Lumabuilt

PLANK INSTALLATION GUIDE

Wall & Soffit Installation

TABLE OF CONTENTS

TESTING DATA
ICC CERTIFIED ESR-5329
MIAMI DATE COUNTY PERMITS

FORWARD

- This installation guide was created to assist with the installation of Mosaic Planks. The instructions in this manual are strictly for illustration purposes and may not be applicable to all building designs or product installations.

- Soffit installation notes are included in this installation guide. To denote any considerations for installing the Mosaic planks in a soffit application.

- All projects should conform to applicable building codes for that particular area. It is recommended to follow all building regulations and standard industry practices.

- Lumabuilt reserves the right to modify, without notice, any details, recommendations or suggestions contained here-in. Any questions you may have regarding proper installation of the Mosaic Plank system should be directed to your sales representative.

- It is the responsibility of the erector to ensure the correct and safe installation of this product. It is recommended that Mosaic Planks are installed by a professional erector who is specifically experienced with the installation of aluminum soffits and siding materials and who utilizes the correct practices and techniques to safely and properly handle any equipment and materials required to complete the installation of this product.

- Mosaic Planks have a durable, yet unique wood grain powder coating applied to it which must be handled, cut, and installed in an appropriate manner as to not damage the finish. A properly installed Mosaic Plank project will create an architecturally beautiful “simulated wood” feature which will last for decades and require little maintenance.

MATERIAL RECEIVING

NOTE: WOODGRAIN PATTERNS VARY. NO TWO PLANKS WILL MATCH IN FINISH: WOODGRAIN VARIATION IS NOT A CAUSE FOR REJECTION.

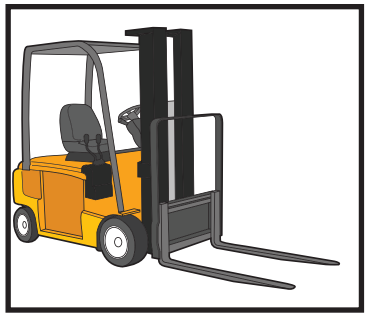
It is the responsibility of the receiving party to visually inspect and unload material from the delivery truck using a forklift. The receiving party shall be responsible for providing suitable equipment for unloading of material from the delivery truck. Upon receiving materials, the installer must check the condition of the packaged materials, verify the quantity of packages received, against the packing list to ensure all materials are accounted for. If damages or shortages are discovered, it must be noted on the Bill of Lading at the time of delivery and photos must be taken immediately to document any issues. Freight damage must be documented and photographed immediately before the product crate is off-loaded so that a claim can be made against the carrier. Lumabuilt is not responsible for any damages or shortages unless they are documented in writing and presented to Lumabuilt within 48 hours of delivery.

VISUAL INSPECTION CHECK LIST

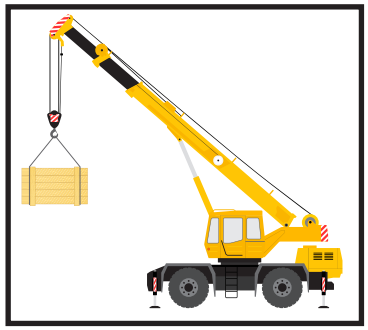
- ☐ Load tarped (if required)
- ☐ Part bundles strapped securely
- ☐ Part bundles intact and undamaged
- ☐ Part bundles quantities match shipper
- ☐ Individual parts are visually undamaged

- ☐ Individual part profiles match packing list
- ☐ Individual part quantities match packing list
- ☐ Individual part lengths match packing list
- ☐ Individual part colors match packing list
- ☐ Packing list matches order request

TRANSPORTATION & HANDLING

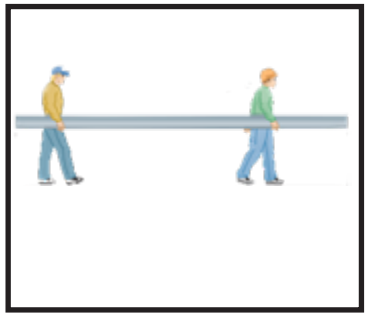


Forklift - A forklift may be used for product bundles up to 24'-0" long. Please make sure the forks are at their proper separation and are adequate length to securely transport each bundle. Do not transport open bundles with a forklift as it will damage the product. When transporting bundles across rough terrain, or over a longer distance, the bundles must be secured and supported over the length.



Crane - A crane should be used when lifting product to higher or difficult to reach elevations. Please be sure to utilize a spreader bar to ensure the even distribution of the weight to the pick-up points. As a rule, when lifting product bundles, no more than 1/3 of the product/bundles length should be left unsupported.

STOP **NEVER USE WIRE ROPES BECAUSE THIS WILL DAMAGE THE PRODUCT.**



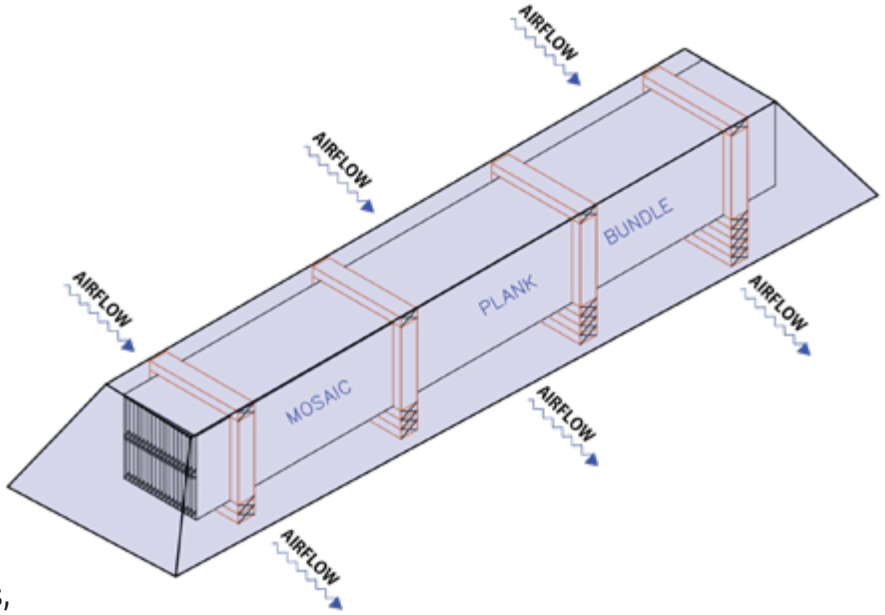
Length over 12'-0"

Manually - When handling Mosaic Planks, care should be taken to prevent scratching of materials. Clean gloves should always be worn. Handling of individual parts should be done carefully and properly to avoid bending or damaging. Planks and components should be carried on edge and the product is to be kept elevated, so that the plank does not drag on the ground. Normally a single individual can carry a plank or component (one at a time), up to a maximum length of 12'. For planks more than 12' long, it is recommended that two people (no more than 6' in from the ends) are utilized. ***DO NOT DRAG PANELS AGAINST EACH OTHER.***

STORING MATERIAL

Ground Storage - Bundled products should be stored high enough off the ground to allow for air circulation and prevent contact with accumulating water. If possible, elevate one end of the bundle to allow any moisture to run off the product.

It is recommended to cover the bundles with a tarp or to store the product beneath covering. Do not use tight fitting plastic-type tarps to cover the bundles, while these tarp types may provide protection from heavy downpours, they can also retard necessary ventilation and trap heat and moisture which may create paint surface and/or metal corrosion. **If moisture has formed, the product should be unbundled, wiped dry, and allowed to dry completely.** Once dry, carefully re-stack the product and loosely recover allowing for ample air circulation. If products are to be stored during possible bad weather conditions, we suggest they be stored inside. **Extended storage of products in a bundle is not recommended.** Under no circumstances should the products be stored near or come in contact with salt water, corrosive chemicals, ash, or fumes generated or released inside the building or nearby plants, foundries, plating works, kilns, fertilizer, and wet, green treated lumber.



FASTENER INFORMATION

Fasteners must be corrosion resistant and comply with all local building codes. According to install substrate, choose your #8 size fastener and spacing based on the fastening spacing table located in the appendix page 50.

TOOLS

In order to have the quickest, easiest, and most successful installation, all necessary tools to complete the project should be acquired. It is critical to carefully inspect the quality of any equipment used to cut or fasten Mosaic Planks as dull cutting blades and poorly worn equipment can damage the product and potentially cause injury to the operator. Follow all OSHA codes with regards to the required safety equipment and proper handling of tools.

- 10" or 12" compound miter saw & portable table saw
- Drill with a 3/8" or 1/2" chuck *(corded or cordless)*
- Screw guns with adjustable torque drives
- Jig saw with a non-ferrous aluminum cutting blade *(corded or cordless)*
- Hole saw up to 4" max diameter *(non-ferrous metal cutting)*
- 10" or 12" 80T non-ferrous metal cutting circular blades
- Fine tooth sheet metal file *(should not be required if materials are cut with the proper equipment and sharp cutting blades)*
- Tin Snips
- Painters tape
- Gloves
- Eye protection *(goggles are recommended)*
- #8 Fasteners *(type and length appropriate to the installation requirement)*
- Touch-up paint
- Horseshoe Shims *(1/16" through 3/8")(molded from high compression 10k-12k psi, Fire retardant copolymer plastic)*
- Sawhorses or other supportive portable work tables
- Shop vacuum
- Small air compressor with micro air blow nozzle
- Laser level
- Plumb bob
- Chalk line

CUTTING

Mosaic Trims and Planks can very easily be cut using various tools with the proper non-ferrous aluminum cutting blades. Since Mosaic Products are a pre-finished painted product, special care and handling should be used when cutting materials to fit as required. Trims and Planks should always be cut face-up and painters tape should be applied to the area where the cuts will take place. When cutting Mosaic Trims or Planks it is imperative to use a proper and sharp cutting blade. Tape and mark the material to be cut, allow the saw motor to reach full speed before cutting the material, use care to slowly cut the materials one part at a time (note that cutting materials too quickly or cutting multiple parts may cause the saw blade to bind up or "kick" the material causing damage to the components and potential injury to the operator).

EQUIPMENT RECOMMENDED PER CUT TYPE

- Cutting Components to Length: Compound Miter Saw
- Rip Cutting Components Down the Length: Table Saw
- Profile Notching Components: Jig Saw
- Hole Cutting Components Hole Saw or a Jig Saw

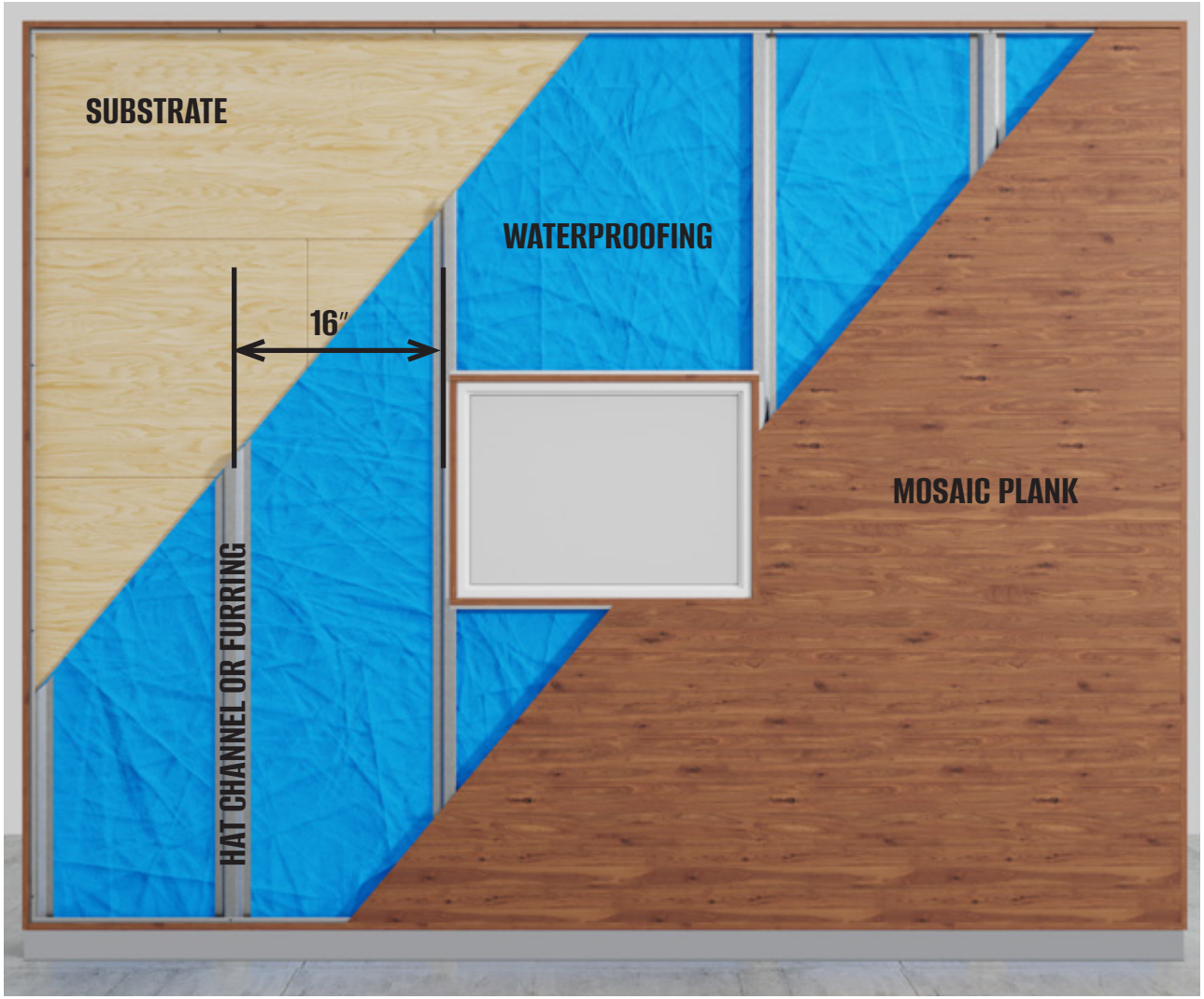
Aluminum shavings can scratch or damage the surface of the planks, take caution not to set up the cut station on or around materials that have not yet been installed.

DRY-IN

Once the substrate has been verified and accepted, dry-in of the walls to be cladded may begin. Follow the vapor barrier manufacture's installation guidelines for proper application and installation guidance. Mosaic Planks should not be installed over cementitious materials, dissimilar metals, or pressure treated materials without adequate barrier protection. All penetrations ***must*** be properly waterproofed to prevent moisture penetration since Mosaic Planks are a ***rain-screen*** system (reference "Rainscreen Principle" documents for further details).

TYPICAL WALL ASSEMBLY

Refer to the architectural plans for soffit framing.

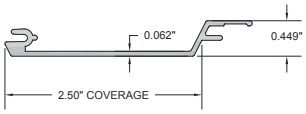


PLANK & TRIM PROFILE IDENTIFIER (PARTS NOT SHOWN TO SCALE)

2.5-INCH V-GROOVE

ABPL25X288

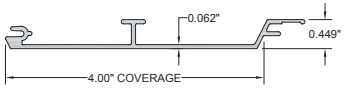
2.5" x 24' Standard Dimension



4-INCH V-GROOVE

ABPL4X288

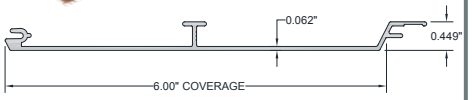
4" x 24' Standard Dimension



6-INCH V-GROOVE

ABPL6X288

6" x 24' Standard Dimension



8-INCH V-GROOVE

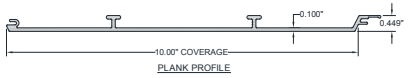
ABPL8X288

8" x 24' Standard Dimension

10-INCH V-GROOVE

ABPL10X288

10" x 24' Standard Dimension



6-INCH PANELIZED FLUSH PLANK

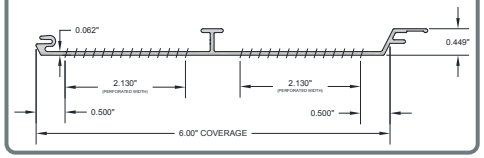
ABPLF6X288

6" x 24' Standard Dimension

6" VENTED PLANK

ABPLP6X144TEMPLT

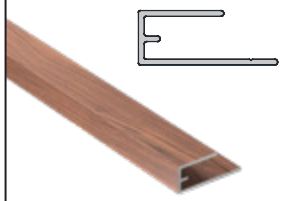
6" x 24' Standard Dimension



CLIPS

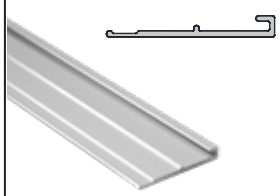
ABCLIPSS

J-STARTER



ABJSX144

STARTER

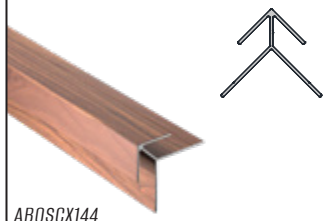


ABSTX144

INSIDE CORNER

ABISCX144

OUTSIDE CORNER



ABOSCX144

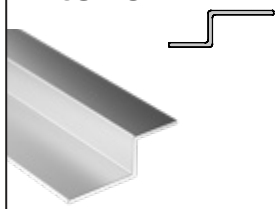
2 PIECE INSIDE/OUTSIDE CORNER ASSEMBLY

ABISOSASX144

EDGE ASSEMBLY TRIM

ABEASX144

ZEE SUPPORT

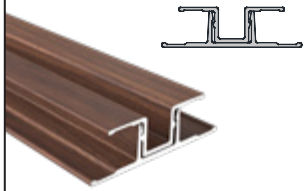


ABZSX144

JOINT ASSEMBLY FLUSH

ABJTX144

REVEAL JOINT ASSEMBLY



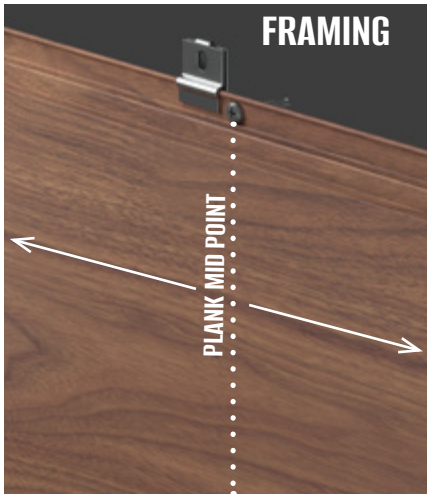
ABJASRX144

EXPANSION & CONTRACTION

The expansion coefficient for aluminum will cause thermal movement over the length of each plank: ***3/16" change in a 24'-0" length of plank, every 50° Fahrenheit of temperature change*** Planks will both expand and contract by the same amount. (See Appendix for expansion and contraction table Page 48)

Mosaic Planks should be installed so that the edge of the plank is ¼" offset from the wall of the trim component. This will allow for the planks to both expand/contract and remain concealed by the trim components.

Do not fasten Mosaic planks to the trim components as this will inhibit thermal movement which will induce waving and/or buckling.



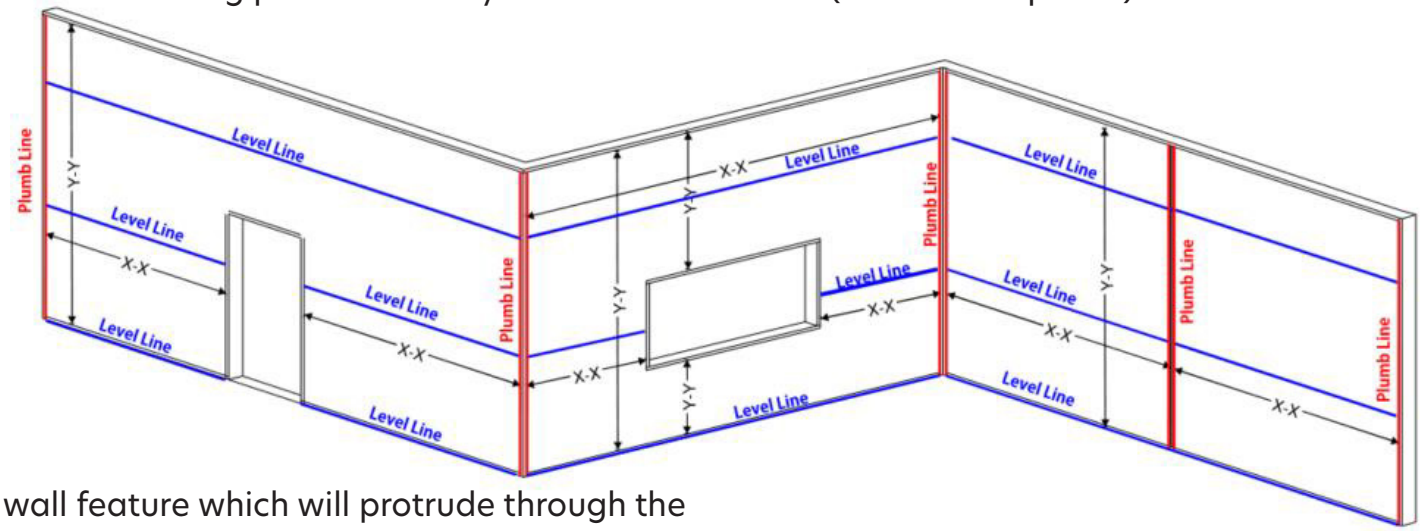
Planks must be hard fastened at only one point (2 Options)

Hard Fastened Point Option#1*:* One fastener should be installed at the plank's midpoint (12' or less) directly through the clip attachment surface to prevent plank migration to the left or right.

Hard Fastened Point Option#2: If using a butt joint, then refer to the **Plank Installation** section (Page 36) for alternate instructions on how to hard fasten the planks.

SNAP LINE INSTALLATION LAYOUT *Soffit installation layout utilizes the same instlallation technique.*

Snapping lines onto the substrate to form an installation layout (start, mid-point, and completion) will make for a much more successful and easier installation. Use a plumb bob, laser level, and chalk line to snap multiple grid lines on the installation substrate at the starting point and every 4 to 6 feet on center (to maintain plumb).



When planning for a wall feature which will protrude through the plank cladding, ensure to mark on the plank sufficient material for removal, to allow for movement of the plank around that protrusion. All surfaces of the substrate should be free from any unintentional obstructions and/or projections which might interfere with plank installation. Note any areas where it was determined, in the substrate check, that it will be necessary to shim Mosaic Planks to bring the panel system into a plumb, level, and consistent plane. When forming the snap-line installation layout, ensure that the lowest horizontal line is, and will be located above the finished grade. The Mosaic Plank system is progressively installed, so it is crucial to follow your previously determined plank layout and selection properly, to avoid making any changes after the product has been installed.

1 TRIM COMPONENT LAYOUT *Soffit installation layout utilizes the same trims and instlallation technique.*

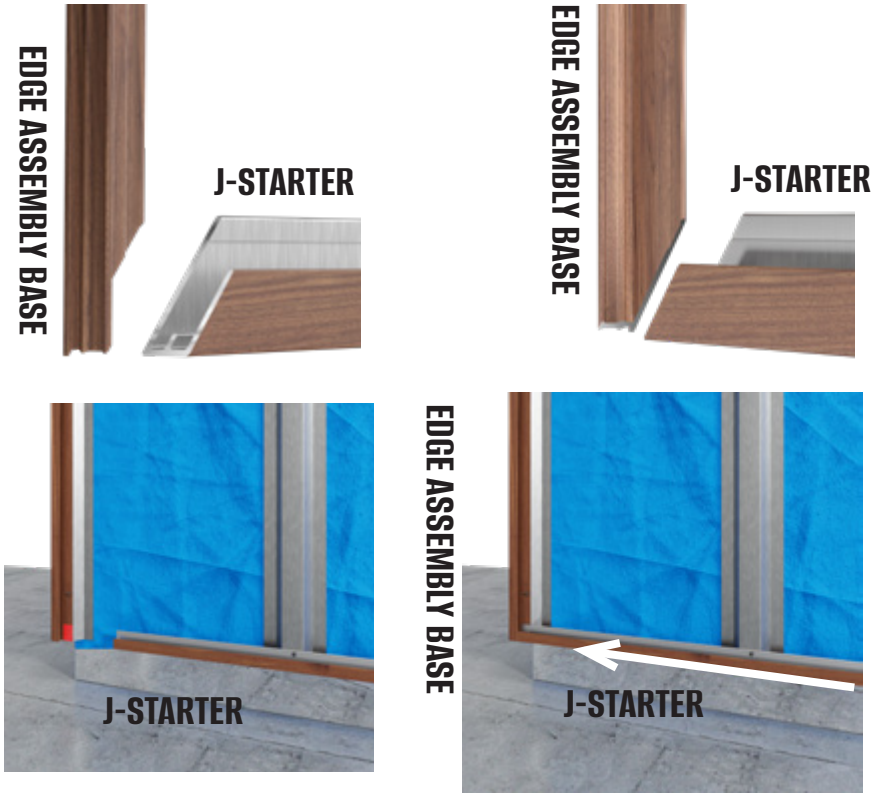
Before beginning the installation, it is important to plan the overall trim layout pattern of the installation, the layout selection should have been determined from the architectural drawings prior to ordering materials but should be verified onsite prior to beginning the installation and it should correspond with how the take-off of materials was performed.

The material waste will differ depending on the trim and plank layout selection.

Trim components will need to be installed before the planks are installed. Identify and determine your trim component selection and layout, as this will affect the cut lengths of the planks and trims.
Two trim components may be joined together using a ***45° Miter Joint Method*** OR a ***Square Cut and Notch Method:***

• ***45° Miter Cut Joints*** must be a combination of:
(J-Starter and J-Starter) OR (J-Starter and Edge Assembly Trim Base/Cap) to achieve uniform face dimensions.

• ***The Notched Cut Method*** does not have this limitation and any combination of component trims may be used. The two trim components which are being joined will be cut to length and one of them will be notched to accept the mating trim.

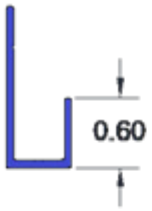


UNIFORM TRIM FACE REQUIREMENT

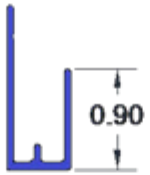
Each trim component has their corresponding exposed face dimension, which will hide the edge or termination of a plank. shown below. When choosing to join perpendicular trims with a 45° miter cut, the face dimensions of the perpendicular trims must have the same trim face dimension (shown below) to maintain proper 45° corner joints. The Edge Assembly Trim has a Base and Cap which can be used interchangeably for the install. The Corner Trims have two options for the inside and outside corner conditions. Any trim combinations are possible when choosing to Square and Notch cut the perpendicular trim joint.

Exposed Face Dimensions on Trim Components

STARTER/EDGE ASSEMBLY TRIMS



ABJCLX144



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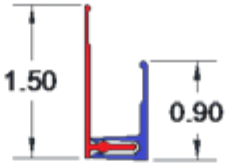
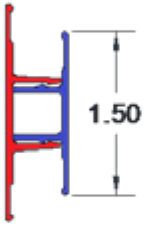
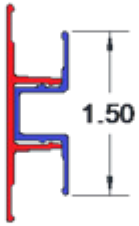


ABETX144
ABEBX144

JOINT TRIMS

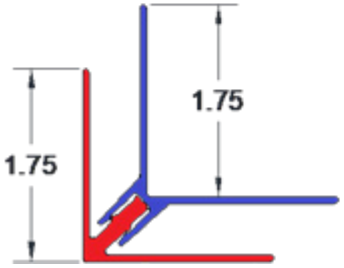


ABJBX144
ABJTX144

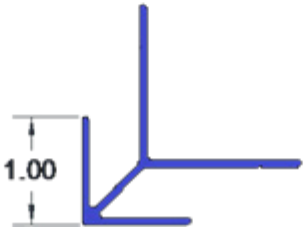


ABJBX144
ABJTRX144

CORNER TRIMS



ABOSASX144
ABISASX144



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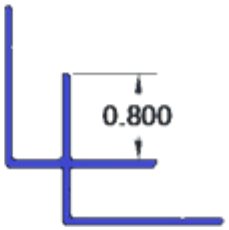
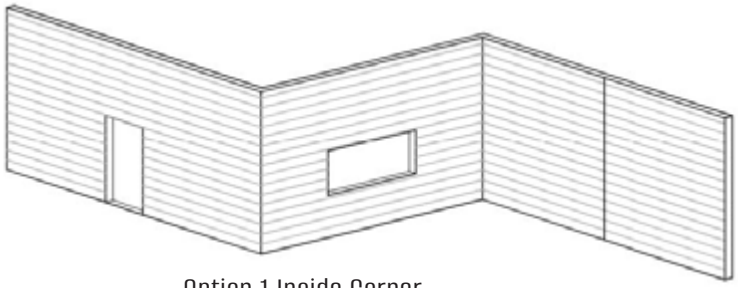


ABISCX144

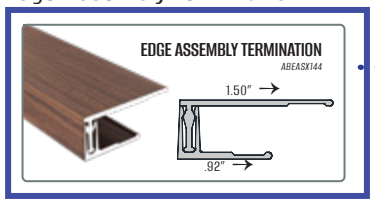
TYPICAL TRIM LOCATIONS (HORIZONTAL)

REFER TO STANDARD DETAILS FOR ADDITIONAL AVAILABLE OPTIONS

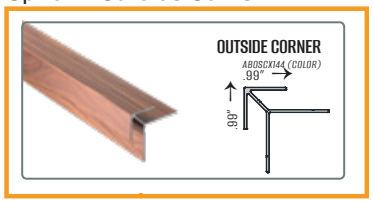
Soffit installation utilizes the same trims, planks and installation technique.



Edge Assembly Termination

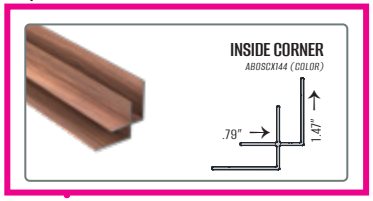


Option 1 Outside Corner

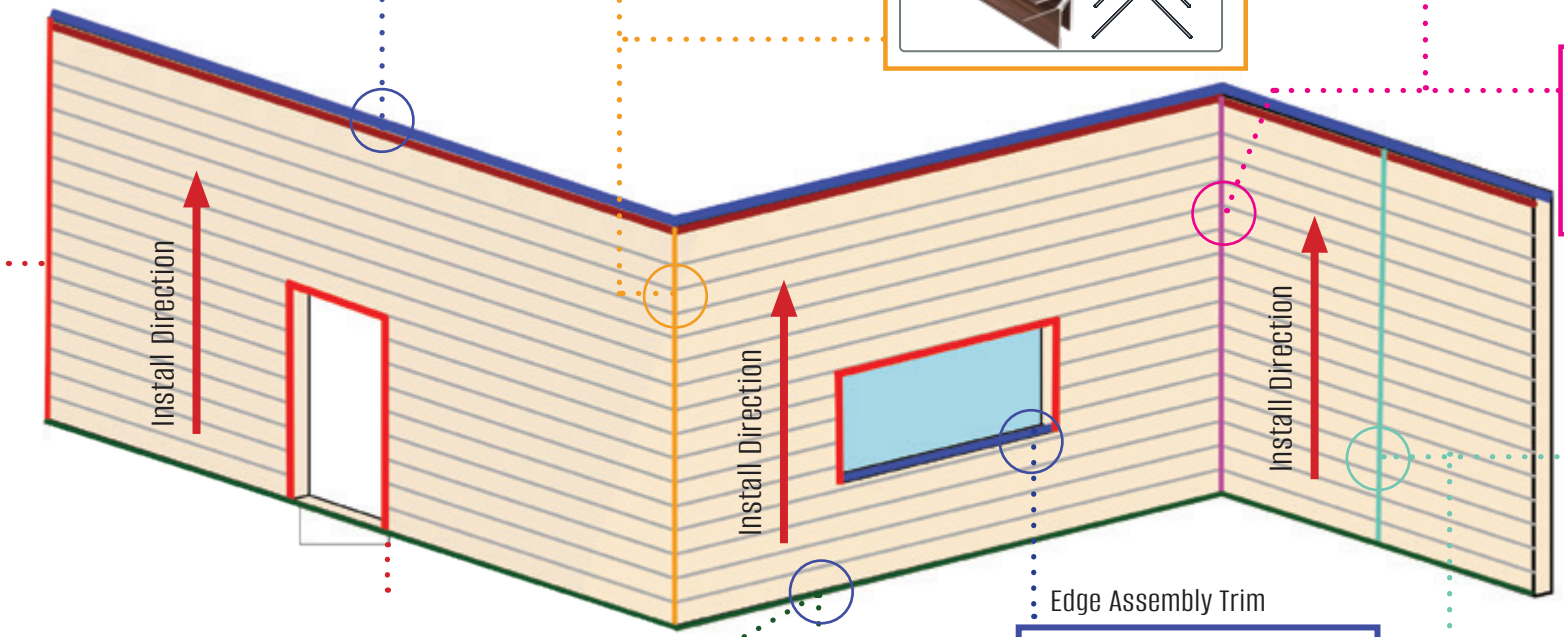


Option 2 Outside Corner Assembly

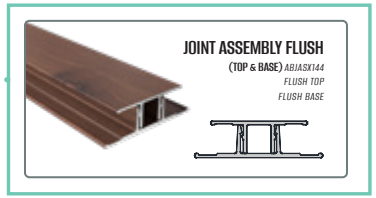
Option 1 Inside Corner



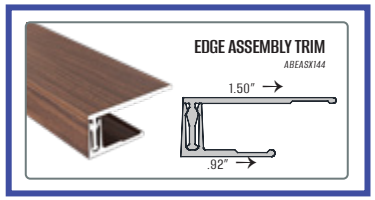
Option 2 Inside Corner Assembly



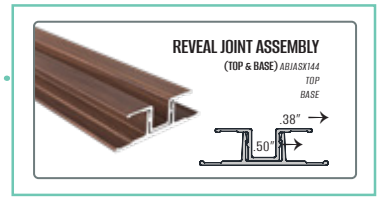
Option 1 Joint Assembly



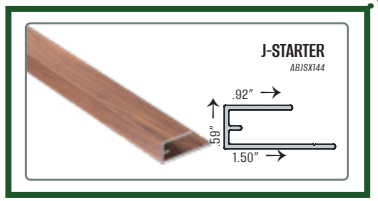
Edge Assembly Trim



Option 2 Reveal Assembly



Option 1 J-Starter

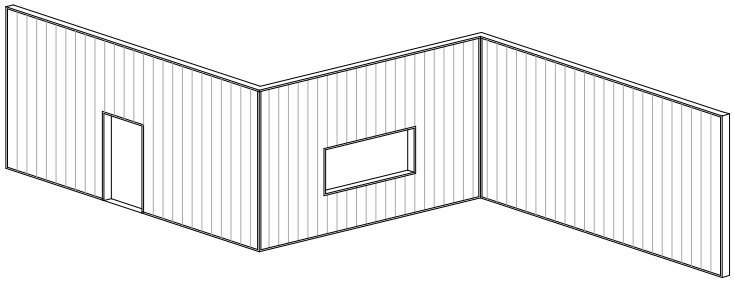


Option 2 Starter Strip

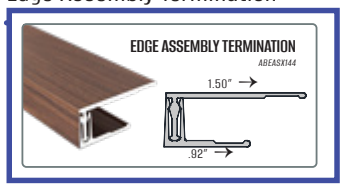
TYPICAL TRIM LOCATIONS (VERTICAL)

REFER TO STANDARD DETAILS FOR ADDITIONAL AVAILABLE OPTIONS

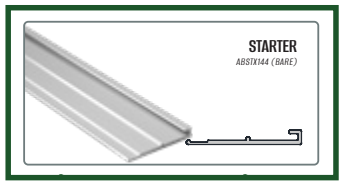
Soffit installation utilizes the same trims, planks and installation technique.



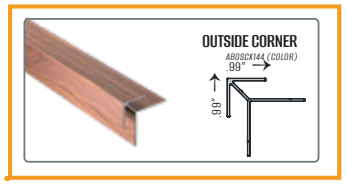
Edge Assembly Termination

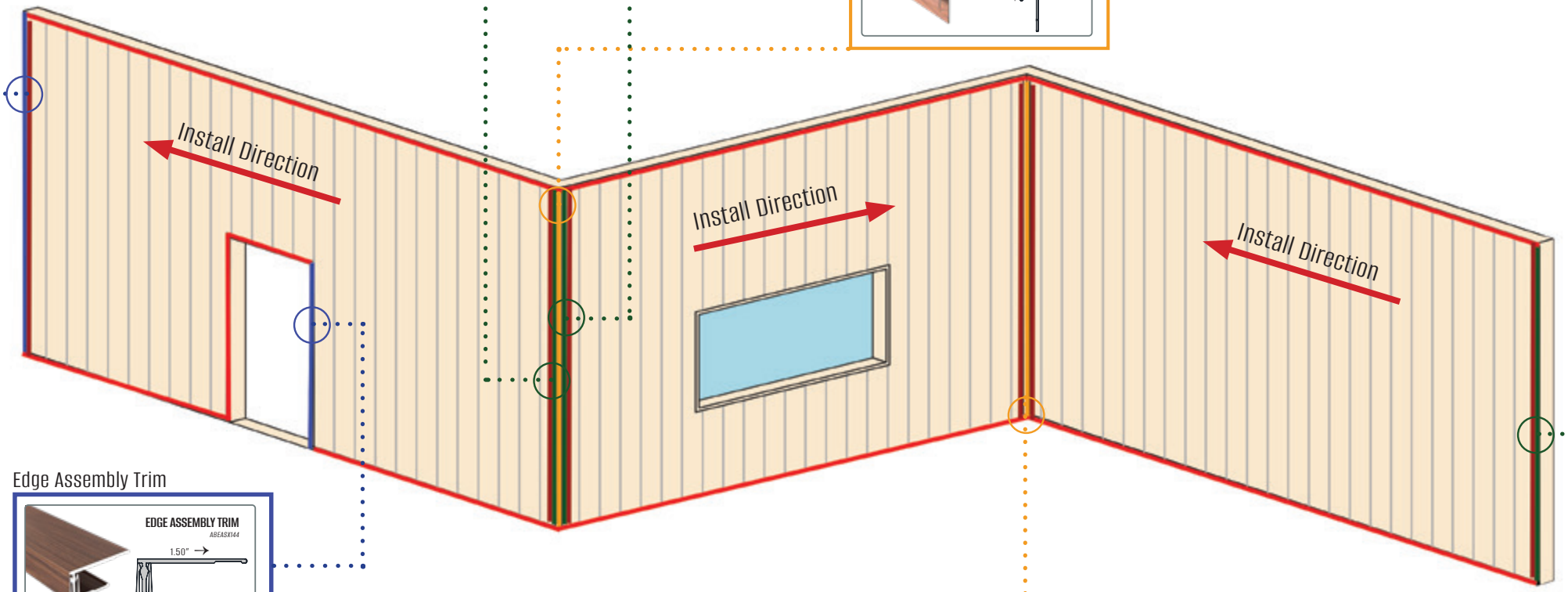


Starter

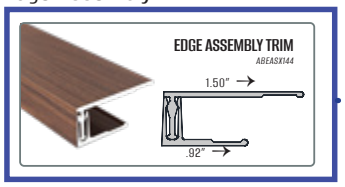


Outside Corner



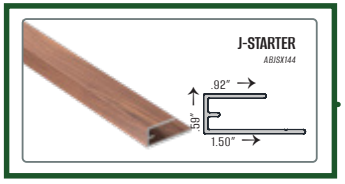


Edge Assembly Trim



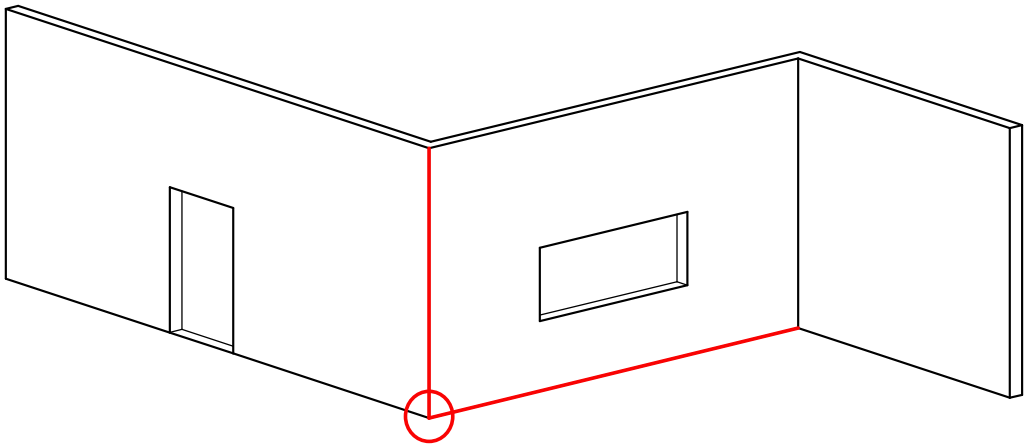
2 Piece Inside/Outside Corner Assembly

J-Starter

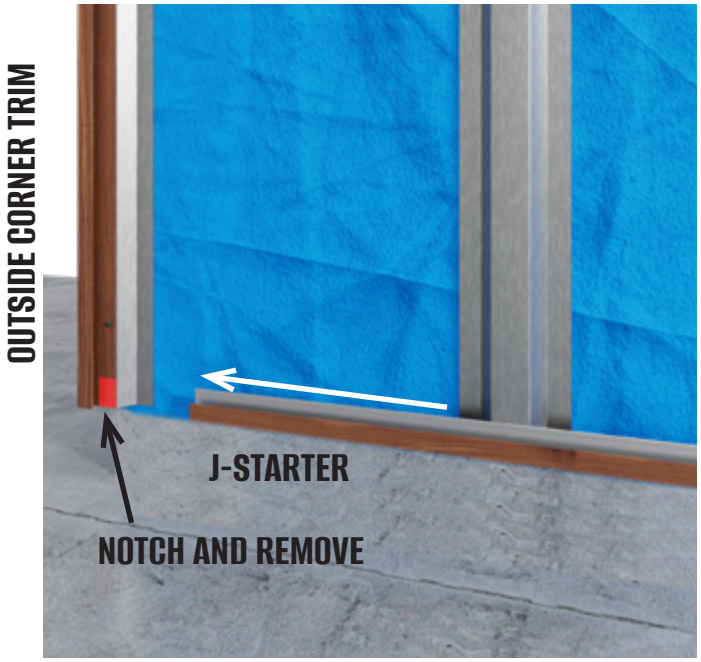


TYPICAL TRIM INSTALLATION - OUTSIDE CORNER

(J-Starter) and (Outside Corner Trim) with square cut ends being butted up to each other. Refer to the **Trim Component Layout** section (Page 12) of this installation guide to review square cut joints. Bottom trim components will require weep holes for drainage: 3/16" diameter holes spaced at 24" O.C separation, with holes offset 2" from the edge of the part.

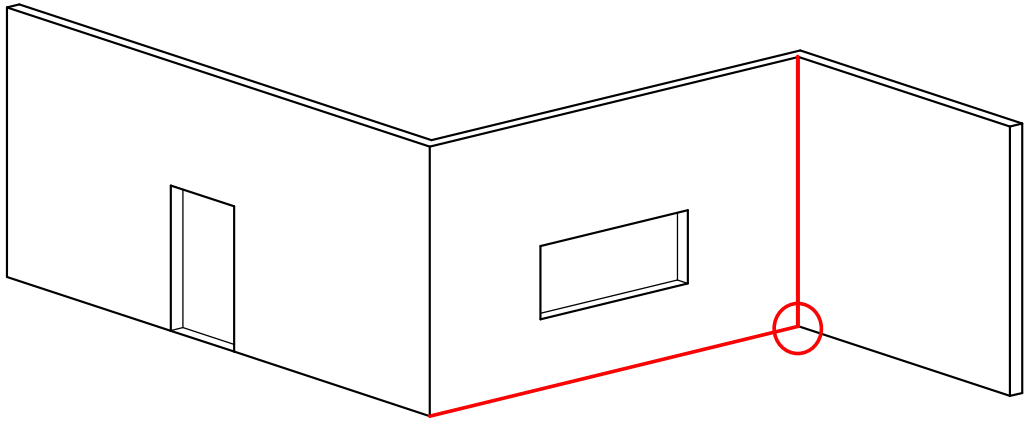


Mounting the trim components: Mounting screws to have no more than 32" O.C separation and penetrate through the appropriate structural framing meant to support the plank system.



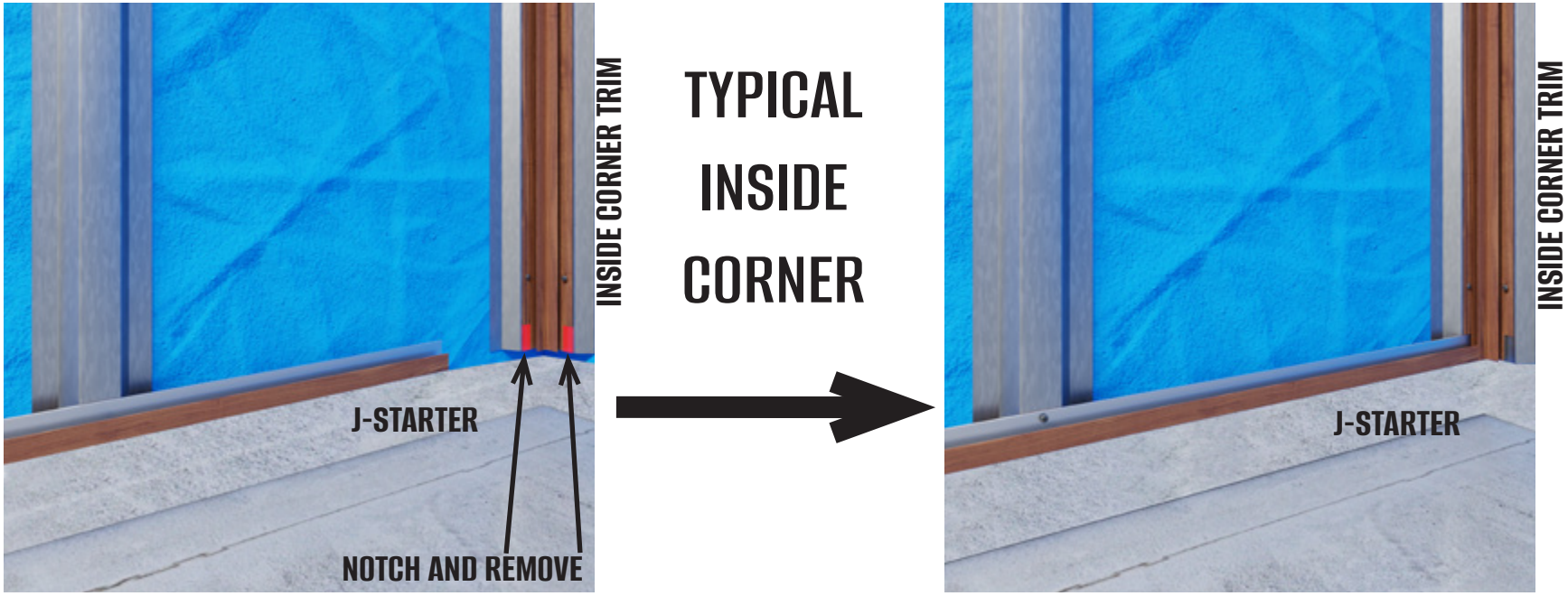
TYPICAL OUTSIDE CORNER
(SQUARE CUT ENDS)

TYPICAL TRIM INSTALLATION - INSIDE CORNER



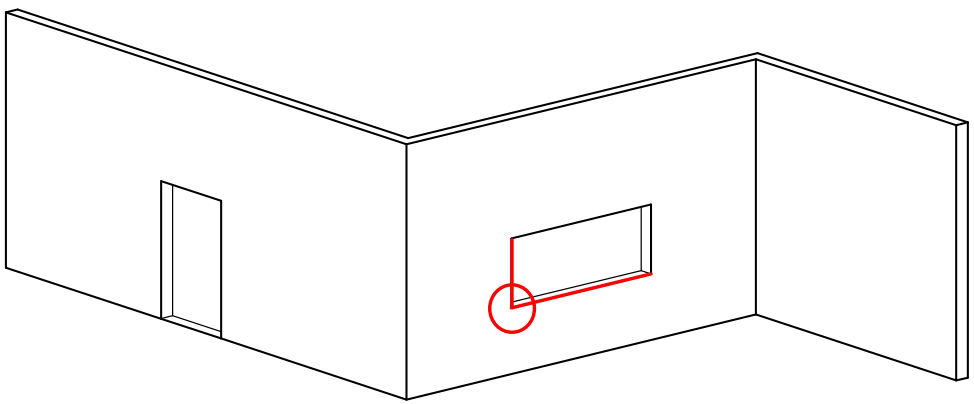
(J-Starter) and (Inside Corner Trim) with square cut ends are butt up to each other. Refer to the **Trim Component Layout** (Page 12) section of this installation guide to review square cut joints. Bottom trim components will require weep holes for drainage: 3/16" diameter holes spaced at 24" O.C separation, with holes offset 2" from the edge of the part.

Mounting the trim components: Mounting screws to have no more than 32" O.C separation and penetrate through the appropriate structural framing meant to support the plank system.



TYPICAL TRIM INSTALLATION -BELOW OPENINGS

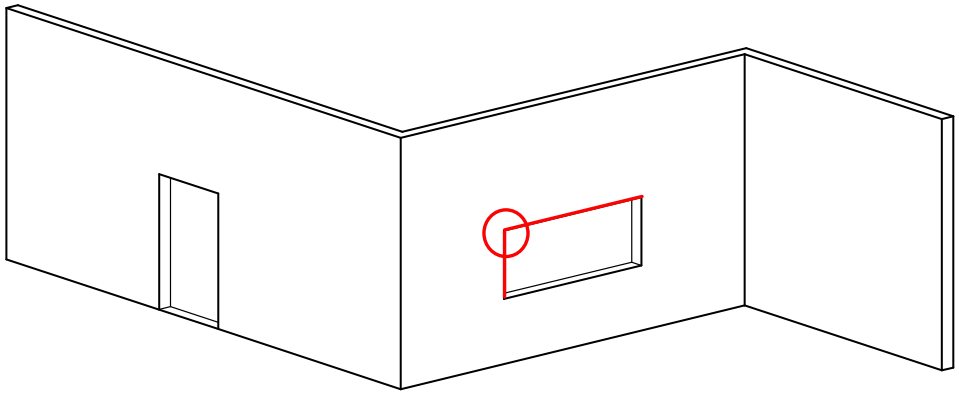
(Edge Assembly Trim Base or Cap) and (J-Starter) joined at the windowsill, using a 45° mitered joint. You will need to apply Zee Support at all plank terminations. Refer to the **Trim Component Layout** section (Page 12) of this installation guide to review miter cut joints. ***Trim components for soffit installations may not require weep holes, refer to plans.***



Mounting the trim components: Mounting screws to have no more than 32" O.C separation and penetrate through the appropriate structural framing meant to DO NOT SNAP ON THE MATING PART OF EDGE ASSEMBLY TRIM AT THIS MOMENT. MOSAIC PLANKS NEED TO BE INSTALLE

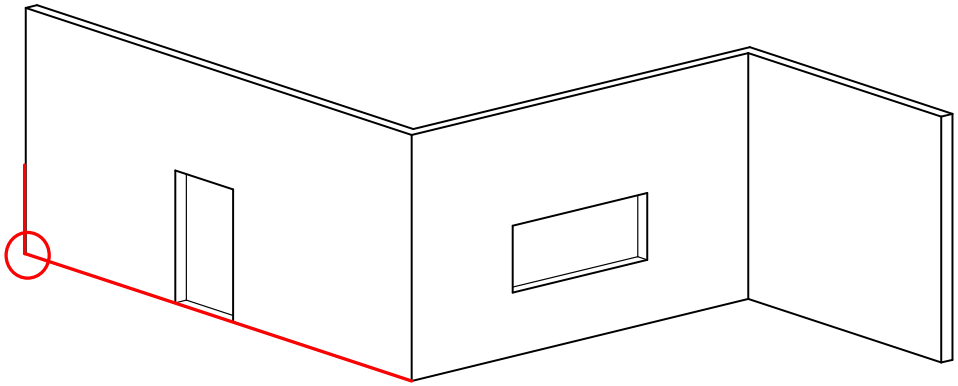
TYPICAL TRIM INSTALLATION - ABOVE OPENINGS

(Trim Component) and (Trim Component) joined at the window header, using square cut and notched joints. Refer to the **Trim Component Layout** section page 12 of this installation guide to review square cut joints.



Mounting the trim components: Mounting screws to have no more than 32" O.C separation and penetrate through the appropriate structural framing meant to support the plank system.

TYPICAL TRIM INSTALLATION - EDGE ASSEMBLY TRIM



(Edge Assembly Trim Base or Cap) and (J- Starter) joined at a bottom edge, using a 45° mitered joint. Refer to the **Trim Component Layout** section page 12 of this installation guide to review miter cut joints. Bottom trim components will require weep holes for drainage: 3/16" diameter holes spaced at 24" O.C separation, with holes offset 2" from the edge of the part.

Mounting the trim components: Mounting screws to have no more than 32" O.C separation and penetrate through the appropriate structural framing meant to support the plank system.

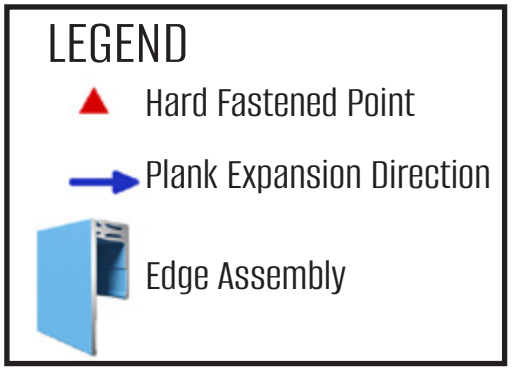
❷ PLANK COMPONENT LAYOUT

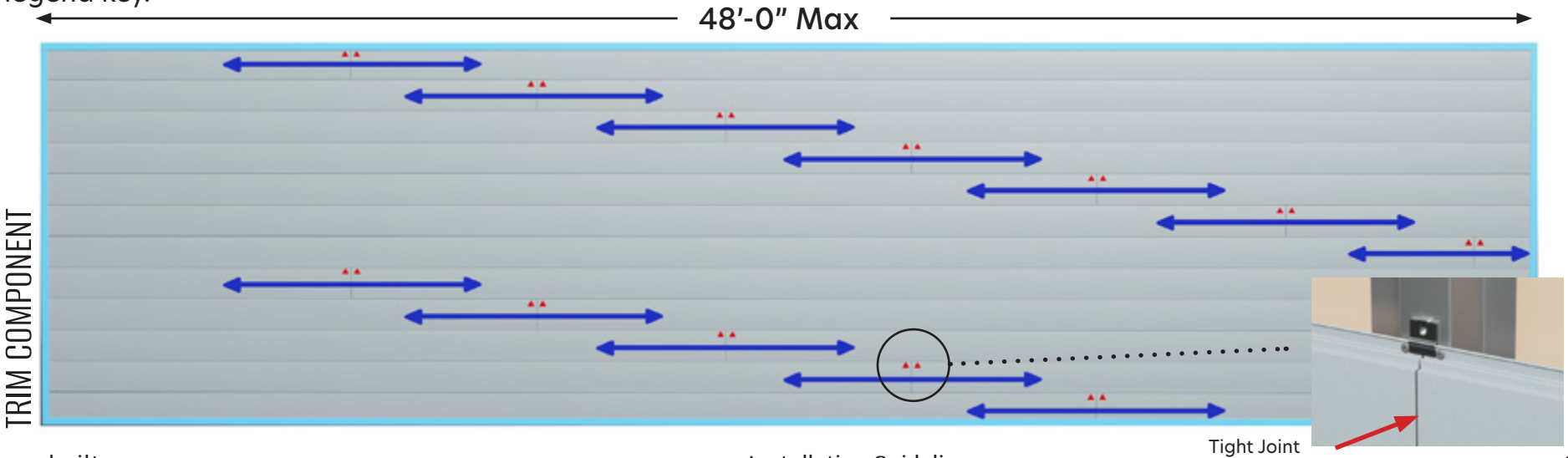
Woodgrain color options are just like real wood and will have different color variations throughout all the planks, so it is important to plan your plank selection to achieve the desired look. Pulling Planks from multiple boxes is suggested.

PLANK LAYOUT EXAMPLE 1 *Compatible layout for a soffit application.*

RUNNING BOND LAYOUT 48′-0″ MAXIMUM PLANK LENGTH (1) STAGGERED BUTT JOINT PER RUN

The running bond plank layout will allow for the installer to utilize the most material and minimize scrap material. Lay the first row of planks down and use the cutoff portion of the plank to finish the row (all plank pieces must be at least 12″ long). The two planks in each row will be hard fastened at the butt joint, (planks edges butted up to each other) and the opposite edge of the plank is allowed to expand/contract while remaining hidden behind Trim components. All plank edges must be positioned in the middle of their Trim component, or as prescribed in the expansion/contraction charts in the appendix page 48. The layout illustration below shows the suggested connection points, components, and expansion direction for each plank. The layout may be modified if expansion and contraction requirements for each plank are satisfied. Stagger the end joints as you work your way up the wall, so that your end joints do not match up from row to row. Overlapping plank lengths should overlap each other by a minimum of 6″. Refer to legend key.





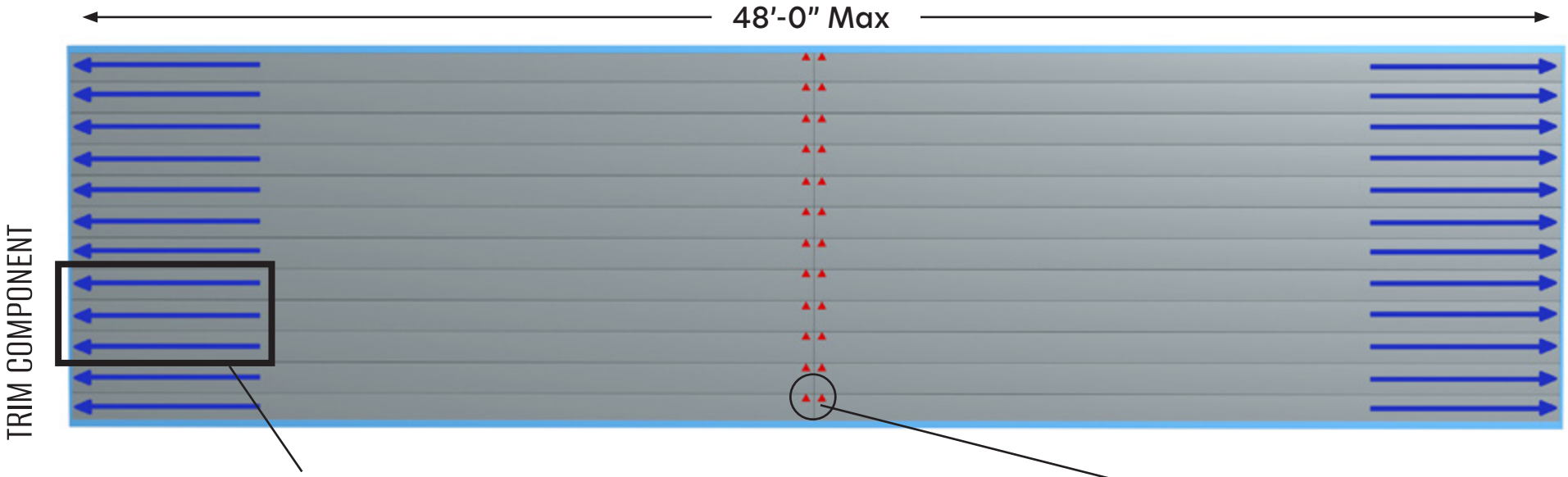
PLANK LAYOUT EXAMPLE 2 *Compatible layout for a soffit application.*

ALIGNED JOINT LAYOUT 48′-0″ MAXIMUM PLANK LENGTH (1) ALIGNED BUTT JOINT

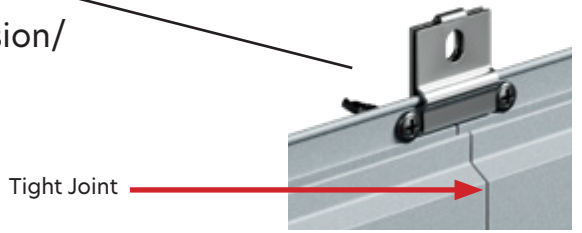
The aligned joint plank layout will allow for the installer to show a singular and aligned joint. For this aligned joint layout shown below, there will be one cut length for the planks. The two planks in each row will be hard fastened at the butt joint (planks edges butted up to each other), and the opposite edge of the plank is allowed to expand/contract while remaining hidden behind Edge Assembly Trim components. All plank edges must be positioned in the middle of the Edge Assembly Trim component, or as prescribed in the expansion/contraction charts in the appendix Page 48. The layout illustration below shows the suggested connection points, components, and expansion direction for each plank. Refer to the legend key for hard fastened points and trim components.

LEGEND

- Hard Fastened Point
- Plank Expansion Direction
- Edge Assembly



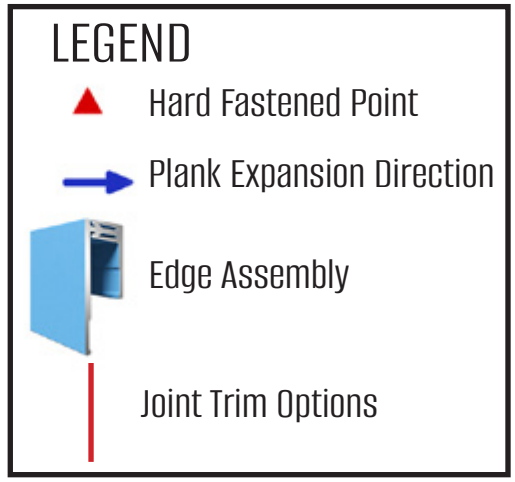
Adjust Plank edge to the midpoint of the Edge Assembly Trim to hide the expansion/ contraction behind the trim.

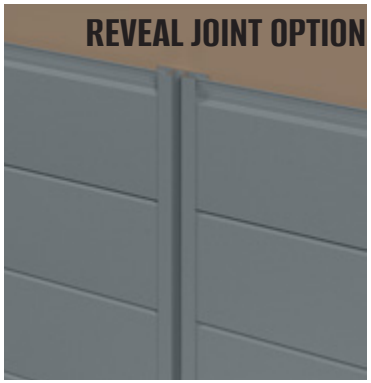


PLANK LAYOUT EXAMPLE 3 *Compatible layout for a soffit application.*

RUNNING BOND LAYOUT WITH PLANK RUNS OVER 48′-0″ WITH OR WITHOUT (1) BUTT JOINT PER 48′-0″ PLANK RUN

To overcome plank runs longer than 48′-0″ a Plank Joint Trim may be used to continue an additional 48′-0″ of plank run. Recommended layouts include a Staggered Joint Running Bond as shown on the left OR a plank run with No Butt Joints as shown on the right. The "No Butt Joint" layout will be fastened at the plank's midpoint and the expansion/contraction will be hidden behind the Trim components. All plank edges must be positioned in the middle of the Trim component, or as prescribed in the expansion/contraction charts in the appendix Page 48. Refer to the legend key for hard fastened points and trim components.





CALCULATING MATERIAL USAGE

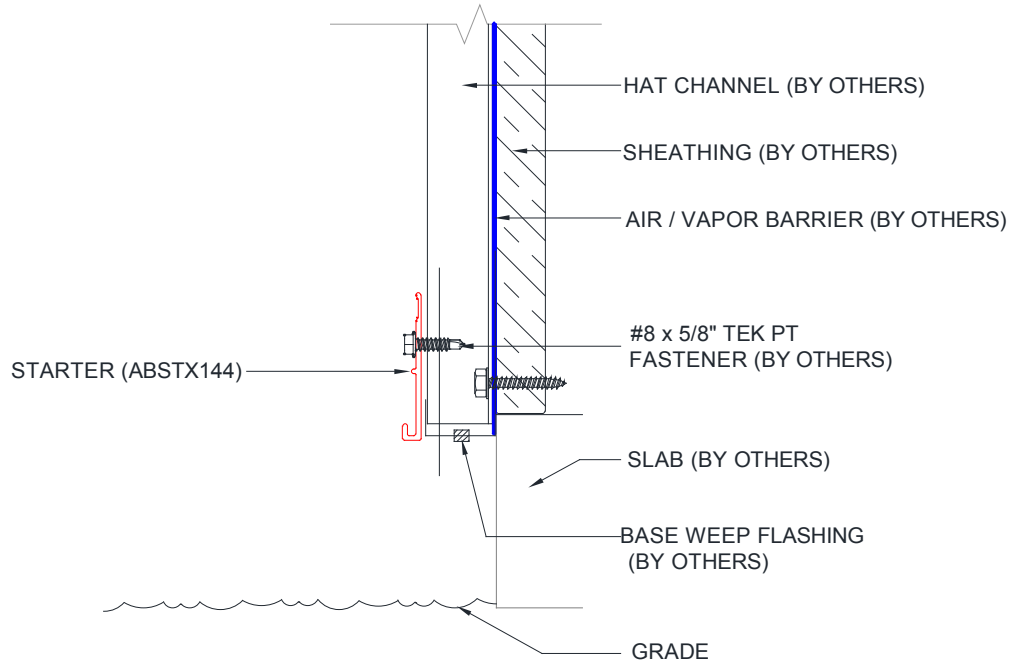
After identifying & determining the plank layout, verify that the correct amount of material has been ordered for your specific application. Since material takeoffs and resulting quantities were originally based on the plank layout from either the Architectural drawings or the physical project, installing the material in another pattern other than what has been pre-determined may result in material shortages.

3 TRIM INSTALLATION *Soffit Installation standard details available*

Once the installation sequence has been determined, the dry-in has been installed, and the snap-line layout has been established, installation may begin. Prepare your materials by cutting each profile to the length determined by the component layout and snapped-on line layout, while following Lumabuilt's material cutting guidelines. All materials may require a fresh square cut at the ends before installation due to the manufacturing process. Be sure to use a touch-up marker and paint the bare aluminum ends of any saw-cut component.

STARTING TRIM OPTION #1

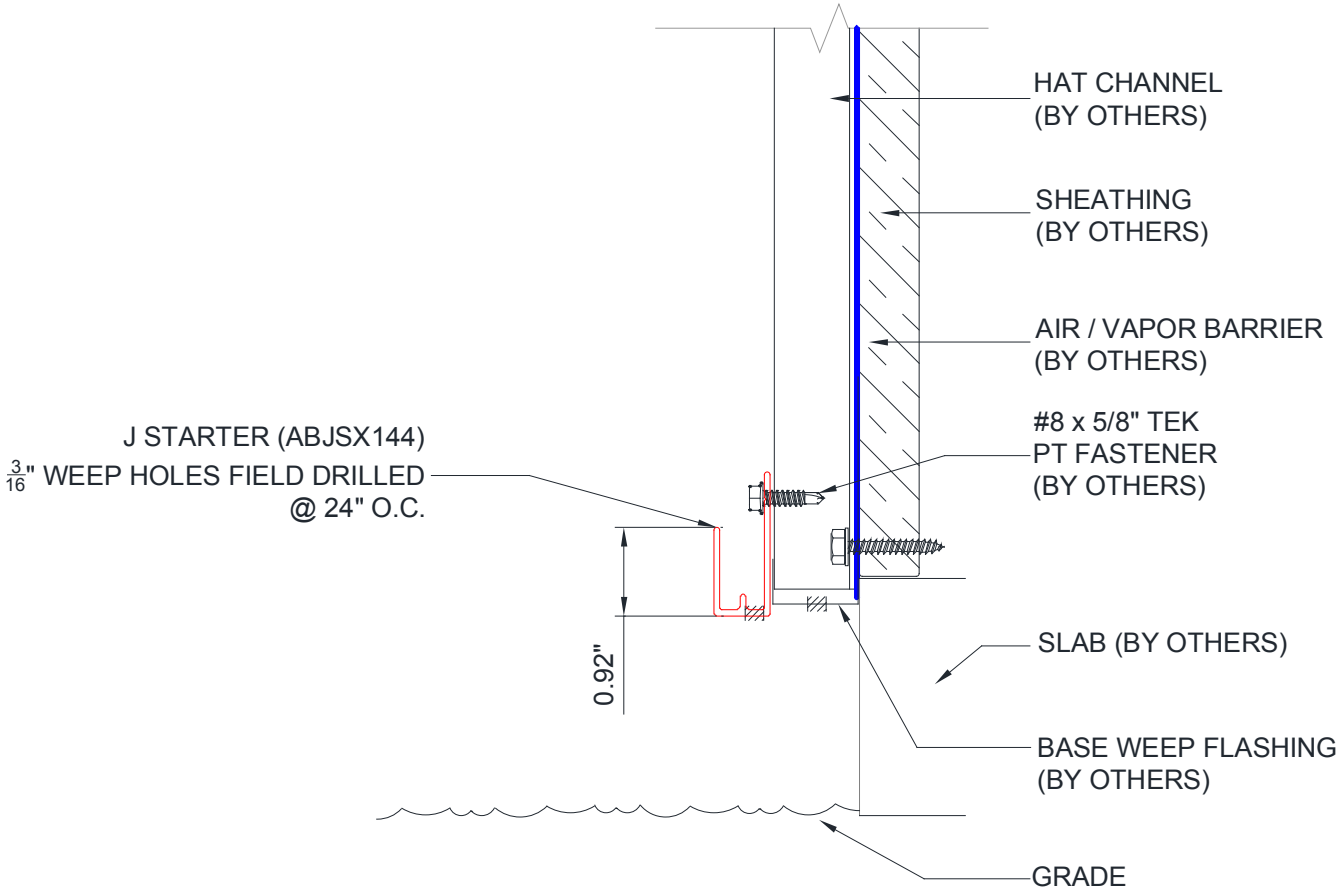
Utilize the **Starter piece (ABSTX144)** as your beginning horizontal trim, line up the starter piece horizontally at the bottom of the snap-line layout, ensuring that the profile is plumb and level. Use recommended fasteners (refer to Appendix page 50) to fasten the Starter to the substrate. Ensure that the mounting screws have no more than 32" separation and go through the Starter and the Studs/Furring or other Structural Framing, meant to support the Plank System.



TRIM INSTALLATION

STARTING TRIM OPTION #2

Utilize the **J-Starter (ABJSX144)** as your beginning horizontal trim. Weep holes will need to be drilled into the bottom face of the J- Starter to allow for drainage. Use a 3/16" drill bit to drill the first weep hole 2" away from the edge. Drill the same size holes down the length of the entire profile, separating each hole 24". Line up the J-Starter piece horizontally at the bottom of the snap-line layout and make sure the profile is plumb and level. Use recommended fasteners (refer to Appendix page 50) to fasten the J- Starter to the substrate. Ensure that the mounting screws have no more than 32" separation and go through the J-Starter and the Studs/Furring or other Structural Framing, meant to support the Plank System.



TRIM INSTALLATION *Soffit installation utilizes the same trim components and installation technique.*

PERIMETER TRIM CONDITIONS (3 OPTIONS)

For Trim Installation guidelines and techniques, please refer to the section: Trim Component Layout Page 12.

EDGE ASSEMBLY TRIM Option#1: Install the **Edge Base (ABEBX144)** or **Edge Cap (ABEBX144)** on the exterior edge of the snap-line layout and ensure the profile is plumb and level (Please see section **Trim Component Layout** Page 12 for information on uniform trim face and trim joint options). Mount the Edge Assembly Trim to the substrate by using the recommended #8 screws (Refer to Appendix page 50). Ensure that the mounting screws go through the Edge Assembly Trim and the studs/furring or other structural framing, meant to support the Plank System. Screws to be no more than 32" O.C distance from each other. The **Trim Componen**t may be used as a Plank Perimeter Trim, or as a Plank Termination Trim.

DO NOT SNAP ON THE MATING PART OF EDGE ASSEMBLY TRIM AT THIS MOMENT. MOSAIC PLANKS NEED TO BE INSTALLED PRIOR TO THIS.

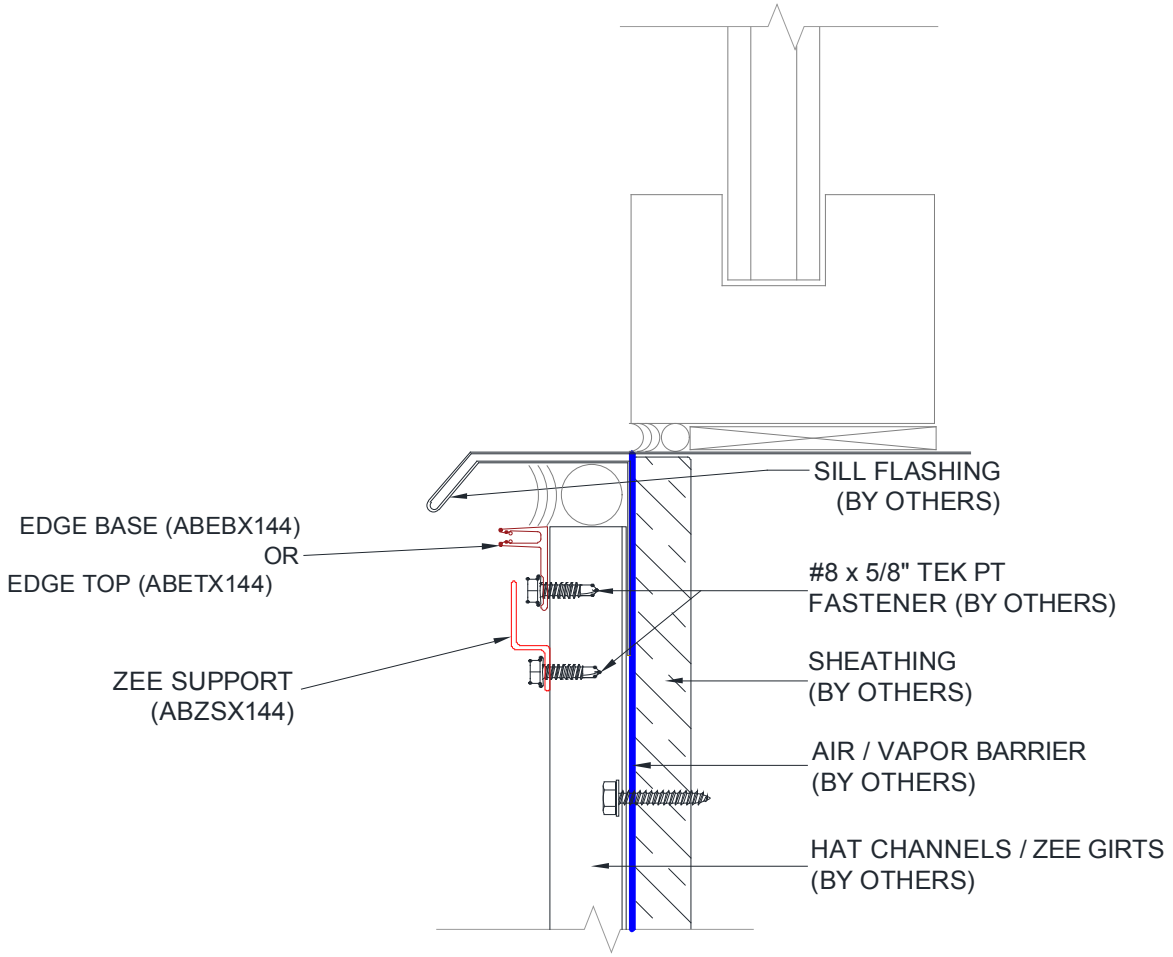
EDGE ASSEMBLY TRIM AT PLANK EDGE

EDGE ASSEMBLY TRIM AT PLANK TERMINATION

TRIM INSTALLATION

Trim Component Option#1 can use on Edge Assembly Trim around fenestration components such as doors and windows or at a plank termination.

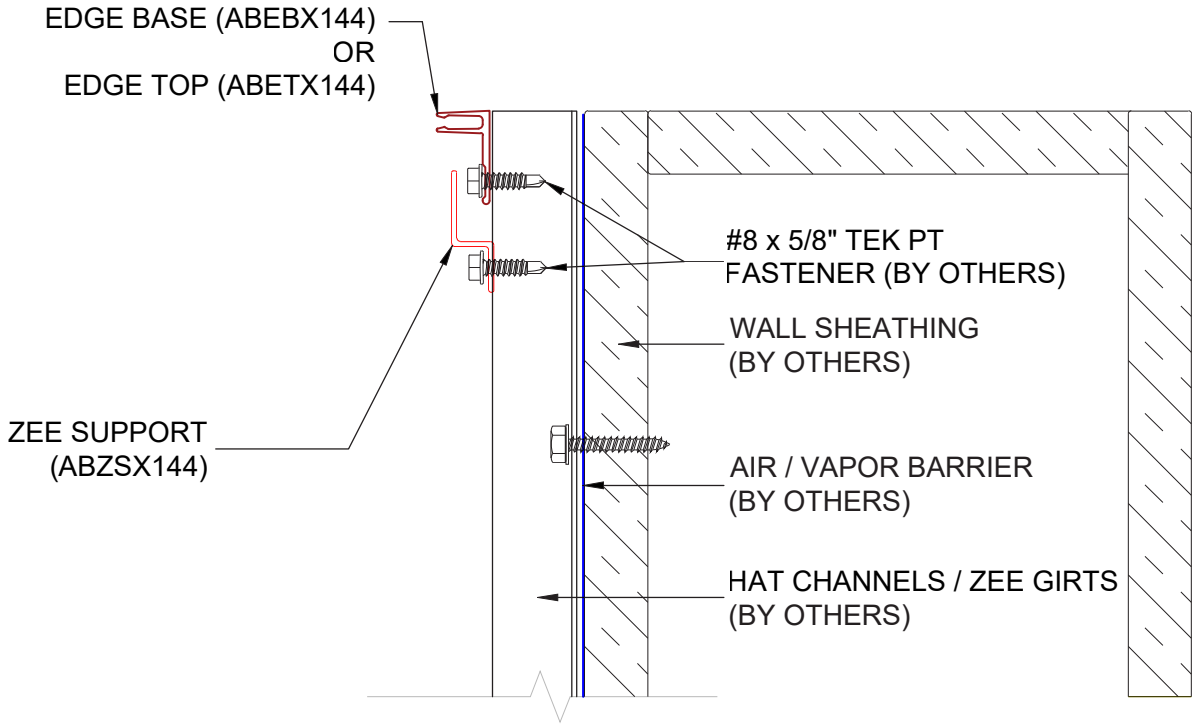
Use the ***EDGE ASSEMBLY TRIM*** as the perimeter base trim around the openings. If installing around a window or door frame, place the Edge Assembly Trim directly against the window or frame and use the recommended #8 fasteners (Refer to Appendix Page 50) to mount it to the substrate. Screws should be maximum 32" O.C separation, or at least two screws if separation is less than 32" O.C. The ***ZEE Support (ABZSX144)*** is used in conjunction with the Edge Assembly Trim to support the final plank at the top of the plank run. Use segments of 4" pieces of ZEE Support profile, separated every 24" to later support the termination plank.



TRIM INSTALLATION

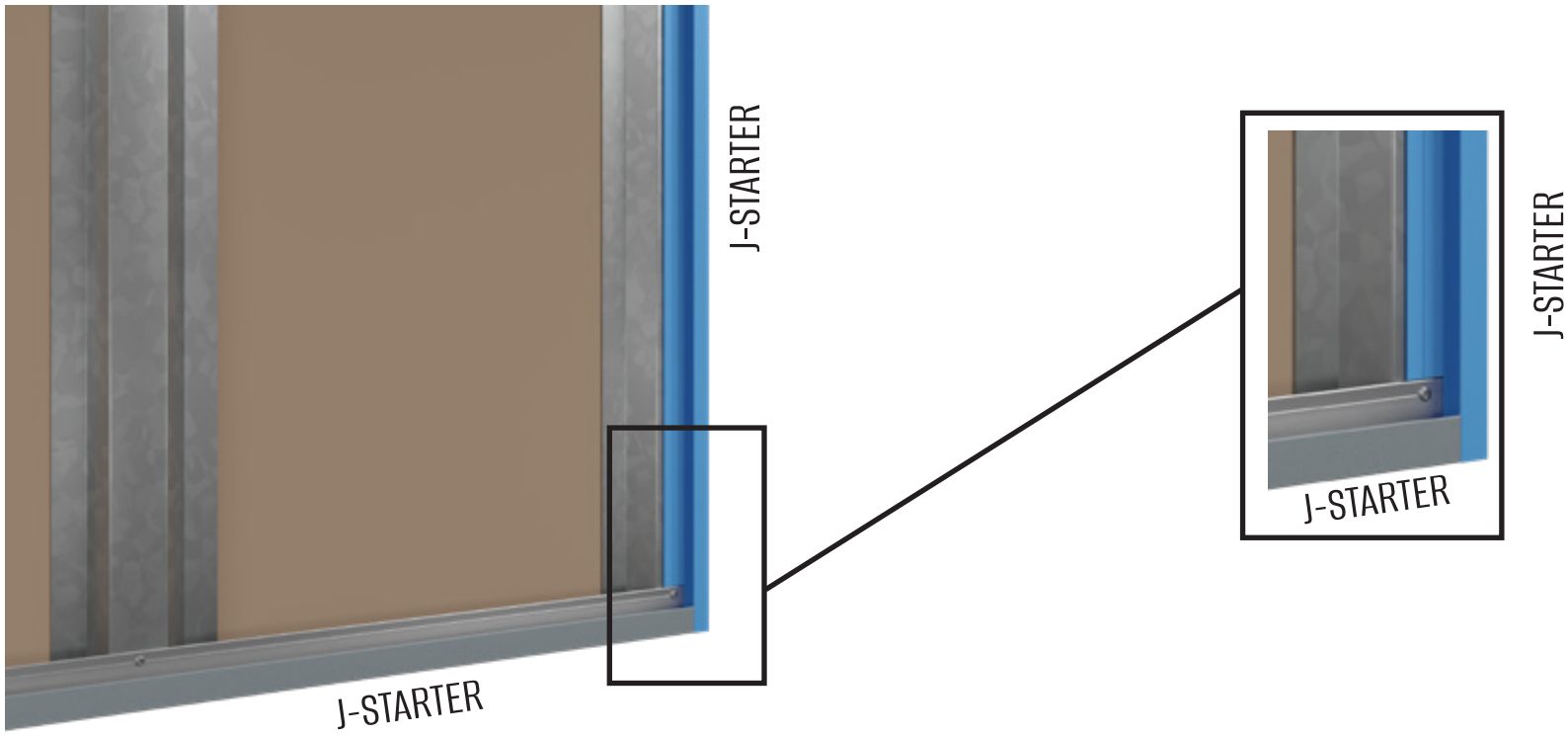
Trim Component Option#1 can use on Edge Assembly Trim around fenestration components such as doors and windows or at a plank termination.

Use the ***EDGE ASSEMBLY TRIM*** at the top of a plank run and use the recommended #8 fasteners (Refer to Appendix Page 50) to mount it to the substrate. Screws should be 32" O.C separation. The ***ZEE Support (ABZSX144)*** is used in conjunction with the Edge Assembly Trim to support the final plank at the top of the plank run. Use segments of 4" pieces or a continuous piece of ZEE Support profile, separated every 24" to later support the termination plank.



TRIM INSTALLATION *Soffit installation utilizes the same trim components and installation technique.*

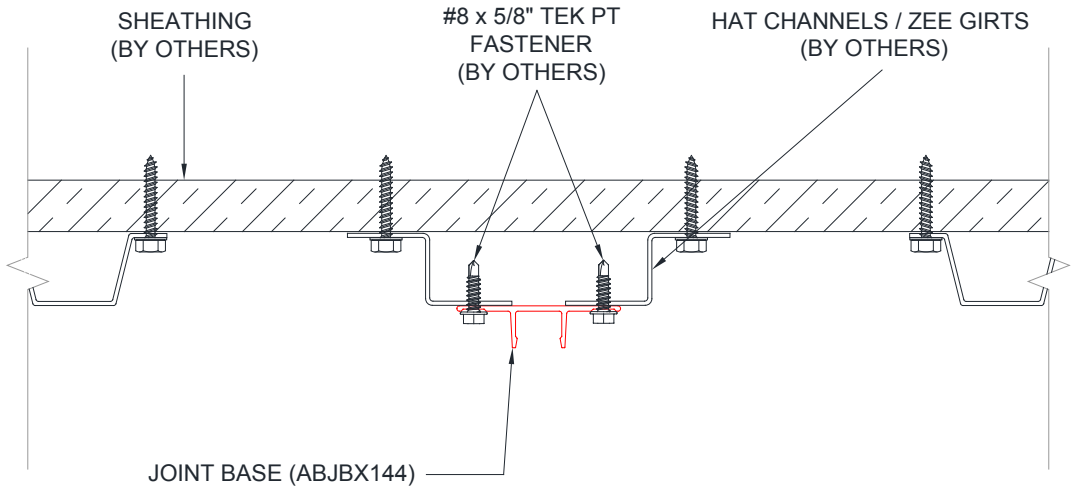
Perimeter Trim Option#2: Install the **J-Starter (ABJSX144)** on the exterior edge of the snap-line layout and ensure the profile is plumb and level (Please see section **Trim Component Layout** Page 12 for information on uniform trim face and trim joint options). Mount the J-Starter to the substrate by using the recommended #8 screws (Refer to Appendix Page 50). Ensure that the mounting screws go through the J-Starter and the studs/furring or other structural framing, meant to support the Plank System. Screws to be no more than 32" O.C distance from each other. The J-Starter may be used as a Plank Perimeter Trim, and the planks will need to be slid into place once the plank installation begins.

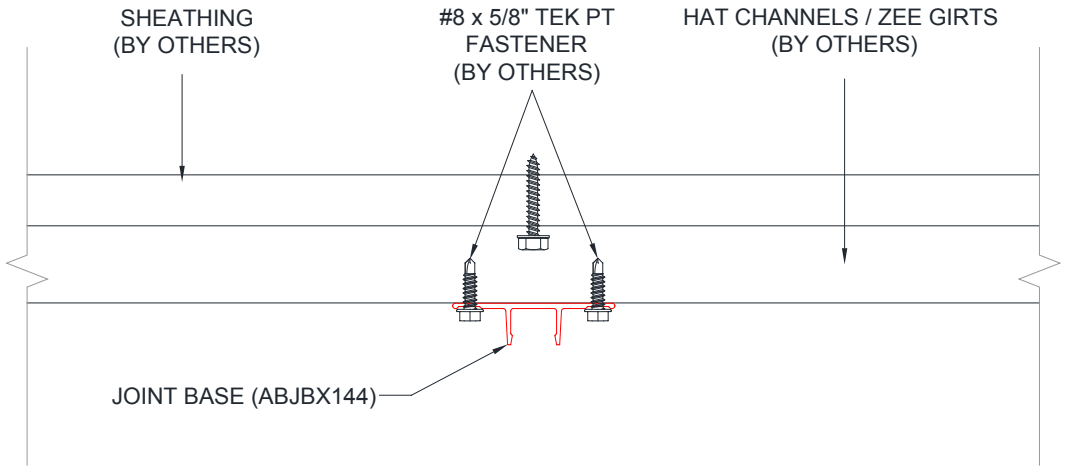


TRIM INSTALLATION *Soffit installation utilizes the same installation technique.*

Install the **Joint Base (ABJBX144)** on the corresponding snap-line at the joint of plank runs and ensure the profile is plumb and level. The Joint Trim is used for Plank runs desired to be longer than 24' long. Mount the Joint Trim Base to the substrate by using the recommended #8 screws (Refer to Appendix Page 50). Ensure that the mounting screws go through the Joint Trim Base and the studs/furring or other structural framing, meant to support the Plank System. Screws to be no more than 32" O.C distance from each other and mounted in an alternating pattern across the center of the Joint Trim Base.

TOP DOWN VIEW OF A VERTICAL JOINT

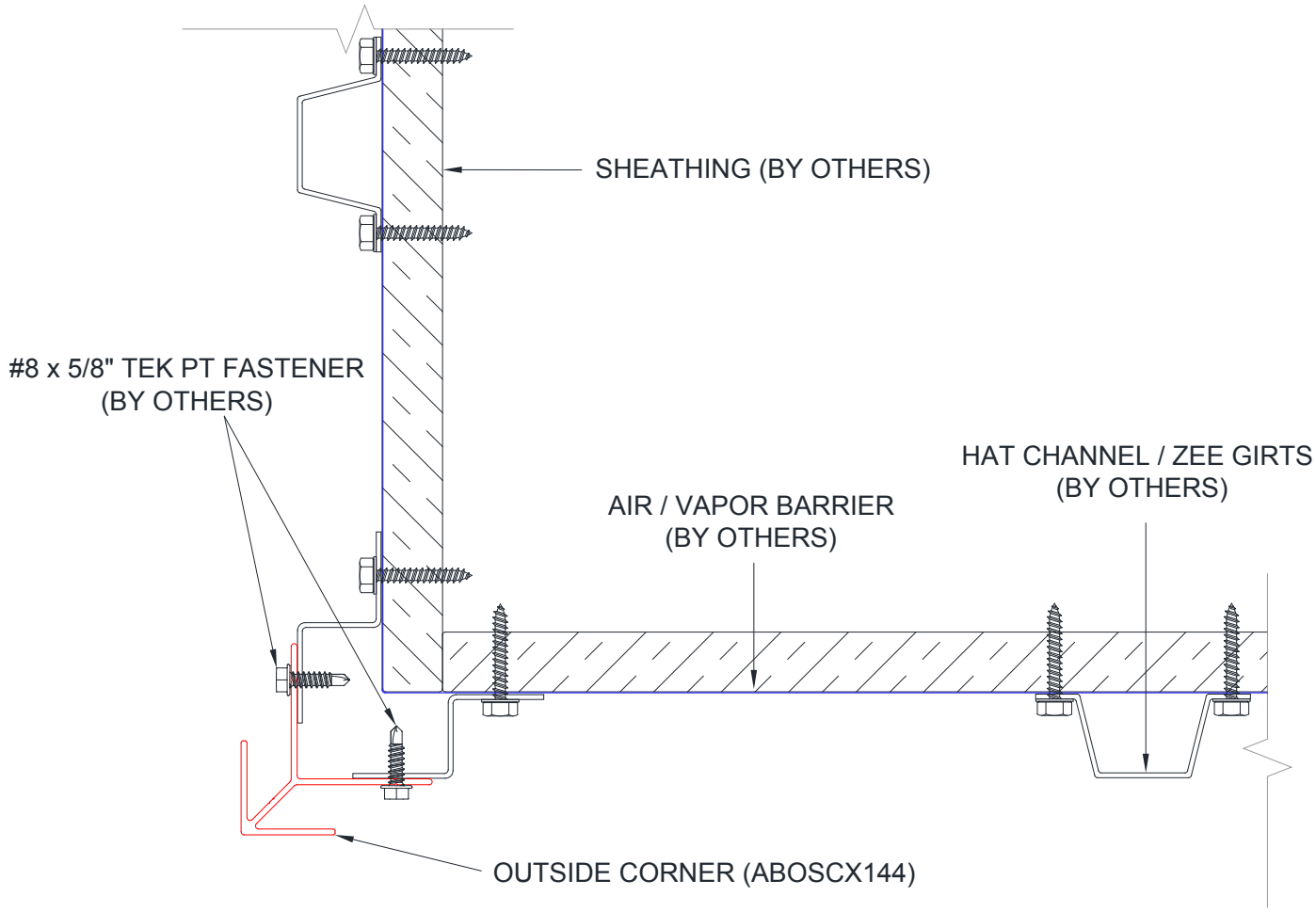




TRIM INSTALLATION *Soffit Installation standard details available.*

OUTSIDE CORNER TRIM CONDITIONS (2 OPTIONS)

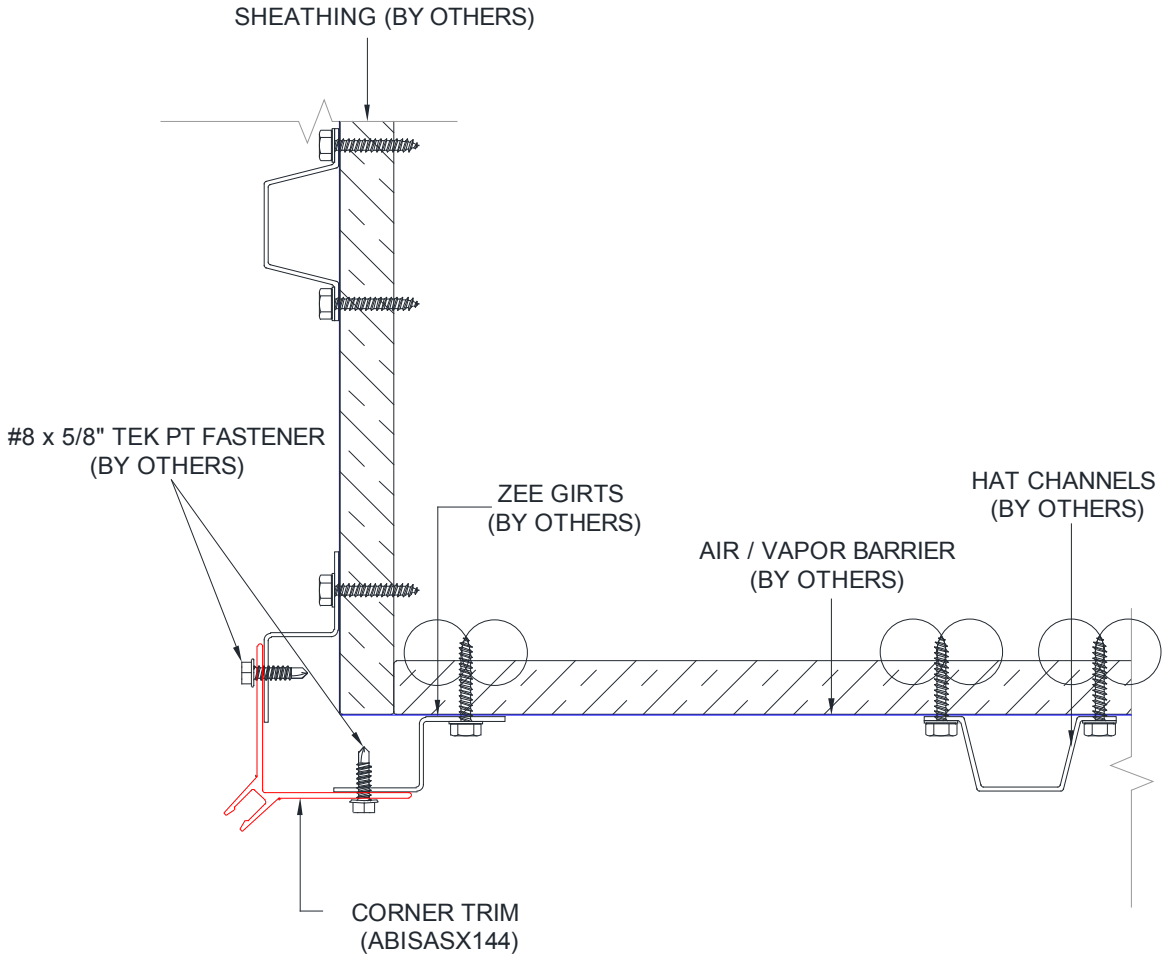
Outside Corner Trim Option#1: Utilize the **Outside Corner (ABOSCX144)** as the trim piece for Outside Corners, by lining up the position of the Outside Corner Trim with its designated position on the snap-line layout and make sure the profile is plumb and level. Mount the Outside Corner Trim to the corner substrate by using the recommended #8 screws (Refer to Appendix Page 50). Ensure that the mounting screws go through the Outside Corner Trim and the studs/furring or other structural framing, meant to support the Plank System. Screws to be no more than 32" O.C distance from each other and mounted in an alternating pattern on both sides of the Outside Corner Trim.



TRIM INSTALLATION

OUTSIDE CORNER TRIM CONDITIONS (2 OPTIONS)

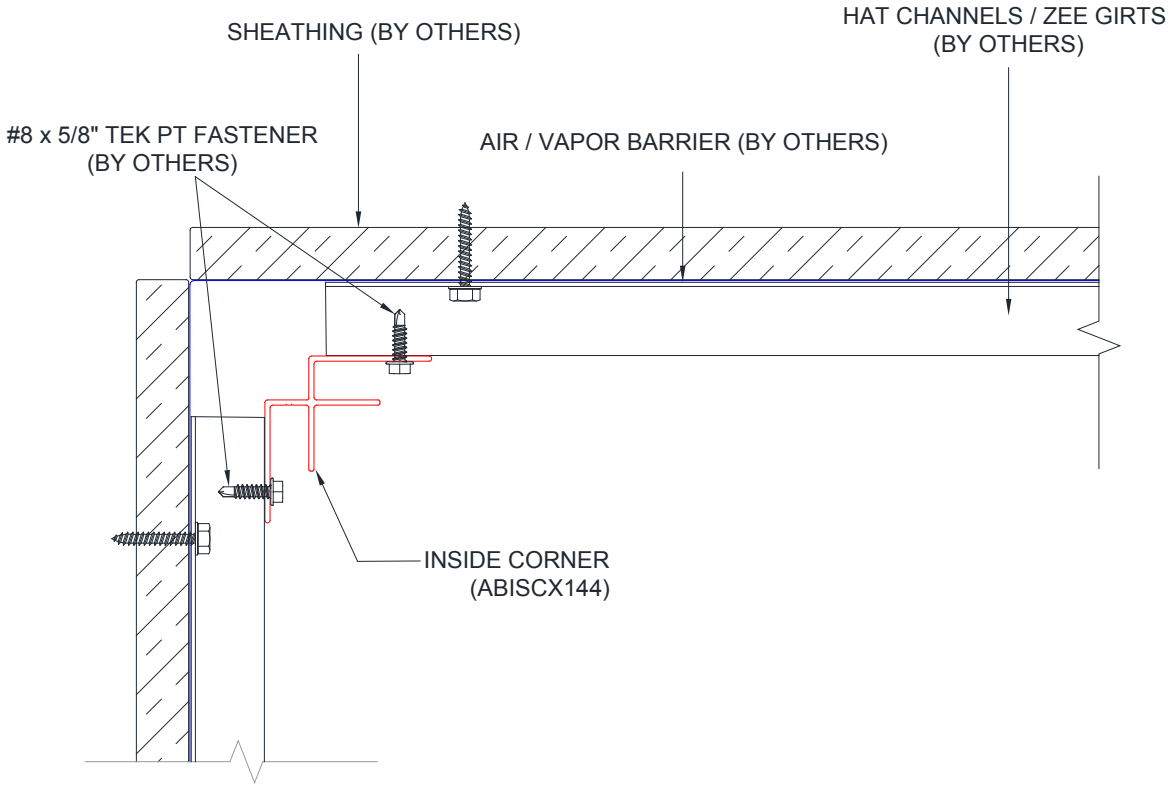
Outside Corner Trim Option#2: Utilize the **Corner Trim (ABISASX144)** as the base trim piece for Outside Corners, by lining up the position of the Corner Trim Base with its designated position on the snap-line layout and make sure the profile is plumb and level. Mount the Corner Trim Base to the corner substrate by using the recommended #8 screws (Refer to Appendix Page 50). Ensure that the mounting screws go through the Corner Trim Base and the studs/furring or other structural framing, meant to support the Plank System. Screws to be no more than 32" O.C distance from each other and mounted in an alternating pattern on both sides of the Corner Trim Base.



TRIM INSTALLATION *Soffit Installation standard details available.*

INSIDE CORNER TRIM CONDITIONS (2 OPTIONS)

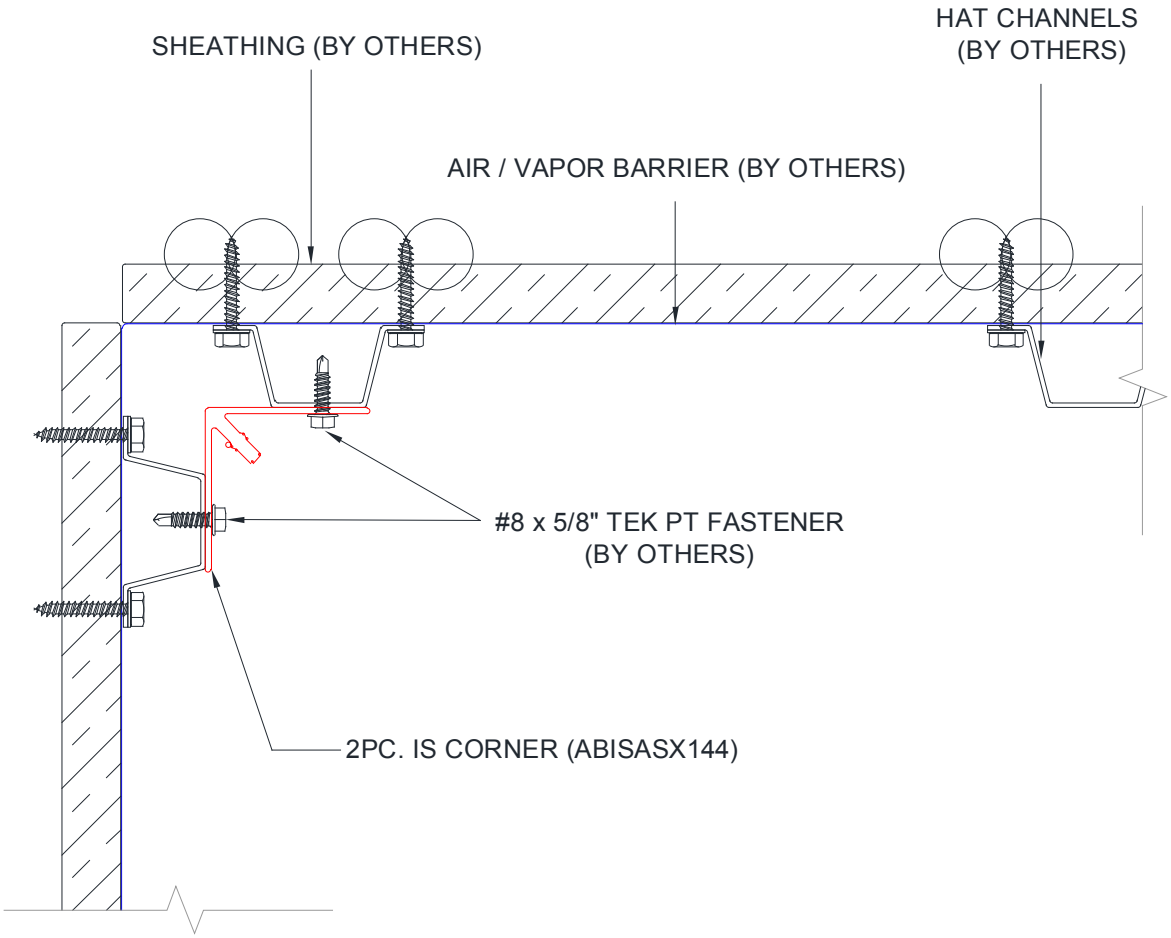
Inside Corner Trim Option#1: Utilize the **Inside Corner (ABISCX144)** as the base trim piece for Inside Corners, by lining up the position of the Inside Corner with its designated position on the snap-line layout and make sure the profile is plumb and level. Mount the Inside Corner Trim to the corner substrate by using the recommended #8 screws (Refer to Appendix Page 50). Ensure that the mounting screws go through the Inside Corner Trim and the studs/furring or other structural framing, meant to support the Plank System. Screws to be no more than 32" O.C distance from each other and mounted in an alternating pattern on both sides of the Inside Corner Trim.



TRIM INSTALLATION

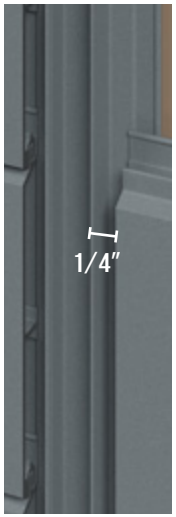
INSIDE CORNER TRIM CONDITIONS (2 OPTIONS)

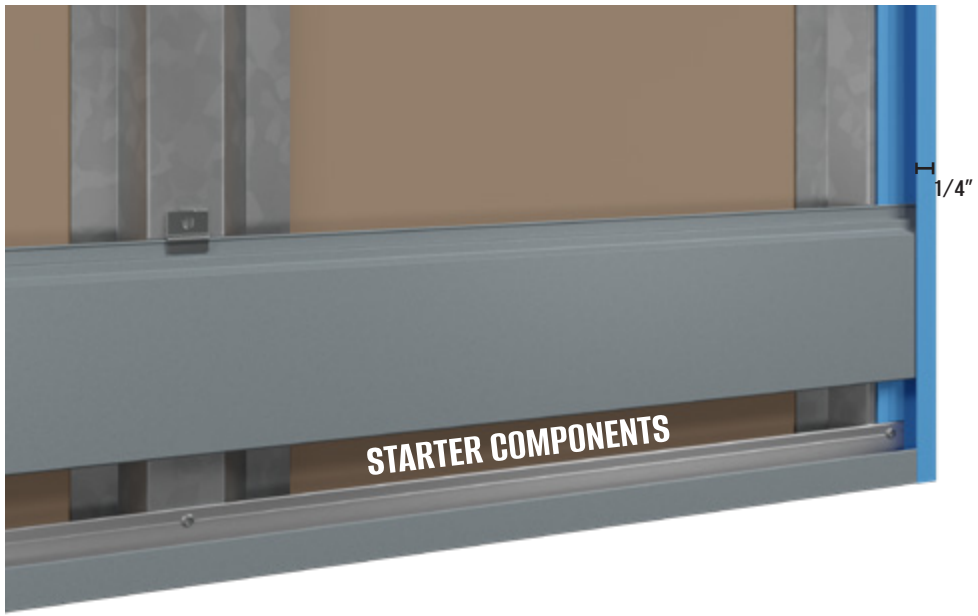
Inside Corner Trim Option#2: Utilize the **Corner Trim (ABOSASX144)** as the base trim piece for Inside Corners, by lining up the position of the Corner Trim Base with its designated position on the snap-line layout and make sure the profile is plumb and level. Mount the Corner Trim Base to the corner substrate by using the recommended #8 screws (Refer to Appendix Page 50). Ensure that the mounting screws go through the Corner Trim Base and the studs/furring or other structural framing, meant to support the Plank System. Screws to be no more than 32" O.C distance from each other and mounted in an alternating pattern on both sides of the Corner Trim Base.



4 PLANK INSTALLATION *Soffit installation utilizes the same trims, planks and installation techniques.*

Place the first plank at the bottom by inserting the groove side of the plank into the beginning horizontal trim. If using a **J-Starter (ABJSX144)** as the Edge Assembly Trim, shown in the image below, then the planks will need to be slid down into position. The Edge Assembly requires the **Edge Base (ABEBX144)** or **Edge Top (ABETX144)** to be snapped into position after all the planks have been installed.





PLANK INSTALLATION

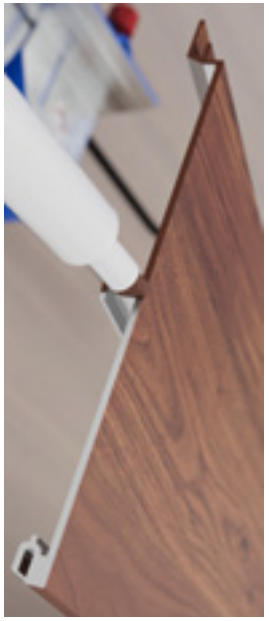
Ensure to leave ¼" gap between the edge of the plank and the wall of the Trim/Joint base for all the edges of each plank. Shown below is a close-up image of the edge of the plank, going into the Edge Assembly Trim component, leaving a ¼" gap to allow for expansion and contraction.

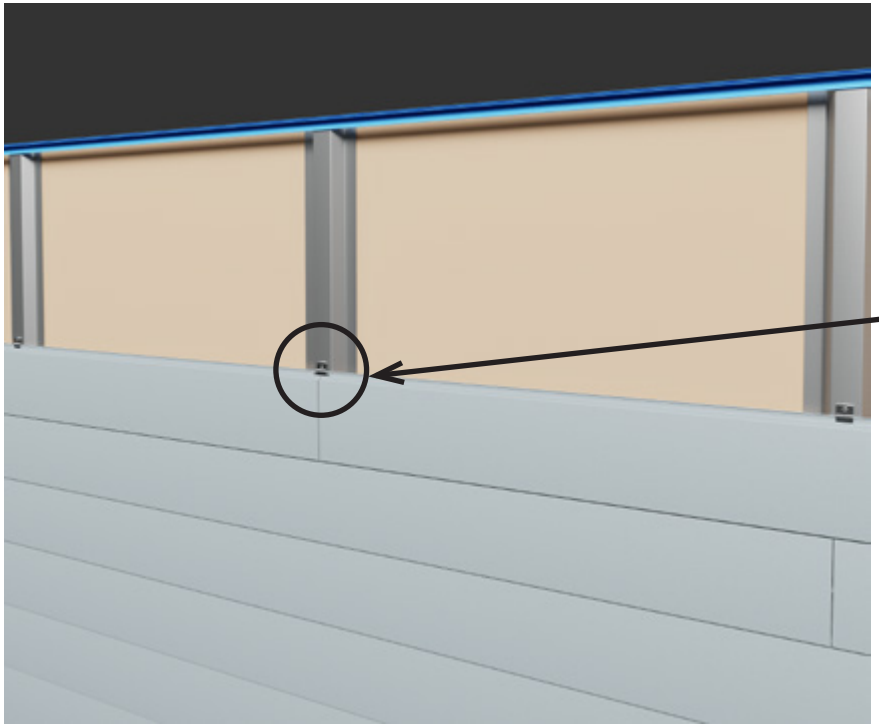
PLANK INSTALLATION *Soffit installation utilizes the same planks and installation techniques.*

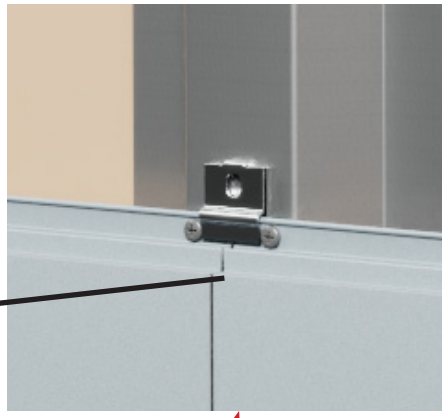
Each Plank must be **hard fastened only at one point** (2 Options)

Hard Fastened Point Option#1: One fastener should be installed at the plank's midpoint (12' or less) directly through the clip attachment surface and into the substrate to prevent plank migration to the left or right.

Hard Fastened Point Option#2: **Butt Joints** are to be used when two planks are spliced together. First use a touch-up marker on the bare metal plank ends, then snap one plank clip onto the planks at the butt joint and hard fasten each plank to the substrate with an appropriate fastener. See detail on following page.







Limit of one spliced tight joint per plank run.

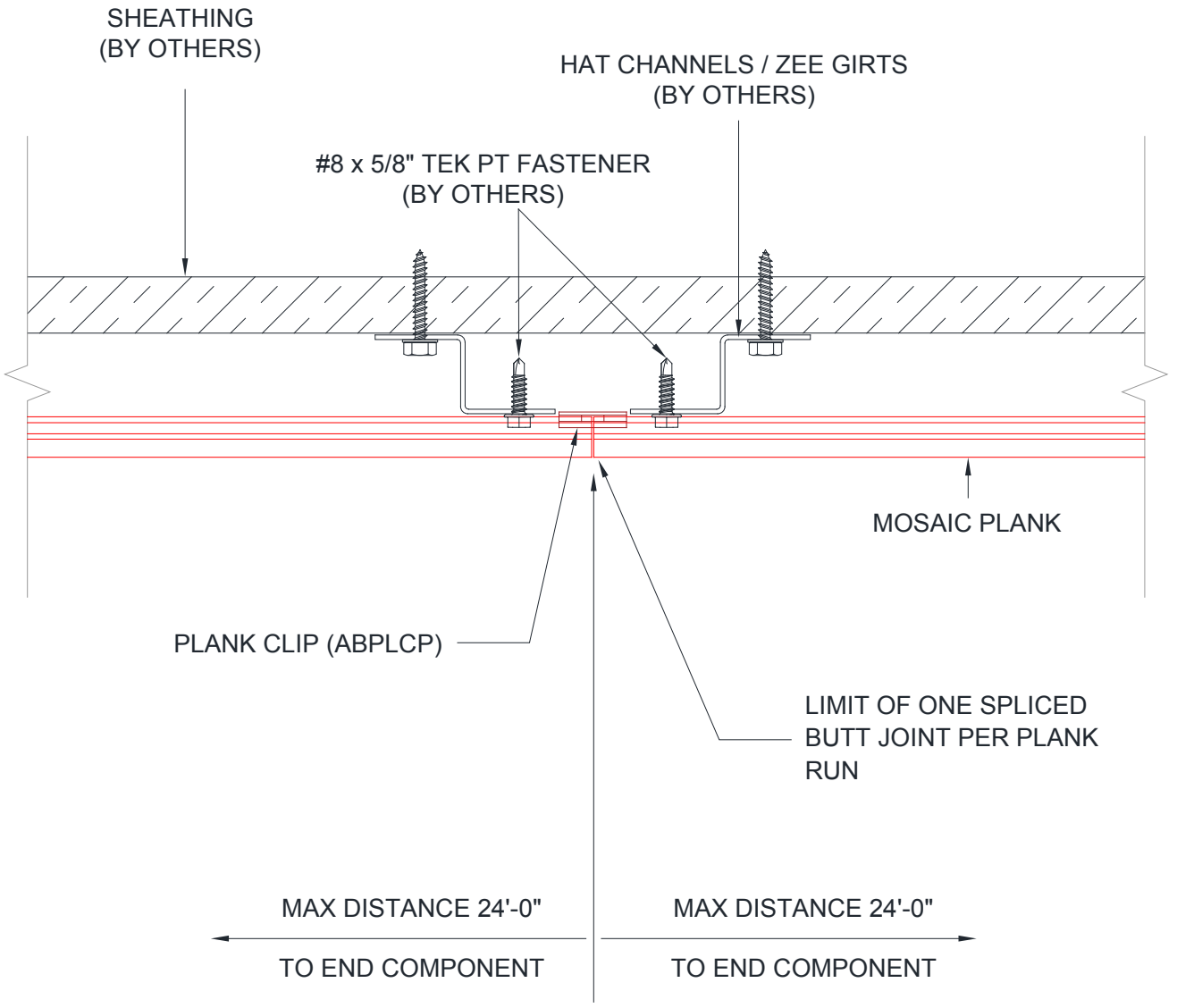
PLANK INSTALLATION *Soffit Installation standard details available.*

BUTT JOINT DETAIL

PLANK SPLICE

1. Use touch-up pen on both plank ends.
2. Install the planks and butt the planks together (MAX 24'-0" length).
3. Snap 1 clip onto the planks at the butting joint (Span the planks)
4. Hard Fasten each plank to the substrate with an appropriate fastener.

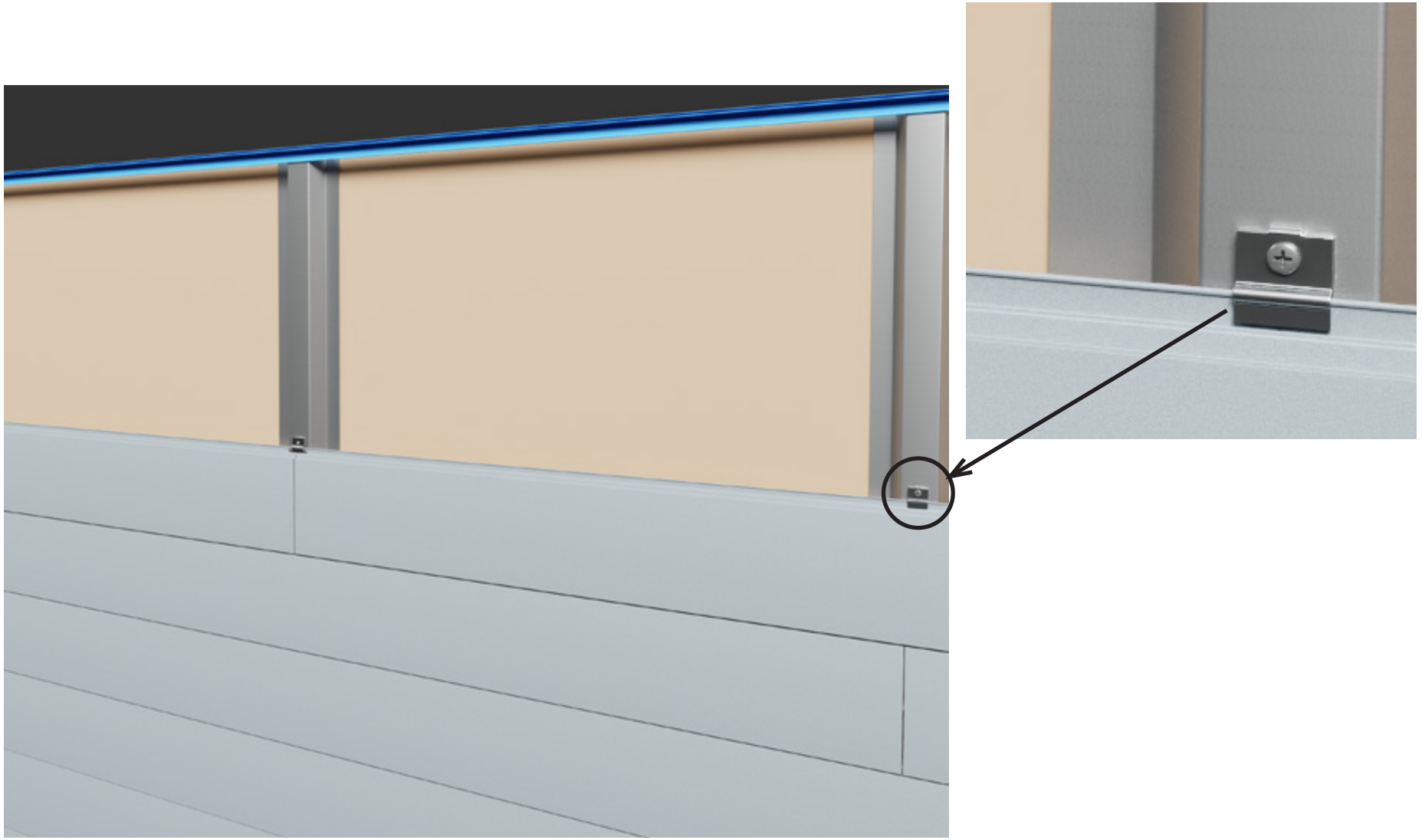
****A cap/closure component must be used at the opposite end of the a splice no more than a maximum distance of 24'-0", in either direction from the splice. A minimum clearance of 1/4" needs to be maintained between the end of the plank and the component pocket to allow for thermal expansion and contractions.*



Limit of one spliced tight joint per plank run.

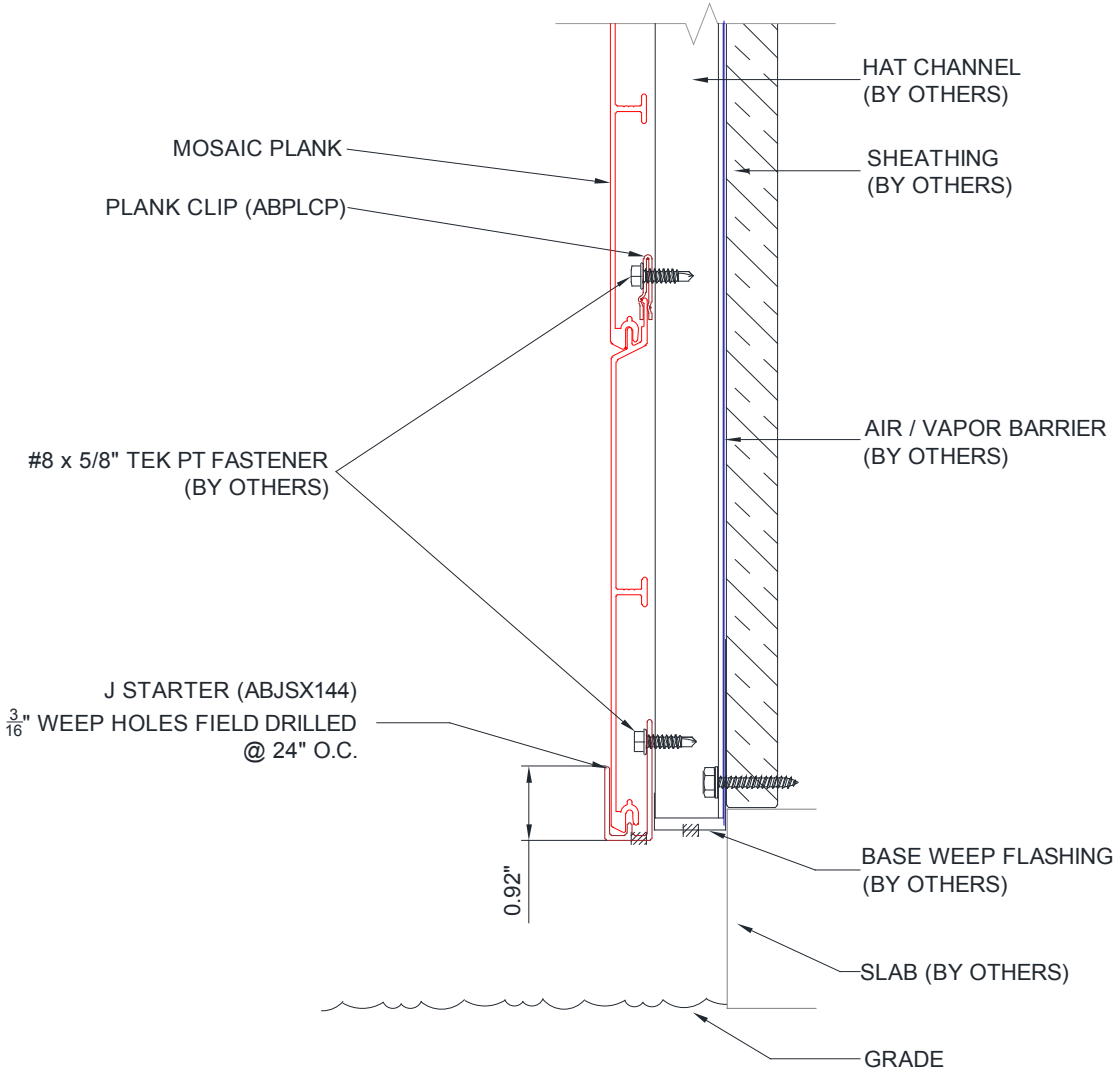
PLANK INSTALLATION *Soffit installation utilizes the same planks and installation techniques.*

After hard fastening the plank and with the Panel Clips spaced to the designated distance, drill the appropriate fastener (Refer to Appendix Page 50) through each Panel Clip to secure them to the studs/furring or other structural framing.



PLANK INSTALLATION *Soffit Installation utilizes the same installation technique.*

Progressively install the remainder of the planks by inserting the next plank's groove onto the installed plank's tongue portion and follow the same procedure as the first plank. Each Plank is to be hard fastened only at one point.



PLANK INSTALLATION PLANK TERMINATION

Soffit installation utilizes the same trims, planks and installation techniques.

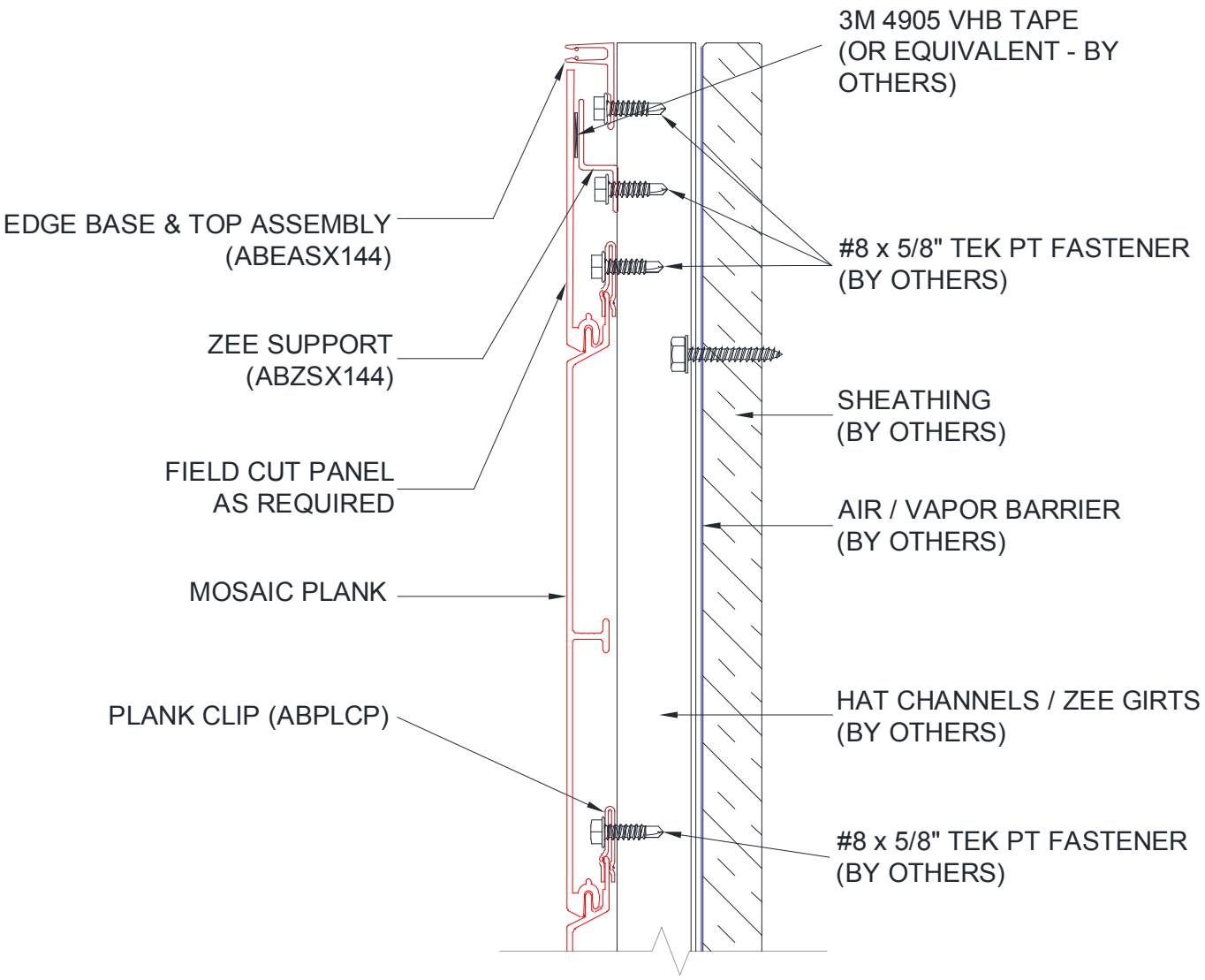
At the termination of the plank layout, the final plank width will need to be rip cut along its length. Measure about ¼" gap from edge of the termination Trim wall to the position of the line to cut on the Plank. Place the final plank into position and measure the distance which needs to be cut, mark spot and use a straight edge to mark the cutting line. Use a table saw to rip-cut the plank down the length at the cutting line. Then apply VHB tape to the ZEE Support (ABZSX144) part to support the termination plank in place. Use segments of 4" pieces or a continuous piece of Zee Support profile, separated every 24". Use the recommended 3M VHB tape and follow the manufacturer's directions for application of the tape onto the long leg of the Zee Support. Remove the protective backing of the VHB tape to expose the adhesive, and place the termination plank's groove onto the previous plank's tongue. Push the termination plank against the exposed VHB tape to secure the plank in place. See detail on following page.

Shown on the left: Edge Support Base or Cap with VHB Tape Applied (3M 4905 or Equivalent)

Shown on the right: Rip-Cut Plank pushed up against VHB Tape.

PLANK INSTALLATION *Soffit Installation standard details available.*

TERMINATION PLANK DETAIL - ZEE SUPPORT



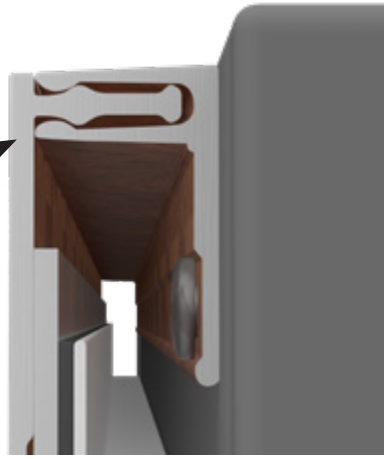
PLANK INSTALLATION *Soffit installation utilizes the same trims, planks and installation techniques.*

Once all planks have been installed, if applicable, then install snap cap trim covers and corner covers onto the trim and corner bases. Do this by properly lining up the snap cap trim cover over the trim base, then use a mallet and a block to start at one end, and work your way to the other side, hitting the snap cap trim cover with sufficient force to join the snapping profiles together. Be sure to have your layout fully realized and installed before joining snap cap trim cover and the base trim. Make sure that the snap cap covers are fully seated into the base trim. Once snap caps are in place, they are permanent, and removing the snap caps will require new snap caps to be ordered.

EDGE ASSEMBLY TRIM SNAP CAPS:

Edge Base (ABEBX144) and Edge Cap (ABETX144) are interchangeable. Refer to Section “Trim Layout Options” to review uniform trim face selection. Top images are shown at Plank Edge Condition. Bottom Images are shown at Plank Termination Condition.

Edge Base (ABEBX144)
OR
Edge Cap (ABETX144)

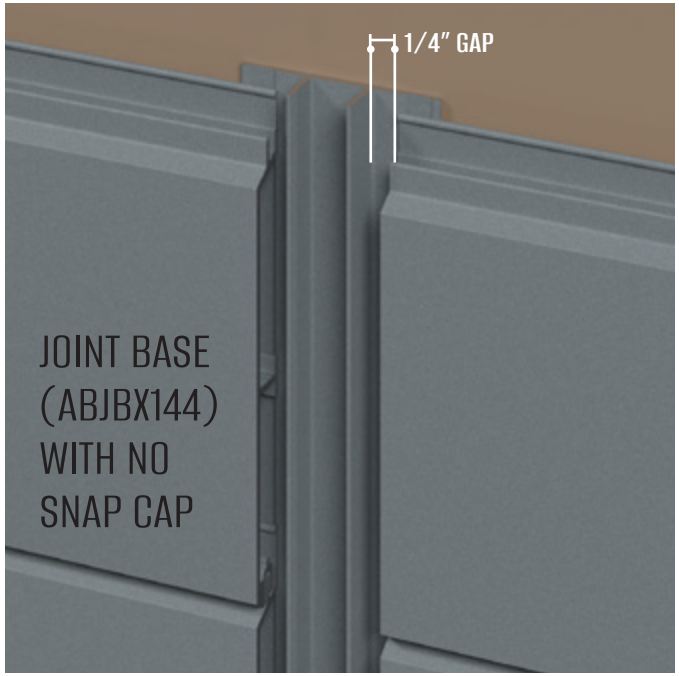


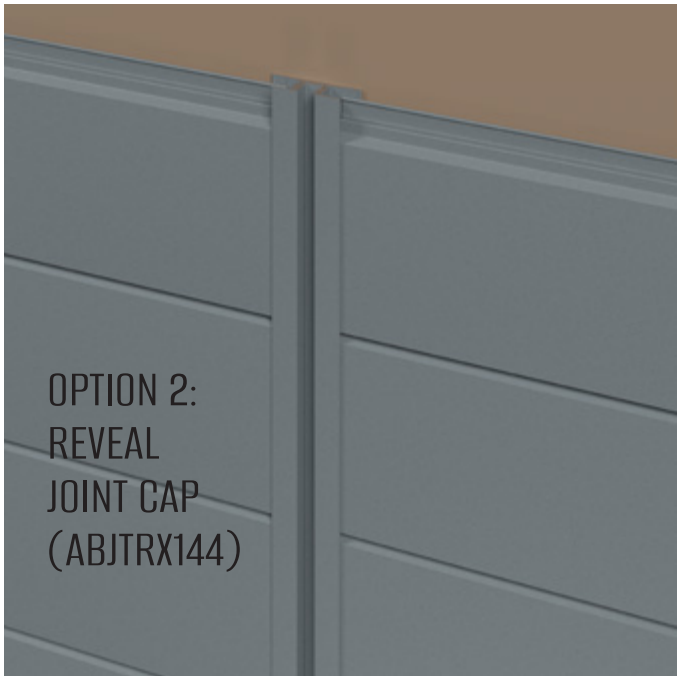
PLANK INSTALLATION

Soffit Installation standard details available.

Soffit installation utilizes the same trims, planks and installation techniques.

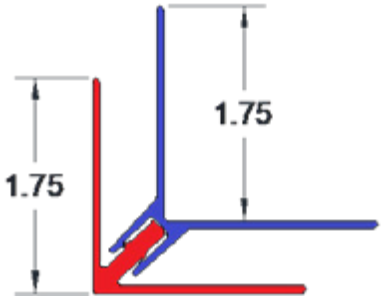
JOINT TRIM SNAP CAPS

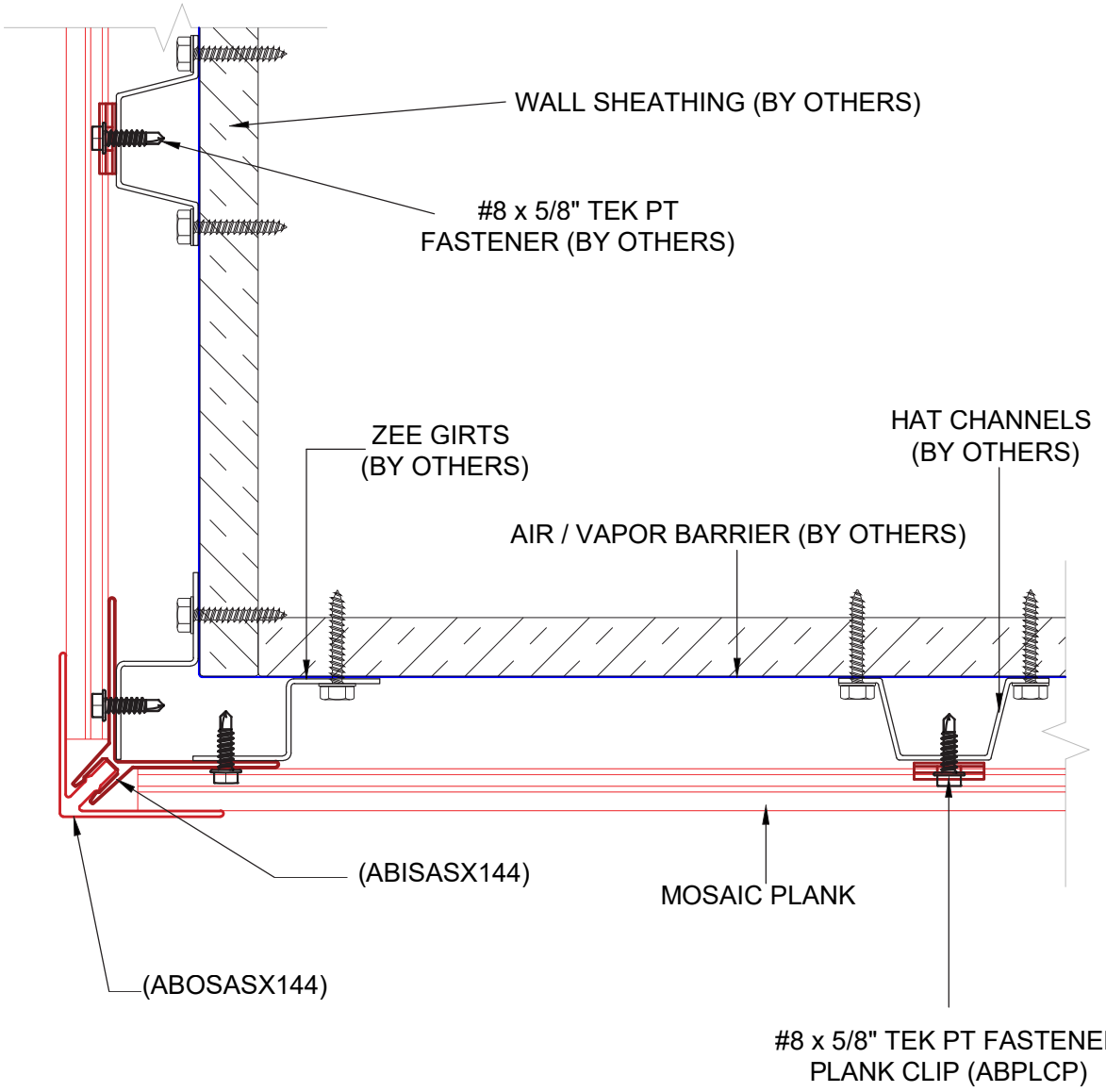




PLANK INSTALLATION *Soffit Installation standard details available.*

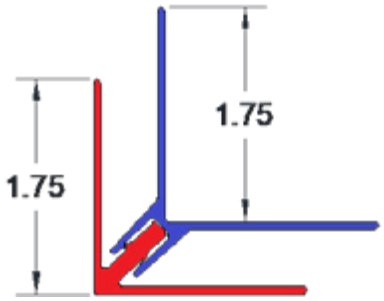
CORNER TRIM SNAP CAPS

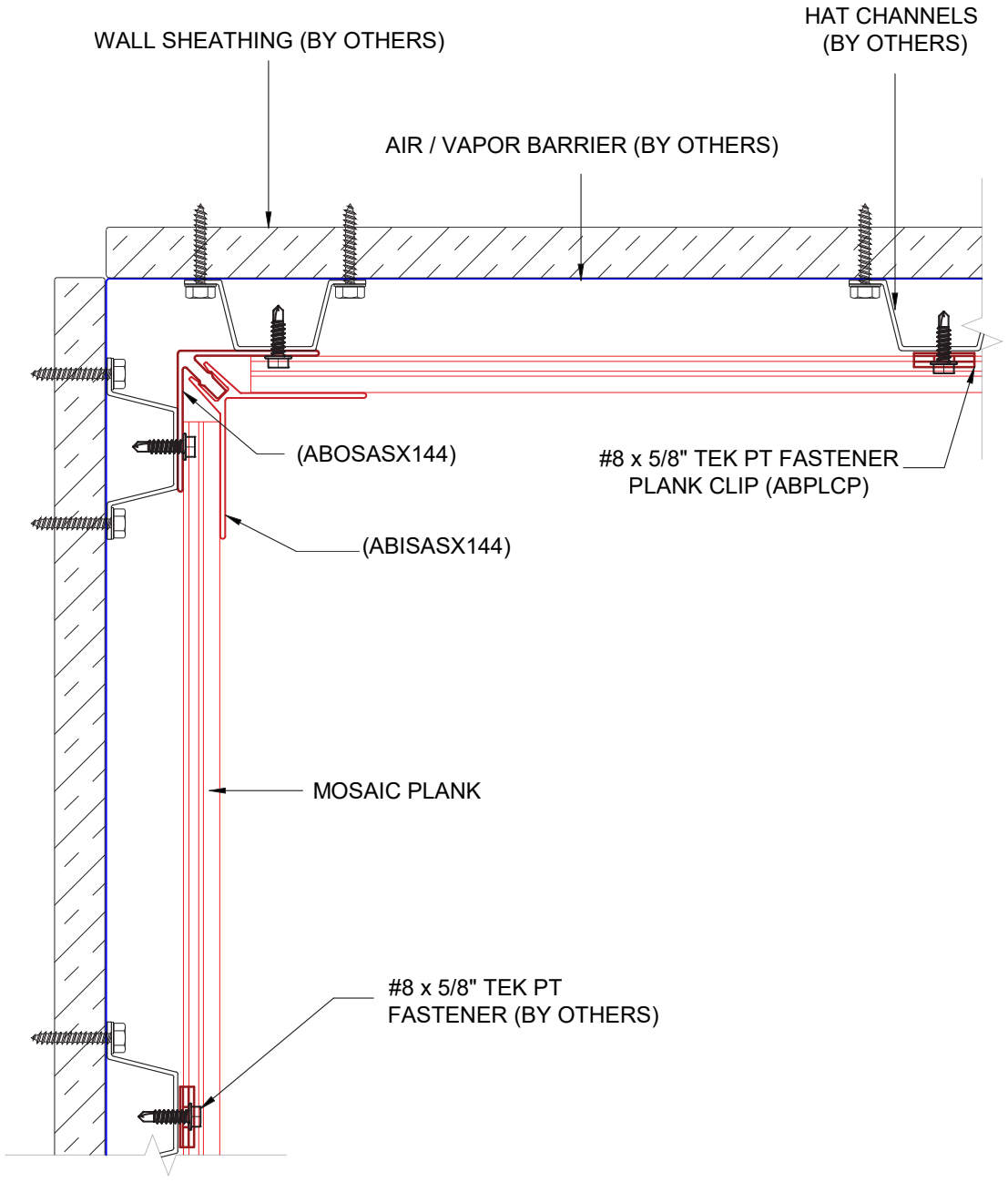




PLANK INSTALLATION *Soffit Installation standard details available.*

INSIDE CORNER CONDITION (TOP DOWN VIEW)





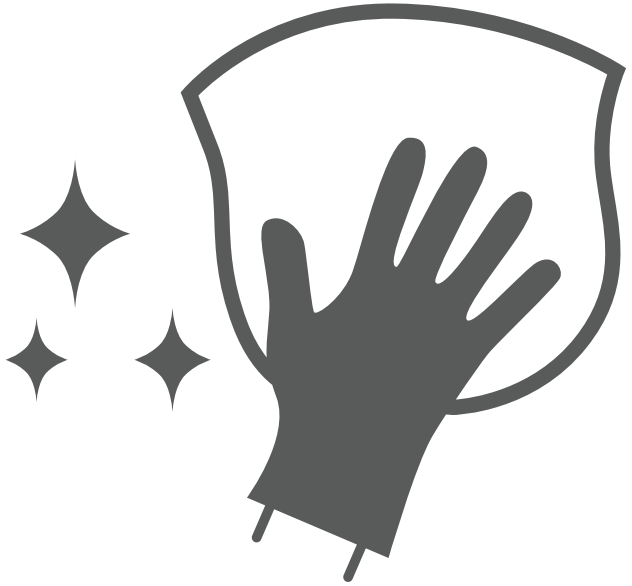
CLEAN UP

Remove all trash from the jobsite, put away all tools, and follow the Mosaic Plank “Cleaning Instructions” to remove dust/debris and properly clean the installed product. Mosaic Planks are made from extruded aluminum so any planks or component scraps should be recycled.

CLEANING AND MAINTENANCE RECOMMENDATIONS

Lumabuilt recommends periodic cleaning, with a cleaning schedule dependent on: geographic location, application of the product, and at the owner’s discretion regarding appearance. Lumabuilt products should be cleaned immediately after installation in order to remove all construction dust, dirt, and other contaminants that may increase the risk of a permanent blemish. Cleaning should be done on the shaded side of the building or ideally on a mild, cloudy day in order to avoid permanent streak marks which will alter the aluminum’s original appearance. The cleaning process should begin at the top of the building and work down.

Use a detergent with a pH range of 5-9 (ruled safe for bare hands). Never use aggressive alkaline or acid cleaners on aluminum finishes. Do not use cleaners containing trisodium phosphate, phosphoric acid, hydrochloric acid, hydrofluoric acid, fluorides, or similar compounds on anodized aluminum surfaces. Strong solvents or abrasive cleaners can cause damage to painted surfaces. Use a soft sponge and start with a small test area to ensure there is no abrasion or other negative effects from the sponge or detergent. Pressure washing is not recommended. After cleaning, inspect the seams, crevices, sills, and any other area that may trap water; these areas should be dried. Please refer to Cleaning Instructions on our website Lumabuilt.com.



WARRANTY

15 or 20 Year Warranty available, please speak with your sales associate for more information.

LIABILITY WAIVER

Oil canning, buckling, joint offsetting, twisting, and cambering due to bad substrate improperly installed product are not a cause for rejection. There are many factors which contribute to mentioned items that a manufacturer is not able to control. These factors include: misalignment of the support system, over driving of fasteners used on the clips and components, stress induced during installation or improper handling, thermal expansion and contraction of the product, material handling. Mosaic Plank products if not properly installed with the nominal required joint clearance to allow for thermal expansion and contraction to occur will potentially induce some or all of the previously mentioned “non-rejectable” issues to occur and potentially cause a system failure.

LUMABUILT DOES NOT MAKE ANY WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR PURPOSE, WITH RESPECT TO ANY SAID SUGGESTIONS AND PRODUCT DATA. In no event shall Lumabuilt, have any liability in any way related to or arising out of said suggestions and product data for direct, special, consequential or any other damages of any kind regardless whether such liability is based on breach of contract, negligence or other sort, or breach of any warranty, express or implied. Also, normal safety and health precautions practiced in any fabricating & installation environment should be utilized. Goggles or other face protection, as well as hearing protection should always be worn.

APPENDIX

EXPANSION AND CONTRACTION TABLE FOR ALUMINUM 6063

		Average Temperature at Time of Cutting & Installation										
	°F	-20	0	10	20	35	50	65	80	95	105	120
Minimum and Maximum Temperature at Install Location	°F	Expansion or Contraction (Inches/Foot)										
	-20	0.000	0.003	0.002	0.006	0.008	0.011	0.013	0.015	0.017	0.019	0.021
	0	0.003	0.000	0.002	0.003	0.005	0.008	0.010	0.012	0.014	0.016	0.018
	10	0.005	0.002	0.000	0.002	0.004	0.006	0.008	0.011	0.013	0.014	0.017
	20	0.006	0.003	0.002	0.000	0.002	0.005	0.007	0.009	0.011	0.013	0.015
	35	0.008	0.005	0.004	0.002	0.000	0.002	0.005	0.007	0.009	0.011	0.013
	50	0.011	0.008	0.006	0.005	0.002	0.000	0.002	0.005	0.007	0.008	0.011
	65	0.013	0.010	0.008	0.007	0.005	0.002	0.000	0.002	0.005	0.006	0.008
	80	0.015	0.012	0.011	0.009	0.007	0.005	0.002	0.000	0.002	0.004	0.006
	95	0.017	0.014	0.013	0.011	0.009	0.007	0.005	0.002	0.000	0.002	0.004
	105	0.019	0.016	0.014	0.013	0.011	0.008	0.006	0.004	0.002	0.000	0.002
	120	0.021	0.018	0.017	0.015	0.013	0.011	0.008	0.006	0.004	0.002	0.000

$\Delta Length(Inches)=[12.5 \cdot 10^{(-6)}] \times [Length\ initial] \times [\Delta Temperature(°F)]$

APPENDIX

YEARLY HIGH AND LOW TEMPERATURES PER AREA IN THE UNITED STATES

Temperature Data displays a yearly high/low average, based on the surrounding area where the temperature data is located. Please refer to local weather data where the install will occur. Data sourced from (NWS) https://www.weather.gov/wrh/climate

APPENDIX

#8-18 TEKS Screw to 20 ga 33 KSI Steel Stud																
Design Load	4″ Wide Plank				6″ Wide Plank				8″ Wide Plank				10″ Wide Plank			
	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing
± 20 psf	540	4″	135.0″	32″	540	6″	90.0″	32″	540	8″	67.5″	32″	540	10″	54.0″	32″
± 30 psf	360	4″	90.0″	32″	360	6″	60.0″	32″	360	8″	45.0″	32″	360	10″	36.0″	32″
± 40 psf	270	4″	67.5″	32″	270	6″	45.0″	32″	270	8″	33.8″	32″	270	10″	27.0″	27″
± 50 psf	216	4″	54.0″	32″	216	6″	36.0″	32″	216	8″	27.0″	27″	216	10″	21.6″	21″
± 60 psf	180	4″	45.0″	27″	180	6″	30.0″	30″	180	8″	22.5″	22″	180	10″	18.0″	18″
± 70 psf	154	4″	38.6″	23″	154	6″	25.7″	25″	154	8″	19.3″	19″	154	10″	15.4″	15″

#8-18 TEKS Screw to 18 ga 33 KSI Steel Stud																
Design Load	4″ Wide Plank				6″ Wide Plank				8″ Wide Plank				10″ Wide Plank			
	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing
± 20 psf	720	4″	180.0″	32″	720	6″	120.0″	32″	720	8″	90.0″	32″	720	10″	72.0″	32″
± 30 psf	480	4″	120.0″	32″	480	6″	80.0″	32″	480	8″	60.0″	32″	480	10″	48.0″	32″
± 40 psf	360	4″	90.0″	32″	360	6″	60.0″	32″	360	8″	45.0″	32″	360	10″	36.0″	32″
± 50 psf	288	4″	72.0″	32″	288	6″	48.0″	32″	288	8″	36.0″	32″	288	10″	28.8″	28″
± 60 psf	240	4″	60.0″	32″	240	6″	40.0″	32″	240	8″	30.0″	30″	240	10″	24.0	24″
± 70 psf	206	4″	51.4″	32″	206	6″	34.3″	32″	206	8″	25.7″	25″	206	10″	20.6″	20″

APPENDIX

#8-18 TEKS Screw to 16 ga 33 KSI Steel Stud																
Design Load	4″ Wide Plank				6″ Wide Plank				8″ Wide Plank				10″ Wide Plank			
	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing
± 20 psf	900	4″	225.0″	32″	900	6″	150.0″	32″	900	8″	112.5″	32″	900	10″	90.0″	32″
± 30 psf	600	4″	150.0″	32″	600	6″	100.0″	32″	600	8″	75.0″	32″	600	10″	60.0″	32″
± 40 psf	450	4″	112.5″	32″	450	6″	75.0″	32″	450	8″	56.3″	32″	450	10″	45.0″	32″
± 50 psf	360	4″	90.0″	32″	360	6″	60.0″	32″	360	8″	45.0″	32″	360	10″	36.0″	32″
± 60 psf	300	4″	75.0″	27″	300	6″	50.0″	32″	300	8″	37.5″	32″	300	10″	30.0″	30″
± 70 psf	257	4″	64.3″	23″	257	6″	42.9″	32″	257	8″	32.1″	32″	257	10″	25.7″	25″

#8 x 2″ Pan Head Wood Screw to 2x S-P-F Wood Stud																
Design Load	4″ Wide Plank				6″ Wide Plank				8″ Wide Plank				10″ Wide Plank			
	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing
± 20 psf	497	4″	124.2″	32″	497	6″	82.8″	32″	497	8″	62.1″	32″	497	10″	49.7″	32″
± 30 psf	331	4″	82.8″	32″	331	6″	55.2″	32″	331	8″	41.4″	32″	331	10″	33.1″	32″
± 40 psf	248	4″	62.1″	32″	248	6″	41.4″	32″	248	8″	31.1″	31″	248	10″	24.8″	24″
± 50 psf	199	4″	49.7″	32″	199	6″	33.1″	32″	199	8″	24.8″	24″	199	10″	19.9″	19″
± 60 psf	166	4″	41.4″	32″	166	6″	27.6″	27″	166	8″	20.7″	20″	166	10″	16.6″	16″
± 70 psf	142	4″	35.5″	32″	142	6″	23.7″	23″	142	8″	17.7″	17″	142	10″	14.2″	14″

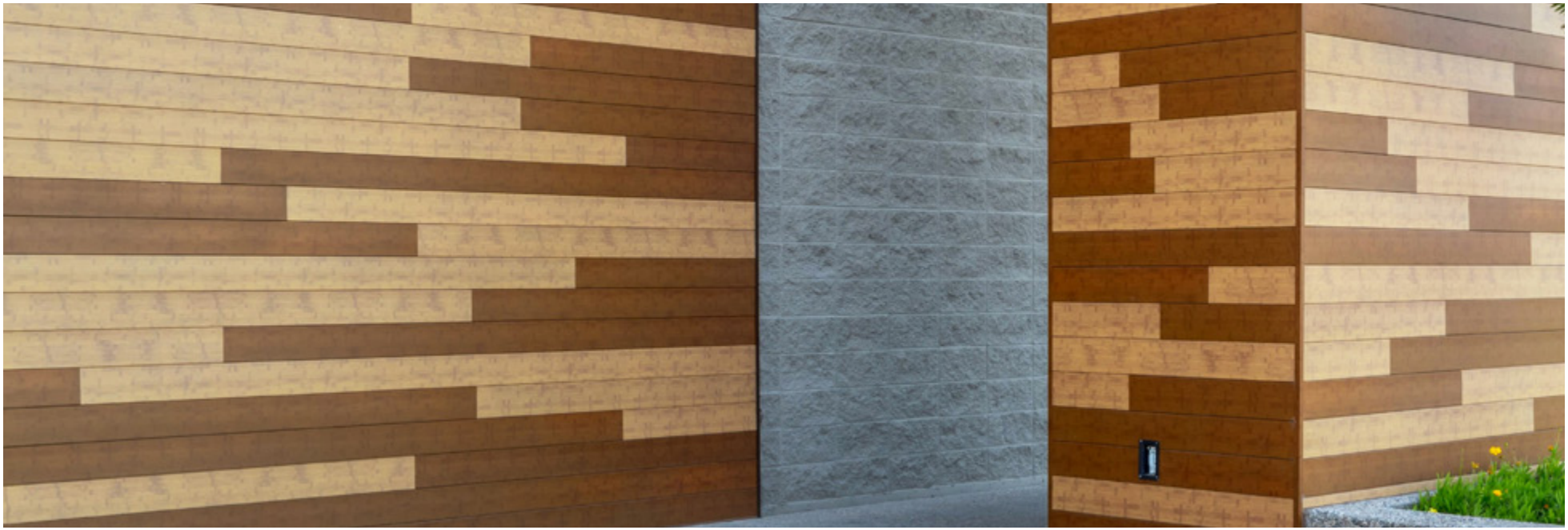
APPENDIX

#8 x 1-1/2″ Pan Head Wood Screw to 2x S-P-F Wood Stud																
Design Load	4″ Wide Plank				6″ Wide Plank				8″ Wide Plank				10″ Wide Plank			
	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing	Max Trib Area (in^2)	Panel Width	Anchor Spacing	Specified Spacing
± 20 psf	331	4″	82.8″	32″	331	6″	55.2″	32″	331	8″	41.4″	32″	331	10″	33.1″	32″
± 30 psf	221	4″	55.2″	32″	221	6″	36.8″	32″	221	8″	27.6″	27″	221	10″	22.1″	22″
± 40 psf	166	4″	41.4″	32″	166	6″	27.″	2″	166	8″	20.7″	20″	166	10″	16.6″	16″
± 50 psf	132	4″	3.1″	32″	132	6″	22.1″	22″	132	8″	16.6″	16.6″	132	10″	13.2″	13″
± 60 psf	110	4″	27.6″	27″	110	6″	18.4″	18″	110	8″	13.8″	13.8″	110	10″	11.0″	11″
± 70 psf	95	4″	23.7″	23″	95	6″	15.8″	15″	95	8″	11.8″	11.8″	95	10″	9.5″	9″

#8x1-1/2″ Pan Head Wood Screw to 1/2″ Plywood Sheathing												
Design Load	4″ Wide Plank			6″ Wide Plank			8″ Wide Plank			10″ Wide Plank		
	Max Trib Area (in^2)	Panel Width	Specified Spacing	Max Trib Area (in^2)	Panel Width	Specified Spacing	Max Trib Area (in^2)	Panel Width	Specified Spacing	Max Trib Area (in^2)	Panel Width	Specified Spacing
± 20 psf	151	4″	32″	151	6″	24″	151	8″	18″	151	10″	15″
± 30 psf	101	4″	24″	101	6″	16″	101	8″	12″	101	10″	10″
± 40 psf	76	4″	16″	76	6″	12″	76	8″	9″	76	10″	7″
± 50 psf	60	4″	12″	60	6″	8″	60	8″	7″	60	10″	6″
± 60 psf	50	4″	12″	50	6″	8″	50	8″	6″	50	10″	5″
± 70 psf	43	4″	8″	43	6″	4″	43	8″	5″	43	10″	4″

APPENDIX

#8x1-1/2" Pan Head Wood Screw to 3/4" Plywood Sheathing												
Design Load	4" Wide Plank			6" Wide Plank			8" Wide Plank			10" Wide Plank		
	Max Trib Area (in^2)	Panel Width	Specified Spacing	Max Trib Area (in^2)	Panel Width	Specified Spacing	Max Trib Area (in^2)	Panel Width	Specified Spacing	Max Trib Area (in^2)	Panel Width	Specified Spacing
± 20 psf	223	4"	32"	223	6"	32"	223	8"	27"	223	10"	22"
± 30 psf	149	4"	32"	149	6"	24"	149	8"	18"	149	10"	14"
± 40 psf	112	4"	24"	112	6"	16"	112	8"	13"	112	10"	11"
± 50 psf	89	4"	20"	89	6"	12"	89	8"	11"	89	10"	8"
± 60 psf	74	4"	16"	74	6"	12"	74	8"	9"	74	10"	7"
± 70 psf	64	4"	12"	64	6"	8"	64	8"	7"	64	10"	6"



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