

ACCENT YOUR SPACE WITH ENDURING DESIGN

Edge & Center Bead Installation

ACRE™ BY MODERN·MILL

BUILD BETTER WITH ACRE

Modern Mill is leading the way toward a more sustainable future, one tree-free board at a time.

Our award-winning building material, ACRE, is the ideal alternative to wood for countless exterior and interior applications.

It's beautiful, easy to work with, easy to care for and better for the environment. ACRE is strong, water-resistant and guaranteed not to rot or splinter.

ACRE is a sustainable choice that doesn't sacrifice performance.

DISCLAIMER

These installation instructions reflect current best practices and may be updated over time. Always check for the latest guide version at www.modern-mill.com/tech-and-training/ or contact your sales rep for the most current installation procedures.

ACRE™ BY MODERN·MILL

PRODUCT EXPECTATIONS

INSTALLATION GUIDES

ACRE contains PVC. It's important to familiarize yourself with its spacing requirements, coatings and all installation guidelines. This will ensure ACRE products perform as designed and to expectations.

- IRIM
- DECKING
- FENCING
- SIDING
- PORCH BOARDS
- SHEETS

COATING AND FINISHING

PROPER INSTALLATION REQUIRES CLOSE ADHERENCE TO MODERN MILL **COATINGS GUIDELINES**: This is a critical and important step, especially with outdoor applications for ACRE to perform as expected and to avoid the effects of excessive expansion and contraction.

ACRE does not absorb paints, stains, or clear coats as typical woods products do. For best results, we recommend applying coatings with boards on a smooth flat surface prior to installation.

ACRE products generally will not gray like natural woods in exterior applications. However, color may fade over time with increased UV exposure, therefore a UV-resistant stain or paint can help resist fading and make for easier cleaning and care.

UNIQUE APPEARANCE

Note that rice hulls, like wood, can vary slightly in color, which can be seen in the final product both prior to and after staining. For best appearance it's important to mix boards from various pallets or various points of the stack.

MOVEMENT

ACRE WILL EXPAND AND CONTRACT WITH ENVIRONMENTAL TEMPERATURE CHANGES. INSTALLATION CONDITIONS AND FINISH COLOR WILL IMPACT EXPANSION AND CONTRACTION. Refer to the proper product installation guide to ensure the best product performance and minimize the effects of expansion and contraction.

FASTENERS

USING THE CORRECT TYPE AND NUMBER OF FASTENERS WILL ENSURE MATERIALS PERFORM AS INTENDED. DO NOT USE BRADS, FINISH/TRIM HEAD NAILS/SCREWS, OR STAPLES. Fasteners must penetrate solid framing members. All projects and designs are unique. For any installation questions please contact your Modern Mill Rep.

Caution: under driven button-cap fasteners may inhibit the engagement of siding panels.

HEAT RETENTION

Coatings will affect product performance, including heat retention, therefore it's important to read the **Coatings Guide** and use manufacturer approved coatings and finishes.

BURNING WARNING

Safety Warning: Do not burn ACRE products or scraps. ACRE products are not safe to be discarded by burning, used as a firewood, kindling or as any other source of fuel to create and/or maintain a fire or heat source.

STORAGE AND HANDLING

We recommend keeping ACRE in a cool, dry spot, out of direct sunlight. Please acclimate ACRE products prior to installation. Always install ACRE immediately after making any cuts.

ADHESIVES

We recommend utilizing a PVC glue or cement, polyurethane glue or construction adhesives. **Do not use wood glue.**

STAINS AND CLEANING

ACRE products can be stained by certain foods, drinks and chemicals. Clean up any stains or dirt as quickly as possible and keep areas clean from debris. Soap and water, or a product like Simple Green® can clean most stains. In some cases, light sanding may be required. If using a power washer, we do not recommend pressure above 2500 psi and to use a wide fan tip or oscillating tip and keeping the tip a minimum of 12" from the surface.

SURFACE MARRING (SCUFFS) AND LIGHT SURFACE DAMAGE

Like wood, ACRE might endure some dings, dents or marring on the job. Most light surface damage can be removed by simply sanding ACRE lightly with 120 grit sandpaper on a pole or block sander in the direction of the grain. Please note, less than 120 grit sandpaper may scratch the surface and affect the finish when stain is applied. We do not recommend the use of an orbital or palm sander as this can affect the ACRE grain structure.

ENVIRONMENTAL IMPACT

ACRE by Modern Mill is made from upcycled rice hulls in a zero-waste manufacturing facility in the U.S.A. ACRE is tree-free, and free of phthalates, phenol, formaldehyde and adhesives. Contact us at zen@modern-mill.com to learn about options for recycling.

WARRANTY

ACRE products have a limited lifetime guarantee to be free from material defects that are a result of the manufacturing process, rotting or splintering as a direct result of the manufacturing process or by normal use and service provided conditions described in all installation materials and technical guides are met. In no event shall Modern Mill be responsible or liable for labor, installation, re-installation, freight, taxes or any other charges related to defective product. Visit our website to learn more:

www.modern-mill.com/warranty

MODERN·MILL

601-869-5050 | zen@modern-mill.com | modern-mill.com

FIRST TIME USING ACRE?

Be sure to visit our **Product Expectations** page for all our installation guides and best practices before building with ACRE.



Contents

Product Expectations	3
Contents	4
Storage and Handling	5
Safety	5
Getting Started	6
ACRE Edge and Center Bead	7
Expansion and Contraction	8
Installation Preparation	8
Installation	9
For Soffit/Ceiling Installation	10
For Wainscoting	14
For Walls	16

PRODUCT APPLICATIONS

Please consult with a Modern Mill representative to ensure your intended use of ACRE products is fit for purpose. Published and current installation guidelines must be followed for ACRE's warranty to remain valid. For example, ACRE Siding is only approved as shiplap and board and batten and must follow prescribed installation guides. Lap Siding is not an approved application.



Be sure to visit our **Product Expectations** page for all our installation guides and best practices before building with ACRE

<https://modern-mill.com/product-expectations/>



BURNING WARNING

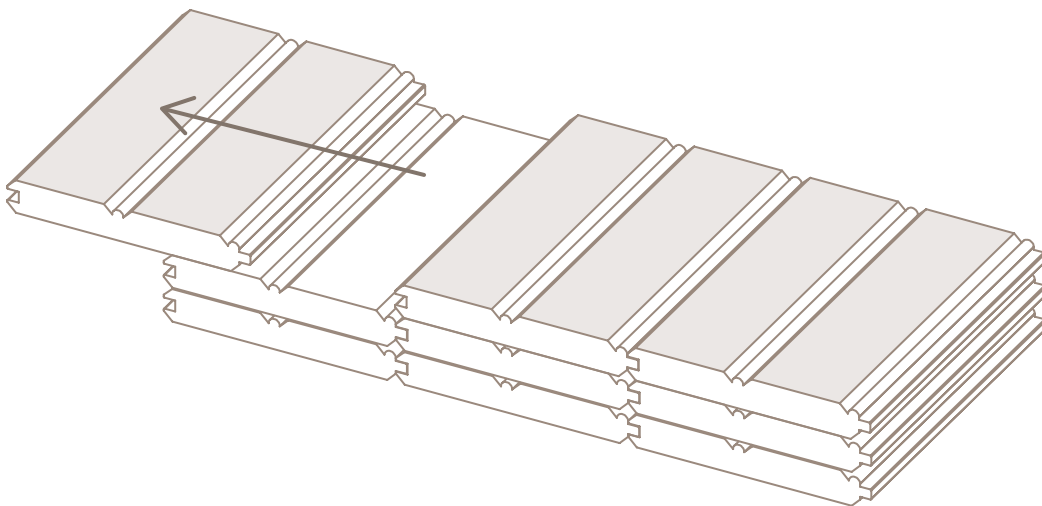
Safety Warning: Do not burn ACRE products or scraps. ACRE products are not safe to be discarded by burning, used as firewood, kindling or as any other source of fuel to create and / or maintain a fire or heat source.

EXTREME HEAT WARNING

Be aware of excess heat on ACRE surfaces such as but not limited to fire, direct or reflective sunlight, reflective sunlight from energy-efficient window products. Low-emissivity (Low-E) glass can harm ACRE products because Low-E glass products are designed to prevent passive heat gain within a structure and can cause unusual heat build up on exterior surfaces from sunlight reflection. The extreme rise of surface temperatures can create an environment which exceeds normal exposures and may create scenarios which can cause ACRE products to melt, sag, warp, discolor, expand and contract beyond acceptable tolerances or accelerate weathering. Be sure to consult Modern Mill's coatings guide, sales representatives or contact us at zen@modern-mill.com or 601-869-5050 for consultative assistance before installation.

Storage and Handling

- Store Edge & Center Bead boards horizontally, fully supported on a flat surface.
- Do not place Edge & Center Bead boards directly on a surface that can develop excessive heat.
- Store in a cool, dry place.
- We recommend storing with pallet covers to keep it clean and protected.
- Edge & Center Bead boards are packaged interlocked. Pull boards across the row and not straight down the stack (see image).
- Acclimate ACRE to the temperature it will be installed at for at least two hours before installation. During installation, be aware of changes in ambient temperature that could affect product gapping



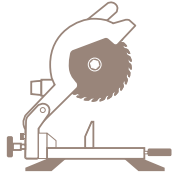
Safety

- Wear safety glasses and appropriate personal protective equipment (PPE) for job site conditions.
- Follow proper safety practices for using all power tools and any job site equipment.

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Getting Started

TOOLS YOU WILL NEED



Miter/Chop Saw



Tape Measure



Exterior rated minimum
#7 x 2-1/4 in, trim
head screws



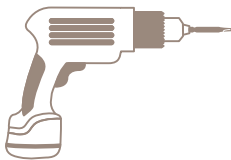
Safety Glasses



Minimum #8 x 2 1/2"
screws for surface finishing



Pencil



Drill



Ladder

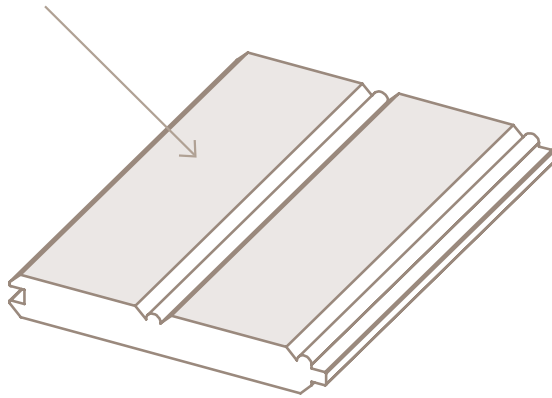


Minimum 7d x 2 1/4" nail

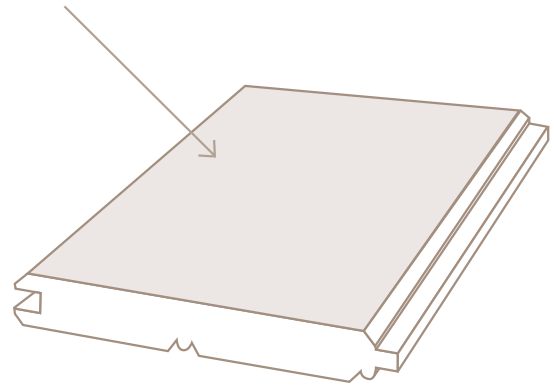
ACRE Edge & Center Bead

- Edge & Center Bead is a reversible product with a beaded look on one side and a v-groove on the other.

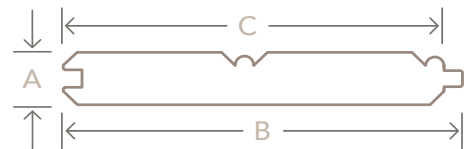
EDGE AND CENTER BEAD SIDE



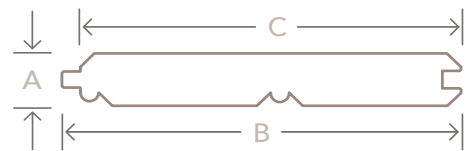
V-GROOVE SIDE



EDGE & CENTER BEAD SIDE



V-GROOVE SIDE



EDGE AND CENTER BEAD V-GROOVE BOARDS PROFILE DETAILS

Nominal Size	Actual Thickness (A)	Actual Width (B)	Reveal (C)	Lengths
1"x6"	0.75"	5.4"	5.2"	16'

AESTHETIC

ACRE Grain



- Edge and Center Bead can be stained, painted, or left natural with appropriate clear coat or sealant. **Please visit the ACRE coatings guidelines for more information.**

Expansion and Contraction

- ACRE products undergo a degree of linear expansion with changes in weather or seasons. Expansion and contraction is most significant where extreme temperatures may exist.
- Be aware of changes in ambient temperature, which could impact the effects of expansion and contraction.
- Fasten ACRE as soon after cutting as possible to minimize expansion and contraction.
- Alternatively, you can use shorter length ACRE Edge and Center Bead with scarfed or rabbeted joints to minimize the effects of expansion and contraction.

Installation Preparation

BEFORE GETTING STARTED

- Ensure boards are dry before installation.
- Before installation, be sure the substrate is true and planar.
- Never span more than 16".
- Where possible orient the boards in the direction that requires the shortest board lengths.
- Ensure proper ventilation where applicable.

PAINTING, STAINING OR FINISHING ACRE PRODUCTS

Pro Tip: For best results, applying paint, stain, or clear coats on a smooth flat surface is recommended. ACRE products may be finished after installation, however the viscosity of the coating could result in an uneven appearance if not monitored closely.

Coat ACRE with manufacturer recommended water-based paints, stains or sealers.

If you choose to paint ACRE, use a coating with a Light Reflective Value (LRV) 55 or greater.

For any paint or stain color with an LRV below 55 or if you are not sure-contact your Modern Mill rep for help and approval for use.



Follow this QR code for a list of finish manufacturers and products that have passed paint-manufacturer testing standards and for technical assistance.

Installation

FASTENING

- Use fasteners rated and approved for exterior use. Note: coastal applications may require special stainless steel fasteners.
- Minimum Screw Size: #7 x 2" trim head.
- Minimum Face Screw Size: #8 x 2".
- Be sure the screws that are driven into the tongue of the board and seat 1/16" into the surface above the tongue to allow complete insertion of the next board.
- Fastener heads need to be driven just under the surface to ensure boards fit tightly as intended.
- Face fasteners should be driven flush to the board surface. Do not over-drive screws.
- ACRE accepts screws and nails easily with a flush finish.
- Cortex screws and matching plugs are available for Edge & Center Bead boards.
- Staples, small brads and wire nails cannot be used.
- Fasteners utilized should be long enough to penetrate the solid substrate a minimum of 1 1/2".
- Fasten Edge & Center Bead using the top of the flange as seen in the diagram.
- Pneumatic nailers work well at pressures between 70psi and 100psi. Always test in an inconspicuous area to determine the best pressure.
- When hand nailing, use a nail set to protect the bead and achieve the required below surface depth.

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For Soffit/Ceiling Installation

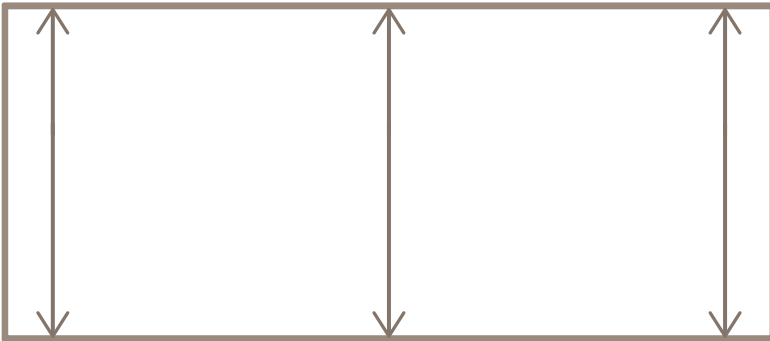
Before installation be sure the underside of the ceiling joists are true and level.

Never span more than 16" between soffit/ceiling joists.

Where possible orient the boards in the direction that requires the shortest board lengths.

Ensure proper ventilation where applicable.

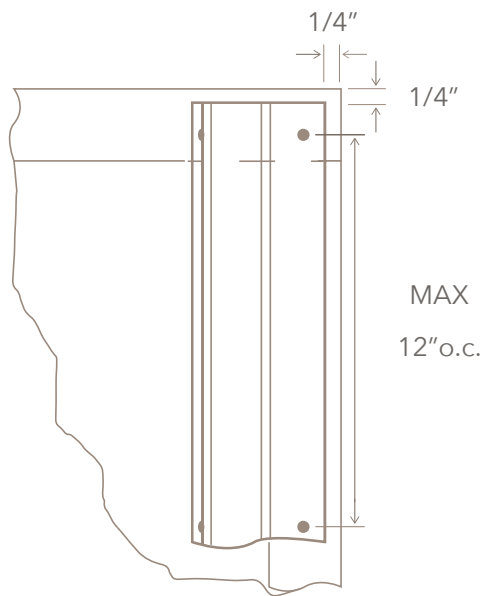
- Measure the depth of the soffit/ceiling front to back in multiple locations. Subtract $\frac{1}{2}$ " from the measurement to account for the $\frac{1}{4}$ " gap required at both ends of the board to allow for expansion.



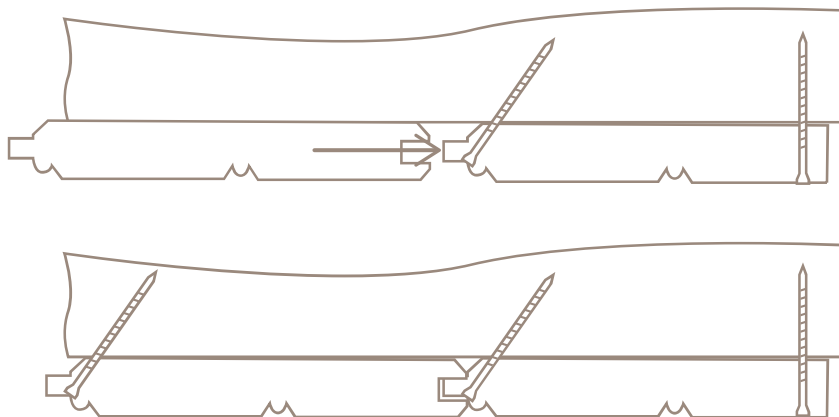
- Calculate the number of boards needed to cover the soffit/ceiling by dividing the width of the soffit/ceiling by the width of reveal of the E&CB board, which is 5.2". If the last board is less than 2", trim down the first and last boards to create an evenly spaced appearance.
- Trim the first board to the desired width by cutting off the groove side leaving the tongue edge for securing.



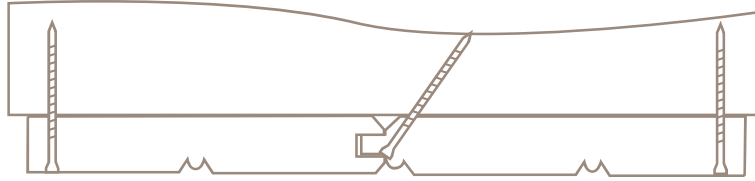
- Face nail the first board allowing a 1/4" gap from the wall using 2" finish or minimum #7 x 2 1/4" trim head screws nails every 12" on center. Position fasteners through the tongue between 3/8" - 2" from the board end and at a 45-degree angle.
- Fastener heads need to be driven just under the surface to ensure boards fit tightly as intended.
- When hand nailing, use a nail set to protect the bead and achieve the required below surface depth.



- Slide the groove of the next board into the tongue of the previous board. If needed, using a piece of scrap board, tap the board lightly to seat the tongue fully into the groove.



- Finishing installing boards as directed. Trim the last board from the tongue side, allowing $\frac{1}{4}$ " gap from the end.



- Install moldings as needed to cover the gap around the perimeter.

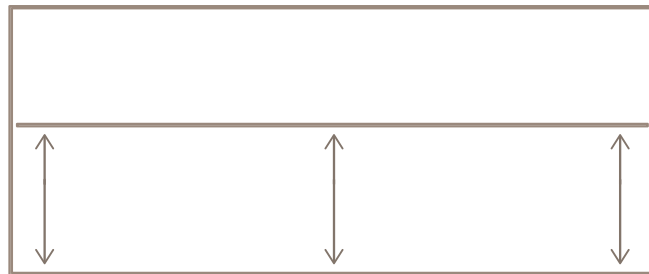
For runs longer than 12-ft, cut a bevel or shiplap joint into the ends of the boards. If installing below 40 degrees F, allow a $\frac{1}{8}$ " gap. Other options include an H-divider adding a faux beam.

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For Wainscoting

- Snap a level chalk line on the wall at the desired height for the top of the wainscot.
- Measure the height at various locations to determine in slight difference in individual board heights will be required.

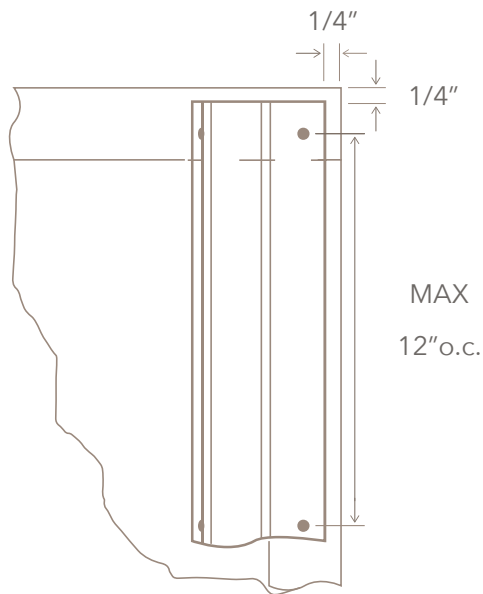


- Measure the width of the wall and divide by 5.2" to determine the approximate number of boards required. If the remainder is less than 2", trim down the first and last boards to create an evenly spaced appearance.
- Trim the first board to the desired width by cutting off the groove side leaving the tongue edge for securing.

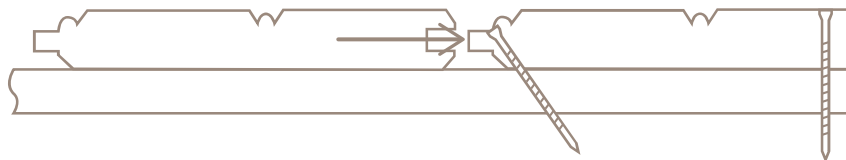


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- Face nail the first board allowing an 1/8" - 1/4" gap from the floor using 2" finish nails at a height that will be covered by the base molding. Fasten at the top through the tongue between 3/8" and 2" from the top end.

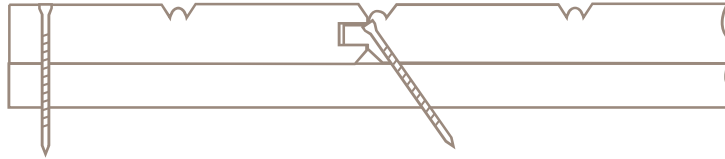


- Slide the groove of the next board into the tongue of the previous board. If needed, using a piece of scrap board, tap the board lightly to seat the tongue fully into the groove.



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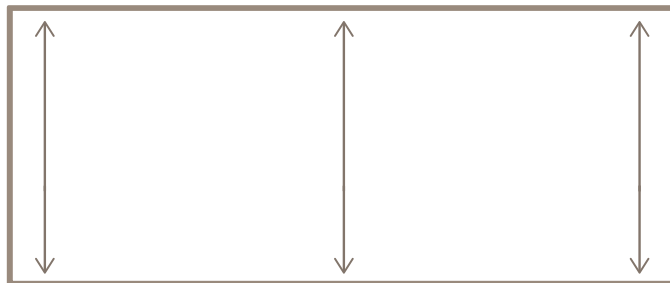
- Finishing installing boards as directed. Trim the last board from the tongue side, secured as directed.



- Install moldings as needed to cover the top and bottom ends of the wainscot.

For Walls

- Measure the height at various locations to determine if slight difference in individual board heights will be required.

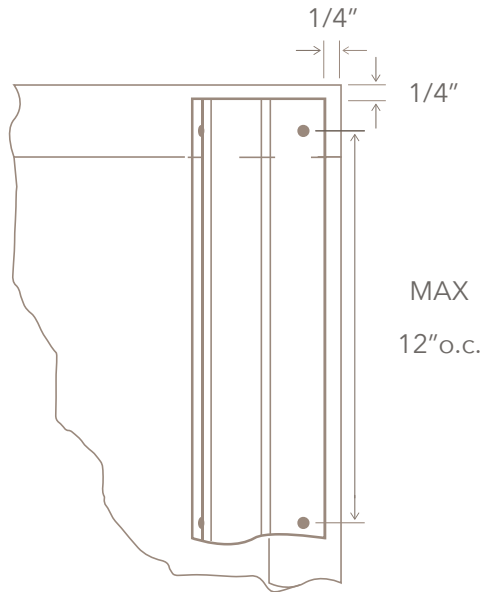


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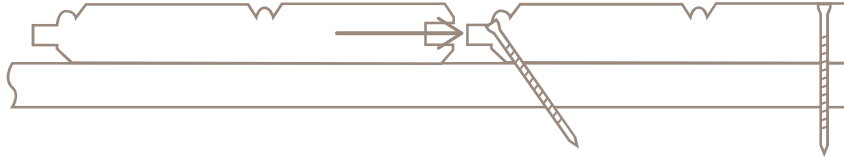
- Measure the width of the wall and divide by 5.2" to determine the approximate number of boards required. If the remainder is less than 2", trim down the first and last boards to create an evenly spaced appearance.
- Trim the first board to the desired width by cutting off the groove side leaving the tongue edge for securing.



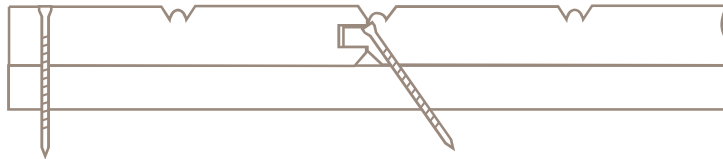
- Face nail the first board allowing an 1/8" - 1/4" gap from the floor using 2" finish nails at a height that will be covered by the base molding. Fasten at the top through the tongue between 3/8" and 2" from the top end.



- Slide the groove of the next board into the tongue of the previous board. If needed, using a piece of scrap board, tap the board lightly to seat the tongue fully into the groove.



- Finishing installing boards as directed. Trim the last board from the tongue side, secured as directed.



- Install moldings as needed to cover the top and bottom ends of the top and bottom ends of the panels.

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