IKO COMMERCIAL®
Specify with Confidence.

Attachment Guide

INNOVI™ TPO
Single-Ply Roofing System Solutions

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SECTION 1

GENERAL CRITERIA.

A. **This guide describes the minimum attachment requirements for IKO InnoviTPO roofing systems.** Refer also to all IKO InnoviTPO technical documents at www.iko.com/comm, including installation manuals, detail drawings and product data sheets, to ensure that the installed roofing system complies with all IKO technical requirements.

B. **IKO Commercial does not practice architecture or engineering**. IKO provides the general information in this guide in good faith, as a courtesy only, and not as a substitute for consultation with a design professional to determine the applicability of IKO technical requirements for a specific project.

C. **The building owner or project design professional is responsible** for consulting with all local authorities having jurisdiction (AHJs), national and local building codes, and insurance requirements to determine project-specific requirements. These codes and requirements may supersede IKO technical requirements, where the codes and requirements are more restrictive.

D. **The attachment rates shown in this guide apply to IKO warranty requirements only.** Wind uplift requirements noted on project specifications or established by locally applicable codes may require different attachment rates. In every case, the more stringent requirements, whether IKO's, the specifiers, or local codes, should be used.

E. **The attachment rates provided apply to new construction projects, and may only generally be applied to Re-Cover applications.** Re-roof or Re-cover attachment rates may vary based on project conditions, fastener pull test or adhesive peel test values, and other related information. Contact IKO Technical Services for project-specific Re-roof or Re-cover warranty requirements.

F. **Except where noted otherwise in the guide, only new construction projects are eligible for wind speed coverage above 55 MPH.**

G. **For projects insured by FM Global:**
   - **a.** Perimeter enhancements are required around the entire roof perimeter, using the "finger" method.
   - **b.** An FM RoofNav listed assembly should be used for all roof areas; see www.roofnav.com, and the IKO InnoviTPO Roofing Systems Tested Assemblies Guide at www.iko.com/comm.
   - **c.** FM attachment requirements may be more stringent than those required for the IKO warranty; the most stringent requirements should be used.
   - **d.** Please note that FM Approvals does not recognize adhesion of insulation materials direct to steel decks.

H. **For projects requiring Canadian Standards Association (CSA) tested systems,** see the detailed information regarding our CSA assemblies at www.iko.com/comm.

I. **Contact IKO Commercial Technical Services** at ikotechusa@iko.com or ikotechcanada@iko.com when project specifications or requirements are determined to be outside the attachment criteria given in this guide.

J. Not all possible conditions are covered in this document. Whenever any project condition or specification requirement falls outside the guidance given herein, IKO Technical Services must be consulted.

i. The following special conditions require consultation with IKO Technical Services prior to installation:

1. Warranty requirements that include coverage of wind speeds exceeding the criteria provided in this guide.

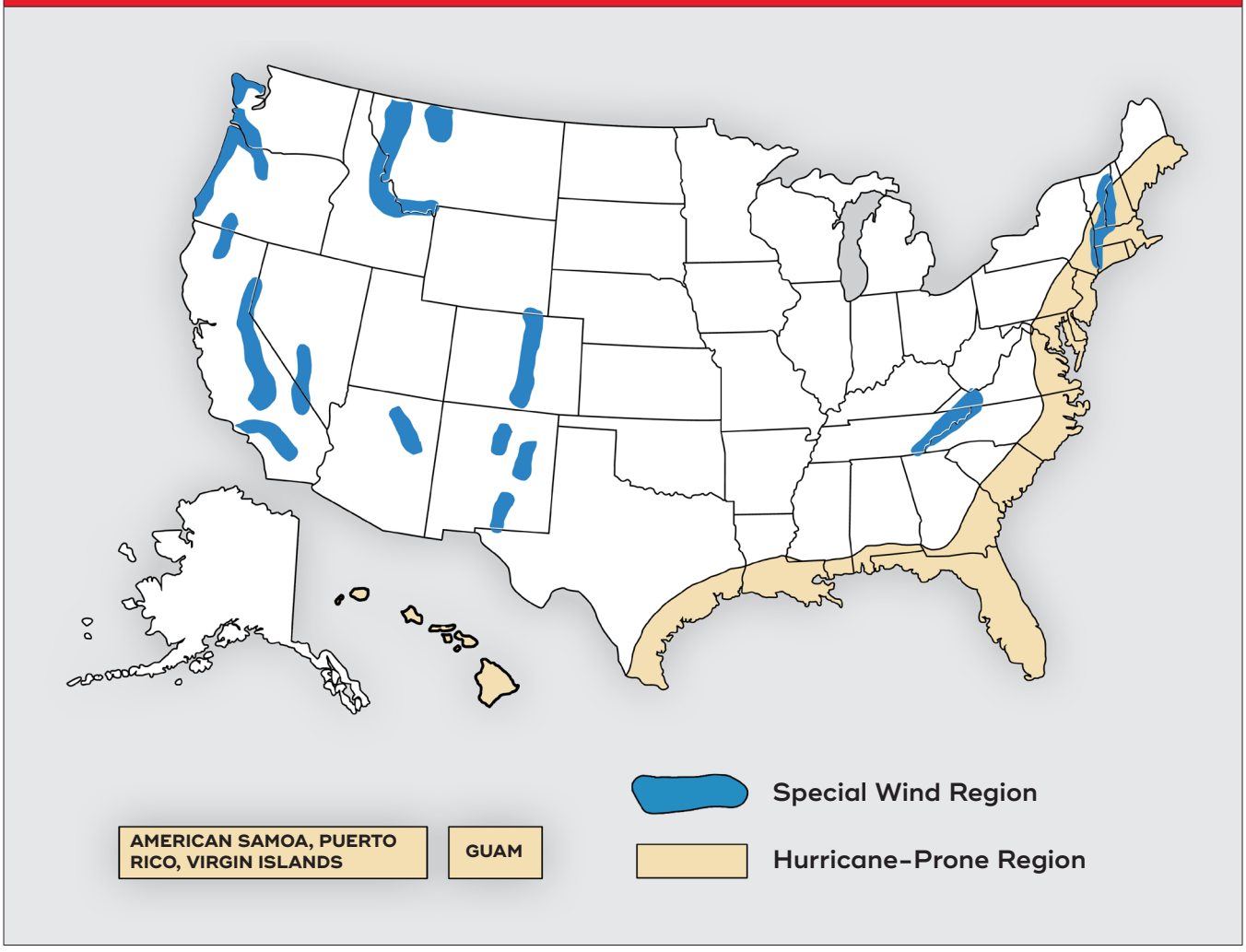
2. Warranty requirements that include leaks caused by greater than 1" hail.

3. Projects located in the following geographic locations:

a. Areas susceptible to hurricanes as shown on the American Society of Civil Engineers' ASCE-7 maps.

b. Within 5 miles (8 km) of open water, including, but not limited to, oceans and lakes larger than 25 square miles (65 square kilometers).

FIGURE 1-1. HIGH WIND ZONES



c. Mountains, foothills and cliffs.

d. High Wind Zones as shown IN FIGURE 1-1 on the American Society of Civil Engineers' ASCE-7 maps.

e. The following special conditions require consultation with a design professional: architect, engineer or roof consultant:

i. Roofs that exceed the slope and height limits shown in Table 1-1. Height and slope limits.

ii. Roofs that do not meet minimum fastener pullout or adhesion tests.

iii. Roofs with bay doors or other large openings that may be opened during a wind event.

iv. Roofs on buildings with positive pressure.

v. Roofs subject to chemical or other discharge, including restaurants.

vi. Roofs with heavy or frequent foot traffic.

vii. Roofs over swimming pools or other high-humidity conditions.

viii. Roofs over freezers or other cold storage conditions.

ix. Roofs over data centers, military buildings, emergency services, medical facilities and other secure locations.

TABLE 1-1. HEIGHT AND SLOPE LIMITS

Attachment	Height Limit	Maximum Slope
Adhered	250 ft	No Limit
Mechanically Attached	120 ft	4:12 in
Induction Welded	120 ft	4:12 in
Ballasted	75 ft (ballast rock) 250 ft (ballast pavers*)	2:12 in

*Ballast pavers must be interlocking on two sides; additional attachment is required for roof heights over 120 ft.

K. Roofing System Definitions.

1. **Adhered Systems.** Single-ply roofing systems with an adhered membrane and either mechanically or adhesively attached insulation.

2. **Mechanically Attached Systems.** Single-ply roofing systems with an in-seam mechanically attached membrane and insulation.

3. **Induction Welded Systems.** Single-ply roofing systems with a membrane bonded from below using special induction weld plates; these plates are fastened through the insulation layers into the structural deck.

4. **Ballasted Systems.** Single-ply roofing systems with membrane and top insulating layer loose-laid; either ballast stone or ballast pavers are installed over the roofing membrane to hold the components in place.

M. Membrane and warranty term options by wind speed coverage are noted in the table below.

TABLE 1-2. MEMBRANE AND WARRANTY TERM OPTIONS BY WIND SPEED COVERAGE

Warranty Term	55 & 72 MPH			Membrane Thickness (mil)
	Adhered	Mechanically Attached	Induction Welded	
5, 10, 15 Years	✔	✔	✔	45, 60, 80
20 Years	✔	✔	✔	60 or 80
25 Years	✔	✔	✔	80
30 Years	✔	✔	✔	80
Warranty Term	**80, 90 & 100 MPH**			**Membrane Thickness (mil)**
	Adhered	**Mechanically Attached**	**Induction Welded**	
5, 10, 15 Years	✔	✔	✔	60 or 80
20 Years	✔	✔	✔	60 or 80
25 Years	✔	✔	✔	80
30 Years	✔	✔	✔	80
Warranty Term	**110 & 120 MPH**			**Membrane Thickness (mil)**
	Adhered	**Mechanically Attached**	**Induction Welded**	
5, 10, 15 Years	Not Acceptable		✔	60 or 80
20 Years			✔	60 or 80
25 Years			✔	80
30 Years			✔	80

Notes:

1. This table shows acceptable systems by warranty term and wind speed coverage; see the specific attachment requirement tables for each deck type and system type, below.
2. Enhanced flashing details are required for all 25 and 30-year warranties, contact IKO Commercial technical services for specifics.

TABLE 1-3. ACCEPTABLE PRODUCTS FOR THE DIAMOND SHIELD LIMITED WARRANTY

Warranty Term	5 Years	10 Years	15 Years	20 Years	25 Years[1]	30 Years[1]	Materials
Membrane[2]	✔	✔	✔				IKO InnoviTPO 45-mil
	✔	✔	✔	✔			IKO InnoviTPO 60-mil[3]
	✔	✔	✔	✔	✔	✔	IKO InnoviTPO 80-mil[3]
Substrate	✔	✔	✔	✔	✔	✔	IKOTherm™ CoverShield™ HD Polyiso
	✔	✔	✔	✔	✔	✔	IKOTherm Polyiso
	✔	✔	✔	✔	✔	✔	IKOTherm III Polyiso
	✔	✔	✔	✔	✔	✔	DensDeck® or DensDeck® Prime Roof Board
Flashings	✔	✔	✔	✔			IKO InnoviTPO 45 mil
	✔	✔	✔	✔	✔	✔	IKO InnoviTPO 60 mil
	✔	✔	✔	✔	✔	✔	IKO InnoviTPO 80 mil

[1]Both 25- and 30-year warranties require min. 1.0" IKOTherm or IKOTherm III, even if a cover board is used.

[2]A 12-foot-width membrane is approved for fully adhered and induction welded systems only.

[3]Only 60-mil and 80-mil membranes are approved for induction welded systems.

TABLE 1-4. ACCEPTABLE MEMBRANES FOR A MATERIAL WARRANTY, BY WARRANTY TERM

Warranty Term	10 Years	15 Years	20 Years
45-mil Membrane	✔	Not Acceptable	Not Acceptable
60-mil Membrane	✔	✔	✔
80-mil Membrane	✔	✔	✔

SECTION 2

WIND UPLIFT.

A. Wind uplift is defined as the force of negative pressure exerted on the building during a wind event. This force is measured in pounds per square foot (psf) and/or kilopascals (kPa). See the IKO InnoviTPO website at www.iko.com/innovi for information on specific IKO Innovi TPO Roofing System assemblies that are rated for wind uplift resistance by FM Approvals, Canadian Standards Association (CSA), and other codes bodies.

B. Wind speed is not the same as wind uplift. Wind speed is measured in miles per hour (mph) and/or kilometers per hour (kph),and is one of the variables used in calculating wind uplift. See Sections 5 and 6 of this guide for information regarding system requirements for warranty wind speed coverage over 55 mph (88 kph).

C. Wind uplift calculators, which may be used to determine uplift conditions for specific projects, are available at the following public websites:

- **a.** National Roofing Contractors Association's Roof Wind Designer, at www.roofwinddesigner.com.
- **b.** National Research Council Canada's Wind Uplift Resistance Calculator, at Wind-Roof Calculators on the Internet (Wind-RCI) — National Research Council Canada.

D. For further information regarding wind uplift, please consult the following resources:

- **a.** American Society of Civil Engineers (ASCE) Standard ASCE 7, "Minimum Design Loads for Buildings and Other Structures."
- **b.** FM Global Property Loss Prevention Data Sheet 1-28, "Wind Design."
- **c.** FM Global Property Loss Prevention Data Sheet 1-29, "Roof Deck Securement and Above-Deck Roof Components."
- **d.** CSA A123.21-20, Standard Test Method for the Dynamic Wind Uplift Resistance of Membrane Roofing Systems.
- **e.** Always follow the most stringent applicable requirements, whether from a codes body or from IKO Commercial, when determining attachment rates.

SECTION 3

ROOF ZONES.

A. **The following information applies to the requirements necessary for an IKO Diamond Shield Limited Warranty.** FM, CSA and other applicable codes bodies may use different definitions of Roof Zones. Consult the relevant documents from the codes bodies specified for their definitions and requirements regarding Roof Zones.

B. **Wind uplift pressure varies at different zones on a roof.** Commercial roofs are divided into three (3) primary zones. These zones are attached at different rates due to the different levels of wind uplift pressure that they experience during a wind event. These zones are identified as:

   i. **Field.** This is the central area of the roof and experiences the least wind uplift pressure.

   ii. **Perimeter.** This is the area located a certain distance from the roof edge toward the field of the roof that experiences increased wind uplift pressure.

   iii. **Corners.** These are areas where Perimeters intersect, which experience the highest wind uplift pressure.

   iv. If a **continuous parapet a minimum of 36 inches** is present, Corner areas may be treated as Perimeter.

C. **To determine the area of a roof's Perimeter:**

   i. For roof heights **less than or equal to 60 feet**:

      1. Use the smaller dimension of either 10% of the shortest plan view dimension, or 40% of the roof height, but not less than 4% of the shortest side, but at a minimum of 3 feet.

   ii. For roof heights **greater than 60 feet**:

      1. Use 10% of the shortest plan view dimension, but at a minimum of 3 feet.

D. **To determine the area of a roof's Corners:**

   i. For roof heights less than or equal to 60 feet:

      1. Corners are the areas of intersection of two Perimeter areas.

   ii. For roof heights greater than 60 feet:

      1. Corners are the areas of intersection of two Perimeter areas, extended twice the width of the Perimeter area along the edge of the roof.

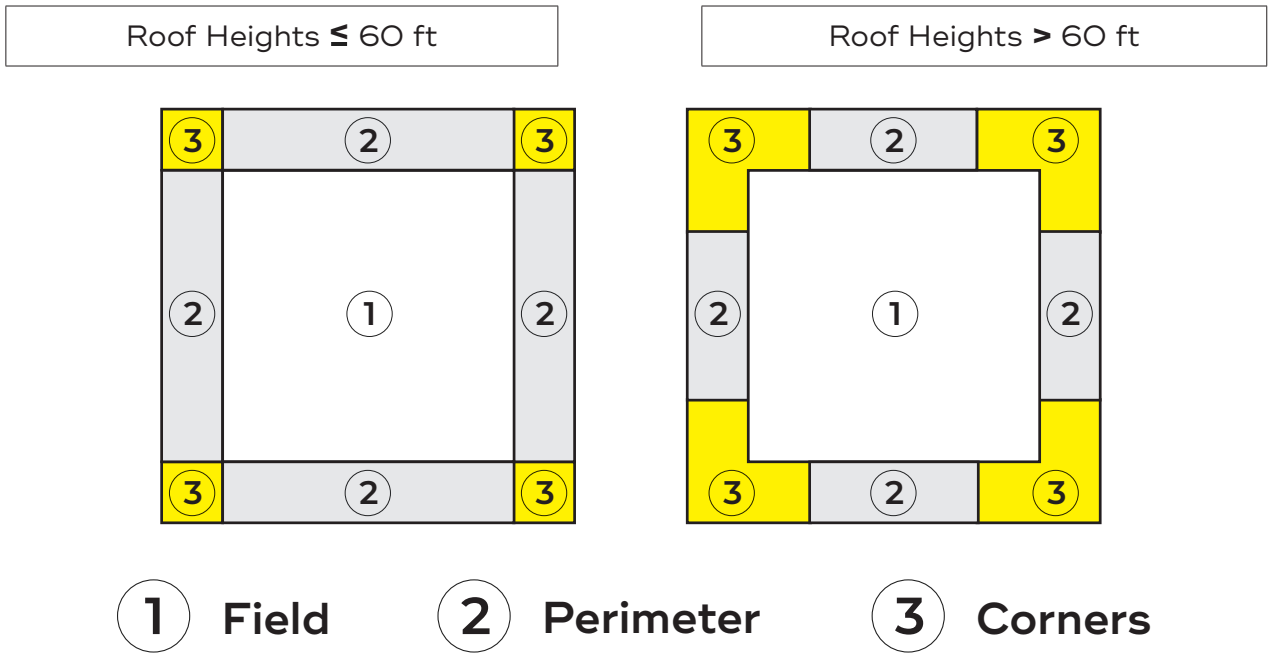
E. **See Drawing 3-1. Roof Zones** for visual representation of these areas.

F. **Perimeter and Corner Enhancements.**

   i. Enhanced fastening of insulation at the Perimeter and Corners is not required for Adhered and Mechanically Attached roofing systems eligible for warranty terms of 5-20 years, when the roof height is below 60' and wind speed coverage does not exceed 55 MPH.

   ii. Other roof conditions will require enhanced fastening at the Perimeter and in the Corners for certain roof systems and conditions, including all Induction Welded systems, Mechanically Attached membranes, roof heights 60' and above, and wind speed coverage exceeding 55 MPH. See the following pages for specific information.

DRAWING 3-1. ROOF ZONES



iii. Insulation adhesive bead spacing must be reduced at the Perimeter and Corners. See the following pages for specific information.

iv. Prescriptive enhancements stated in this guide are those required for eligibility for an IKO Diamond Shield Limited Warranty with no additional coverage or adherence to a project's specification requirements. Other requirements called out in project specifications, including, but not limited to, warranty coverage for increased wind speeds and wind uplift code requirements, may require additional enhancements.

v. Always follow the most stringent applicable requirements, whether from a codes body or from IKO Commercial, when determining attachment rates.

SECTION 4

ACCEPTABLE DECKS, PLATES, FASTENERS AND ADHESIVES.

A. Fastener Pullout Requirements

i. Minimum required pullout values for all deck types:

- Insulation fasteners: 300 lbs.
- Membrane fasteners: 400 lbs.
- Systems using induction weld plates: 400 lbs.

a. Note: Certain deck types, including steel decks less than 22-gauge, gypsum, Tectum and cementitious wood fiber, may not achieve the minimum required pullout values. Contact IKO Technical Services for guidance when roofing systems over these deck types are specified.

ii. Pullout tests are required for all steel decks lighter than 22 gauge.

iii. To preserve the integrity of the deck, nondestructive pullout tests should be attempted for gypsum, Tectum and cementitious wood fiber, and lightweight insulating concrete/cellular concrete decks. These tests stop at the required minimum pullout and do not proceed until failure.

iv. Fastener pull tests must be performed in accordance with ANSI/SPRI FX-1, "Standard Field Test Procedure for Determining the Withdrawal Resistance of Roofing Fasteners."

a. Request pullout tests through your IKO Commercial sales representative or Field Services Technician.

b. Pullout test results can impact the fastening rates required for the project, at IKO's discretion.

TABLE 4-1. ACCEPTABLE INNOVIFAST FASTENERS FOR INSULATION

Deck Type	Acceptable Fasteners	Maximum Warranty Term	Minimum Fastener Penetration
Steel, min. 22-gauge	Insulation Fastener (#12)	20 Years	3/4"
	AP Fastener (#14)	30 Years	3/4"
	Stainless Steel Fastener (#14)	30 Years	3/4"
	HD Fastener (#15)[1]	30 Years	3/4"
Steel, lighter than 22 gauge[2]	Insulation Fastener (#12)	20 Years	3/4"
	AP Fastener (#14)	30 Years	3/4"
	Stainless Steel Fastener (#14)	30 Years	3/4"
	HD Fastener (#15)[1]	30 Years	3/4"
Structural Concrete ≥ 2,500 psi	HD Fastener (#15)[1,4]	20 Years	1"
	Concrete Drive	30 Years	1-1/4"
Wood Plank ≥ 3/4–inch, OSB ≥ 7/16–inch[6], Plywood 15/32-inch[7]	Insulation Fastener (#12)	20 Years	1"
	AP Fastener (#14)	30 Years	1"
	Stainless Steel Fastener (#14)	30 Years	1"
Lightweight Concrete Over Steel Pan[2]	Insulation Fastener (#12)	20 Years	3/4"
	AP Fastener (#14)	30 Years	3/4"
	Stainless Steel Fastener (#14)	30 Years	3/4"
	HD Fastener (#15)	30 Years	3/4"
Lightweight Concrete over Structural Concrete	HD Fastener (#15)	20 Years	1"
	Concrete Drive	30 Years	1-1/4"
Gypsum ≥ 2", Cementitious Wood Fiber ≥ 2–inch	Polymer Auger	20 Years	1-1/2"
	Peel Rivet	30 Years	See product data sheet for min/max clamping
Metal Building Retrofit	HD Fastener (#15)	20 years	1-1/2"

[1] HD Fasteners (#15) are required for all Induction Welded Systems into steel decks, and for all re-cover projects into steel decks.

[2] AP Fasteners (#14) or Stainless Steel Fasteners (#14) are required for attachment into wood decks.

[3] A pullout test is required for all steel decks greater than 22 ga.

[4] Use of HD Fasteners in a structural concrete deck requires pre-drilling of holes min. 1/2–inch deeper than the fastener penetration into the deck using a 7/32" standard carbide drill bit.

[5] Use of Peel Rivets into gypsum or other cementitious wood fiber deck requires pre-drilling. Peel Rivets must be installed with a rivet gun. See product data sheet for minimum and maximum clamping requirements of Peel Rivets.

[6] Systems over OSB decks eligible only for a max. 20-year warranty.

[7] Only min. 15/32" plywood decks are eligible for a 25- or 30-year warranty. Only All Purpose (AP) Fasteners (#14) may be used for insulation attachment into wood deck.

TABLE 4-2. PLATES BY USE AND WARRANTY TERM

InnoviFast Plate	Insulation	Membrane
3" Insulation Plate	Up to 30 years	Not Acceptable
2 3/8" HD Seam Plate	Not Acceptable	Up to 20 years
XHD Seam Plate (14-Barb)	Not Acceptable	Up to 30 years
Induction Weld Plate and Induction Weld Plate-TF	Up to 30 years	
Auger Insulation Plate	Up to 20 years	Not Acceptable
Auger Seam Plate	Not Acceptable	Up to 20 years

B. Adhesive Attachment of Insulation.

i. **InnoviBond™ DUO Dual-Tank Spray Adhesive (Parts A & B)** may be used to adhere insulation to appropriate substrates for warranty terms as shown below in Table 4-3.

ii. **IKO Millennium™ Adhesive** may be used to adhere insulation to appropriate substrates for warranty terms as shown below in Table 4-3..

iii. **Use of asphalt.**

1. Asphalt attachment of insulation is acceptable over properly prepared structural concrete, in a full mopping only; spot-mopping is not allowed.

iv. **Adhesive Peel Test** When an adhesive peel test is conducted, follow the procedures provided in ANSI/SPRI IA-1 Standard Field Test Procedure for Determining the Uplift Resistance of Insulation and Insulation Adhesive Combinations over Various Substrates.

TABLE 4-3. INSULATION ADHESIVE BY DECK TYPE & WARRANTY TERM LIMIT

Deck Type	IKO Millennium Adhesive	InnoviBond DUO Dual Tank Spray Adhesive	Hot Asphalt
Steel, min. 22-gauge	30 Years[2]	30 Years[2]	Not Acceptable
Steel, lighter than 22 gauge[2]	Not Acceptable		
Structural Concrete ≥ 2,500 psi	30 Years	30 Years	15 Years
Wood Plank ≥ 3/4–inch, OSB ≥ 7/16–inch[4], Plywood 15/32–inch[5]	20 Years	20 Years	Not Acceptable
Lightweight Concrete Over Steel Pan[2]	20 Years	20 Years	Not Acceptable
Lightweight Concrete over Structural Concrete	20 Years	20 Years	Not Acceptable
Gypsum ≥ 2–inch[2], Cementitious Wood Fiber ≥ 2–inch[2]	20 Years	20 Years	Not Acceptable
Metal Building Retrofit	20 Years	20 Years	15 Years

Notes:

1. New steel decks only; insulation may not be adhered to a steel deck in a reroof application. The top flutes of all steel decks must be wiped completely clean of any residual oils, dirt, dust, and debris, prior to application of adhesive.
2. For 25- and 30-year warranties, adhesive beads must be applied on every flute of the steel deck.

TABLE 4-4. ACCEPTABLE INNOVIFAST™ MEMBRANE FASTENERS

Deck Type	Acceptable Fasteners	Maximum Warranty Term	Minimum Fastener Penetration
Steel, min. 22-gauge	AP Fastener (#14)	15 Years	3/4"
	Stainless Steel Fastener (#14)	15 Years	3/4"
	HD Fastener (#15)[1]	30 Years	3/4"
Steel, lighter than 22 gauge[2]	AP Fastener (#14)	10 Years	3/4"
	Stainless Steel Fastener (#14)	10 Years	3/4"
	HD Fastener (#15)[1]	10 Years	3/4"
Structural Concrete ≥ 2,500 psi	HD Fastener (#15)[1,3]	30 Years	1"
	Concrete Drive	30 Years	1-1/4"
Wood Plank ≥ 3/4-inch, OSB ≥ 7/16-inch[4]**, Plywood 15/32"**[5]	AP Fastener (#14)	30 Years	1"
	Stainless Steel Fastener (#14)	30 Years	1"
Lightweight Concrete Over Steel Pan[2]	AP Fastener (#14)	15 Years	3/4"
	Stainless Steel Fastener (#14)	15 Years	3/4"
	HD Fastener (#15)[1]	20 Years	3/4"
Lightweight Concrete over Structural Concrete	HD Fastener (#15)[3]	20 Years	1"
	Concrete Drive	20 Years	1-1/4"
Gypsum ≥ 2-inch[2]**, Cementitious Wood Fiber ≥ 2-inch**[2]	Polymer Auger	15 Years	1-1/2"
	Peel Rivet	15 Years	See product data sheet for min./max. clamping.
Metal Building Retrofit	HD Fastener (#15)	20 Years	1-1/2"

[1] HD Fasteners (#15) are required for all Induction Welded Systems into steel decks, and for all Re-cover projects into steel decks.

[2] A pullout test is required.

[3] Use of HD Fasteners in a Structural Concrete deck requires pre-drilling of holes min. 1/2-inch deeper than the fastener penetration into the deck using a 7/32" standard carbide drill bit.

[4] Systems over OSB decks eligible only for a max. 20-year warranty.

[5] Only min. 15/32" Plywood decks are eligible for a 25- or 30-year warranty.

SECTION 5

INSULATION ATTACHMENT.

A. Adhered Membrane Systems.

i. Insulation attachment rates.

1. Attachment rates vary by insulation type and thickness of the top insulating layer. Please see **Table 5-1. Adhered Roofing Systems — Insulation Attachment Rates**, for specific information.

2. Always follow the most stringent applicable project requirements, whether from a codes body or from IKO Commercial, when determining attachment rates for mechanically attached systems.

TABLE 5-1. ADHERED SYSTEMS – INSULATION ATTACHMENT RATES FOR ROOFS ≤ 60FT

Wind Speed (MPH)	Top Insulating Layer	Attachment	
		Min. # of Fasteners per 4'x8' Board	Adhesive Ribbon Spacing per 4'x4' Board (Field-Perimeter-Corners)
55	1.0" to 1.4" IKOTherm™ or IKOTherm III	16	12"-6"-6"
	1.5" to 1.9" IKOTherm or IKOTherm III	12	
	≥ 2" IKOTherm or IKOTherm III	8	
	1/2" CoverShield™ HD	12	
	1/4" DensDeck® Prime, Securock®, or DEXcell®	12	
	1/2" DensDeck Prime, Securock, or DEXcell	8	
	5/8" DensDeck Prime or StormX™ Prime, Securock, or DEXcell	8	
72-80	1.5" to 1.9" IKOTherm or IKOTherm III	12	
	≥ 2" IKOTherm or IKOTherm III	10	
	1/2" CoverShield HD	12	
	1/2" DensDeck Prime, Securock, or DEXcell	12	
	5/8" DensDeck Prime or StormX Prime, Securock, or DEXcell	12	
90	≥ 2" IKOTherm or IKOTherm III	12	6"-6"-4"
	1/2" CoverShield HD	16	
	1/2" DensDeck Prime or StormX Prime, Securock, or DEXcell	12	
	5/8" DensDeck Prime or StormX Prime	12	
100	≥ 2" IKOTherm (25 PSI only) or IKOTherm III (25 PSI only)	16	4"-4"-4" or Full Spray
	1/2" CoverShield HD	24	
	1/2" DensDeck Prime, Securock, or DEXcell	16	
	5/8" DensDeck Prime or StormX Prime, Securock, or DEXcell	16	
110	5/8" DensDeck Prime or StormX Prime, Securock, or DEXcell	16	4"-4"-4" or Full Spray
120	5/8" DensDeck Prime or StormX Prime, Securock, or DEXcell	24	4"-4"-4" or Full Spray

Notes:

1. 25- and 30-year warranties may require enhanced attachment rates, contact IKO Technical Services.
2. Insulation Fastening Patterns provided at www.iko.com/comm must be used.

B. Mechanically Attached Systems.

i. Insulation attachment rates for mechanically attached systems typically do not change between the Field, Perimeter, and Corner areas of the roof.

ii. Use of an air and/or vapor barrier requires increased attachment rates.

a. Always follow the most stringent applicable project requirements, whether from a codes body or from IKO Commercial, when determining attachment rates for mechanically attached systems.

TABLE 5-2. MECHANICALLY ATTACHED SYSTEMS – INSULATION ATTACHMENT RATES

Insulation		Fastening Rates† (No Air/Vapor Barrier)		Fastening Rates† (With Air/Vapor Barrier)*	
Insulation Type	Thickness	Per 4' x 4' Board	Per 4' x 8' Board	Per 4' x 4' Board	Per 4' x 8' Board
IKOTherm™, IKOTherm III	0.5"-1.4"	4	5	8	16
	1.5"-1.9"	4	5	6	12
	≥ 2.0"	4	5	5	8
CoverShield™ HD	0.5"	4	5	8	16
DensDeck® Prime	1/4"	4	5	8	16
	1/2"	4	5	6	12
	5/8"	4	5	5	8
DensDeck StormX™ Prime	5/8"	4	5	5	8

*Installations that include a 6-mil poly non-sealing air/vapor barrier may be fastened at the "No Air/Vapor Barrier" rates.

C. Induction Welded Systems.

i. Use InnoviWeld™ Induction Plates and InnoviFast™ Fasteners to attach the insulation to the structural deck.

ii. Any width of InnoviTPO Membrane may be used in Induction Welded Systems.

iii. Only HD Fasteners (#15) may be used in induction welded systems over steel decks. Whenever possible, install fasteners and induction weld plates in rows on the top flute of steel decks.

iv. Only AP Fasteners (#14) or Stainless Steel Fasteners (#14) may be used in wood decks.

v. Peel Rivets may be used in Gypsum, Tectum, and other cementitious wood fiber decks.

vi. Base tie-ins and other details can be accomplished using induction weld plates and fasteners. However, some details may require membrane attachment using fasteners and seam plates. See IKO InnoviTPO Standard Details at: www.iko.com/comm for specific information.

vii. Always follow the most stringent applicable project requirements, whether from a codes body or from IKO Commercial, when determining attachment rates for induction welded systems.

viii. 45-mil membrane is not acceptable for Induction Welded Systems for wind speeds above 55 MPH or for warranties longer than 15 years. Only 60- or 80-mil membrane may be used for Induction Welded Systems above 55 MPH, and only 80-mil membrane may be used for 25- and 30-year warranty lengths.

ix. For wind speeds of 100 MPH or greater, 5/8" DensDeck®, 5/8" Securock®, 5/8" DEXcell®, or 1/2" CoverShield™ must be used over approved IKOTherm™ or IKOTherm III insulation.

TABLE 5-3. INDUCTION WELDED SYSTEMS – ATTACHMENT REQUIREMENTS, 5-20 YEAR WARRANTIES – WITHOUT AN AIR/VAPOR BARRIER

Wind Speed (MPH)	Fasteners per 4’ x 8’ Insulation Board			
	Field	Perimeter	Corners	Acceptable Decks
55	6	9	12	All
72	6	10	15	Steel, Concrete, Wood, Gypsum/CWF
80	8	12	16	Steel, Concrete, Wood
90	8	14	20	
100	10	16	24	
110	12	24	32	Steel, Concrete
120	12	24	32	

TABLE 5-4. INDUCTION WELDED SYSTEMS – ATTACHMENT REQUIREMENTS, 5-20 YEAR WARRANTIES – WITH AN AIR/VAPOR BARRIER

Wind Speed (MPH)	Fasteners per 4' x 8' Insulation Board			
	Field	Perimeter	Corners	Acceptable Decks
55	8	12	16	All
72	10	14	20	Steel, Concrete, Wood, Gypsum/CWF
80	10	16	24	Steel, Concrete, Wood
90	12	20	30	
100	12	24	32	
110	12	24	32	Steel, Concrete
120	12	24	32	

TABLE 5-5. INDUCTION WELDED SYSTEMS – ATTACHMENT REQUIREMENTS, 25-30 YEAR WARRANTIES – WITHOUT AN AIR/VAPOR BARRIER

Wind Speed (MPH)	Fasteners per 4' x 8' Insulation Board			
	Field	Perimeter	Corners	Acceptable Decks
55	6	10	20	All
72	8	12	16	Steel, Concrete, Wood, Gypsum/CWF
80	10	14	20	Steel, Concrete, Wood
90	10	16	24	
100	12	20	30	
110	12	24	32	Steel, Concrete
120	12	24	32	

TABLE 5-6. INDUCTION WELDED SYSTEMS – ATTACHMENT REQUIREMENTS, 25-30 YEAR WARRANTIES – WITH AN AIR/VAPOR BARRIER

Wind Speed (MPH)	Fasteners per 4' x 8' Insulation Board			
	Field	Perimeter	Corners	Acceptable Decks
55	10	16	20	All
72	10	16	20	Steel, Concrete, Wood
80	14	20	24	
90	16	24	30	
100	12	24	32	
110	12	24	32	Steel, Concrete
120	12	24	32	

SECTION 6

MEMBRANE ATTACHMENT.

A. Adhered Systems.

i. Follow the adhesive coverage rates and installation instructions provided in the product data sheets for InnoviBond™ Membrane Adhesive, Membrane Adhesive LVOC and Membrane Adhesive SPR, and in the IKO Innovi™ TPO installation manual.

ii. Peel Stops (See Drawing 7-2).

1. Peel Stops are rows of fasteners and seam plates attached 12.0 inches (30 cm) o.c. along the perimeter of a roof, a minimum of 12 inches (30 cm) to a maximum of 24 inches (61 cm) from the roof edge, stripped in using a minimum 8-inch (20 cm) wide strip of InnoviTPO membrane, heat-welded a minimum of 2.0 inches (5 cm) along all edges. Install Peel Stops when fully adhered systems are installed in the following conditions:

a. Whenever wind speed warranty coverage greater than 80 mph (129 kph) is required.

b. Projects located in High Velocity Hurricane Zones (HVHZ), coastal areas or other high-wind zones per ASCE 7.

c. Projects over wood, lightweight concrete (LWC/LWIC), Tectum or gypsum decking.

d. Projects with bay/dock doors or similar large wall openings.

B. Mechanically Attached Systems.

i. Field attachment.

1. Attach the membrane using appropriate fasteners (see tables above) and seam plates in the seam at 12 inches (30 cm) o.c.

2. For 25- and 30-year warranties, attach fasteners and seam plates in the seam at 6 inches (15 cm) o.c.

3. NOTE: Specified performance requirements may change the above fastening rates; the most stringent requirements, whether IKO's or those required by the project specification, should always be used.

ii. Perimeter and corner enhancements. Choose one of two ways to enhance fastening:

1. Finger method: Install all field membrane sheets perpendicular to the flutes in steel deck applications. At the perimeter, install additional fasteners in rows no greater than 40% of the width of the field sheets. Strip in the rows with a minimum of 8.0-inch-wide strips of reinforced membrane, welded a minimum of 1.5 inches on all sides of the strips (2.0 inches minimum if a hand welder is used), and apply TPO edge sealant around the perimeter of the strips.

a. Induction weld option: Alternatively, fingers may be accomplished by using rows of induction weld plates in place of the rows of fasteners and seam plates. The same spacing requirements apply. This alternate method eliminates the need for stripping in the rows.

2. Picture frame method: Install outer perimeter membrane sheets all the way into the corner. The other perimeter sheets are fastened up to the previously installed perimeter sheets, and then the fastener rows are continued to the corner through the top of the previously installed sheets. Strip in the rows with a minimum of 8.0-inch-wide strips of reinforced membrane, welded a minimum of 1.5 inches on all sides of the strip (a minimum of 2.0 inches if a hand welder is used), and apply InnoviTPO Edge Sealant around the perimeter of the strips.

TABLE 6-1. MECHANICALLY ATTACHED SYSTEMS MEMBRANE FASTENING REQUIREMENTS, MINIMUM 22 GA STEEL AND STRUCTURAL CONCRETE DECKS

Wind Speed (MPH)	Max. Building Height	Min. # of Perimeter Half Sheets		Max. Field Sheet Width	Max. Perimeter Sheet Width	Fastener Spacing
		ASCE 7 Wind Zone ≤120 MPH	ASCE 7 Wind Zone >120 MPH			
55	<60'	1	2	10'	5'	12" O.C.
		3	4	8'	5'	12" O.C
72-80[2]	≥60'	2	3	10'	5'	12" O.C.
		4	5	8'	5'	12" O.C.
90[1,2]	<60'	3	4	10'	5'	6" O.C.
		4	5	8'	5'	6" O.C.
100[1,2]	<60'	4	5	5'	5'	6" O.C.
	≥60'	5	6			
110[1,2]	Use an InnoviWeld™ Induction Welded Roofing System, attached using InnoviFast™ HD Fasteners at 12 perboard/Field, 20/Perimeter, 30/Corners.					
120[1,2]						

Notes:

1. Use of HD Fasteners in a Structural Concrete deck requires pre-drilling of holes min. 1/2" deeper than the fastener penetration into the deck using a 7/32" standard carbide drill bit
2. 60- or 80-mil membrane is required for wind speeds greater than 72 MPH.
3. All 25- and 30-year warranties require one (1) additional Perimeter Half Sheet more than shown in the table above.
4. All 25- and 30-year warranties above 55 MPH also require: a) Max. 8' width Field Sheets. b) Membrane fastener attachment at 6" o.c.

TABLE 6-2. MECHANICALLY ATTACHED SYSTEMS – MEMBRANE FASTENING REQUIREMENTS, WOOD DECKS

Wind Speed (MPH)	Wood Deck Type	Max. Building Height	Min. # of Perimeter Half Sheets		Max. Field Sheet Width	Max. Perimeter Sheet Width	Fastener Spacing (3)
			ASCE 7 Wind Zone ≤120 MPH	ASCE 7 Wind Zone >120 MPH			
55	7/16" OSB	<60'	2	3	10'	5'	6" o.c.
		≥60'	4	5	8'	5'	6" o.c.
	5/8" OSB	<60'	2	3	10'	5'	12" o.c.
		≥60'	4	5	10'	5'	6" o.c.
	15/32" Plwood	<60'	2	3	10'	5'	12" o.c.
	(3 Ply)	≥60'	4	5	10'	5'	6" o.c.
	15/32" Plwood	<60'	2	3	10'	5'	12" o.c.
	(5 Ply)	≥60'	4	5	10'	5'	6" o.c.
72-80	5/8" OSB	<60'	2	3	10'	5'	6" o.c.
		≥60'	4	5	10'	5'	6" o.c.
	15/32" Plwood	<60'	2	3	10'	5'	6" o.c.
	(3 Ply)	≥60'	4	5	10'	5'	6" o.c.
	15/32" Plwood	<60'	2	3	10'	5'	12" o.c.
	(5 Ply)						
90	5/8" OSB	<60'	3	4	8'	5'	6" o.c.
		≥60'	4	5	8'	5'	6" o.c.
	15/32" Plwood	<60'	3	4	8'	5'	6" o.c.
	(3 Ply)	≥60'	4	5	8'	5'	6" o.c.
	15/32" Plwood	<60'	3	4	8'	5'	6" o.c.
	(5 Ply)	≥60'	4	5	8'	5'	6" o.c.
100	Min. 3/4" Wood Plank	<60'	3	4	5'	5'	6" o.c.
	2" x 6" Wood Plank	<60'					6" o.c.

Notes:

1. Only 15/32" Plywood (3- or 5-ply) is acceptable for 25- and 30-year warranty terms.
2. 60- or 80-mil membrane is required for wind speeds greater than 72 mph.
3. See the following tables for additional requirements for 25- and 30-year warranties.

TABLE 6-3. MECHANICALLY ATTACHED SYSTEMS – MEMBRANE FASTENING REQUIREMENTS, LIGHTWEIGHT CONCRETE, GYPSUM, TECTUM, CEMENTITIOUS WOOD FIBER DECKS

Wind Speed (MPH)	Deck Type	Max. Building Height	Min. # of Perimeter Half Sheets		Max. Field Sheet Width	Max. Perimeter Sheet Width	Fastener Spacing[1,2]
			ASCE 7 Wind Zone ≤120 MPH	ASCE 7 Wind Zone >120 MPH			
55	LWC over 22 ga steel pan or 2,500 PSI structural concrete	<60'	2	4	10'	5'	12" o.c.
		≥60'	3	4	8'	5'	12" o.c.
	Gypsum or CWF	<60'	3	Not Allowed	10'	5'	12" o.c.
		≥60'	Not Allowed				
72	LWC over 22 ga steel pan or 2,500 PSI structural concrete	<60'	2	4	10'	5'	6" o.c.
		≥60'	3	4	8'	5'	6" o.c.

Notes:

1. For Gypsum and CWF decks: Pullout tests are required, contact IKO for assistance in scheduling the tests; test results must be submitted to IKO Technical Services for review prior to beginning work. Either InnoviFast™ Polymer Fasteners or Peel Rivets are required.
2. Maximum warranty length for LWC, Gypsum and CWF decks is 20 years.

C. Induction Welded Systems

i. Only HD fasteners (#15) may be used in induction welded systems over steel decks; only AP Fasteners (#14) may be used over wood decks.

ii. Whenever possible, install fasteners and induction weld plates in rows on the top flute of steel decks.

iii. Base tie-ins and other details can be accomplished using induction weld plates and fasteners. However, some details may require membrane attachment using fasteners and seam plates. See IKO InnoviTPO Standard Details at: www.iko.com/comm for specific information.

iv. See Section 5, Item C. of this guide for complete information regarding Induction Welded Systems.

D. Ballasted Systems.

i. Neither the insulation nor the membrane is mechanically attached in ballasted systems, except at elevation changes and around penetrations. Instead, these systems use ASTM #2 or #4 ballast rock, or ballast pavers, to hold the system in place.

ii. Ballasted systems should only be used when the following conditions are present:

1. Roof height does not exceed 75 feet.
2. Continuous parapet is present.
3. Wind uplift pressures are never expected to exceed 30 psf on any portion of the roof.
4. No bay/dock doors or large wall openings are present.

NOTE: Should any proposed ballasted roof system fail to meet any of the above conditions, IKO Technical must be consulted before roofing work commences. Failure to consult with IKO may result in removal or refusal of warranty coverage.

iii. Minimum ballast weights.

1. Given the conditions stated above in **i** and **ii** are met, the following are minimum ballast weights required per roof area:
   - **a.** Field: 10 lbs psf.
   - **b.** Perimeter: 12 lbs psf.
   - **c.** Corners: 15 lbs psf.

SECTION 7

ATTACHMENT REQUIREMENTS OVER BAY DOORS/LOADING DOCKS.

A. Mechanically Attached Systems.

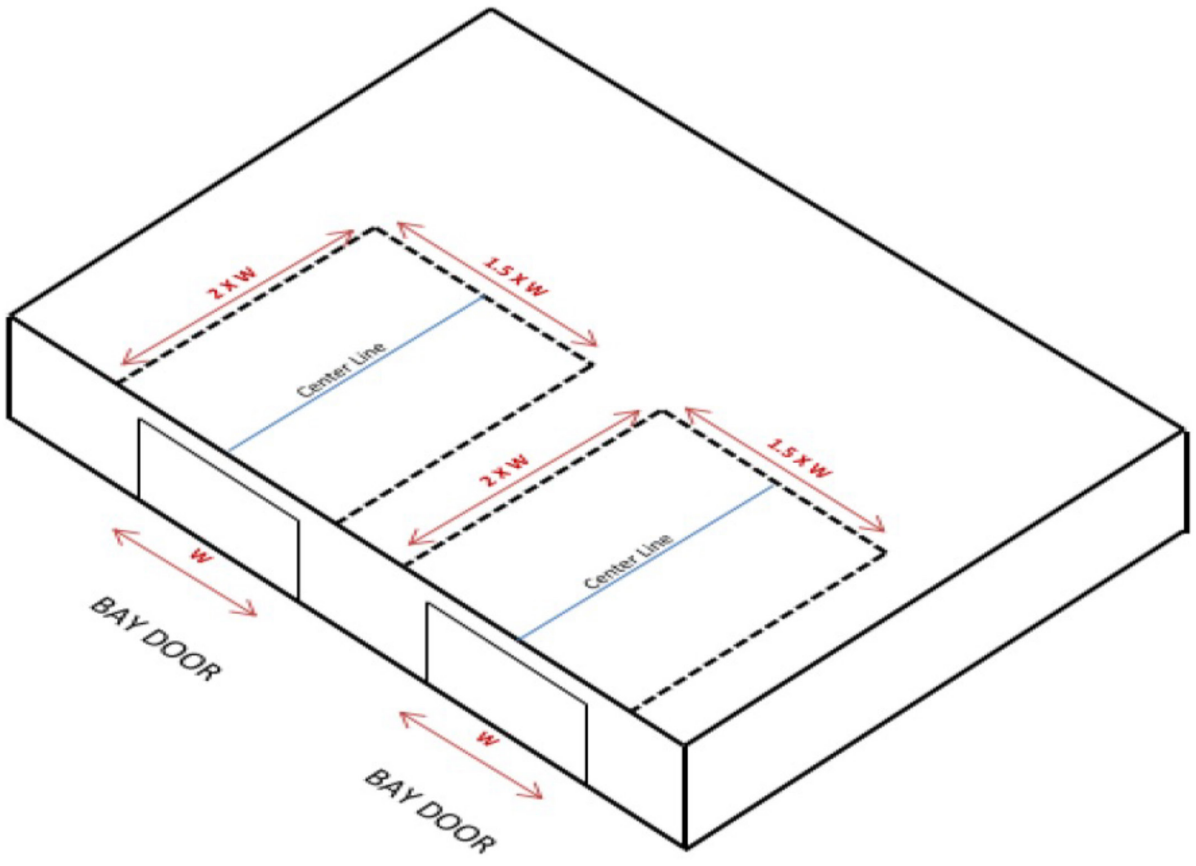
i. Perimeter half-sheets must be continued for a distance from the roof edge equaling twice the width of the door and laterally o.c. 1.5 times the width of the door (see Drawing 7-1).

B. Adhered Systems.

i. Perimeter insulation fastening rates must be continued for a distance from the roof edge equaling twice the width of the door and laterally o.c. 1.5 times the width of the door (see Drawing 7-1).

ii. A Peel Stop must be installed. See Section 6.A.ii, and Drawing 7-2, for guidance.

DRAWING 7-1. ATTACHMENT REQUIREMENT FOR OVERBAY DOOR



C. Induction Welded Systems:

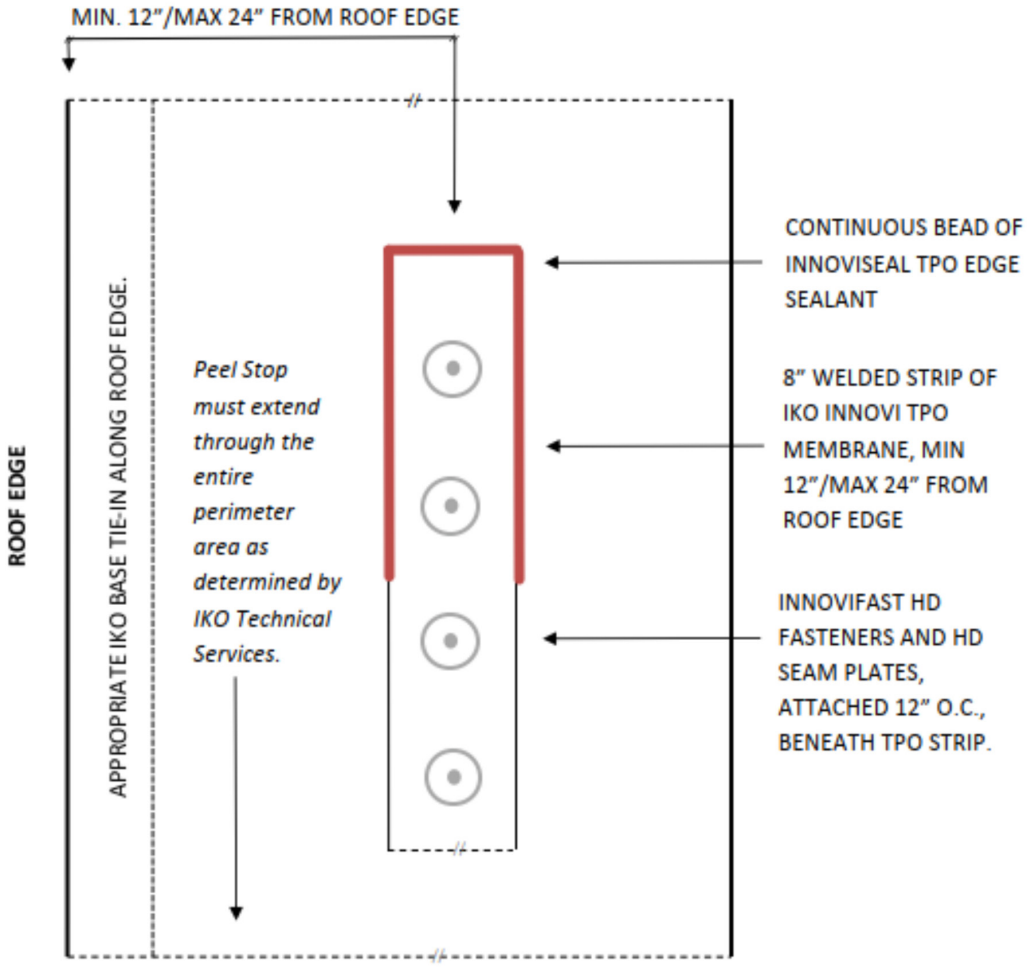
i. Perimeter fastening rates must be continued for a distance from the roof edge equaling twice the width of the door and laterally o.c. 1.5 times the width of the door (see Drawing 7-1).

ii. A Peel Stop must be installed (See Drawing 7-2). Peel Stops in induction welded systems may be accomplished in one of two ways:

1. A single row of induction weld plates, parallel to the roof edge, set a minimum of 12 inches and a maximum of 24 inches from the roof edge, and attached a minimum of 12 inches o.c. Fasteners and seam plates may be used; see Section 6.A.ii for guidance.

D. Ballasted systems are not acceptable for buildings with bay doors/loading docks.

DRAWING 7-2. PEEL STOP DETAIL



NOTE: InnoviWeld Induction Weld Plates may be used.

SECTION 8

EDGE METAL SYSTEMS AND SECUREMENT.

A. Appropriate Fasteners for Wall Substrates.

i. See Section 4 of this Guide for appropriate fasteners for various substrates.

B. Edge Metal Fastener Spacing. Mechanically attach metal edge systems to enable maximum compression along the entire edge, and at no greater than 12 inches o.c., except as noted below.

C. ES-1 Edge Securement Requirements.

i. Pre-fabricated edge metal systems that have been certified as compliant with FM 4435/ANSI/SPRI ES-1 are required for all warrantied roofing systems with wind speed coverage greater than 72 MPH, and for all 25 and 30-year warranties.

Fastener spacing for these systems must be no greater than 6.0" o.c. Fasteners should be installed in a staggered pattern.

ii. Shop-fabricated edge metal systems for projects receiving a 20-year or longer, and for all projects receiving wind speed coverage of 72 MPH, be tested and certified in accordance with FM 4435/ANSI/ES-1.

iii. IKO recommends the use of ES-1 certified edge metal systems for projects receiving warranty terms of less than 20 years.

SECTION 9

METAL BUILDING RETROFIT REQUIREMENTS.

A. Pull-out tests:

i. Pull-out tests into the steel deck are required for insulation attachment for all Metal Building Retrofit projects where the steel is lighter than 22 gauge. A minimum of four (4) tests at various locations across the roof are required.

ii. Pull-out tests for membrane attachment into purlins are required for 72 MPH wind speed coverage.

iii. Submit test results to ikotechusa@iko.com or ikotechcanada@iko.com prior to beginning work.

B. See tables on the next page for specific requirements and limitations for wind speed coverage.

C. Wood nailers must be installed at the roof edge to meet the height of the roofing system.

D. Appropriate edge metal must be installed per IKO technical requirements.

TABLE 9-1. METAL BUILDING RETROFIT INSULATION REQUIREMENTS

Acceptable Flute-Fill			Acceptable Overlay		
EPS (by others)	XPS (by others)	Polyiso	Min. 1.0" IKOTherm™ or IKOTherm III Polyiso	0.5" IKOTherm CoverShield™ HD Cover Board	0.5" DensDeck®, Securock®, or DEXcell®

Note:
DensDeck, Securock, or DEXcell must be purchased through IKO Commercial.

TABLE 9-2. METAL BUILDING RETROFIT - MINIMUM PULL-OUT REQUIREMENTS, WARRANTY TERM, WIND SPEED

Metal Roof (Insulation Attachment)		Purlins (Membrane Attachment)		Max. Warranty Term	Max. Wind Speed
Gauge	Pullout (lbs)	Gauge	Pullout (lbs)		
22	300	12	1,000	20 Years	72 MPH
24	300	14	1,000	20 Years	72 MPH
26	200	16	800	15 Years	55 MPH
28	150	18	600	10 Years	55 MPH

Note:
Pull-out values above are the average of minimum four (4) tests from various parts of the roof. Pull tests of the steel roof deck are required for insulation attachment.

TABLE 9-3. METAL BUILDING RETROFIT - ADHERED MEMBRANE

Insulation Attachment			Membrane Attachment		
Flute-Full	IKOTherm	Fastener	Acceptable Adhesives		
Loose-laid	16 per board	InnoviFast HD Fastener	InnoviBond Membrane Adhesive	InnoviBond Membrane Adhesive LVOC	InnoviBond Membrane Adhesive SPR (Sprayable)

TABLE 9-4. METAL BUILDING RETROFIT - MECHANICALLY ATTACHED MEMBRANE

WIND ZONE ≤120 MPH					
Wind Speed (MPH)	**Insulation Attachment**	**Insulation Fastener**	**Membrane Attachment**	**Purlin Rate**	**Perimeter Half-Sheets**
55	8 per board	InnoviFast HD Fastener	12" o.c.	Every Other Purlin	2 (5' Sheet)
72	8 per board		12" o.c.	Every Purlin	
WIND ZONE >120 MPH					
Wind Speed (MPH)	**Insulation Attachment**	**Insulation Fastener**	**Membrane Attachment**	**Purlin Rate**	**Perimeter Half-Sheets**
55	8 per board	InnoviFast HD Fastener	12" o.c.	Every Purlin	
72	12 per board		12" o.c.	Every Purlin	

Note:
10' Sheets may be attached using InnoviFlash™ TPO Reinforced Membrane Attachment (RMA) Strip at every other purlin.

TABLE 9-5. METAL BUILDING RETROFIT - INDUCTION WELDED MEMBRANE

Wind Speed (MPH)	**Insulation Attachment**	**Insulation Fastener**	**Membrane Attachment**	**Purlin Rate**	**Perimeter**
55	8 per board	InnoviFast HD Fastener	12" o.c.	Every Other Purlin	Attach into the first two (2) purlins from the edge
72	12 per board		12" o.c.	Every Purlin	

SECTION 10

OVERBURDEN SYSTEMS.

An overburden is defined by IKO as any material or items placed on or above the IKO roofing membrane, either temporarily or permanently, which require removal prior to investigation of a leak by an IKO Commercial Field Service Technician or a roofing applicator. Examples of overburden include but are not limited to solar power arrays, green roofs, paver systems, leisure or recreational equipment, and decking, including all of the related accessory and ancillary items necessary to the function of the overburden.

Building Owner Requirments:

When installed over an IKO Commercial roofing system that has received or will receive an IKO Diamond Shield Limited Warranty (DSLW), IKO requires that our Overburden Waiver is signed by the building owner and submitted via email to commercialwarranties@iko.com. Through this Waiver, the building owner agrees:

1. To ensure that the installed IKO Commercial roofing system is inspected by an IKO Commercial Field Service Technician prior to installation of any overburden. Failure to provide for inspection prior to overburden installation will result in denial of warranty coverage.
2. To remove and replace any overburden necessary to provide access to the roofing system for investigation or repair of a suspected leak or other any claim against the IKO limited warranty, at their own expense, including any damages incurred to the roofing system during these processes.
3. To disconnect and otherwise render safe all electricity associated with a photovoltaic solar array, prior to investigation and repair of a roof leak or warranty claim, at their own expense.
4. To waive any and all costs, fees, and liability of the roofing applicator and IKO for any damages or other loss incurred due to removal, disconnection, rendering-safe, and replacement of overburden for investigation and/or repair of a suspected roof leak or warranty claim.
5. IKO will require the building owner's signature on our Overburden Waiver form, indicating their acceptance of and agreement with these requirements. This form will be preserved by IKO in the roofing project's file for reference in case of any future suspected leaks in the roofing system.

Technical Requirements:

For a 5-, 10-, or 15-Year warranty:

- Adhered 60- or 80-mil IKO InnoviTPO Membrane. All membrane seams must be stripped with InnoviFlash™ 6" TPO Cover Strip (10" Cover Strip for overburden weights > 55 lbs psf).
- Adhered 1/2" IKOTherm™ CoverShield™, or DensDeck® Prime, Securock®, or DEXcell® FA coverboard.

For a 20-Year warranty:

- Adhered 80-mil IKO Innovi TPO Membrane (60-mil allowed for green roof tray systems only). All membrane seams must be stripped with InnoviFlash 6" TPO Cover Strip (10" Cover Strip for overburden weights > 55 lbs psf).
- Adhered 1/2" IKOTherm CoverShield, or DensDeck Prime, Securock, or DEXcell FA coverboard.

Warranty Information:

- Contact IKO Technical Services whenever a 25-year warranty is requested.
- 30-year warranties are not available when Overburden is present.
- Mechanically Attached and Induction Welded systems are not acceptable.
- All other technical requirements for the warranty term requested must be met as prescribed in this guide.
- An inspection of the installed roofing system by an IKO Commercial Field Service Technician is required PRIOR to installation of any overburden materials. All punch list items found during inspection must be repaired and either reinspected or photographic evidence of successful repairs provided to IKO before any overburden is installed. Failure to fully complete this requirement will result in denial of warranty coverage.

Green roof overburden removal and replacement warranty coverage

When purchased from an IKO-approved supplier, green roofs and their related accessories (slotted metal, pavers, stone, etc.) may be eligible for additional coverage under the IKO Diamond Shield Limited Warranty. This special, single-source coverage provides for the removal and replacement of the overburden materials as necessary to investigate a warranty claim. Contact your local IKO representative to learn more about the IKO-approved green roof suppliers in your area. Pavers, stone, and other overburden materials that are not associated with a green roof system are not eligible for this special coverage. Solar power arrays are not eligible for this special coverage.

SECTION 11

WARRANTY REQUIREMENTS.

- Only roofing systems installed by IKO Approved Applicators are eligible for IKO Commercial Limited Warranties. For more information regarding the IKO Approved Applicator Program (IAAP), please see the IAAP Brochure available at www.iko.com/comm, and please contact your local IKO Commercial Representative.
- All installations requiring a Diamond Shield™ Limited Warranty must be installed in accordance with all current IKO Commercial technical requirements, detail drawings, installation guidelines, and warranty requirements available at www.iko.com/comm, and must receive a successful inspection by an IKO Field Services Technician.
- On-site inspections are only performed on projects for which an application for an IKO Diamond Shield™ Limited Warranty has been submitted and approved by IKO Technical Services. IKO reserves the right to withhold warranty coverage until all punch list items provided to the contractor by the IKO Field Services Technician are resolved, and until IKO, the roofing contractor and the material suppliers have been fully paid for the IKO roofing materials and warranty.
- Not all projects are eligible for all IKO Commercial Limited Warranties, warranty terms, or enhanced or additional coverage. Please contact IKO Technical Services at ikotechusa@iko.com or ikotechcanada@iko.com, for assistance in determining job-specific technical requirements to meet desired or specified warranty coverage.

- All Limited Warranty applications must be submitted to IKO a minimum of 14 days in advance of job start.
- Any requests for technical deviation from IKO Commercial application requirements must be reviewed and approved in writing by an IKO Technical Services prior to installation.
- Any requests for exceptions from or changes to the standard terms and conditions of IKO Commercial Limited Warranties must be submitted in writing prior to installation of the IKO roofing system. Such requests are subject to review and written approval by an officer of the company. No other IKO employee or other agent representing IKO may make any promises regarding exceptions to any IKO Commercial Limited Warranty.
- Only IKO products are included in an IKO warranty. Other than exceptions noted elsewhere in this document, the performance of products by others, even if approved by the project specifier and accepted as compatible by IKO, is not the responsibility of IKO and is excluded from coverage in an IKO warranty.
- U.S. contractors bidding work outside the United States must contact IKO Warranty Services at commercialwarranties@iko.com prior to submitting a Warranty Application.
- For warranty prices, including special coverage for increased wind speeds, hail, and punctures, see the Innovi TPO Warranty Price Guide at www.iko.com/comm.

TABLE 11-1. HAIL COVERAGE REQUIREMENTS

Hail Diameter	Membrane Thickness	Attachment	Immediate Substrate
1”	80-mil	Adhered	1/2” IKOTherm™ CoverShield™ or 5/8” DensDeck® StormX® Prime

Note:

VSH Systems: IKO offers Innovi TPO roofing systems that have been rated by FM Approvals as **Resistant to Very Severe Hail (VSH)**. See the list of our approved VSH systems in the TPO Code Approvals section at www.iko.com/comm.

TABLE 11-2. CUT & PUNCTURE COVERAGE REQUIREMENTS

Membrane Thickness	Attachment	Immediate Substrate
80-mil	Adhered	1/2” IKOTherm CoverShield any thickness DensDeck Prime , or 5/8” DensDeck StormX Prime

Note:

Coverage: Repair of leaks caused by unintentional cuts and punctures resulting from normal rooftop maintenance, service, or inspection, for up to 8 man-hours per year during the warranty term.

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IKO COMMERCIAL CONTACTS.

IKO COMMERCIAL TECHNICAL SERVICES:

Canada: ikotechcanada@iko.com

U.S.: ikotechusa@iko.com

IKO COMMERCIAL SALES REPRESENTATIVE:

Canada: www.iko.com/comm/find-a-sales-rep-canada/

U.S.: www.iko.com/comm/find-a-sales-rep-us/

PRODUCT INFORMATION:

Phone: 1-855-IKO-ROOF

Website.: www.iko.com/comm