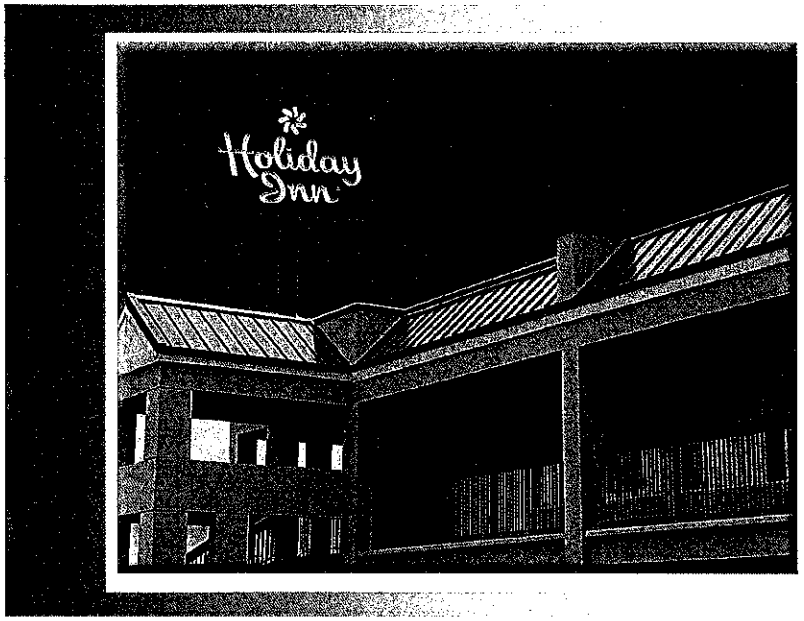
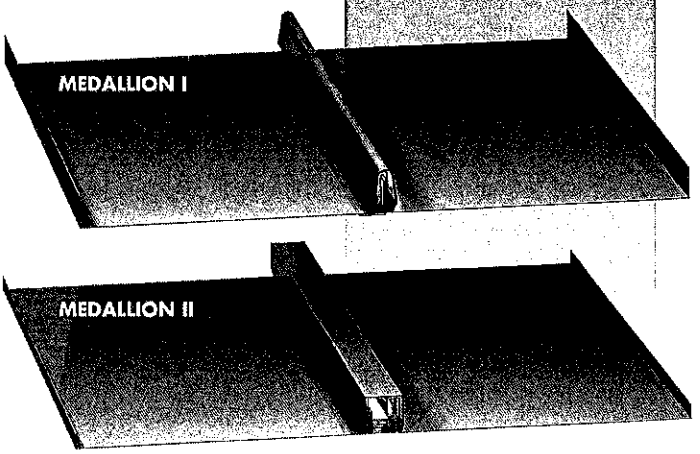
ATTACHMENT 5

MEDALLION I
MEDALLION II





Panel / Trim /Accessories

MCELROY METAL

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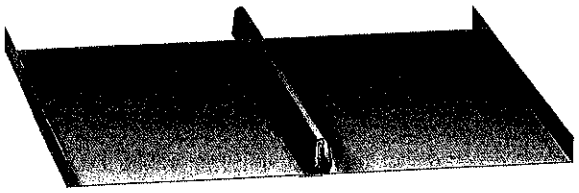
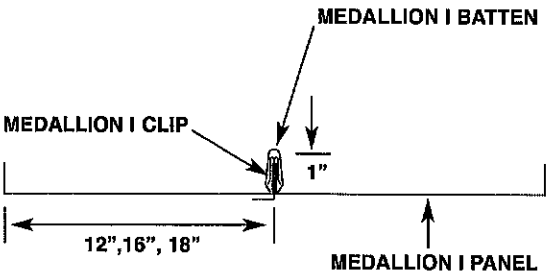
ENERGY STAR PARTNER

MCELROY METAL

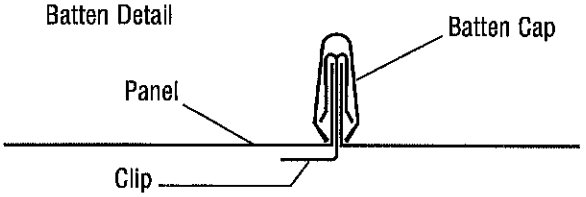
MEDALLION I



Medallion I



Medallion I
Seam &
Batten Detail



Medallion I Pan Conditions

MEDALLION I STRIATED*	12", 16", 18"
MEDALLION I FLAT PAN	12", 16", 18"
MEDALLION I DOUBLE PENCIL RIBS	16" and 18" Only
MEDALLION I SINGLE PENCIL RIB	12" Only

*Recommended Pan Condition

For any available Testing Data, Section Properties, or Load Tables, please visit www.mcelroymetal.com. For additional information, please contact the **McElroy Engineering Department at 1-800-950-9082**.

Details:

- Minimum slope: 3:12
- Must be installed over solid decking
- Curving: Medallion I only - minimum radius 30"

- Oil canning is a natural occurrence in metal panels and is not a cause for panel rejection

Panel Options:

- Panel width: 12", 16", and 18"
- Panel configurations: striated, ribbed or flat pan (striated recommended)

- Coating:
  - Kynar 500® (PVDF)

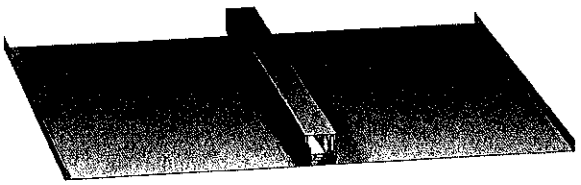
- Substrate:
  - Standard 24 GA Galvalume®

Notes:

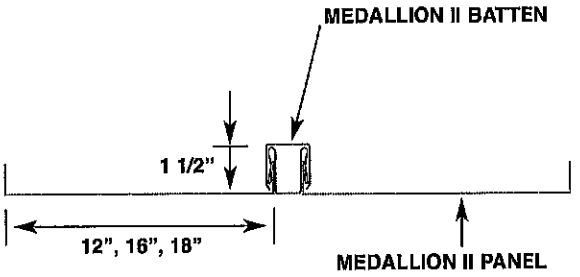
- Please contact a McElroy representative for specific pricing, lead times, special colors or gauges that may not be on a McElroy Metal color chart.
- Contents in this manual are subject to change without notice. To confirm this book is the most current copy, please visit McElroy's website at www.mcelroymetal.com.

MCELROY METAL

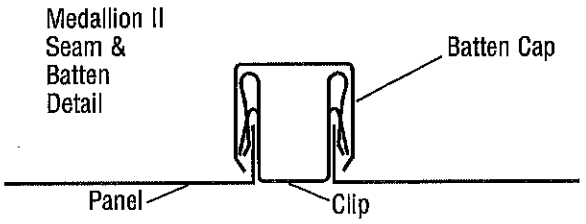
MEDALLION II



Medallion II



Cover width is pan width plus 1".



Medallion II Pan Conditions

MEDALLION II STRIATED*	12", 16", 18"
MEDALLION II FLAT PAN	12", 16", 18"
MEDALLION II DOUBLE PENCIL RIBS	16" and 18" Only
MEDALLION II SINGLE PENCIL RIB	12" Only

*Recommended Pan Condition

For any available Testing Data, Section Properties, or Load Tables, please visit www.mcelroymetal.com. For additional information, please contact the **McElroy Engineering Department at 1-800-950-9082**.

Details:

- Minimum slope: 3:12
- Must be installed over solid decking
- Curving: Medallion I only - minimum radius 30"
- Oil canning is a natural occurrence in metal panels and is not a cause for panel rejection

Panel Options:

- Panel width: 12", 16", and 18"
- Panel configurations: striated, ribbed or flat pan (striated recommended)
- Coating:
  - Kynar 500® (PVDF)
- Substrate:
  - Standard 24 GA Galvalume®

Notes:

- Please contact a McElroy representative for specific pricing, lead times, special colors or gauges that may not be on a McElroy Metal color chart.
- Contents in this manual are subject to change without notice. To confirm this book is the most current copy, please visit McElroy's website at www.mcelroymetal.com.

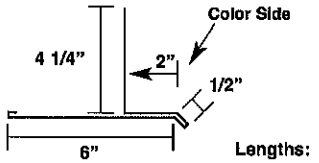
MCELROY METAL

MEDALLION I

TRIM

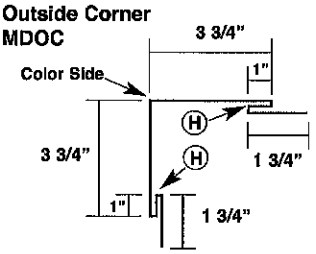
24 GA

Soffit Base Trim
MDSB



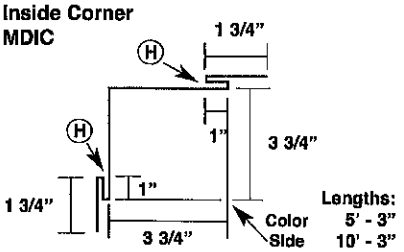
Lengths:
10' - 3"
20' - 3"

Outside Corner
MDOC



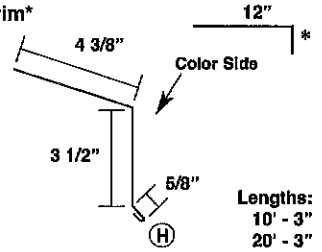
Lengths:
5' - 3"
10' - 3"

Inside Corner
MDIC



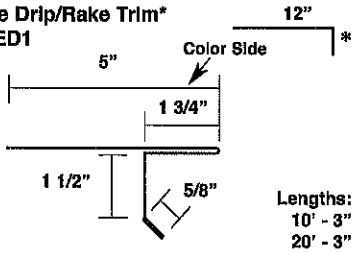
Lengths:
5' - 3"
10' - 3"

Eave Trim*
MDET



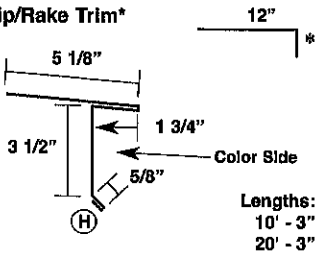
Lengths:
10' - 3"
20' - 3"

Eave Drip/Rake Trim*
MDED1



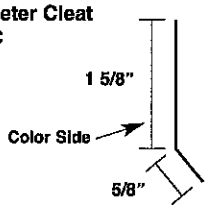
Lengths:
10' - 3"
20' - 3"

Eave Drip/Rake Trim*
MDED3



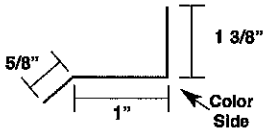
Lengths:
10' - 3"
20' - 3"

Perimeter Cleat
MDPC



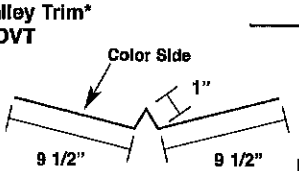
Lengths:
10'

Perimeter Zee Trim
M1PZ



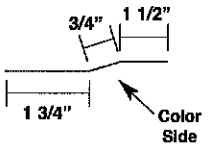
Lengths:
10'

Valley Trim*
MDVT



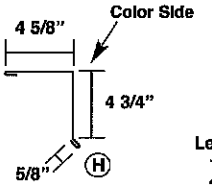
Lengths:
10' - 3"
20' - 3"

Offset Cleat
MDOF



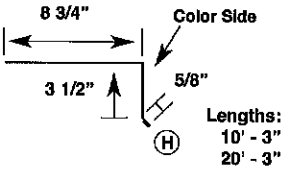
Lengths:
10'

Rake Trim
M1RT



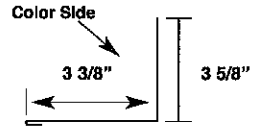
Lengths:
10' - 3"
20' - 3"

Alternate Rake Trim
MDAR



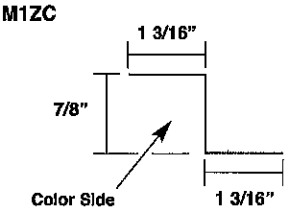
Lengths:
10' - 3"
20' - 3"

Rake Tie-In Trim
MDEW



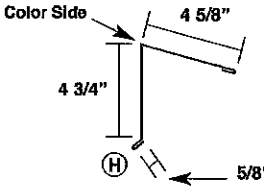
Lengths:
10' - 3"

Zee Closure
M1ZC



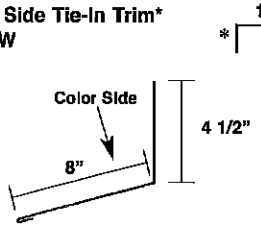
Lengths:
10'

High Side Trim*
M1HS



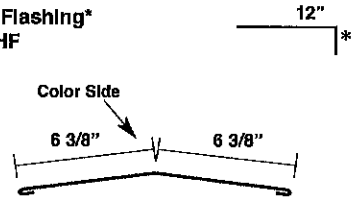
Lengths:
10' - 3"
20' - 3"

High Side Tie-In Trim*
MDSW



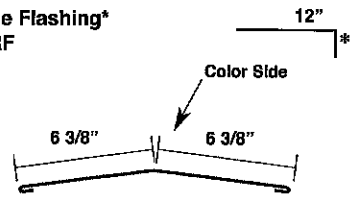
Lengths:
10' - 3"

Hip Flashing*
MDHF



Lengths:
10' - 3"
20' - 3"

Ridge Flashing*
MDRF



Lengths:
10' - 3"
20' - 3"

*specify roof pitch

(H) Indicates an open hem - All other hems are closed.

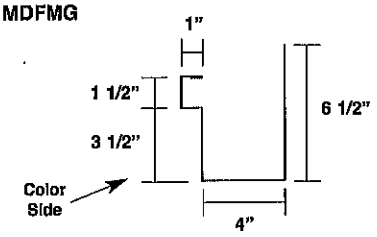
MCELROY METAL

MEDALLION I

TRIM

24 GA

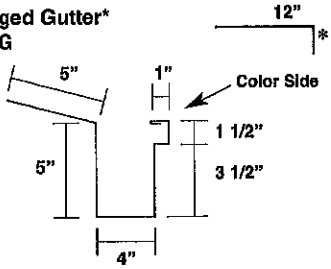
**Face Mounted Gutter
MDFMG



**Snow guards required to prevent damage caused by sliding snow.

Lengths:
10' - 3"
20' - 3"

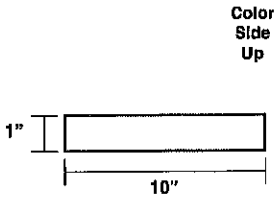
**Flanged Gutter*
MDFLG



**Snow guards required to prevent damage caused by sliding snow.

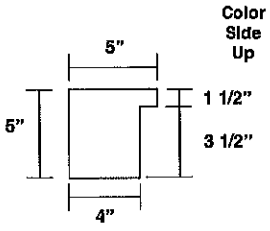
Lengths:
10' - 3"
20' - 3"

Gutter Strap
MD-GS



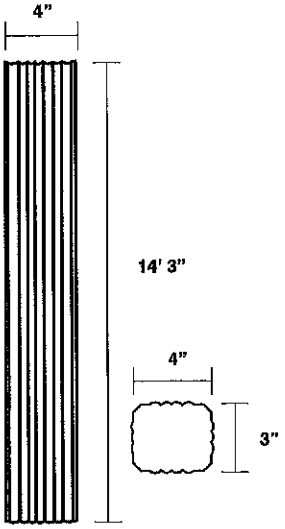
Lengths:
10"

Gutter End Cap
MDGEC



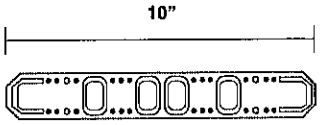
26 Ga.

Downspout 3" x 4"
26 Ga. = BBPDS



Lengths:
14' - 3"

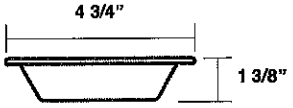
Downspout Strap
BBPDSS



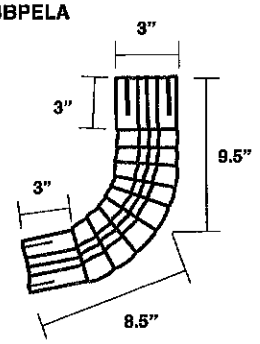
Lengths:
10"

Only available in 26 Ga.

Aluminium Downspout Outlet
BBPOUT



3" x 4" Downspout Elbow A-Style
26 Ga. = BBPELA



29 Ga. only available at the Marshall and Lewisport locations.

Notes:

*specify roof pitch

(H) Indicates an open hem - All other hems are closed.

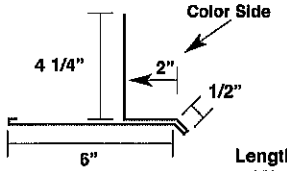
MCELROY METAL

MEDALLION II

TRIM

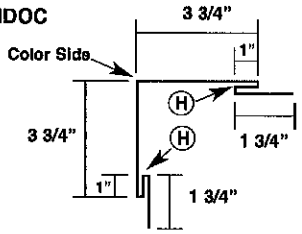
24 GA

Soffit Base Trim
MDSB



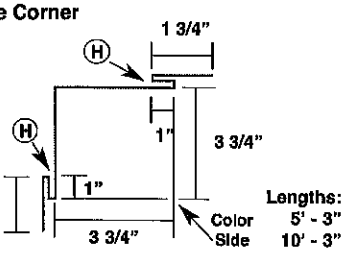
Lengths:
10' - 3"
20' - 3"

Outside Corner
MDOC



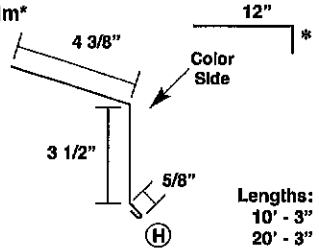
Lengths:
5' - 3"
10' - 3"

Inside Corner
MDIC



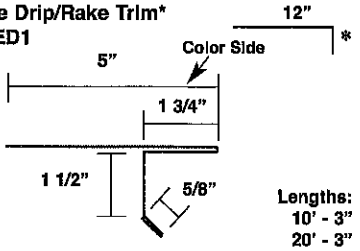
Lengths:
5' - 3"
10' - 3"

Eave Trim*
MDET



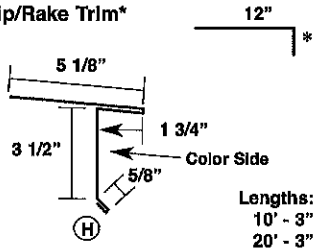
Lengths:
10' - 3"
20' - 3"

Eave Drip/Rake Trim*
MDED1



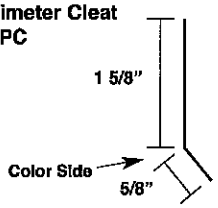
Lengths:
10' - 3"
20' - 3"

Eave Drip/Rake Trim*
MDED3



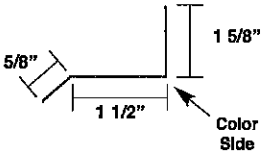
Lengths:
10' - 3"
20' - 3"

Perimeter Cleat
MDPC



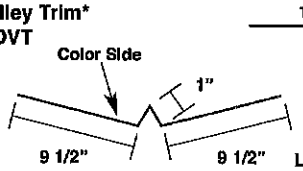
Lengths:
10'

Perimeter Zee Trim
M2PZ



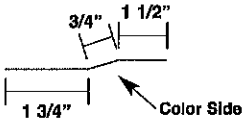
Lengths:
10'

Valley Trim*
MDVT



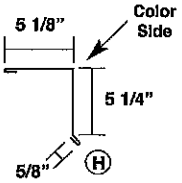
Lengths:
10' - 3"
20' - 3"

Offset Cleat
MDOF



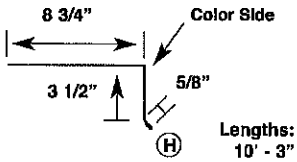
Lengths:
10'

Rake Trim
M2RT



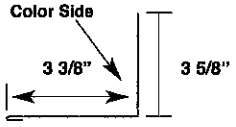
Lengths:
10' - 3"
20' - 3"

Alternate Rake Trim
MDAR



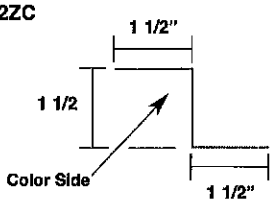
Lengths:
10' - 3"
20' - 3"

Rake Tie-In Trim
MDEW



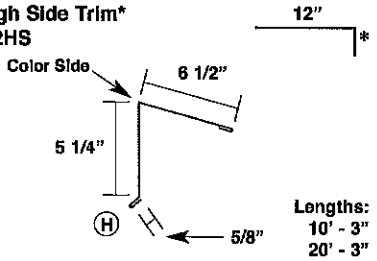
Lengths:
10' - 3"

Zee Closure
M2ZC



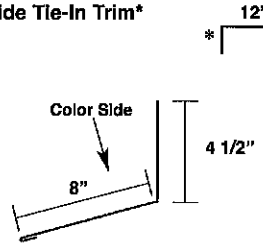
Lengths:
10'

High Side Trim*
M2HS



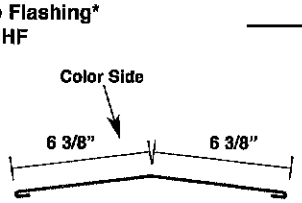
Lengths:
10' - 3"
20' - 3"

High Side Tie-In Trim*
MDSW



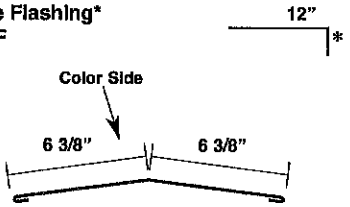
Lengths:
10' - 3"

Hip Flashing*
MDHF



Lengths:
10' - 3"
20' - 3"

Ridge Flashing*
MDRF



Lengths:
10' - 3"
20' - 3"

*specify roof pitch

(H) Indicates an open hem - All other hems are closed.

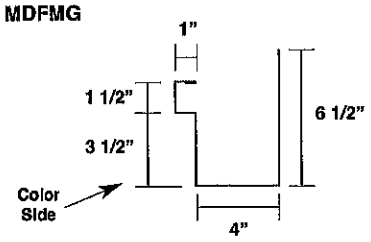
MCELROY METAL

MEDALLION II

TRIM

24 GA

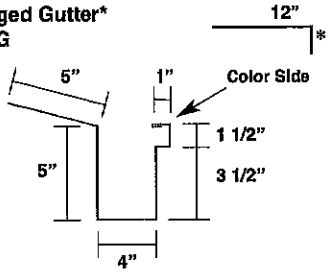
**Face Mounted Gutter
MDFMG



**Snow guards required to prevent damage caused by sliding snow.

Lengths:
10' - 3"
20' - 3"

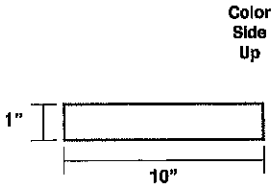
**Flanged Gutter*
MDFLG



**Snow guards required to prevent damage caused by sliding snow.

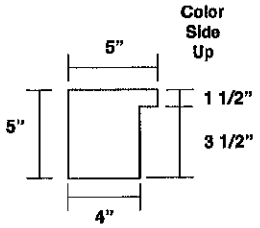
Lengths:
10' - 3"
20' - 3"

Gutter Strap
MD-GS



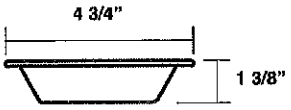
Lengths:
10"

Gutter End Cap
MDGEC

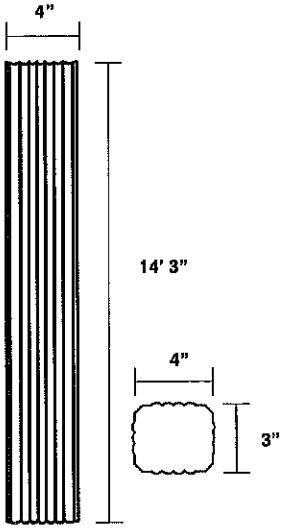


26 Ga.

Aluminum Downspout Outlet
BBPOUT

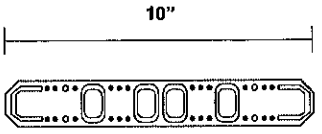


Downspout 3" x 4"
26 Ga. = BBPDS



Lengths:
14' - 3"

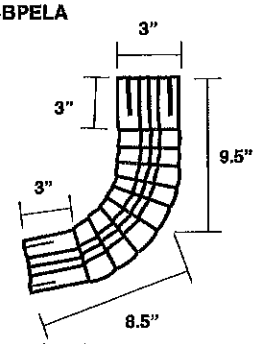
Downspout Strap
BBPDSS



Lengths:
10"

Only available in 26 Ga.

3" x 4" Downspout Elbow A-Style
26 Ga. = BBPELA



29 Ga. only available at the Marshall and Lewisport locations.

Notes:

*specify roof pitch

(H) Indicates an open hem - All other hems are closed.

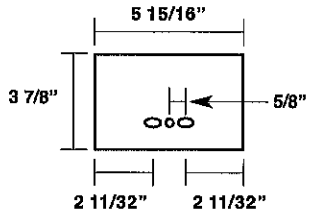
MCELROY METAL

MEDALLION I &II

ACCESSORIES

26 GA

Bearing Plate
Item #: 94599 Primed
Item #: 203541 Galvanized



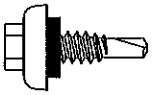
#9 - 15 x 1" Woodgrip
W/O Washer - Plain
Item #: 36115

1/4 - 14 x 1 1/4" TEK 2
W/O Washer - Plain
Item #: 10969

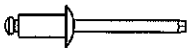
#10 - 12 x 1" Type A
Pancake Head
Woodgrip
Item #: 36116001

#10 - 16 x 1" TEK2
Pancake Head
Self-Driller
Item #: 36117

1/4" - 14 x 7/8"
LAPTEK ZAC
Self-Driller
(Part # Varies by Color)



43D Pop Rivets
(Part # Varies by Color



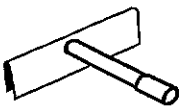
Butyl Tape Sealant
3/32" x 1" x 45'
Item #: 95335

Titebond Caulk Sealant
(Part # varies by color)

White Urethane Sealant
Item #: 95320

Sikalastomer Tube Sealant
Item #: 95342

Hemming Tool
Item #: 36120

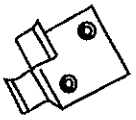


Touch-Up Paint Pen
(Part # Varies by Color)

MEDALLION I BATTEN and CLIP

BATTEN & CLIP — **26 GA**

Medallion I Clip
Item #: 36500

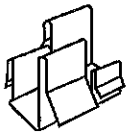


Medallion I Batten

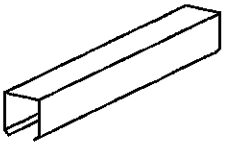
MEDALLION II BATTEN and CLIP

BATTEN & CLIP

Medallion II Clip
Item #: 36510



Medallion II Batten



Notes:

MCELROY METAL

MEDALLION I & II

Notes:

ATTACHMENT 5

MCELROY METAL

☆ MANUFACTURING LOCATIONS ● SERVICE CENTERS ★ MANUFACTURING AND SERVICE CENTER

CORPORATE OFFICE
1500 HAMILTON RD.
BOSSIER CITY, LA 71111

MANUFACTURING LOCATIONS

ADELANTO, CA	ASHBURN, GA	BOSSIER CITY, LA	CLINTON, IL	DIAMOND, MO
HOUSTON, TX	LEWISPORT, KY	MARSHALL, MI	MAUSTON, WI	MERKEL, TX
	PEACHTREE CITY, GA	SUNNYVALE, TX	WINCHESTER, VA	

McELROY METAL
SERVICE CENTER

17031 Koala Road **Adelanto, CA 92301**	5215 Leo St. **Alexandria, LA 71301**	1007 Wilso Dr, **Baltimore, MD 21223**	1500 Hamilton Rd. **Bossier City, LA 71111**
3052 Yadkin Road **Chesapeake, VA 23323**	9476 Meadowbrook Rd. **Clinton, IL 61727**	3215 Highway 59 **Diamond, MO 64840**	390 N. Valley Dell Dr. **Fenton, MO 63026**
409 Lovejoy Road **Ft. Walton Beach, FL 32548**	3014 Lincoln Court **Garland, TX 75041**	1440 Aldine Bender Road **Houston, TX 77032**	10504 E. 59th Street **Indianapolis, IN 46236**
9435 US Hwy. 60 W. **Lewisport, KY 42351**	1020 Veterans Street **Mauston, WI 53948**	5123 Terminal Dr. **McFarland, WI 53558**	514 Cave Road **Nashville, TN 37210**
8304 Hwy. 70 E. **North Little Rock, AR 72117**	613 North Bierdeman Rd. **Pearl, MS 39208**	8511 Industrial Drive **Pearland, TX 77584**	7450 Tower Street **Richland Hills, TX 76118**

8200 Berry Ave. Suite 100 **Sacramento, CA 95828**	1365 Dean Forest Rd. **Savannah, GA 31405**	7355 Oakley Industrial Blvd. **Union City, GA 30291**
1144 Silstar Rd. **West Columbia, SC 29170**	325 McGhee Rd. **Winchester, VA 22603**	

Website: www.mcelroymetal.com · E-mail: info@mcelroymetal.com

HardiePlank® Lap Siding Product Description

HardiePlank® lap siding is factory-primed fiber-cement lap siding available in a variety of styles and textures. Please see your local James Hardie® product dealer for product availability. HardiePlank lap siding comes in 12 ft. lengths. Nominal widths from 5 1/4 in to 12 in. create a range of exposures from 4 in to 10 3/4 in

HardiePlank lap siding is also available with ColorPlus® Technology as one of James Hardie's prefinished products. ColorPlus® Technology is a factory applied, oven-baked finish available on a variety of James Hardie siding and trim products. See your local dealer for details and availability of products, colors, and accessories.

The HZ5® product line is right at home in climates with freezing temperatures, seasonal temperature variations, snow and ice. HZ5® boards are the result of our generational evolution of our time-tested products. We've evolved our substrate composition to be specifically designed to perform in conditions found in these climates. To ensure that its beauty matches its durability, we've engineered the surface for higher performance, giving it superior paint adhesion and moisture resistance. In addition, we've added a drip edge to the HardiePlank® HZ5® lap siding product to provide improved water management in conditions specific to HZ5® climates.

Select Cedarmill©

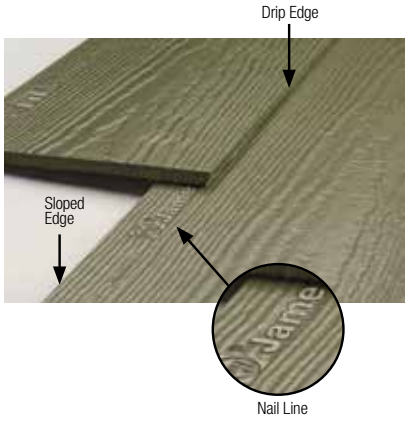
Smooth

Beaded Cedarmill©

Beaded Smooth

Custom Colonial Roughsawn®

Custom Colonial Smooth®



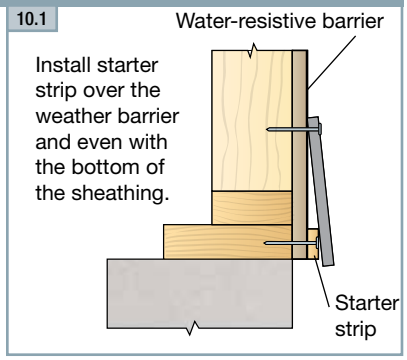
Installation of HardiePlank® Lap Siding

INSTALL A STARTER STRIP

HardiePlank® lap siding requires a starter strip beneath the first course to set it on the proper angle and to create a proper drip edge at the bottom of the siding. Starter strips are easily made by ripping 1¼ in. pieces of HardiePlank siding from full or partial planks.

The bottom of the starter strip should be installed even with the bottom of the mudsill or the bottom edge of the sheathing. The strip must be installed over the water-resistive barrier, but occasional gaps should be left in the starter strip to allow any accumulated moisture behind the siding to drain away safely.

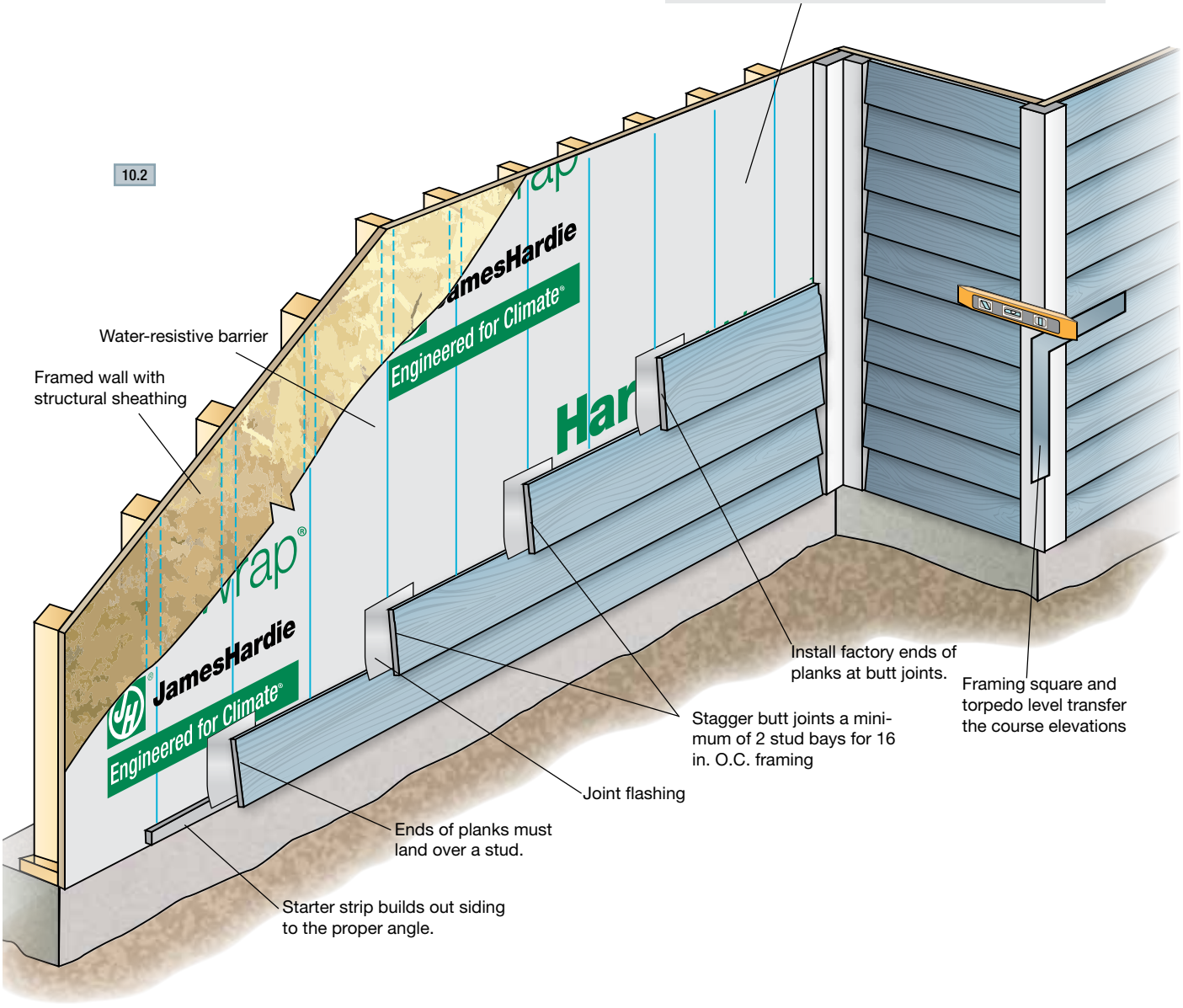
10.1



OVERVIEW OF HARDIEPLANK LAP SIDING

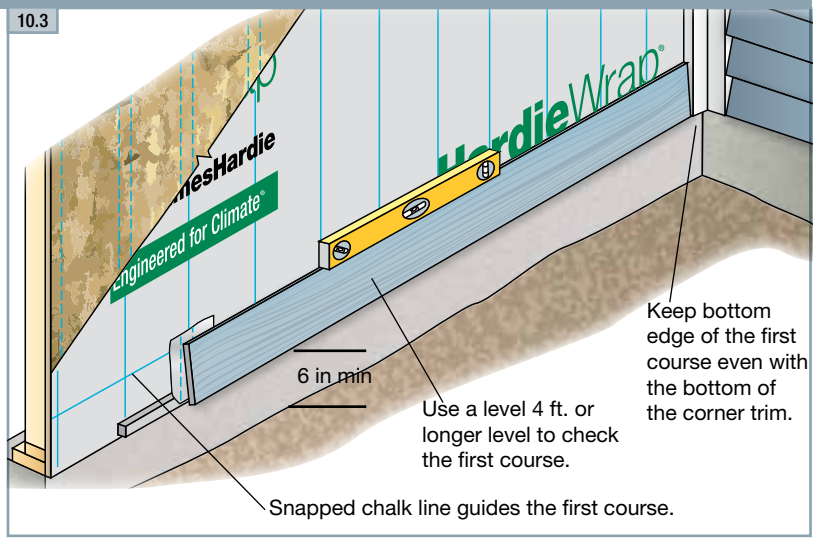
TIP: For accurate fastening, snap vertical chalk lines on the water-resistive barrier at the center of every stud location.

10.2



INSTALLING THE PLANKS

10.3



The first course of HardiePlank® siding is critical to the proper installation of the plank on the rest of the building. The first course should start at the lowest point of the house and within required clearances. Special attention should be made to ensure that it's straight and level. Attention should also be paid to staggering any butt joints in the planks so that the installation is attractive while making efficient use of material.

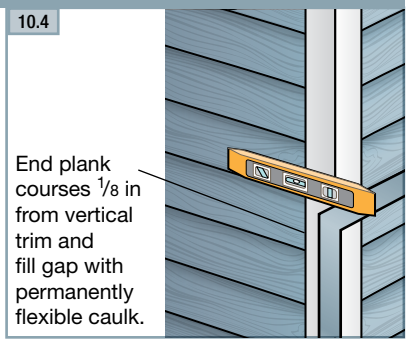
1. Use a level (4 ft. or longer) or chalked level line to be sure that the first course is level. As installation proceeds up the wall, periodically check the level and straightness of the courses. When correcting for flatness over products such as exterior insulation, use drywall shims. It is good practice to snap a chalk line every 3 to 5 courses to keep the planks straight and level.
2. Position the bottom edge of the first course of siding a minimum ¼ in below the edge of the starter strip (maintain required clearances) and secure.
3. Run the siding to the HardieTrim® board leaving a 1/8 in. gap between the siding and trim.

The bottom of the siding should be kept even with the bottom of the trim, or if desired, the trim may extend below the bottom of the siding. But the siding should never hang below the trim. ***When installing the first course make sure ground clearances are in accordance with James Hardie requirements and those of local codes.**

PLANK ALIGNMENT AT CORNERS

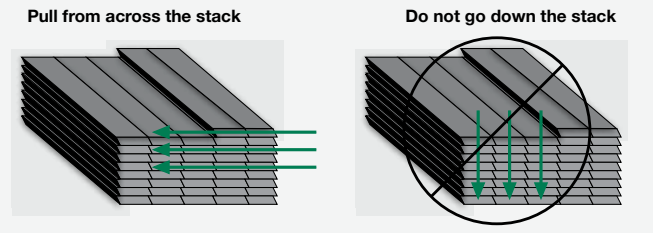
For the best looking installation, make sure that the heights of the plank courses match on both sides of a corner. Use a framing square, speed square or a level to match up the plank heights. Check every few courses to make sure proper heights are being maintained.

10.4



HANDLING

IMPORTANT: To prevent damage to the drip edge, extra care should be taken when removing planks from the pallet, while handling, and when installing with a lap gauge. Planks are interlocked together on the pallet, therefore they should be removed from the pallet horizontally (side to side) to allow planks to unlock themselves from one another.



TIP: When taking planks from the pallet installation, avoid repeating the texture pattern by working across the pallet. Two to four planks can be removed from a stack at one time. But then material should be taken from adjacent stacks, again working across the pallet. Texture repeat is typically a concern on large walls with few breaks such as windows or doors.

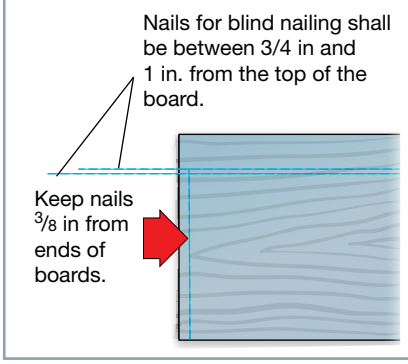
Installation of HardiePlank® Lap Siding (cont.)

BLIND NAILING (nailing through top of plank)

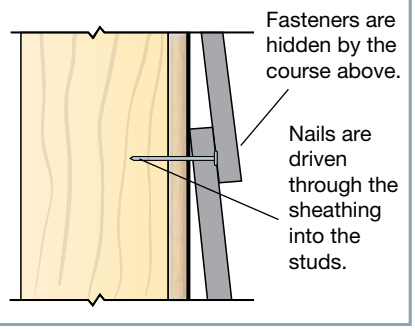
Blind nailing is recommended for installing any type of HardiePlank® lap siding including ColorPlus® siding. With blind nailing, each course covers the fasteners on the course below, which provides a better looking installation.

For blind nailing HardiePlank lap siding, James Hardie recommends driving fasteners 1 in. from the top edge of the plank. Additionally fasteners should be placed no closer than 3/8 in from the ends of the plank.

10.5 **Blind nailing measurments**



10.6 **Blind nailing**



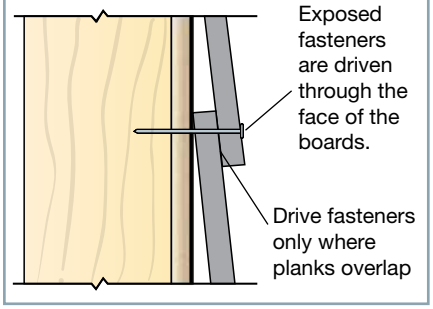
HardiePlank® HZ5® Lap Siding is manufactured with a nail line that should be used as a guide for proper nail placement when blind nailing. This nail line should not be used as a lap line.

Avoid placing fasteners near the top edge of the plank. This practice, called “high nailing”, may lead to loose planks, unwanted gaps or rattling. **Pin-backed corners may be done for aesthetic purposes only. Finish nails are recommended for pin-backs. Headed siding nails are allowed. Place pin-backs no closer than 1in. from plank ends & 3/4in. from plank edge into min. 3/8in. wood structural panel. Pin-backs are not a substitute for blind or face nailing**

FACE NAILING (nailing through the overlap at the bottom of the plank)

Although blind nailing is recommended by James Hardie, face nailing may be required for certain. installations including: installations in high wind areas, fastening into OSB or equivalent sheathing without penetrating a stud, or when dictated by specific building codes. Refer to Appendix D for related code matters.

10.7 **Face nailing**

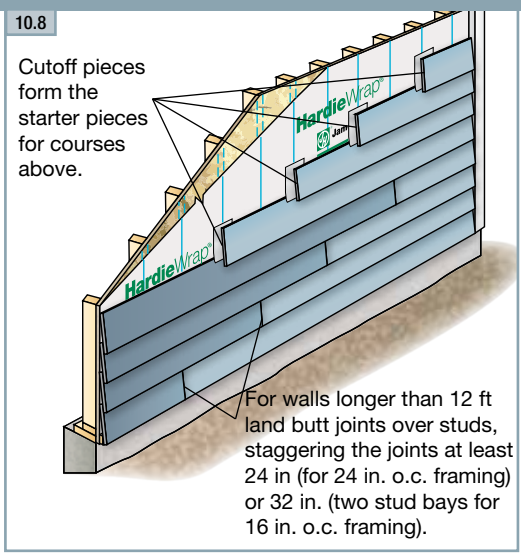


STAGGERING THE BUTT JOINTS

For walls longer than 12 ft, it is necessary to butt joint additional lengths of HardiePlank siding. These butt joints should be staggered to avoid noticeable patterns, which is determined by the placement of the first course. Butt joints between consecutive courses should be spaced apart by at least two stud bays for 16 in, o.c. framing or one bay for 24 in. o.c. framing.

While random placement of the planks is usually the most aesthetically pleasing, a progressive stagger pattern can make the job easier and faster without the pattern becoming too noticeable. With this strategy, the cut off piece for one course becomes the starter piece for a course above, making efficient use of materials and ensuring that all butt joints land on studs. The pattern can be modified for different stud placement.

10.8



JOINT FLASHING

One or more of the following joint treatment options are required by code (as referenced 2009 IRC R703.10.2)

A. Joint Flashing (James Hardie recommended)

B. Caulking* (Caulking is not recommended for ColorPlus for aesthetic reasons as the Caulking and ColorPlus will weather differently. For the same reason, do not caulk nail heads on ColorPlus products.}

C. “H” jointer cover

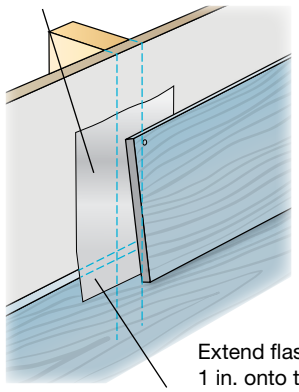
Flashing behind butt joints provides an extra level of protection against the entry of water at the joint. James Hardie recommends 6 in. wide flashing that overlaps the course below by 1 in. Some local building codes may require different size flashing.

Joint-flashing material must be durable, waterproof materials that do not react with cement products. Examples of suitable material include finished coil stock and code compliant water-resistive barriers. Other products may also be suitable.

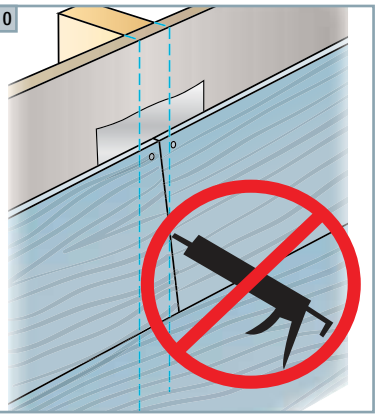
TIP: Joint flashing can be quickly and easily made by cutting a 6 in. wide section off a roll of housewrap. Tape the roll tightly at the cut mark and cut the section off using a miter saw with a carbide blade. Individual sheets then can be cut to length with a utility knife.

TIP: Use light-colored joint flashing when using light-colored ColorPlus lap siding or other siding with a light-colored finish. Dark-color joint flashings should be used on siding with dark finishes.

10.9



10.10



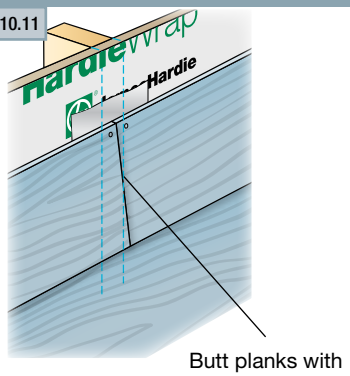
Caulking at HardiePlank lap siding butt joints is not recommended for ColorPlus for aesthetic reasons as the caulking and ColorPlus will weather differently. For the same reason, do not caulk exposed nail heads. Refer to the ColorPlus touch-up section for details

JOINT PLACEMENT AND TREATMENT

Butt joints in HardiePlank lap siding should always land on a stud. Butt joints between studs are not recommended and should be avoided. Whenever possible, factory-finished ends should be used at butt joints.

Place cut ends where the siding meets a corner, door, window trim, or other break in the wall where the joint is to be caulked. If cut ends are used in a butt joint between planks, James Hardie requires sealing cut ends for all products. For ColorPlus products, use the color-matched edge coater to seal the cut end.

10.11



COLORPLUS® TIP: When installing HardiePlank lap siding with ColorPlus Technology, position the plank in the immediate area where the plank is to be fastened. Do not place the plank on the course below and slide into position. Doing so may scuff or scratch the ColorPlus finish on the installed piece.

Installation of HardiePlank® Lap Siding (cont.)

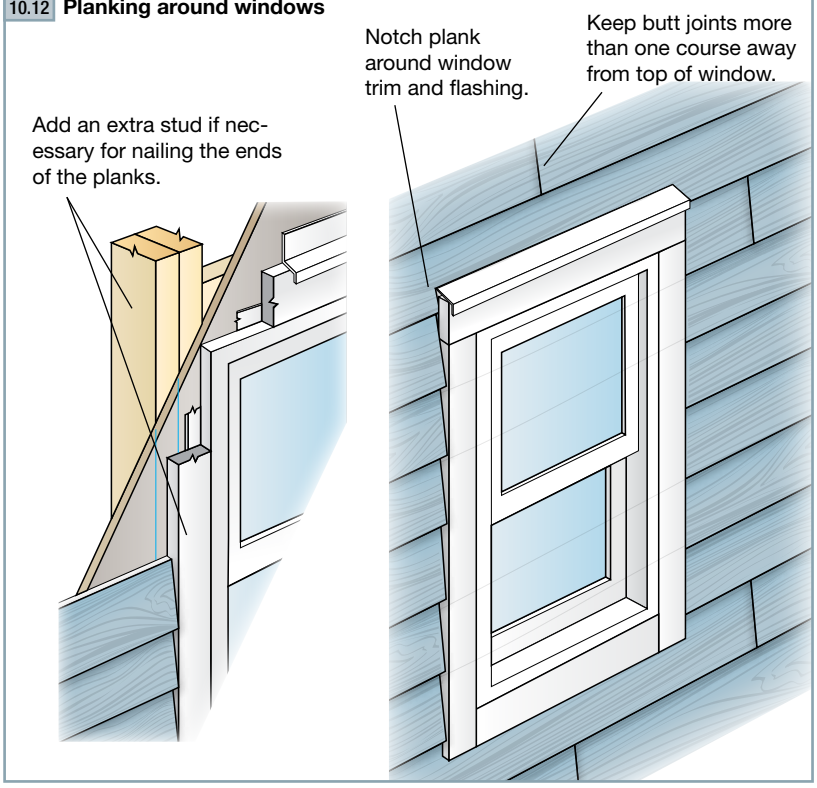
CONTINUING THE INSTALLATION

Once the initial course of HardiePlank® siding is fastened to the wall, continue installing successive courses with full 12 ft. pieces (follow the stagger pattern for longer walls), or until a window, door or other opening interrupts the course (fig 10.12). Notch planks as needed to fit around windows and doors. Again, be sure to seal all cut edges. Avoid placing butt joints directly above or below windows or above doors. Separate the joint from the opening by at least one course of siding.

Where butt joints land on a stud, make sure there is enough stud space for plank on both sides of the joint to land properly. Optimally both sides of a butt joint should land in the middle of a stud with 3/4 in landing space for each side. The minimum stud space for a plank to land is 3/8 in

Pay special attention to window, doors, and corners that have been trimmed before the siding goes on. Vertical trim boards may cover the king studs beside windows or doors, or they may cover up corner studs leaving no room for nailing the siding. In these places add extra studs as needed.

10.12 **Planking around windows**



COLORPLUS TIP: HardiePlank lap siding with ColorPlus Technology is shipped with a protective laminate slip sheet, which should be left in place during cutting and fastening to reduce marring and scratching. The sheet should be removed immediately after each plank is installed.

If corners are trimmed with HardieTrim® 5/4, 4/4 boards, it may be necessary to measure and cut the first pieces of siding to make sure the butt joints land on studs.

INSTALLING HARDIEPLANK® SIDING ON GABLE WALLS

Siding gable walls can be challenging, and some of the keys to siding gable walls efficiently are determining the angle or pitch of the roof, properly staging materials, and ensuring that the plank lengths are measured accurately.

To estimate the amount of siding needed to complete a gable end, use the estimating tools located in Appendix C.

Stage enough material on the pump jacks or scaffolding to complete the gable end, but take care not to overload the staging. When possible, a cut table should be located on the pump jacks or scaffolding, which frees up crew members to work on other walls.

ATTACHMENT 5

To cut planks for the gable:

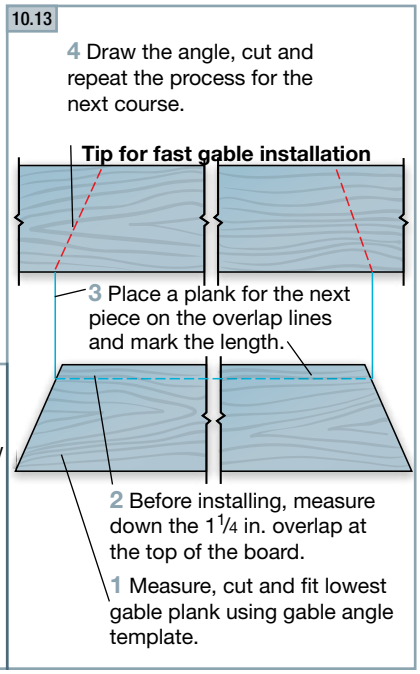
1. Tack up a small scrap piece of siding where the first gable course is going.
2. Hold a second small piece of siding against the eave or rake board.
3. Trace the angle onto the scrap.
4. Cut that line and label the scrap as the template for the gable angle. The template can then be used to transfer the angle onto the larger pieces for cutting and installation.
5. Periodically check the angle as you progress up the wall.

The quickest way to measure and cut consecutive courses of siding for a gable is to work off the previous piece.

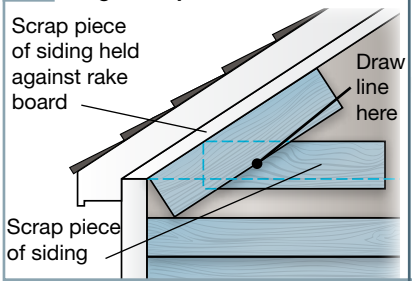
1. Cut and fit the lowest course of siding.
2. Before installing, lay it flat and measure down 1¼ in. from the top edge of the plank for the course overlap. Make a mark on both ends.
3. Set a piece of uncut siding on top of the first piece, aligning the bottom edge with the overlap marks. Transfer the length directly to the uncut piece.
4. Draw the gable angle with the template, cut the angle and then repeat the process for the next course.

TIP: Stainless steel fasteners are recommended when installing James Hardie® products.

10.13



10.14 **Angle Template**



HARDIEPLANK® SIDING FASTENER SPECIFICATIONS

The Fastener Specifications table shows fastener options for a variety of different nailing substrates. Please refer to the applicable ESR report online (see back page) to determine which fastener meets your wind load design criteria.

Fastener Substrate			Approved Fastener
wood studs	blind nail	16 in o.c.	3 9
		24 in o.c.	16
	face nail	16 in o.c.	2 5
		24 in o.c.	2 5
steel studs*	blind nail	16 in o.c.	8 13
		24 in o.c.	
	face nail	16 in o.c.	7 12
		24 in o.c.	
Direct to Masonry			14
7/16 in OSB or equivalent (face nailed)			4

Fastener Type

2 — .113 in x .267 in x 2 in — 6D common

3 — .093 in x .222 in. x 2 in — 6D siding nail

9 — No 11ga 1.25 in long — roofing nail

7 — Ribbed Bugle-Head No. 8 .323 in x 1.625 in — screws

8 — Ribbed Wafer-Head No. 8 (.375 in x 1.25 in)

12 — [AKN-100] .100 in x .25 in x 1.5 in — ET&F

13 — [AGS-100] .100 in x .313 in x 1.5 in

14 — [ASTM C-90] ASM-144-125 (P/C) .30 in x .14 in x 1.25 in — masonry nail

5 — .113 in x .260 in x 2.375 in — 8D common

16 — No 11ga 1.75 in long — roofing nail

4 — .091 in. x .221 in. x 1.5 in — 4D siding nail

*When blind fastening 9.5 in or wider product onto steel studs, use screws.

● indicates recommended fasteners

ATTACHMENT 5

HardiePlank® Lap Siding

EFFECTIVE SEPTEMBER 2019

IMPORTANT: FAILURE TO FOLLOW JAMES HARDIE WRITTEN INSTALLATION INSTRUCTIONS AND COMPLY WITH APPLICABLE BUILDING CODES MAY VIOLATE LOCAL LAWS, AFFECT BUILDING ENVELOPE PERFORMANCE AND MAY AFFECT WARRANTY COVERAGE. FAILURE TO COMPLY WITH ALL HEALTH AND SAFETY REGULATIONS WHEN CUTTING AND INSTALLING THIS PRODUCT MAY RESULT IN PERSONAL INJURY. BEFORE INSTALLATION, CONFIRM YOU ARE USING THE CORRECT HARDIEZONE® PRODUCT INSTRUCTIONS BY VISITING HARDIEZONE.COM OR CALL 1-866-942-7343 (866-9-HARDIE)

STORAGE & HANDLING:

Store flat and keep dry and covered prior to installation. Installing siding wet or saturated may result in shrinkage at butt joints. Carry planks on edge. Protect edges and corners from breakage. James Hardie is not responsible for damage caused by improper storage and handling of the product.

⚠ CUTTING INSTRUCTIONS

OUTDOORS

1. Position cutting station so that airflow blows dust away from the user and others near the cutting area.
2. Cut using one of the following methods:
   - a. Best: Circular saw equipped with a HardieBlade® saw blade and attached vacuum dust collection system. Shears (manual, pneumatic or electric) may also be used, not recommended for products thicker than 7/16 in.
   - b. Better: Circular saw equipped with a dust collection feature (e.g. Roan® saw) and a HardieBlade saw blade.
   - c. Good: Circular saw equipped with a HardieBlade saw blade.

INDOORS

DO NOT grind or cut with a power saw indoors. Cut using shears (manual, pneumatic or electric) or the score and snap method, not recommended for products thicker than 7/16 in.

- DO NOT dry sweep dust; use wet dust suppression or vacuum to collect dust.
- For maximum dust reduction, James Hardie recommends using the "Best" cutting practices. Always follow the equipment manufacturer's instructions for proper operation.
- For best performance when cutting with a circular saw, James Hardie recommends using HardieBlade® saw blades.
- Go to jameshardiepros.com for additional cutting and dust control recommendations.

IMPORTANT: The Occupational Safety and Health Administration (OSHA) regulates workplace exposure to silica dust. For construction sites, OSHA has deemed that cutting fiber cement with a circular saw having a blade diameter less than 8 inches and connected to a commercially available dust collection system per manufacturer's instructions results in exposures below the OSHA Permissible Exposure Limit (PEL) for respirable crystalline silica, without the need for additional respiratory protection.

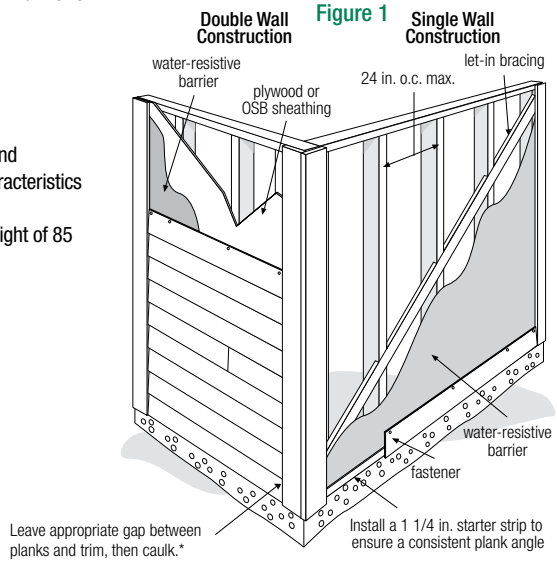
If you are unsure about how to comply with OSHA silica dust regulations, consult a qualified industrial hygienist or safety professional, or contact your James Hardie technical sales representative for assistance. James Hardie makes no representation or warranty that adopting a particular cutting practice will assure your compliance with OSHA rules or other applicable laws and safety requirements.

IMPORTANT: To prevent damage to the drip edge, extra care should be taken when removing planks from the pallet, while handling, and when installing with a lap gauge. Please see additional handling requirements on page 4.

GENERAL REQUIREMENTS:

- HardiePlank® lap siding can be installed over braced wood or steel studs, 20 gauge (33 mils) minimum to 16 gauge (54 mils) maximum, spaced a maximum of 24 in o.c. or directly to minimum 7/16 in thick OSB sheathing. See General Fastening Requirements. Irregularities in framing and sheathing can mirror through the finished application. Correct irregularities before installing siding.
- Information on installing James Hardie products over non-nailable substrates (ex: gypsum, foam,etc.) can be located in JH Tech Bulletin 19 at www.jamehardie.com
- A water-resistive barrier is required in accordance with local building code requirements. The water-resistive barrier must be appropriately installed with penetration and junction flashing in accordance with local building code requirements. James Hardie will assume no responsibility for water infiltration. James Hardie does manufacture HardieWrap® Weather Barrier, a non-woven non-perforated housewrap[1], which complies with building code requirements.
- Adjacent finished grade must slope away from the building in accordance with local building codes - typically a minimum of 6 in. in the first 10 ft..
- Do not use HardiePlank lap siding in Fascia or Trim applications.
- Do not install James Hardie products, such that they may remain in contact with standing water.
- HardiePlank lap siding may be installed on flat vertical wall applications only.
- For larger projects, including commercial and multi-family projects, where the span of the wall is significant in length, the designer and/or architect should take into consideration the coefficient of thermal expansion and moisture movement of the product in their design. These values can be found in the Technical Bulletin "Expansion Characteristics of James Hardie® Siding Products" at www.jameshardie.com.
- James Hardie Building Products provides installation /wind load information for buildings with a maximum mean roof height of 85 feet. For information on installations above 60 feet, please contact JH technical support.

Figure 1



INSTALLATION: JOINT TREATMENT

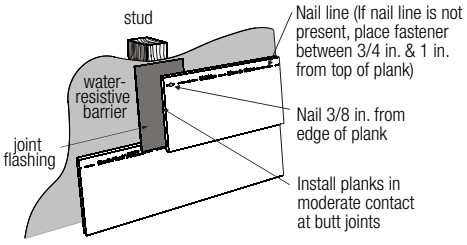
One or more of the following joint treatment options are required by code *(as referenced 2009 IRC R703.10.2)*

A. Joint Flashing (James Hardie recommended)

B. Caulking* (Caulking is not recommended for ColorPlus for aesthetic reasons as the Caulking and ColorPlus will weather differently. For the same reason, do not caulk nail heads on ColorPlus products.)

C. "H" jointer cover

Figure 2



Note: Field painting over caulking may produce a sheen difference when compared to the field painted PrimePlus. *Refer to Caulking section in these instructions.
[1]For additional information on HardieWrap® Weather Barrier, consult James Hardie at 1-866-4Hardie or www.hardiewrap.com

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Visit jameshardiepros.com for the most recent version.

HS11117 P1/4 09/19

CLEARANCE AND FLASHING REQUIREMENTS

Figure 3
Roof to Wall

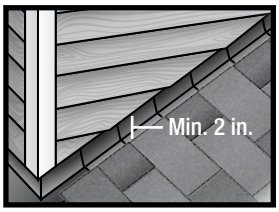


Figure 4
Horizontal Flashing

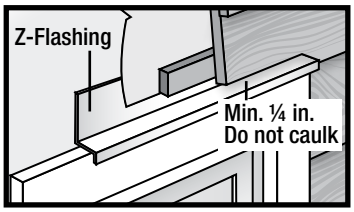


Figure 5
Kickout Flashing

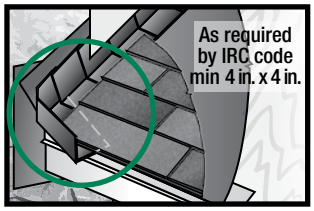


Figure 6
Slabs, Path, Steps to Siding

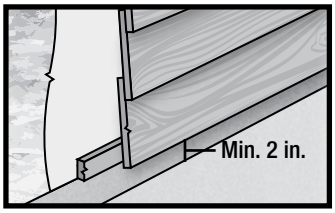


Figure 7
Deck to Wall

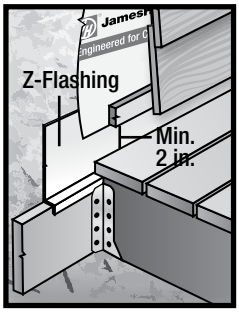


Figure 8
Ground to Siding

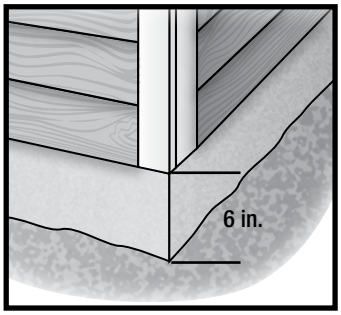


Figure 9
Gutter to Siding

Figure 10
Sheltered Areas

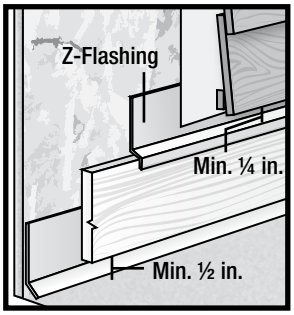


Figure 11
Mortar/Masonry

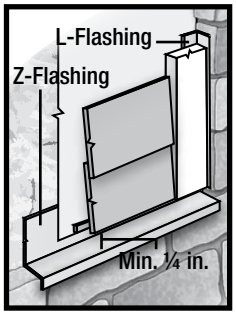


Figure 12
Drip Edge

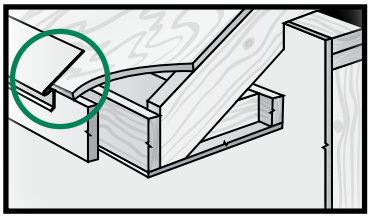


Figure 13
Block Penetration

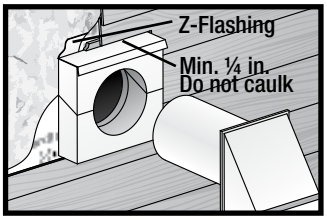
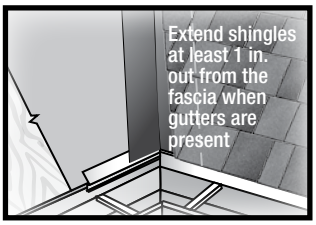


Figure 14
Valley/Shingle Extension



FASTENER REQUIREMENTS*

Refer to the applicable ESR report online to determine which fastener meets your wind load design criteria.

Blind Nailing is the preferred method of installation for HardiePlank® lap siding products. Face nailing should only be used where required by code for high wind areas and must not be used in conjunction with Blind nailing (Please see JH Tech bulletin 17 for exemption when doing a repair).

BLIND NAILING

Nails - Wood Framing
- Siding nail (0.09 in. shank x 0.221 in. HD x 2 in. long)
- 11ga. roofing nail (0.121 in. shank x 0.371 in. HD x 1.25 in. long)

Screws - Steel Framing
- Ribbed Wafer-head or equivalent (No. 8 x 1 1/4 in. long x 0.375 in. HD) Screws must penetrate 3 threads into metal framing.

Nails - Steel Framing
- ET & F Panelfast® nails or equivalent (0.10 in. shank x 0.313 in. HD x 1-1/2 in. long) Nails must penetrate minimum 1/4 in. into metal framing.

OSB minimum 7/16 in.
- Siding nail (0.09 in. shank x 0.215 in. HD x 1-1/2 in. long
- Ribbed Wafer-head or equivalent (No. 8 x 1 5/8 in. long x 0.375 in. HD).

FACE NAILING

Nails - Wood Framing
- 6d (0.113 in. shank x 0.267 in. HD x 2 in. long)
- Siding nail (0.09" shank x 0.221" HD x 2" long)

Screws - Steel Framing
- Ribbed Bugle-head or equivalent (No. 8-18 x 1-5/8 in. long x 0.323 in. HD) Screws must penetrate 3 threads into metal framing.

Nails - Steel Framing
- ET & F pin or equivalent (0.10 in. shank x 0.25 in. HD x 1-1/2 in. long) Nails must penetrate minimum 1/4 in. into metal framing.

OSB minimum 7/16 in.
- Siding nail (0.09 in. shank x 0.221 in. HD x 1-1/2 in. long)

*Also see General Fastening Requirements; and when considering alternative fastening options refer to James Hardie's Technical Bulletin USTB 5 - Fastening Tips for HardiePlank Lap Siding.

FASTENER REQUIREMENTS *continued*

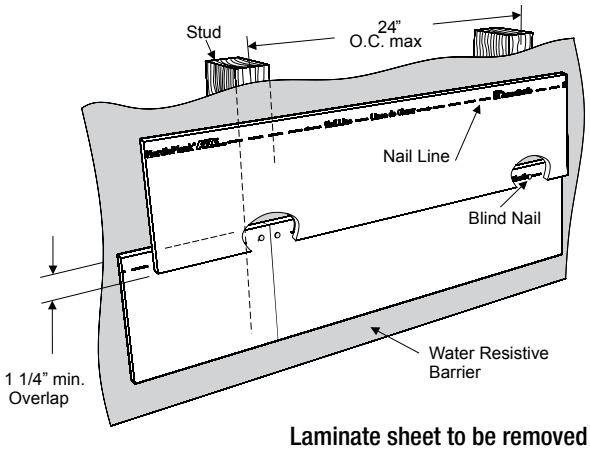


Figure 14

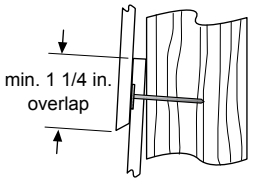
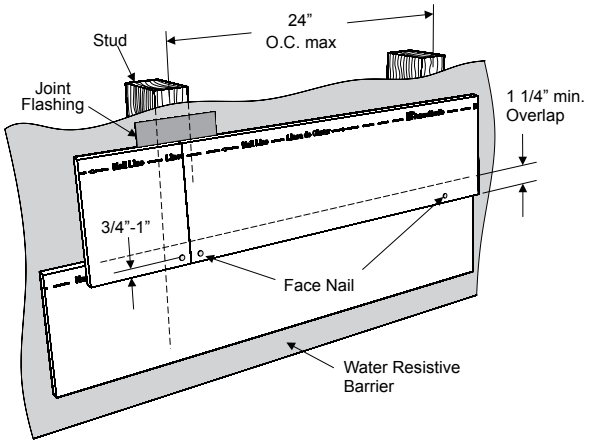


Figure 15



Laminate sheet to be removed immediately after installation of each course for ColorPlus® products.

Pin-backed corners may be done for aesthetic purposes only. Finish nails are recommended for pin-backs. Headed siding nails are allowed. Place pin-backs no closer than 1 in. from plank ends and 3/4 in. from plank edge into min. 3/8 in. wood structural panel. Pin-backs are not a substitute for blind or face nailing.

GENERAL FASTENING REQUIREMENTS

Fasteners must be corrosion resistant, galvanized, or stainless steel. Electro-galvanized are acceptable but may exhibit premature corrosion. James Hardie recommends the use of quality, hot-dipped galvanized nails. James Hardie is not responsible for the corrosion resistance of fasteners. Stainless steel fasteners are recommended when installing James Hardie® products near the ocean, large bodies of water, or in very humid climates.

Manufacturers of ACQ and CA preservative-treated wood recommend spacer materials or other physical barriers to prevent direct contact of ACQ or CA preservative-treated wood and aluminum products. Fasteners used to attach HardieTrim Tabs to preservative-treated wood shall be of hot dipped zinc-coated galvanized steel or stainless steel and in accordance to 2009 IRC R317.3 or 2009 IBC 2304.9.5

- Consult applicable product evaluation or listing for correct fasteners type and placement to achieve specified design wind loads.
- NOTE: Published wind loads may not be applicable to all areas where Local Building Codes have specific jurisdiction. Consult James Hardie Technical Services if you are unsure of applicable compliance documentation.
- Drive fasteners perpendicular to siding and framing.
- Fastener heads should fit snug against siding (no air space).
- NOTE: Whenever a structural member is present, HardiePlank should be fastened with even spacing to the structural member. The tables allowing direct to OSB or plywood should only be used when traditional framing is not available.

CUT EDGE TREATMENT

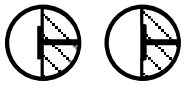
Caulk, paint or prime all field cut edges. James Hardie touch-up kits are required to touch-up ColorPlus products.

CAULKING

For best results use an Elastomeric Joint Sealant complying with ASTM C920 Grade NS, Class 25 or higher or a Latex Joint Sealant complying with ASTM C834. Caulking/Sealant must be applied in accordance with the caulking/sealant manufacturer's written instructions. **Note: some caulking manufacturers do not allow "tooling".**

PNEUMATIC FASTENING

James Hardie products can be hand nailed or fastened with a pneumatic tool. Pneumatic fastening is highly recommended. Set air pressure so that the fastener is driven snug with the surface of the siding. A flush mount attachment on the pneumatic tool is recommended. This will help control the depth the nail is driven. If setting the nail depth proves difficult, choose a setting that under drives the nail. (Drive under driven nails snug with a smooth faced hammer - Does not apply for installation to steel framing).



DO NOT

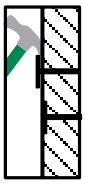
UNDER DRIVE

IF, THEN

WOOD FRAME

HAMMER FLUSH

STEEL FRAME



REMOVE & REPLACE

DO NOT

OVER DRIVE **SLANT**

IF, THEN ADDITIONAL NAIL

FACE NAIL

COUNTERSINK & FILL

DO NOT USE

ALUMINUM FASTENERS

CLIPPED HEAD NAILS

STAPLES

PAINTING

DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® products. Factory-primed James Hardie products must be painted within 180 days of installation. 100% acrylic topcoats are recommended. Do not paint when wet. For application rates refer to paint manufacturers specifications. Back-rolling is recommended if the siding is sprayed.

COLORPLUS® TECHNOLOGY CAULKING, TOUCH-UP & LAMINATE

- Care should be taken when handling and cutting James Hardie ColorPlus® products. During installation use a wet soft cloth or soft brush to gently wipe off any residue or construction dust left on the product, then rinse with a garden hose.
- Touch up nicks, scrapes and nail heads using the ColorPlus® Technology touch-up applicator. Touch-up should be used sparingly. If large areas require touch-up, replace the damaged area with new HardiePlank® lap siding with ColorPlus® Technology.
- Laminate sheet must be removed immediately after installation of each course.
- Terminate non-factory cut edges into trim where possible, and caulk. Color matched caulks are available from your ColorPlus® product dealer.
- Treat all other non-factory cut edges using the ColorPlus Technology edge coaters, available from your ColorPlus product dealer.

Note: James Hardie does not warrant the usage of third party touch-up or paints used as touch-up on James Hardie ColorPlus products.

Problems with appearance or performance arising from use of third party touch-up paints or paints used as touch-up that are not James Hardie touch-up will not be covered under the James Hardie ColorPlus Limited Finish Warranty.

COVERAGE CHART/ESTIMATING GUIDE

Number of 12 ft. planks, does not include waste

COVERAGE AREA LESS OPENINGS

	HARDIEPLANK® LAP SIDING WIDTH								
SQ (1 SQ = 100 sq.ft.)	(exposure)	5 1/4 4	6 1/4 5	7 1/4 6	7 1/2 6 1/4	8 6 3/4	8 1/4 7	9 1/4 8	9 1/2 8 1/4	12 10 3/4
1		25	20	17	16	15	14	13	13	9
2		50	40	33	32	30	29	25	25	19
3		75	60	50	48	44	43	38	38	28
4		100	80	67	64	59	57	50	50	37
5		125	100	83	80	74	71	63	63	47
6		150	120	100	96	89	86	75	75	56
7		175	140	117	112	104	100	88	88	65
8		200	160	133	128	119	114	100	100	74
9		225	180	150	144	133	129	113	113	84
10		250	200	167	160	148	143	125	125	93
11		275	220	183	176	163	157	138	138	102
12		300	240	200	192	178	171	150	150	112
13		325	260	217	208	193	186	163	163	121
14		350	280	233	224	207	200	175	175	130
15		375	300	250	240	222	214	188	188	140
16		400	320	267	256	237	229	200	200	149
17		425	340	283	272	252	243	213	213	158
18		450	360	300	288	267	257	225	225	167
19		475	380	317	304	281	271	238	238	177
20		500	400	333	320	296	286	250	250	186

This coverage chart is meant as a guide. Actual usage is subject to variables such as building design. James Hardie does not assume responsibility for over or under ordering of product.

PAINTING JAMES HARDIE® SIDING AND TRIM PRODUCTS WITH COLORPLUS® TECHNOLOGY

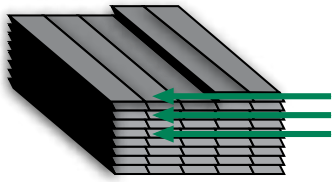
When repainting ColorPlus products, James Hardie recommends the following regarding surface preparation and topcoat application:

- Ensure the surface is clean, dry, and free of any dust, dirt, or mildew
- Repriming is normally not necessary
- 100% acrylic topcoats are recommended
- DO NOT use stain, oil/alkyd base paint, or powder coating on James Hardie® Products.
- Apply finish coat in accordance with paint manufacturers written instructions regarding coverage, application methods, and application temperature
- DO NOT caulk nail heads when using ColorPlus products, refer to the ColorPlus touch-up section

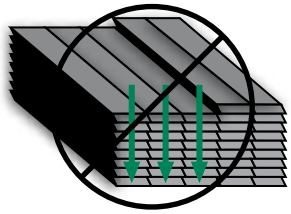
ADDITIONAL HANDLING REQUIREMENTS

IMPORTANT: To prevent damage to the drip edge, extra care should be taken when removing planks from the pallet, while handling, and when installing with a lap gauge. Planks are interlocked together on the pallet, therefore they should be removed from the pallet horizontally (side to side) to allow planks to unlock themselves from one another.

Pull from across the stack



Do not go down the stack



HS11117 P4/4 09/19

SILICA WARNING

DANGER: May cause cancer if dust from product is inhaled. Causes damage to lungs and respiratory system through prolonged or repeated inhalation of dust from product. Refer to the current product Safety Data Sheet before use. The hazard associated with fiber cement arises from crystalline silica present in the dust generated by activities such as cutting, machining, drilling, routing, sawing, crushing, or otherwise abrading fiber cement, and when cleaning up, disposing of or moving the dust. When doing any of these activities in a manner that generates dust you must (1) comply with the OSHA standard for silica dust and/or other applicable law, (2) follow James Hardie cutting instructions to reduce or limit the release of dust; (3) warn others in the area to avoid breathing the dust; (4) when using mechanical saw or high speed cutting tools, work outdoors and use dust collection equipment; and (5) if no other dust controls are available, wear a dust mask or respirator that meets NIOSH requirements (e.g. N-95 dust mask). During clean-up, use a well maintained vacuum and filter appropriate for capturing fine (respirable) dust or use wet clean-up methods - never dry sweep.

WARNING: This product can expose you to chemicals including respirable crystalline silica, which is known to the State of California to cause cancer. For more information go to P65Warnings.ca.gov.

RECOGNITION: In accordance with ICC-ES Evaluation Report ESR-2290, HardiePlank® lap siding is recognized as a suitable alternate to that specified in the 2006, 2009, 2012 & 2015 International Residential Code for One and Two-Family Dwellings, and the 2006, 2009, 2012 & 2015 International Building Code. HardiePlank lap siding is also recognized for application in the following: City of Los Angeles Research Report No. 24862, State of Florida Product Approval FL#13192, Miami-Dade County Florida NOA No. 17-0406.06, U.S. Dept. of HUD Materials Release 1263f, Texas Department of Insurance Product Evaluation EC-23, City of New York MEA 223-93-M, and California DSA PA-019. These documents should also be consulted for additional information concerning the suitability of this product for specific applications.

Build something great™

ATTACHMENT 5

Boral **TruExterior® Trim**

PRODUCT & INSTALLATION GUIDE

About Boral®

Boral **Bricks**

Boral **Roofing**

Cultured Stone® by Boral®

Boral **TruExterior® Trim**

Boral Limited

Boral is an international building and construction materials group, headquartered in Sydney, Australia. With annual sales over $5.0 billion, Boral has roughly 14,000 employees working across over 580 operating sites. Boral produces and distributes a broad range of Construction Materials including quarry products, cement, fly ash, pre-mix concrete and asphalt; and Building Products including clay brick, clay and concrete roof tiles, masonry products, plasterboard, windows and timber. Boral serves customers in the building and construction industries in three key geographical markets - Australia, the USA and Asia.

Boral USA

Headquartered in Roswell, Georgia, Boral USA has been in operation for more than 30 years—with a focus on being a leading manufacturer and supplier of building products and construction materials.

- Boral USA currently holds a variety of leadership positions in the building products and construction materials markets.
- The company is active in categories that show long-term growth opportunities.
- Boral USA is a leading manufacturer and marketer of:

  Boral Bricks – #1 brand of clay brick

  Boral Roofing – Largest manufacturer of clay & concrete roof tiles in the U.S.

  Cultured Stone® by Boral® – #1 brand of manufactured stone veneer

  Boral Material Technologies – A leading marketer of fly-ash

  Boral Composites - Producer of Boral TruExterior® Trim and other innovative poly-ash products

Boral TruExterior® Trim has created an entirely new category of exterior trim, bringing new levels of performance, features, and benefits. It truly is like no other.

A New Category of Exterior Trim

A New Category of Exterior Trim

- The first and only Poly-ash trim product, consisting of a blend of proprietary polymers and coal combustion products (ash).
- Poly-ash composition provides consistency throughout the material with virtually no moisture cycling+ or expansion and contraction+.
- Developed with years of rigorous internal and 3rd party testing, proven with thousands of installations.
- Composed of more than 70% recycled materials.
- Boral TruExterior® Trim is a product you can trust to provide exceptional performance, superior workability and a lasting appearance for exterior applications.

An Excellent Exterior Trim Alternative

Like Wood, Boral TruExterior® Trim…

- is easy to handle (similar weight)
- is reversible with an authentic wood grain and smooth side
- is easy to cut, rout, drill and fasten
- can be installed with the same tools

Unlike Wood, Boral TruExterior® Trim…

- is a low maintenance product
- has exceptional durability
- is resistant to rotting, cracking, splitting from moisture and virtually free from termites+
- offers excellent workability

Unlike most other trim products, Boral TruExterior® Trim…

- maintains a high level of dimensional stability during periods of moisture and temperature change+
- is suitable for ground contact
- does not require end-sealing, special adhesives or other cumbersome and costly installation techniques
- can be painted any color
- contains one of the highest levels of recycled content

+Please see Boral TruExterior® Trim Limited Warranty and Product Data Sheets for proprietary test results located at www.BoralTruExterior.com

Like No Other

Boral TruExterior® Trim satisfies the exterior trim customer's need for a product that is:

- **Easy to install**
- **Long-lasting, withstanding nature's elements**
- **Competitively priced compared to other products in the marketplace**

Superior Workability

Boral TruExterior® Trim is creating an entirely new category of reliable exterior trim that offers phenomenal performance, remarkable workability, and a lasting look without the limitations that plague other exterior trim products. Plus it can be installed using proven woodworking tools and methods.

Applications

Designed to be used in non-structural applications, Boral TruExterior® Trim is suited for ground contact, which makes it ideal for exterior trim applications such as:

- **Corners**
- **Soffits**
- **Fascia**
- **Batten strips**
- **Frieze boards**
- **Rake boards**
- **Garage door casings**
- **Window surrounds**
- **Door trim**
- **Other non-structural exterior trim applications**

Boral TruExterior® Beadboard

Boral TruExterior® Beadboard

Complimenting the 1x and 5/4 profiles, Boral TruExterior® Beadboard offers the traditional look of wood beadboard without the problems that plague wood products, such as rotting, cupping and twisting. Boral TruExterior® Beadboard can be installed in either parallel, perpendicular, or diagonal directions. And its high level of dimensional stability[+] allows fastening up to 24” on center without the need for additional support backing.

Boral TruExterior® Beadboard is designed for non-structural applications and is ideal for soffits, porch ceilings, decorative wall applications and other moisture-prone areas.

Boral TruExterior® Beadboard Facts

- Maintains high level of dimensional stability[†]
- No need to prime end or field cuts
- Easily accepts paint of any color
- Reversible edge & center bead and V-groove profiles
- Workability exceeds wood beadboard
- Resists rot and termite attacks[†]
- Installs with standard woodworking tools and methods
- No cracking or splitting from moisture
- Accepts a wide variety of fasteners
- Spans up to 24” on center and can be ran parallel to the house for soffit applications
- Made in the USA
- 20-year limited warranty

[+]Please see Boral TruExterior® Trim Limited Warranty and Product Data Sheets for proprietary test results located at www.BoralTruExterior.com

Boral TruExterior® Trim

Available Sizes

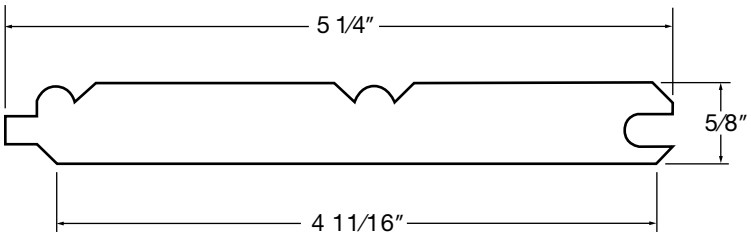
Boral TruExterior® Trim is reversible with wood grain on one side and a smooth finish on the reverse. It comes in 16' lengths and is available in both 4/4 and 5/4 thicknesses (3/4" and 1" actual, respectively).

4/4 Nominal Thickness *nominal size*	3/4" Actual Thickness *actual size*	5/4 Nominal Thickness *nominal size*	1" Actual Thickness *actual size*	2" Nominal Thickness *nominal size*	1 1/2" Actual Thickness *actual size*
1 x 4	3/4" x 3 1/2"	5/4 x 4	1" x 3 1/2"	2 x 4	1 1/2" x 3 1/2"
1 x 5*	3/4" x 4 1/2"	-	-	-	-
1 x 6	3/4" x 5 1/2"	5/4 x 6	1" x 5 1/2"	2 x 6	1 1/2" x 5 1/2"
1 x 8	3/4" x 7 1/4"	5/4 x 8	1" x 7 1/4"	2 x 8	1 1/2" x 7 1/4"
1 x 10	3/4" x 9 1/4"	5/4 x 10	1" x 9 1/4"	2 x 10	1 1/2" x 9 1/4"
1 x 12	3/4" x 11 1/4"	5/4 x 12	1" x 11 1/4"	2 x 12	1 1/2" x 11 1/4"

*Subject to regional availability.

Beadboard Product Dimensions

Nominal Dimensions	Actual Dimensions
5/8 x 6 x 16	5/8" x 5 1/4" x 16'



The Exterior Trim Landscape

Boral TruExterior® Trim compared to Other Trim Options

	BORAL TRUEXTERIOR® TRIM	WOOD TRIM	CELLULAR PVC TRIM	FIBER CEMENT TRIM	ENGINEERED/ COMPOSITE TRIM
No Special Tools Required	•	•	•		•
Easily Routed	•	•	•	✓	✓
Consistent Density	•		✓	•	
Fasten Close to Edge of Product	•		•		
Readily Accepts Wide Variety of Fasteners	•	✓	✓		
No Special Paint Needed For Light or Dark Colors	•	•		•	•
No Additional Safety Precautions Needed While Cutting	•	•	•		•
Installs the Same Way at All Temperatures	•	•		•	•
No Need to Prime End or Field Cuts	•		•		
No Need for Adhesives to Limit Movement	•	•		•	•
Dimensionally Stable After Installation+	•	✓		•	
Suitable for Ground and Masonry Contact	•		•		
No Cracking or Splitting from Moisture+	•		•	✓	✓
Resistant to Fungal Decay+	•		•		
Over 70% Recycled Content+	•				
Made in the USA	•	✓	✓	✓	✓

● **All in Category** ✓ **Some in Category**

+Please see Boral TruExterior® Trim Limited Warranty and Product Data Sheets for proprietary test results located at www.BoralTruExterior.com

The Sustainable Solution

In the U.S., Boral continues the company's mission of being a leader in sustainability by engaging in such areas as alternative fuel sources and waste water management systems.

CERTIFIED cradle to cradle SILVER

- Boral is committed to global environmental stewardship, which is reflected in Boral TruExterior® Trim – the first and only exterior trim product to be awarded a Cradle to Cradle certification (C2C). C2C is a multi-attribute, eco-label that assesses a product's safety to humans, environment and design for future life cycles. Within the terms of the certification program, this means pursuing the following ideals:
  - Using material that is safe for human health and the environment
  - Designing products and systems for material recovery and reutilization, such as recycling or composting
  - Using renewable energy
  - Efficiently using water and realizing maximum water quality associated with production
  - Instituting strategies for social responsibility

For more information on Cradle to Cradle Certification, please visit www.C2Ccertified.com

Cradle to Cradle Certified℠ is a certification licensed by the Cradle to Cradle Products Innovation Institute.

SCScertified™ MINIMUM 70% RECYCLED CONTENT PRE-CONSUMER

- Boral TruExterior® Trim boasts the highest recycled content among all exterior trim products with a SCS Global Certified minimum 70% recycled content. The SCS Recycled Content certification is designed to help manufacturers make credible claims about their products by increasing the use of recycled materials which reduces solid waste and natural resource consumption. All claims are certified in accordance with U.S. Federal Trade Commission's Guides for the Use of Environmental Marketing.

For more information on SCS Global, please visit www.SCSglobalservices.com

U.S. GREEN BUILDING COUNCIL LEED SILVER USGBC

- Coal Combustion products are endorsed by the U.S. Green Building Council for use in construction materials.

For more information on the U.S. Green Building Council, please visit www.USGBC.org

- Boral TruExterior® Trim is produced in a state of the art LEED Silver Certified facility in East Spencer, NC.

Warranty

This express Limited Product Warranty ("Warranty") covers performance of trim product ("Trim Product") manufactured by Boral Composites Inc. ("BCI"). This Warranty extends only to the original owner of the structure in which the Trim Product is installed ("Qualified Owner").

BCI warrants to the Qualified Owner that each Trim Product will be free from manufacturing defects such that the Trim Product: 1) will not decay due to rot; 2) will not excessively swell from moisture; and 3) will resist termite damage in each case to the extent such properties are proven in the tests set forth in the Boral TruExterior® Trim Product Data Sheet, as amended from time to time, which is located at the www.BoralTruExterior.com website. The duration of this Warranty is twenty (20) years from the date the Trim Products were originally purchased from an approved BCI vendor. This warranty is conditioned on and subject to the additional terms and conditions set forth below.

To make a Warranty claim, the Qualified Owner must: (1) notify BCI in writing within ninety (90) days after the facts on which the claim is based become known, (2) provide BCI an opportunity to investigate and approve the claim, and (3) provide BCI an opportunity to inspect and test the Trim Product, its installation, and the environment in which it was used prior to removal by the original purchaser. Warranty claims must be made during the duration of the Warranty. Failure to comply with these notice and inspection provisions shall void this Warranty.

If BCI finds that any of your Trim Product does not meet the Warranty set forth herein, after inspecting and testing the Trim Product, BCI will furnish at its sole option new Trim Product, free of charge, to replace each defective area of Trim Product or refund the purchase price of the defective Trim Product. These remedies are the Qualified Owner's exclusive remedies for breach of warranty. BCI shall not be responsible for labor costs and shall not be liable for any other losses or damages.

Specific Exclusions: This Warranty does not cover (a) damage to the Trim Product caused during installation; (b) Trim Product not installed in accordance with appropriate local building codes and acceptable trade practices in that specified area; (c) damage caused due to failure to follow painting guidelines provided by BCI; (d) intentional or unintentional misuse of or damage to the Trim Product; (e) damage to Trim Product or structure caused by impact of foreign objects, earthquakes, fire, flood, lightning, ice, tornado, hurricane, windstorm, or any other Acts of God; (f) movement, settlement, distortion, warping or cracking of the Trim Product's structural supports or accessories used in connection therewith; (g) physical abuse, vandalism, riot, insurrection, improper maintenance, use of incompatible accessories; (h) color fading, color changes or variations of the color hue or physical deterioration of the color for any reasons including, but not limited to pollution, mold, mildew, acid rain, weathering, oxidation, air pollutants, or application of harmful chemicals or vapors to the Trim Product. This Warranty also does not cover trim manufactured by others, accessory materials, or installation labor provided by others.

This is the entire Warranty between BCI and the Qualified Owner with respect to Trim Product. This Warranty supercedes all prior and contemporaneous agreements, representations, or understandings, whether oral or written, relating to Trim Products. Statements contained in BCI's advertising materials do not constitute a warranty. THIS WARRANTY IS THE SOLE WARRANTY GIVEN BY BCI WITH RESPECT TO THE TRIM PRODUCTS. BCI DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. IF YOU LIVE IN A STATE WHERE THE DISCLAIMER OF IMPLIED WARRANTIES IS NOT ALLOWED, THEN THE DURATION OF ANY IMPLIED WARRANTY IS HEREBY LIMITED TO THE DURATION OF THE EXPRESS WARRANTIES. OTHERWISE, THIS WARRANTY IS THE QUALIFIED OWNER'S SOLE AND EXCLUSIVE REMEDY.

BCI reserves the right, in its sole discretion, to modify or withdraw this Warranty, in which event this Warranty will not be applicable to any purchases of Trim Products that occur after the date of modification or withdrawal.

BCI shall in no event be liable under any circumstances for incidental, punitive, consequential, exemplary or other damages, or for any damages to any structure or its contents or its occupants, whether any such claim is based upon theories of contract, warranty, negligence, tort, strict liability or otherwise. This express Warranty excludes all costs of labor, installation, reinstallation, freight, taxes or any other charge related to defective Trim Product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

This Warranty gives the Qualified Owner specific legal rights, and the Qualified Owner may have other rights which may vary from state to state.

For further information concerning this Warranty or to report claims, contact:

Boral Composites Inc.
Attention: Director of Sales and Marketing
200 Mansell Court East, Suite 305
Roswell, Georgia 30076

Revision. 2.13

Installation Guidelines

The following information offers typical installation techniques when working with Boral TruExterior® Trim. This product should never be used in structural or load bearing applications. These directions are guidelines. As with installing any building material, care should be taken to adhere to local code requirements and construction best practices to ensure installation is adequate for each specific application.

Storage and Handling

Boral TruExterior® Trim should be stored on a flat, level surface. Pallets are shipped from the manufacturing facility in a protective covering and each board has a factory applied primer, so care should be taken to keep the board covered and free of dirt and debris. If the board gets dirty, make sure to clean and dry it prior to painting.

Working With Boral TruExterior® Trim

This product is an excellent replacement for wood trim and can be installed using proven woodworking tools and methods. For ease of use, consider the following before working:

- **Cutting** – Boral TruExterior® Trim can be cut using standard saw blades. However, for longer tool life carbide tipped blades are recommended.
- **Routing & Drilling** – Boral TruExterior® Trim can be drilled and routed using standard woodworking tools, but a carbide tipped router and drill bits are recommended.
- **Fastening**
  - Use fasteners designed for exterior trim and siding
  - Use 2 fasteners per every framing member and 3 fasteners for all 12” wide boards.
  - Fasteners should be installed every 24" OC or less. For best results, place fasteners within 2" of the edge of each board.

For 2x applications:

  - Use a fastener that is long enough to penetrate a solid wood substrate a minimum of 1 1/2"
  - Fasteners should penetrate a framing member. Sheathing alone may not provide adequate support or holding power.

- **Safety** – In working with any product that may cause airborne debris such as nuisance dust, be sure to take proper measures to protect against eye and inhalation hazards.

Standard nail guns and screws can be used to install Boral TruExterior® Trim as it takes a variety of fasteners with ease and does not mushroom at the screw head nor require pre-drilling.

Boral TruExterior® Trim is a non-structural building material and should never be used in load-bearing or structural applications. Fasteners should be installed every 24” OC or less. For best results, be sure to place fasteners within 2” of the end of every board. Proper care should be taken to understand the desired application and ensure that proper framing and fasteners are adequate for the installation.

Expansion and Contraction – Boral TruExterior® Trim is very stable[+] during periods of temperature and moisture change; no special precautions are necessary to control or limit movement.

Use at Grade – Since Boral TruExterior® Trim is virtually impervious to water absorption, termite attacks and won’t rot[+], it is approved for ground contact.

Nail Holes and Repair – Filling nail and screw holes or repairing any minor damage caused by handling may be done using high-grade acrylic caulk or wood fillers.

Painting Boral TruExterior® Trim is a requirement, and failure to do so will void the warranty. As in preparing for any painting project, be sure the surface of the product is free of dirt, debris or other contaminants prior to paint application. Boral TruExterior® Trim can be painted using any high grade exterior paint. Make sure to follow the paint manufacturer’s application recommendations.

More information can be found in Boral's technical bulletin for paint or in the product warranty. Both documents can be found at www.BoralTruExterior.com.

Boral TruExterior® Trim may be painted any color without special precaution as the product is not prone to excessive movement due to heat buildup.[+]

Boral TruExterior® Trim is virtually impervious to moisture[+], so there is no need to prime or paint end-cuts or field-cut edges.

Moisture cycling is a primary cause for paint failure on wood products. Since Boral TruExterior® Trim is resistant to this moisture cycling[+]; paint will perform better.

[+]Please see the Boral TruExterior® Trim Product Data Sheet at www.BoralTruExterior.com for property test results.

ATTACHMENT 5

Download a QR Code reader app for your smartphone, then take a photo to visit our website

PROUDLY MADE IN THE USA

1.888.9BORAL9 | www.BoralTruExterior.com

BRICKS
STONE
TRIM
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BORAL®