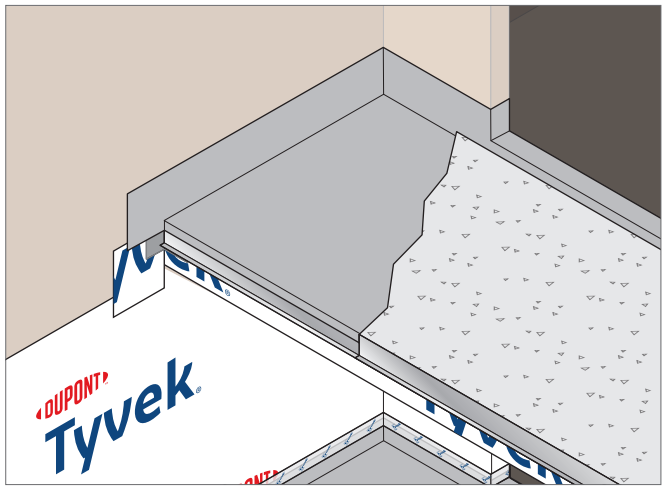
DuPont Performance Building Solutions

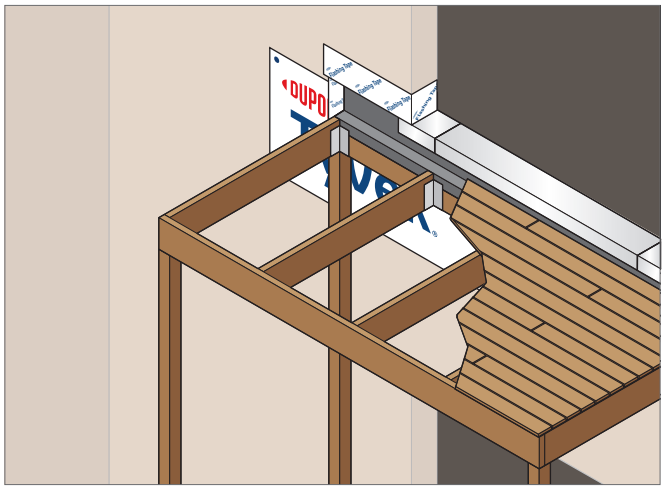
DuPont™ Tyvek® WRB Installation Guidelines

Integration with Balcony and Deck Waterproofing Materials Installed **BEFORE** the **Tyvek® WRB**

For Type III and Type V Wood-Framed Structures Including Multi-Family and Light Commercial Buildings



Balconies



Decks

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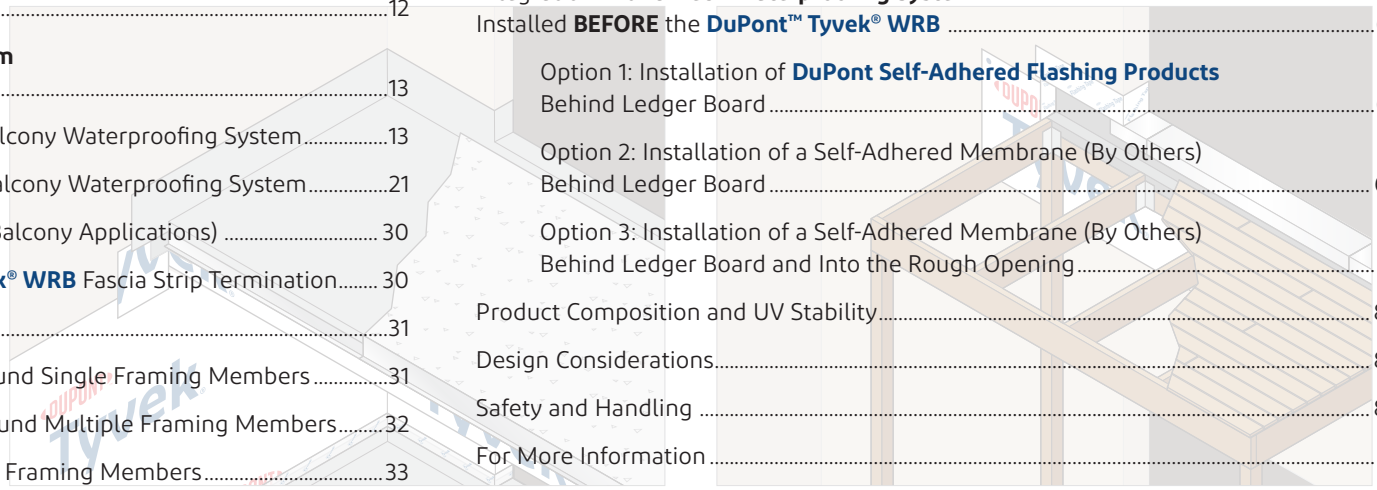

Introduction

This Installation Guideline pertains to wood-framed buildings of any height, of Type III and Type V construction, including multi-family buildings and light commercial buildings. See *Applicable Structures and Performance Criteria* for more information regarding building types and building envelope performance.

This Installation Guideline outlines recommended installation techniques and details for integrating balcony and deck waterproofing systems **BEFORE** the installation of **DuPont™ Tyvek® Water-Resistive and Air Barriers**, referred to in this document as **DuPont™ Tyvek® WRBs**, and **DuPont Self-Adhered Flashing Products**. Refer to the Installation Guideline titled *Integration with Balcony and Deck Waterproofing Materials Installed AFTER the Tyvek® WRB* if applicable.

Always check building.dupont.com for the latest versions of DuPont Installation Guidelines and other product literature.

Applicable Products

Water-Resistive and Air Barriers (Tyvek® WRBs)

Product	Dimensions	Area
DuPont™ Tyvek® HomeWrap®	3 ft x 100 ft 3 ft x 165 ft 5 ft x 200 ft 9 ft x 100 ft 9 ft x 150 ft 10 ft x 100 ft 10 ft x 150 ft	300 sq ft 495 sq ft 1,000 sq ft 900 sq ft 1,350 sq ft 1,000 sq ft 1,500 sq ft
DuPont™ Tyvek® StuccoWrap®	5 ft x 200 ft	1,000 sq ft
DuPont™ Tyvek® DrainWrap™	9 ft x 125 ft 10 ft x 125 ft	1,125 sq ft 1,250 sq ft
DuPont™ Tyvek® ThermaWrap® LE	5 ft x 150 ft 9 ft x 100 ft	750 sq ft 900 sq ft
DuPont™ Tyvek® CommercialWrap®	5 ft x 200 ft 10 ft x 125 ft	1,000 sq ft 1,250 sq ft
DuPont™ Tyvek® CommercialWrap® D	5 ft x 200 ft 10 ft x 125 ft	1,000 sq ft 1,250 sq ft

Self-Adhered Flashing Products

Product	Width
DuPont™ FlexWrap™ EZ	2.75 in
DuPont™ FlexWrap™	6 in 9 in
DuPont™ StraightFlash™	4 in 9 in
DuPont™ Flashing Tape	4 in 6 in 9 in 12 in

Installation Accessories

Product	Type	Quantity
DuPont™ Tyvek® Tape	2 in Bulk Pack 3 in Bulk Pack	6 rolls/bulk pack
DuPont™ Tyvek® Metallized Tape	2 in x 100 ft Rolls	12 rolls/case
DuPont™ Tyvek® Wrap Cap Staples or other cap staples for Stinger® Cap Stapler	7/8 in, 1-1/4 in, and 1-1/2 in lengths 3/8 in and 5/8 in lengths	2,000/box 2,016/box
DuPont™ Tyvek® Wrap Cap Nails	1 in electro-galvanized ring shank nail	2,000/box
DuPont™ Tyvek® Wrap Cap Screws	2 in dia. plastic cap, 1-3/4 in screw length	1,000/box
Great Stuff Pro™ Gaps & Cracks Polyurethane Foam Sealant	Can (reusable dispensing gun sold separately)	20 oz
DuPont™ RainVent™ Battens	5/8 in x 3/8 in x 8 ft	40/pack
DuPont™ Tyvek® DrainVent™ Rainscreen	4 ft x 50 ft roll	
Tower® Residential Sealant (formerly DuPont™ Residential Sealant)		
TRUFAST® Walls Grip-Deck® screws with Thermal-Grip FastCap™ washers (TRUFAST® Walls formerly Rodenhouse)[1]		

[1]For information regarding installation of TRUFAST® Walls fasteners, refer to the *Key Installation Requirements for DuPont™ Tyvek® WRBs* section in the applicable DuPont Installation Guideline found on building.dupont.com.

Additional Materials Based on Project Requirements, Details, and Specifications[1]

- Backer Rod
- Sealant[1]
- Adhesive/Primer[2]
- J-Roller

Warranty

Please refer to the *DuPont Building Envelope Solutions Products 10-Year Limited Warranty for Single-Family, Wood-Framed Multi-Family, and Light Commercial Buildings*.

NOTE: In order to make a claim under the DuPont Performance Building Solutions 10-Year Limited Product and Labor Warranty, you must have met all of the terms and conditions of the warranty, including use of the applicable DuPont Installation Guidelines available at the date of original installation. In the event that a specific detail or installation technique is not covered in the DuPont Installation Guidelines at the time of construction, then the *Key Installation Requirements* outlined in this document must have been followed in order to make a claim under the warranty. It is in the sole discretion of DuPont to determine if full compliance with the Key Installation Requirements exists. Please contact DuPont or a DuPont Representative if you have any questions regarding any DuPont Installation Guideline.

[1]Apply per manufacturers' guidelines. **For non DuPont products, DuPont assumes no liability in use of recommended products** — installers need to evaluate suitability of recommended products in their end-use applications.
[2]For information regarding chemically compatibility of sealants, see technical bulletin *Chemical Compatibility of Representative Building Sealants and Adhesives/Primers*.

Applicable Structures and Performance Criteria

Applicable Structures

These Installation Guidelines pertain solely to Wood-Framed Multi-Family and Light Commercial Buildings as defined below.

DuPont categorizes structures into three primary groups:

i.) "**Single-Family Residential Buildings**" are defined as fully-detached one or two family structures, as well as townhouse structures not more than three stories above grade plane as defined in the 2021 International Residential Code (IRC) Section R101.2, both to the extent they are exclusively Residential Use building structures.

ii.) "**Wood-Framed Multi-Family and Light Commercial Buildings**" are defined by DuPont as the following (must meet **ALL** criteria):

a. Constructed of wood-based structural exterior framing of Type III or Type V Construction* (IBC Chapter 6); and

b. Does not exceed 2021 IBC max height (Table 504.3) for Type V construction (70 ft.) or Type III construction (85 ft.), including allowances for Automatic Sprinkler height increase (IBC 504.1 and Table 504.4) and 'podium' structures outlined in the Special Provisions* (IBC Section 510); and

c. Design requirements for the building envelope do not exceed air barrier performance of ASTM E1677 (10.8 psf structural load, 65 mph equivalent wind load), and water infiltration resistance criteria of 6.24 psf (50 mph equivalent wind-driven rain) when tested in accordance with ASTM E331, ASTM E1105, or equivalent.

*Special Provisions (IBC Section 510) allows for a "horizontal building separation", or 'podium', to be built under the wood-framed Type III or Type V building. The podium is typically constructed of steel framing or concrete. Podium-style buildings are included under "Wood-Framed Multi-Family and Light Commercial Buildings", as long as all other definition criteria (a. through c. above) are met.

iii.) "**Commercial and High-Performance Buildings of Any Height**" are defined by DuPont as any of the following:

a. Structures constructed of steel-based structural exterior framing and any exterior sheathing, or

b. Structures with exterior above grade walls constructed of concrete or concrete masonry units (CMU), or

c. Structures of any height and construction type (including any framing type) that are designated as high-performance. "High-performance" is defined as air barrier performance exceeding ASTM E1677 and/or water infiltration resistance criteria exceeding 6.24 psf when tested in accordance with ASTM E331, ASTM E1105, or equivalent.

NOTE: "Podium" style structures with wood-framed floors built above steel-framed or concrete/CMU floors are covered under "Wood-Framed Multi-Family and Light Commercial Buildings" unless they are "high-performance".

Water-Resistive Barrier Performance Requirements

These Installation Guidelines pertain to Wood-Framed Multi-Family and Light Commercial Buildings with air barrier performance not exceeding ASTM E1677 (10.8 psf structural load, 65 mph equivalent wind load), and water infiltration resistance criteria not exceeding 6.24 psf (50 mph equivalent wind-driven rain) when tested in accordance with ASTM E331, ASTM E1105, or equivalent.

Allowable Building Height and Number of Stories

Chapter 5 of the 2021 International Building Code (IBC) contains information regarding the maximum height and number of stories for buildings of Group R Occupancy Classification (IBC Section 310). Including increased allowances for automatic sprinklers and a "podium" horizontal building separation (Section 510), Group R buildings of Type III or Type V construction can have the following **maximum heights above grade plane**:

Buildings with Group R (Residential) Occupancy Classification

Type of Construction	Maximum Building Height in Feet Per 2021 IBC Table 504.3
VA	70
VB	60
IIIA	85
IIIB	75

For Wood-Framed Multi-Family and Light Commercial Buildings up to 70 feet in height, any DuPont™ Tyvek® WRB can be used. For buildings between 70 and 85 feet in height, DuPont™ Tyvek® CommercialWrap® or DuPont™ Tyvek® CommercialWrap® D must be used on all above grade wood-framed exterior walls, and 3" Tyvek® Tape must be used.

NOTE: In general, **Tyvek® CommercialWrap®** or **Tyvek® CommercialWrap® D** are recommended for Wood-Framed Multi-Family and Light Commercial Buildings due to their increased durability and UV exposure limit which can help accommodate longer construction times. See *Product Composition and UV Stability* section for more information.

Applicable Structures and Performance Criteria

DuPont Building Envelope Solutions Products Installation Considerations for Wood-Framed Multi-Family and Light Commercial Buildings

These Installation Guidelines should be used for buildings which meet the applicable structures definitions and performance criteria on the previous page. The following table provides a summary of typical installation information. For more information, please see the respective section in this document.

Installation Considerations	Total Building Height Above Grade Plane[1]	
	70 Feet and Under	70 – 85 Feet
Performance Criteria	Building air barrier performance not exceeding ASTM E1677, **AND** WRB and self-adhered flashing water infiltration resistance criteria not exceeding 6.24 psf when tested in accordance with ASTM E331, ASTM E1105, or equivalent.	
Tyvek® WRB[2]	**DuPont™ Tyvek® HomeWrap®**, **Tyvek® DrainWrap™**, **Tyvek® StuccoWrap®**, **Tyvek® CommercialWrap®**, and **Tyvek® CommercialWrap® D**	**Tyvek® CommercialWrap®**, **Tyvek® CommercialWrap® D** (required on all above grade wood-framed exterior walls)
DuPont™ Tyvek® Tape	2″ (3″ required when using **Tyvek® DrainWrap™, Tyvek® StuccoWrap®**, or **Tyvek® CommercialWrap® D**)	3″
Typical Recommended Fasteners and Spacing[3]	1″ **DuPont™ Tyvek® Wrap Cap Staples or Nails** (or equivalent) fastened along stud lines spaced at 6″ – 18″ vertically	2″ **DuPont™ Tyvek® Wrap Cap Screws** or approved TRUFAST® Walls Fasteners (formerly Rodenhouse) 1″ plastic cap fasteners are considered temporary fasteners
Air Barrier Details	Required when the designated building envelope performance requirements are equivalent to ASTM E1677	
Tyvek® WRB Terminations to Sheathing	**DuPont Self-Adhered Flashing Products**	
Recommended Window/Door Head Flap Treatment	**DuPont™ Tyvek® Tape** or **DuPont Self-Adhered Flashing Products**	**DuPont Self-Adhered Flashing Products** Install mechanical fasteners through flashing as needed for increased holding power
Self-Adhered Flashing Patches behind Cladding Fasteners	Required when water infiltration resistance criteria for the building envelope exceeds 0.56 psf (15 mph equivalent wind-driven rain), nominal test pressure per ASTM E1677. For more information, see the *Alternate Fastening* section in the applicable DuPont Installation Guideline found on building.dupont.com.	

[1]Height above grade plane based on the approved calculated method as defined in architectural plans/construction documents.

[2]Buildings requiring NFPA 285 compliance must use **Tyvek® CommercialWrap®** or **Tyvek® CommercialWrap® D** in accordance with DuPont NFPA 285 documentation.

[3]For increased holding power and for higher air and water holdout performance, DuPont recommends fasteners of sufficient length to penetrate securely into the stud. For more information, see the *Temporary Fastening* section in the applicable DuPont Installation Guideline found on building.dupont.com.

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Water-Resistive Barrier (WRB) Code Requirements

The 2021 International Building Code (Section 1402.2 Weather Protection) requires that "exterior walls shall provide the building with a weather-resistant exterior wall envelope. The exterior wall envelope shall be designed and constructed in such a manner as to prevent the accumulation of water within the wall assembly by providing a water-resistive barrier behind the exterior veneer, as described in Section 1403.2, and a means for draining water that enters the assembly to the exterior. The exterior wall envelope shall include flashing, as described in Section 1404.4. Section 1403.2 (Water-resistive barrier) states that "not fewer than one layer of No. 15 asphalt felt, complying with ASTM D226 for Type 1 felt or other approved materials, shall be attached to the studs or sheathing, with flashing as described in Section 1404.4 in such a manner as to provide a continuous water-resistive barrier behind the exterior veneer."

The **DuPont™ Tyvek® WRBs** listed below qualify as approved water-resistive barriers based on ICC-ES AC38 Acceptance Criteria according to the associated Evaluation Reports:

- ICC-ES Evaluation Report ESR 2375
  - **DuPont™ Tyvek® HomeWrap®**
  - **DuPont™ Tyvek® StuccoWrap®**
  - **DuPont™ Tyvek® DrainWrap™**
  - **DuPont™ Tyvek® CommercialWrap®**
  - **DuPont™ Tyvek® CommercialWrap® D**
- ICC-ESR-1993: **DuPont™ Tyvek® ThermaWrap® LE**

Air leakage control and air barriers are required in the IECC-2021 Sections R402.4 and C402.5. Specifically, Section C402.5 identifies three compliance options for air barriers. **Tyvek® WRBs** comply with the option detailed in Section C402.5.1.2.1 Materials:

> "Materials with an air permeability no greater than 0.004 cfm/ft_2 (0.02 L/s x m^2) under a pressure differential of 0.3 inches water gauge (75 Pa) when tested in accordance with ASTM E2178 shall comply with this section." **Tyvek® WRBs** have been tested in accordance with ASTM E2178 and have air permeability less than 0.004 cfm/ft^2 (0.02 L/s x m^2).

All **Tyvek® WRBs** have been tested to the following standards:

- ASTM E2556 *Type II Standard Specification for Vapor Permeable Flexible Sheet Water-Resistive Barriers Intended for Mechanical Attachment*
- ASTM E1677 *Standard Specification for an Air Retarder (AR) Material or System for Low-Rise Framed Building Walls*
- ASTM E2178 *Standard Test Method for Air Permeance of Building Materials*
- ASTM E96 *Standard Test Methods for Water Vapor Transmission of Materials*
- AATCC 127 *Test Method for Water Resistance: Hydrostatic Pressure*
- ASTM E84 *Standard Test Method for Surface Burning Characteristics of Building Materials*
- ASTM E2273 *Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies*

The application of **Tyvek® WRBs** is governed by the code adopted and enforced by the local jurisdiction. Consult your jurisdiction to assure compliance with the local building code.

Flashing Products Code Requirements

The 2021 International Building Code (Section 1404.4 Flashing) requires that "flashing shall be installed in such a manner so as to prevent moisture from entering the wall or to redirect that moisture to the exterior. Flashing shall be installed at the perimeters of exterior door and window assemblies, penetrations and terminations of exterior wall assemblies, exterior wall intersections with roofs, chimneys, porches, decks, balconies and similar projections and at built-in gutters and similar locations where moisture could enter the wall. Flashing with projecting flanges shall be installed on both sides and the ends of copings, under sills and continuously above projecting trim. Where self-adhered membranes are used as flashings of fenestration in wall assemblies, those self-adhered flashings shall comply with **AAMA 711**. Where fluid applied membranes are used as flashing for exterior wall openings, those fluid applied membrane flashings shall comply with AAMA 714."

- **DuPont Self-Adhered Flashing Products** comply with AAMA 711 (an FGIA Specification) *Specification for Self Adhering Flashing Used for Installation of Exterior Wall Fenestration Products*.

Additional Codes and Standards Information for DuPont™ Tyvek® Commercial Air and Water Barrier Systems

DuPont™ Tyvek® CommercialWrap®, **Tyvek® CommercialWrap® D**, **DuPont™ StraightFlash™**, and **DuPont™ FlexWrap™** were designed for the rigors of heavy commercial construction. These commercial products have been tested to the following standards:

- ABAA Evaluated
- ASTM E2357 *Standard Test Method for Determining Air Leakage of Air Barrier Assemblies*
- ASTM E331 *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Pressure*
- ASTM E1105 *Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Door, and Curtain Walls, by Uniform or Cyclic Static Air Pressure Difference*
- ASTM E283 *Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen*
- AAMA 501.5 *Test Method for Thermal Cycling of Exterior Walls*
- NFPA 285 *Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components*

Energy Conservation Codes for commercial buildings are being adopted in many regions across the U.S. **DuPont™ Tyvek® Water-Resistive and Air Barriers (WRBs)** currently meet the following codes and guidelines.

- ASHRAE 90.1 Model Energy Code air barrier requirements
- 2021 International Energy Conservation Code® (IECC)
- 2021 International Green Construction Code® (IgCC)

General Instructions

The best time to install **Tyvek® WRBs** is:

- **AFTER** the roof sheathing is installed
- **AFTER** the step, kick-out, or through wall flashings have been installed
- **BEFORE** the windows and doors are installed.

DuPont Self-Adhered Flashing Products are not intended for through-wall flashing applications.

Special Considerations

1. These Installation Guidelines, including the allowable use of DuPont Products, are based on building air barrier performance not exceeding ASTM E1677, and **Tyvek® WRBs** and self-adhered flashing water infiltration resistance criteria not exceeding 6.24 psf when tested in accordance with ASTM E331, ASTM E1105, or equivalent.
2. Buildings requiring NFPA 285 compliance must use **Tyvek® CommercialWrap®** or **Tyvek® CommercialWrap® D** in accordance with DuPont NFPA 285 documentation. See *NFPA 285 Compliant Wall Assemblies with DuPont™ Tyvek® Commercial Air and Water Barrier Systems* and building.dupont.com for more information.
3. **DuPont Self-Adhered Flashing Products** should be installed on clean, dry surfaces that are free of free of free of frost, debris and/or obstructions that could compromise the flashing integrity, debris and/or obstructions that could compromise the flashing integrity. Wipe surfaces to remove moisture, dirt, grease and other debris that could interfere with adhesion.
4. **DuPont Self-Adhered Flashing Products** perform best when installed at temperatures above 25°F (–4°C).
5. Adverse weather conditions or cold temperatures may require use of an adhesive/primer to promote adhesion of **DuPont Self-Adhered Flashing Products** to most common building materials. **Concrete, masonry, and fiber-faced exterior gypsum board require the use of a recommended adhesive/primer**. Do not apply adhesive/primer to exterior continuous insulation due to potential sheathing degradation.
6. Remove all wrinkles and bubbles that may allow for water intrusion by smoothing surface and repositioning as necessary during installation of **DuPont Self-Adhered Flashing Products**. Apply pressure along entire surface of flashing for a good bond using firm hand pressure, J-roller, or alternate tool without sharp edges (such as a plastic carpet tuck tool) to assist with application of uniform pressure.
7. Building envelope design requirements exceeding 0.56 psf (15 mph equivalent wind-driven rain) water infiltration resistance per ASTM E1677 require **StraightFlash™**, **DuPont™ Flashing Tape** or recommended alternate patches behind fastening plates (brick tie base plates, metal fastening clips, metal channels, etc.). When used behind the cladding fasteners and/or fastening plates, the flashing patch must be adhered to the **Tyvek® WRB**.

Special Considerations

8. **DuPont Self-Adhered Flashing Products** are not intended for through-wall flashing applications.
9. **DuPont™ Tyvek® WRBs** and **DuPont™ Tyvek® Fluid Applied Products** are **NOT** intended to be used as balcony waterproofing membranes.
10. When using mechanically fastened through-wall flashing, DuPont recommends sealing top edge with **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™**.
11. When flashing the sill area for windows and doors, DuPont recommends the use of 6" wide **DuPont™ FlexWrap™** for 2"x 4" framing and 9" wide **FlexWrap™** for 2" x 6" framing. When rigid back dams are required or desired, an option would be to use a 3/4" corner guard (back dam) cut to the length of the sill and nail into place on the interior edge of the sill prior to installation of 9" wide **FlexWrap™**. Then install 9" wide **FlexWrap™** over sill and corner guard back dam.
12. Use **DuPont Self-Adhered Flashing Products** with roll widths sufficient to achieve a minimum of 1" adhesion **BEYOND** where the back of the window or door frame will be located to allow for the creation of the interior perimeter seal
13. **Do Not Stretch FlexWrap™** when installing along sills or jambs. **FlexWrap™** is only intended to be stretched when covering corners or curved sections.
14. When installing **DuPont™ FlexWrap™ EZ** and **FlexWrap™** on penetrations or other wall conditions, ensure the flashing will not be exposed after completion of cladding.
15. **DuPont Self-Adhered Flashing Products** can be used to bridge non-movement gaps up to 1" unsupported. Flashing must maintain a 2" adhesive lap on the wall substrate.
16. **Do Not Apply DuPont™ Tyvek® Tape** or **DuPont Self-Adhered Flashing Products** over **DuPont™ Tyvek® Wrap Cap Fasteners**, or recommended fasteners however, fasteners can be installed over the flashing.
17. When installing the **Tyvek® WRB**, **DO NOT INSTALL** fasteners within 6" of the sills and jambs of the openings and within 9" of the head of the openings.
18. For extreme/coastal exposures, installation of a high-pressure skirt is recommended to help prevent water intrusion at the sill or threshold.
19. For additional wind load resistance, the use of **DuPont™ Flashing Tape** or **StraightFlash™** with **Tyvek® Wrap Cap Fasteners**, or recommended fasteners can be installed to secure the head flap of the windows.
20. **DuPont™ Flashing Tape** or **StraightFlash™** are the recommended method for terminating the **Tyvek® WRB** at top and bottom of wall, at head flaps, and at other horizontal and vertical locations. **Tyvek® Tape** can be used as indicated in this Installation Guideline to seal the **Tyvek® WRB** to most plastic top sheets of self-adhered products and to thin metal flashings (e.g. drip caps or through wall kick-out flashings). **Tyvek® Tape** should **NOT** be used to seal **Tyvek® WRBs** to wood framing/sheathing, exterior gypsum sheathing, or masonry.
21. **Tyvek® Tape** is a seam tape primarily designed to seal **Tyvek® WRB** seams. **Tyvek® Tape** is **NOT** a flashing product, and should not be used in applications where a flashing product is required.
22. Before applying **Tyvek® Tape**, surfaces should be dry and clean. During installation apply firm, even pressure with hand or "J" roller.
23. In lieu of temporarily taping, **Tyvek® WRB** flaps at window head and jambs can be tucked under the installed **Tyvek® WRB**.
24. Door and window rough sill framing must be level or slightly sloped to the exterior to ensure proper drainage to the exterior. This best practice ensures continuous support with positive slope to the exterior.
25. For window or door openings greater than 6 feet wide, **DuPont™ Flashing Tape** or **StraightFlash™** can be used with **FlexWrap™** in 3-piece sill/head applications. **DuPont™ Flashing Tape** or **StraightFlash™** should be applied the length of the sill prior to placing the **FlexWrap™** corners. The **FlexWrap™** corners should be at least 12" long allowing for 6" up the jamb and 6" of overlap on the **FlexWrap™** sill flashing. When applying the 3-piece flashing detail to the head of the opening, the **DuPont™ Flashing Tape** or **StraightFlash™** head piece should be applied prior to installing the **FlexWrap™** corner flashing. Minimum overlapping of the **FlexWrap™** head flashing and jamb flashing should be a minimum of 6". **Registered DuPont Certified Installers may use the 3-piece sill/head flashing method on window and door openings of any size**. Please contact your local Building Envelope Specialist for additional information.
26. **DuPont™ Tyvek® DrainWrap™**, **Tyvek® StuccoWrap®**, and **Tyvek® CommercialWrap® D must** be installed with the grooves going up and down.
27. **DuPont™ Tyvek® HomeWrap®** and **Tyvek® CommercialWrap®** provide >90% drainage efficiency, and **Tyvek® DrainWrap™**, **Tyvek® StuccoWrap®**, and **Tyvek® CommercialWrap® D** provide >98% drainage efficiency when tested in accordance with ASTM E2273.
28. No surface preparation is needed for the installation of **Tyvek® WRBs**.
29. **Tyvek® WRBs** must **NOT** come in direct contact with other manufacturers' cured or uncured fluid-applied and/or deck coating waterproofing products due to potential impact on performance properties. For additional information, refer to the applicable detail.
30. DuPont requires **DuPont™ Tyvek® HomeWrap®**, **Tyvek® StuccoWrap®**, and **Tyvek® DrainWrap™** be covered within 4 months (120 days) of installation. DuPont requires **Tyvek® CommercialWrap®** and **Tyvek® CommercialWrap® D** be covered within 9 months (270 days) of installation.

Special Considerations

31. DuPont requires that **FlexWrap™**, **FlexWrap™ EZ**, and **StraightFlash™** be covered within 9 months (270 days) of installation. DuPont requires that **DuPont™ Flashing Tape** be covered within four months (120 days) of installation.
32. The maximum in-service temperature for **DuPont™ Tyvek® WRBs** and **DuPont Self-Adhered Flashing Products** is 180°F.
33. Tower® Residential Sealant (formerly DuPont™ Residential Sealant) is designed for use with DuPont products and can be used where sealant is outlined in this guide. This change represents a branding change only—chemical composition and performance characteristics of the sealant are unchanged.
34. For details regarding flashing garage door openings, refer to *Installation Instructions for Garage Doors Installed AFTER the DuPont™ Tyvek® Water-Resistive and Air Barrier (WRB) is Installed*.
35. When applying Tower® Residential Sealant, or recommended sealant, during window installation, DuPont recommends minimizing or removing excess sealant that may interfere with adhesion of **DuPont Self-Adhered Flashing Products**.

For additional guidance, please call 1-833-338-7668, visit our website at building.dupont.com, or consult your local DuPont Representative.

Key Installation Requirements for Integrating DuPont™ Tyvek® WRBs at Balconies, Decks, and Related Details

Tyvek® WRBs must be properly integrated with waterproofing membranes, flashing and other water management components (by others) used in the construction of balconies and decks.

Tyvek® WRBs, **DuPont™ Tyvek® Fluid Applied WB+™**, and **DuPont™ Tyvek® Fluid Applied Products are NOT suitable** for use as waterproofing membranes on balconies and other horizontal surfaces. While these Installation Guidelines cover common balcony and deck configurations, variations from those covered within the guidelines will require similar practices.

These Installation Guidelines pertain to wood-framed balconies and decks as defined below. DuPont categorizes balconies and decks as the following:

- **Balconies** are defined as elevated exterior platforms where the primary waterproofing occurs **over** the horizontal plane. Balconies can be constructed with a ledger board or beams/trusses that cantilever from the exterior wall. The top of the horizontal plane is covered with a concrete topping.

- **Decks** are defined as exterior platforms that occur either above a foundation wall or another story and are typically elevated with support posts. The primary waterproofing occurs **behind** the deck ledger board, and the top of the horizontal plane is covered with decking.

- Balcony waterproofing membranes should be installed per manufacturer's instructions, plans, and/or specifications. For balcony and deck-related accessories not shown in these installation guidelines (e.g metal edge flashing/drip edge, drainage mat, and concrete topping slab), refer to the manufacturer's instructions on installation requirements.

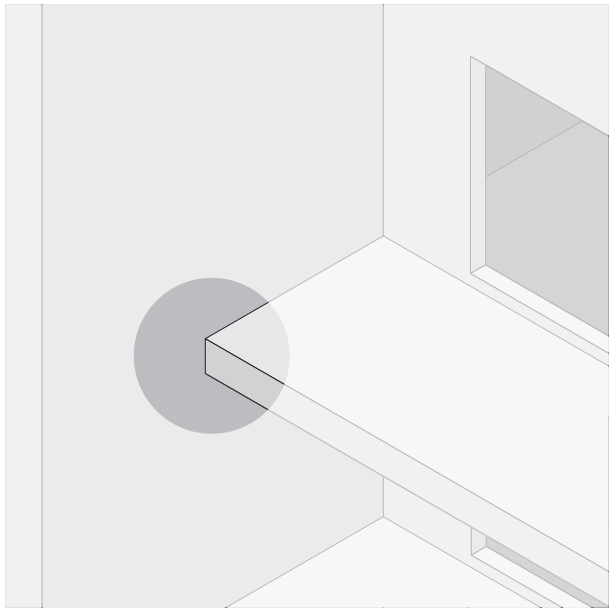
Type of Balcony Waterproofing	Installation Requirements
Self-Adhered Waterproofing Membrane	Follow manufacturer's installation instructions. When installed directly over the **Tyvek® WRB**, ensure chemical compatibility and proper adhesion between the materials. Termination onto a **DuPont Self-Adhered Flashing Product** may be necessary.
Fluid-Applied Waterproofing Membrane	Follow manufacturer's installation instructions. Third-party fluid-applied products should **NOT** come into direct contact with **Tyvek® WRBs**. Use **DuPont™ StraightFlash™** as a transition membrane between the fluid-applied waterproofing and the **Tyvek® WRB** fascia strip. **NOTE**: Hot-applied fluid-applied products should **NOT** be integrated with DuPont Building Envelope Solutions Products until they have cooled/cured.

- Ensure chemical compatibility of sealants, adhesives/primers, and/or mastics used to seal self-adhered waterproofing membranes or flashings (by others) onto **Tyvek® WRBs**. In general, **Tyvek® WRBs** should **NOT** come in direct contact with other manufacturer's cured or uncured fluid-applied products due to potential impact on performance properties.
- If an embedded railing attachment waterproofing membrane is installed directly over the **Tyvek® WRB** fascia strip, ensure chemical compatibility between the materials. If a fluid-applied waterproofing membrane is used, ensure termination occurs onto **StraightFlash™**.

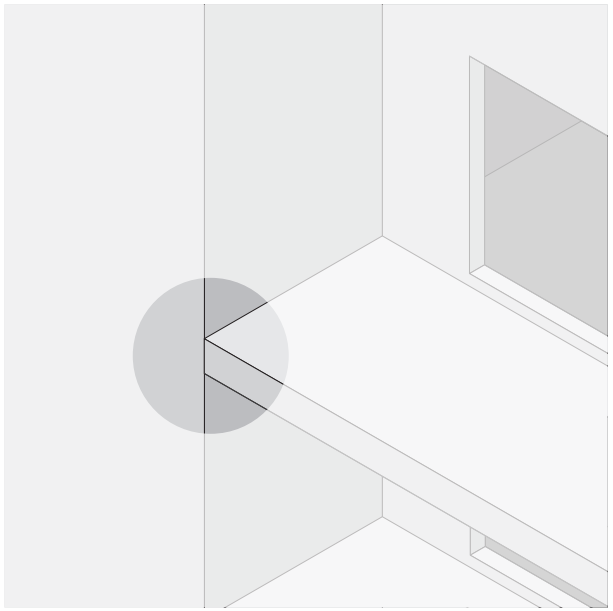
Balcony Conditions Covered in this Guide

While an inset balcony condition is represented in these guides, similar installation requirements also apply to other balcony conditions as shown below.

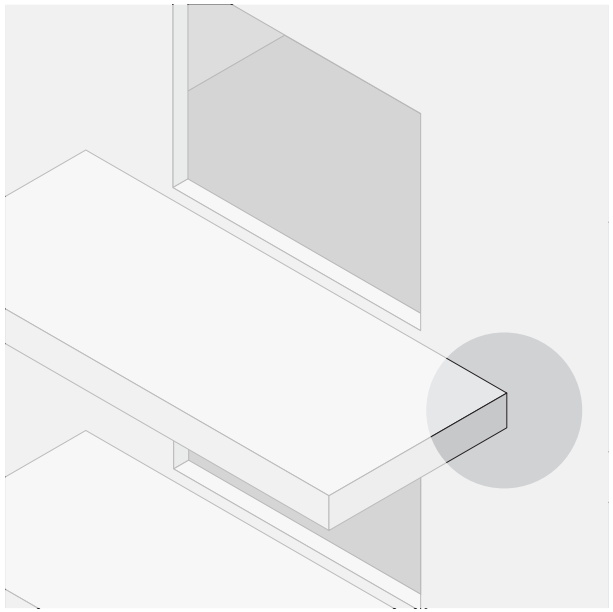
Inset Balcony



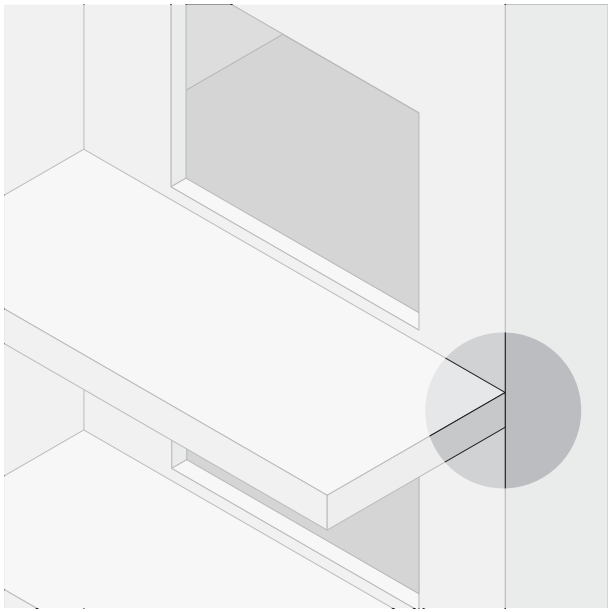
Inset Balcony: Flush with Adjacent Wall



Cantilever Balcony



Cantilever Balcony: Flush with Adjacent Wall



Integration with a Balcony Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Wood-Frame Balcony with a Self-Adhered Balcony Waterproofing System

This method applies to the following products: DuPont™ Flashing Tape and DuPont™ StraightFlash™

NOTE: **Details not to scale**. Certain components enlarged for clarity.

STEP 1

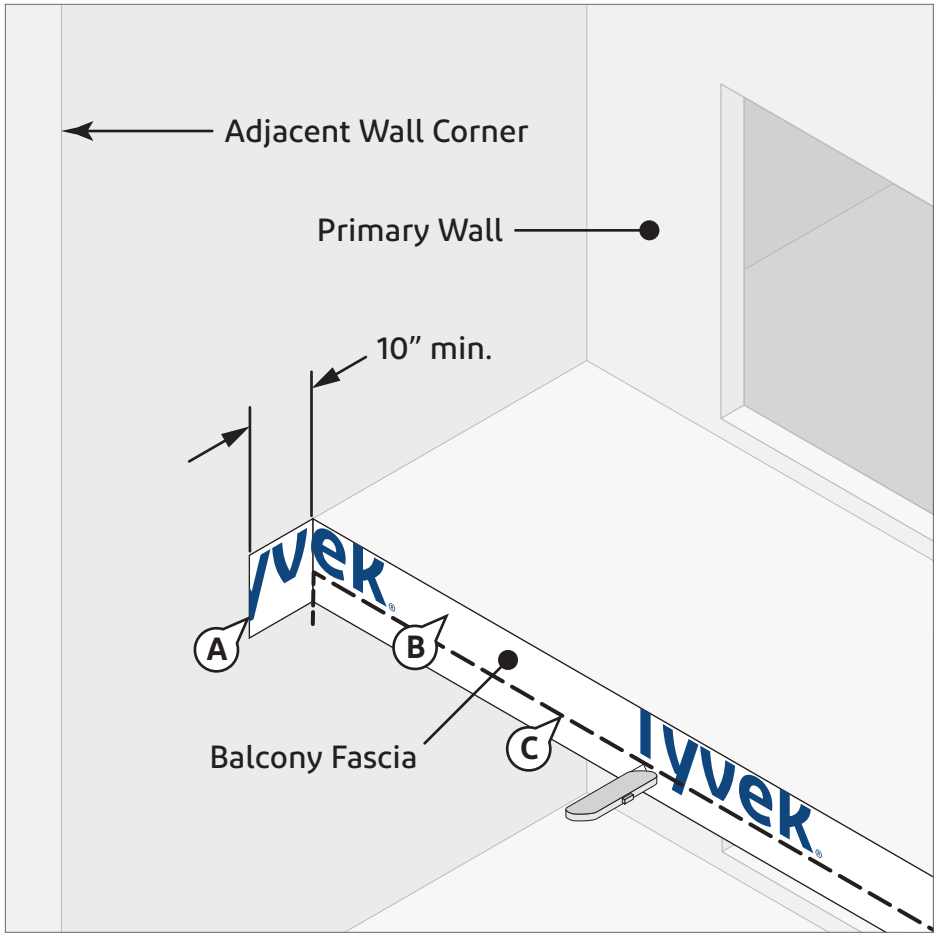
Preparation and Installation of Tyvek® WRB Balcony Fascia Strips

A. Cut **Tyvek® WRB** fascia strip long enough to extend at least 10" **BEYOND** the balcony-wall interface. Ensure **Tyvek® WRB** strip is cut wide enough to completely cover the balcony fascia framing.

B. Align **Tyvek® WRB** fascia strip to the top edge of the balcony fascia. Install fascia strip across the balcony fascia and onto the adjacent wall(s). Ensure fascia strip forms a tight 90 degree corner with adjacent wall to not affect corner flashing installation in later step .

NOTE: If using **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fasteners, avoid fastener placement where future **DuPont Self-Adhered Flashing Products**, **DuPont™ Tyvek® Tape**, corner flashing and/or balcony waterproofing membrane will be installed.

C. Trim the **Tyvek® WRB** strip flush with the balcony edge and remove excess if needed.



STEP 1 – ALTERNATE

DuPont Self-Adhered Flashing Products or self-adhered membrane by others (not shown) may be used to cover the balcony fascia in lieu of a **Tyvek® WRB** fascia strip.

If multiple pieces of self-adhered flashing are needed to cover the entire fascia depth, install* the bottom flashing prior to subsequent pieces, overlapping each by a minimum of 2" to ensure proper shingling for water drainage.

*Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

STEP 2

Installation of Corner Flashing at Balcony-Wall Interface

NOTE: For more robust **Tyvek® WRB** fascia strip terminations, follow the guidance in STEP 2 – ALTERNATE prior to installing corner flashing.

Option 1: When Using Self-Adhered Corner Flashing by Others

A. Install self-adhered corner flashing by others per flashing manufacturer's instructions.

NOTE: If applicable, ensure chemical compatibility of any sealants and/or mastics applied around the edges of the corner flashing that come in contact with the **Tyvek® WRB**.

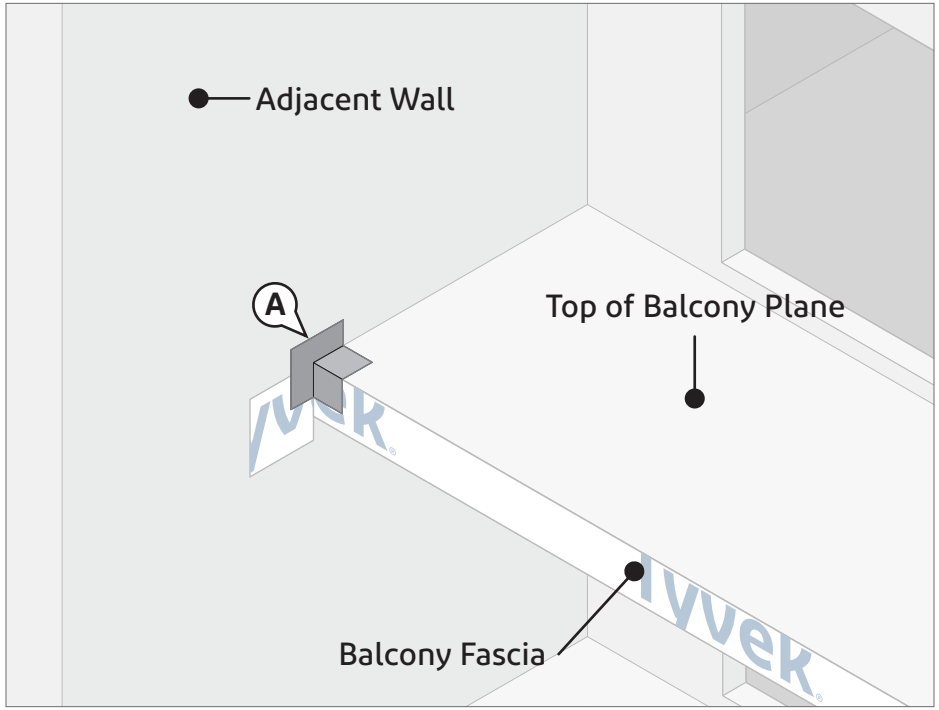
Option 2: When Using Prefabricated Metal Corner Flashing by Others

A. Install metal corner flashing by others per manufacturer's instructions.

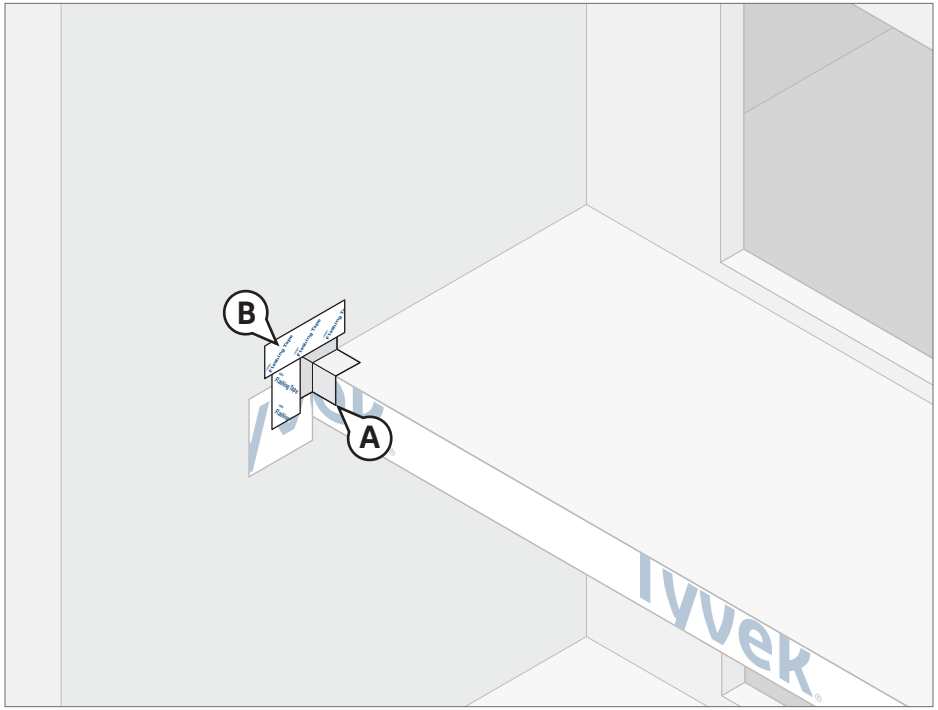
B. Terminate[1] the vertical followed by the horizontal sides of the metal flashing onto the adjacent wall using **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™**.

NOTE: For a more robust corner treatment, the metal flashing should be embedded in a chemically-compatible sealant[2] prior to the installation of the **DuPont Self-Adhered Flashing Product**.

NOTE: Termination with **DuPont Self-Adhered Flashing Products** is optional if waterproofing membrane installed in STEP 3 will extend minimum 2" past vertical and horizontal sides of corner flashing.



Option 1: Self-Adhered Corner Flashing (By Others)



Option 2: Prefabricated Metal Corner Flashing (By Others)

[1]Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal the **Tyvek® WRB** directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

[2]Refer to *Chemical Compatibility of Representative Building Sealants and Adhesives/Primers* for more information on chemical compatibility. DuPont recommends minimizing or removing excess sealant that may interfere with adhesion of **DuPont Self-Adhered Flashing Products**.

STEP 2 – ALTERNATE

Option 1: Tyvek® WRB Fascia Strip Termination on Exposed Sheathing

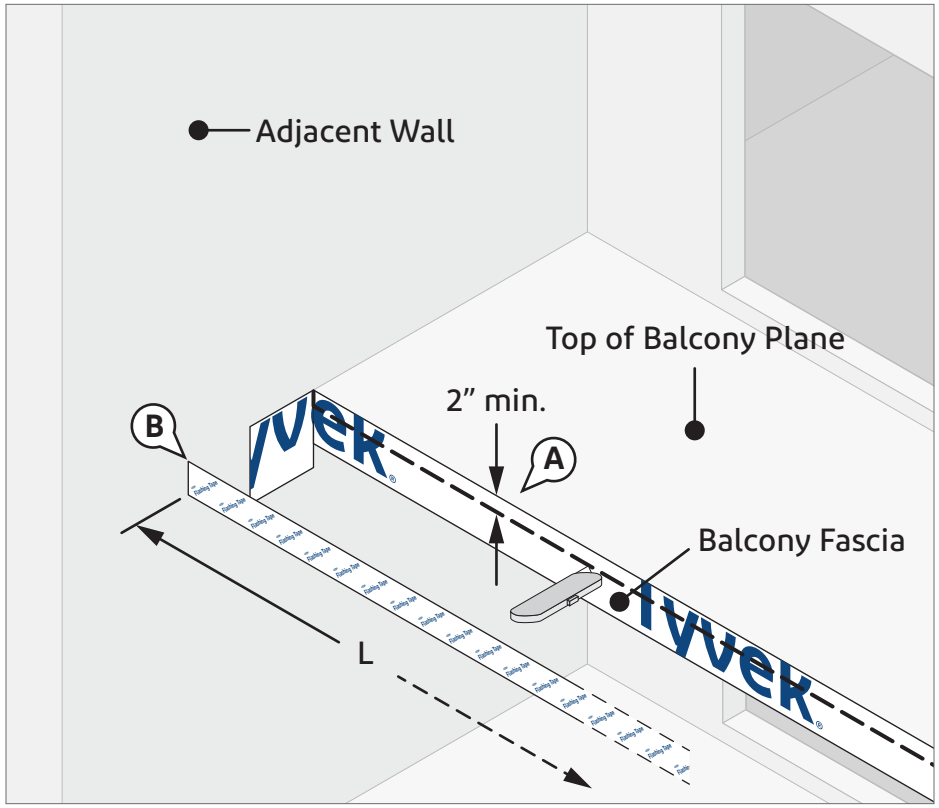
This optional method involves terminating the **Tyvek® WRB** fascia strip with a **DuPont Self-Adhered Flashing Product** onto exposed sheathing for a more robust termination. For additional termination methods for extended decking conditions (not shown), see the CAD details in the *Subfloor Decking Overhang Conditions* section of this document.

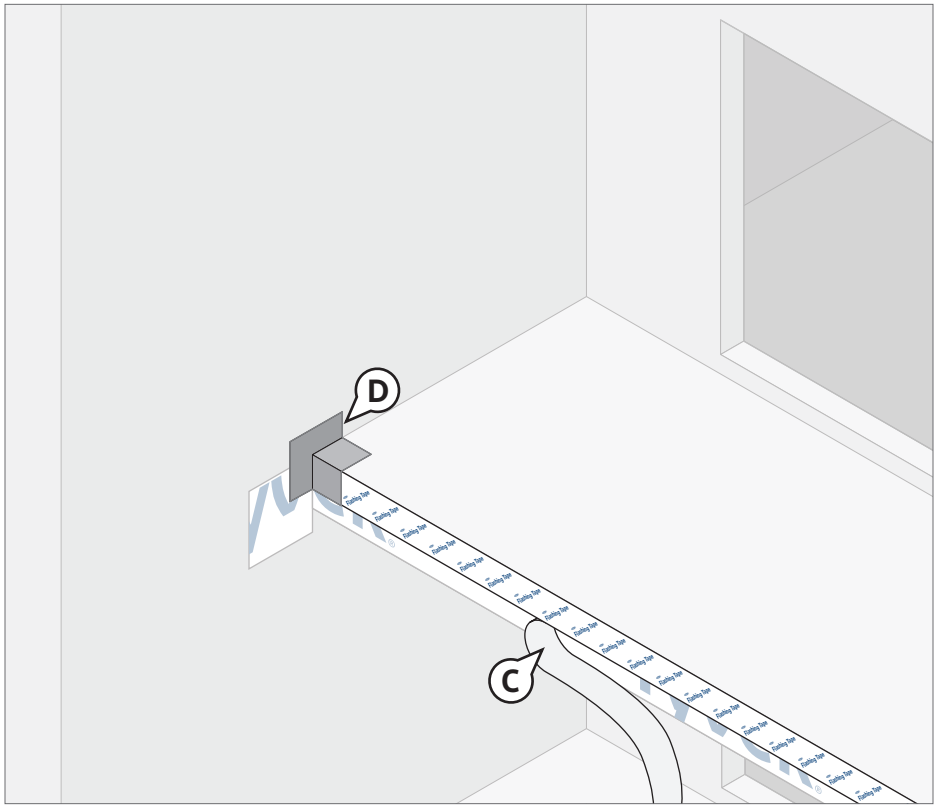
A. Trim the **Tyvek® WRB** fascia strip 2" from the top of the balcony edge to expose the sheathing underneath.

B. Cut **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™** the length (L) of the balcony fascia. Use a roll width sufficient to achieve a minimum of 2" adhesion onto the **Tyvek® WRB** fascia strip and a minimum 2" onto the exposed sheathing.

C. Remove the **DuPont Self-Adhered Flashing Product** release paper and terminate the **Tyvek® WRB** along the balcony fascia with the flashing, ensuring a minimum of 2" adhesion onto the **Tyvek® WRB** fascia strip, and a minimum of 2" onto the exposed sheathing*.

D. Install corner flashing per Option 1 or Option 2 of STEP 2.





*Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

STEP 2 – ALTERNATE

Option 2: Tyvek® WRB Fascia Strip Termination on Top of Balcony Plane

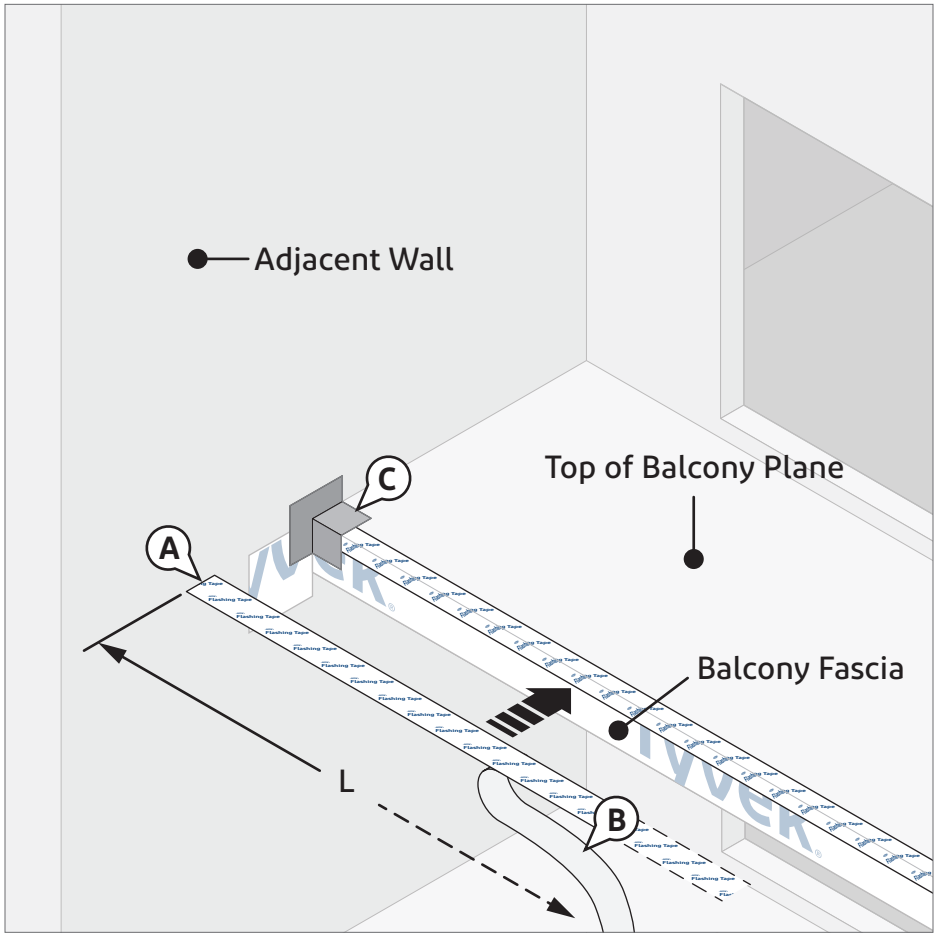
This optional method involves terminating the **Tyvek® WRB** fascia strip with a **DuPont Self-Adhered Flashing Product** onto the top of the balcony plan For additional termination methods for extended decking conditions (not shown), see the CAD details in the *Subfloor Decking Overhang Conditions* section of this document.

A. Cut **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™** the length (L) of the balcony fascia. Use a roll width sufficient to achieve a minimum of 2" adhesion onto the **Tyvek® WRB** fascia strip and a minimum of 2" **(maximum of 4")** adhesion onto the top of the balcony plane.

NOTE: Ensure that **DuPont Self-Adhered Flashing Products** installed on top of balcony plane do not interfere with installation of embedded railing attachment components or other membranes (if applicable).

B. Remove the **DuPont Self-Adhered Flashing Product** release paper and terminate* the **Tyvek® WRB** along the balcony fascia with the flashing, ensuring the correct amount of adhesion onto the fascia strip and top of the balcony plane as mentioned above.

C. Install corner flashing per Option 1 or Option 2 of STEP 2.



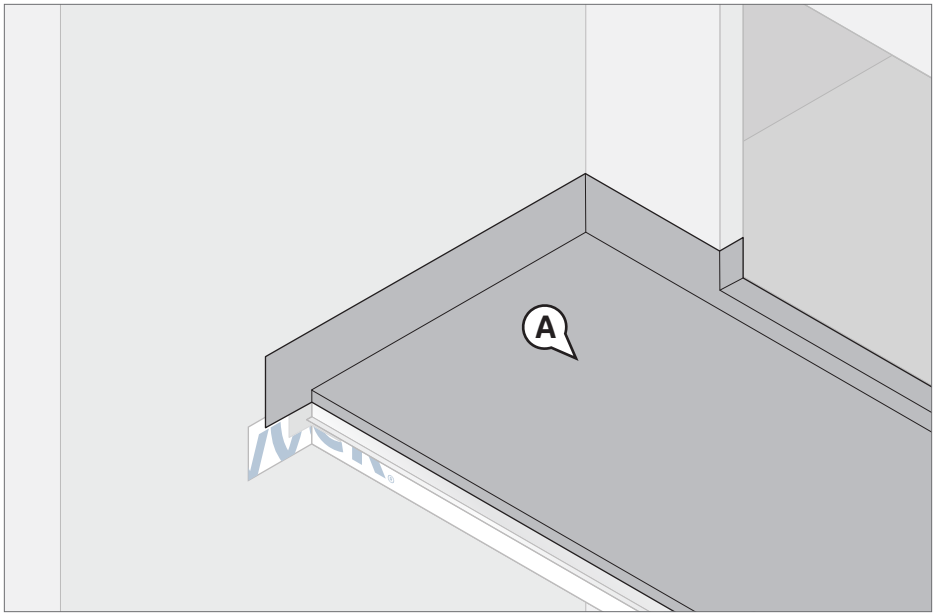
*Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

Integration with a Balcony Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Wood-Frame Balcony with a Self-Adhered Balcony Waterproofing System

STEP 3

Installation of Self-Adhered Waterproofing System (Over Drip Edge)

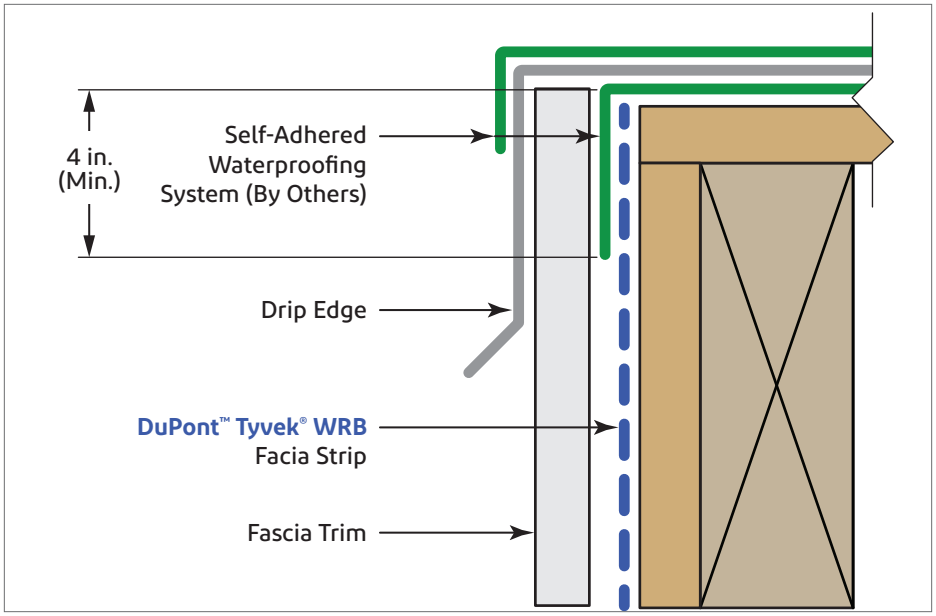
A. Install the self-adhered balcony waterproofing system per manufacturer's installation instructions and/or project plans and specifications.



Installation of Self-Adhered Balcony Waterproofing System (Over Fascia)

If the self-adhered waterproofing system will turn down vertically onto the balcony fascia, a minimum 4" overlap onto the **Tyvek® WRB** fascia strip is required.

If the self-adhered waterproofing system is **not** chemically-compatible with the **Tyvek® WRB**, the waterproofing system must terminate onto a **DuPont Self-Adhered Flashing Product** installed per STEP 2 – ALTERNATE. Ensure a minimum 2" overlap over the flashing (not shown).



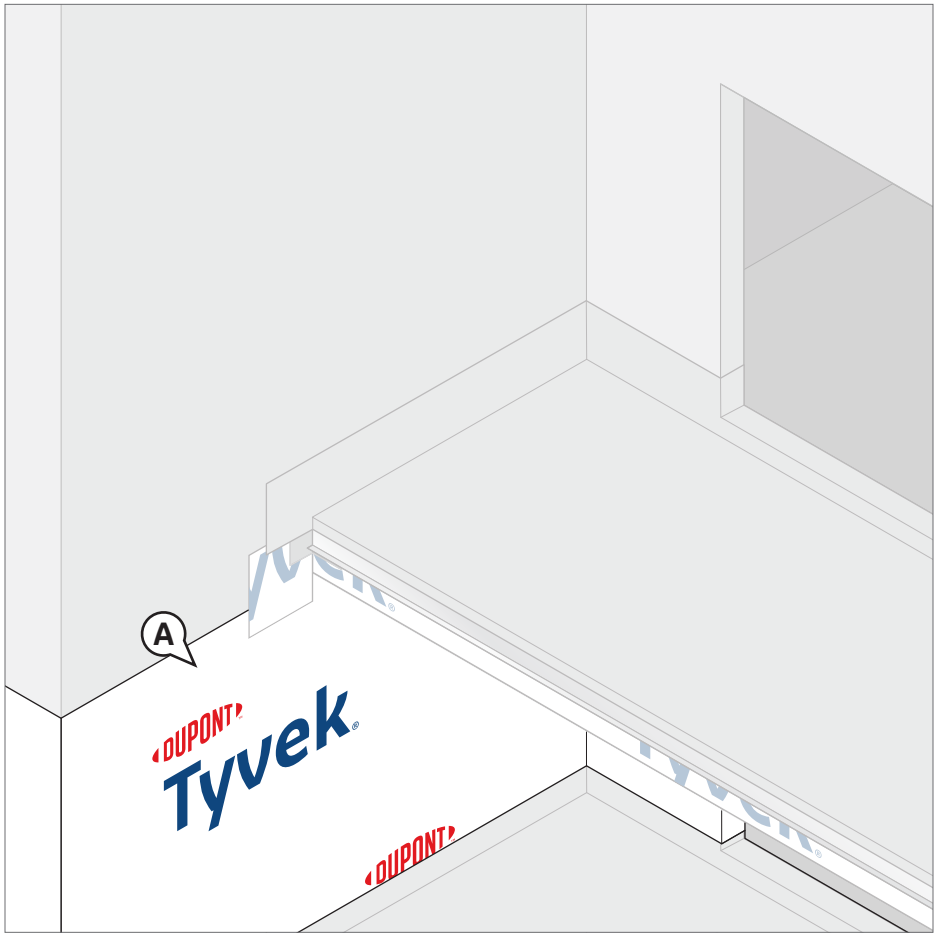
Integration with a Balcony Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Wood-Frame Balcony with a Self-Adhered Balcony Waterproofing System

STEP 4

Installation of the Tyvek® WRB

A. Install the lower course(s) of **Tyvek® WRB** starting below the balcony according to the *Tyvek® WRB Installation Instructions* in the applicable DuPont Installation Guideline found on building.dupont.com.

NOTE: For air barrier installation methods beneath the balcony, see the *Balcony Underside Air Barrier Installations* section.



Integration with a Balcony Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Wood-Frame Balcony with a Self-Adhered Balcony Waterproofing System

STEP 5

Installation of the Tyvek® WRB

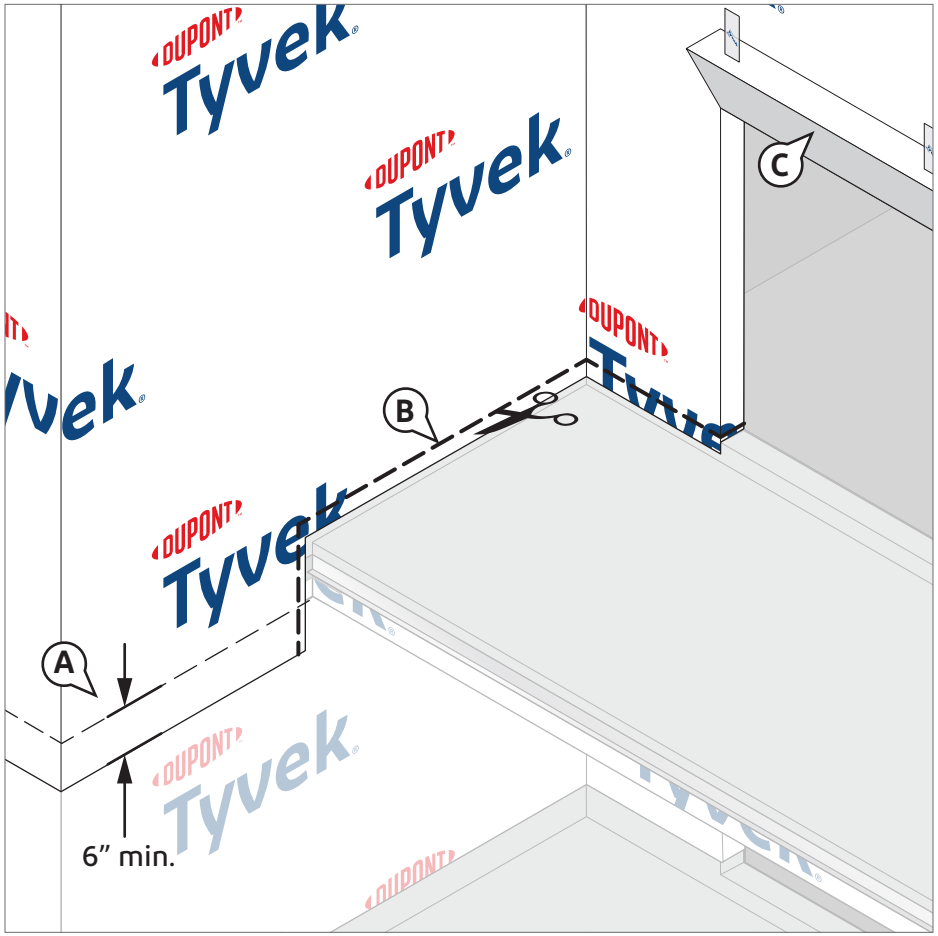
A. Install upper course(s) of **Tyvek® WRB** according to the *Tyvek® WRB Installation Instructions* in the applicable DuPont Installation Guideline. Maintain a minimum 6" overlap between courses.

NOTE: When using **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fasteners, avoid installing fasteners through balcony waterproofing membrane underneath. Refer to waterproofing manufacturer's guidance for any restrictions on fastener penetration through membrane.

B. Trim the **Tyvek® WRB** ~1" away from the edges of the balcony before taping the seams with **Tyvek® Tape**, **DuPont™ Flashing Tape**, or **DuPont™ StraightFlash™** in the next step. Do **NOT** cut through the previously installed **Tyvek® WRB**, flashing and/or waterproofing membrane underneath.

C. Prior to the installation of the balcony door (not shown), create an "I-Cut" or "O-Cut"/flush cut in the **Tyvek® WRB** and a head flap above the rough opening.

Refer to the applicable DuPont Installation Guidelines available at building.dupont.com for more information on the appropriate **Tyvek® WRB** preparation method based on the door type.



Integration with a Balcony Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Wood-Frame Balcony with a Self-Adhered Balcony Waterproofing System

STEP 6

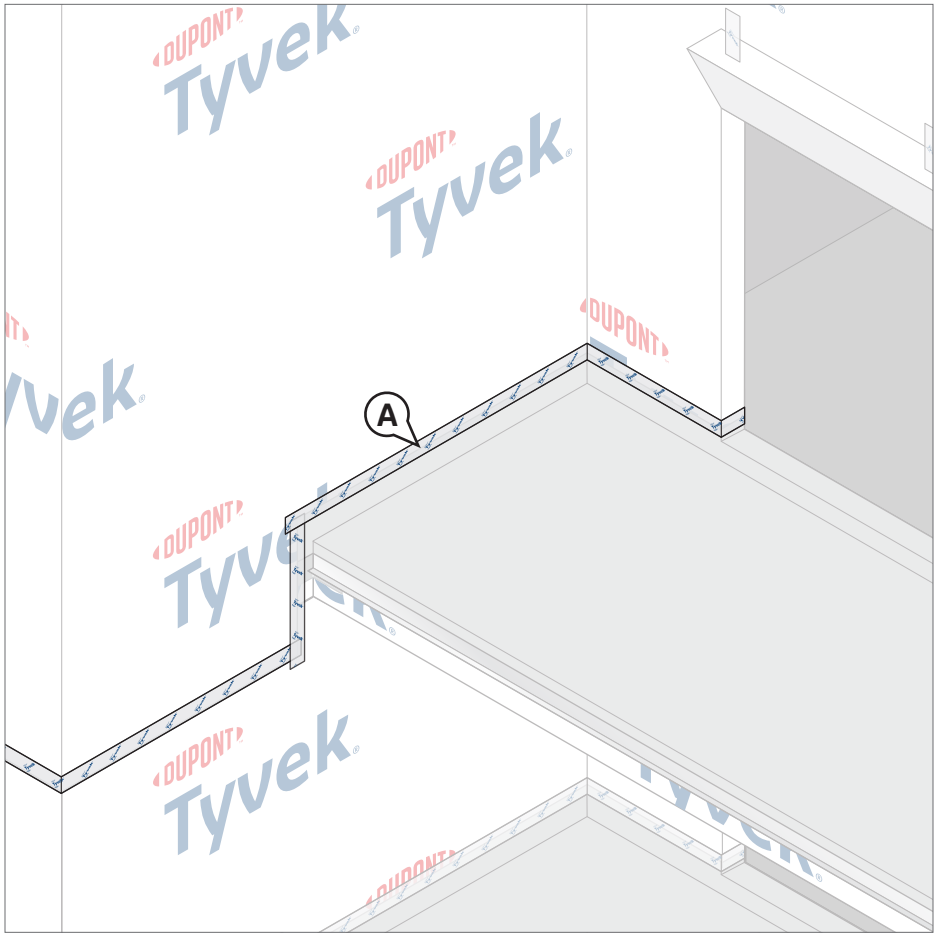
Final Step

NOTE: Concrete topping slab, T-bar and other balcony-related accessories not shown. Refer to manufacturer's instructions for installation requirements.

A. Tape seams of the **Tyvek® WRB** using **DuPont™ Tyvek® Tape**. If the **Tyvek® WRB** is not being installed as an air barrier, **Tyvek® Tape** is not required on horizontal seams, but is considered a recommended best practice. When installing as an air barrier, both the horizontal and vertical seams must be taped. To maintain proper shingling, tape vertical seams before taping horizontal seams.

NOTE: Use 3" **Tyvek® Tape** for the seams of **DuPont™ Tyvek® StuccoWrap®**, **Tyvek® DrainWrap™**, and **Tyvek® CommercialWrap® D**. The grooves on these **Tyvek® WRBs must** be installed vertically.

NOTE: **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™** may be required to obtain a more robust termination onto the self-adhered waterproofing system.



Integration with a Balcony Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Wood-Frame Balcony with a Fluid-Applied Balcony Waterproofing System

This method applies to the following products: DuPont™ StraightFlash™ and DuPont™ Flashing Tape

NOTE: **Details not to scale**. Certain components enlarged for clarity.

STEP 1

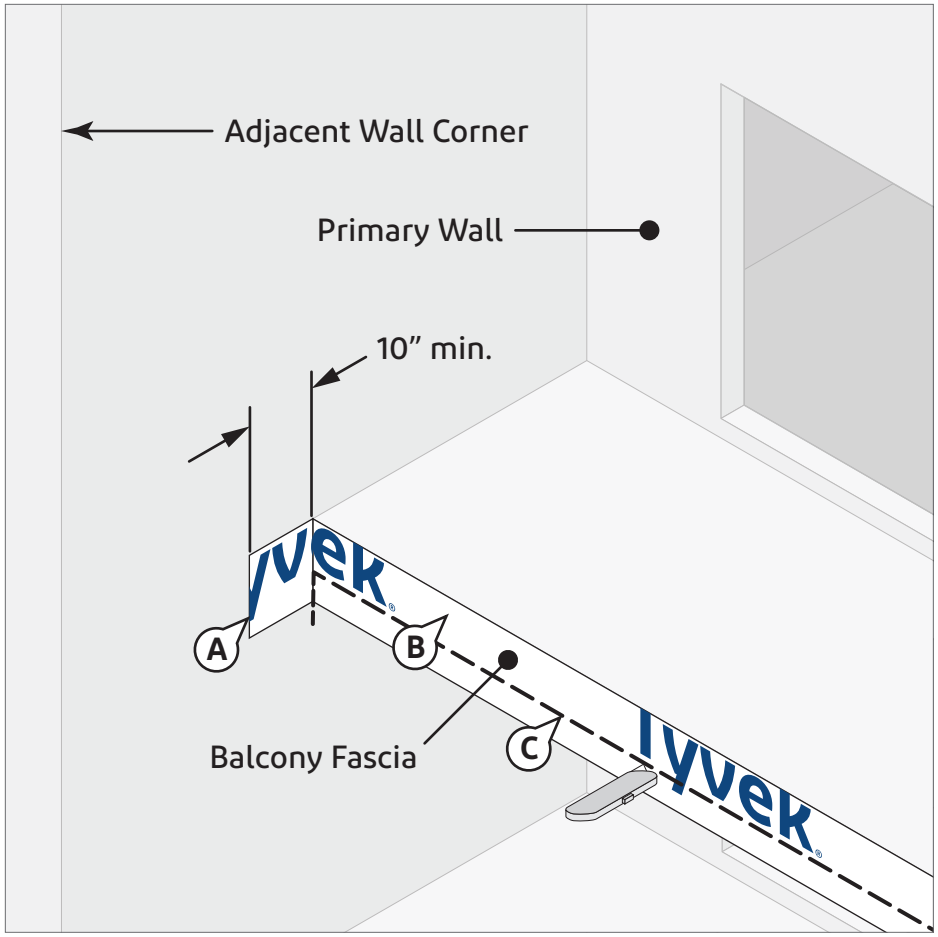
Preparation and Installation of Tyvek® WRB Balcony Fascia Strips

A. Cut **Tyvek® WRB** fascia strip long enough to extend at least 10" **BEYOND** the balcony-wall interface. Ensure **Tyvek® WRB** strip is cut wide enough to completely cover the balcony fascia framing.

B. Align **Tyvek® WRB** fascia strip to the top edge of the balcony fascia. Install fascia strip across the balcony fascia and onto the adjacent wall(s). Ensure fascia strip forms a tight 90 degree corner with adjacent wall to not affect corner flashing installation in later step .

NOTE: If using **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fasteners, avoid fastener placement where future **DuPont Self-Adhered Flashing Products**, **DuPont™ Tyvek® Tape**, corner flashing and/or balcony waterproofing membrane will be installed.

C. Trim the **Tyvek® WRB** strip flush with the balcony edge and remove excess if needed.



STEP 1 – ALTERNATE

StraightFlash™ or self-adhered membrane by others (not shown) may be used to cover the balcony fascia in lieu of a **Tyvek® WRB** fascia strip.

If multiple pieces of **StraightFlash™** are needed to cover the entire fascia depth, install* the bottom flashing prior to subsequent pieces, overlapping each by a minimum of 2" to ensure proper shingling for water drainage.

*Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

Integration with a Balcony Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Wood-Frame Balcony with a Fluid-Applied Balcony Waterproofing System

STEP 2

Option 1: Tyvek® WRB Fascia Strip Termination on Exposed Sheathing

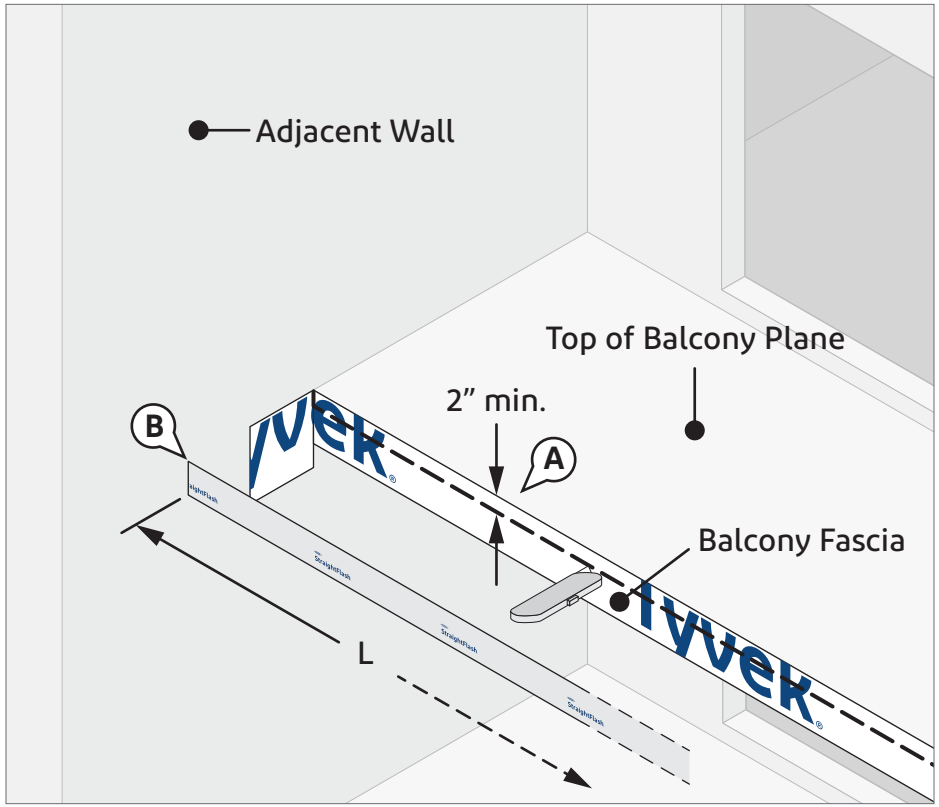
NOTE: This step is not required if the fluid-applied waterproofing membrane will have no direct contact with the Tyvek® WRB fascia strip.

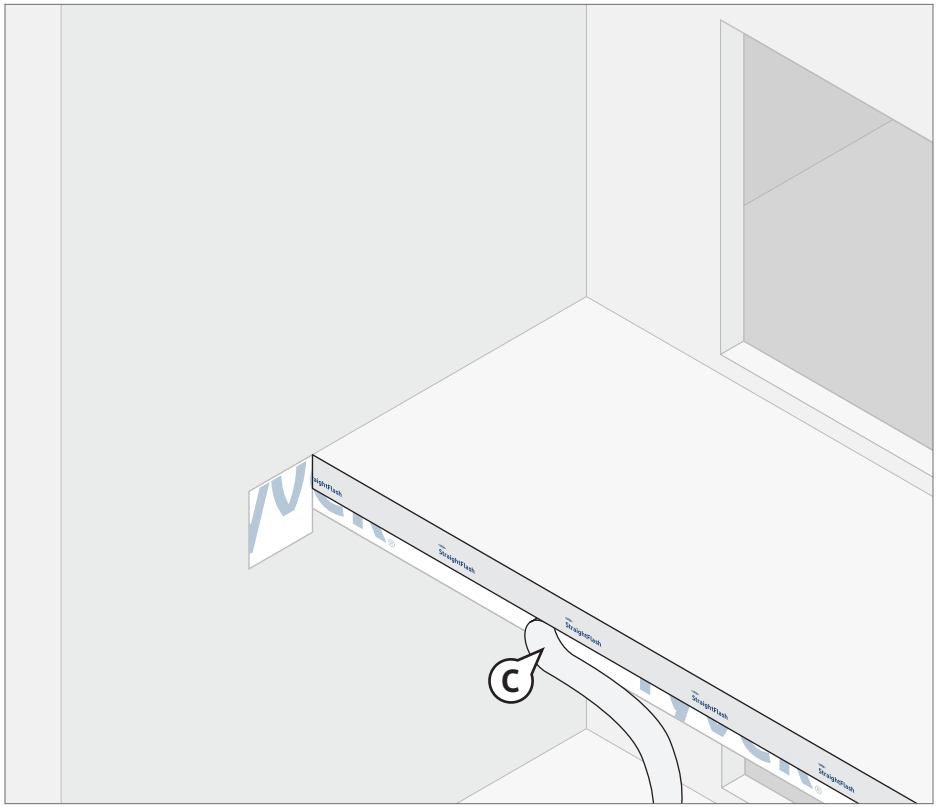
This method involves terminating the **Tyvek® WRB** fascia strip with **DuPont™ StraightFlash™** onto exposed sheathing. For additional termination methods for extended decking conditions (not shown), see the CAD details in the *Subfloor Decking Overhang Conditions* section of this document.

A. Trim the **Tyvek® WRB** fascia strip 2" from the top of the balcony edge to expose the sheathing underneath.

B. Cut **StraightFlash™** the length (L) of the balcony fascia. Use a roll width sufficient to achieve a minimum of 2" adhesion onto the **Tyvek® WRB** fascia strip and a minimum 2" onto the exposed sheathing.

C. Remove the **StraightFlash™** release paper and terminate the **Tyvek® WRB** along the balcony fascia with the flashing, ensuring a minimum of 2" adhesion onto the **Tyvek® WRB** fascia strip, and a minimum of 2" onto the exposed sheathing*.





*Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

Integration with a Balcony Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Wood-Frame Balcony with a Fluid-Applied Balcony Waterproofing System

STEP 2

Option 2: Tyvek® WRB Fascia Strip Termination on Top of Balcony Plane

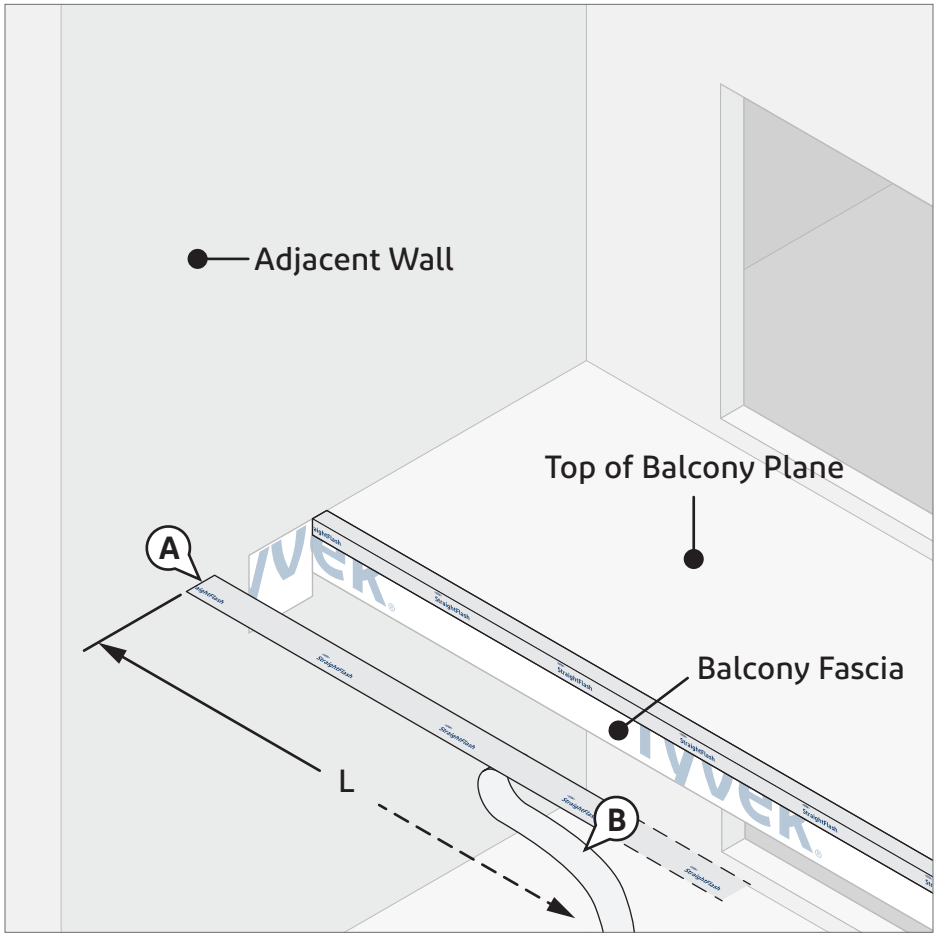
NOTE: This step is not required if the fluid-applied waterproofing membrane will have no direct contact with the Tyvek® WRB fascia strip.

This method involves terminating the **Tyvek® WRB** fascia strip with **DuPont™ StraightFlash™** onto the top of the balcony plane. For additional termination methods for extended decking conditions (not shown), see the CAD details in the *Subfloor Decking Overhang Conditions* section of this document.

A. Cut **StraightFlash™** the length (L) of the balcony fascia. Use a roll width sufficient to achieve a minimum of 2" adhesion onto the **Tyvek® WRB** fascia strip and a minimum of 2" **(maximum of 4")** adhesion onto the top of the balcony plane.

NOTE: Ensure that the **StraightFlash™** installed on top of balcony plane does not interfere with installation of embedded railing attachment components or other membranes (if applicable).

B. Remove the **StraightFlash™** release paper and terminate* the **Tyvek® WRB** along the balcony fascia with the flashing, ensuring the correct amount of adhesion onto the fascia strip and top of the balcony plane as mentioned above.



*Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

STEP 3

Installation of Corner Flashing at Balcony-Wall Interface

Option 1: When Using Self-Adhered Corner Flashing by Others

A. Install self-adhered corner flashing by others per flashing manufacturer's instructions.

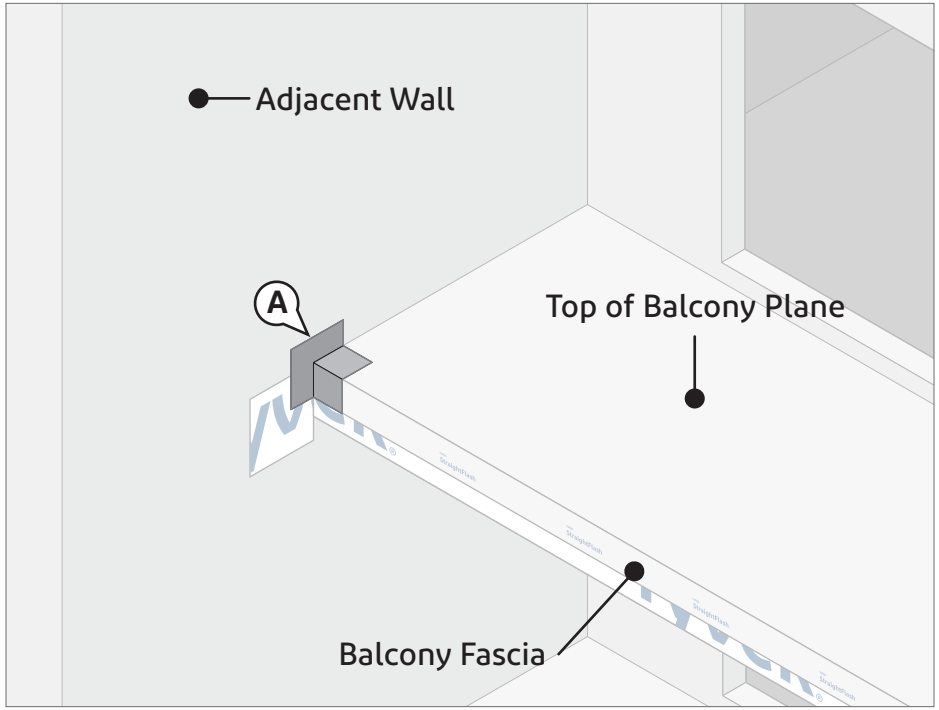
NOTE: If applicable, ensure chemical compatibility of any sealants and/or mastics applied around the edges of the corner flashing that come in contact with the **Tyvek® WRB**.

Option 2: When Using Prefabricated Metal Corner Flashing by Others

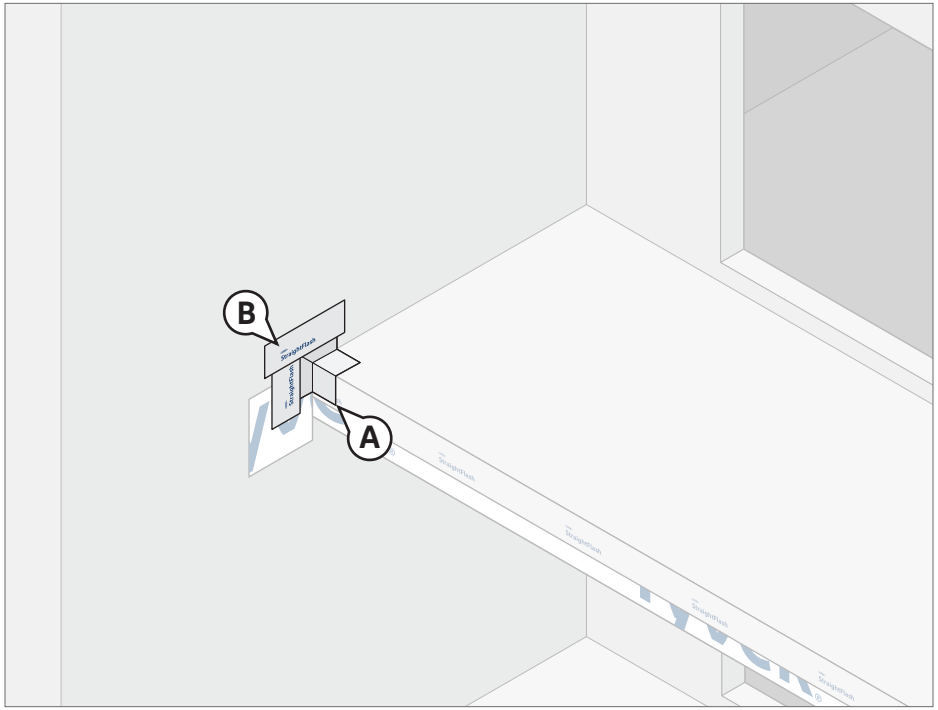
A. Install metal corner flashing by others per manufacturer's instructions.

B. Terminate the vertical followed by the horizontal sides of the metal flashing onto the adjacent wall[1] using **DuPont™ StraightFlash™**.

NOTE: For a more robust corner treatment, the metal flashing should be embedded in a chemically-compatible sealant[2] prior to the installation of the **DuPont™ StraightFlash™**.



Option 1: Self-Adhered Corner Flashing (By Others)



Option 2: Prefabricated Metal Corner Flashing (By Others)

[1]Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal the **Tyvek® WRB** directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

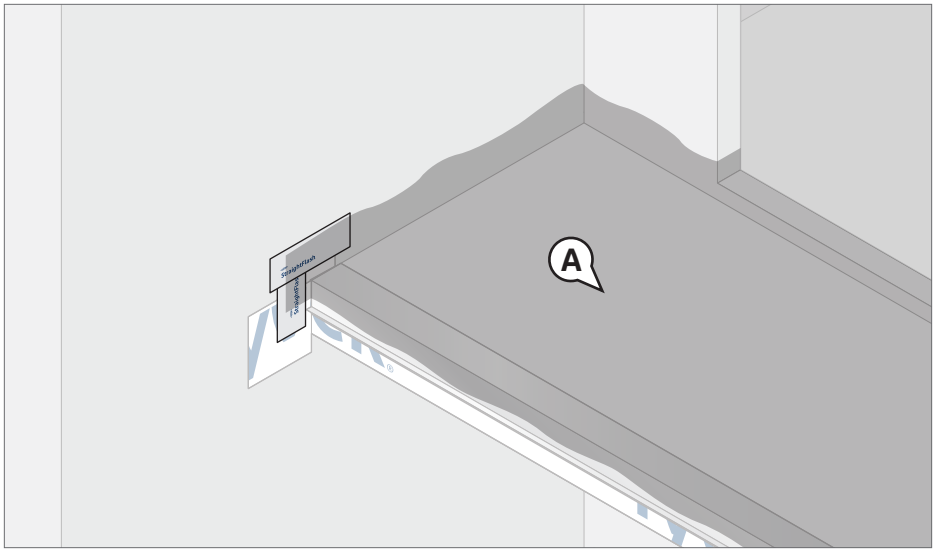
[2]Refer to *Chemical Compatibility of Representative Building Sealants and Adhesives/Primers* for more information on chemical compatibility. DuPont recommends minimizing or removing excess sealant that may interfere with adhesion of **DuPont Self-Adhered Flashing Products**.

Integration with a Balcony Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Wood-Frame Balcony with a Fluid-Applied Balcony Waterproofing System

STEP 4

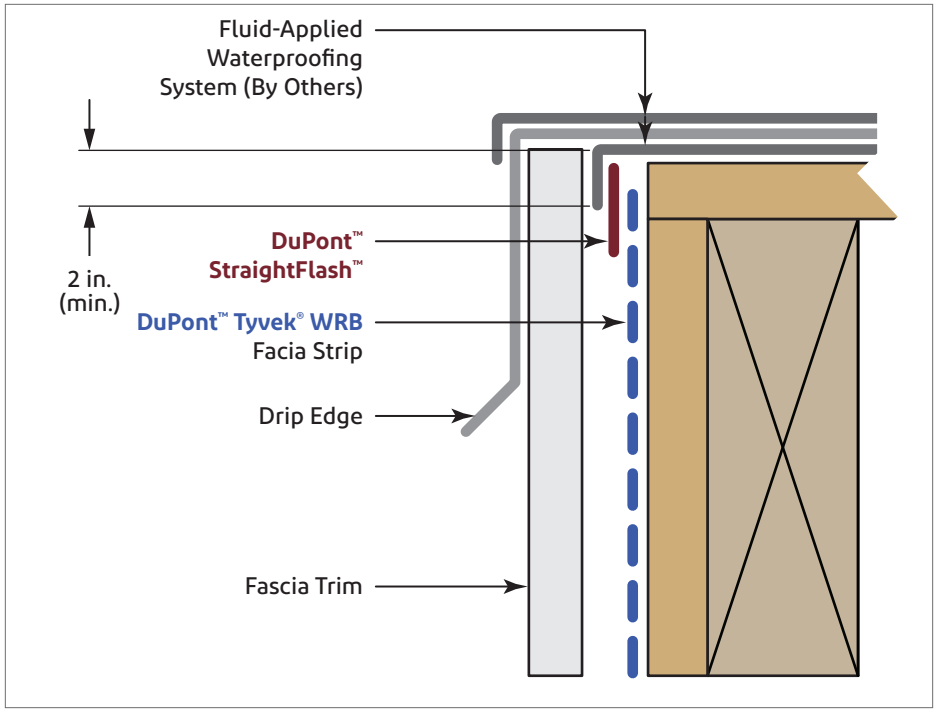
Installation of Fluid-Applied Balcony Waterproofing System (Over Drip Edge)

A. Install the fluid-applied balcony waterproofing system per manufacturer's installation instructions and/or project plans and specifications. **DO NOT INSTALL** directly onto the **Tyvek® WRB**.



Installation of Fluid-Applied Balcony Waterproofing System (Over Fascia)

NOTE: If the fluid-applied waterproofing system will turn down vertically onto the balcony fascia, it must terminate 2" onto the **DuPont™ StraightFlash™** installed per STEP 2.



Integration with a Balcony Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Wood-Frame Balcony with a Fluid-Applied Balcony Waterproofing System

STEP 5

Transitioning Tyvek® WRB over Fluid-Applied Waterproofing

NOTE: **Tyvek® WRB must not come in contact with other manufacturer's cured or uncured fluid-applied waterproofing products due to potential impact on performance properties**. Refer to Option 1 or Option 2 below for transition options.

Option 1: Transitions Using Metal Flashing[1]

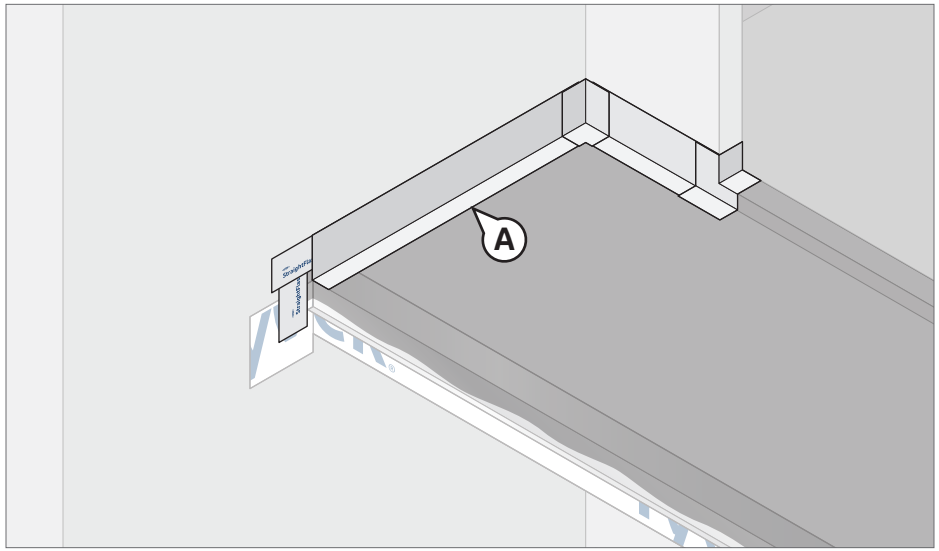
A. Install metal flashing along the interior corner and over the previously-installed corner flashing. Embed in compatible sealant[2] as needed in locations along the wall.

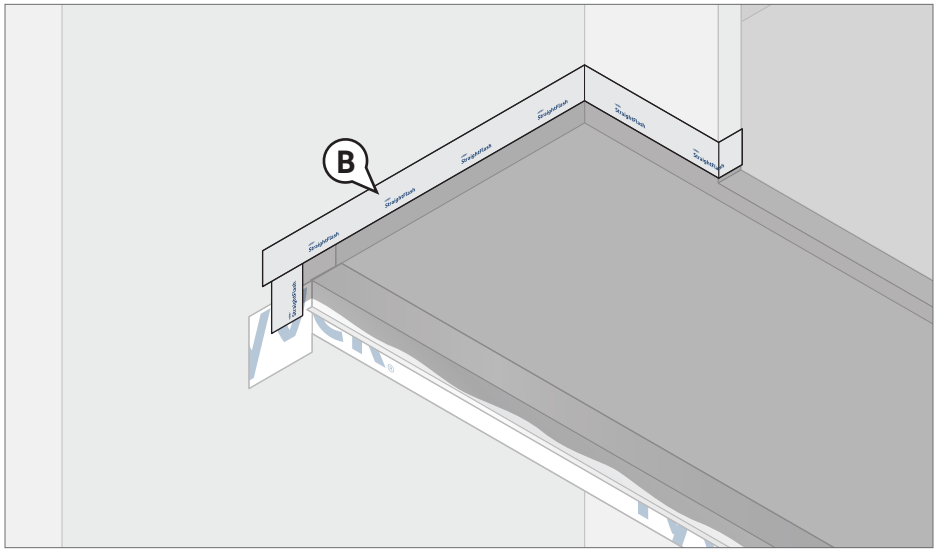
B. **Optional**: Use **StraightFlash™** or **DuPont™ Flashing Tape** to terminate[3] along the horizontal edge of the metal flashing used at the interface.

Option 2: Transitions Using DuPont Self-Adhered Flashing Products

A. Cut **StraightFlash™** or **DuPont™ Flashing Tape** long enough to extend minimum 1" **BEYOND** the existing corner flashing piece.

B. Position and install[3] the **DuPont Self-Adhered Flashing Products** to ensure a minimum 2" overlap onto the waterproofing membrane on the wall, and minimum 2" onto the exposed sheathing above.





[1]While metal flashing is shown, the balcony flashing material used may vary based on project specifications.

[2]Refer to *Chemical Compatibility of Representative Building Sealants and Adhesives/Primers* for more information on chemical compatibility. DuPont recommends minimizing or removing excess sealant that may interfere with adhesion of **DuPont Self-Adhered Flashing Products**.

[3]Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

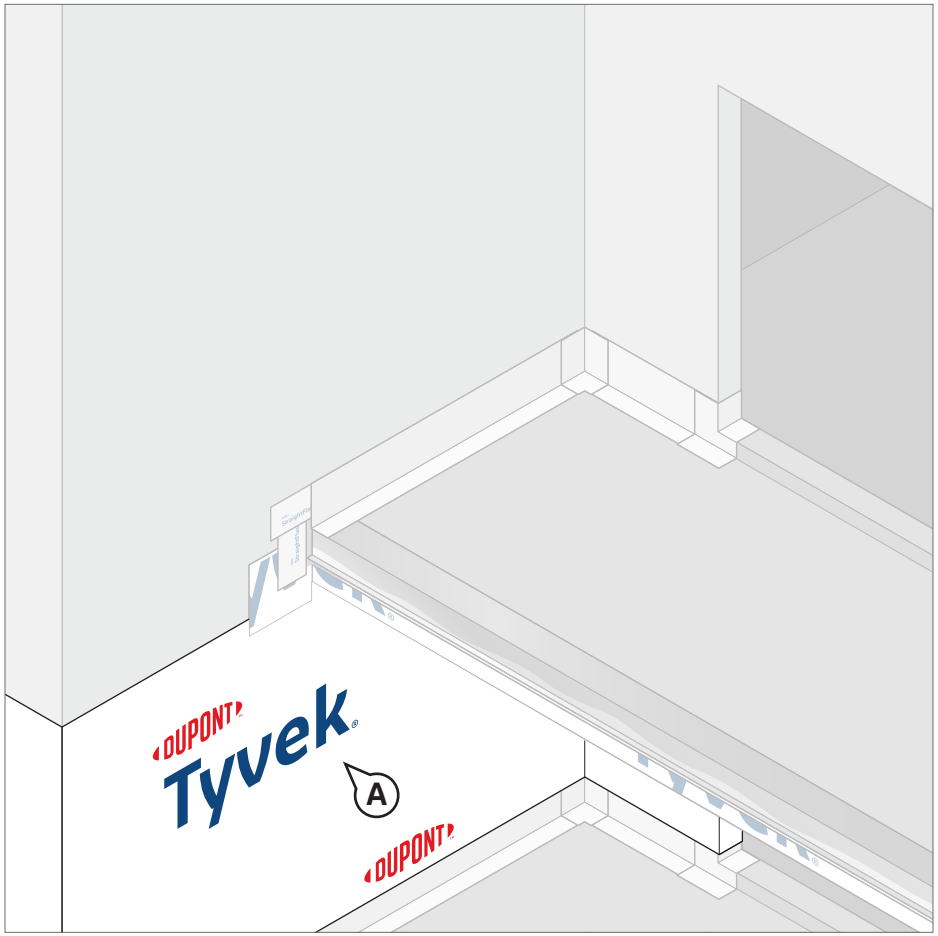
Integration with a Balcony Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Wood-Frame Balcony with a Fluid-Applied Balcony Waterproofing System

STEP 6

Installation of the Tyvek® WRB

A. Install the lower course(s) of **Tyvek® WRB** starting below the balcony according to the *Tyvek® WRB Installation Instructions* in the applicable DuPont Installation Guideline found on building.dupont.com.

NOTE: For air barrier installation methods beneath the balcony, see the *Balcony Underside Air Barrier Installations* section.



Integration with a Balcony Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Wood-Frame Balcony with a Fluid-Applied Balcony Waterproofing System

STEP 7

Installation of the Tyvek® WRB

A. Install upper course(s) of **Tyvek® WRB** according to the *Tyvek® WRB Installation Instructions* in the applicable DuPont Installation Guideline. Maintain a minimum 6" overlap between courses.

NOTE: When using **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fasteners, avoid installing fasteners through balcony waterproofing membrane underneath. Refer to waterproofing manufacturer's guidance for any restrictions on fastener penetration through membrane.

B. Trim the **Tyvek® WRB** along the edge of the balcony based on the transition method used in STEP 5:

Option 1: For Transitions Using Metal Flashing[1]

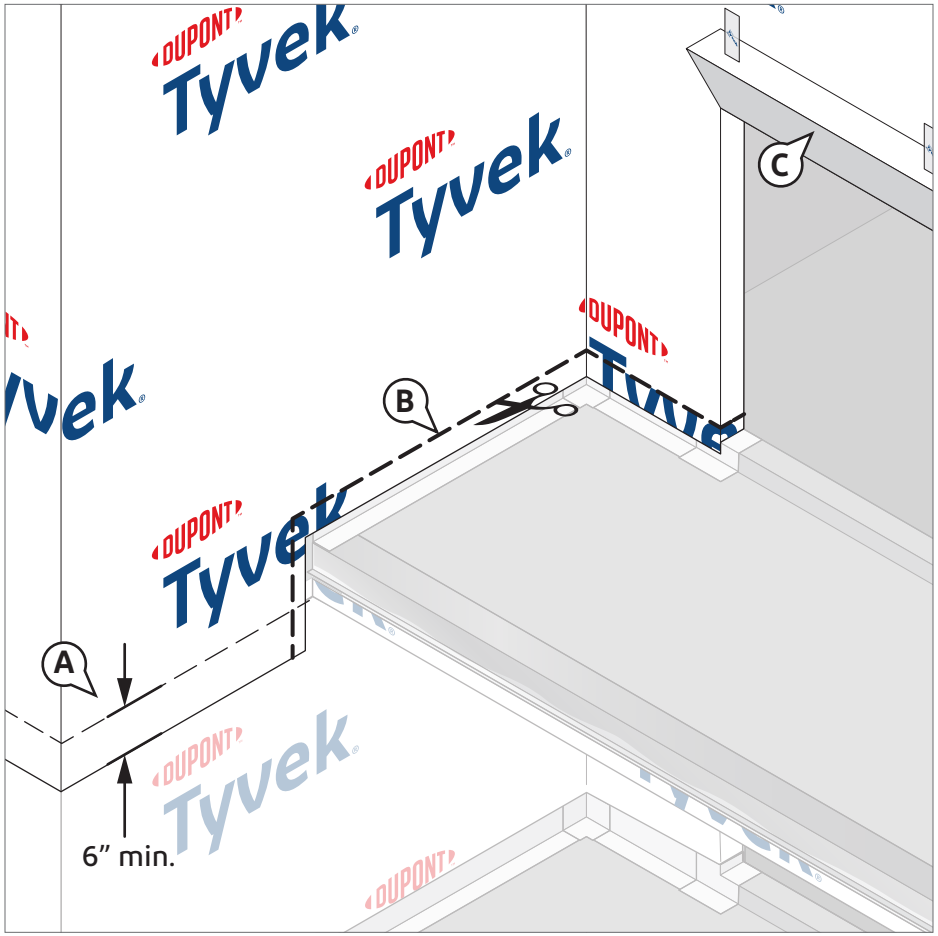
Trim the **Tyvek® WRB** ~1" away from the edge of the balcony. Do **NOT** cut through the previously installed **Tyvek® WRB** or flashing underneath.

Option 2: For Transitions Using DuPont Self-Adhered Flashing Products

Trim the **Tyvek® WRB** ~3 away from the edge of the balcony, or as needed to ensure **Tyvek® WRB** does **NOT** come in contact with waterproofing membrane installed up the wall. Do **NOT** cut through the previously installed **Tyvek® WRB** or flashing underneath.

C. Prior to the installation of the balcony door (not shown), create an "I-Cut" or "O-Cut"/flush cut in the **Tyvek® WRB** and a head flap above the rough opening.

Refer to the applicable DuPont Installation Guidelines available at building.dupont.com for more information on the appropriate **Tyvek® WRB** preparation method based on the door type.



[1]While metal flashing is shown, the balcony flashing material used may vary based on project specifications.

Integration with a Balcony Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Wood-Frame Balcony with a Fluid-Applied Balcony Waterproofing System

STEP 8

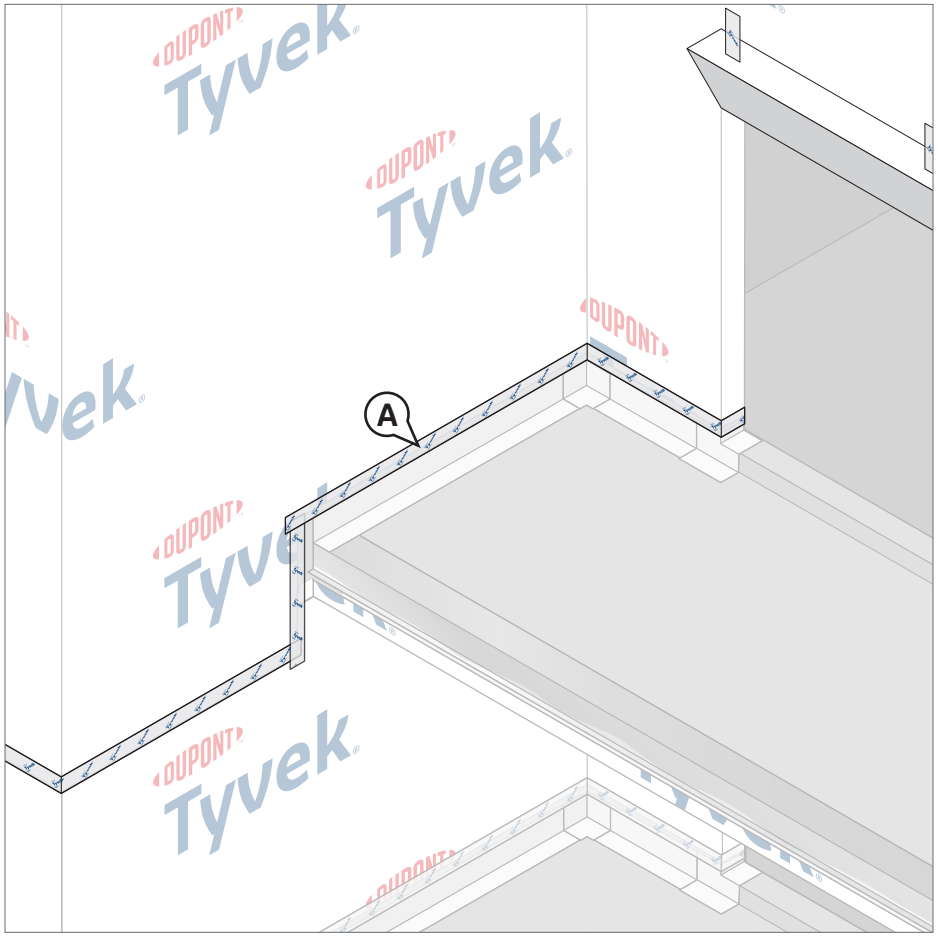
Final Step

NOTE: Concrete topping slab, T-bar and other balcony-related accessories not shown. Refer to manufacturer's instructions for installation requirements.

A. Tape seams of the **Tyvek® WRB** using **DuPont™ Tyvek® Tape**. If the **Tyvek® WRB** is not being installed as an air barrier, **Tyvek® Tape** is not required on horizontal seams, but is considered a recommended best practice. When installing as an air barrier, both the horizontal and vertical seams must be taped. To maintain proper shingling, tape vertical seams before taping horizontal seams.

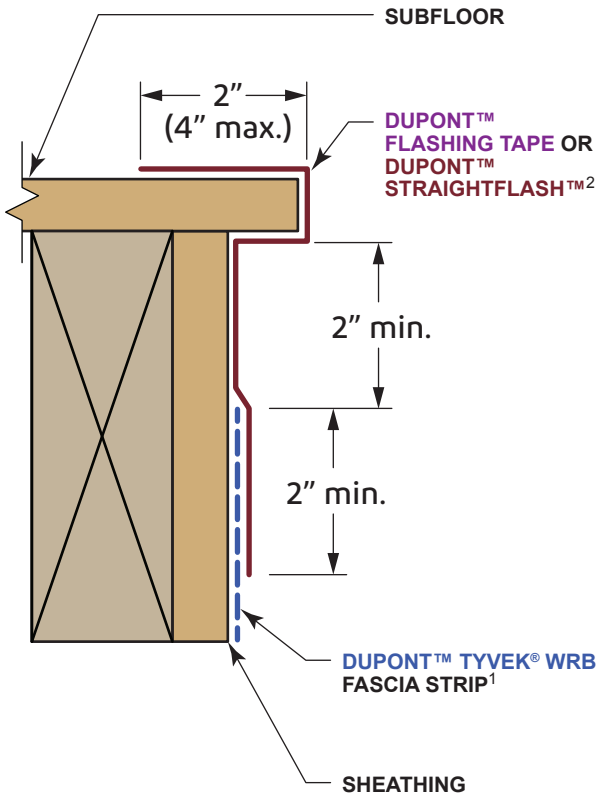
NOTE: Use 3" **Tyvek® Tape** for the seams of **DuPont™ Tyvek® StuccoWrap®**, **Tyvek® DrainWrap™**, and **Tyvek® CommercialWrap® D**. The grooves on these **Tyvek® WRBs must** be installed vertically.

NOTE: **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™** may be required to obtain a more robust termination onto metal flashing (if applicable).

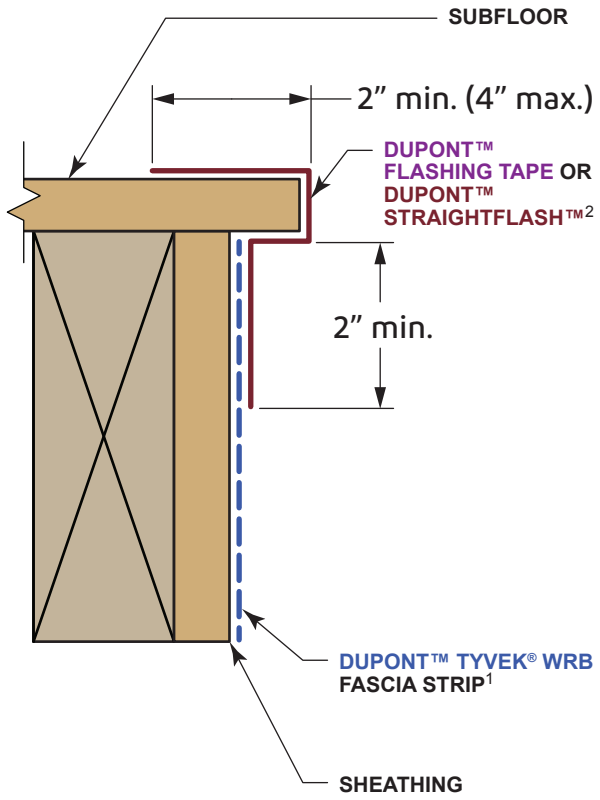


DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)
Subfloor Decking Overhang Conditions: Tyvek® WRB Fascia Strip Termination

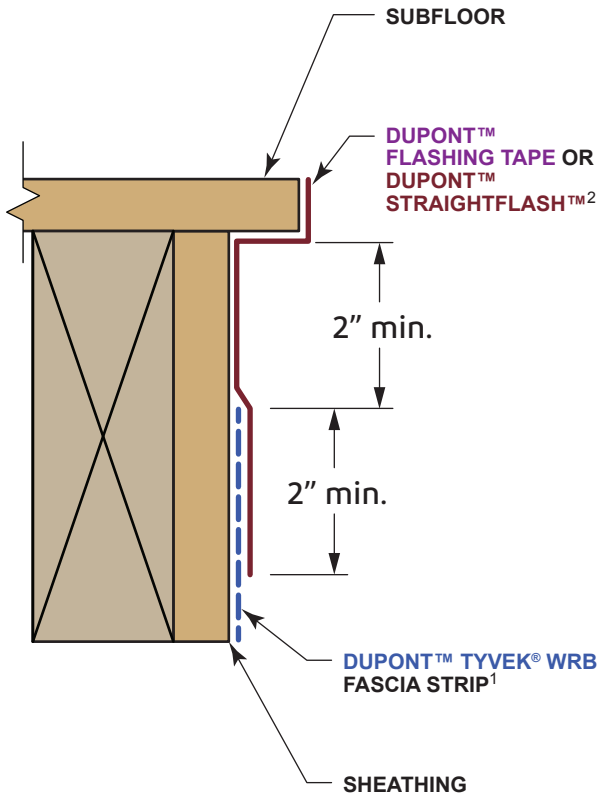
NOTE: **DuPont™ StraightFlash™ must be used** in lieu of **DuPont™ Flashing Tape** when using a fluid-applid waterproofing system that comes in direct contact with flashing topsheet.



OPTION 1 (SECTION VIEW)



OPTION 2 (SECTION VIEW)



OPTION 3 (SECTION VIEW)

[1] Avoid fastener placement where future **DuPont™ Tyvek® Tape** or **DuPont Self- Adhered Flashing Products** will be installed.

[2] Ensure that the **DuPont Self-Adhered Flashing Products** installed on top of balcony plane does not interfere with installation of embedded railing attachment components or other waterproofing membranes (if applicable). Metal edge flashing/drip edge are not shown.

NOTE: CAD details not to scale. For additional CAD details, visit building.dupont.com

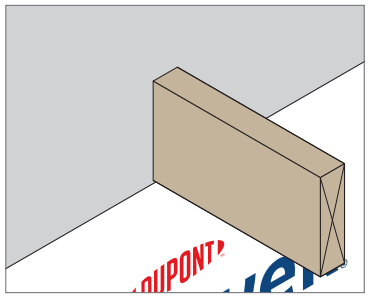
DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)

Flashing Beam/Truss Penetrations

Option 1: Using Pieces of Tyvek® WRB Around Single Framing Members

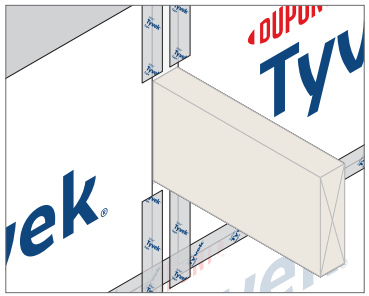
NOTE: A backing support made of solid OSB or wood sheathing must be installed around the framing before the **Tyvek® WRB** and **DuPont Self-Adhered Flashing Product** installation. **OPTIONAL**: **DuPont™ FlexWrap™ EZ** may be used in place of **DuPont™ FlexWrap™** (STEP 3) when the beam penetration rough opening is not more than 1/2" larger than the outside dimension of the beam.

NOTE: Ensure FlexWrap™/FlexWrap™ EZ will NOT be left exposed after the completion of the cladding.



STEP 1

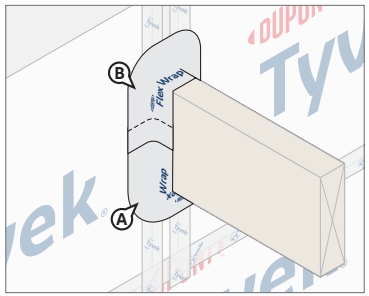
Install the first course of **Tyvek® WRB** so the top edge is flush with the bottom of the beam.



STEP 2

Cut pieces of **Tyvek® WRB** to fit around the beams. The pieces should extend a minimum of 7" above the beams and overlap the course below by a minimum of 6". Seal the vertical seams with **DuPont™ Tyvek® Tape**.

NOTE: For air barrier installations, seal all vertical and horizontal seams.

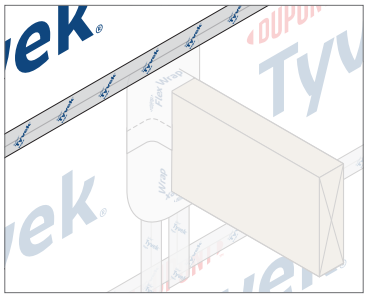


STEP 3

Seal around the beam using two pieces of 6" wide **FlexWrap™** (or **FlexWrap™ EZ** as captured in the note above).

A. Cut the first piece of **FlexWrap™** long enough to wrap around the bottom half of the beam. Break the perforation in the release paper by folding the **FlexWrap™** top sheet to the inside of the fold. With the **FlexWrap™** still folded, remove the narrow piece of release paper and adhere the exposed butyl to the bottom and up each side of the beam. Remove the remaining release paper and fan the **FlexWrap™** out onto the **Tyvek® WRB** on the face of the wall.

B. Cut the second piece of **FlexWrap™** long enough to wrap around the top half of the beam, overlapping the first piece of **FlexWrap™** on each side by 2". Install along the top of the beam and down each side, overlapping the lower piece of **FlexWrap™** by 2" using the method above.



STEP 4

Final Step

Install the top course of the **Tyvek® WRB**, overlapping the **Tyvek® WRB** below with a 1" gap above the beam. Tape all vertical seams with **Tyvek® Tape**.

NOTE: For air barrier installations, seal all vertical and horizontal seams.

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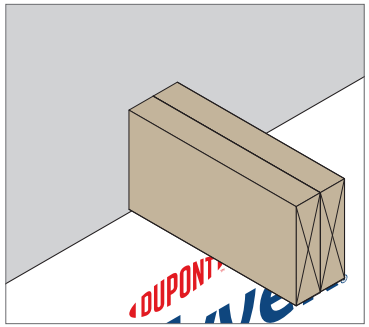
DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)

Flashing Beam/Truss Penetrations

Option 2: Using Pieces of Tyvek® WRB Around Multiple Framing Members

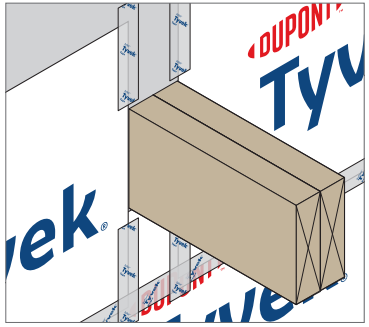
NOTE: A backing support made of solid OSB or wood sheathing must be installed around the framing before the **Tyvek® WRB** and **DuPont Self-Adhered Flashing Product** installation. **OPTIONAL**: **DuPont™ FlexWrap™ EZ** may be used in place of **DuPont™ FlexWrap™** (STEP 3) when the beam penetration rough opening is not more than 1/2" larger than the outside dimension of the beam.

NOTE: Ensure FlexWrap™/FlexWrap™ EZ will NOT be left exposed after the completion of the cladding.



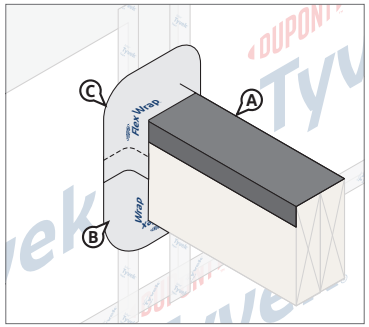
STEP 1

Install the first course of **Tyvek® WRB** so the top edge is flush with the bottom of the beams.



STEP 2

Cut pieces of **Tyvek® WRB** to fit around the beams. The pieces should extend a minimum of 7" above the beams and overlap the course below by a minimum of 6". Seal the vertical seams with **DuPont™ Tyvek® Tape**.
NOTE: For air barrier installations, seal all vertical and horizontal seams.

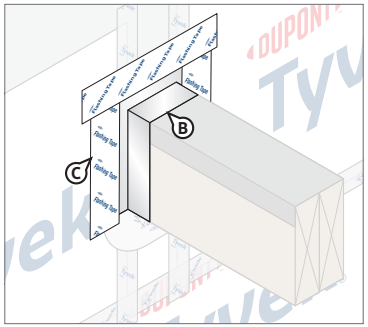


STEP 3

A. Install metal cap flashing or self-adhered beam/joist flashing (by others) along the length of the framing members per the manufacturer's installation instructions.

B. Cut a piece of **FlexWrap™** long enough to wrap around the bottom half of the beams. Break the perforation in the release paper by folding the **FlexWrap™** top sheet to the inside of the fold. With the **FlexWrap™** still folded, remove the narrow piece of release paper and adhere the exposed butyl to the bottom and up each side of the beams. Remove the remaining release paper and fan the **FlexWrap™** out onto the **Tyvek® WRB** on the face of the wall.

C. Cut the second piece of **FlexWrap™**[1] long enough to wrap around the top half of the beams, overlapping the first piece of **FlexWrap™** on each side by 2". Install along the top of the beams and down each side, overlapping the lower piece of **FlexWrap™** by 2" using the method above.



STEP 3 – ALTERNATE

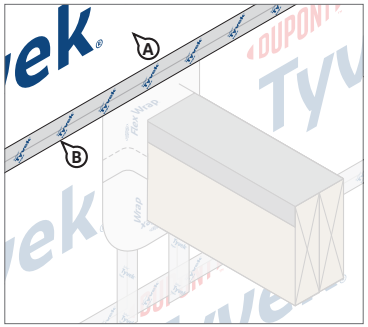
A. Follow Steps 3A and 3B.

NOTE: Follow Steps 3A–3C if installing **FlexWrap™** underneath the saddle flashing is desired.

B. Install saddle flashing (by others) over the beams at the wall intersection per the manufacturer's installation instructions.

NOTE: For a more robust treatment, saddle flashing may be embedded in a chemically-compatible sealant[2] prior to the installation of the **DuPont Self-Adhered Flashing Products** in the next step.

C. For metal saddle flashing only: Terminate the vertical followed by the horizontal sides of the flashing onto the wall using **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™**.



STEP 4

Final Step

A. Install upper course of the **Tyvek® WRB**, overlapping the **Tyvek® WRB** below with a 1" gap above the beams.

B. Tape all vertical seams with **DuPont™ Tyvek® Tape**.

NOTE: For air barrier installations, seal all vertical and horizontal seams.

[1]Ensure chemical compatibility and adequate adhesion of **FlexWrap™** to the topsheet of the self-adhered beam/joist flashing (by others).

[2]Refer to *Chemical Compatibility of Representative Building Sealants and Adhesives/Primers* for more information on chemical compatibility. DuPont recommends minimizing or removing excess sealant that may interfere with adhesion of **DuPont Self-Adhered Flashing Products**.

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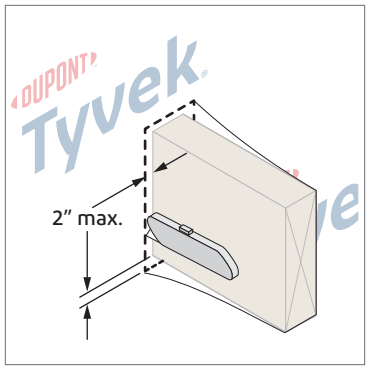
DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)

Flashing Beam/Truss Penetrations

Option 3: Tyvek® WRB Flap Created Above Framing Members

NOTE: A backing support made of solid OSB or wood sheathing must be installed around the framing before the **Tyvek® WRB** and **DuPont Self-Adhered Flashing Product** installation.

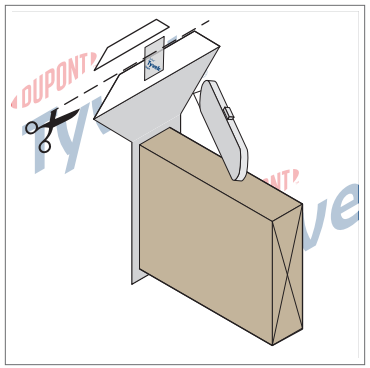
NOTE: Ensure DuPont™ FlexWrap™ will NOT be left exposed after the completion of the cladding.



STEP 1

Install the **Tyvek® WRB** over the beam and cut around the perimeter of the member.

NOTE: **Do NOT cut** the **Tyvek® WRB** more than 2" from the beam on all sides.

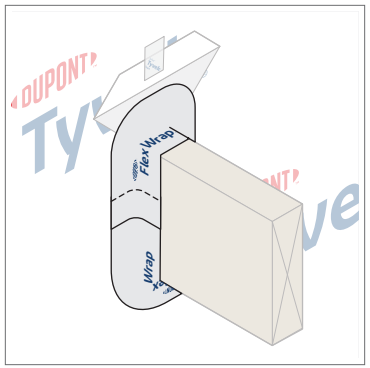


STEP 2

Cut a 45-degree slit a minimum of 8" extending from the corner of the beam, up and away from the corner. This will create a flap above the beam to expose the sheathing and allow for future installation of the **FlexWrap™** in STEP 3.

Cut a 1"– 2" strip of the **Tyvek® WRB** at lower horizontal edge of the head flap and temporarily secure with **DuPont™ Tyvek® Tape**.

ALTERNATE METHOD TO SECURE TYVEK® WRB FLAP. In lieu of temporarily taping the flap can be tucked under the **Tyvek® WRB**.

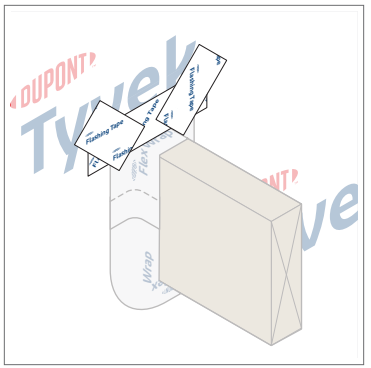


STEP 3

Seal around the beam using two pieces of 6" wide **FlexWrap™**.

Cut the first piece of **FlexWrap™** long enough to wrap around the bottom half of the beam. Break the perforation in the release paper by folding the **FlexWrap™** top sheet to the inside of the fold. With the **FlexWrap™** still folded, remove the narrow piece of release paper and adhere the exposed butyl to the bottom and up each side of the beam. Remove the remaining release paper and fan the **FlexWrap™** out onto the **Tyvek® WRB** on the face of the wall.

Cut the second piece of **FlexWrap™** long enough to wrap around the top half of the beam, overlapping the first piece of **FlexWrap™** on each side by 2". Install* along the top of the beam and down each side, overlapping the lower piece of **FlexWrap™** by 2" using the method above.



STEP 4

Final Step

Flip down the **Tyvek® WRB** flap.

Tape seams using **DuPont™ Flashing Tape**, **DuPont™ StraightFlash™**, or **Tyvek® Tape**.

NOTE: For a more robust head flap termination, seal with **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™**.

*Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather.

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DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)

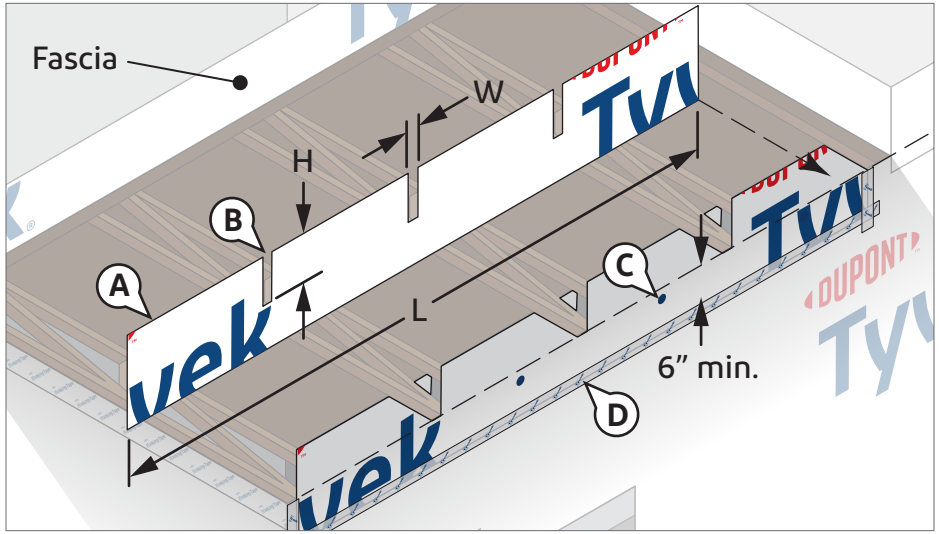
Balcony Underside Air Barrier Installations

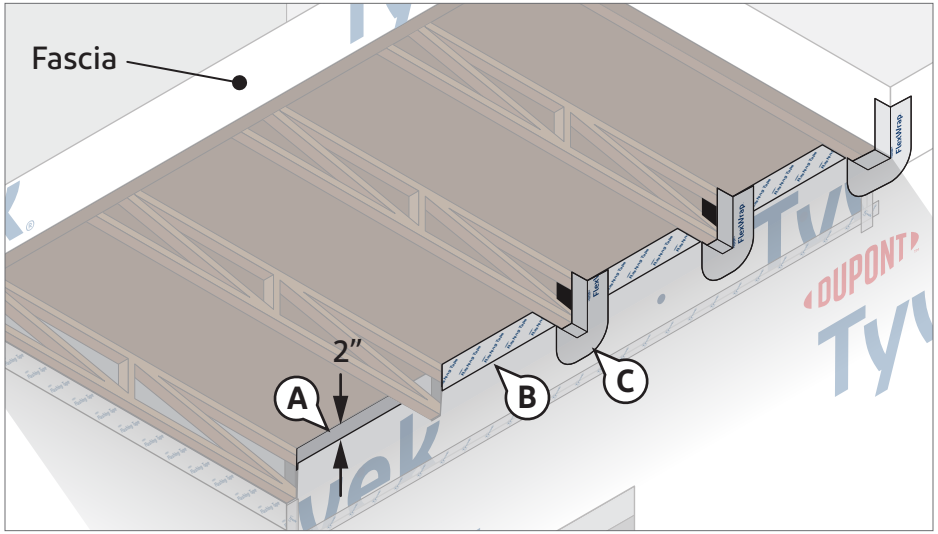
Option 1: Using a Single Piece of Tyvek® WRB Installed Between Beams/Trusses (Cantilevering Through Wall)

This option applies to air barrier installations where the **Tyvek® WRB** is installed directly underneath the balcony deck and between beams, joists, or trusses.

NOTE: A backing support made of solid OSB or wood sheathing must be installed around the framing before the **Tyvek® WRB** and **DuPont Self-Adhered Flashing Product** installation.

OPTIONAL: **DuPont™ FlexWrap™ EZ** may be used in place of **DuPont™ FlexWrap™** when the beam/truss penetration rough opening (RO) is not more than 1/2" larger than the outside dimension of the beam/truss.





STEP 1

Preparation and Installation of the Tyvek® WRB Piece

A. Cut a piece of **Tyvek® WRB** long enough to cover the area underneath the balcony deck (L). The piece should overlap the previously-installed **Tyvek® WRB** below by a minimum of 6" when installed.

B. Remove portions of the **Tyvek® WRB** based on the dimensions of the balcony beam/trusses. Cut out notches equal to the width (W) and the height (H) of each beam/truss to ensure the installed **Tyvek® WRB** piece fits around the framing.

C. Secure the **Tyvek® WRB** piece with **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fasteners.

NOTE: Avoid fastener placement where future **DuPont™ Tyvek® Tape** or **DuPont Self-Adhered Flashing Products** will be installed. Refer to the *Tyvek® WRB Installation Instructions* in the applicable DuPont Installation Guideline found on building.dupont.com.

D. Seal the horizontal then the vertical seams with **DuPont™ Tyvek® Tape**.

NOTE: Use 3" **Tyvek® Tape** for the seams of **DuPont™ Tyvek® StuccoWrap®**, **Tyvek® DrainWrap™**, and **Tyvek® CommercialWrap® D**. The grooves on these **Tyvek® WRBs must** be installed vertically.

STEP 2

A. Trim the **Tyvek® WRB** piece 2" **BELOW** the balcony deck to expose the sheathing.

B. Terminate the **Tyvek® WRB** piece onto the exposed wall sheathing* using **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™**. Ensure minimum 2" adhesion of the flashing to the **Tyvek® WRB** and minimum 2" adhesion onto the exposed wall sheathing.

C. Cut a piece of 6" wide **FlexWrap™** (or **FlexWrap™ EZ** as captured in the note above) long enough to wrap around the bottom half of the beam/truss. Break the perforation in the release paper by folding the **FlexWrap™** top sheet to the inside of the fold. With the **FlexWrap™** still folded, remove the narrow piece of release paper and adhere the exposed butyl to the bottom and up each side of the beam/truss. Remove the remaining release paper and fan out the **FlexWrap™** onto the **Tyvek® WRB** on the face of the wall.

D. Repeat STEPS 2A – 2C for all remaining areas underneath the balcony deck.

NOTE: Use **Great Stuff Pro™ Gaps & Cracks Polyurethane Foam Sealant**, or recommended foam, to seal any gaps or voids present (not shown).

*Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)

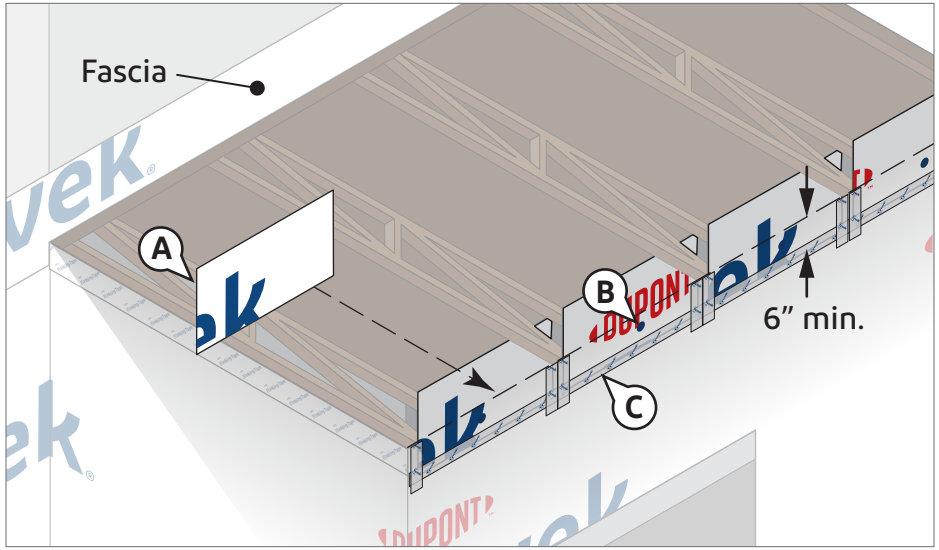
Balcony Underside Air Barrier Installations

Option 2: Using Multiple Pieces of Tyvek® WRB Installed Between Beams/Trusses (Cantilevering Through Wall)

This option applies to air barrier installations where the **Tyvek® WRB** is installed directly underneath the balcony deck and between beams, joists, or trusses.

NOTE: A backing support made of solid OSB or wood sheathing must be installed around the framing before the **Tyvek® WRB** and **DuPont Self-Adhered Flashing Product** installation.

OPTIONAL: **DuPont™ FlexWrap™ EZ** may be used in place of **DuPont™ FlexWrap™** when the beam/truss penetration rough opening (RO) is not more than 1/2" larger than the outside dimension of the beam/truss.



STEP 1

Preparation and Installation of Tyvek® WRB Pieces

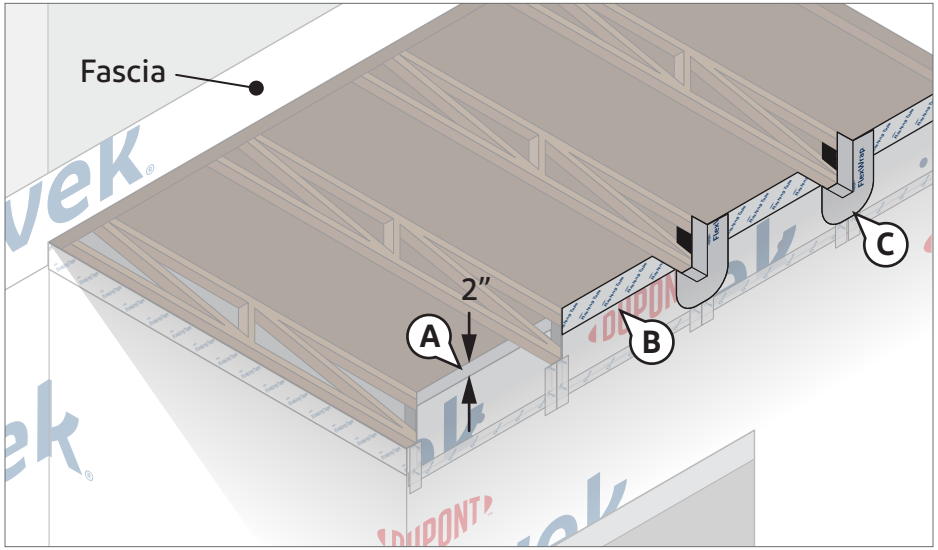
A. Cut multiple pieces of **Tyvek® WRB** to fit between the beams/trusses. The pieces should overlap the previously-installed **Tyvek® WRB** below by 6" when installed. Refer to the *Tyvek® WRB Installation Instructions* section in the applicable DuPont Installation Guideline found on building.dupont.com.

B. Secure the **Tyvek® WRB** piece with **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fasteners.

NOTE: Avoid fastener placement where future **DuPont™ Tyvek® Tape** or **DuPont Self-Adhered Flashing Products** will be installed. Refer to the *Tyvek® WRB Installation Instructions* in the applicable DuPont Installation Guideline found on building.dupont.com.

C. Seal the horizontal then the vertical seams with **Tyvek® Tape**.

NOTE: Use 3" **Tyvek® Tape** for the seams of **DuPont™ Tyvek® StuccoWrap®**, **Tyvek® DrainWrap™**, and **Tyvek® CommercialWrap® D**. The grooves on these **Tyvek® WRBs must** be installed vertically.



STEP 2

A. Trim the **Tyvek® WRB** piece 2" **BELOW** the balcony deck to expose the sheathing.

B. Terminate the **Tyvek® WRB** piece onto the exposed wall sheathing* using **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™**. Ensure minimum 2" adhesion of the flashing to the **Tyvek® WRB** and minimum 2" adhesion onto the exposed wall sheathing.

C. Cut a piece of 6" wide **FlexWrap™** (or **FlexWrap™ EZ** as captured in the note above) long enough to wrap around the bottom half of the beam/truss. Break the perforation in the release paper by folding the **FlexWrap™** top sheet to the inside of the fold. With the **FlexWrap™** still folded, remove the narrow piece of release paper and adhere the exposed butyl to the bottom and up each side of the beam/truss. Remove the remaining release paper and fan out the **FlexWrap™** onto the **Tyvek® WRB** on the face of the wall.

D. Repeat STEPS 2A – 2C for all remaining areas underneath the balcony deck.

NOTE: Use **Great Stuff Pro™ Gaps & Cracks Polyurethane Foam Sealant**, or recommended foam, to seal any gaps or voids present (not shown).

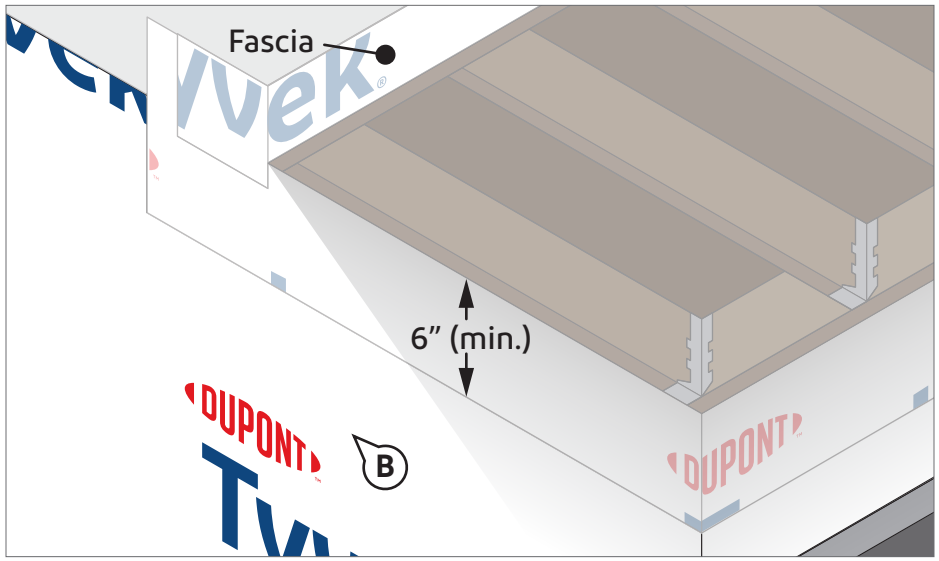
*Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)

Balcony Underside Air Barrier Installations

Option 3: Tyvek® WRB Apron Installed Behind Balcony Ledger Board

This option applies to air barrier installations where a **Tyvek® WRB** apron is installed behind the balcony ledger board to overlap the future courses of **Tyvek® WRB**.

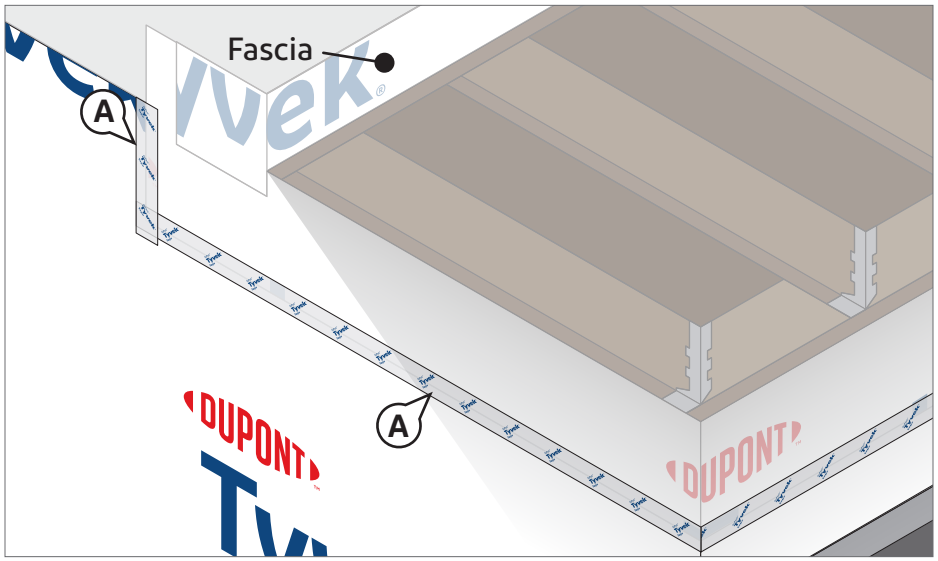


STEP 1

A. Fold up and temporarily secure the previously-installed **Tyvek® WRB** apron.

B. Install lower course of **Tyvek® WRB** directly underneath the **Tyvek® WRB** apron according to the *Tyvek® WRB Installation Instructions* in the applicable DuPont Installation Guideline found on building.dupont.com.

C. Maintain a minimum 6” overlap between the courses.



STEP 2

A. Seal the horizontal then the vertical seams with **DuPont™ Tyvek® Tape**..

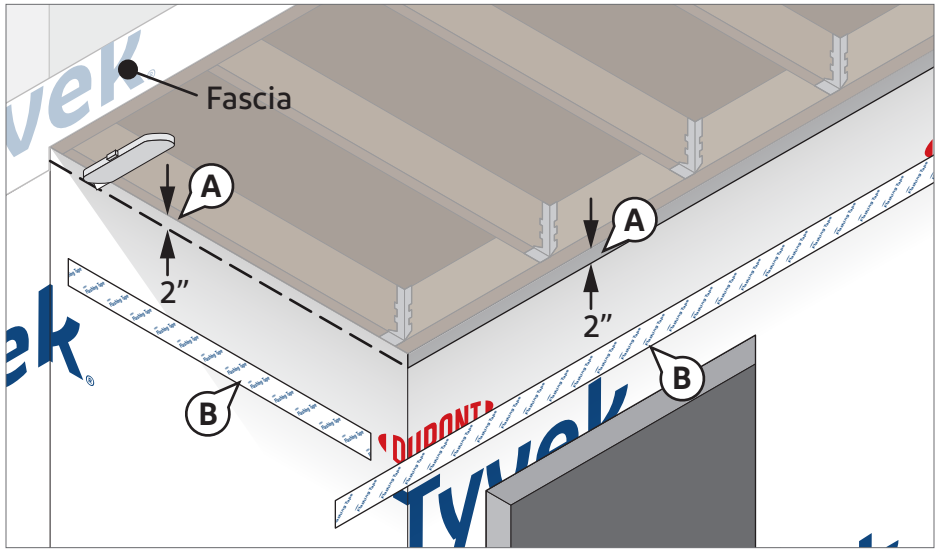
NOTE: Use 3” **Tyvek® Tape** for the seams of **DuPont™ Tyvek® StuccoWrap®**, **Tyvek® DrainWrap™**, and **Tyvek® CommercialWrap® D**. The grooves on these **Tyvek® WRBs must** be installed vertically.

DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)

Balcony Underside Air Barrier Installations

Option 4: Tyvek® WRB Installed Below Balcony Ledger Board

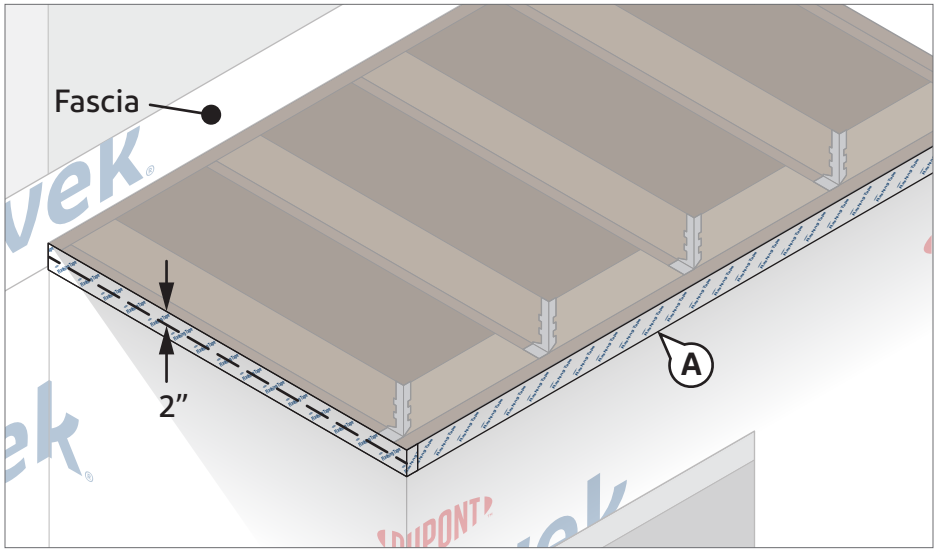
This option applies to air barrier installations where the **Tyvek® WRB** is installed directly underneath the balcony ledger board.



STEP 1

A. Trim the **Tyvek® WRB** 2″ **BELOW** the ledger board to expose the sheathing.

B. Cut pieces of **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™** to lengths required to wrap around the underside of the ledger board.



STEP 2

A. Terminate the **Tyvek® WRB** onto the exposed wall sheathing* using **DuPont™ Flashing Tape** or **StraightFlash™**. Ensure minimum 2″ adhesion of the flashing to the **Tyvek® WRB** and minimum 2″ adhesion onto the exposed wall sheathing.

*Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather

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DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)
Wood-Frame Balcony Low Wall

This method applies to the following products: DuPont™ Flashing Tape and DuPont™ StraightFlash™

This section of the guide is intended for balcony low wall/parapet wall conditions that intersect a taller adjacent wall.

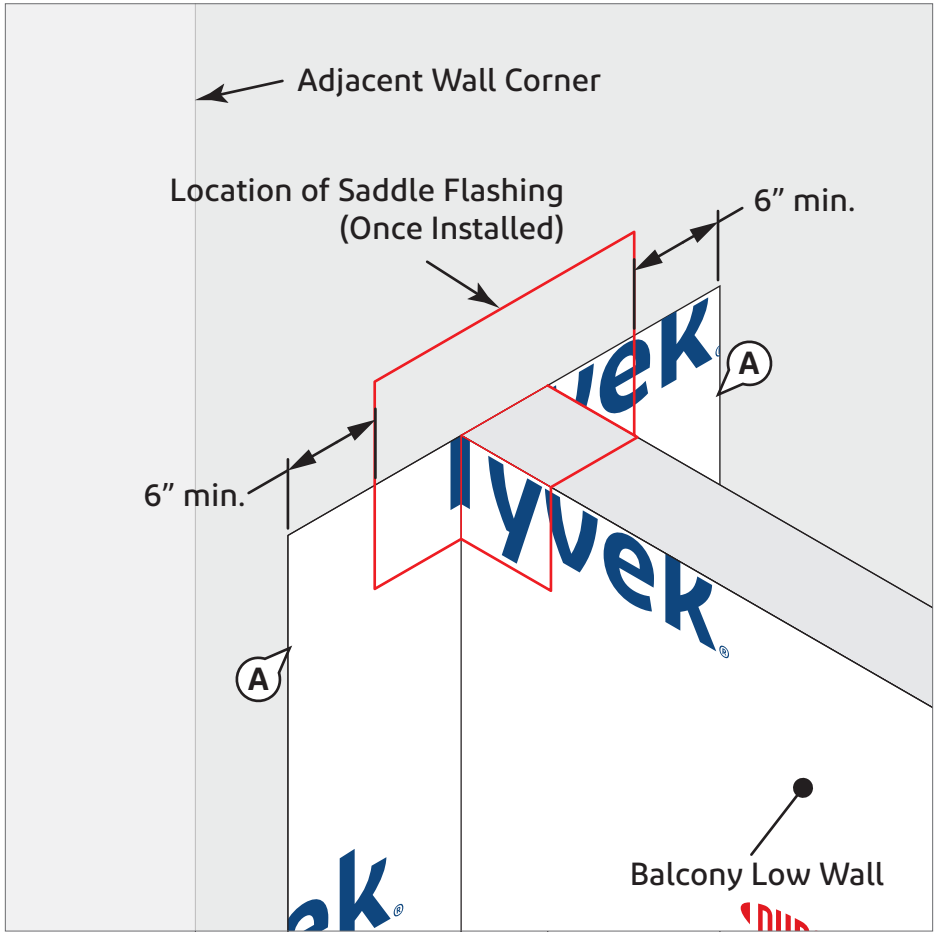
NOTE: **Details not to scale**. Certain components enlarged for clarity.

STEP 1

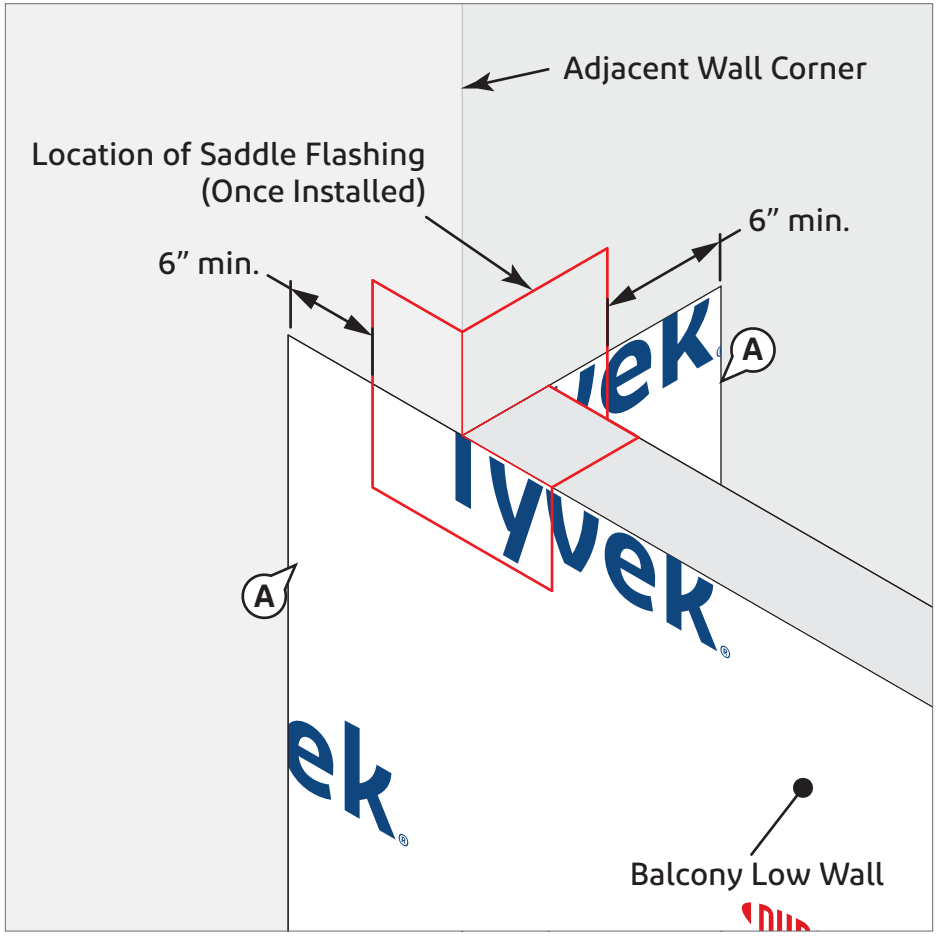
A. Install **Tyvek® WRB** onto both sides of the balcony low wall according to the *Tyvek® WRB Installation Instructions* section in the applicable DuPont Installation Guideline found on building.dupont.com. Ensure **Tyvek® WRB** also extends at least 6" **BEYOND** the saddle flashing once installed in STEP 3.

NOTE: When using **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fasteners, avoid fastener placement where future **DuPont Self-Adhered Flashing Products**, **DuPont™ Tyvek® Tape**, saddle flashing, and/or waterproofing membrane will be installed.

Condition 1: Low Wall Inset from Adjacent Wall



Condition 2: Low Wall Flush with Adjacent Wall



DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)
Wood-Frame Balcony Low Wall

NOTE: For air barrier installations, follow the guidance in STEP 2 – ALTERNATE prior to installing the self-adhered waterproofing or roofing membrane (by others).

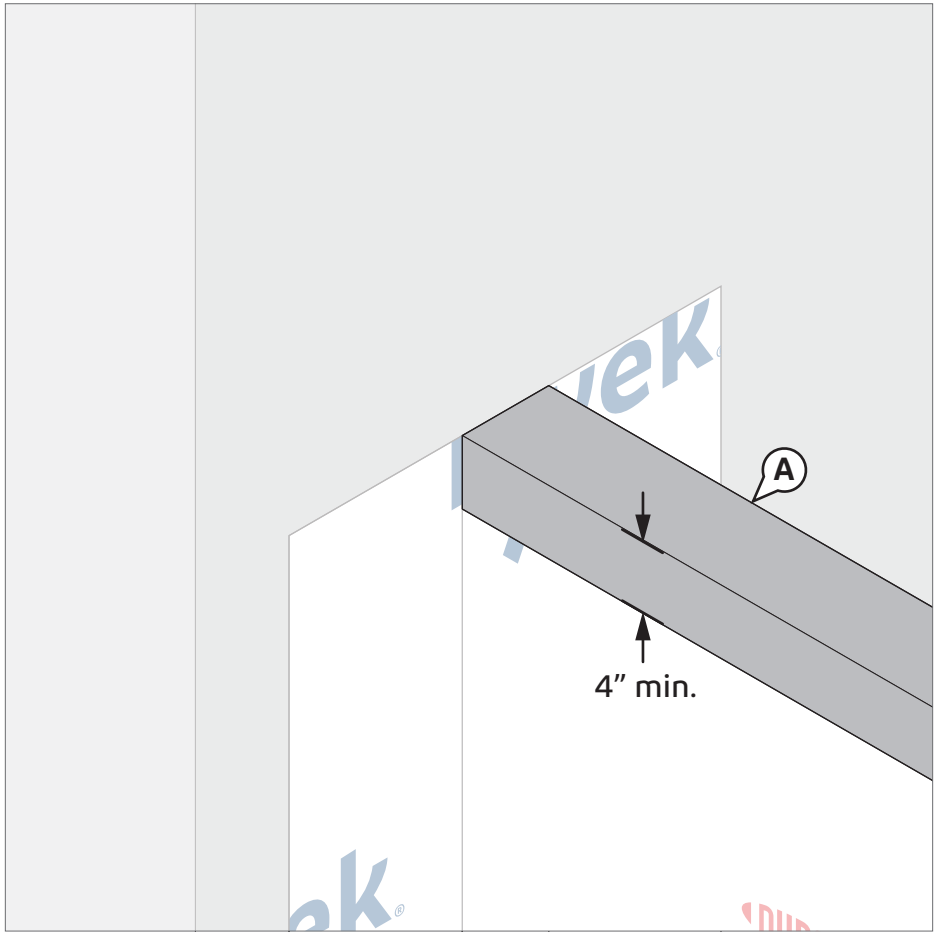
STEP 2

A. Install the self-adhered waterproofing or roofing membrane (by others) per manufacturer's installation instructions and/or project plans and specifications. Ensure a minimum 4" overlap on both sides of the wall.

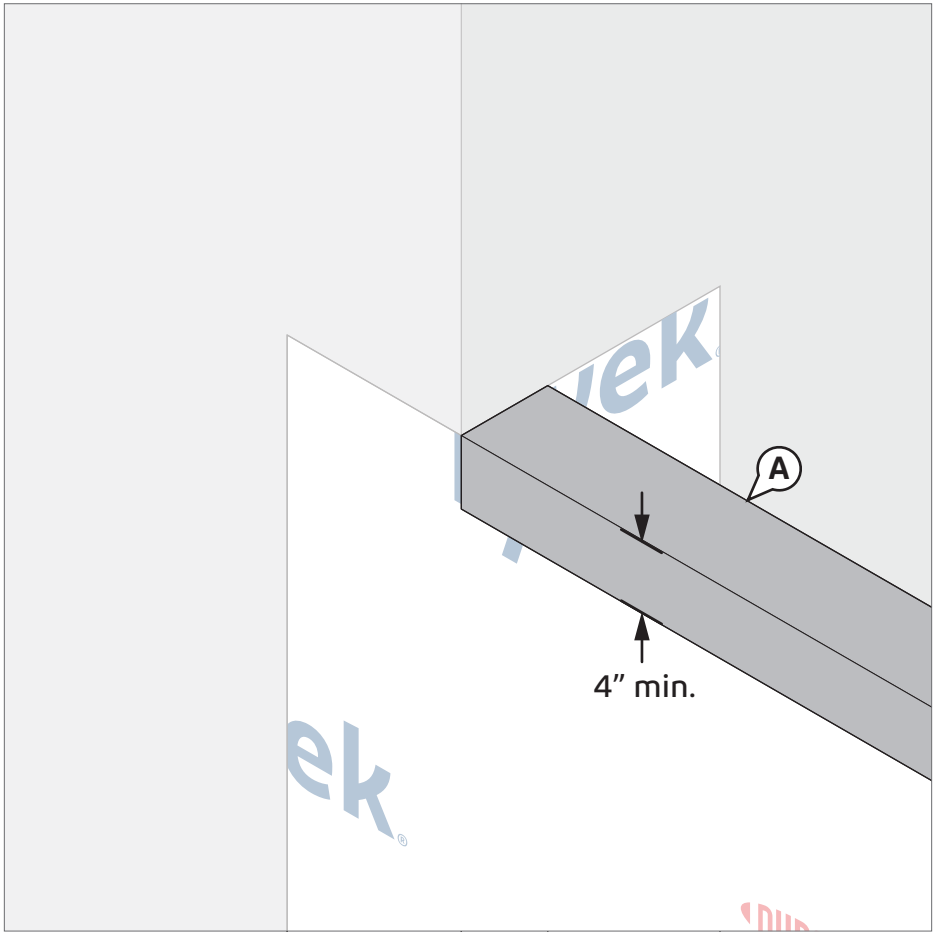
NOTE: If a chemically-compatible self-adhered membrane is used, it can be applied directly onto the **Tyvek® WRB** with a minimum 4" overlap; otherwise, it must terminate onto a **DuPont Self-Adhered Flashing Product** per STEP 2 – ALTERNATE.

NOTE: If the self-adhered waterproofing or roofing membrane (by others) will be installed over a metal edge flashing/drip edge (not shown), follow manufacturer's instructions for required overlap.

Condition 1: Low Wall Inset from Adjacent Wall



Condition 2: Low Wall Flush with Adjacent Wall



STEP 2 – ALTERNATE (REQUIRED FOR AIR BARRIER INSTALLATIONS)

Option 1: Top of Wall Tyvek® WRB Termination

NOTE: The following option can also be used with a balcony low wall that is flush with the adjacent wall (not shown).

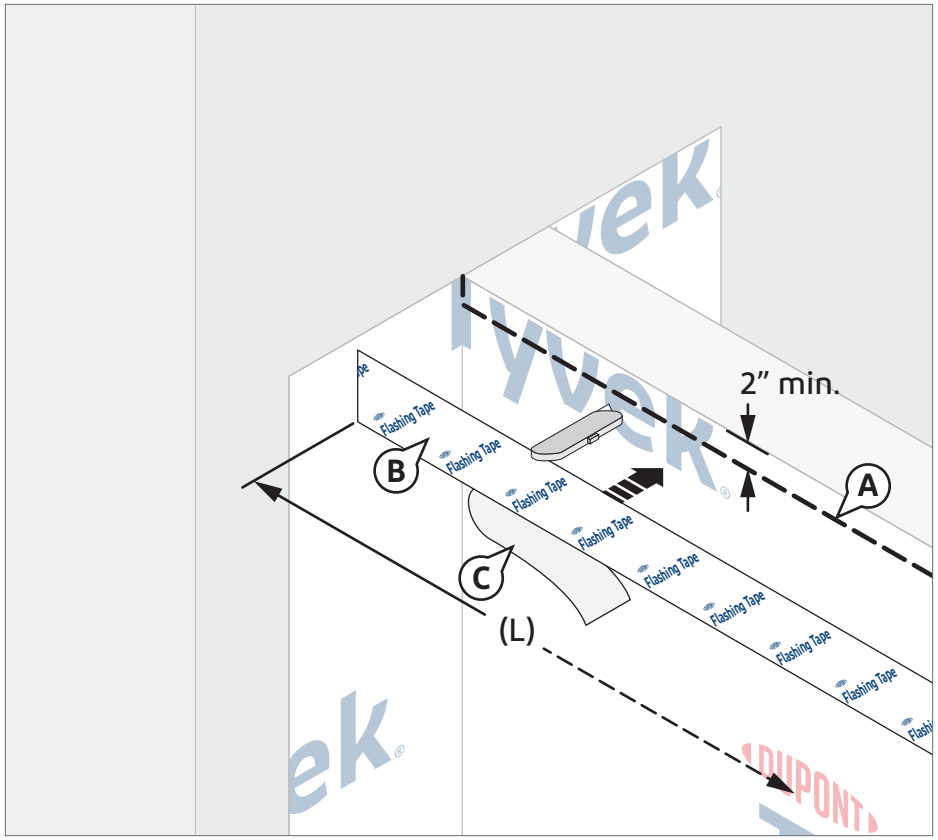
A. Trim the **Tyvek® WRB** 2" **BELOW** the top of the wall on both sides to expose the sheathing.

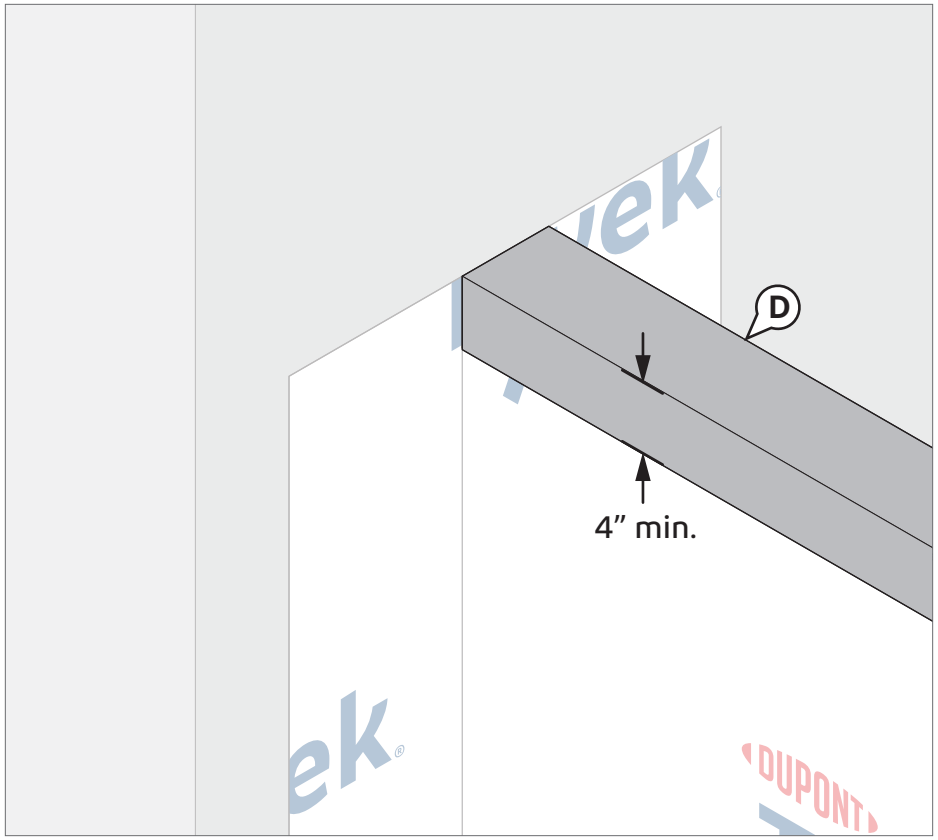
B. Cut **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™** the length of the low wall (L). Use a roll width sufficient to achieve a minimum of 2" adhesion onto the **Tyvek® WRB** and a minimum of 2" onto the exposed sheathing[1].

C. Remove the **DuPont Self-Adhered Flashing Product** release paper and terminate[1] the **Tyvek® WRB** with the flashing, ensuring the correct amount of adhesion onto the **Tyvek® WRB** and sheathing as mentioned previously.

D. Install the self-adhered waterproofing or roofing membrane[2] per manufacturer's installation instructions and/or project plans and specifications. Ensure a minimum 4" overlap onto the vertical wall.

NOTE: If the self-adhered waterproofing or roofing membrane (by others) will be installed over a metal edge flashing/drip edge (not shown), follow manufacturer's instructions for required overlap.





[1]Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

[2]When using a self-adhered membrane, ensure chemical compatibility and adequate adhesion to the **Tyvek® WRB**. DuPont does not assume liability for long term performance of self-adhered membranes by others.

STEP 2 – ALTERNATE (REQUIRED FOR AIR BARRIER INSTALLATIONS)

Option 2: Top of Wall Tyvek® WRB Termination

NOTE: The following option can also be used with a balcony low wall that is flush with the adjacent wall (not shown).

A. Ensure the **Tyvek® WRB** is cut flush with the top of the wall on both sides.

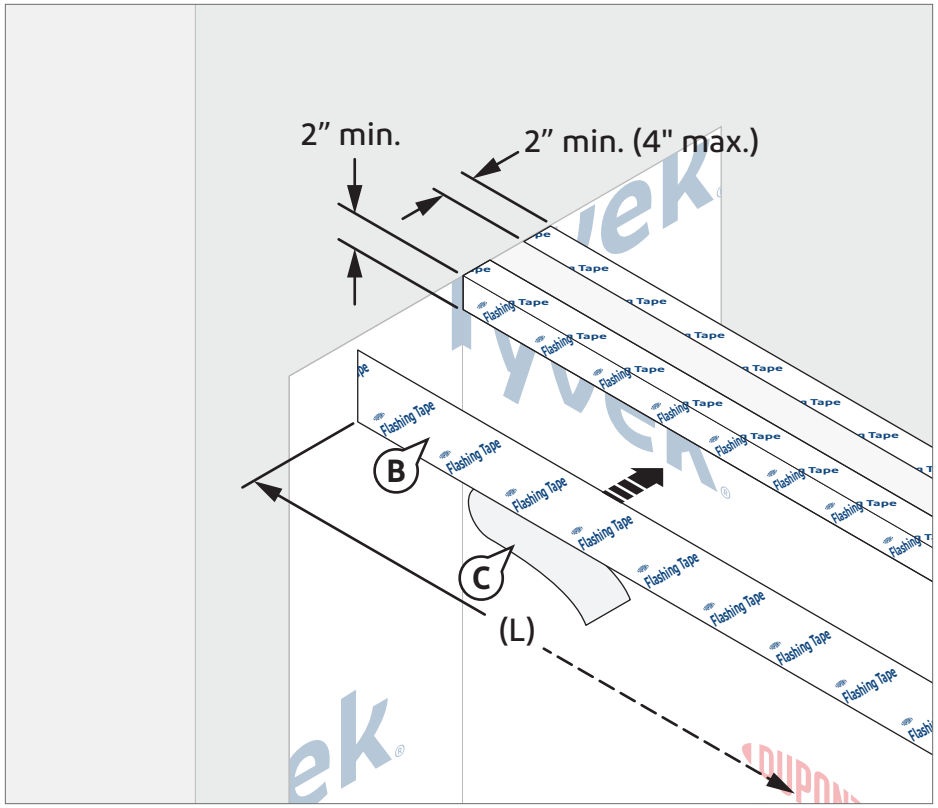
B. Cut **DuPont™ Flashing Tape** or **StraightFlash™** the length of the low wall. Use a roll width sufficient to achieve a minimum of 2" adhesion onto the **Tyvek® WRB** and a minimum of 2" (**maximum of 4"**) onto the horizontal plane. Ensure flashing does not completely cover the horizontal plane.

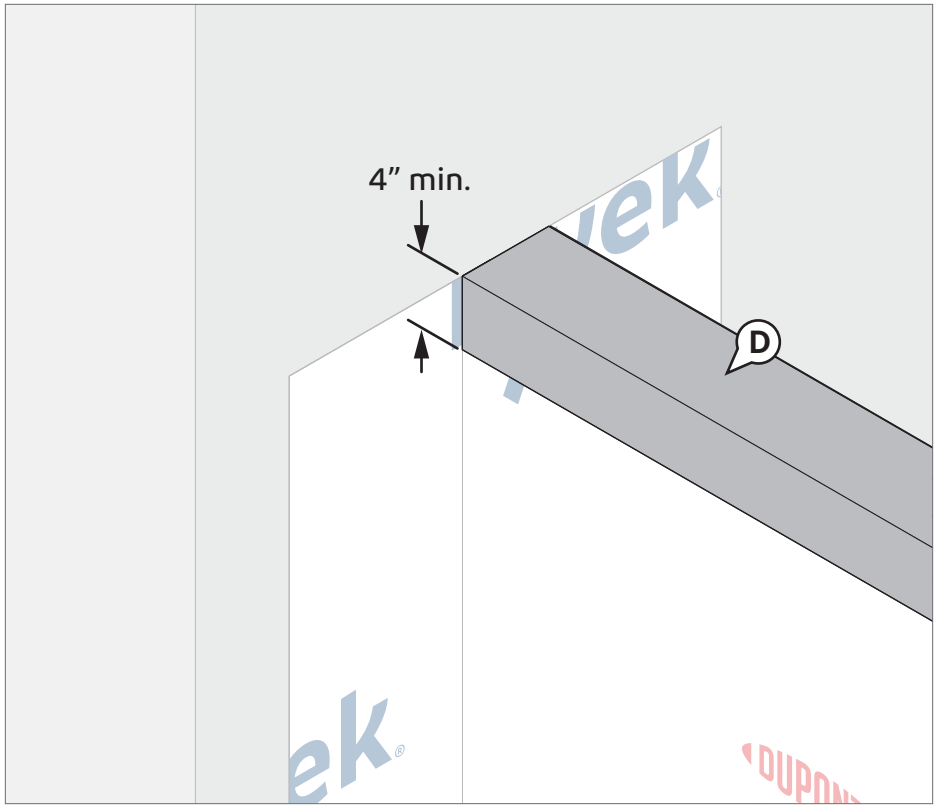
NOTE: If the self-adhered waterproofing/roofing membrane used in STEP 2D is **not** chemically-compatible with the **Tyvek® WRB**, use a minimum 6" wide piece of **DuPont Self-Adhered Flashing Products** and ensure flashing extends minimum 4" onto the vertical wall (not shown).

C. Remove the **DuPont Self-Adhered Flashing Product** release paper and terminate[1] the **Tyvek® WRB** with the flashing, ensuring the correct amount of adhesion onto the **Tyvek® WRB** and horizontal plane as mentioned previously.

D. Install the self-adhered waterproofing or roofing membrane[2] per manufacturer's installation instructions and/or project plans and specifications. Ensure a minimum 4" overlap onto the vertical wall.

NOTE: If the self-adhered waterproofing or roofing membrane (by others) will be installed over a metal edge flashing/drip edge (not shown), follow manufacturer's instructions for required overlap.





[1]Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

[2]When using a self-adhered membrane, ensure chemical compatibility and adequate adhesion to the **Tyvek® WRB**. DuPont does not assume liability for long term performance of self-adhered membranes by others.

STEP 3

Installation of Saddle Flashing

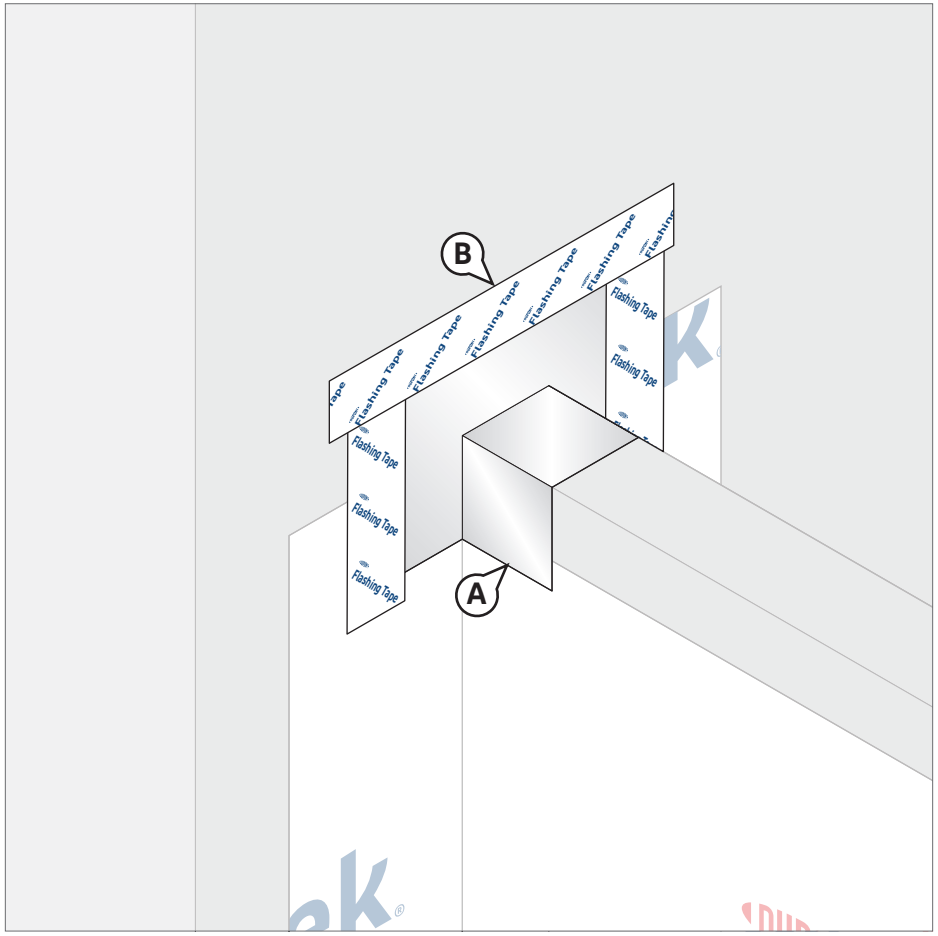
NOTE: **Some balcony low wall related accessories and components are not shown**. Refer to manufacturer's instructions for installation requirements.

A. Install saddle flashing, self-adhered waterproofing, or roofing membrane (by others) over the **Tyvek® WRB** at the wall intersection per manufacturer's instructions.

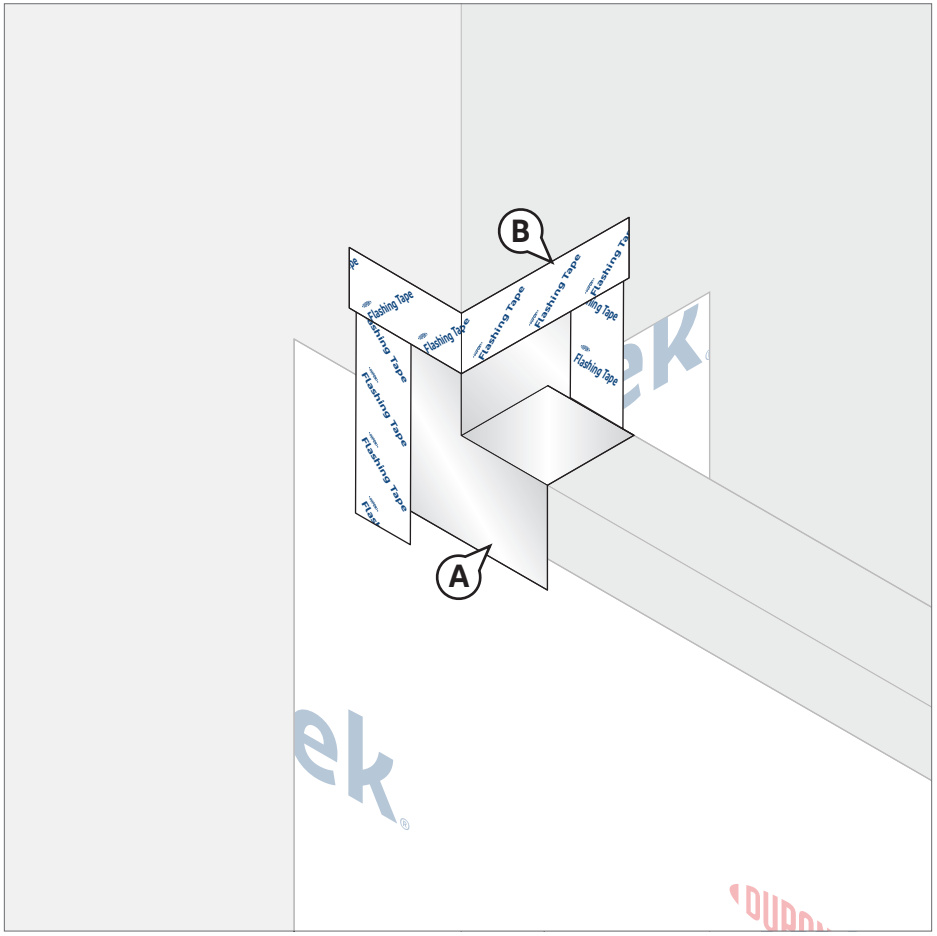
NOTE: For a more robust treatment, metal saddle flashing may be embedded in a chemically-compatible sealant[1] prior to the installation of the **DuPont Self-Adhered Flashing Products** in STEP 3B.

B. For metal saddle flashing only: Terminate the vertical followed by the horizontal sides of the flashing onto the adjacent wall using **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™**.

Condition 1: Low Wall Inset from Adjacent Wall



Condition 2: Low Wall Flush with Adjacent Wall



[1] Refer to *Chemical Compatibility of Representative Building Sealants and Adhesives/Primers* for more information on chemical compatibility. DuPont recommends minimizing or removing excess sealant that may interfere with adhesion of **DuPont Self-Adhered Flashing Products**.

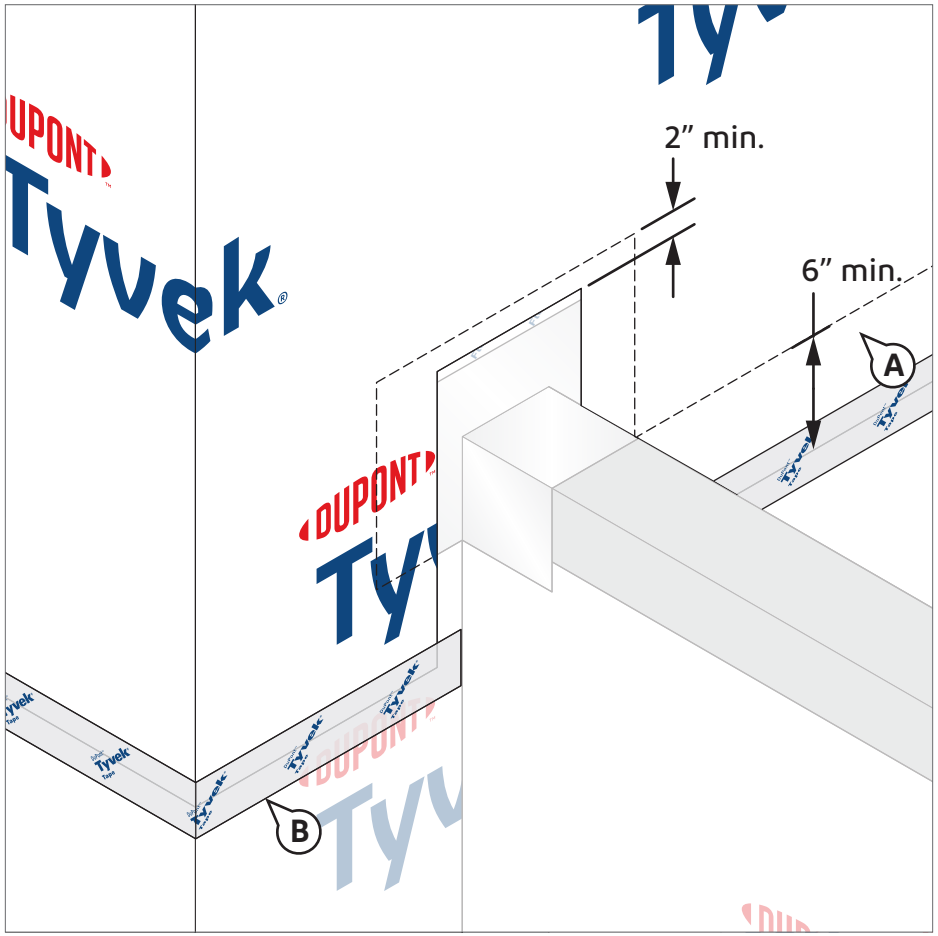
STEP 4

Installation of Tyvek® WRB

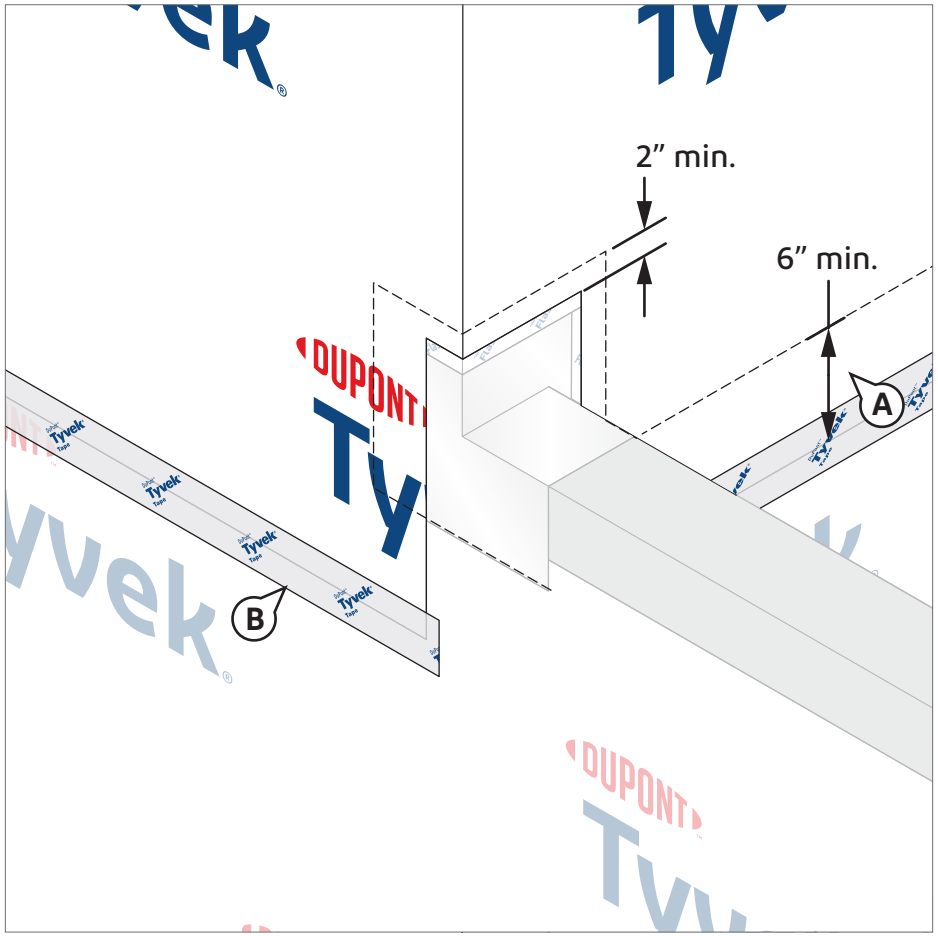
A. Install upper course of **Tyvek® WRB** according to the *Tyvek® WRB Installation Instructions* in the applicable DuPont Installation Guideline found on building.dupont.com. Ensure **Tyvek® WRB** overlaps minimum 6" onto the previously-installed **Tyvek® WRB** and minimum 2" onto the saddle flashing, self-adhered waterproofing or roofing membrane used at the wall intersection.

B. Tape all vertical seams of the **Tyvek® WRB** using **Tyvek® Tape**. If the **Tyvek® WRB** is not being installed as an air barrier, **Tyvek® Tape** is not required on horizontal seams, but is considered a recommended best practice. When installing as an air barrier, both the horizontal and vertical seams must be taped.

Condition 1: Low Wall Inset from Adjacent Wall



Condition 2: Low Wall Flush with Adjacent Wall



STEP 5

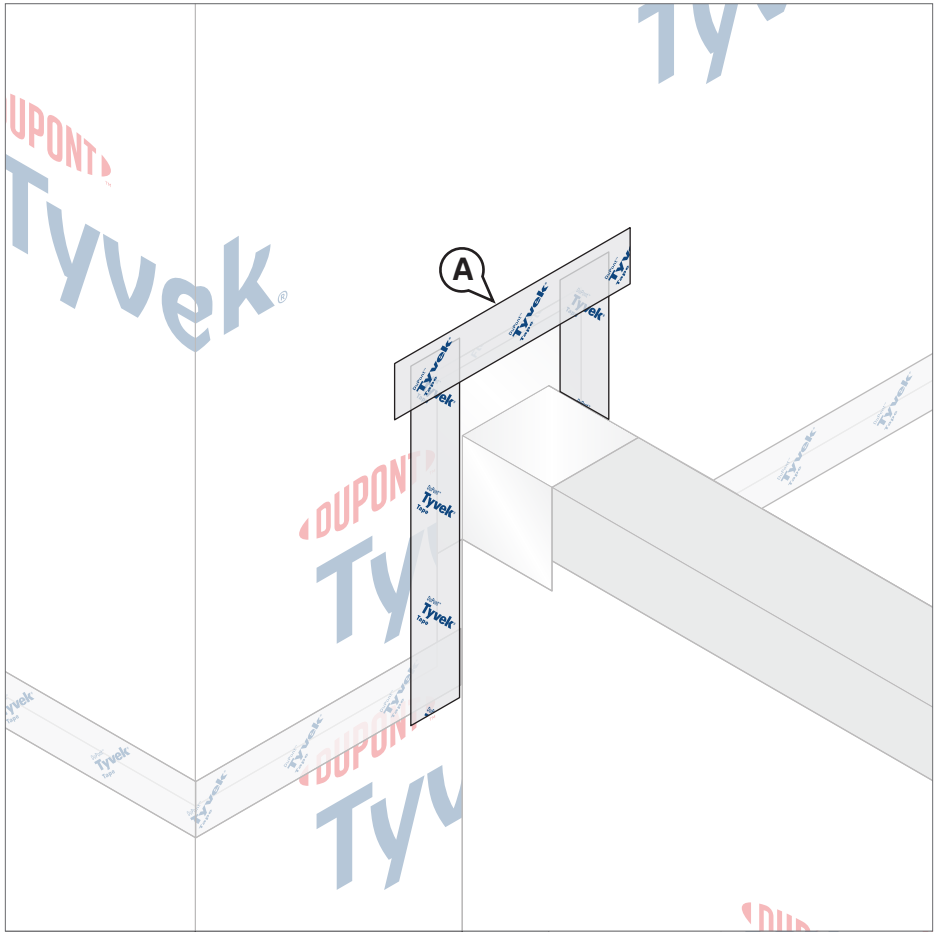
Final Step

A. Tape **Tyvek® WRB** seams onto the saddle flashing, self-adhered waterproofing or roofing membrane used at the wall intersection.

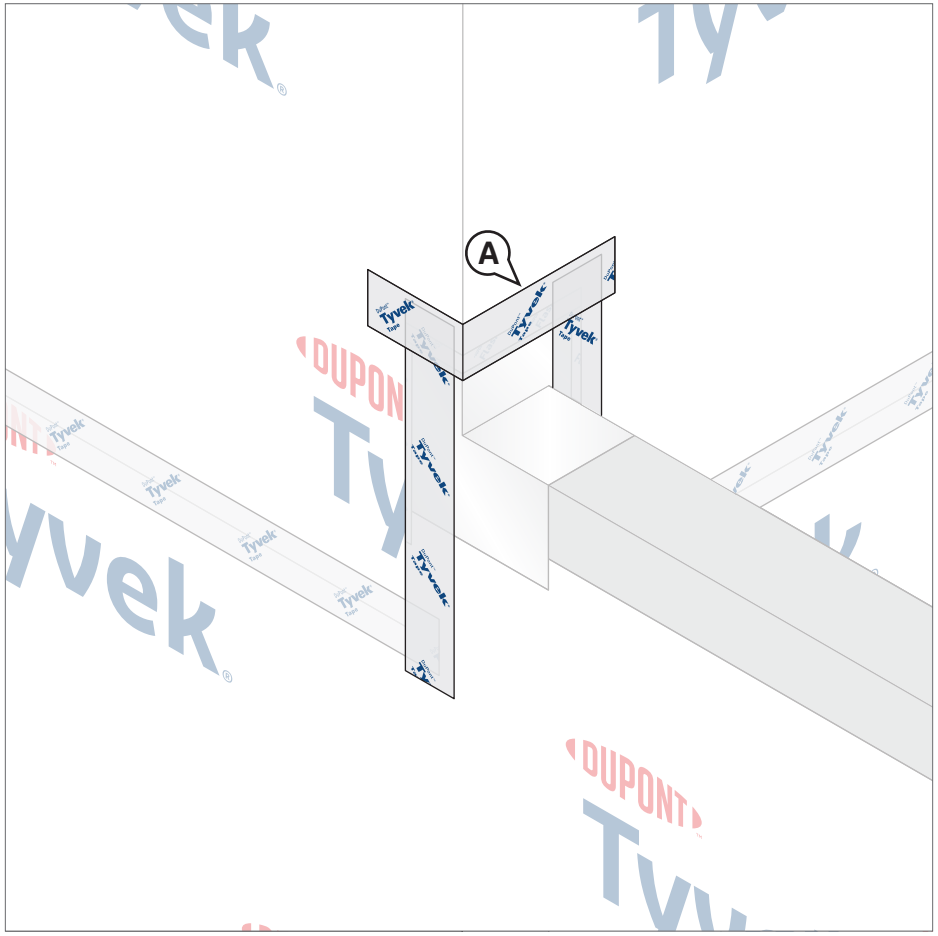
NOTE: **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™** may be required to obtain a robust termination onto a self-adhered waterproofing or roofing membrane.

NOTE: To maintain proper shingling, tape vertical seams before taping horizontal seams.

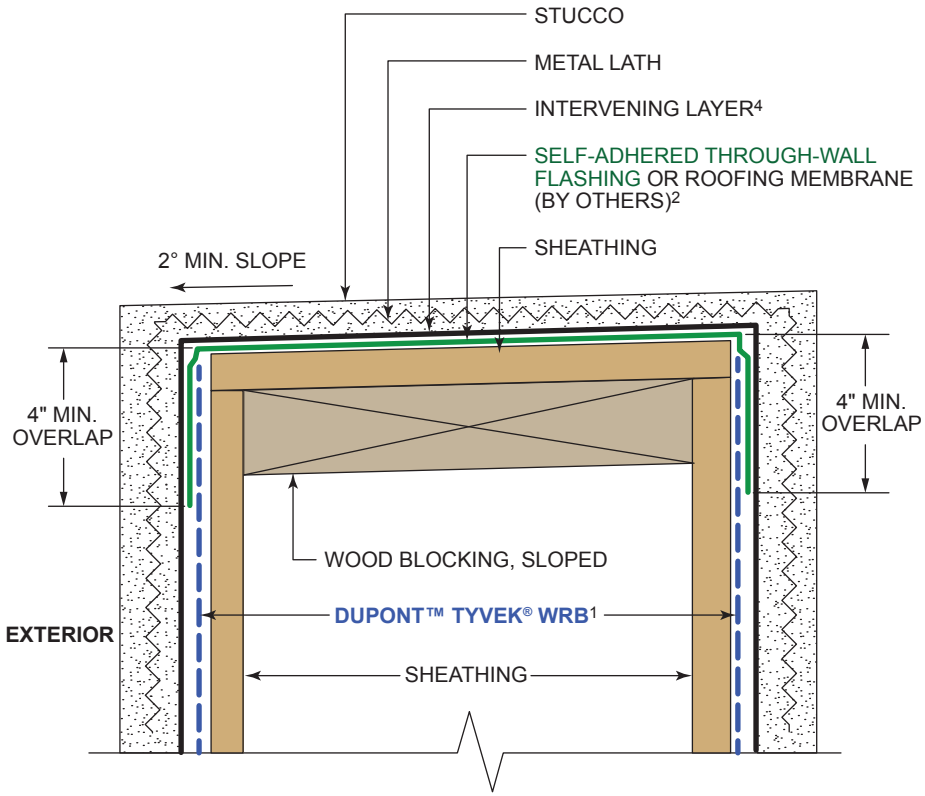
Condition 1: Low Wall Inset from Adjacent Wall



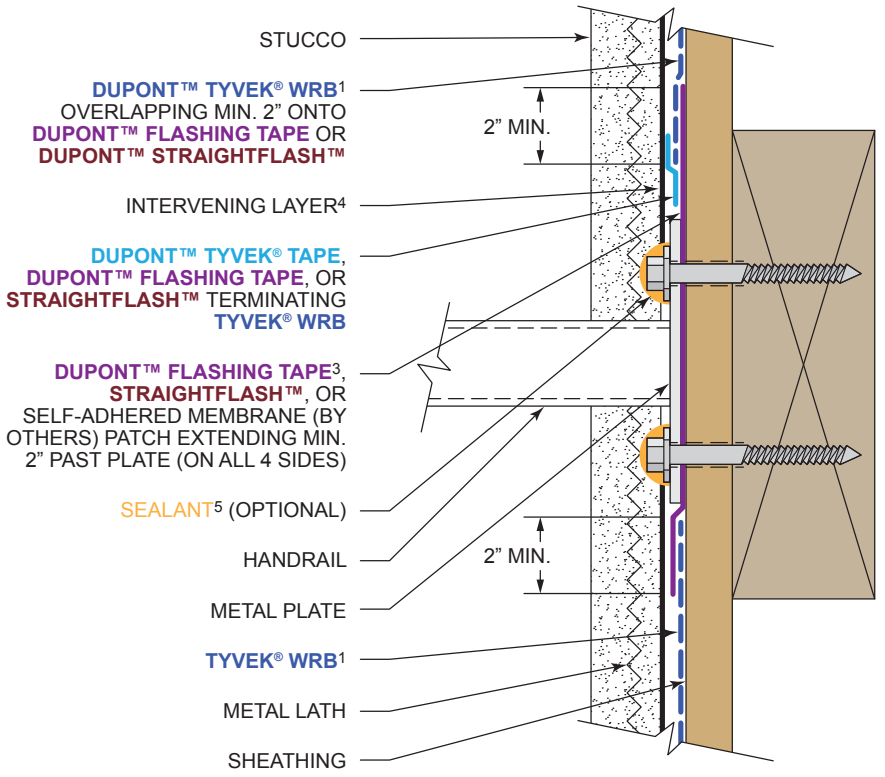
Condition 2: Low Wall Flush with Adjacent Wall



DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)
Wood-Frame Balcony Low Wall and Railing Attachments



BALCONY LOW WALL WITH STUCCO (SECTION VIEW)



RAILING ATTACHMENT AT WALL WITH STUCCO (SECTION VIEW)

NOTE: CAD details not to scale. For additional CAD details, visit building.dupont.com

[1]Refer to the *Facade Considerations* section of the applicable DuPont Installation Guidelines to help determine the appropriate **Tyvek® WRB** for the cladding type.

[2]Ensure chemical compatibility with **Tyvek® WRB**. For chemically incompatible membranes and/or for air barrier installations, membrane must terminate onto a **DuPont Self-Adhered Flashing Product** (not shown). When installed over a metal edge flashing/drip edge (not shown), follow manufacturer's instructions for required overlap. For additional guidance, see the *Wood-Frame Balcony Low Wall* section of this document.

[3]Multiple pieces of **DuPont™ Flashing Tape** or **Straightflash™** may be needed to achieve full coverage behind metal plate. Install starting from the bottom and overlap subsequent pieces by 2" for proper shingling. Use a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

[4]Where required by code, intervening layer options include a second layer of **Tyvek® WRB**, Grade D building paper, felt, rigid foam board, **DuPont™ Tyvek® DrainVent™ Rainscreen**, or the backing of paper-backed lath.

[5]Refer to *Chemical Compatibility of Representative Building Sealants and Adhesives/Primers* for more information on chemical compatibility.

DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)

Balcony Dropped Beams and Headers

Option 1: Using DuPont Self-Adhered Flashing Products Across Underside of Beam

This option applies to the following products: DuPont™ Flashing Tape, DuPont™ StraightFlash™, and DuPont™ FlexWrap™

This section of the guide is intended for addressing dropped beam and header conditions with **DuPont Self-Adhered Flashing Products** when the depth of the beam is **not greater than 10”**. If the depth of the beam is **greater than 10”**, follow the guidance in Option 2 instead.

NOTE: Details not to scale. Certain components enlarged for clarity.

STEP 1

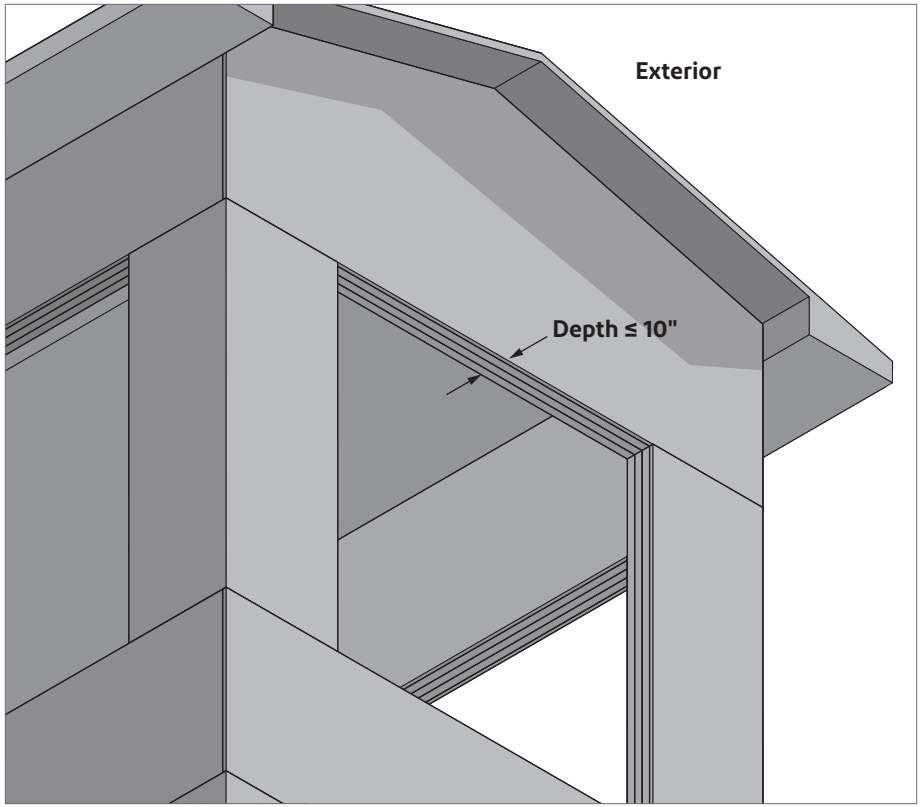
Installation of Tyvek® WRB on Exterior-Facing Walls

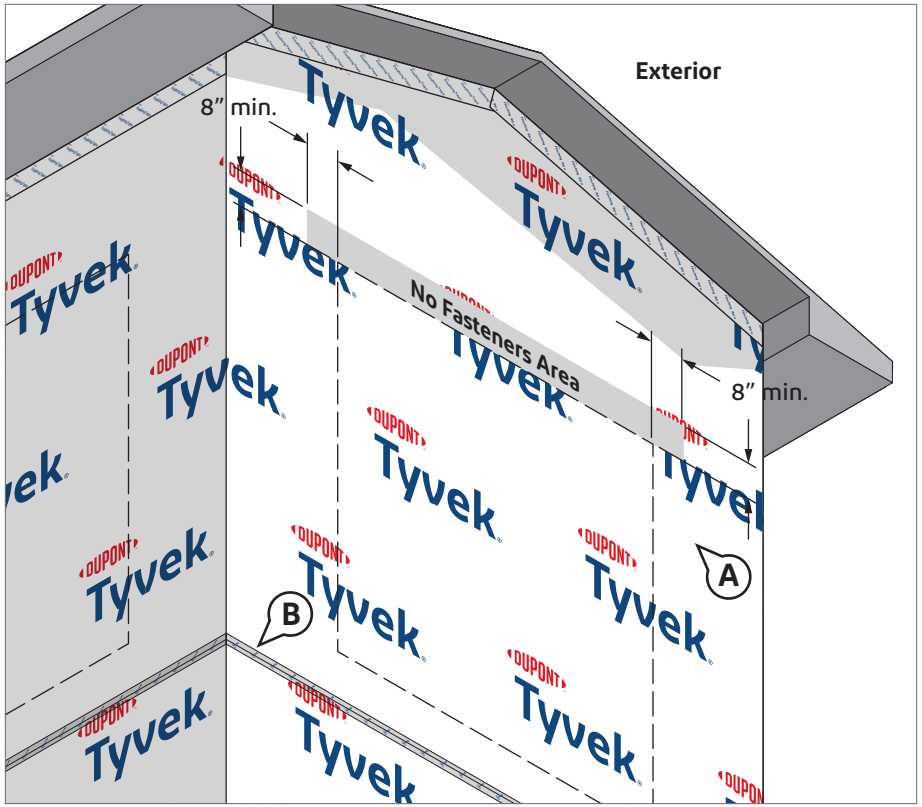
A. Wrap walls according to the *Tyvek® WRB Installation Instructions* in the applicable DuPont Installation Guideline found on building.dupont.com. Maintain a minimum 6” overlap between courses.

NOTE: When using **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fasteners, **DO NOT INSTALL** fasteners within 8” from the head of the opening, or where the **Tyvek® WRB** flap will be temporarily folded up in STEP 2.

B. Tape all vertical seams of the **Tyvek® WRB** using **DuPont™ Tyvek® Tape**. If the **Tyvek® WRB** is not being installed as an air barrier, **Tyvek® Tape** is not required on horizontal seams, but is considered a recommended best practice. When installing as an air barrier, both the horizontal and vertical seams must be taped.

NOTE: Use 3” **Tyvek® Tape** for the seams of **DuPont™ Tyvek® StuccoWrap®**, **Tyvek® DrainWrap™**, and **Tyvek® CommercialWrap® D**. The grooves on these **Tyvek® WRBs must** be installed vertically.





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STEP 2

Preparation of Tyvek® WRB on Exterior-Facing Walls

A. Make an "I-Cut" in the **Tyvek® WRB**. For an "I-Cut", begin with a horizontal cut across the bottom and the top of the opening. From the center, cut straight down to the sill.

B. Cut two 45 degree slits a minimum of 8" extending from the corner of the head, up and away from the opening. This will create a flap above the opening to expose sheathing or framing members to allow head flashing installation (see STEP 4).

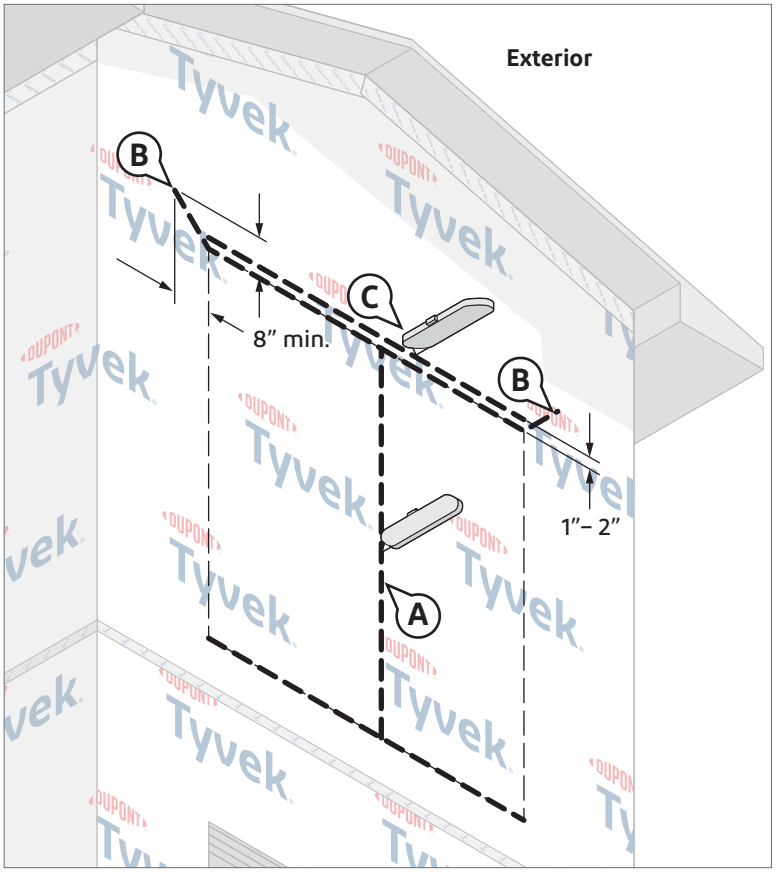
NOTE: Some flashing widths may require longer slits.

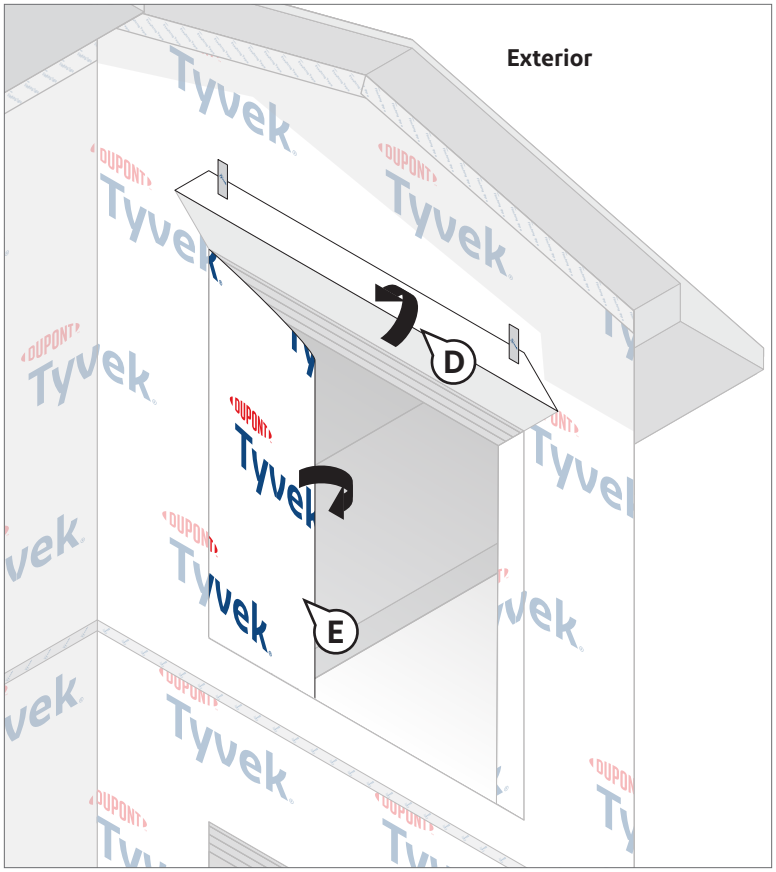
C. Create another horizontal cut 1"– 2" above the horizontal edge of the head flap.

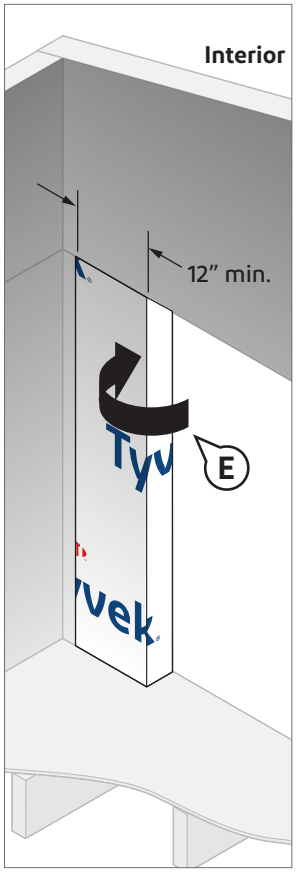
D. Flip head flap up and temporarily secure with **DuPont™ Tyvek® Tape**.

ALTERNATE METHOD TO SECURE HEAD FLAP: In lieu of temporarily taping, the head flap can be tucked under the **Tyvek® WRB**.

E. Fold side flaps into opening and ensure flaps extend a minimum of 12" onto the inside wall for future overlap with **Tyvek® WRB** courses. Cut off excess if desired.







STEP 3

Installation and Preparation of Tyvek® WRB on Interior-Facing Walls

A. Wrap walls according to the *Tyvek® WRB Installation Instructions* in the applicable DuPont Installation Guideline found on building.dupont.com.

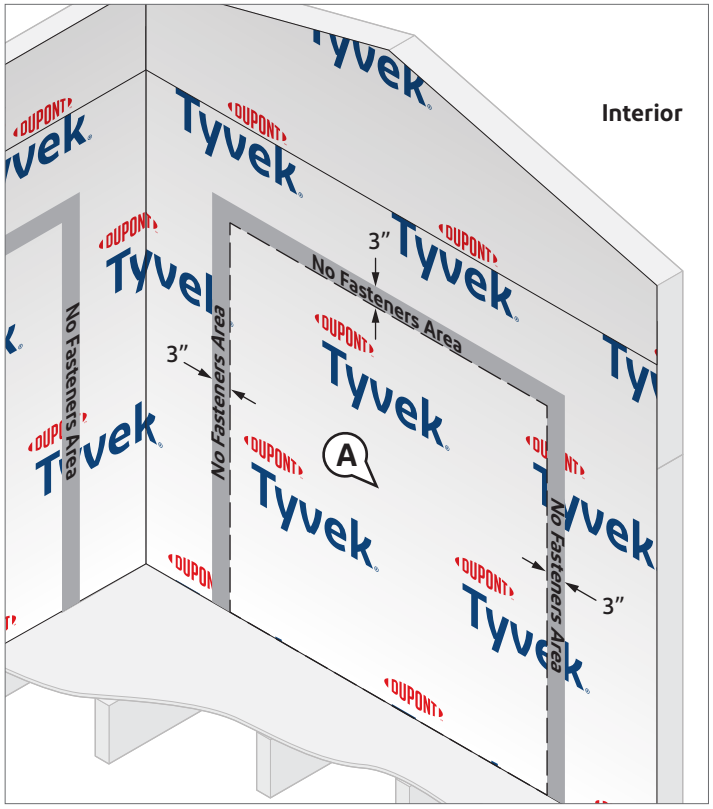
NOTE: When using **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fasteners, **DO NOT INSTALL** fasteners within 2"– 3" from the head of the opening, or where the **DuPont Self-Adhered Flashing Products** will be installed in STEP 4.

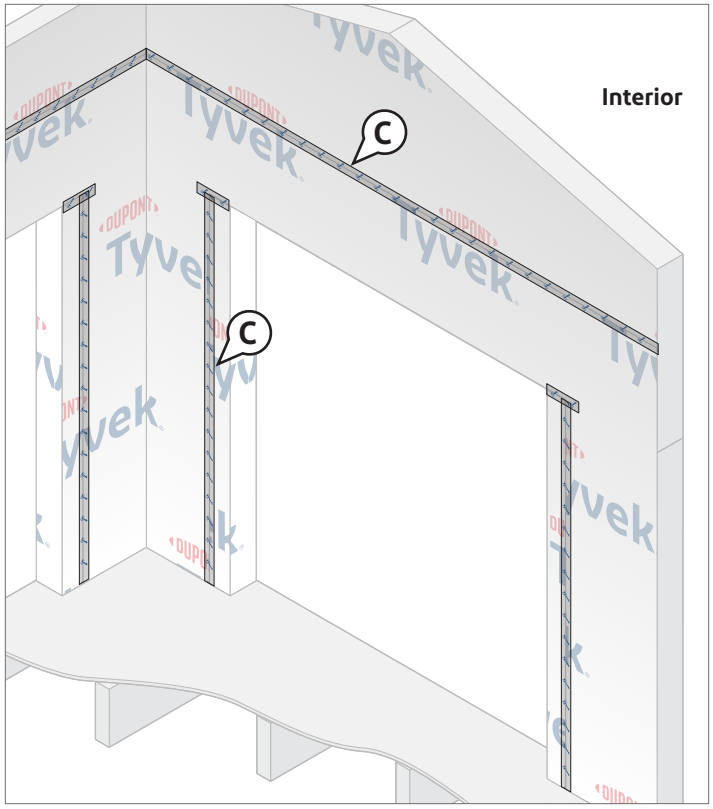
B. Cut the **Tyvek® WRB** 4"– 6" away from both sides of the opening before taping the seams in the next step.

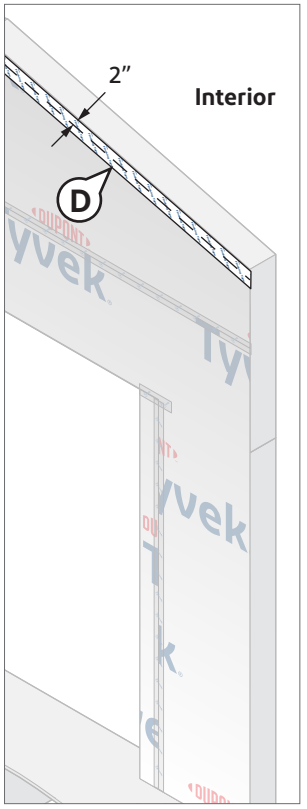
C. Tape all vertical seams of the **Tyvek® WRB** using **DuPont™ Tyvek® Tape**. If the **Tyvek® WRB** is not being installed as an air barrier, **Tyvek® Tape** is not required on horizontal seams, but is considered a recommended best practice. When installing as an air barrier, both the horizontal and vertical seams must be taped.

NOTE: Use 3" **Tyvek® Tape** for the seams of **DuPont™ Tyvek® StuccoWrap®**, **Tyvek® DrainWrap™**, and **Tyvek® CommercialWrap® D**. The grooves on these **Tyvek® WRBs must** be installed vertically.

D. **Air Barrier Installations (if applicable)**: Cut the **Tyvek® WRB** 2" **BELOW** the framing to expose the sheathing and terminate the **Tyvek® WRB** using **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™** with minimum 2" adhesion onto the sheathing.







Air Barrier Installations

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STEP 4

Installation of DuPont Self-Adhered Flashing Products at Head of Opening

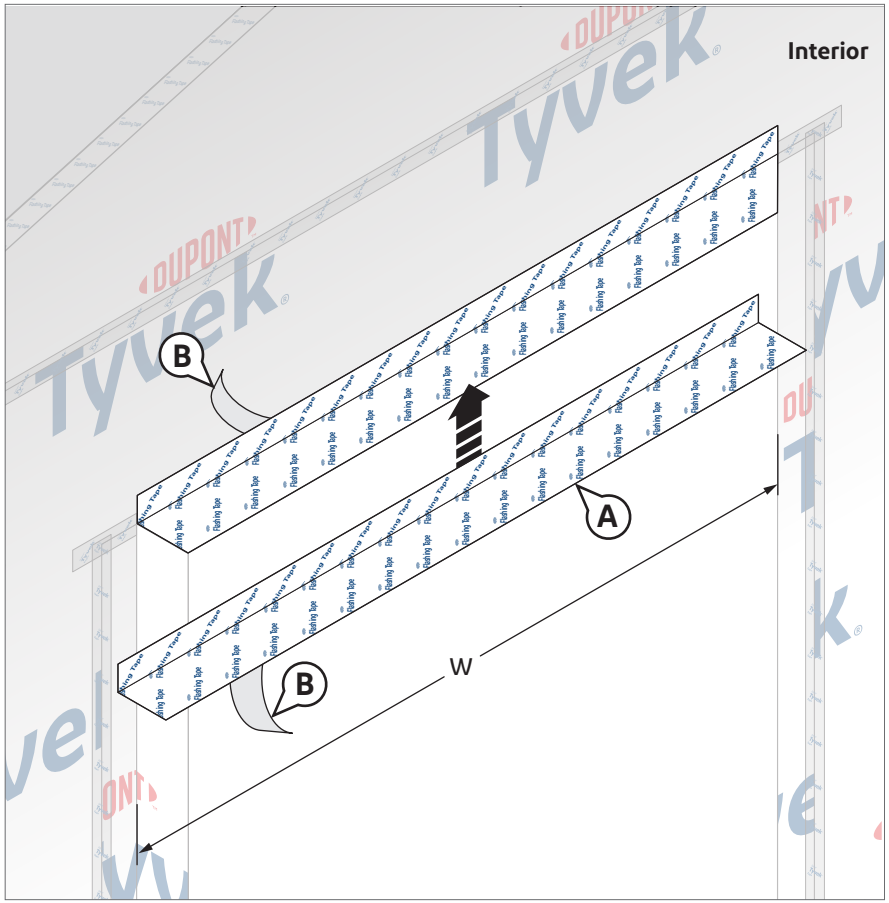
A. Cut two (2) pieces of **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™** long enough to extend the full width of the opening (W). Use roll widths sufficient to achieve a minimum of 2"– 3" adhesion onto the face of the wall.

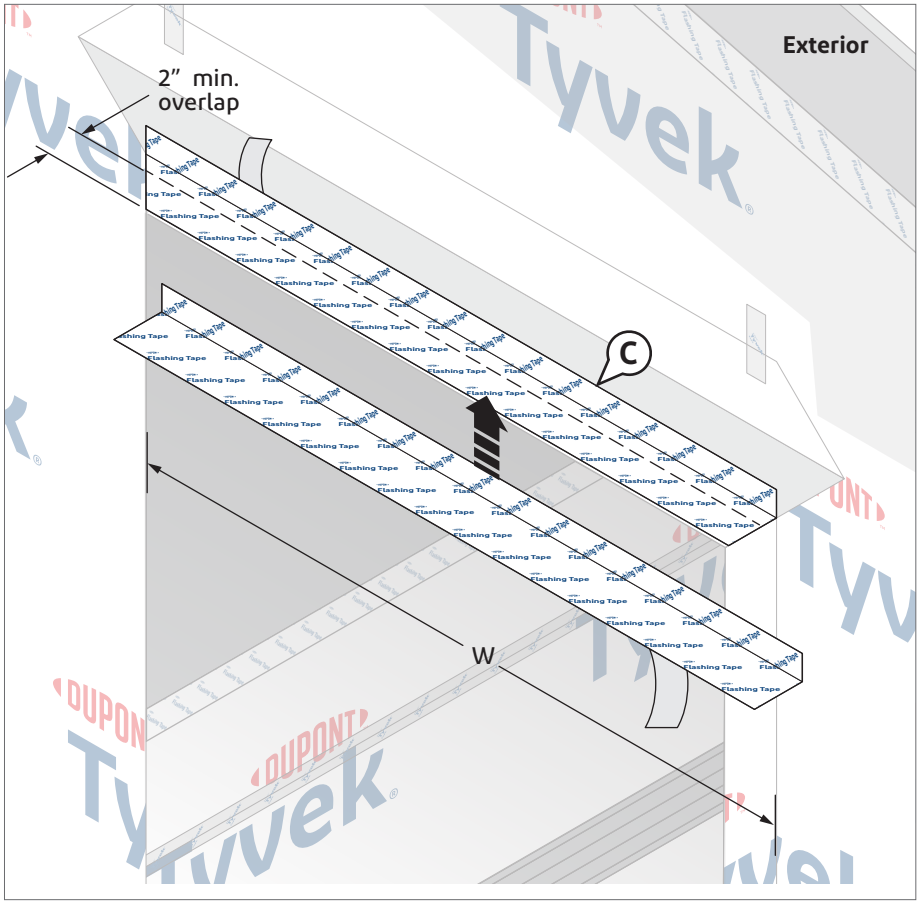
B. Starting at the interior side of the wall, remove the release paper and adhere the **DuPont Self-Adhered Flashing Product** onto the face of the wall and on the underside of the beam. Ensure the correct amount of adhesion as mentioned above.

C. Repeat step B on the exterior side of the wall, ensuring that the flashing overlaps the initial piece by a minimum of 2" and extends a minimum of 2" onto the exterior sheathing.

ALTERNATE METHOD USING FULL PIECE OF DUPONT™ FLEXWRAP™ (NOT SHOWN)

Cut two (2) pieces of **FlexWrap™** at least 12" **LONGER** than the width of the opening (W). Install on interior and exterior sides of the wall per STEP 5B – 5E.





[1]Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)

Balcony Dropped Beams and Headers

Option 1: Using DuPont Self-Adhered Flashing Products Across Underside of Beam

STEP 5

Installation of DuPont™ FlexWrap™ Corners at Head of Opening

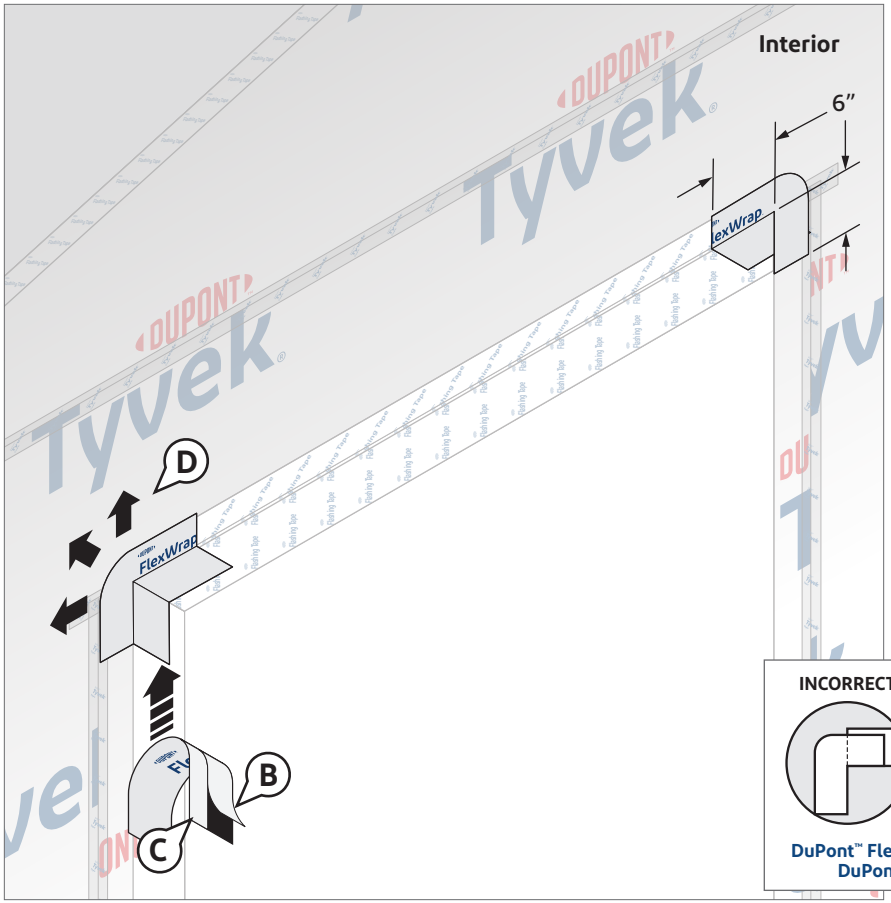
A. Cut four (4) pieces of **FlexWrap™** a minimum of 12" long. **Use 6" wide FlexWrap™ for beams up to 6" in depth and 9" wide FlexWrap™ for beams up to 10" in depth**.

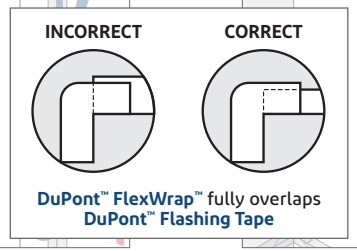
B. Starting at the interior side of the wall, remove wide piece of release paper. Position **FlexWrap™** by aligning the inside edge of the narrow release paper with the face of the wall to ensure 2"– 3" will be adhered to the face of the wall with at least 6" extending down the wall and 6" across the head. Adhere into opening, ensuring the correct amount of adhesion onto the wall as mentioned above.

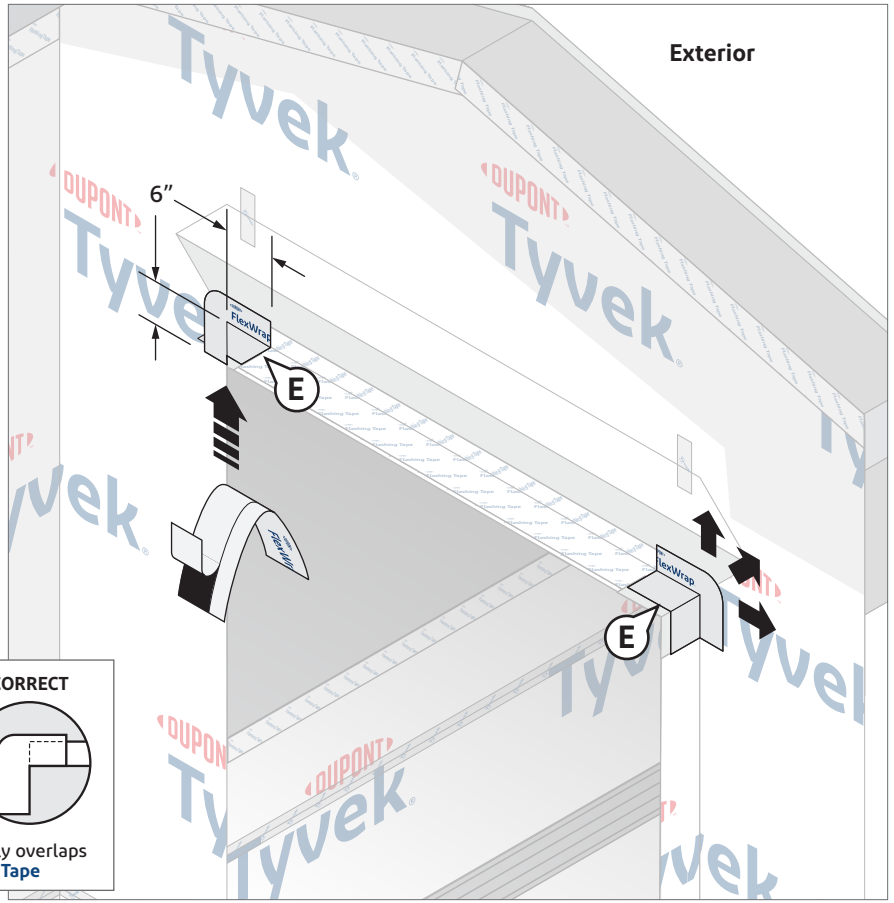
C. Remove narrow release paper.

D. Fan out the **FlexWrap™** at corners and adhere onto face of wall. Repeat steps on opposite corner.

E. Repeat steps B – D on the exterior side of the wall.







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DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)

Balcony Dropped Beams and Headers

Option 1: Using DuPont Self-Adhered Flashing Products Across Underside of Beam

STEP 6 (IF APPLICABLE)

Installation of Drip Cap/Kick-Out Flashing

A. Install a drip cap/kick-out flashing (by others) along the exterior face of the wall per manufacturer's requirements.

B. Terminate vertical leg of drip cap/kick-out flashing with **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™**. The **DuPont Self-Adhered Flashing Product** used should be long enough to extend **BEYOND** the **DuPont™ FlexWrap™** on each side and adhere[1] a minimum of 2″ onto the sheathing above.

STEP 7

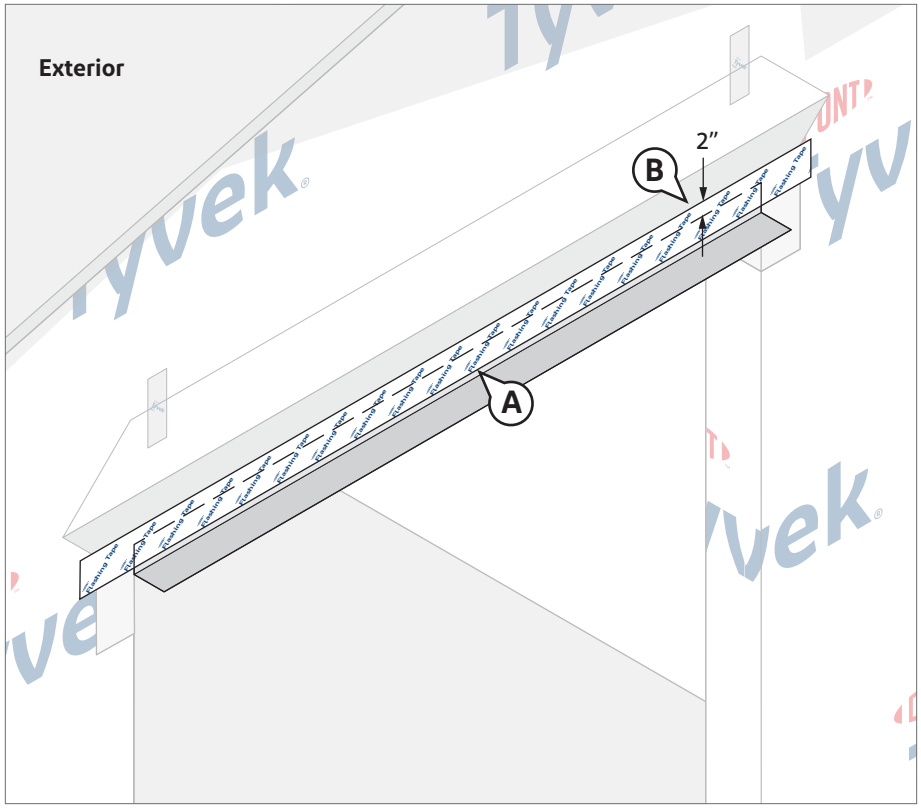
Final Step

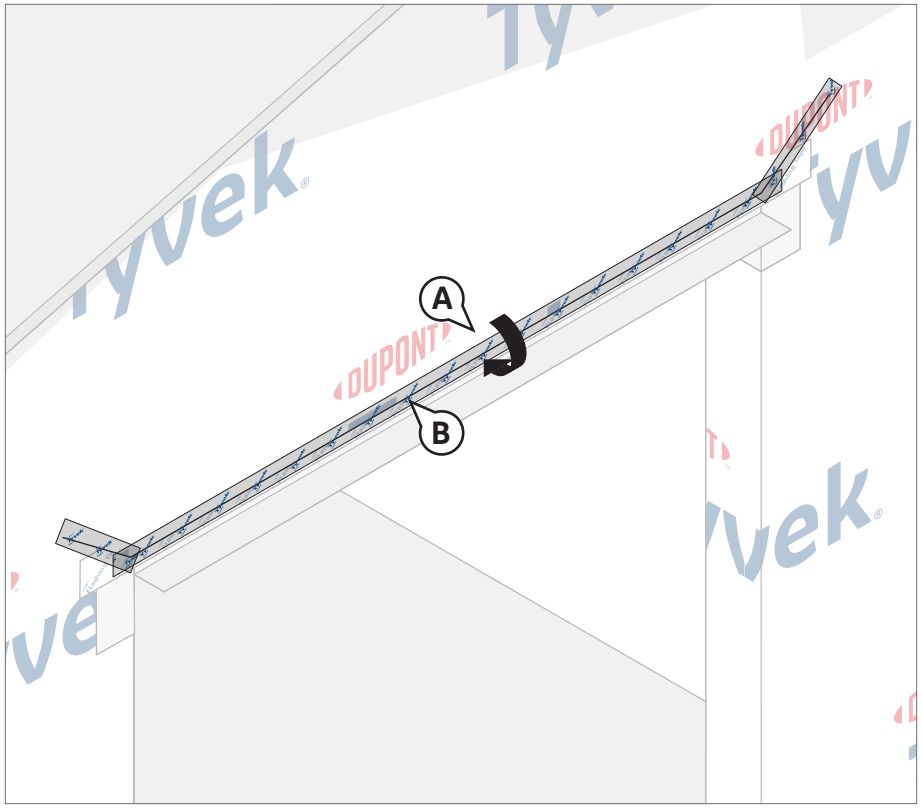
A. Flip down **Tyvek® WRB** flap.

B. Tape seams using **DuPont™ Tyvek® Tape**, **DuPont™ Flashing Tape**, or **StraightFlash™**.

NOTE: **DuPont™ Flashing Tape** or **StraightFlash™** may be required to obtain a robust termination onto the metal flashing underneath (if applicable).

NOTE: To maintain proper shingling, tape horizontal seams before taping along diagonal cut.





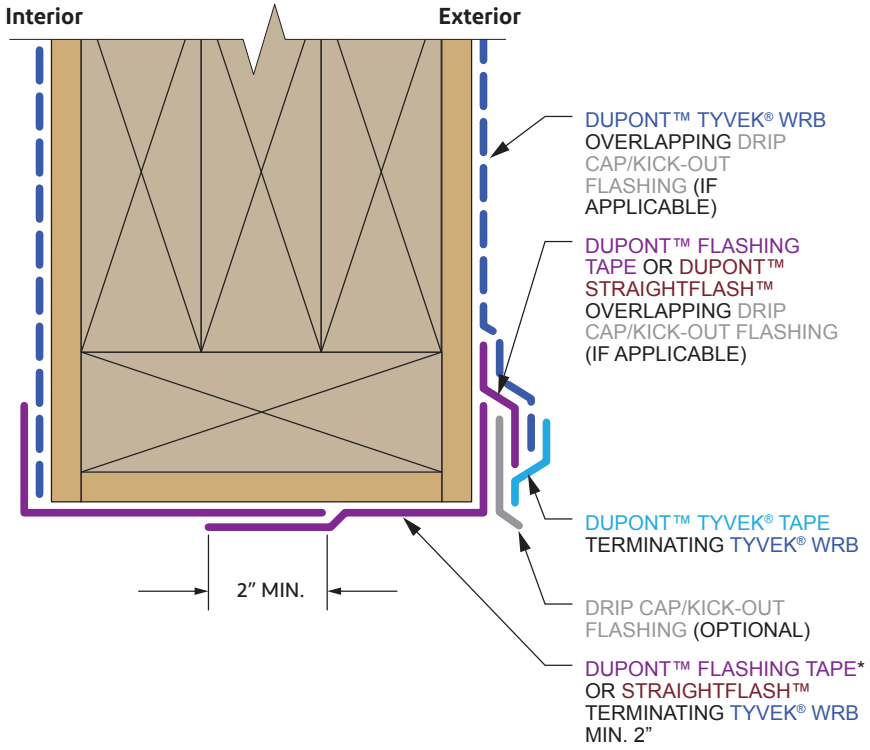
[1]Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)

Balcony Dropped Beams and Headers

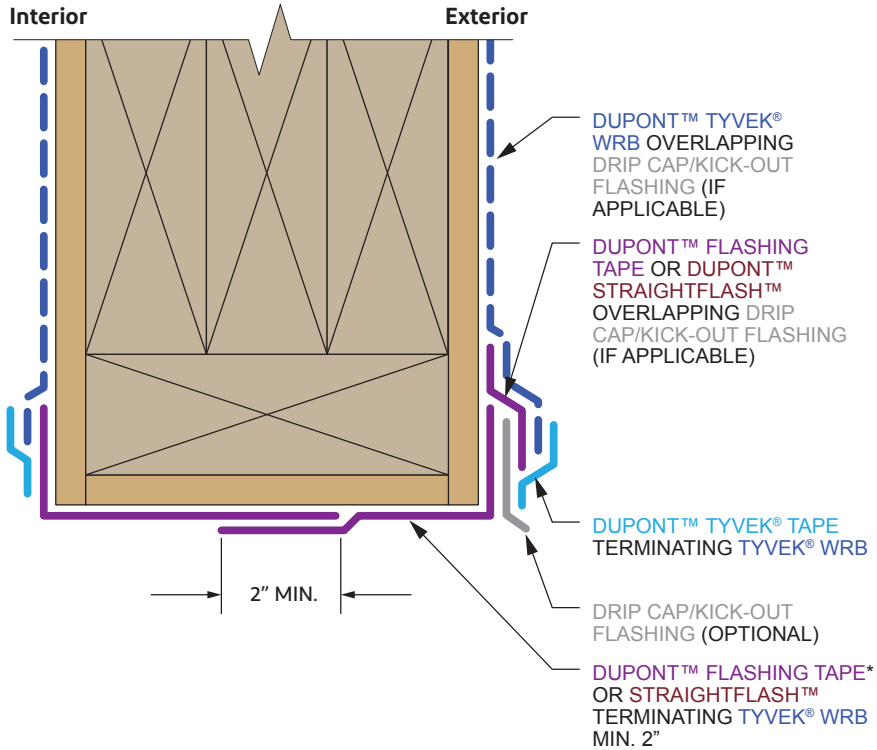
Option 1: Using DuPont Self-Adhered Flashing Products Across Underside of Beam

NOTE: This method is recommended when the beam does not exceed 10" in depth.



BALCONY DROPPED BEAM/HEADER (SECTION VIEW)

Method 1: DuPont Self-Adhered Flashing Products Installed AFTER the Tyvek® WRB Installation on Interior Walls



BALCONY DROPPED BEAM/HEADER (SECTION VIEW)

Method 2: DuPont Self-Adhered Flashing Products Installed BEFORE the Tyvek® WRB Installation on Interior Walls

*__DuPont™ FlexWrap™__ may be used in lieu of __DuPont™ Flashing Tape__ or __StraightFlash™__ when following alternate option per STEP 4.

NOTE: CAD details not to scale. For additional CAD details, visit building.dupont.com.

DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)

Balcony Dropped Beams and Headers

Option 2: Using Tyvek® WRB Header Piece Across Underside of Beam

This option applies to the following products: DuPont™ Flashing Tape, DuPont™ StraightFlash™, and DuPont™ FlexWrap™

This section of the guide is intended for addressing dropped beam and header conditions with a **Tyvek® WRB** header piece when the depth of the beam is **greater than 10”**. If the depth of the beam is **10” or less**, the guidance in Option 1 can be followed if desired.

NOTE: Details not to scale. Certain components enlarged for clarity.

STEP 1

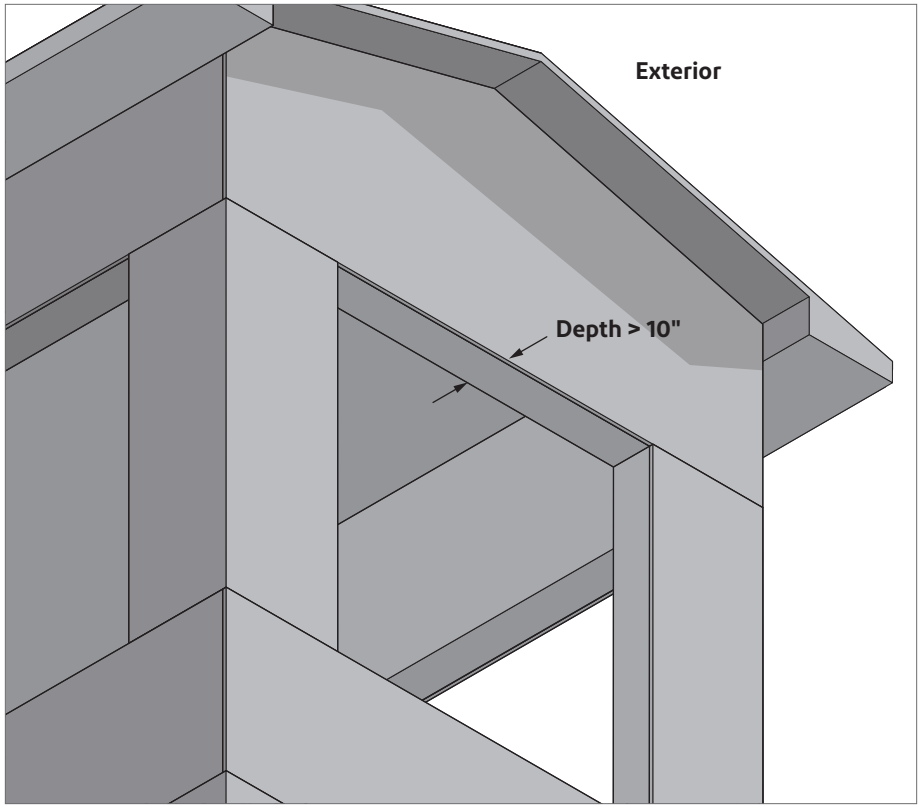
Installation of Tyvek® WRB on Exterior-Facing Walls

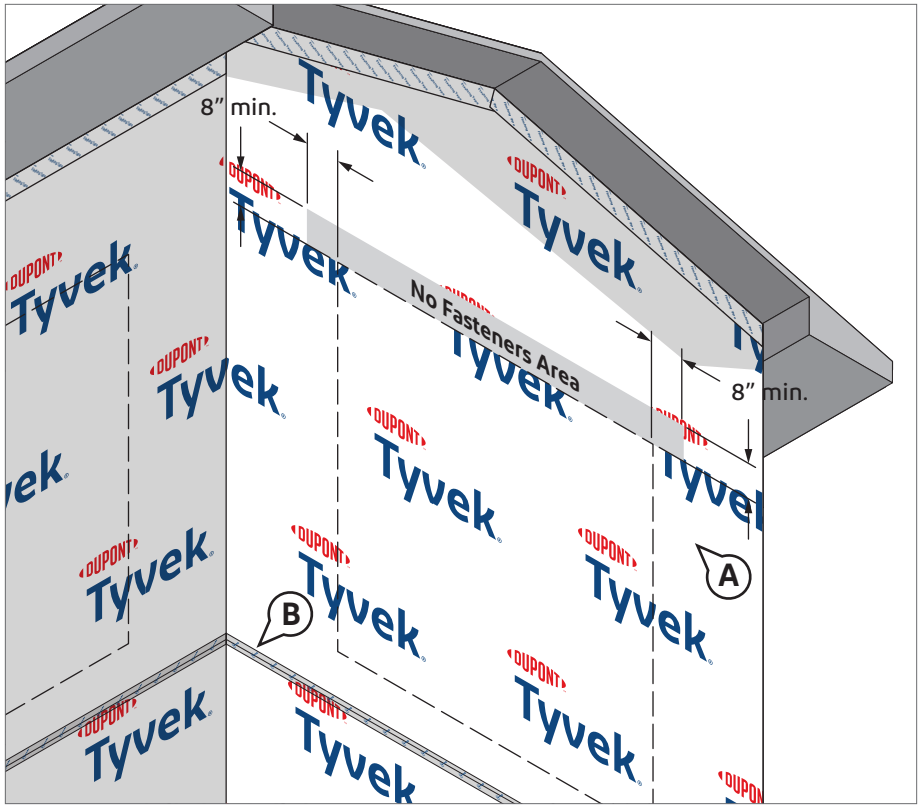
A. Wrap walls according to the *Tyvek® WRB Installation Instructions* in the applicable DuPont Installation Guideline found on building.dupont.com. Maintain a minimum 6” overlap between courses.

NOTE: When using **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fasteners, **DO NOT INSTALL** fasteners within 8” from the head of the opening, or where the **Tyvek® WRB** flap will be temporarily folded up in STEP 2.

B. Tape all vertical seams of the **Tyvek® WRB** using **DuPont™ Tyvek® Tape**. If the **Tyvek® WRB** is not being installed as an air barrier, **Tyvek® Tape** is not required on horizontal seams, but is considered a recommended best practice. When installing as an air barrier, both the horizontal and vertical seams must be taped.

NOTE: Use 3” **Tyvek® Tape** for the seams of **DuPont™ Tyvek® StuccoWrap®**, **Tyvek® DrainWrap™**, and **Tyvek® CommercialWrap® D**. The grooves on these **Tyvek® WRBs must** be installed vertically.





STEP 2

Preparation of Tyvek® WRB on Exterior-Facing Walls

A. Make an "I-Cut" in the **Tyvek® WRB**. For an "I-Cut", begin with a horizontal cut across the bottom and the top of the opening. From the center, cut straight down to the sill.

B. Cut two 45 degree slits a minimum of 8" extending from the corner of the head, up and away from the opening. This will create a flap above the opening to expose sheathing or framing members to allow head flashing installation (see STEP 6).

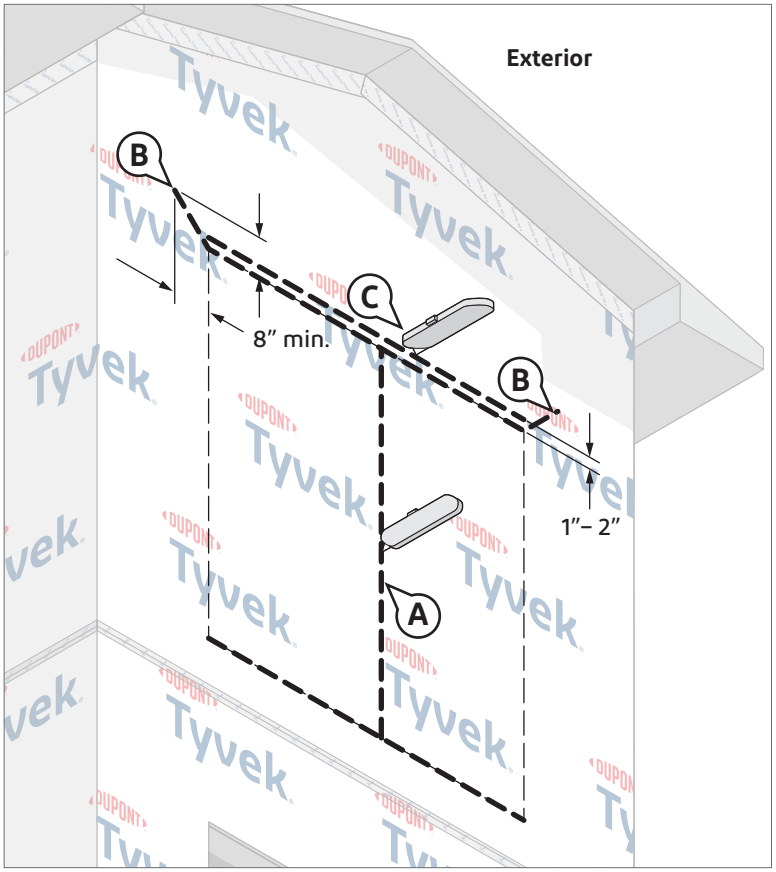
NOTE: Some flashing widths may require longer slits.

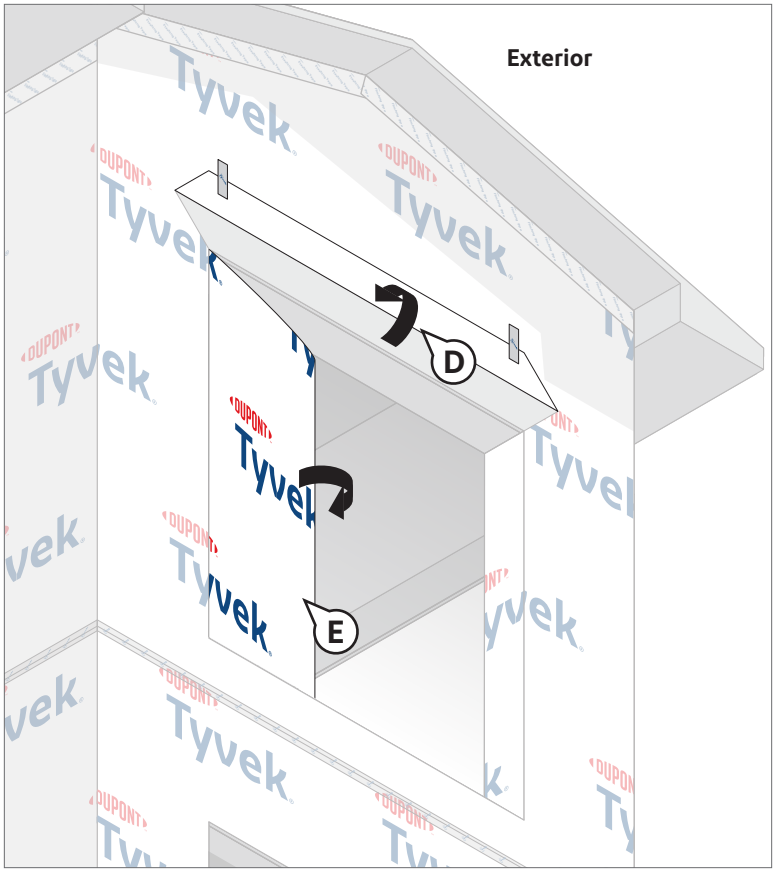
C. Create another horizontal cut 1"– 2" above the horizontal edge of the head flap.

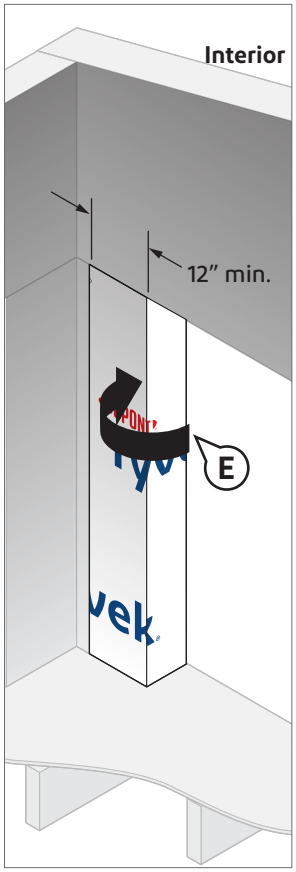
D. Flip head flap up and temporarily secure with **DuPont™ Tyvek® Tape**.

ALTERNATE METHOD TO SECURE HEAD FLAP: In lieu of temporarily taping, the head flap can be tucked under the **Tyvek® WRB**.

E. Fold side flaps into opening and ensure flaps extend a minimum of 12" to the inside wall for future overlap with **Tyvek® WRB** courses. Cut off excess if desired.







DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)

Balcony Dropped Beams and Headers

Option 2: Using Tyvek® WRB Header Piece Across Underside of Beam

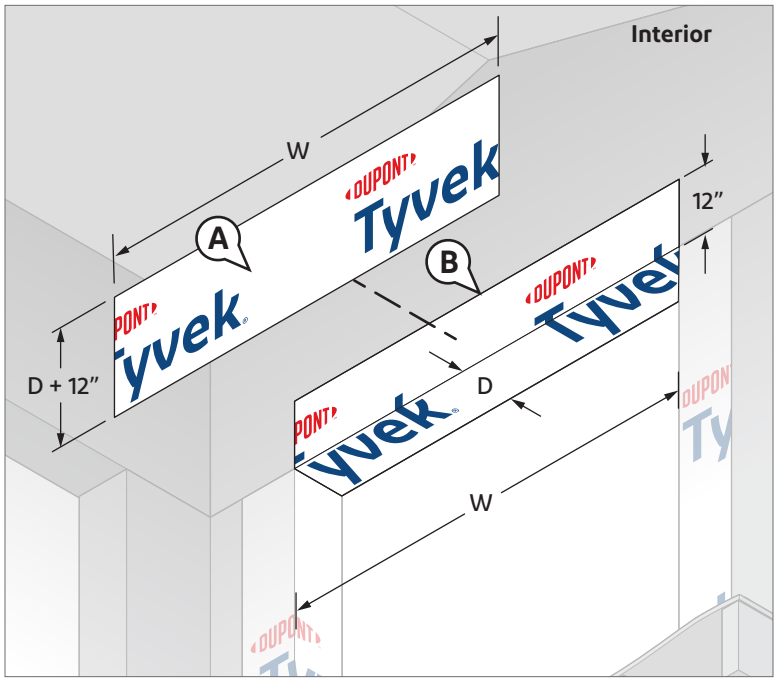
STEP 3

Installation of Tyvek® WRB Header Piece

NOTE: A longer **Tyvek® WRB** header piece may be used to replace the **DuPont Self-Adhered Flashing Products** shown in STEP 4 if desired. Follow STEP 3 – ALTERNATE instead.

A. Cut a piece of **Tyvek® WRB** long enough to extend the full width of the opening (W) and a minimum of 12" **GREATER** than the depth (D) of the underside of the beam.

B. At the interior side of the wall, position the **Tyvek® WRB** header piece to ensure it will fully cover the underside of the beam and extend 12" onto the face of the interior wall. Fold the **Tyvek® WRB** header piece accordingly and install, ensuring the correct amount of coverage as mentioned above.



STEP 4

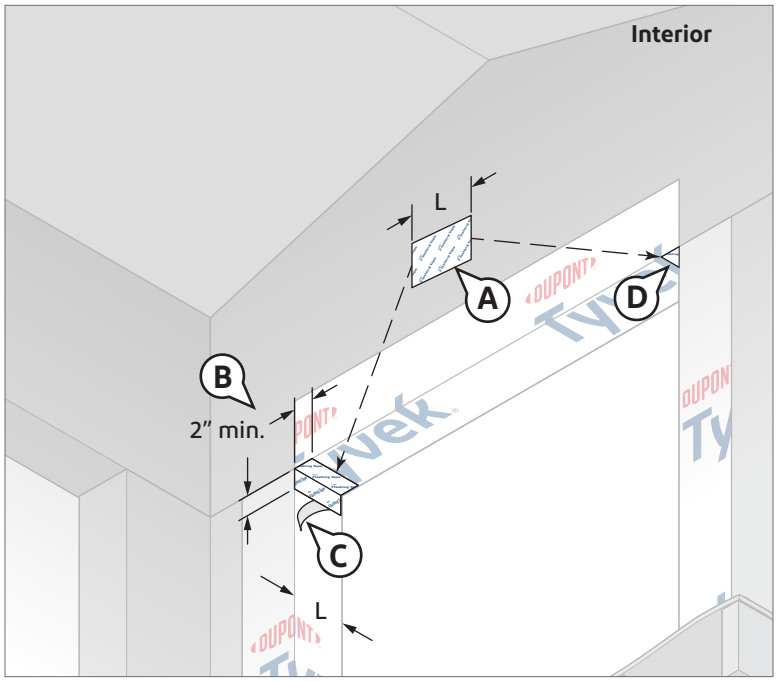
Installation of DuPont Self-Adhered Flashing Products Along Wall Interface

A. Cut two (2) pieces of **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™** the length of the wall interface (L).

B. Position the **DuPont Self-Adhered Flashing Product** to ensure it will overlap a minimum of 2" on the wall and 2" on the underside of the beam.

C. Remove the release paper and adhere the **DuPont Self-Adhered Flashing Product** on the wall and on the underside of the beam. Ensure the correct amount of adhesion as mentioned above.

D. Repeat steps B – C on the opposite side of the wall.



STEP 3 – ALTERNATE

Installation of Tyvek® WRB Header Piece

A. Cut a piece of **Tyvek® WRB** at least 12" **LONGER** than the width of the opening (W) and at least 12" **GREATER** than the depth (D) of the underside of the beam.

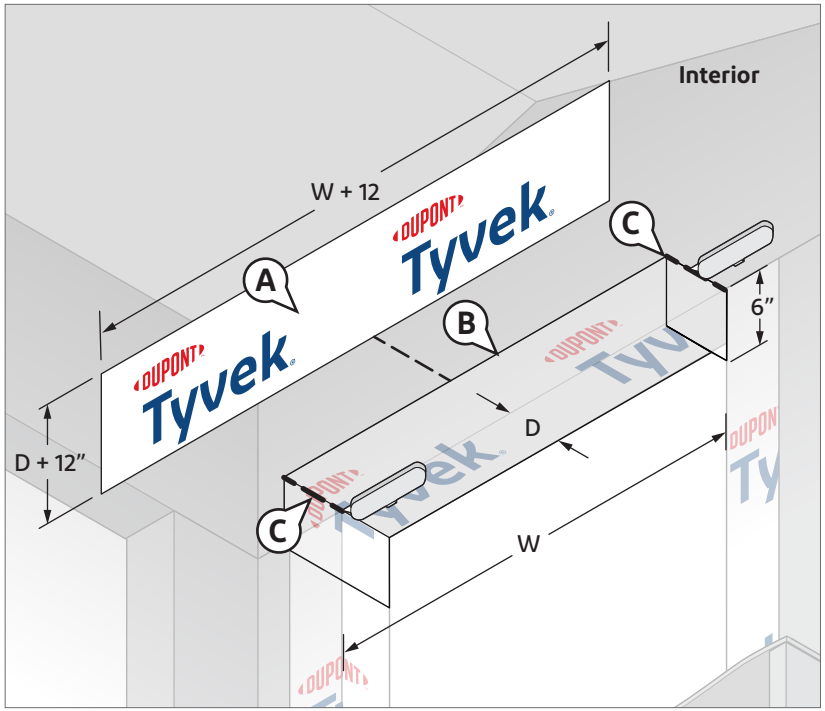
B. At the interior side of the wall, position the **Tyvek® WRB** header piece to ensure it will fully cover the underside of the beam and extends at least 6" down each wall. Install, ensuring the correct amount of coverage as mentioned above.

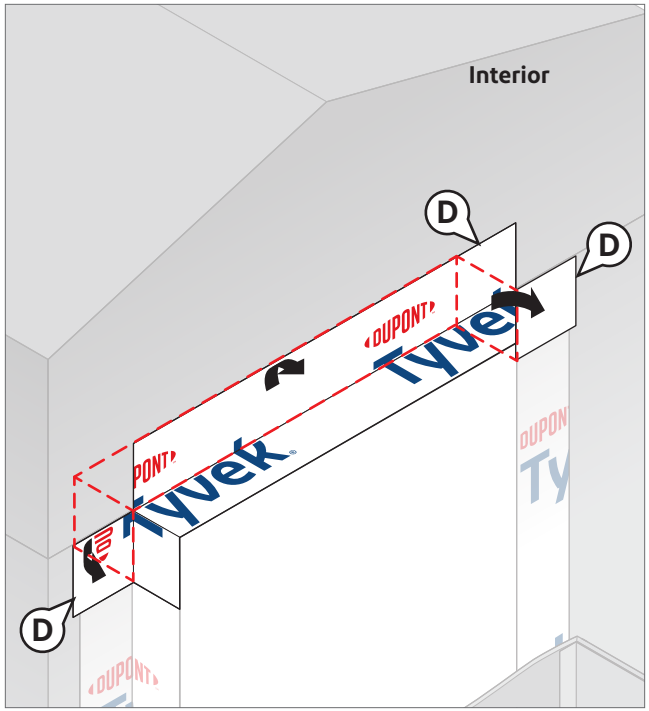
C. Use a utility knife to cut **Tyvek® WRB** header piece from the corner of the wall interface outwards. Do **NOT** cut through the previously installed **Tyvek® WRB**.

D. Fold the **Tyvek® WRB** header piece out onto the sides of the walls as shown.

E. **Air Barrier Installations (if applicable)**: Tape all horizontal seams of the **Tyvek® WRB** header piece.

F. Skip STEP 4 and proceed with STEP 5.





DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)

Balcony Dropped Beams and Headers

Option 2: Using Tyvek® WRB Header Piece Across Underside of Beam

STEP 5

Installation and Preparation of Tyvek® WRB on Interior-Facing Walls

A. Wrap walls according to the *Tyvek® WRB Installation Instructions* in the applicable DuPont Installation Guideline found on building.dupont.com.

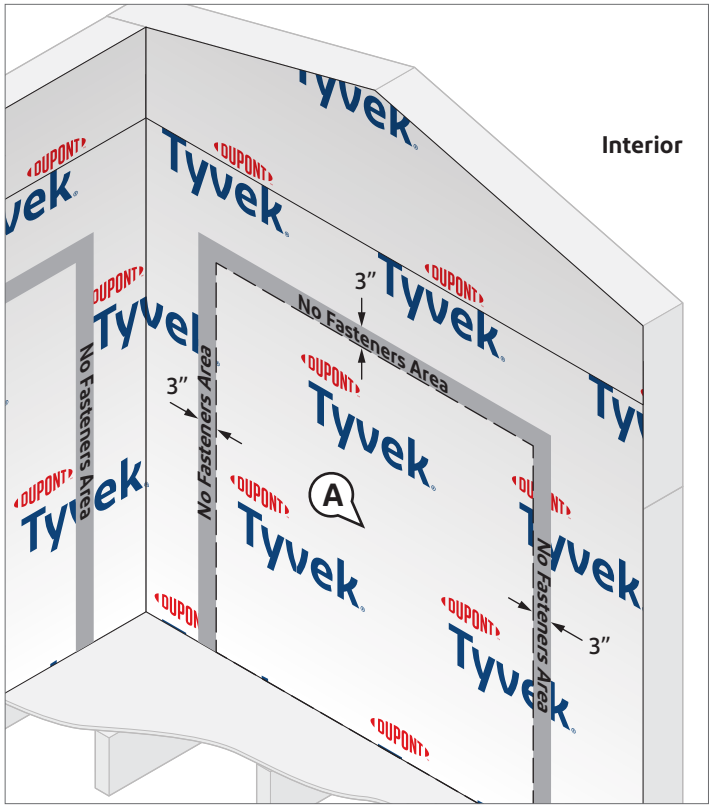
NOTE: When using **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fasteners, **DO NOT INSTALL** fasteners within 2"– 3" from the head of the opening, or where the **DuPont Self-Adhered Flashing Products** will be installed in STEP 6.

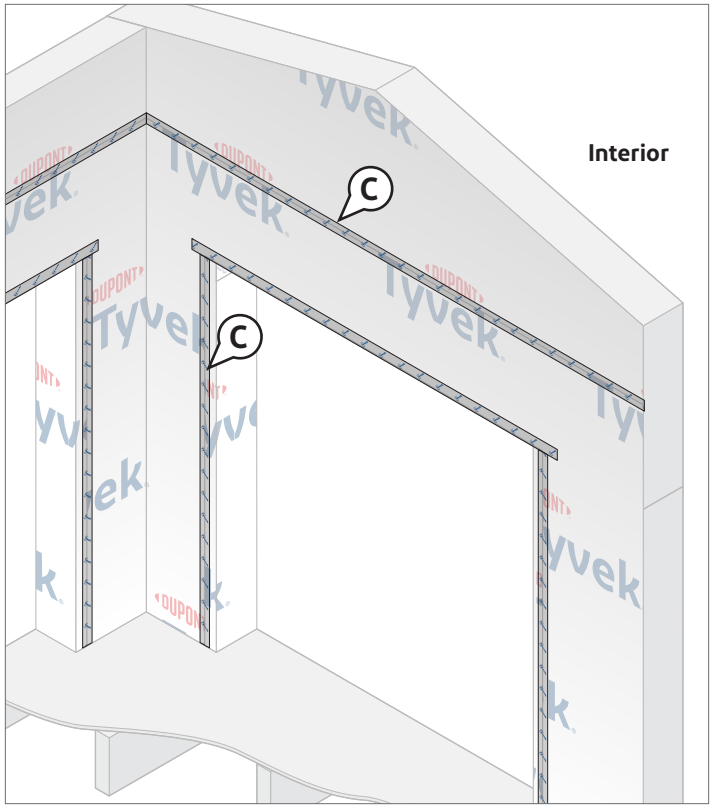
B. Cut the **Tyvek® WRB** 1"– 2" from both the sides and above the opening before taping the seams in the next step.

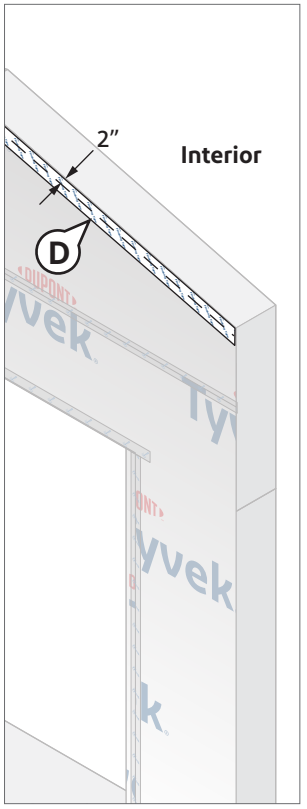
C. Tape all vertical seams of the **Tyvek® WRB** using **DuPont™ Tyvek® Tape**. If the **Tyvek® WRB** is not being installed as an air barrier, **Tyvek® Tape** is not required on horizontal seams, but is considered a recommended best practice. When installing as an air barrier, both the horizontal and vertical seams must be taped.

NOTE: Use 3" **Tyvek® Tape** for the seams of **DuPont™ Tyvek® StuccoWrap®**, **Tyvek® DrainWrap™**, and **Tyvek® CommercialWrap® D**. The grooves on these **Tyvek® WRBs must** be installed vertically.

D. **Air Barrier Installations (if applicable)**: Cut the **Tyvek® WRB** 2" **BELOW** the framing to expose the sheathing and terminate the **Tyvek® WRB** using **DuPont™ Flashing Tape** or **DuPont™ StraightFlash** with minimum 2" adhesion onto the sheathing.







Air Barrier Installations

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DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)

Balcony Dropped Beams and Headers

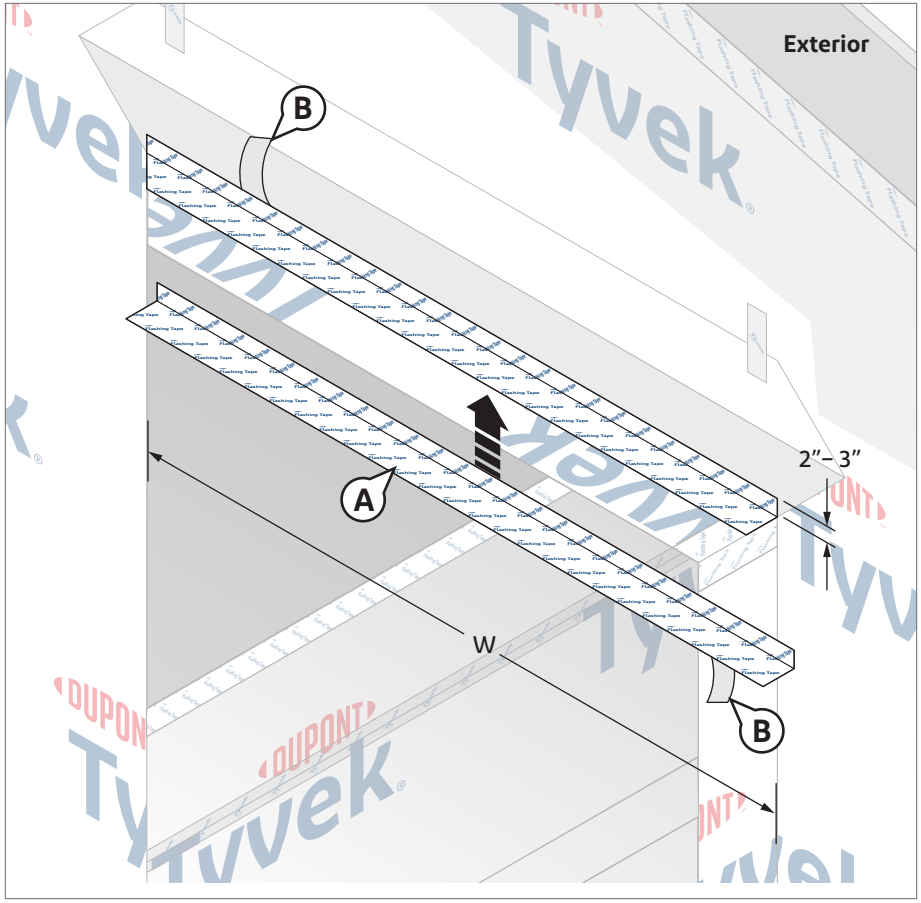
Option 2: Using Tyvek® WRB Header Piece Across Underside of Beam

STEP 6

Installation of DuPont Self-Adhered Flashing Products at Head of Opening

A. Cut a piece of **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™** the width of the opening (W). Use roll widths sufficient to achieve a minimum of 2"– 3" adhesion onto the face of the wall.

B. Remove the release paper and adhere the **DuPont Self-Adhered Flashing Product** onto the face of the wall and on the underside of the beam. Ensure the correct amount of adhesion as mentioned above.



ALTERNATE METHOD USING FULL PIECE OF DUPONT™ FLEXWRAP™ (NOT SHOWN)

C. Cut two (2) pieces of **FlexWrap™** at least 12" **LONGER** than the width of the opening (W). Install on interior and exterior sides of the wall per STEPS 7B – 7E.

[1]Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)

Balcony Dropped Beams and Headers

Option 2: Using Tyvek® WRB Header Piece Across Underside of Beam

STEP 7

Installation of DuPont™ FlexWrap™ Corners at Head of Opening

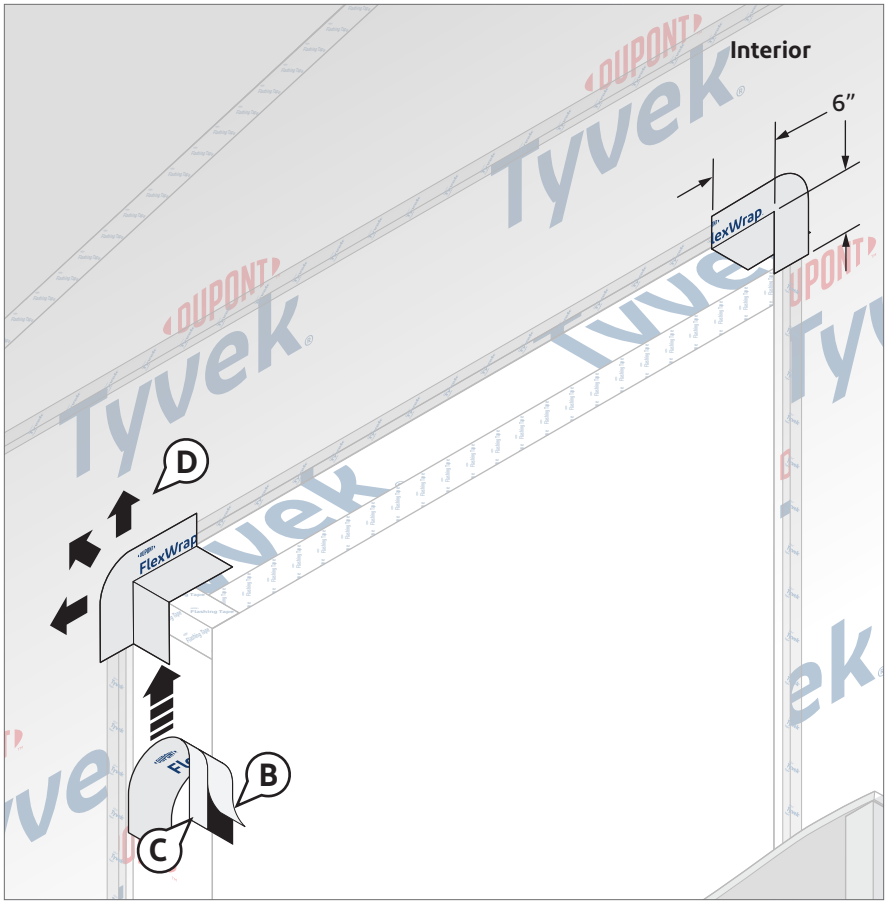
A. Cut two (2) pieces of **FlexWrap™** a minimum of 12" long.

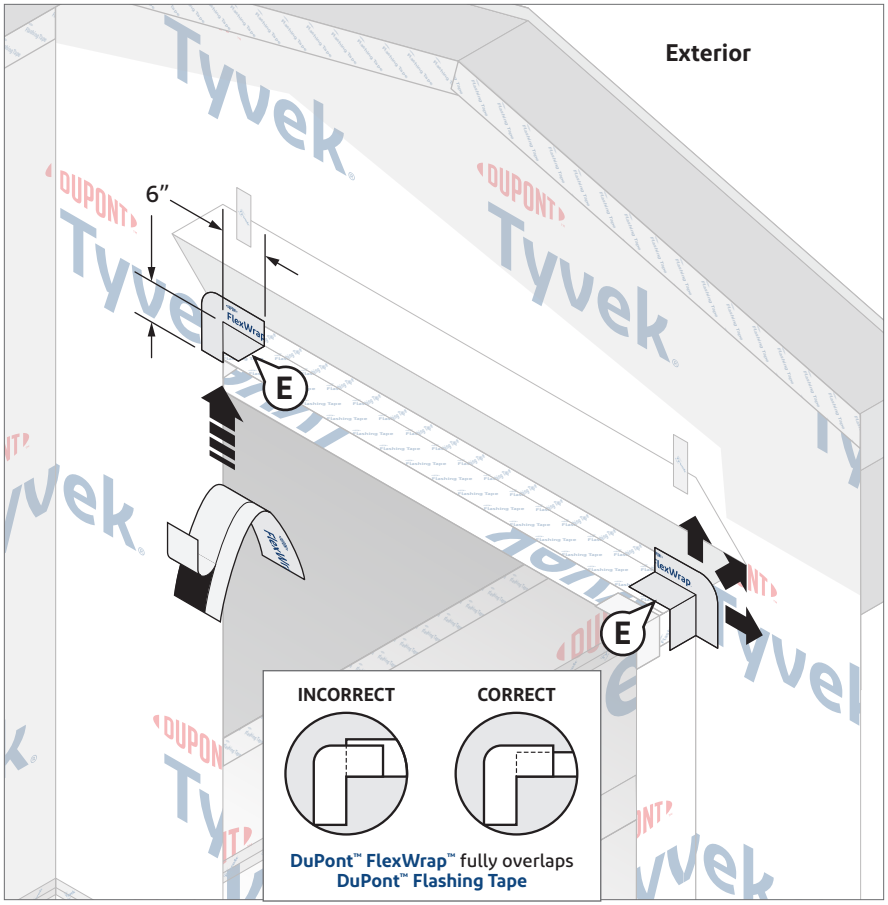
B. Starting at the interior side of the wall, remove wide piece of release paper. Position **FlexWrap™** by aligning the inside edge of the narrow release paper with the face of the wall to ensure 3"– 4" will be adhered to the face of the wall, or as needed to seal the **Tyvek® WRB** interfaces, and with at least 6" extending down the wall and 6" across the head. Adhere into opening, ensuring the correct amount of adhesion onto the wall as mentioned above.

C. Remove narrow release paper.

D. Fan out the **FlexWrap™** at corners and adhere onto face of wall. Repeat steps on opposite corner.

E. Repeat steps A-D on the exterior side of the wall.





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DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)

Balcony Dropped Beams and Headers

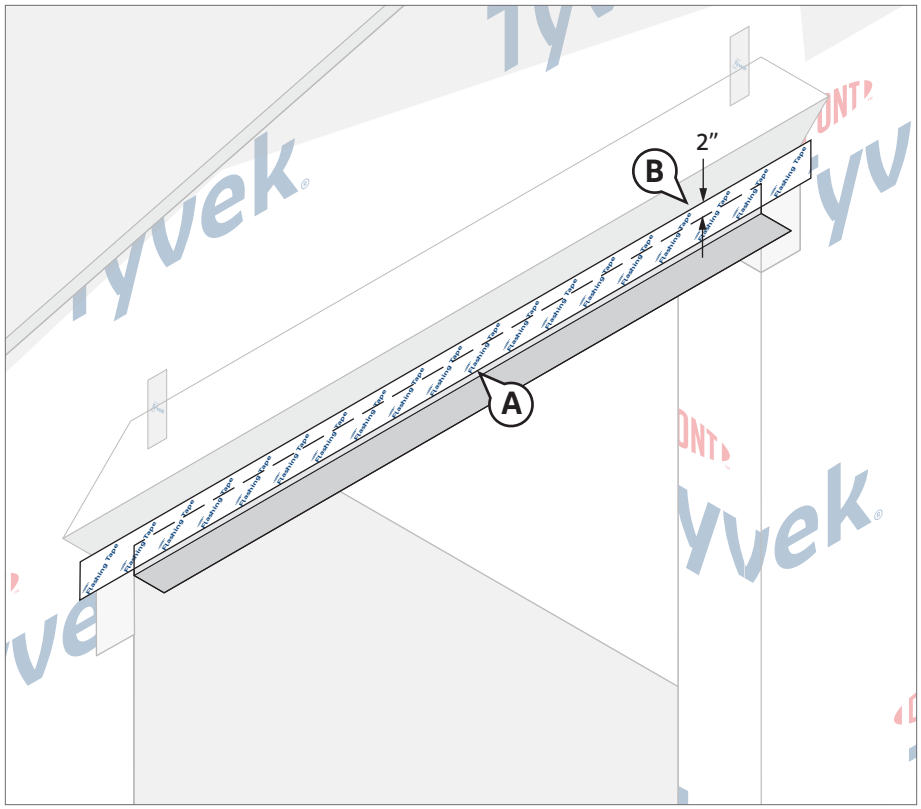
Option 2: Using Tyvek® WRB Header Piece Across Underside of Beam

STEP 8 (IF APPLICABLE)

Installation of Drip Cap/Kick-Out Flashing

A. Install a drip cap/kick-out flashing (by others) along the exterior face of the wall per manufacturer's requirements.

B. Terminate vertical leg of drip cap/kick-out flashing with **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™**. The **DuPont Self-Adhered Flashing Product** used should be long enough to extend **BEYOND** the **DuPont™ FlexWrap™** on each side and adhere[1] a minimum of 2" onto the sheathing above.



STEP 9

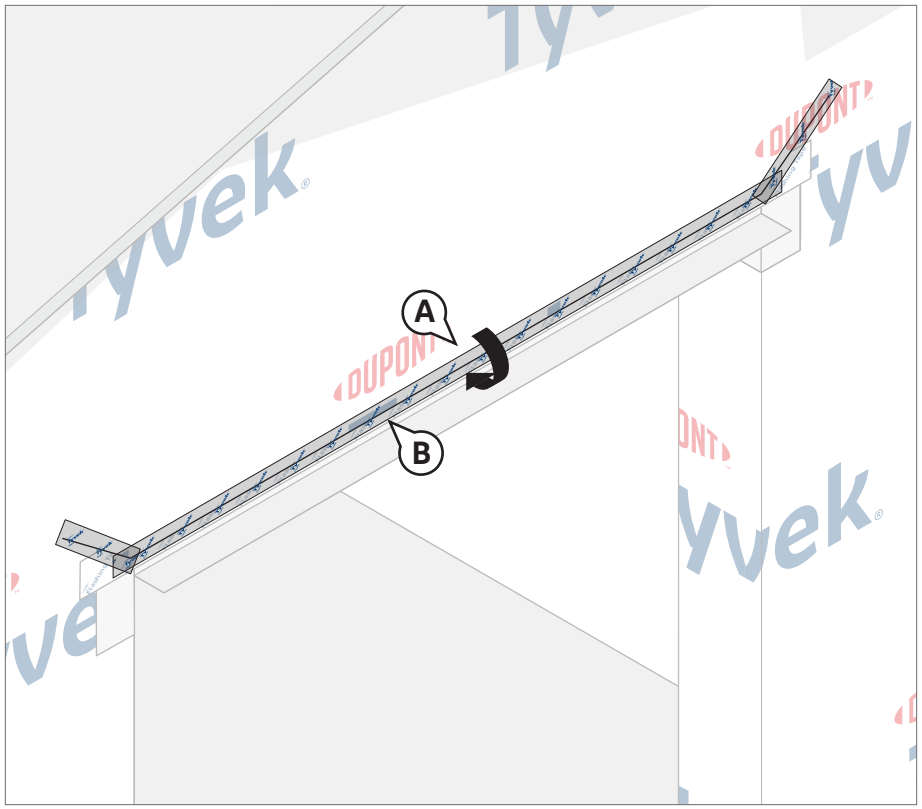
Final Step

A. Flip down **Tyvek® WRB** flap.

B. Tape seams using **DuPont™ Tyvek® Tape**, **DuPont™ Flashing Tape**, or **StraightFlash™**.

NOTE: **DuPont™ Flashing Tape** or **StraightFlash™** may be required to obtain a robust termination onto the metal flashing underneath (if applicable).

NOTE: To maintain proper shingling, tape horizontal seams before taping along diagonal cut.

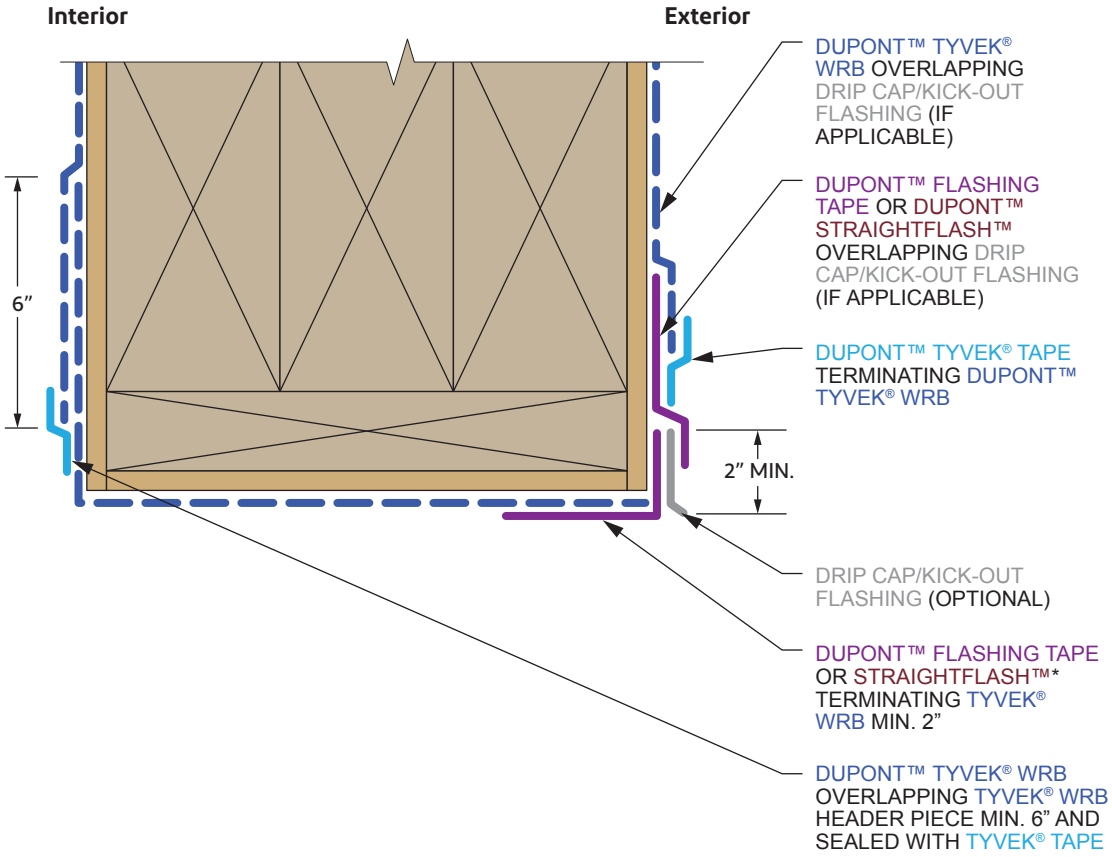


[1]Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

DuPont™ Tyvek® WRB Installation Instructions (Balcony Applications)

Balcony Dropped Beams and Headers

Option 2: Using Tyvek® WRB Header Piece Across Underside of Beam



BALCONY DROPPED BEAM/HEADER (SECTION VIEW)

Using Tyvek® WRB Header Piece Across Underside of Beam

*__DuPont™ FlexWrap™__ may be used in lieu of __DuPont™ Flashing Tape__ or __StraightFlash™__ when following alternate option per STEP 6.

NOTE: CAD details not to scale. For additional CAD details, visit building.dupont.com.

Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

Option 1: Installation of DuPont Self-Adhered Flashing Products Behind Ledger Board

This option applies to the following products: DuPont™ Flashing Tape, DuPont™ StraightFlash™ and DuPont™ FlexWrap™

NOTE: **Details not to scale**. Certain components enlarged for clarity.

STEP 1

Preparation and Installation of Tyvek® WRB Apron

Condition 1: Deck Installed Above Another Story

A. Cut a **Tyvek® WRB** apron for attachment under the sill of the rough opening. The **Tyvek® WRB** apron should be cut the length of the ledger board plus 20". The apron should be cut wide enough so it will extend at least 6" **BEYOND** the bottom of the ledger (once installed).

NOTE: The ledger board will be installed in STEP 4. Actual placement location will vary.

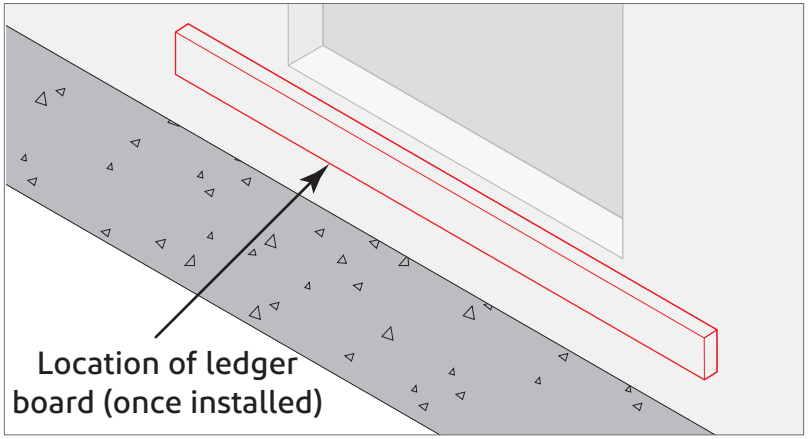
B. Starting at the sill of the rough opening, center the **Tyvek® WRB** apron so it will extend at least 10" **BEYOND** each side of the ledger (once installed).

C. Secure the top of the apron to the wall and leave the bottom of the apron unsecured to allow it to overlap the future **Tyvek® WRB** course installed in a later step. Avoid placing **DuPont™ Tyvek® Wrap Cap Fasteners** where **DuPont Self-Adhered Flashing Products** will be installed.

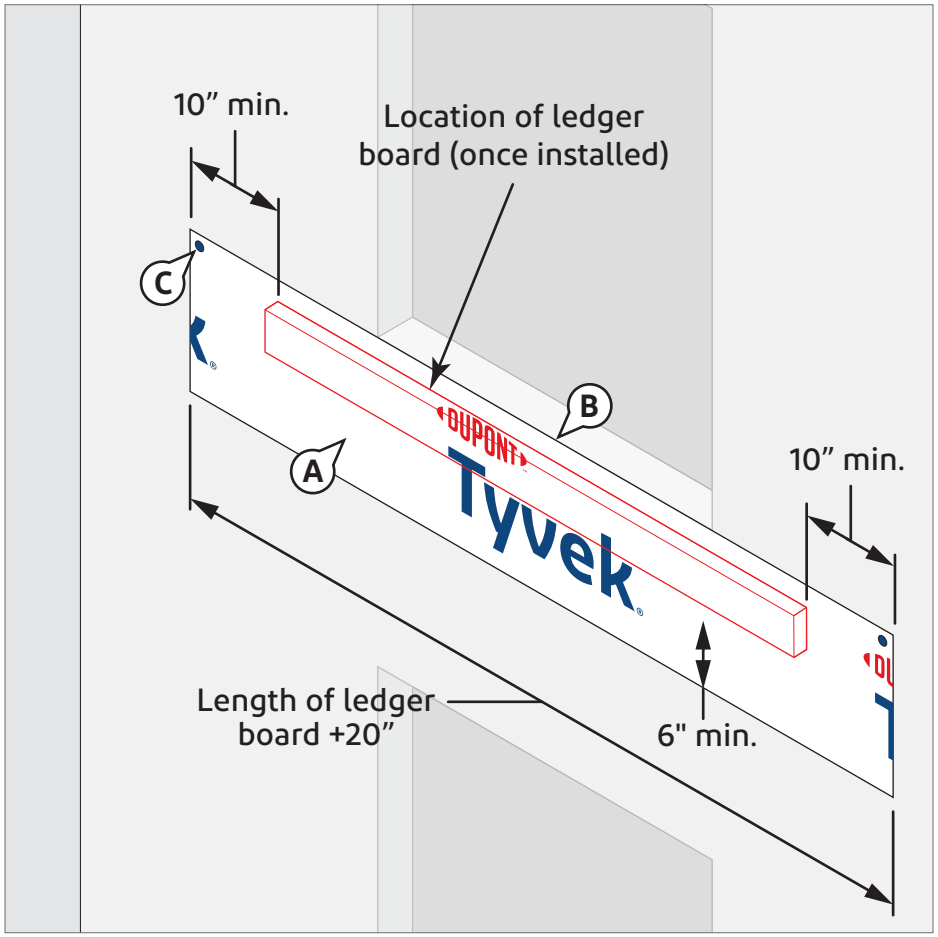
Condition 2: Deck Installed at Foundation Wall

Proceed directly to STEP 2. See the related CAD details at the end of this section for more guidance.

Condition 2: Deck Installed At Foundation Wall



Condition 1: Deck Installed Above Another Story



Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

Option 1: Installation of DuPont Self-Adhered Flashing Products Behind Ledger Board

STEP 2

Installation of DuPont Self-Adhered Flashing Products on Wall

NOTE: If a metal edge flashing/drip edge is placed at the base of the ledger board (not shown), install accessory before proceeding with STEP 2A.

Condition 1: Deck Installed Above Another Story

A. Mark the location of the ledger board. Starting from the base of the ledger board (once installed in STEP 4), install* **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™** over the **Tyvek® WRB** apron and onto the sheathing above. Ensure flashing is cut long enough to extend a minimum of 4" **BEYOND** both ends of the ledger. **DuPont™ Flashing Tape** or **StraightFlash™** should also extend a minimum of 4" onto the sheathing.

DuPont Self-Adhered Flashing Products Installation Method

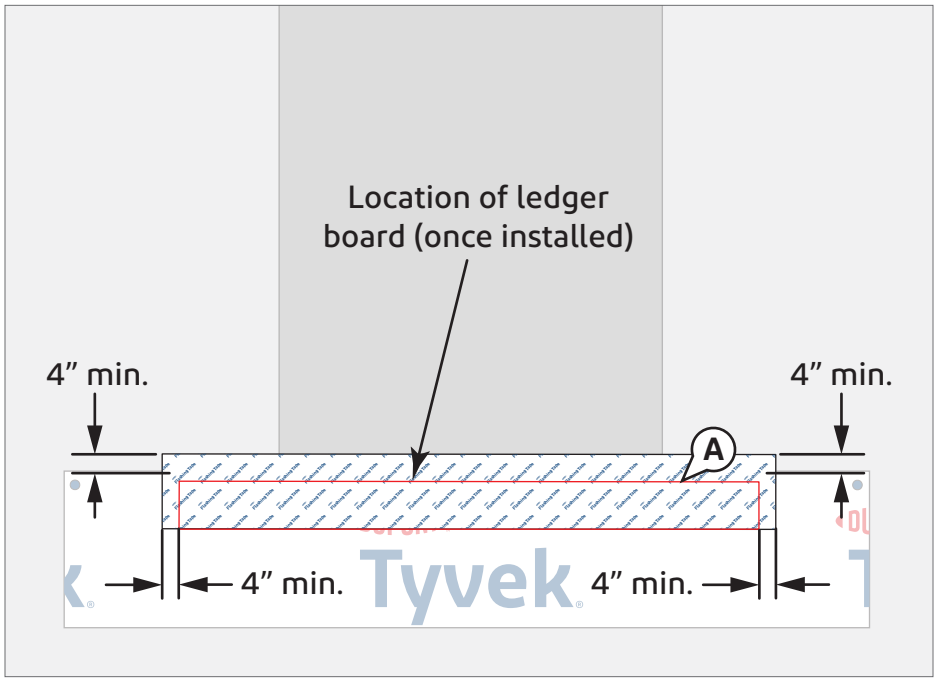
Depending on the ledger board dimensions, multiple pieces of **DuPont™ Flashing Tape** or **StraightFlash™** may be needed to achieve full coverage behind the ledger board and onto the sheathing. Install* the bottom flashing piece prior to subsequent pieces, overlapping each by a minimum of 2" to ensure proper shingling for water drainage.

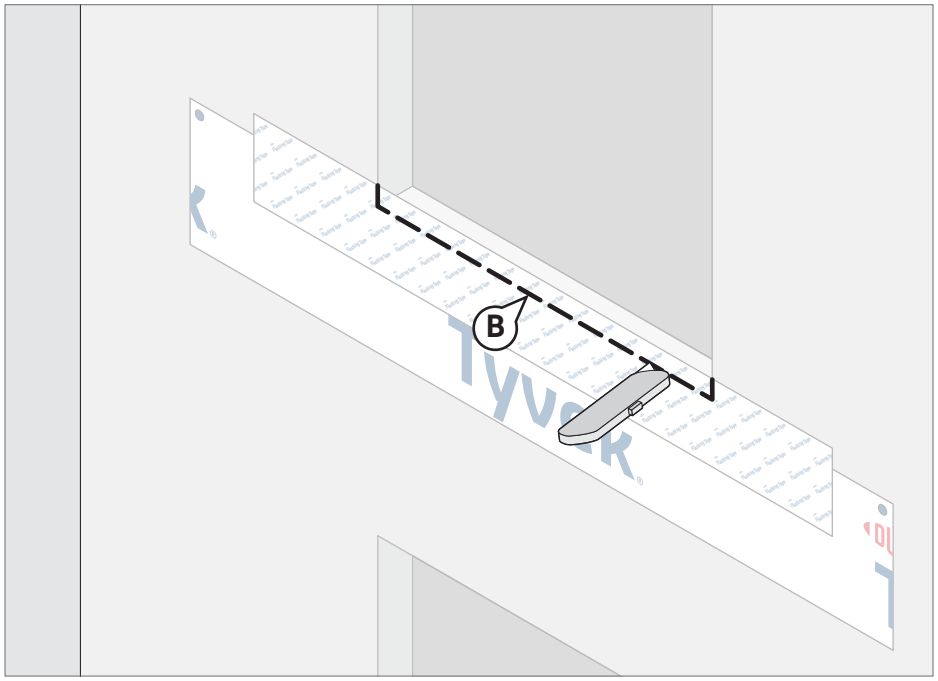
NOTE: 12"–wide **DuPont™ Flashing Tape** may be used if it satisfies the adhesion requirements in STEP 2A.

B. At the rough opening, cut out any excess **DuPont Self-Adhered Flashing Products** that extend over this region.

Condition 2: Deck Installed at Foundation Wall (Not Shown)

Follow guidance above. The **DuPont Self-Adhered Flashing Products** will be installed directly onto the substrate* instead of over a **Tyvek® WRB** apron.





*Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

Option 1: Installation of DuPont Self-Adhered Flashing Products Behind Ledger Board

STEP 3

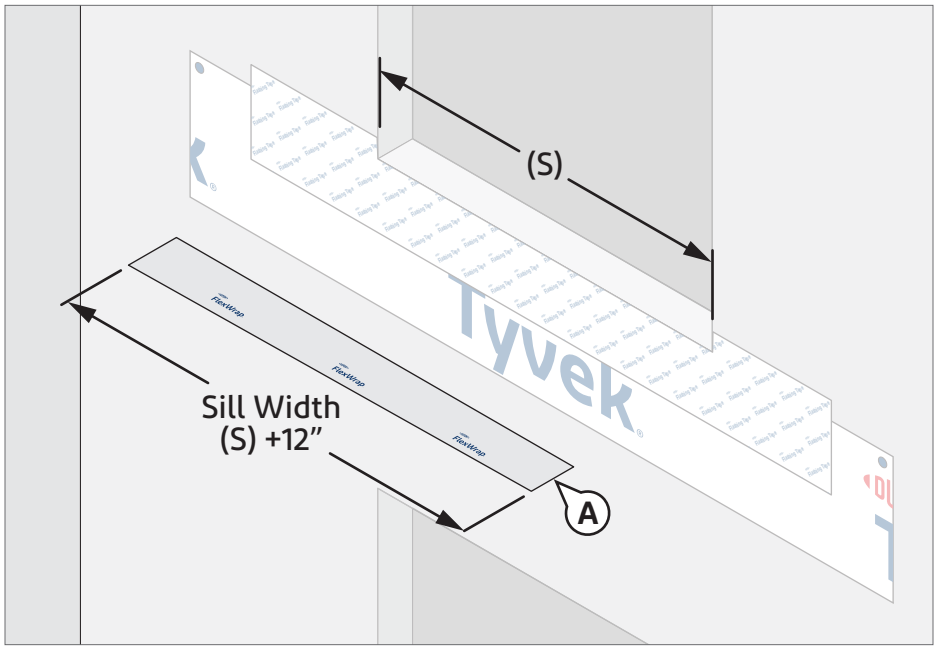
Installation of DuPont™ FlexWrap™ at Rough Opening Sill

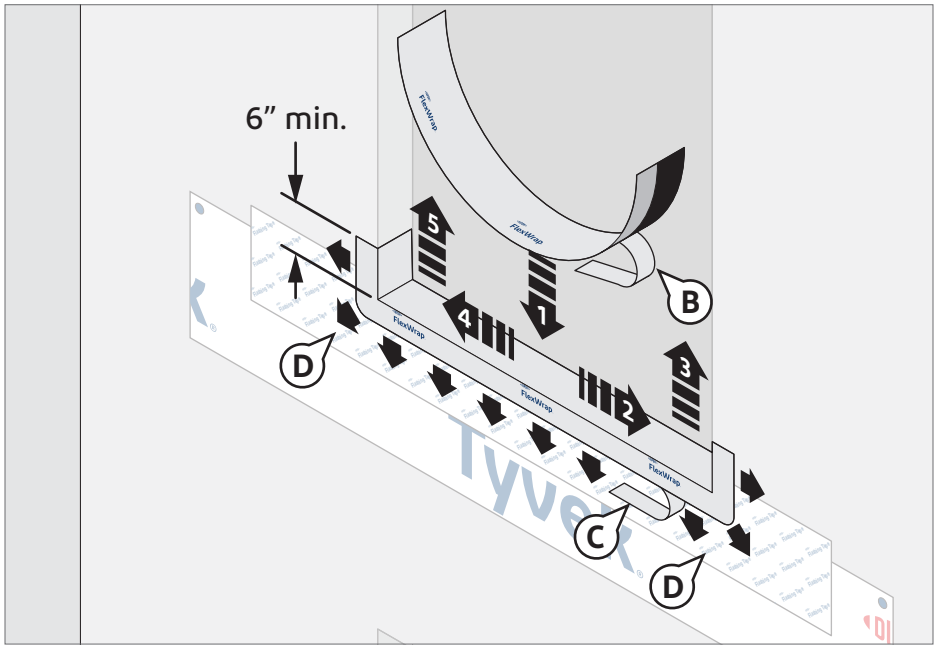
A. Cut **FlexWrap™**[1] at least 12" **LONGER** than width of rough opening sill. Use roll widths sufficient to achieve a minimum of 1" adhesion **BEYOND** where the door frame will be located, ensuring 2"– 3" adhesion onto the face of the wall.

B. Remove wide piece of release paper. Position **FlexWrap™** by aligning the inside edge of the narrow release paper with the face of the wall to ensure 2"– 3" will be adhered to the face of the wall with a minimum of 6" up each side. Adhere[2] into rough opening.

C. Remove narrow release paper.

D. Fan out the **FlexWrap™** at corners and adhere onto face of wall. Continue adhering onto face of wall along sill.





[1]DuPont™ Tyvek® Certified Installers may install a 3-piece sill detail for door openings less than 6 ft. wide. For doors greater than 6 ft. wide, see the *Special Considerations* section for more information regarding the 3-piece sill detail. Contact your local DuPont Building Envelope Specialist for more information about the Certified Installer Program.

[2]Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

Option 1: Installation of DuPont Self-Adhered Flashing Products Behind Ledger Board

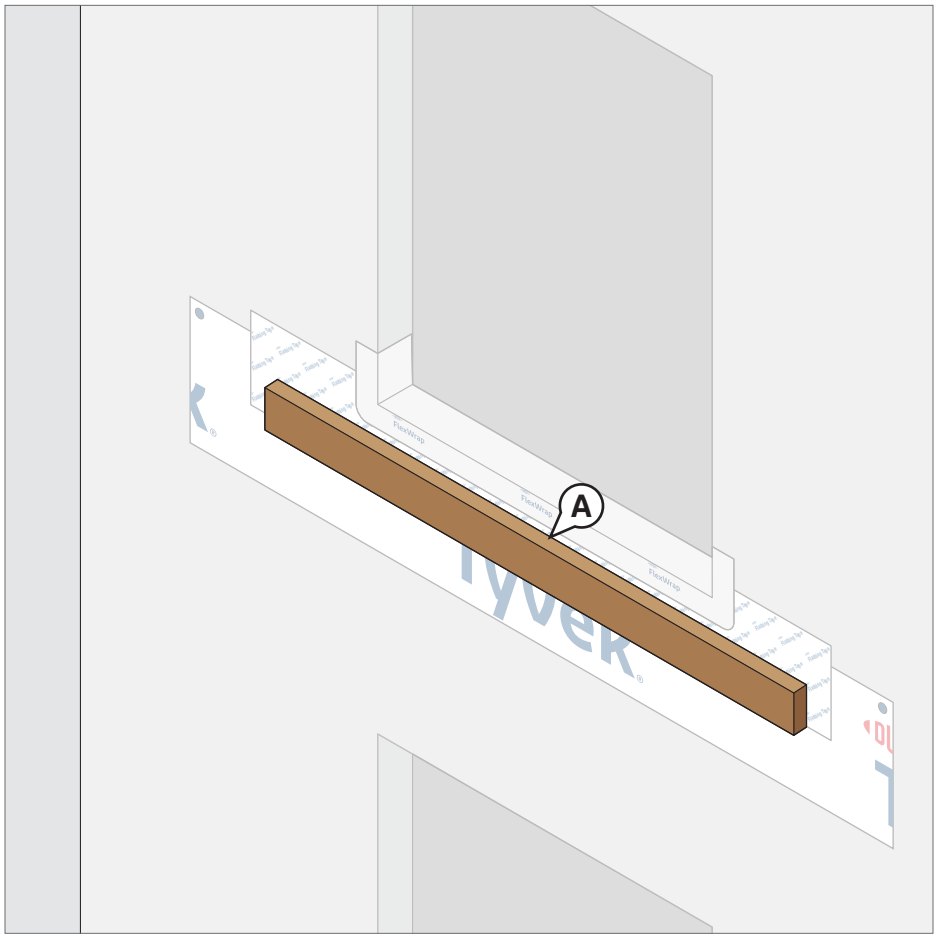
STEP 4

Installation of the Ledger Board

A. Install the ledger board per plans and specifications.

NOTE: The ledger board should be centered over the **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™** installed in STEP 2 to ensure the flashing extends a minimum of 4" **BEYOND** both ends of the ledger and the entire width of the ledger is covered.

NOTE: Metal edge flashing/drip edge and other ledger board related accessories not shown.



Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

Option 1: Installation of DuPont Self-Adhered Flashing Products Behind Ledger Board

STEP 5

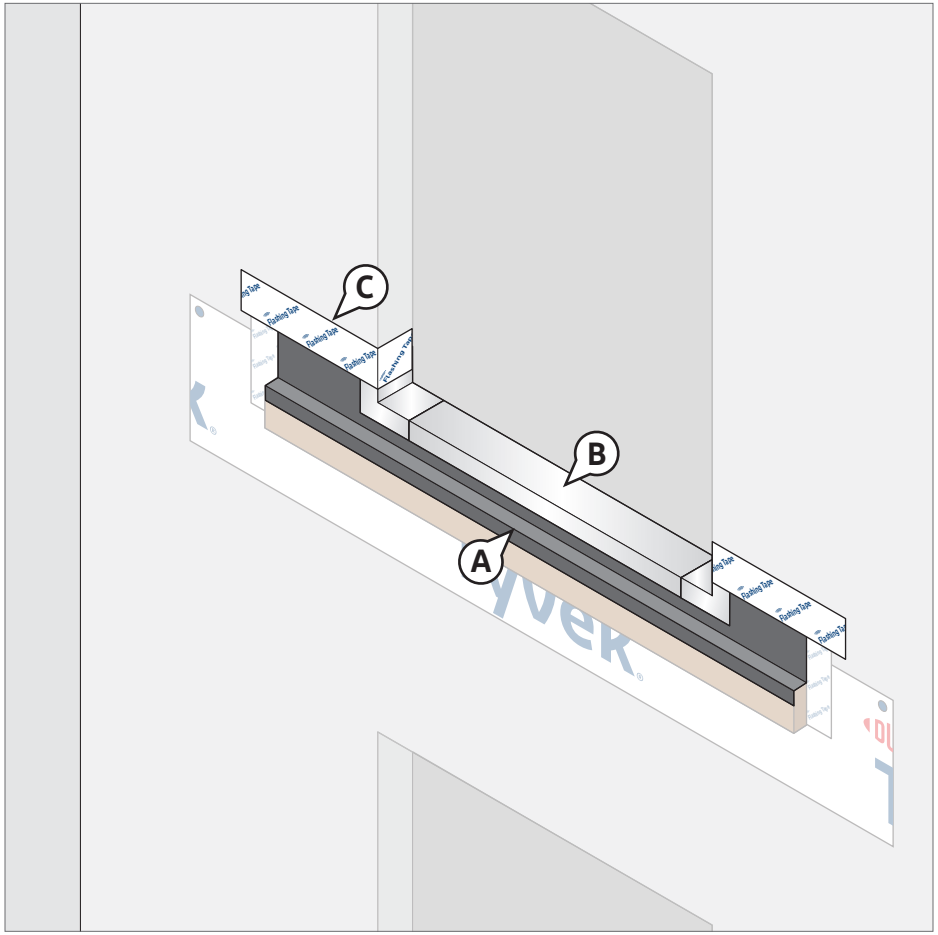
Installation of Self-Adhered or Mechanically-Attached Through Wall Flashing By Others

A. Install through wall flashing along top of the ledger board, up vertical wall onto sheathing, and into the rough opening of the door per plans and specifications.

NOTE: **DuPont Self-Adhered Flashing Products** are **NOT** intended for through wall flashing applications.

B. **Optional**: Install additional flashing (e.g., metal sill pan) as needed per manufacturer's instructions to ensure continuity from the rough opening to the face of the ledger. Use sealant along sill pan flashing seams.

C. When metal or other mechanically-attached through wall flashing is used, the vertical leg of the flashing should be terminated to the sheathing using **DuPont™ Flashing Tape*** or **DuPont™ StraightFlash™**.



*Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

Option 1: Installation of DuPont Self-Adhered Flashing Products Behind Ledger Board

STEP 6

Installation of Tyvek® WRB

A. Install lower **Tyvek® WRB** course below the deck ledger board and underneath the existing **Tyvek® WRB** apron according to the *Tyvek® WRB Installation Instructions* in the applicable DuPont Installation Guideline found on building.dupont.com. **Ensure the Tyvek® WRB apron overlaps onto the lower Tyvek® WRB course for proper shingling**.

NOTE: If deck is installed over a foundation wall, skip this step.

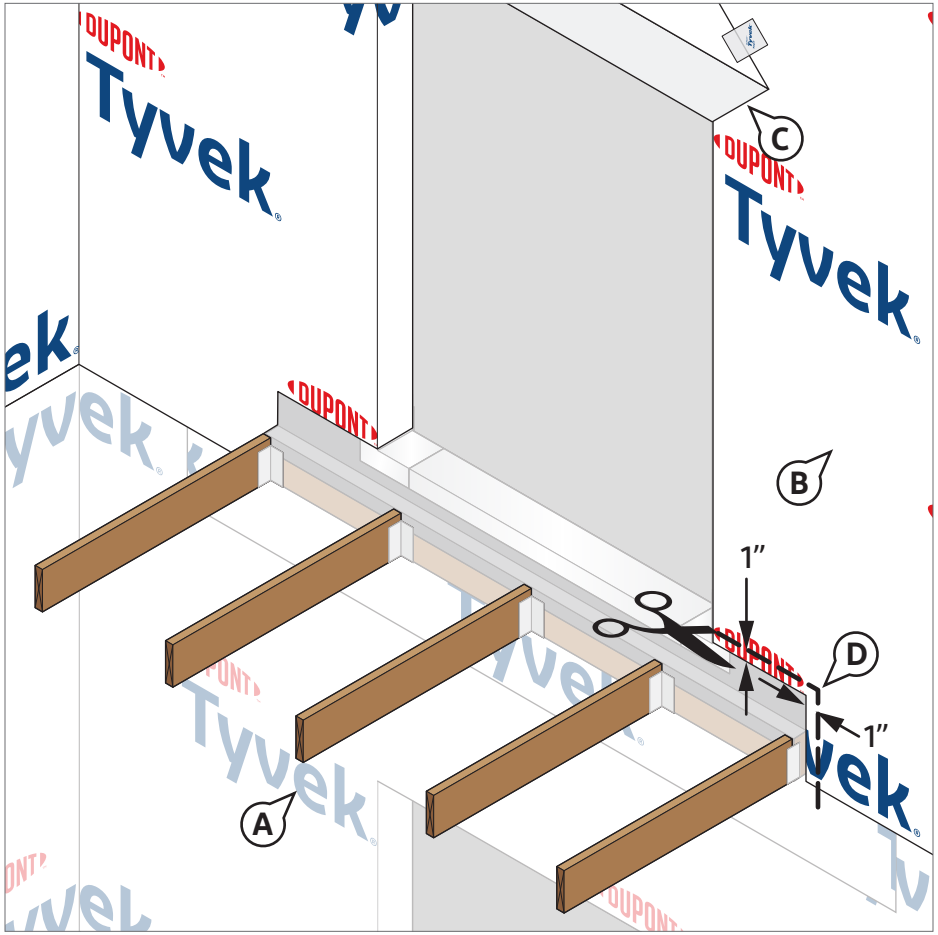
B. Install upper **Tyvek® WRB** course over through wall flashing and ensure proper overlap with **Tyvek® WRB** apron (if applicable) and **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™** behind ledger.

NOTE: The upper **Tyvek® WRB** course should overlap the flashing installed behind the ledger board a minimum of 2" on either side.

C. Prior to the installation of the door (not shown), create an "I-Cut" or "O-Cut"/flush cut in the **Tyvek® WRB** and a head flap above the rough opening. Refer to the applicable *DuPont Installation Guidelines* available at building.dupont.com for more information on the appropriate **Tyvek® WRB** preparation method based on the door type.

D. Trim the upper **Tyvek® WRB** course ~1" away from edges of the ledger board on both sides to allow for adhesion of the **DuPont™ Tyvek® Tape** in the next step.

NOTE: Do **NOT** cut through the **DuPont Self-Adhered Flashing Products** or **Tyvek® WRB** apron underneath.



Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

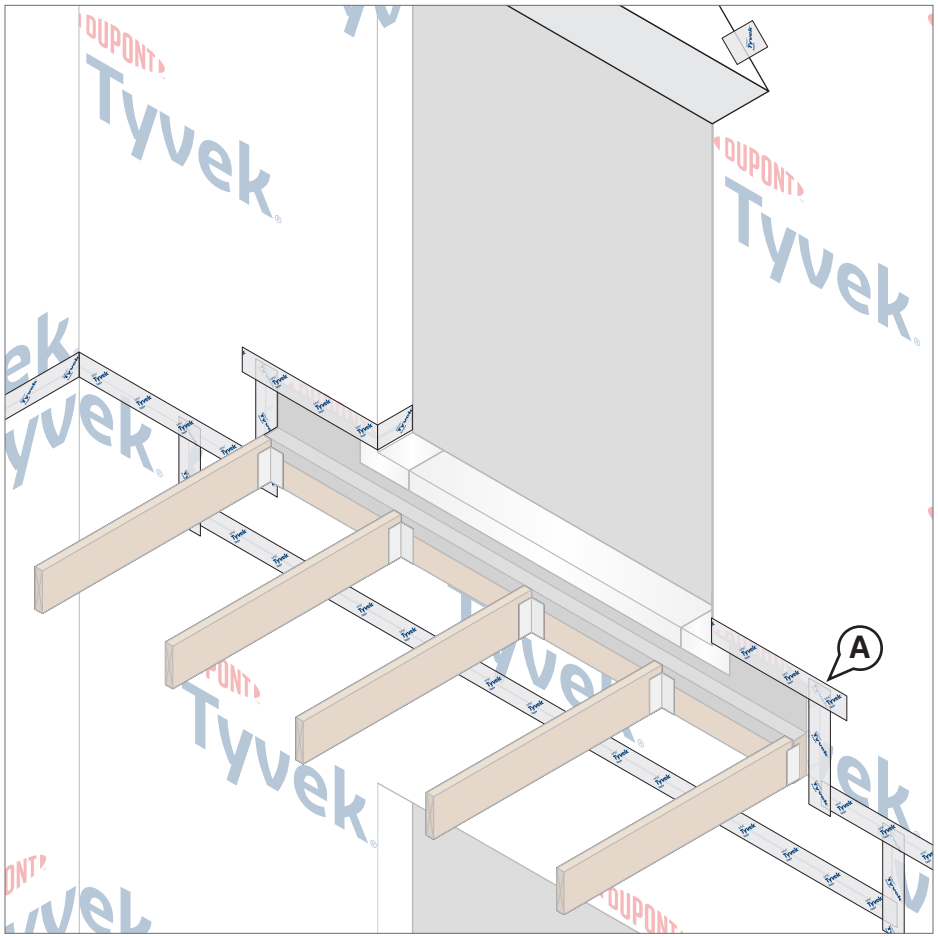
Option 1: Installation of DuPont Self-Adhered Flashing Products Behind Ledger Board

STEP 7

Final Step

A. Working from bottom to top, install **DuPont™ Tyvek® Tape**, **DuPont™ Flashing Tape**, or **DuPont™ StraightFlash™** to seal horizontal and vertical seams of the **Tyvek® WRB** apron (if applicable) and upper courses of **Tyvek® WRB**.

NOTE: **DuPont™ Flashing Tape** or **StraightFlash™** may be required to obtain a more robust termination onto the through wall flashing (by others).



Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

Option 2: Installation of a Self-Adhered Membrane (By Others) Behind Ledger Board

This option applies to the following products: DuPont™ Flashing Tape, DuPont™ StraightFlash™ and DuPont™ FlexWrap™

NOTE: **Details not to scale**. Certain components enlarged for clarity.

STEP 1

Preparation and Installation of Tyvek® WRB Apron

Condition 1: Deck Installed Above Another Story

A. Cut a **Tyvek® WRB** apron for attachment under the sill of the rough opening. The **Tyvek® WRB** apron should be cut the length of the ledger board plus 20". The apron should be cut wide enough so it will extend at least 6" **BEYOND** the bottom of the ledger (once installed).

NOTE: The ledger board will be installed in STEP 4. Actual placement location will vary.

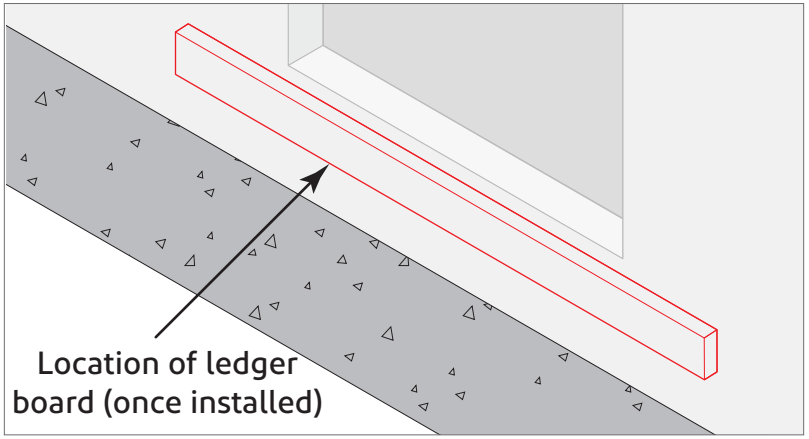
B. Starting at the sill of the rough opening, center the **Tyvek® WRB** apron so it will extend at least 10" **BEYOND** each side of the ledger (once installed).

C. Secure the top of the apron to the wall and leave the bottom of the apron unsecured to allow it to overlap the future **Tyvek® WRB** course installed in a later step. Avoid placing **DuPont™ Tyvek® Wrap Cap Fasteners** where **DuPont Self-Adhered Flashing Products** will be installed.

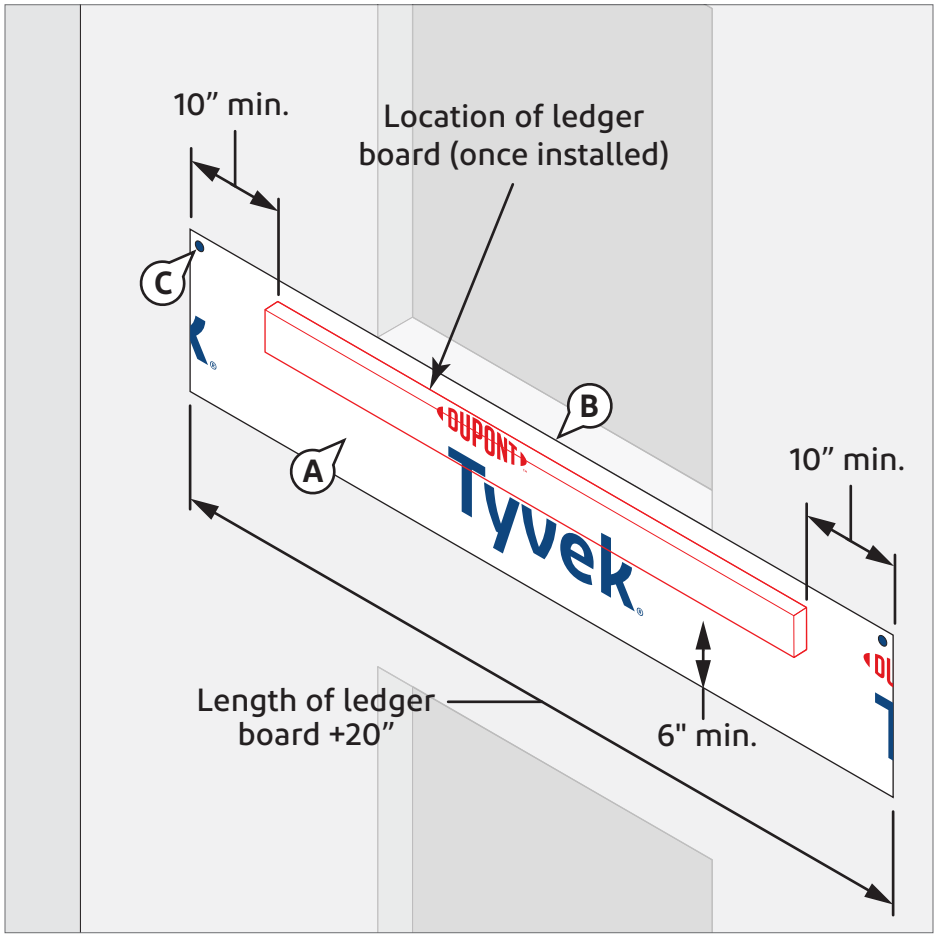
Condition 2: Deck Installed at Foundation Wall

Proceed directly to STEP 2. See the related CAD details at the end of this section for more guidance.

Condition 2: Deck Installed At Foundation Wall



Condition 1: Deck Installed Above Another Story



Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

Option 2: Installation of a Self-Adhered Membrane (By Others) Behind Ledger Board

STEP 2

Installation of Self-Adhered Membrane (By Others) on Wall

NOTE: If metal edge flashing/drip edge is placed at the base of the ledger board (not shown), install accessory before proceeding with STEP 2A.

Condition 1: Deck Installed Above Another Story

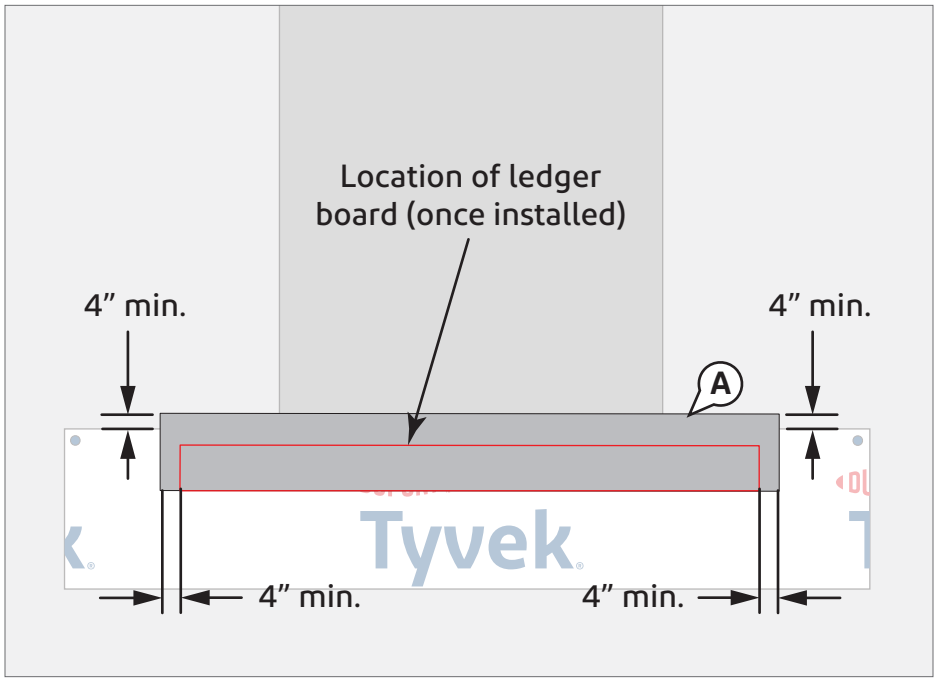
A. Mark the location of the ledger board. Starting from the base of the ledger board (once installed in STEP 4), install a self-adhered membrane (by others) per manufacturer's installation instructions and/or project plans and specifications. Ensure membrane is cut long enough to extend a minimum of 4" **BEYOND** both ends of the ledger and should also extend a minimum of 4" onto the sheathing.

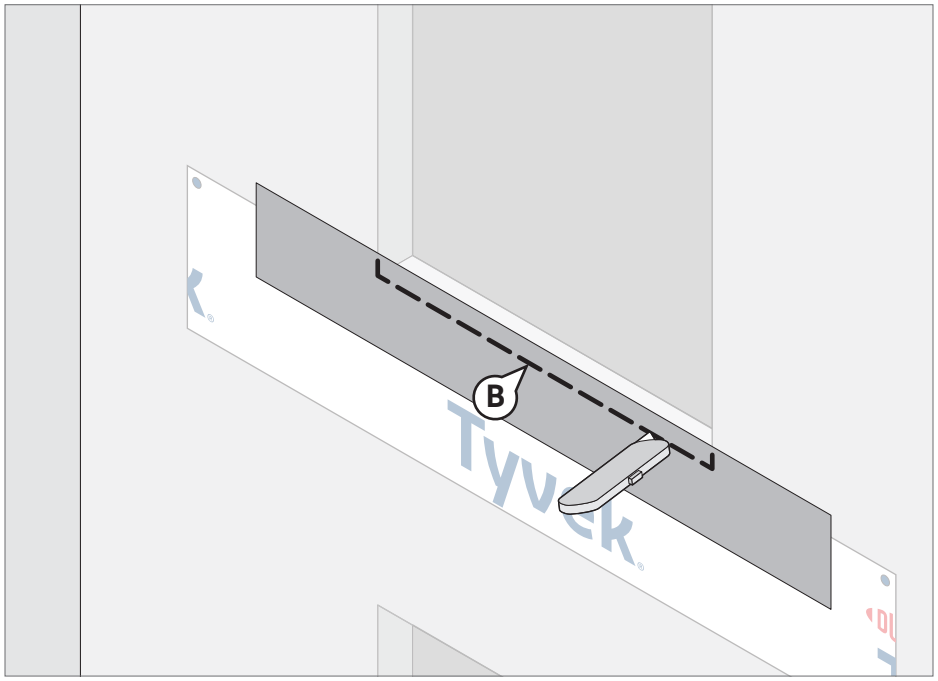
NOTE: Ensure chemical compatibility and adequate adhesion of the self-adhered membrane to the **Tyvek® WRB**. **DuPont does not assume liability for long term performance of self-adhered membranes by others**.

B. At the rough opening, cut out any excess self-adhered membrane that extends over this region.

Condition 2: Deck Installed at Foundation Wall (Not Shown)

Follow guidance above. The self-adhered membrane (by others) will be installed directly onto the substrate instead of over a **Tyvek® WRB** apron.





Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

Option 2: Installation of a Self-Adhered Membrane (By Others) Behind Ledger Board

STEP 3

Installation of DuPont™ FlexWrap™ at Rough Opening Sill

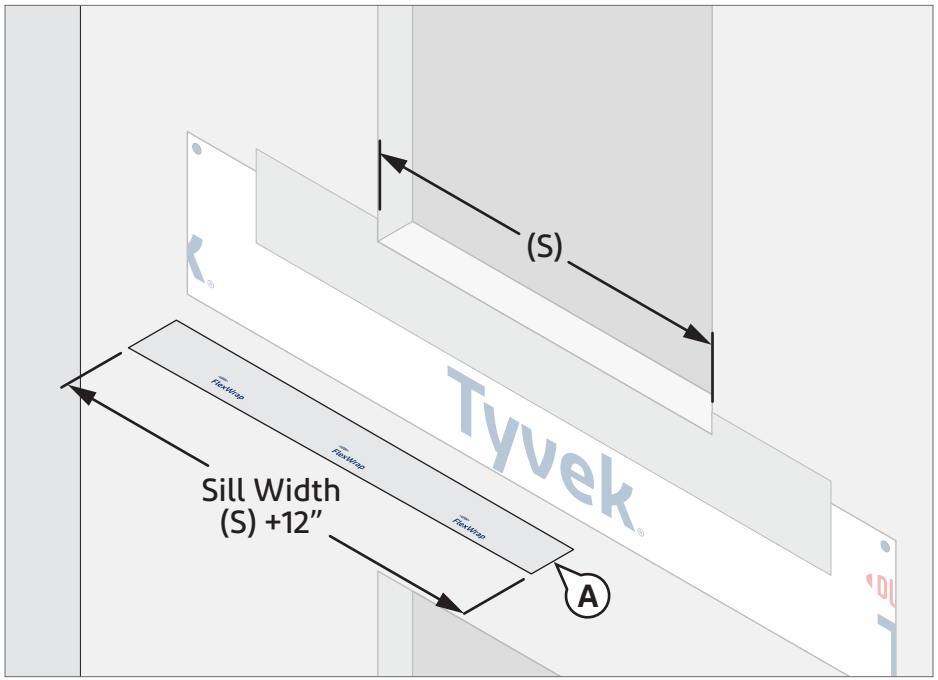
A. Cut **FlexWrap™**[1] at least 12" **LONGER** than width of rough opening sill. Use roll widths sufficient to achieve a minimum of 1" adhesion **BEYOND** where the door frame will be located, ensuring 2"– 3" adhesion onto the face of the wall.

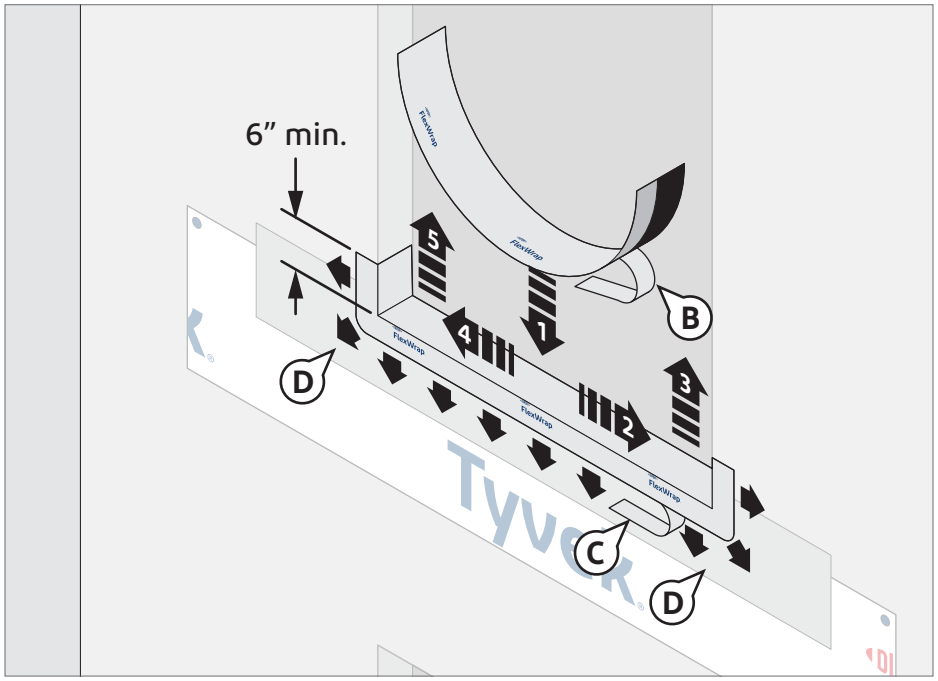
NOTE: Ensure chemical compatibility and adequate adhesion of **FlexWrap™** to the topsheet of the self-adhered membrane. While **FlexWrap™** is chemically compatible with and exhibits good adhesion to most self-adhered membranes, DuPont does not assume liability for long-term performance of self-adhered membranes by others.

B. Remove wide piece of release paper. Position **FlexWrap™** by aligning the inside edge of the narrow release paper with the face of the wall to ensure 2"– 3" will be adhered to the face of the wall with a minimum of 6" up each side. Adhere[2] into rough opening.

C. Remove narrow release paper.

D. Fan out the **FlexWrap™** at corners and adhere onto face of wall. Continue adhering onto face of wall along sill.





[1]DuPont™ Tyvek® Certified Installers may install a 3-piece sill detail for door openings less than 6 ft. wide. For doors greater than 6 ft. wide, see the *Special Considerations* section for more information regarding the 3-piece sill detail. Contact your local DuPont Building Envelope Specialist for more information about the Certified Installer Program.

[2]Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

Option 2: Installation of a Self-Adhered Membrane (By Others) Behind Ledger Board

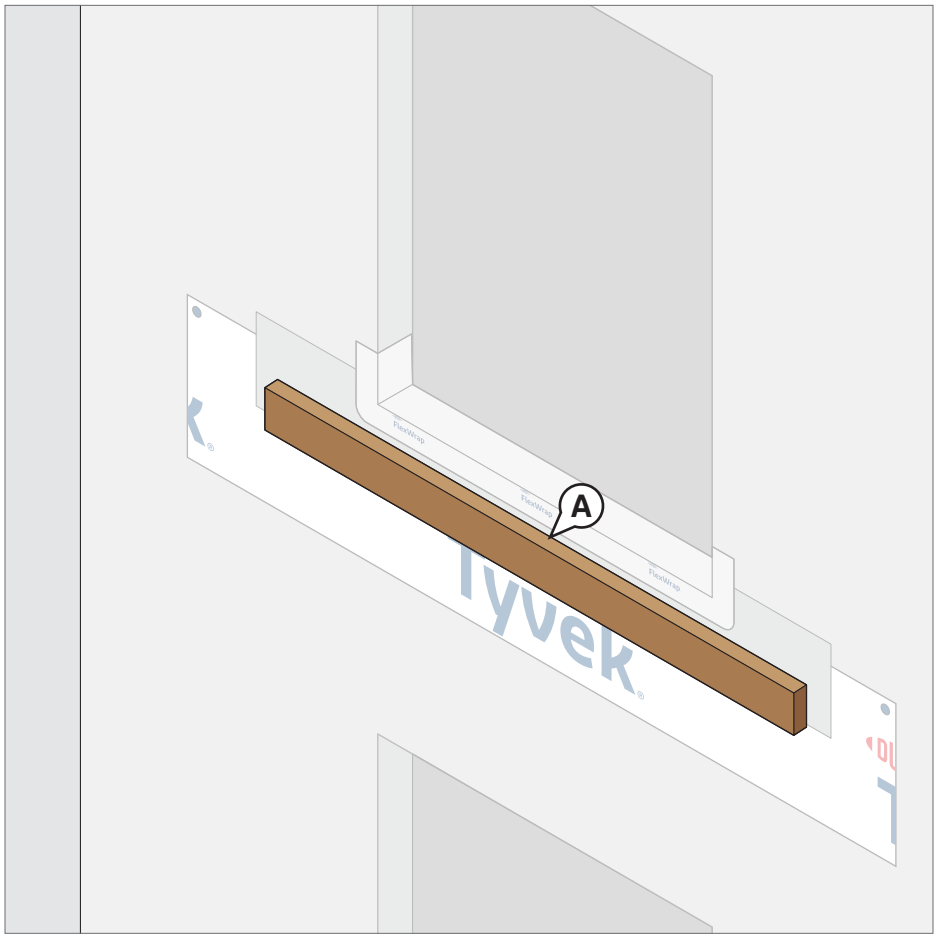
STEP 4

Installation of the Ledger Board

A. Install the ledger board per plans and specifications.

NOTE: The ledger board should be centered over the self-adhered membrane (by others) installed in STEP 2 to ensure the membrane extends a minimum of 4" **BEYOND** both ends of the ledger and the entire width of the ledger is covered.

NOTE: Metal edge flashing/drip edge and other ledger board related accessories not shown.



Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

Option 2: Installation of a Self-Adhered Membrane (By Others) Behind Ledger Board

STEP 5

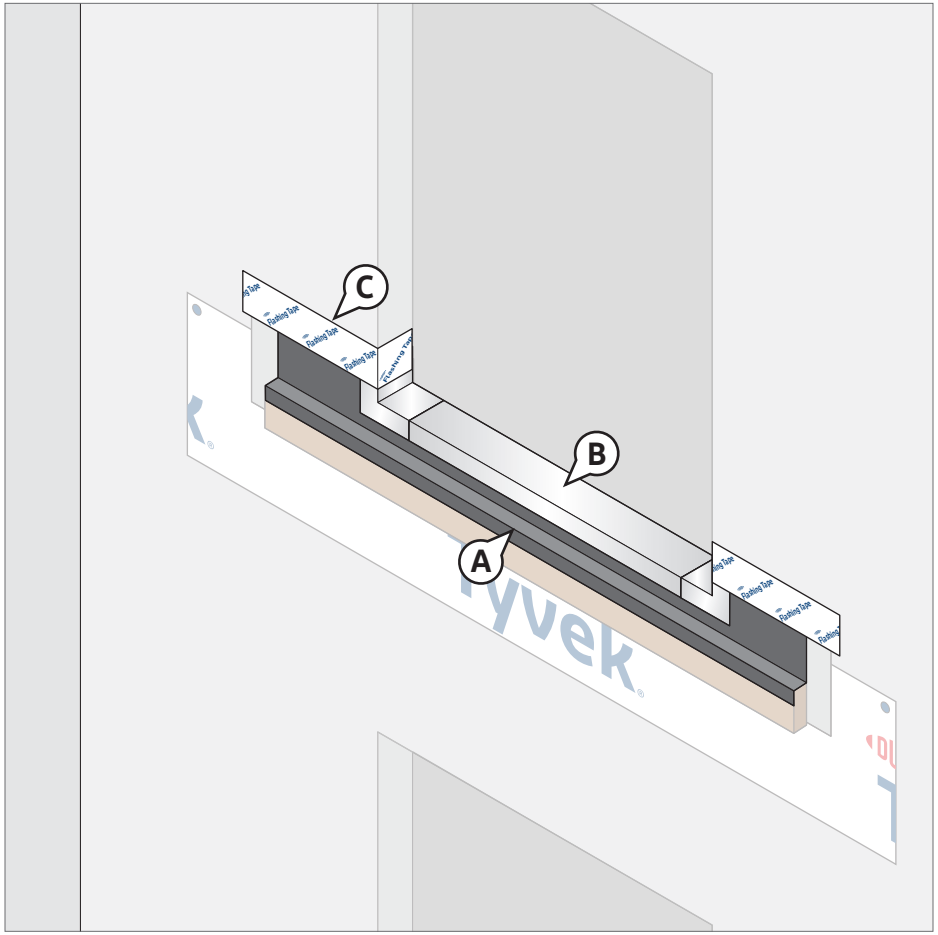
Installation of Self-Adhered or Mechanically-Attached Through Wall Flashing By Others

A. Install through wall flashing along top of the ledger board, up vertical wall onto sheathing, and into the rough opening of the door per plans and specifications.

NOTE: **DuPont Self-Adhered Flashing Products** are **NOT** intended for through wall flashing applications.

B. **Optional**: Install additional flashing (e.g., metal sill pan) as needed per manufacturer's instructions to ensure continuity from the rough opening to the face of the ledger. Use sealant along sill pan flashing seams.

C. When metal or other mechanically-attached through wall flashing is used, the vertical leg of the flashing should be terminated to the sheathing using **DuPont™ Flashing Tape*** or **DuPont™ StraightFlash™**.



*Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

Option 2: Installation of a Self-Adhered Membrane (By Others) Behind Ledger Board

STEP 6

Installation of Tyvek® WRB

A. Install lower **Tyvek® WRB** course below the deck ledger board and underneath the existing **Tyvek® WRB** apron according to the *Tyvek® WRB Installation Instructions* in the applicable DuPont Installation Guideline found on building.dupont.com. **Ensure the Tyvek® WRB apron overlaps onto the lower Tyvek® WRB course for proper shingling**.

NOTE: If deck is installed over a foundation wall, skip this step.

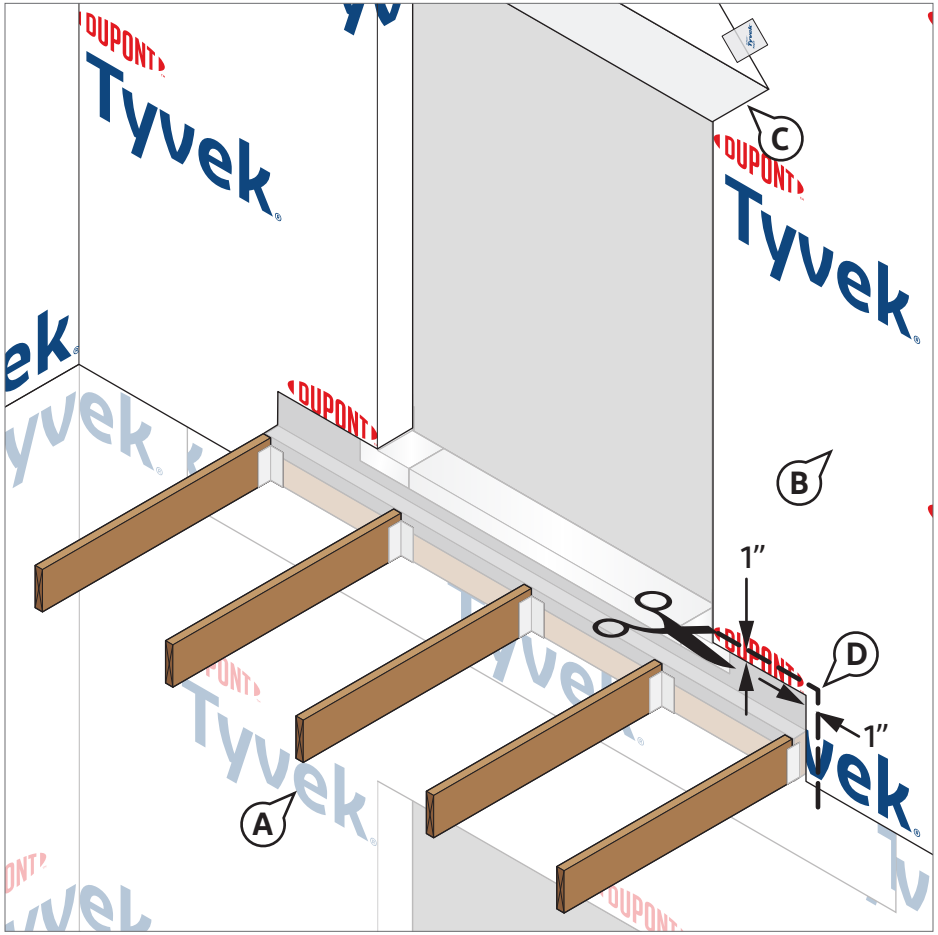
B. Install upper **Tyvek® WRB** course over through wall flashing and ensure proper overlap with **Tyvek® WRB** apron (if applicable) and self-adhered membrane behind ledger.

NOTE: The upper **Tyvek® WRB** course should overlap the self-adhered membrane behind the ledger board a minimum of 2" on either side.

C. Prior to the installation of the door (not shown), create an "I-Cut" or "O-Cut"/flush cut in the **Tyvek® WRB** and a head flap above the rough opening. Refer to the applicable *DuPont Installation Guidelines* available at building.dupont.com for more information on the appropriate **Tyvek® WRB** preparation method based on the door type.

D. Trim the upper **Tyvek® WRB** course ~1" away from edges of the ledger board to allow for adhesion of the **DuPont™ Tyvek® Tape** in the next step.

NOTE: Do **NOT** cut through the self-adhered membrane or **Tyvek® WRB** apron underneath.



Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

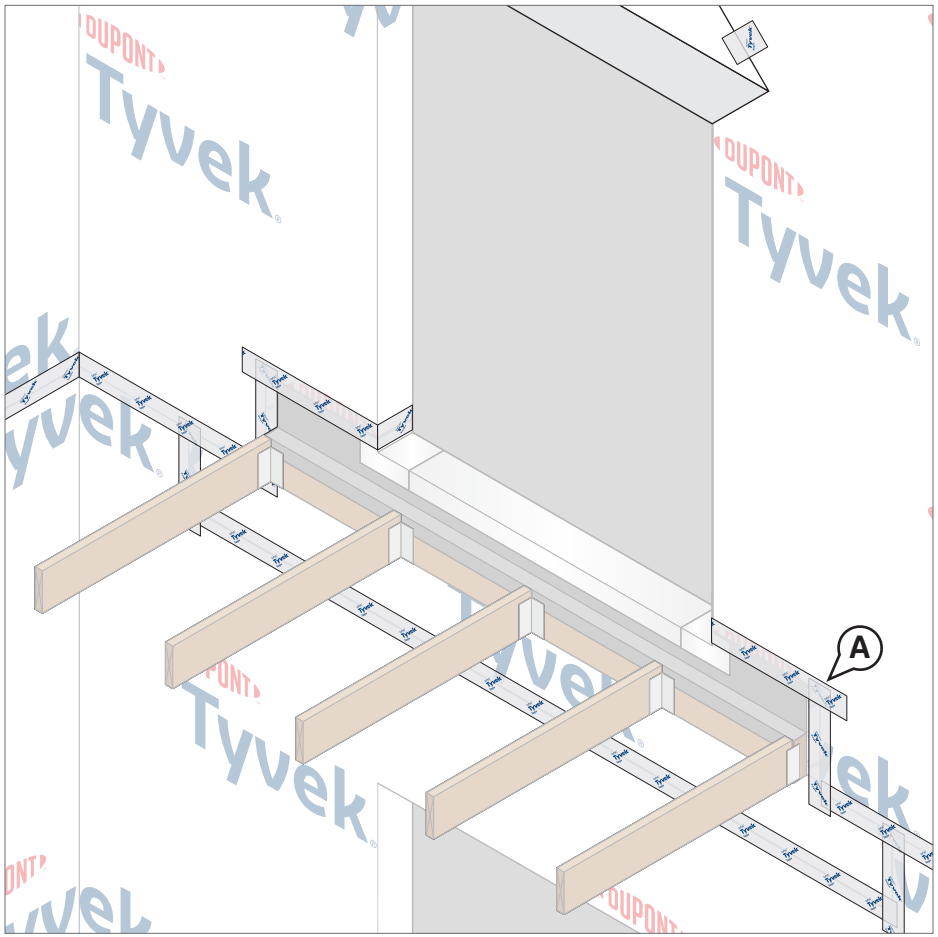
Option 2: Installation of a Self-Adhered Membrane (By Others) Behind Ledger Board

STEP 7

Final Step

A. Working from bottom to top, install **DuPont™ Tyvek® Tape**, **DuPont™ Flashing Tape**, or **DuPont™ StraightFlash™** to seal horizontal and vertical seams of the **Tyvek® WRB** apron and upper courses of **Tyvek® WRB**.

NOTE: **DuPont™ Flashing Tape** or **StraightFlash™** may be required to obtain a more robust termination onto the through wall flashing or self-adhered membrane (by others).



Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

Option 3: Installation of a Self-Adhered Membrane (By Others) Behind Ledger Board and Into the Rough Opening

This option applies to the following products: DuPont™ Flashing Tape and DuPont™ StraightFlash™

NOTE: **Details not to scale**. Certain components enlarged for clarity.

STEP 1

Preparation and Installation of Tyvek® WRB Apron

Condition 1: Deck Installed Above Another Story

A. Cut a **Tyvek® WRB** apron for attachment under the sill of the rough opening. The **Tyvek® WRB** apron should be cut the length of the ledger board plus 20". The apron should be cut wide enough so it will extend at least 6" **BEYOND** the bottom of the ledger (once installed).

NOTE: The ledger board will be installed in STEP 4. Actual placement location will vary.

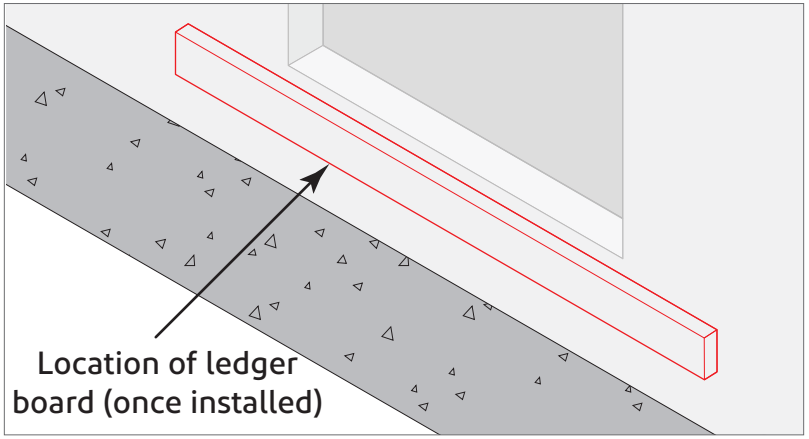
B. Starting at the sill of the rough opening, center the **Tyvek® WRB** apron so it will extend at least 10" **BEYOND** each side of the ledger (once installed).

C. Secure the top of the apron to the wall and leave the bottom of the apron unsecured to allow it to overlap the future **Tyvek® WRB** course installed in a later step. Avoid placing **DuPont™ Tyvek® Wrap Cap Fasteners** where **DuPont Self-Adhered Flashing Products** will be installed.

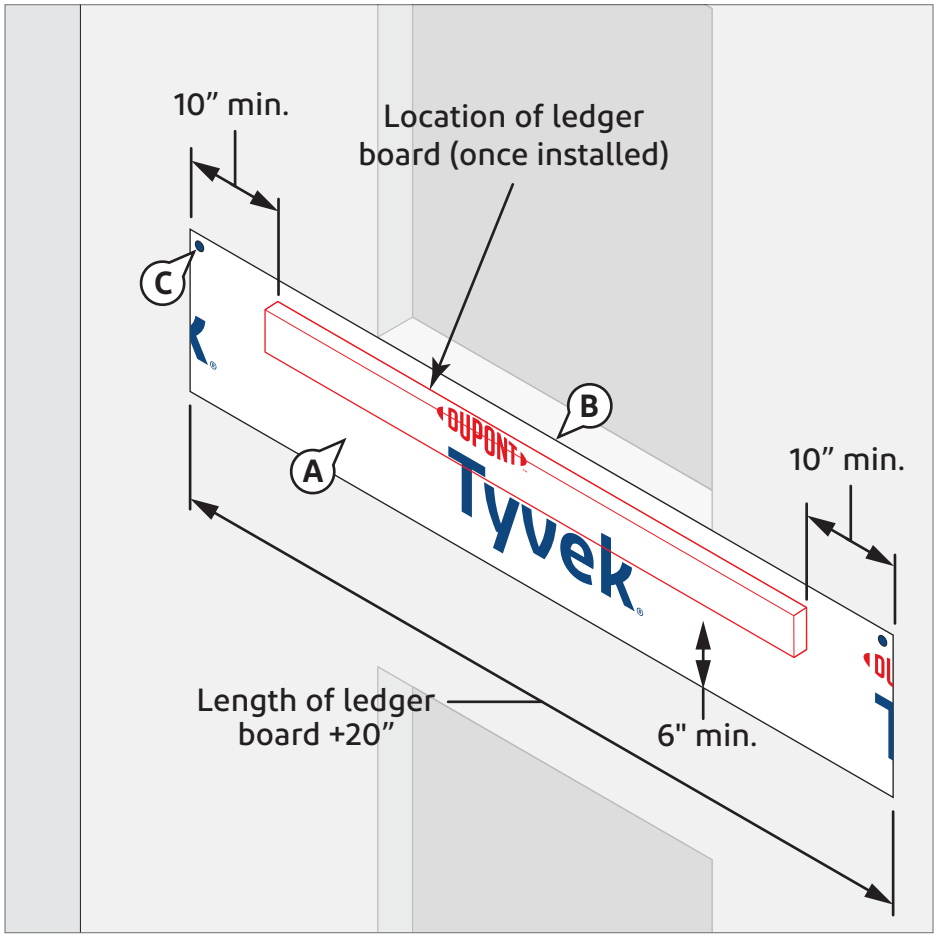
Condition 2: Deck Installed at Foundation Wall

Proceed directly to STEP 2. See the related CAD details at the end of this section for more guidance.

Condition 2: Deck Installed At Foundation Wall



Condition 1: Deck Installed Above Another Story



Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

Option 3: Installation of a Self-Adhered Membrane (By Others) Behind Ledger Board and Into the Rough Opening

STEP 2

Installation of Self-Adhered Membrane (By Others) on Wall and into Rough Opening

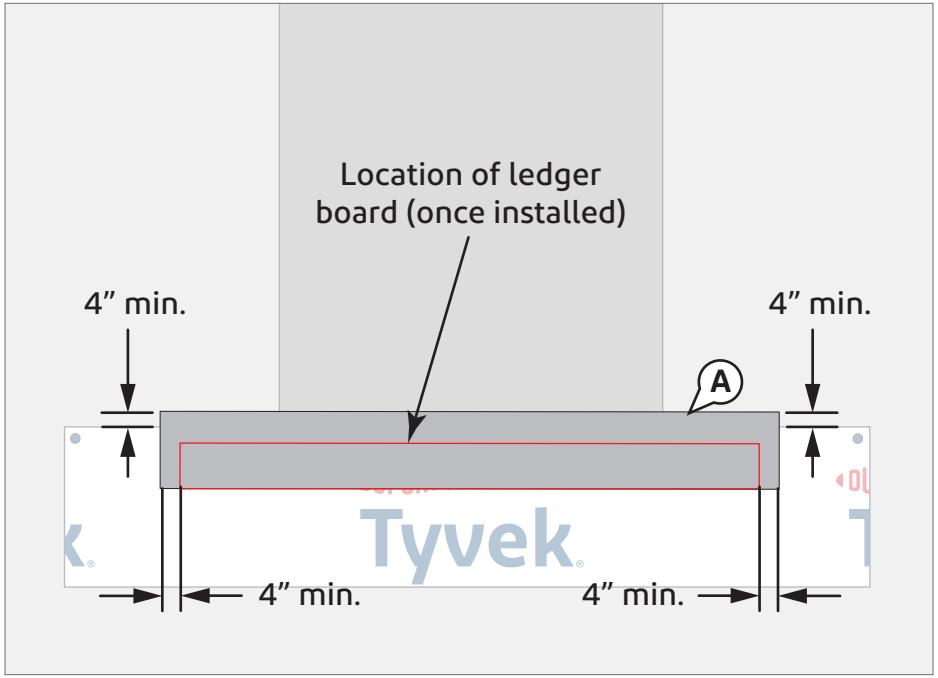
NOTE: If metal edge flashing/drip edge is placed at the base of the ledger board (not shown), install accessory before proceeding with STEP 2A.

Condition 1: Deck Installed Above Another Story

A. Mark the location of the ledger board. Starting from the base of the ledger board (once installed in STEP 4), install a self-adhered membrane (by others)* per manufacturer's installation instructions and/or project plans and specifications. Ensure membrane is cut long enough to extend a minimum of 4" **BEYOND** both ends of the ledger and should also extend a minimum of 4" onto the sheathing.

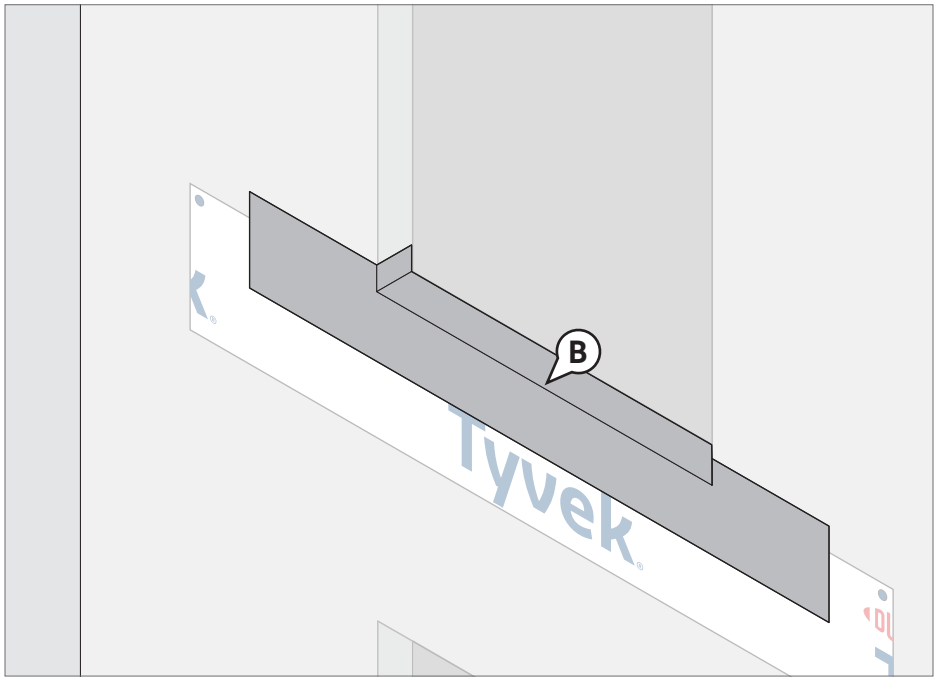
NOTE: Ensure chemical compatibility and adequate adhesion of the self-adhered membrane to the **Tyvek® WRB**. **DuPont does not assume liability for long term performance of self-adhered membranes by others**.

B. At the rough opening, install the self-adhered membrane (by others) into the sill and partially up the jambs per manufacturer's door threshold installation instructions and/or project plans and specifications.



Condition 2: Deck Installed at Foundation Wall (Not Shown)

Follow guidance above. The self-adhered membrane (by others) will be installed directly onto the substrate instead of over a **Tyvek® WRB** apron.



Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

Option 3: Installation of a Self-Adhered Membrane (By Others) Behind Ledger Board and Into the Rough Opening

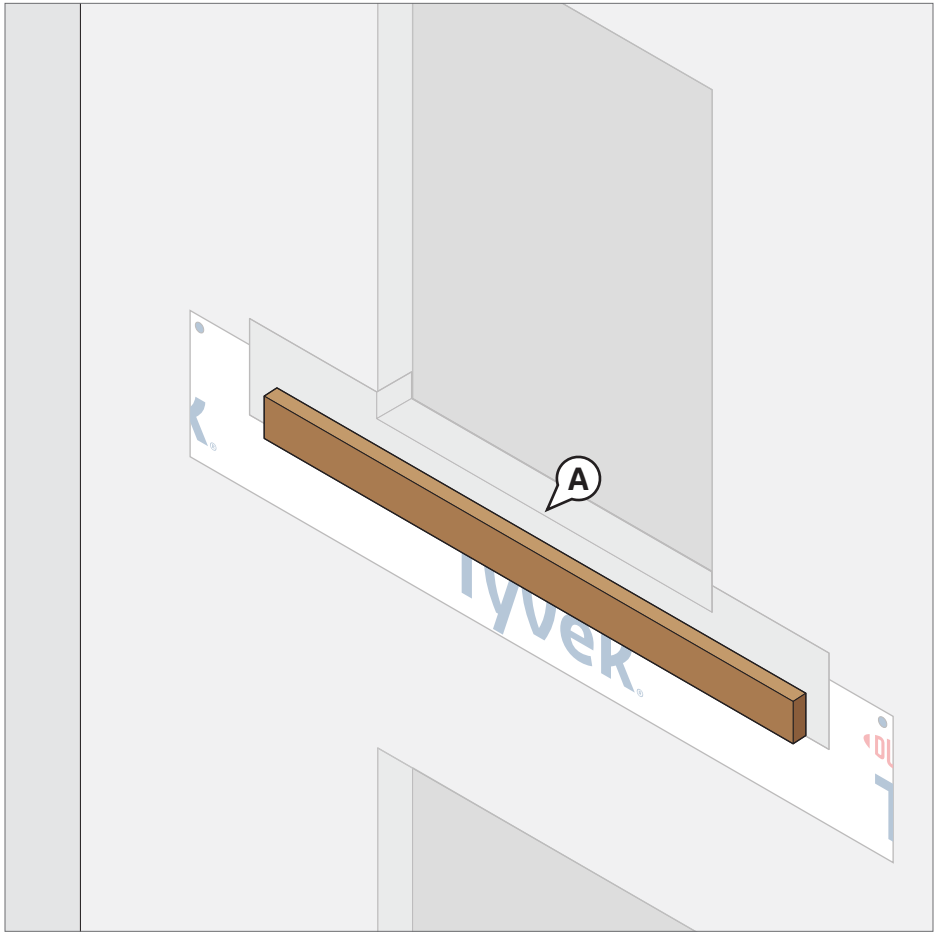
STEP 3

Installation of the Ledger Board

A. Install the ledger board per plans and specifications.

NOTE: The ledger board should be centered over the self-adhered membrane (by others) installed in STEP 2 to ensure the membrane extends a minimum of 4" **BEYOND** both ends of the ledger and the entire width of the ledger is covered.

NOTE: Metal edge flashing/drip edge and other ledger board related accessories not shown.



Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

Option 3: Installation of a Self-Adhered Membrane (By Others) Behind Ledger Board and Into the Rough Opening

STEP 4

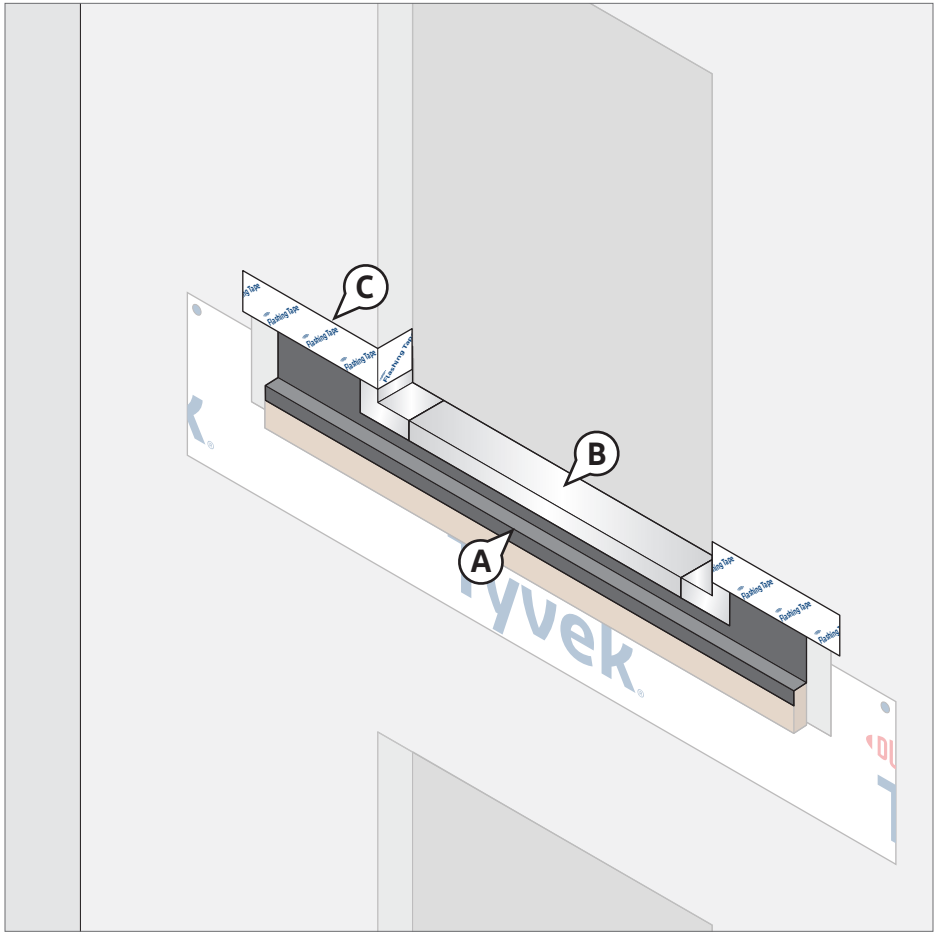
Installation of Self-Adhered or Mechanically-Attached Through Wall Flashing By Others

A. Install through wall flashing along top of the ledger board, up vertical wall onto sheathing, and into the rough opening of the door per plans and specifications.

NOTE: **DuPont Self-Adhered Flashing Products** are **NOT** intended for through wall flashing applications.

B. **Optional**: Install additional flashing (e.g., metal sill pan) as needed per manufacturer's instructions to ensure continuity from the rough opening to the face of the ledger. Use sealant along sill pan flashing seams.

C. When metal or other mechanically-attached through wall flashing is used, the vertical leg of the flashing should be terminated to the sheathing using **DuPont™ Flashing Tape*** or **DuPont™ StraightFlash™**.



*Use **DuPont Self-Adhered Flashing Products** with a recommended adhesive/primer as applicable to seal directly to gypsum sheathing, concrete, wood, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

Option 3: Installation of a Self-Adhered Membrane (By Others) Behind Ledger Board and Into the Rough Opening

STEP 5

Installation of Tyvek® WRB

A. Install lower **Tyvek® WRB** course below the deck ledger board and underneath the existing **Tyvek® WRB** apron according to the *Tyvek® WRB Installation Instructions* in the applicable DuPont Installation Guideline found on building.dupont.com. **Ensure the Tyvek® WRB apron overlaps onto the lower Tyvek® WRB course for proper shingling**.

NOTE: If deck is installed over a foundation wall, skip this step.

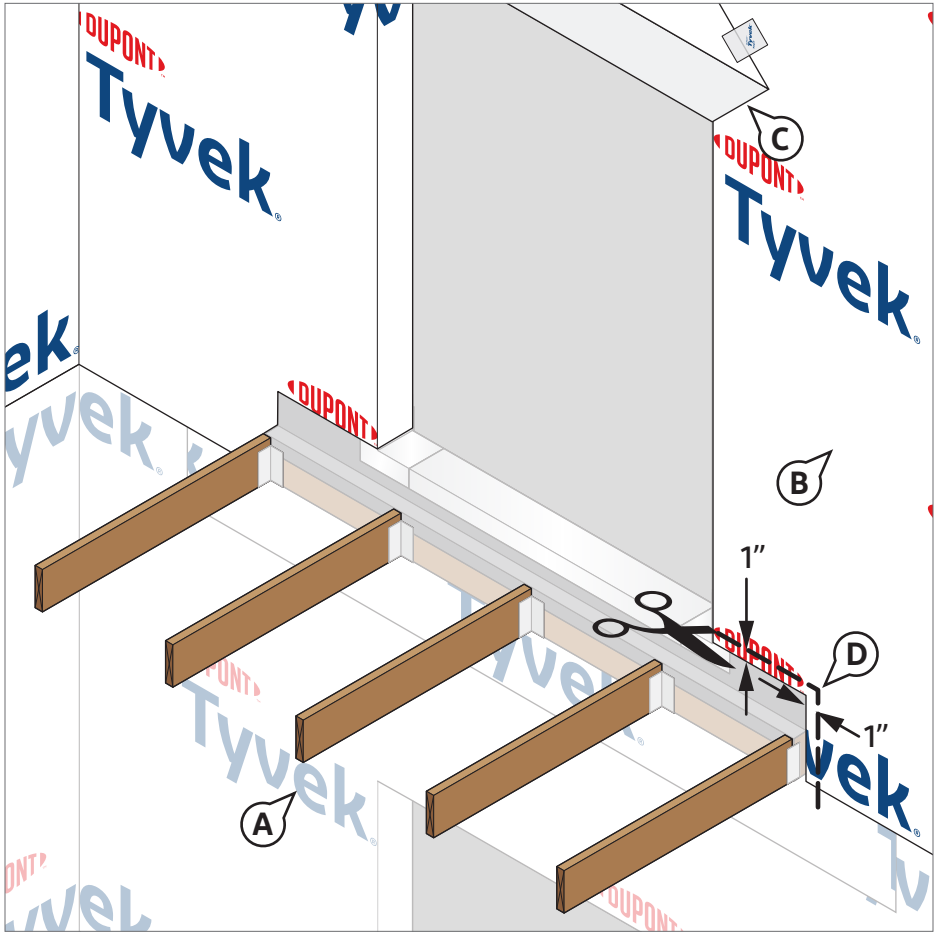
B. Install upper **Tyvek® WRB** course over through wall flashing and ensure proper overlap with **Tyvek® WRB** apron (if applicable) and self-adhered membrane behind ledger.

NOTE: The upper **Tyvek® WRB** course should overlap the self-adhered membrane behind the ledger board a minimum of 2" on either side.

C. Prior to the installation of the door (not shown), create an "I-Cut" or "O-Cut"/flush cut in the **Tyvek® WRB** and a head flap above the rough opening. Refer to the applicable *DuPont Installation Guidelines* available at building.dupont.com for more information on the appropriate **Tyvek® WRB** preparation method based on the door type.

D. Trim the upper **Tyvek® WRB** course ~1" away from edges of the ledger board to allow for adhesion of the **DuPont™ Tyvek® Tape** in the next step.

NOTE: Do **NOT** cut through the self-adhered membrane or **Tyvek® WRB** apron underneath.



Integration with a Deck Waterproofing System Installed BEFORE the DuPont™ Tyvek® WRB
Deck Ledger Board Installed BEFORE the Tyvek® WRB

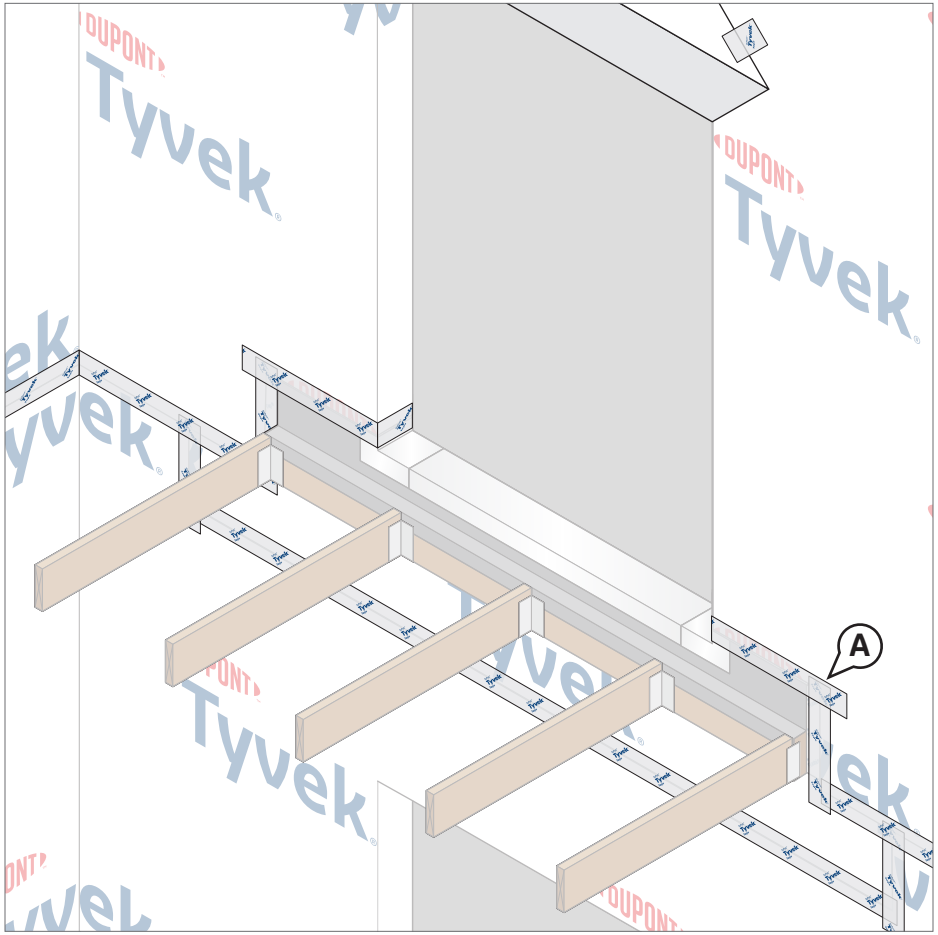
Option 3: Installation of a Self-Adhered Membrane (By Others) Behind Ledger Board and Into the Rough Opening

STEP 6

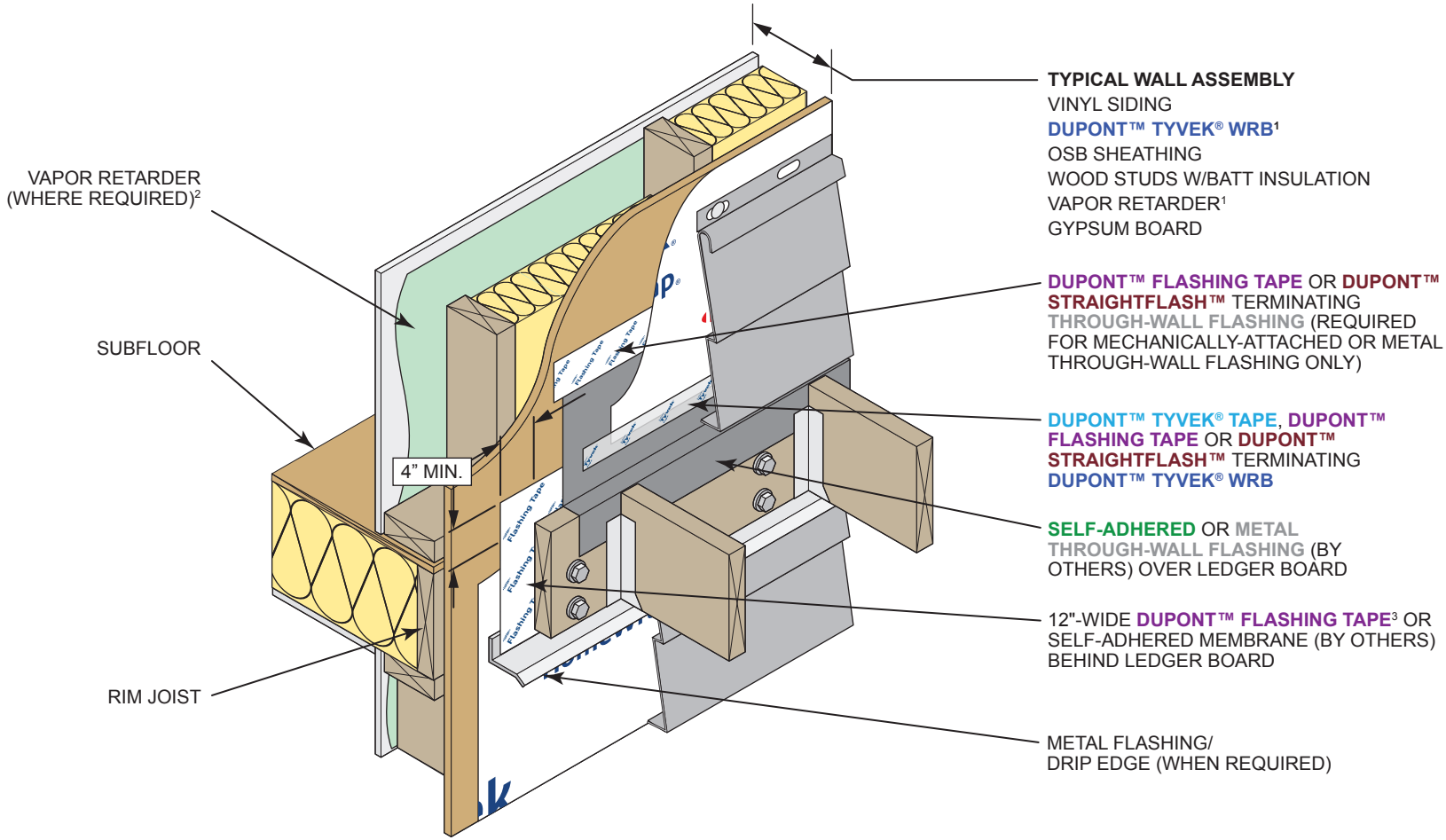
Final Step

A. Working from bottom to top, install **DuPont™ Tyvek® Tape**, **DuPont™ Flashing Tape**, or **DuPont™ StraightFlash™** to seal horizontal and vertical seams of the **Tyvek® WRB** apron and upper courses of **Tyvek® WRB**.

NOTE: **DuPont™ Flashing Tape** or **StraightFlash™** may be required to obtain a more robust termination onto the through wall flashing or self-adhered membrane (by others).



Integration with a Deck Waterproofing System Installed AFTER the DuPont™ Tyvek® WRB
Deck Ledger Board Installed AFTER the Tyvek® WRB



DECK INSTALLED ABOVE ANOTHER STORY

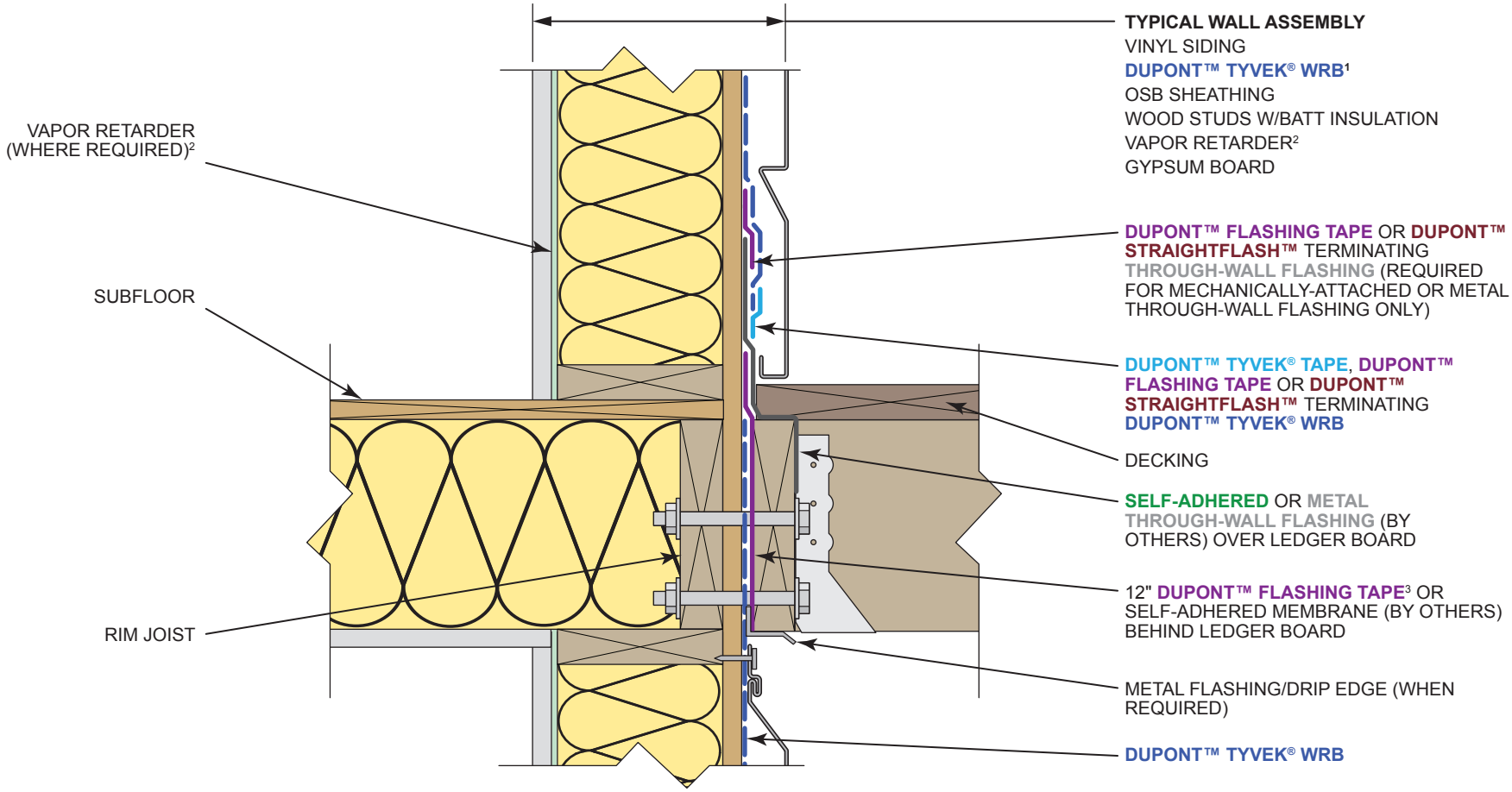
NOTE: CAD details not to scale. For additional CAD details, visit building.dupont.com

[1]Refer to the *Facade Considerations* section of the applicable DuPont Installation Guidelines to help determine the appropriate **Tyvek® WRB** for the cladding type.

[2]Use of interior vapor retarder is dependent upon climate zone and local building codes and laws. Consult local jurisdiction to ensure appropriate use of vapor retarders in wall assembly.

[3]Multiple pieces of **DuPont™ Flashing Tape** or **StraightFlash™** may be needed to achieve full coverage behind ledger board. Install starting from bottom and overlap subsequent pieces by 2" for proper shingling.

Integration with a Deck Waterproofing System Installed AFTER the DuPont™ Tyvek® WRB
Deck Ledger Board Installed AFTER the Tyvek® WRB



DECK INSTALLED ABOVE ANOTHER STORY (SECTION VIEW)

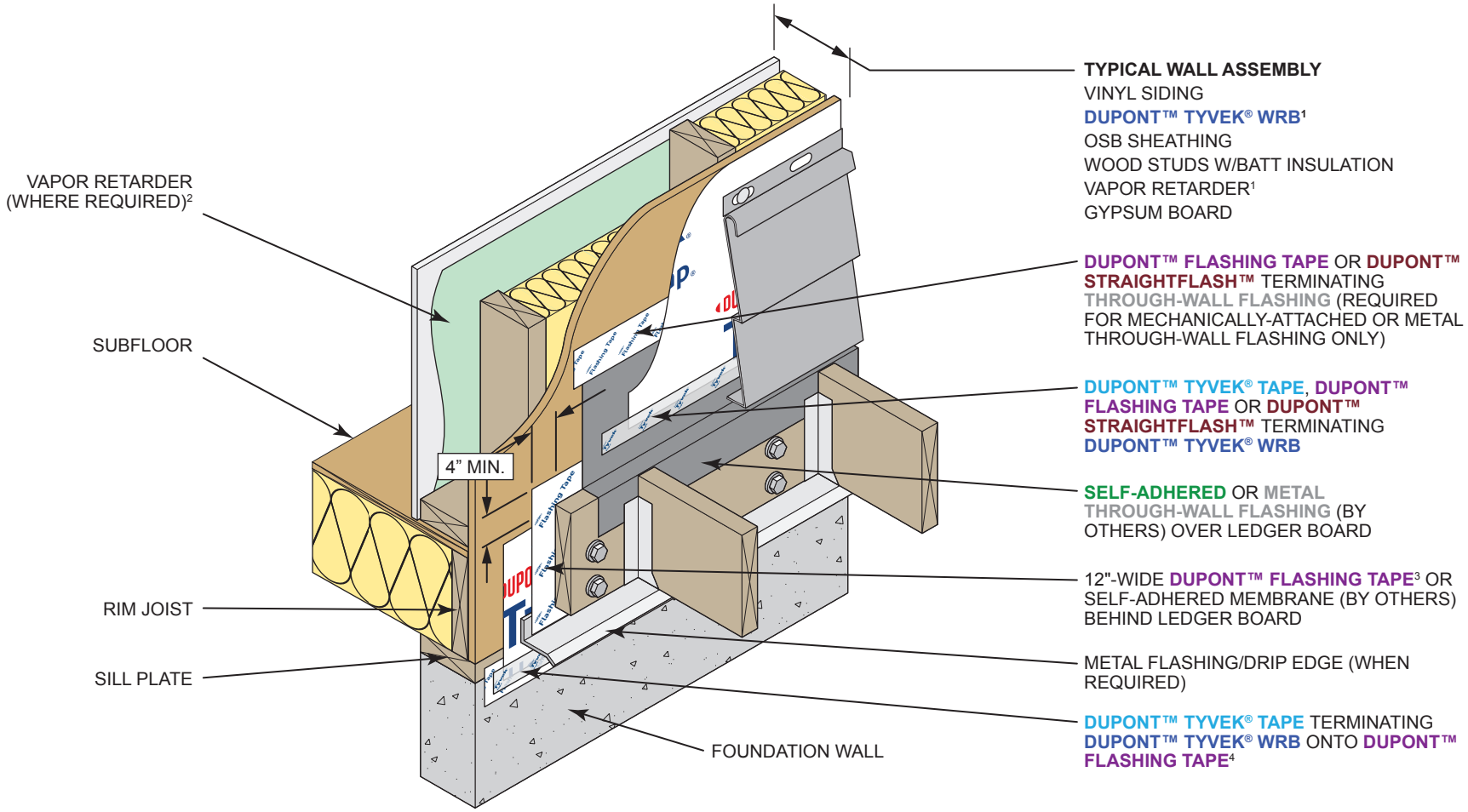
NOTE: CAD details not to scale. For additional CAD details, visit building.dupont.com

[1]Refer to the *Facade Considerations* section of the applicable DuPont Installation Guidelines to help determine the appropriate **Tyvek® WRB** for the cladding type.

[2]Use of interior vapor retarder is dependent upon climate zone and local building codes and laws. Consult local jurisdiction to ensure appropriate use of vapor retarders in wall assembly.

[3]Multiple pieces of **DuPont™ Flashing Tape** or **StraightFlash™** may be needed to achieve full coverage behind ledger board. Install starting from bottom and overlap subsequent pieces by 2" for proper shingling.

Integration with a Deck Waterproofing System Installed AFTER the DuPont™ Tyvek® WRB
Deck Ledger Board Installed AFTER the Tyvek® WRB



DECK INSTALLED AT FOUNDATION WALL

NOTE: CAD details not to scale. For additional CAD details, visit building.dupont.com

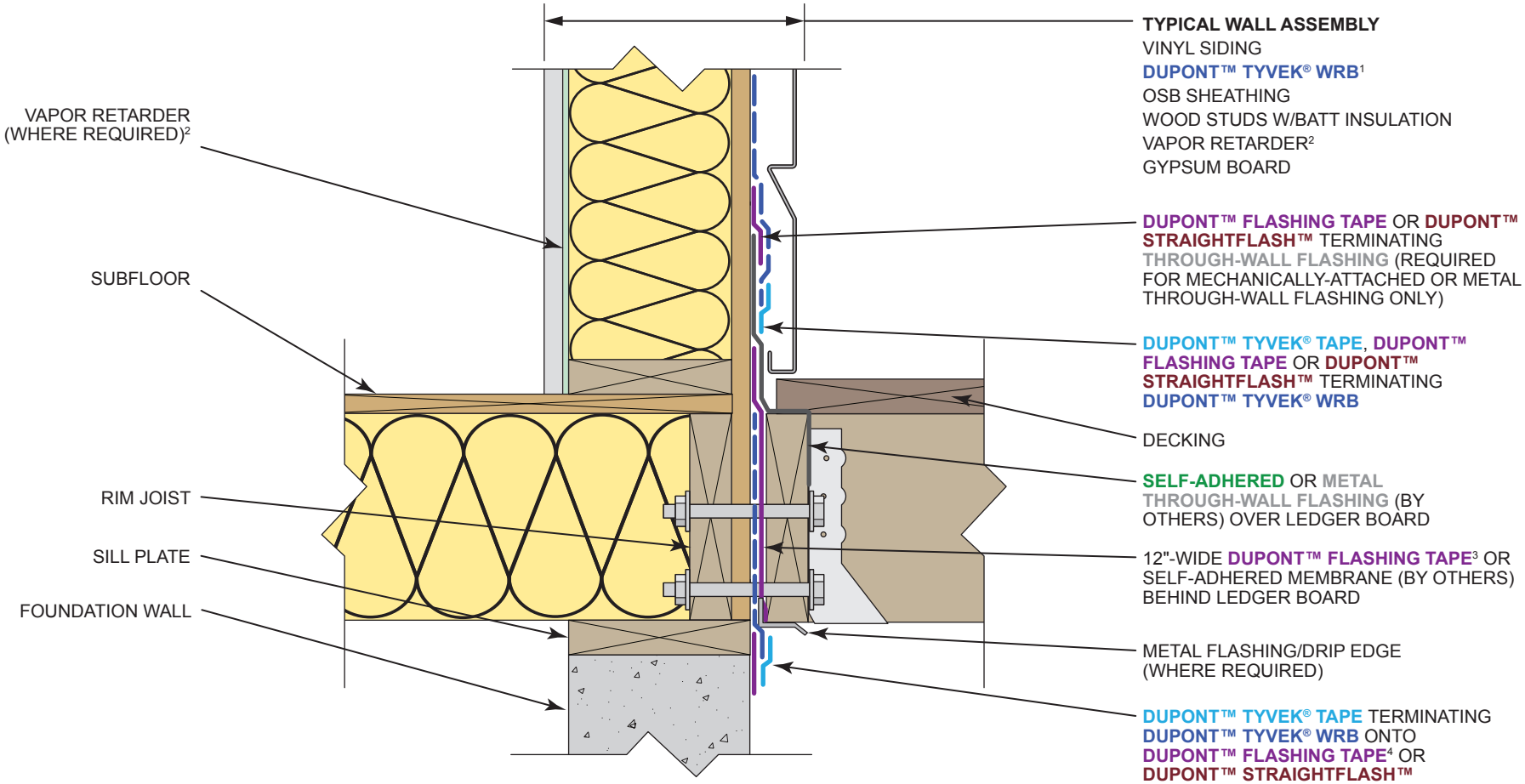
[1]Refer to the *Facade Considerations* section of the applicable DuPont Installation Guidelines to help determine the appropriate **Tyvek® WRB** for the cladding type.

[2]Use of interior vapor retarder is dependent upon climate zone and local building codes and laws. Consult local jurisdiction to ensure appropriate use of vapor retarders in wall assembly.

[3]Multiple pieces of **DuPont™ Flashing Tape** or **StraightFlash™** may be needed to achieve full coverage behind ledger board. Install starting from bottom and overlap subsequent pieces by 2" for proper shingling.

[4]Bottom of wall termination is required for air barrier installations. Refer to the *Tyvek® WRB Installation Instructions* section in the applicable DuPont Installation Guideline for more options.

Integration with a Deck Waterproofing System Installed AFTER the DuPont™ Tyvek® WRB
Deck Ledger Board Installed AFTER the Tyvek® WRB



DECK INSTALLED AT FOUNDATION WALL (SECTION VIEW)

NOTE: CAD details not to scale. For additional CAD details, visit building.dupont.com

[1]Refer to the *Facade Considerations* section of the applicable DuPont Installation Guidelines to help determine the appropriate **Tyvek® WRB** for the cladding type.

[2]Use of interior vapor retarder is dependent upon climate zone and local building codes and laws. Consult local jurisdiction to ensure appropriate use of vapor retarders in wall assembly.

[3]Multiple pieces of **DuPont™ Flashing Tape** or **StraightFlash™** may be needed to achieve full coverage behind ledger board. Install starting from bottom and overlap subsequent pieces by 2" for proper shingling.

[4]Bottom of wall termination is required for air barrier installations. Refer to the *Tyvek® WRB Installation Instructions* section in the applicable DuPont Installation Guideline for more options.

Product Composition and UV Stability

DuPont™ Tyvek® WRBs used in construction products are made from 100% flash spunbonded high density polyethylene fibers which have been bonded together by heat and pressure, without binders or fillers, into a tough durable sheet structure. Additives have been incorporated into the polyethylene to provide ultraviolet light resistance. DuPont requires that **DuPont™ Tyvek® HomeWrap®**, **Tyvek® DrainWrap™**, **Tyvek® StuccoWrap®**, and **Tyvek® ThermaWrap® LE** be covered within 4 months (120 days) of installation. DuPont requires that **DuPont™ Tyvek® CommercialWrap®** and **Tyvek® CommercialWrap® D** be covered within 9 months (270 days) of installation.

DuPont Self-Adhered Flashing Products are made from a synthetic rubber adhesive, and a top sheet of flash spunbonded high density polyethylene fibers or polypropelene film. Additives have been incorporated into these materials to provide ultraviolet light resistance. DuPont requires that **DuPont™ FlexWrap™**, **DuPont™ FlexWrap™ EZ**, **DuPont™ StraightFlash™** and **DuPont™ VersaFlange™** be covered within nine months (270 days) of installation. DuPont requires that **DuPont™ Flashing Tape** be covered within 4 months (120 days) of installation.

Design Considerations

DuPont Building Envelope Solutions Products are to be used as outlined in this installation guideline. **DuPont Self-Adhered Flashing Products** should only be used to seal penetrations and flash openings in buildings. **Tyvek® WRBs**, and **DuPont Self-Adhered Flashing Products** are not to be used in roofing applications.

When installed in conjunction with other building materials, **Tyvek® WRBs**, and **DuPont Self-Adhered Flashing Products** must be properly shingled with these materials such that water is diverted to the exterior of the wall system. **Tyvek® WRBs** are secondary weather barriers. The outer facade is the primary barrier.

Follow facade manufacturer's installation and maintenance requirements for all facade systems in order to maintain water holdout properties and ensure performance of **Tyvek® WRBs**.

Do not install on a wall that does not feature a continuous path for moisture drainage. Any standing water must be allowed to drain off the membrane.

Use of additives, coatings or cleaners on or in the facade system may impact the performance of **Tyvek® WRBs**.

For superior protection against bulk water penetration, DuPont suggests a system combining a quality exterior facade, a good secondary air and water barrier and exterior sheathing, high quality windows and doors, and appropriate flashing materials paying attention to proper installation of each component.

In a system where no exterior sheathing is used and **Tyvek® WRBs** are installed directly over the wall studs, exterior facade materials should be selected to ensure maximum protection against water intrusion. Careful workmanship and proper installation of each component is very important.

Safety and Handling

Warning

Tyvek® WRBs are slippery and should not be used in any application where they will be walked on. In addition, because they are slippery, DuPont recommends using kickjacks, scaffolding, or lifts for exterior work above the first floor. If ladders must be used, extra caution must be taken to use them safely by following the requirements set forth in ANSI Standards 14.1, 14.2, and 14.5 for ladders made of wood, aluminum, and fiberglass, respectively. **DuPont™ Tyvek®** is combustible and should be protected from flames and other high heat sources. **DuPont™ Tyvek®** will melt at 275°F (135°C) and if the temperature of **DuPont™ Tyvek®** reaches 750°F (400°C), it will burn and the fire may spread and fall away from the point of ignition. For more information, call 1-833-338-7668.

DuPont Self-Adhered Flashing Products and their release paper are slippery and should not be walked on. Remove release paper from work area immediately. **DuPont Self-Adhered Flashing Products** will melt at temperatures greater than 250°F (121°C). **DuPont Self-Adhered Flashing Products** are combustible and should be protected from flames and other high heat sources. **DuPont Self-Adhered Flashing Products** will not support combustion if the heat source is removed. However, if burning occurs, ignited droplets may fall away from the point of ignition. For more information, call 1-833-338-7668.

Tower® Residential Sealant (formerly DuPont™ Residential Sealant) is irritating to skin, eyes, and respiratory tract. For proper usage, follow directions stated on the product label. For health information, refer to the Safety Data Sheet (SDS) or call Chemtrec at 1-800-424-9300.

When cured, **Great Stuff Pro™ Gaps & Cracks Polyurethane Foam Sealant** is combustible and will burn if exposed to open flame or sparks from high-energy sources. Do not expose to temperatures above 240°F (116°C). For more information, consult the Safety Data Sheet (SDS), call DuPont at 1-866-583-2583. When air sealing buildings, ensure that combustion appliances, such as furnaces, water heaters, wood burning stoves, gas stoves and gas dryers are properly vented to the outside. See website: https://www.nrel.gov/docs/fy14osti/61326.pdf.

In Canada visit: https://nrc-publications.canada.ca/eng/view/ft/?id=96acba7c-afd4-4ea1-94b0-1f8f3500c582.

Safety and Handling (continued)

Great Stuff Pro™ polyurethane foam sealant and adhesive products contain isocyanate and a flammable blowing agent. Read all instructions and the Safety Data Sheet (SDS), carefully before use. Eliminate all sources of ignition before use. Cover all skin. Wear long sleeves, gloves, and safety glasses or goggles. Not for use in aviation, or food/beverage contact, or as structural support in marine applications. Provide adequate ventilation or wear proper respiratory protection. Contents under pressure. Not to be used for filling closed cavities or voids such as behind walls and under tub surrounds; this improper use of the product could result in the accumulation of flammable vapors and/or uncured material. Failure to follow the warnings and instructions provided with the product, and/or all applicable rules and regulations, can result in injury or death.

Building and/or construction practices unrelated to building materials could greatly affect moisture and the potential for mold formation. No material supplied by DuPont can give assurance that mold will not develop in any specific system.

Read all instructions and the Safety Data Sheet (SDS) carefully before use.

For more information, visit greatstuffpro.com or building.dupont.com

For More Information

Visit the *Quick Links* section of our website (https://www.dupont.com/building/resources.html) where you'll find links to essential documents and resources to help you get the job done right:

- Installation Guidelines
- Safety Data Sheets (SDS)
- CAD Drawings
- DuPont Performance Building Solutions Document Library

For complete warranty information please call 1-833-338-7668 or visit us at building.dupont.com.

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DUPONT™ Tyvek®

For more information about DuPont Performance Building Solutions, please call 1-833-338-7668 or visit us at building.dupont.com