thickness.

C. Owens-Corning "Roof Deck Boards".

D. Wood fiber.

E. Perlite, 1-1/2 to 3-in. thick

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Existing Roof System: — Class A gravel surfaced.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”,mechanically fastened.

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

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

Insulation (Optional): —

A. Any UL Certified polystyrene insulation (tapered or uniform thickness) any thickness covered with 1-in. thick perlite or 1-in. thick wood fiber or Atlas Roofing Corp. "FR10".

B. Duro-Guard ISO-II-A, any thickness.

C. Owens-Corning "Roof Deck Boards".

D. Wood fiber.

E. Perlite, 1-1/2 to 3-in. thick

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Existing Roof System: — Class A covered with:

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Existing Roof System: — Class A, B or C gravel surfaced. The gravel must be maintained at 400-lbs./100-ft.^{2}

Separation Sheet: — Type 30 or G2 (45-lbs.) base sheet, Atlas Roofing Corp. "FR10" or underlayment boards consisting of "Duro-Guard XPS Fan Fold-P" or Pablo Corp. "P14, PB4 or PB6," or minimum 1/2-in. thick wood fiber roof insulation.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Existing Roof System: — Class A, B or C BUR system, smooth surface covered with:

Slip Sheet: — Two layers Atlas Roofing Corp. "FR10", mechanically fastened.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Existing Roof System: —

A. Class A, B or C mineral or smooth surfaced asphalt felt roof covering system, covered with:

B. Single-ply (modified bitumen) roof system, covered with:

C. Class A, B or C asphalt organic felt or glass fiber mat shingles, covered with:

Slip Sheet: — Four layers Atlas Roofing Corp. "FR10", mechanically fastened.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Existing Roof System: — Class A gravel surfaced asphalt felt roof covering system. The gravel must be maintained at 400-lbs./100-ft.^{2}

Insulation: — Carpenter Insulation "Foamfold".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Existing Roof System: — Class A, B or C roof (smooth or granular surfaced cap sheet, shingles or modified bitumen single ply), covered with minimum 1/2-in. thick gypsum board.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

10. **Deck:** NC **Incline:** 3

Existing Roof System: — Insulated or uninsulated ballasted single ply membrane, ballast may be removed, covered with:

Slip Sheet: — Atlas Roofing Corp. "FR10" or GAF "Versa-Shield 1S", mechanically fastened or loose laid.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Existing Roof System: — Class A gravel surfaced asphalt felt roof covering system. The gravel must be maintained at 400-lbs./100-ft.^{2}

Insulation: — Polyfoam Packers "ThermoSafe-RB" insulation.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Existing Roofing System: — Class A, B or C built up system, smooth surface, cap sheet or gravel surfaced; gravel may be removed.

Barrier Board (if gravel is removed): — 1/2-in. thick gypsum board.

Insulation: — Plymouth Foam Inc. "Ultra-Fold TPM", "Ultra Guard TPM" or Pactiv LLC "Duro-Fold", mechanically fastened.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Existing Roof System: — Class A, smooth or gravel surfaced (gravel maintained at 400-lbs./100-ft^2)

Insulation: — Pactiv Corp. "PB6", "PB6W", "PG38", "PG39" or "Duro-Guard XPS Fan Fold-P".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

14. **Deck:** Deleted

15. **Deck:** Deleted

16. **Deck:** Deleted

17. **Deck:** Deleted

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

Existing Roof System: — Class A, B or C built up system, smooth surface, cap sheet or gravel surfaced, gravel may be removed.

Insulation: — "Duro-Guard EPS Fan-Fold-C", "Duro-Guard ISO HD-H", or "Duro-Guard HD-A", maximum 1-in. thick.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Existing Roof System: — Class A, B or C roof covering system, gravel may be removed on gravel surfaced roof covering systems.

Insulation: — "Duro-Guard EPS Fan-Fold-C", any thickness.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

Surfacing: — River bottom stone (3/4-in. to 11/2-in. diameter) at minimum 900-lbs. per 100-ft^2

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

Existing Roof System: — Class A, B or C, Certification to be retained, covered with:

Barrier Board: — Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick, adhered with "Duro-Last SB IV" at 1-3/5-gal/100-ft^2

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

Existing Roof System: — Class A, B or C, Certification to be retained, covered with:

Barrier Board: — Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick, adhered with "Duro-Last WB Adhesive II" at 1-gal/100-ft^2

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

Existing Roof System: — Class A, B or C, Certification to be retained, covered with:

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board", or United States Gypsum Co. Securock® Glass-Mat Roof Board with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Tuff" (PVC), 80-mil thick, adhered with "Duro-Last SB IV" at 1-3/5-gal/100-ft.^{2}

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

Existing Roof System: — Class A, B or C, Certification to be retained, covered with:

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. Securock® Glass-Mat Roof Board with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Tuff" (PVC), 80-mil thick, adhered with "Duro-Last WB Adhesive II" at 1-gal/100-ft.^{2}

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

Existing Roof System: — Class A, B or C, Certification to be retained, covered with:

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

with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Last EV" (PVC), adhered with "Duro-Last SB IV" at 0.75-gal/100-ft.^{2}

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

Existing Roof System: — Class A, B or C, Certification to be retained, covered with:

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board", or United States Gypsum Co. Securock® Glass-Mat Roof Board with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Last EV" (PVC), adhered with "Duro-Last WB Adhesive II" at 0.45-gal/100-ft.^{2}

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

Existing Roof System: — Class A, B or C, Certification to be retained, covered with:

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board", or United States Gypsum Co. Securock® Glass-Mat Roof Board with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Last EV" (PVC), mechanically attached.

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

Existing Roof System: — Class A, B or C roof covering system (gravel may be removed from gravel built-up or ballasted single-ply system).

Insulation: — "Duro-Guard Iso III-H" or "Duro-Guard Iso Composite-H", minimum 3-in. thick.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Existing Roof System: — Class A, B or C roof covering system (gravel may be removed from gravel built-up or ballasted single-ply system).

Insulation: — "Duro-Guard Iso III-H" or "Duro-Guard Iso Composite-H", minimum 3-in. thick.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Existing Roof System: — Class A, smooth or gravel surfaced (gravel maintained at 400-lbs./100-ft^2).

Insulation: — Minimum 1-in. thick "Duro-Guard ISO II-A".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Existing Roof System: — Class A BUR system, insulated or uninsulated, Type G3 mineral surfaced cap or smooth surface.

Slip Sheet: — Maximum 4-mil thick "Duro-Weave" or "Duro-Blue" (not UL Certified), mechanically fastened.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, or 50-mil thick "Duro-Tuff" (PVC), mechanically fastened.

Coating: — RM Lucas "8000" Silicone coating applied at 2.5 gallons/100-ft^2.

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

Existing Roof System: — Class A, B or C built up system, smooth surface, cap sheet or gravel surfaced, gravel may be removed.

Coverboard: — Continuus Materials Holdings LLC "Everboard™ QB", minimum 5/16-in. thick.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Existing Roof System: — Class A, B or C built up system, smooth surface, cap sheet or gravel surfaced, gravel may be removed.

Coverboard: — Continuus Materials Holdings LLC "Everboard™ QB", minimum 5/16-in. thick adhered with OMG INC's "Olybond 500", "Olybond 500 (Canister application)" or "SpotShot".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, adhered with "Duro-Last WB Adhesive II" at 1-gal./100-ft.^{2}

Class B

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

Existing Roof System: — Class B BUR system smooth surfaced covered with:

Slip Sheet: —

A Type 30 or Type G2 (45-lbs.) base sheet.

B. One layer Atlas Roofing Corp. "FR10", mechanically fastened.

C. Pactiv Corp. "P14, PB4, PB6" or "Duro-Guard XPS Fan Fold-P".

D. Carpenter Insulation "Foamfold".

E. Minimum 1/2-in. thick wood fiber roof insulation.

F. 3-mil thick polyethylene film.

G. "Duro-Last Ballast Mat".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Base Sheet: — One layer Type G2 Owens-Corning base sheet, mechanically fastened to deck.

Cap Sheet: — One layer Type G3 GAF Mineral Surfaced Cap Sheet, hot mopped.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

Coating: — Kool Seal "Uniflex" Elastomeric White Gray or Black roof coating at 3/4 to 1-gal/100-ft.^{2}

Surfacing: — No. 11 roofing granules embedded in the wet coating at 50-lbs./100-ft^2

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

Existing Roof System: —

A. Class A, B or C mineral or smooth surfaced asphalt felt roof covering system, covered with:

B. Single-ply (modified bitumen) roof system, covered with:

C. Class A, B or C asphalt organic felt or glass fiber mat shingles, covered with:

Slip Sheet: — Two layers Atlas Roofing Corp. "FR10", mechanically fastened.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Existing Roof System: — Class B Certification to be retained, covered with:

Slip Sheet: — Geotextile slip sheet (not UL Certified but max. 3-lbs./100-ft.^{2}).

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened, Existing roof Certification remain the same.

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

Existing Roof System: — Class A, B or C roof covering system (gravel may be removed from gravel built-up or ballasted single-ply system).

Insulation: — A minimum 1.9-in. thick layer of "Duro-Guard Iso III-H".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Existing Roof System: — Class A, B or C roof covering system (gravel may be removed from gravel built-up or ballasted single-ply system).

Insulation: — A minimum 1.9-in. thick layer of "Duro-Guard Iso III-H".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

Class C

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

Existing Roof System: — Class C Certification to be retained, covered with:

Slip Sheet (Optional): — Geotextile slip sheet (not UL Certified but max. 3-lbs./100-ft.^{2}) or "Duro-Last Ballast Mat".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened, Existing roof Certification remain the same.

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

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

Insulation: — "Duro-Guard EPS Fan-Fold-C", maximum 1-in. thick.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

Class A, B or C

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

Existing Roof System: — Class A, B or C, Certification to be retained, covered with:

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened. Existing roof Certification remain the same.

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

Existing Roof System: — Class A, B or C, Certification to be retained, covered with:

Membrane: — "Duro-Last" (PVC), mechanically fastened, Existing roof Certification remain the same.

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

Existing Roofing System: — Class A, B or C built up system smooth surface, cap sheet or gravel surfaced; gravel must maintain at 400-lbs. per 100-ft.^{2}; existing Certification will be maintained.

Insulation: — Plymouth Foam Inc. "Ultra-Fold TPM", "Ultra Guard TPM" or Pactiv LLC "Duro-Fold".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened.

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

Existing Roof System: — Class A, B or C, Certification to be retained, covered with:

Insulation: — Polyisocyanurate insulation, minimum 1-in. thick.

Slip Sheet: — Leggett & Platt "Nova Rollout" - mechanically fastened.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened with 2-in. Polyplates and #14 screws.

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

Existing Roof System: — Class A, B or C, Certification to be retained, covered with:

Slip Sheet: — GAF "VersaShield FB-1S" or GAF "VersaShield FB-2S" or GAF "VersaShield Underlayment", or Atlas Roofing Corp. "FR10" or Atlas Roofing Corp. "FR50" or Polyethylene (not UL Certified), 3 to 6-mils thick or Johns Manville "Invinsa Roof Board", 1/2-in. thick, mechanically attached.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened, Existing roof Certification remain the same.

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

Existing Roof System: — Class A, B or C, Certification to be retained, covered with:

Slip Sheet: — Geotextile slip sheet (not UL Certified but maximum 3-lbs./100-ft.^{2}) or "Duro-Last Ballast Mat".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, mechanically fastened, Existing roof Certification remain the same.

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

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

Membrane: — "Duro-Fleece Plus" (PVC), adhered with OMG Inc. "Fleece Membrane Adhesive".

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

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

Membrane: — "Duro-Fleece Plus" (PVC), mechanically attached.

9. Deleted

10. Deleted

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

Existing Roof System: — Class A, B or C, Certification to be retained, covered with:

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, adhered with "Duro-Last SB IV" at 1-1/3 gal/100-ft.^{2}

12. **Deck:** Deleted

13. **Deck:** Deleted

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

Existing Roof System: — Class A, B or C built-up or modified bitumen system, smooth surface, cap sheet or gravel surfaced (gravel maintained). Or Class A, B or C single-ply system (polystyrene in existing single-ply system must be below a coverboard or minimum 1-in. thick polyisocyanurate), to retain the existing Classification.

Insulation: — "Duro-Guard EPS Flat Type VIII-C", "Duro-Guard EPS Taper Type VIII-C", "Duro-Guard EPS Flat Type II-C", "Duro-Guard EPS Taper Type II-C", "Duro-Guard EPS Fan-Fold-C", maximum 1-in. thick.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, or any UL Classified PVC, mechanically fastened.

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

Existing Roof System: — Class A, B or C built-up system or modified bitumen system, smooth surface, cap sheet or gravel surfaced (gravel maintained) to retain the existing Classification.

Insulation: — "Duro-Guard EPS Flat Type VIII-C", "Duro-Guard EPS Taper Type VIII-C", "Duro-Guard EPS Flat Type II-C", "Duro-Guard EPS Taper Type II-C", "Duro-Guard EPS Fan-Fold-C", maximum 1-in. thick.

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”, or any UL Classified PVC, mechanically attached.

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

Existing Roof System: — Class A, B or C, Certification to be retained, covered with:

Slip Sheet: — GAF "VersaShield FB-1S", "VersaShield FB-2S" or "VersaShield Underlayment" or Atlas Roofing Corp. "FR10" or "FR50" or 1/4-in. thick Johns Manville "Invinsa Roof Board", mechanically attached.

Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick, mechanically fastened.

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

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

Membrane: — "Duro-Fleece" (PVC) 50-mil to 80-mil thick, adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft.^{2}

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

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

Insulation: — "Duro-Guard Iso HD-H" or "Duro-Guard Iso Composite-H".

Membrane: — “Duro-Last” (PVC) or “Duro-Last X”.

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

Existing Roof System: — Class A, B or C, Certification to be retained, covered with:

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Tuff" (PVC), 50 or 60-mil thick, mechanically fastened.

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

Existing Roof System: — Class A, B or C, Certification to be retained, covered with:

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Tuff" (PVC), 80-mil thick, mechanically fastened.

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

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

Membrane: — "Duro-Fleece" (PVC) 50-mil to 80-mil thick, mechanically fastened.

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

Existing Roof System: — Class A, B or C, Certification to be retained, covered with:

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard" or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board" or United States Gypsum Co. "Securock® Glass-Mat Roof Board" with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Fleece", 50 or 60-mil thick, fully adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft.^{2}

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

Existing Roof System: — Class A, B or C, Certification to be retained, covered with:

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

Barrier Board: — Minimum 1/4-in. thick Georgia-Pacific Gypsum LLC "DensDeck® Roofboard", "DensDeck Prime® Roofboard" or "DensDeck DuraGuard™ Roofboard", or National Gypsum Co. "DEXcell Glass Mat Roof Board" or "DEXcell FA Glass Mat Roof Board", or United States Gypsum Co. Securock® Glass-Mat Roof Board with the butt joints in the barrier board offset a minimum of 6-in. from the butt joints in the plywood roof deck.

Membrane: — "Duro-Fleece", 50 to 80-mil thick, fully adhered with "Duro-Grip CR-20", applied at a rate of 5-lbs./100-ft.^{2} or H.B. Fuller Company “Millennium PG-1 EF ECO”, applied in a spatter pattern.

24. **Deck:** C-15/32 **Impact:** 1-1/2, see Note 1

Existing Roof System: — Any Class A, B or C built-up roof system.

Slip Sheet: — One or more plies GAF "VersaShield Solo Fire Resistant Slipsheet."

Roof Covering: — "Duro-Last" or "Duro-Tuff" or "Duro-Last EV" mechanically fastened.

Note 1: Classification (A, B or C) and maximum incline will be the same as that of the Classified Roofing System (TGFU) currently limited to noncombustible roof deck, but not to exceed inclines greater than 1-1/2:12.

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

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

Membrane: — "Duro-Last EV Fleece", adhered with "Duro-Grip CR-20", applied at a rate of 5 lb/100-ft^2.

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

Existing Roof System: — (To maintain existing Certifications) – Any Class A, B or C, uncoated, insulated or uninsulated, Type G3 mineral surfaced cap BUR system.

Membrane: — “Duro-Last EV Fleece”, adhered with Soprema “Duotack SPF”, applied at a rate of 2.5-3.7 lb/100-ft^2.

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

Existing Roof System: — Any Class A, B, or C UL Classified EPDM single ply membrane roof covering system, mechanically fastened or fully adhered, non-insulated or insulated, to retain existing Classification.

Slip Sheet: — “Duro-Blue” (not UL Certified), mechanically fastened.

Membrane: — “Duro-Last X”, mechanically fastened.

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

Existing Deck: — Class A, B or C built up system, smooth surface, cap sheet or gravel surfaced, gravel may be removed.

Barrier Board (if gravel is removed): — Minimum 1/2 in. thick gypsum board.

Insulation: — Maximum 1/2 in. thick "Duro-Guard EPS Fanfold", "Duro-Guard EPS Flat", "Duro-Guard EPS Tapered", “DURO-GUARD EPS FAN FOLD-A” mechanically fastened.

Membrane: — Duro-Last (PVC), mechanically fastened.

Tradename and/or Trademark: Gaco, GENFLEX, DURO-LAST THE WORLD'S BEST ROOF, ELEVATE, OX Engineered Products, ENVERGE

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