

Table VIII

**Underlayment/Insulation & Required Attachment Assemblies
Up to 20 YR Warranty for TPO Adhered Roofing Systems**

Other Requirements are Listed in Additional Design Considerations following this Table
All Carlisle Products listed for higher wind speed coverage can also be used for Warranties for a lower speed coverage.
(i.e. 72 MPH underlayment may be used for 55 MPH underlayment)

Peak Gust Wind Speed Warranty	Minimum Membrane Underlayment*	Underlayment/Insulation Attachment			Metal Edging
		# of Fasteners per 4' x 8' board size (1)	Adhesive Ribbon Spacing for 4' x 4' size board		
			Field	Perimeter	
55 or 72 MPH	1" (20 psi) Polyisocyanurate	16 (11)	12" (6)(7)	6" (6)	Carlisle Drip Edge, SecurEdge™ 200
	1-1/2" (20 psi) Polyisocyanurate	10			
	2" (20 psi) Polyisocyanurate	8			
	1/2" SecurShield HD (3)	12			
	1/4" DensDeck Prime or 1/4" Securock (2)	12			
80 MPH	1/2" SecurShield HD Plus (3)	8	12" (6)(7)(8)	6" (6)(8)	Carlisle Drip Edge, SecurEdge 200 (12)
	1/2" HP Recovery Board (2)	16			
	2" SecurShield HD Composite	6			
	1/2" DensDeck Prime or 1/2" Securock (2)	8			
	1-1/2" (25-psi) Polyisocyanurate	10			
	2" (25 -psi) Polyisocyanurate	8			
90 MPH	1/2" DensDeck Prime or 1/2" Securock (2)	12	6"(10)	6"(8)(9)	Carlisle Drip Edge (4), SecurEdge 200 (4)(5) or SecurEdge 2000 or 3000.
	1/2" SecurShield HD (3) or 1-1/2" (20-psi) SecurShield Polyiso	16			
	1/2" SecurShield HD Plus (3)	12			
	2" (20-psi) SecurShield Polyiso or 2" SecurShield HD Composite	8			
	1-1/2" StormBase (OSB/Polyiso Composite) or 1/2" EcoStorm VSH (2)	8			
	1-1/2" Insulfoam HD Composite	16			
100 MPH	2" (25-psi) SecurShield Polyiso (1)	16	FS	FS	Carlisle Drip Edge (4), SecurEdge 200 (4)(5) or SecurEdge 2000 or 3000.
110 MPH	1-1/2" StormBase (OSB/Polyiso Composite) or 1/2" EcoStorm VSH (2)	16	FS	FS	SecurEdge 2000 or 3000
	1/2" SecurShield HD Plus (3)				
120 MPH	5/8" DensDeck Prime or 5/8" Securock (2)	16	FS	FS	SecurEdge 2000 or 3000
	1-1/2" StormBase (OSB/Polyiso Composite) (1) or 1/2" EcoStorm VSH (3)	17			
	1/2" SecurShield HD Plus (3)	24			
	2" SecurShield HD Composite	16			

FS = Full Spray or Ribbons @ 4" O.C.

***For Direct Application over Wood Decks and Lightweight Cellular Concrete, Refer to Roof Deck & Substrate Criteria Table.**

- (1) For Building heights between 51-100', enhance 12'-wide perimeter with 50% more fasteners and plates.
- (2) Cover boards must be installed over a min. 1" thick approved Carlisle Insulation.
- (3) 1/2" SecurShield HD limited to 90 mph. 1/2" SecurShield HD Plus limited to 120 mph.
- (4) Carlisle HP or HP-X Fasteners must be used to secure Carlisle Drip Edge or SecurEdge 200 Metal Fascia to perimeter wood nailers.
- (5) Membrane securement is required at the base of the SecurEdge 200 waterdam.
- (6) Gravel Surface BUR - Field @ 6" O.C. / Perimeter @ 4" O.C.
- (7) Steel Decks - Field & Perimeter @ 6" O.C.
- (8) Cementitious Wood Fiber - Field @ 6" O.C. / Perimeter @ 4" O.C.

(9) Smooth BUR - Field @ 6" O.C. / Perimeter @ 4" O.C.

(10) Gravel Surface BUR – FS

(11) Reduced fastening (11 fasteners per 4 x 8 board) is acceptable on Reroof/No Tear off projects with a maximum roof height of 40'.

(12) May be fastened with ring shank nails staggered 4" on center. Carlisle HP or HP-X Fasteners may also be used fastened 12" on center.

Additional Design Considerations (Up to 20 YR Warranty)

1 – Refer to Table I paragraph 1.05 for warranty options available with various membrane thickness.

2 - Building height shall not exceed 100'*

3 - Local Wind Zone per ASCE 7 shall not exceed 130 mph*

4 - Acceptable decking: 22-gauge or heavier steel, structural concrete, 1-1/2" wood plank, or 15/32" plywood.

* Projects where building height exceeds 100', shall be submitted to Carlisle for review.

Underlayment/Insulation & Required Attachment Assemblies Up to 20 YR Warranty for TPO SAT Adhered Roofing Systems

Table IX

Other Requirements are Listed in Additional Design Considerations following this Table

All Carlisle Products listed for higher wind speed coverage can also be used for Warranties for a lower speed coverage. (i.e. 72 MPH underlayment may be used for 55 MPH underlayment)

Peak Gust Wind Speed Warranty	Minimum Membrane Underlayment	Insulation Attachment			Metal Edging
		# of Fasteners per 4' x 8' board size (1)	Adhesive Ribbon Spacing for 4' x 4' size board		
			Field	Perimeter	
55 or 72 MPH	1" (20 psi) Polyisocyanurate	16 (9)	12" (4)(5)	6" (4)	Carlisle Drip Edge, SecurEdge 200
	1-1/2" (20 psi) Polyisocyanurate	10			
	2" (20 psi) Polyisocyanurate	8			
	1/2" SecurShield HD (3)	12			
	1/4" DensDeck Prime or 1/4" Securock (2)				
	2" (1.25 lb/density) Insulfoam SP*				
80 MPH	1/2" DensDeck Prime or 1/2" Securock (2)	8	12" (4)(5)(6)	6' (4)(7)	Carlisle Drip Edge, SecurEdge (10)
	1/2" SecurShield HD (3)	16			
	1/2" SecurShield HD Plus (3)	8			
	2" SecurShield HD Composite	6			
	1-1/2" (25-psi) Polyisocyanurate	10			
	2" (25 -psi) Polyisocyanurate	8			
	2" (1.25 lb/density) Insulfoam SP**	16			
	1-1/2" Insulfoam HD Composite*	12	12" (8)	6" (6)(7)	
90 MPH	1/2" DensDeck Prime or 1/2" Securock (2)	12	6" (8)	6" (6)(7)	Carlisle Drip Edge (11), SecurEdge 200 (11)(12) or SecurEdge 2000 or 3000.
	1/2" SecurShield HD (3) or 1-1/2" (20-psi) SecurShield Polyiso	16			
	1/2" SecurShield HD Plus (3)	12			
	1-1/2" StormBase (OSB/Polyiso Composite) or 1/2" EcoStorm VSH	8			
	2" (20-psi) SecurShield Polyiso or 2" SecurShield HD Composite	8			
	1-1/2" Insulfoam HD Composite	16			
100 MPH	5/8" DensDeck Prime or 5/8" Securock (2)	16	FS	FS	Carlisle Drip Edge (11), SecurEdge 200 (11)(12) or SecurEdge 2000 or 3000.
	1/2" SecurShield HD Plus (3)				
	1-1/2" StormBase (OSB/Polyiso Composite) or 1/2" EcoStorm VSH				
	2" (25-psi) SecurShield Polyiso (1)				
	2" SecurShield HD Composite				

FS = Full Spray or Ribbons @ 4" O.C.

- (1) For Building heights between 51-100', enhance 12'-wide perimeter with 50% more fasteners and plates.
- (2) Cover boards must be installed over a min. 1" thick approved Carlisle Insulation.
- (3) 1/2" SecurShield HD limited to 90 mph. 1/2" SecurShield HD Plus limited to 120 mph.
- (4) Gravel Surface BUR - Field @ 6" O.C. / Perimeter @ 4" O.C.
- (5) Steel Decks - Field & Perimeter @ 6" O.C.
- (6) Cementitious Wood Fiber - Field @ 6" O.C. / Perimeter @ 4" O.C.

(7) Smooth BUR - Field @ 6" O.C. / Perimeter @ 4" O.C.

(8) Gravel Surface BUR – FS

(9) Reduced fastening (11 fasteners per 4 x 8 board) is acceptable on Reroof/No Tear off projects with a maximum roof height of 40'.

(10) May be fastened with ring shank nails staggered 4" on center. Carlisle HP or HP-X Fasteners may also be used fastened 12" on center.

(11) Carlisle HP or HP-X Fasteners must be used to secure Carlisle Drip Edge or SecurEdge 200 Metal Fascia to perimeter wood nailers.

(12) Membrane securement is required at the base of the SecurEdge 200 waterdam.

*Maximum warranty available 20 year.

** Maximum warranty available 15 year.

Additional Design Considerations (Up to 20 YR Warranty)

1 - Minimum membrane thickness 60-mil TPO SAT

2 - Building height shall not exceed 100*

3 - Local Wind Zone per ASCE 7 shall not exceed 130 mph*

4- Acceptable decking: 22-gauge or heavier steel, structural concrete, 1-1/2" wood plank, or 15/32" plywood.

5- All "T-joints" must be overlaid with appropriate flashing material or Carlisle "T-Joint" Covers.

* Projects where building height exceeds 100' or warranty wind speed exceeds 100 mph, shall be submitted to Carlisle for review.

Underlayment/Insulation & Required Attachment Assemblies 25 YR or 30 YR Warranty for Adhered TPO Roofing Systems

Table X

Other Requirements are Listed in Additional Design Considerations following this Table

All Carlisle Products listed for higher wind speed coverage can also be used for Warranties for a lower speed coverage. (i.e. 72 MPH underlayment may be used for 55 MPH underlayment)

Peak Gust Wind Speed Warranty	Minimum Membrane Underlayment	Insulation Attachment			Metal Edging
		# of Fasteners per 4' x 8' board size (1)	Adhesive Ribbon Spacing for 4' x 4' size board		
			Field	Perimeter	
55 or 72 MPH	1" to 2" (25 psi) Polyisocyanurate	16	6" (3)(5)	6" (5)	Carlisle Drip Edge, SecurEdge 200
	1/2" HP Recovery Board (1)(9)				
	1/4" DensDeck Prime or 1/4" Securock (2)				
	1/2" SecurShield HD (2)				
80 MPH	1-1/2" to 2" (25-psi) SecurShield Polyisocyanurate	20	6" (4)(5)(6)	6" (5)(6)	Carlisle Drip Edge (7), SecurEdge 200 (7)(8) or SecurEdge 2000 or 3000
	1/2" DensDeck Prime or 1/2" Securock (2)	16			
	1/2" SecurShield HD Plus (2)	20			
	1/2" SecurShield HD (2)	20			
90 MPH	1/2" SecurShield HD (2)	24	FS	FS	SecurEdge 2000 or 3000
	1/2" SecurShield HD Plus (2)	20			
	1/2" DensDeck Prime or 1/2" Securock (2)				
100 MPH	5/8" DensDeck Prime or 5/8" Securock (2)	16	FS	FS	SecurEdge 2000 or 3000
	1-1/2" StormBase (OSB/Polyiso Composite) or 1/2" EcoStorm VSH (2)				
	2" SecurShield HD Composite (2)				
	1/2" SecurShield HD Plus (2)	24			

FS = Full Spray or Ribbons @ 4" O.C.

- (1) For Building heights between 51-100', enhance 12'-wide perimeter with 50% more fasteners and plates.
- (2) Hail coverage offered with substrate.
- (3) Structural Concrete - Field @ 12" O.C. / Perimeter @ 6" O.C.
- (4) 80-mph over structural concrete - Field & Perimeter @ 6" O.C.
- (5) Cementitious Wood Fiber & Wood - FS
- (6) 80-mph warranty wind speed coverage over Gypsum Decks – Adhesive Ribbon spacing shall be at 4" O.C.
- (7) Carlisle HP or HP-X Fasteners must be used to secure Carlisle SecurEdge200 Metal Fascia to perimeter wood nailers.
- (8) Membrane securement is required at the base of the SecurEdge 200 waterdam.
- (9) 1/2" Recovery Board limited to 55 mph.

Additional Design Considerations (25 YR or 30 YR Warranty)

- 1 - Minimum membrane thickness 80-mil TPO
- 2 - Building height shall not exceed 100'
- 3 - Local Wind Zone per ASCE 7 shall not exceed 130 mph*
- 4- Acceptable decking: 22-gauge or heavier steel, structural concrete, 1-1/2" wood plank, or 15/32" plywood.
- 5– All "T-Joints" must be overlaid with appropriate flashing material or Carlisle "T-Joint" Covers.
- 6 – New construction or complete tear-off of existing roofing material.

*Projects where building height exceeds 100' or warranty wind speed exceeds 100 mph, shall be submitted to Carlisle for review.

Underlayment/Insulation & Required Attachment Assemblies 25 YR or 30 YR Warranty for TPO SAT Adhered Roofing Systems

Table XI

Other Requirements are Listed in Additional Design Considerations following this Table

All Carlisle Products listed for higher wind speed coverage can also be used for Warranties for a lower speed coverage. (i.e. 72 MPH underlayment may be used for 55 MPH underlayment)

Peak Gust Wind Speed Warranty	Minimum Membrane Underlayment	Insulation Attachment			Metal Edging
		# of Fasteners per 4' x 8' board size (1)	Adhesive Ribbon Spacing for 4' x 4' size board		
			Field	Perimeter	
55 or 72 MPH	1" to 2" (25 psi) Polyisocyanurate	16	6" (3)(5)	6" (5)	Carlisle Drip Edge, SecurEdge 200
	1/4" DensDeck Prime or 1/4" Securock (2)				
	1/2" SecurShield HD (2)				
80 MPH	1-1/2" to 2" (25-psi) SecurShield Polyisocyanurate	20	6" (4)(5)(6)	6" (5)(6)	Carlisle Drip Edge (7), SecurEdge 200 (7)(8) or SecurEdge 2000 or 3000
	1/2" DensDeck Prime or 1/2" Securock (2)	16			
	1/2" SecurShield HD Plus (2)	20			
	1/2" SecurShield HD (2)				
90 MPH	1/2" SecurShield HD (2)	24	FS	FS	Carlisle Drip Edge (7), SecurEdge 200 (7)(8) or SecurEdge 2000 or 3000
	1/2" SecurShield HD Plus (2)	20			
	1/2" DensDeck Prime or 1/2" Securock (2)				
100 MPH	5/8" DensDeck Prime or 5/8" Securock (2)	16	FS	FS	SecurEdge 2000 or 3000
	1-1/2" StormBase (OSB/Polyiso Composite) or 1/2" EcoStorm VSH (2)				
	2" SecurShield HD Composite (2)				
	1/2" SecurShield HD Plus (2)	24			

FS = Full Spray or Ribbons @ 4" O.C.

- (1) For Building heights between 51-100', enhance 12'-wide perimeter with 50% more fasteners and plates.
- (2) Hail coverage offered with substrate.
- (3) Structural Concrete - Field @ 12" O.C. / Perimeter @ 6" O.C.
- (4) 80-mph over structural concrete - Field & Perimeter @ 6" O.C.
- (5) Cementitious Wood Fiber & Wood - FS
- (6) 80-mph warranty wind speed coverage over Gypsum Decks – Adhesive Ribbon spacing shall be at 4" O.C.
- (7) Carlisle HP or HP-X Fasteners must be used to secure Carlisle SecurEdge200 Metal Fascia to perimeter wood nailers.
- (8) Membrane securement is required at the base of the SecurEdge 200 waterdam.

Additional Design Considerations (25 YR or 30 YR Warranty)

- 1 - Minimum membrane thickness 80-mil TPO SAT
- 2 - Building height shall not exceed 100'
- 3 - Local Wind Zone per ASCE 7 shall not exceed 130 mph*
- 4- Acceptable decking: 22-gauge or heavier steel, structural concrete, 1-1/2" wood plank, or 15/32" plywood.
- 5– All "T-Joints" must be overlaid with appropriate flashing material or Carlisle "T-Joint" Covers.
- 6 – New construction or complete tear-off of existing roofing material.

* Projects where building height exceeds 100' or warranty wind speed exceeds 100 mph, shall be submitted to Carlisle for review.

Underlayment/Insulation & Required Attachment Assemblies Up to 20 YR Warranty for Adhered PVC / KEE HP PVC Roofing

Table XII

Other Requirements are Listed in Additional Design Considerations following this Table

All Carlisle Products listed for higher wind speed coverage can also be used for Warranties for a lower speed coverage. (i.e. 72 MPH underlayment may be used for 55 MPH underlayment)

Peak Gust Wind Speed Warranty	Minimum Membrane Underlayment*	Insulation Attachment		Metal Edging	
		# of Fasteners per 4' x 8' board size (1)	Adhesive Ribbon Spacing for 4' x 4' size board		
			Field		Perimeter
55 or 72 MPH	1" (20 psi) Polyisocyanurate	16 (11)	12"(6)(7)	6"(6)	Carlisle Drip Edge, SecurEdge 200
	1-1/2" (20 psi) Polyisocyanurate	10			
	2"(20 psi) Polyisocyanurate	8			
	1/2" SecurShield HD (3)	12			
	1/4" DensDeck Prime or 1/4" Securock (2)	12			
80 MPH	1/2" SecurShield HD Plus (3)	8	12"(6)(7)(8)	6"(6)(8)	Carlisle Drip Edge, SecurEdge 200 (12)
	1/2" HP Recovery Board (2)	16			
	2" SecurShield HD Composite	6			
	1/2" DensDeck Prime or 1/2" Securock (2)	8			
	1-1/2" (25 psi) Polyisocyanurate	10			
	2" (25 psi) Polyisocyanurate	8			
90 MPH	1/2" DensDeck Prime or 1/2" Securock (2)	12	6"(10)	6"(8)(9)	Carlisle Drip Edge (4), SecurEdge 200 (4)(5) or SecurEdge 2000 or 3000.
	1/2" SecurShield HD (3) or 1-1/2" (20 psi) SecurShield Polyiso	16			
	1/2" SecurShield HD Plus	12			
	2" (20 psi) SecurShield Polyiso or 2" SecurShield HD Composite	8			
	1-1/2" StormBase (OSB/Polyiso Composite) or 1/2" EcoStorm VSH (2)	8			
	1-1/2" Insulfoam HD Composite	16			
100 MPH	2" (25-psi) SecurShield Polyiso (1)	16	FS	FS	Carlisle Drip Edge (4), SecurEdge 200 (4)(5) or SecurEdge 2000 or 3000.
110 MPH	1-1/2" StormBase (OSB/Polyiso Composite) or 1/2" EcoStorm VSH (2)	16	FS	FS	SecurEdge 2000 or 3000
	1/2" SecurShield HD Plus (3)				
120 MPH	5/8" DensDeck Prime or 5/8" Securock (2)	16	FS	FS	SecurEdge 2000 or 3000
	1-1/2" StormBase (OSB/Polyiso Composite) (1) or 1/2" EcoStorm VSH (2)	17			
	1/2" SecurShield HD Plus (3)	24			
	2" SecurShield HD Composite	16			

FS = Full Spray or Ribbons @ 4" O.C.

***For Direct Application over Wood Decks and Lightweight Cellular Concrete, Refer to Roof Deck & Substrate Criteria Table.**

- (1) For Building heights between 51-100', enhance 12'-wide perimeter with 50% more fasteners and plates.
- (2) Cover boards must be installed over a min. 1" thick approved Carlisle Insulation.
- (3) 1/2" SecurShield HD limited to 90 mph. 1/2" SecurShield HD Plus limited to 120 mph.
- (4) Carlisle HP or HP-X Fasteners must be used to secure Carlisle Drip Edge or SecurEdge 200 Metal Fascia to perimeter wood nailers.
- (5) Membrane securement is required at the base of the SecurEdge 200 waterdam.
- (6) Gravel Surface BUR - Field @ 6" O.C. / Perimeter @ 4" O.C.
- (7) Steel Decks - Field & Perimeter @ 6" O.C.
- (8) Cementitious Wood Fiber - Field @ 6" O.C. / Perimeter @ 4" O.C.
- (9) Smooth BUR - Field @ 6" O.C. / Perimeter @ 4" O.C.
- (10) Gravel Surface BUR – FS
- (11) Reduced fastening (11 fasteners per 4 x 8 board) is acceptable on Reroof/No Tear off projects with a maximum roof height of 40'.
- (12) May be fastened with ring shank nails staggered 4" on center. Carlisle HP or HP-X Fasteners may also be used fastened 12" on center.

Additional Design Considerations (Up to 20 YR Warranty)

- 1 - Minimum membrane thickness 60-mil PVC or 50-mil KEE HP PVC
 - 2 - Building height shall not exceed 100*
 - 3 - Local Wind Zone per ASCE 7 shall not exceed 130 mph*
 - 4 - Acceptable decking: 22-gauge or heavier steel, structural concrete, 1-1/2" wood plank, or 15/32" plywood.
 - 5 - All "T-Joints" must be overlaid with Carlisle "T-Joint" Covers.
- * Projects where building height exceeds 100', shall be submitted to Carlisle for review.

Underlayment/Insulation & Required Attachment Assemblies
Table XIII 25 YR or 30 YR Warranty for Adhered PVC / KEE HP PVC Roofing Systems

Other Requirements are Listed in Additional Design Considerations following this Table

All Carlisle Products listed for higher wind speed coverage can also be used for Warranties for a lower speed coverage. (i.e. 72 MPH underlayment may be used for 55 MPH underlayment)

Peak Gust Wind Speed Warranty	Minimum Membrane Underlayment	Insulation Attachment		Metal Edging	
		# of Fasteners per 4' x 8' board size (1)	Adhesive Ribbon Spacing for 4' x 4' size board		
			Field		Perimeter
55 or 72 MPH	1" to 2" (25 psi) Polyisocyanurate	16	6" (3)(5)	6" (5)	Carlisle Drip Edge, SecurEdge 200
	1/2" HP Recovery Board (1) (9)				
	1/4" DensDeck Prime or 1/4" Securock (2)				
	1/2" SecurShield HD (2)				
80 MPH	1-1/2" to 2" (25-psi) SecurShield Polyisocyanurate	20	6" (4)(5)(6)	6" (5)(6)	Carlisle Drip Edge (7), SecurEdge 200 (7) (8) or SecurEdge 2000 or 3000
	1/2" DensDeck Prime or 1/2" Securock (2)	16			
	1/2" SecurShield HD Plus (2)	20			
	1/2" SecurShield HD (2)	20			
90 MPH	1/2" SecurShield HD (2)	24	FS	FS	SecurEdge 2000 or 3000
	1/2" SecurShield HD Plus (2)	20			
	1/2" DensDeck Prime or 1/2" Securock (2)	20			
100 MPH	5/8" DensDeck Prime or 5/8" Securock (2)	16	FS	FS	SecurEdge 2000 or 3000
	1-1/2" StormBase (OSB/Polyiso Composite) or 1/2" EcoStorm VSH (2)				
	2" SecurShield HD Composite (2)				
	1/2" SecurShield HD Plus (2)	24			

FS = Full Spray or Ribbons @ 4" O.C.

- (1) For Building heights between 51-100', enhance 12'-wide perimeter with 50% more fasteners and plates.
- (2) Hail coverage offered with substrate.
- (3) Structural Concrete - Field @ 12" O.C. / Perimeter @ 6" O.C.
- (4) 80 mph over Structural Concrete - Field & Perimeter @ 6" O.C.
- (5) Cementitious Wood Fiber & Wood – FS
- (6) 80-mph warranty wind speed coverage over Gypsum Decks – Adhesive Ribbon spacing shall be at 4" O.C.
- (7) Carlisle HP or HP-X Fasteners must be used to secure Carlisle Drip Edge or SecurEdge200 Metal Fascia to perimeter wood nailers.
- (8) Membrane securement is required at the base of the SecurEdge 200 waterdam.
- (9) 1/2" Recovery Board limited to 55 mph.

Additional Design Considerations (25 YR or 30 YR Warranty)

- 1 - Minimum membrane thickness 80-mil PVC or KEE HP PVC
- 2 - Building height shall not exceed 100'
- 3 - Local Wind Zone per ASCE 7 shall not exceed 130 mph*
- 4 - Acceptable decking: 22-gauge or heavier steel, structural concrete, 1-1/2" wood plank, or 15/32" plywood.
- 5 - All "T-joints" must be overlaid with Carlisle "T-Joint" Covers.
- 6 - New construction or complete tear-off of existing roofing material.

* Projects where building height exceeds 100' or warranty wind speed exceeds 100 mph, shall be submitted to Carlisle for review.

B. Access for warranty service

It shall be the owner's responsibility to expose the membrane in the event that warranty service is required when access is impaired. Such impairment includes, but is not necessarily limited to:

1. Design features, such as window washer systems, which require the installation of traffic surface units in excess of 100 pounds per unit.
2. Any equipment, ornamentation, building service units and other top surfacing materials which are not defined as part of this specification.
3. Photovoltaic and Mounting systems or other Rooftop equipment that does not provide Carlisle with reasonable access to the membrane system for purposes of warranty investigation and related repairs.
4. Severely ponded conditions.

CAUTION: APPLICATIONS SUCH AS WALKING DECKS, TERRACES, PATIOS OR AREAS SUBJECTED TO CONDITIONS NOT TYPICALLY FOUND ON ROOFING SYSTEMS WILL **NOT** BE ELIGIBLE FOR A MEMBRANE SYSTEM WARRANTY.

- C. The formation or presence of mold or fungi in a building is dependent upon a broad range of factors including, but not limited to, the presence of spores and nutrient sources, moisture, temperatures, climatic conditions, relative humidity, and heating/ventilating systems and their maintenance and operating capabilities. These factors are beyond the control of Carlisle and Carlisle shall not be responsible for any claims, repairs, restoration or damages relating to the presence of any irritants, contaminants, vapors, fumes, molds, fungi, bacteria, spores, mycotoxins, or the like in any building or in the air, land, or water serving the building.

1.06 Job Conditions

- A. On phased roofing, temporary closures should be provided to prevent moisture infiltration. When a temporary roof is specified, Carlisle 725-TR in conjunction with CCW-702 or CAV-GRIP III Low-VOC Adhesive/Primer may be used. Refer to Product Section Part II for additional product information and Specification Supplement G-08-20.
- B. When possible on multiple level roofs, begin the installation on the highest level to avoid or minimize construction traffic on completed roof sections.
- C. On projects at high altitudes (6,000' and above) rapid flash-off (drying) of Adhesives will occur due to low atmospheric pressure.
- D. When roof slopes exceed 5 inches per horizontal foot, use of an Automatic Heat Welder may be more difficult. A Hand Held Hot Air Welder should be specified.
- E. Vapor Retarders
1. Carlisle does not require a vapor retarder for the protection of the membrane; however, the following criteria should be considered by the specifier:
 - a. Use of a vapor retarder to protect insulation and reduce moisture accumulation within an insulated roofing assembly, should be investigated. Consult latest publications by ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.) and NRCA (National Roofing Contractors Association) for specific information.
 - b. In the generally temperate climate of the United States, during the winter months, water vapor flows upward from a heated, more humid interior toward a colder, drier exterior. Vapor retarders are more commonly required in northern climates than in southern regions, where downward vapor pressure may be expected and the roofing membrane itself becomes the vapor retarder.
 - c. On cold storage/freezer facilities, the perimeter and penetration details must be selected to provide an air seal and prevent outside air from infiltrating and condensing within the roofing assembly.