**SELECT CEDARMAX® - SMOOTH - COLONIAL SMOOTH® - COLONIAL ROUGHSAWN® BEADED CEDARMAX® BEADED SMOOTH - STRAIGHT-EDGE SHINGLE PLANK**

**IMPORTANT FAILURE TO INSTALL AND FINISH THIS PRODUCT IN ACCORDANCE WITH APPLICABLE BUILDING CODES AND JAMES HARDIE WRITTEN APPLICATION INSTRUCTIONS MAY LEAD TO PERSONAL INJURY, AFFECT SYSTEM PERFORMANCE, VIOLATE LOCAL BUILDING CODES, AND VOID THE PRODUCT ONLY WARRANTY.**

**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.
- 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:**
- **OUTSIDE:**
  1. Set siding station so that the wood will be cut away from user and others traveling area.
  2. Use one of the following methods:
     a. **Dry Cut:**
        i. Use a circular saw or jigsaw.
        ii. Use a circular saw or jigsaw.
  3. **Inside:**
     a. **Dry Cut:**
        i. Use a circular saw or jigsaw.
     b. **Wet Cut:**
        i. Use a circular saw or jigsaw with a water-resistant sawblade (a water-resistant sawblade will be used to cut inside the siding)

**ROUGHSawn®**
- **OUTSIDE:**
  1. Cut roughsawn siding in one pass. Use a circular saw or jigsaw.
  2. Use a circular saw or jigsaw.
- **INSIDE:**
  1. **Dry Cut:**
     a. Never use a power saw that does not use the embedded cutting blade (not required).
     b. **Wet Cut:**
        i. Use a circular saw or jigsaw with a water-resistant sawblade (a water-resistant sawblade will be used to cut inside the siding).

**GENERAL REQUIREMENTS:**
- Hardeplank™ lap siding can be installed over braces wood or steel studs spaced a maximum of 24" o.c. or 7/16" thick OSB sheathing. Hardeplank lap siding can also be installed over foam insulation up to 3/8" thick. Irregularities in framing, sheathing, and/or foam insulation can mar the finished application.
- A weather-resistant barrier is required in accordance with local building code requirements. The weather resistant barrier must be properly installed with penetration and junction flashings in accordance with local building code requirements. James Hardie will assume no responsibility for water infiltration.
- Install James Hardie® products with a minimum 6" clearance to the finished grade on the exterior of the building or in accordance with local building codes if greater than 6" is required (Fig. 1).
- Maintain a minimum 2" clearance between James Hardie products and roofs, decks, pails, steps, and driveways (Figs. 4 & 5).
- Maintain a 1/4" clearance between James Hardie products and horizontal flashing (Fig. 6).
- Install kickout flashing at roof-wall junctions, (Fig. 7). Ensure gutters have end caps and do not terminate against siding and trim.
- Adjacent finished grade must slope away from the building in accordance with local building codes; typically a minimum of 6" in the first 10'.
- Do not install James Hardie products, such as they may remain in contact with standing water.

**INSTALLATION:**
- Install a 1 1/4" starter strip to ensure a consistent plank angle (Figure 1).
- Use a J-Joint treatment option 1 in moisture contact.
- Use a J-Joint treatment option 2 (Not applicable to ColorPlus Finish).
- Joints are factory finished edges together at butt joints.
- Install with nails or screws in accordance with local building codes.

**WARNING: AVOID BREATHING SILICA DUST**
- James Hardie products contain a regulated system of silica, which is known in the State of California to cause cancer and is listed by NIOSH and OSHA as a cancer causing agent. Breathing excessive amounts of silica can cause silicosis, a disease that can also cause silicoproliferative disease, which can also be fatal. Control dust exposure, and washing thoroughly after exposure. The American Lung Association recommends using approved respirators and protective equipment in the manufacture of James Hardie products. James Hardie products do not pose any health risks to the consumer.

**ADDITIONAL INFORMATION:**
- Additional Information, Warranties, and Warnings are available at www.jameshardie.com

**EFFECTIVE FEBRUARY 2007**

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**Figure 1:** Double Wall Construction
- Weather-resistant barrier
- Joint treatment - Option 1
- Joint treatment - Option 2 (Not applicable to ColorPlus Finish)

**Figure 2:** Single Wall Construction
- Weather-resistant barrier
- Joint treatment - Option 1
- Joint treatment - Option 2 (Not applicable to ColorPlus Finish)

**Figure 3:** Install factory-finished edges together at butt joints.
- For other cutting options, refer to local building codes or NER 405.
- Only necessary on sheathing, plank can be a maximum of 1/4" wide and must have a minimum of 1/8" thick or 0.021" thick siliconized fiber cement board or 0.021" thick or 0.018" thick cement board or metal."
CLEARANCES
Install siding and trim products in compliance with local building code requirements for clearance between the bottom edge of the siding and the adjacent finished grade.

KICKOUT FLASHING
Because of the volume of water that can pour down a sloped roof, one of the most critical flashing details occurs where a roof intersects a sideway. The roof must be flashed with step flashing. Where the roof terminates, install a kickout to deflect water away from the siding (Figure 7).

It is best to install a full-rebated asphalt flashing on the wall below the subflash and trim boards are nailed in place, and then come back to install the kickout.

Figure 7, Kickout Flashing To prevent water from dumping behind the siding and the end of the roof intersection, bend a small "kickout" from metal flashing to divert water running down the roof away from the siding.

FASTENER REQUIREMENTS
FACE NAILING
Corrosion Resistant Nails (galvanized or stainless steel)
- 6d (0.113" shank x 0.267" HD x 2" long)
- 8d (0.113" shank x 0.227" HD x 2" long)
- 10d (0.113" shank x 0.312" HD x 1-1/2" long)

Corrosion Resistant Screws
- Ribbed Bugle-head or equivalent (No. 8 1-1/2" long x 0.322" #2 HCS Screws must penetrate 1/4" or 3 threads into metal framing.

Corrosion Resistant Fasteners
- ET & F pin (0.100" shank x 0.25" HD x 1-1/2" long)

BLIND NAILING
Corrosion Resistant Nails (galvanized or stainless steel)
- 6d (0.113" shank x 0.267" HD x 1.14" long)
- 8d (0.113" shank x 0.227" HD x 1.14" long)
- 10d (0.113" shank x 0.312" HD x 1.50" long)

Corrosion Resistant Screws
- Ribbed Waterhead or equivalent (No. 8 1-1/2" long x 0.317" HD) Screws must penetrate 1/4" or 3 threads into metal framing.

Corrosion Resistant Fasteners
- ET & F Panelfast (0.100" shank x 0.313" HD x 1.12" long)

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 high-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.

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 of the head is driven. If setting the nail depth proves difficult, choose a setting that under drives the nail. Drive under drives nails snug with a smooth faced hammer.

CAULKING
Caulk, paint or prime all cut edges for best results use a latex sealant that complies with either ASTM C834 or ASTM C320 (Grade NS, Class C). Caulking must be applied in accordance with the caulking manufacturer's written instructions.

PAINTING
James Hardie products must be painted. 100% acrylic topcoats are recommended. Do not paint when wet. For paint application refer to paint manufacturers specifications. Back-rolling is recommended if the siding is sprayed.

COLORPLUS TECHNOLOGY
COLORPLUS TECHNOLOGY CAULKING, TOUCH-UP & LAMINATE
- Touch-up kit, Scopes and nail heads using the ColorPlus technology, touch-up perga. Touch-up paint should be used sparingly. It is recommended to replace damaged areas with new HardieWrap® lap siding with ColorPlus technology.
- Laminate sheet must be removed immediately after installation of the course.
- Terminate non-cutout cut edges into trim where possible, and caulk. ColorPlus caulk is available from your ColorPlus dealer.
- Treat all other non-cutout cut edges using the ColorPlus technology edge coaters, available from your ColorPlus product dealer.

PAINTING JAMES HARDE SIDING AND TRIM PRODUCTS WITH COLORPLUS TECHNOLOGY
James Hardie products with ColorPlus Technology may be re-painted at or near the end of the paint warranty period or solely for the purpose of changing the color scheme of the home. When repainting ColorPlus products, James Hardie recommends the following regarding surface preparation and topcoat application:
- Ensure the surface is dry, free of any dust, dirt, or mold
- Repriming is not necessary
- 100% acrylic topcoats are recommended
- Glazed base coats or semi-transparent stains are not recommended
- Apply Finish coat in accordance with paint manufacturers written instructions regarding coverage, application methods, and application temperature

COVERAGE CHART/ TESTING GUIDE
Number of 12" plants, does not include waste

<table>
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<tr>
<th>COVERAGE AREA</th>
<th>HARDIEPLANK® LAP SIDING WIDTH</th>
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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.

*NOTE: Published shear values and 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 documentation compliance.

*Do not over-drive nail heads or drive nails at an angle.
*If nail is countersunk, caulk nail hole and add a nail. (Fig. B)
*Under-driven nails should be hit flush to the plank with a hammer.
*Do not use aluminum fasteners, staples, or clipped head nails.

For more information, visit www.jameshardie.com.
CLEARANCES
Install siding and trim products in compliance with local building code requirements for clearance between the bottom edge of the siding and the adjacent finished grade.

KICKOUT FLASHING
Because of the volume of water that can pour down a sloped roof, one of the most critical flashing details occurs where a roof intersects a sideway. The roof must be flashed with step flashing. Where the roof terminates, install a kickout to deflect water away from the siding (Figure 7).

It is best to install a full rubberized asphalt flashing on the wall below the subsurface and trim boards are nailed in place, and then come back to install the kickout.

Figure 7, Kickout Flashing: To prevent water from dumping behind the siding and the end of the roof intersection, bend a small "kickout" from metal flashing to divert water running down the roof away from the siding.

FASTENER REQUIREMENTS
FACE NAILING
Corrosion Resistant Nails (galvanized or stainless steel)
- #6 (0.113” shank x 0.267” HD x 2” long)
- #8 (0.150” shank x 0.227” HD x 2” long)
- #8 (0.250” shank x 0.227” HD x 2” long)
- #10 (0.312” shank x 0.227” HD x 1-1/2” long)

Corrosion Resistant Screws
- Ribbed Bugle-head or equivalent (No. 6 to 8) 1-1/2” long x 0.375” HD Screws must penetrate 1/4” or 3 threads into metal framing.

Corrosion Resistant Fasteners
- ET & F Pin (0.100” shank x 0.25” HD x 1-1/2” long)

BLIND NAILING
Corrosion Resistant Nails (galvanized or stainless steel)
- #6 Nails (0.069” shank x 0.227” HD x 1-1/4” long)
- #8 Nails (0.100” shank x 0.227” HD x 1-1/4” long)

Corrosion Resistant Screws
- Ribbed Water-head or equivalent (No. 8 x 1-1/2” long x 0.375” HD) Screws must penetrate 1/4” or 3 threads into metal framing.

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 high-quality, high-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.

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 of the nail head. If setting the nail depth proves difficult, choose a setting that under drives the nail. Drive under drives nails snug with a smooth faced hammer.

CUT EDGE TREATMENT
Caulk, paint or prime all cut edges, where practical.

CAULKING
For best results use a latex sealant that complies with either ASTM C342 or ASTM C330 (Grade N5, Class C5). Caulking must be applied in accordance with the caulking manufacturer’s written instructions.

PAINTING
James Hardie products must be painted.* 100% acrylic toppings are recommended. Do not paint when wet. Paint applicators refer to paint manufacturers specifications back-colling is recommended if the siding is sprayed.

*Within 180 days for primed and 90 days for unpainted

COLORPLUS TECHNOLOGY
- TOUCH-UP NICKS: Scraps and nail heads using the ColorPlus technology, touch up systems. Touch-up paint should be used sparingly. Large areas require touch-ups, replace the damaged area with new HardieRex™ lap siding with ColorPlus technology.
- Laminate sheet must be removed immediately after installation of each course.
- Terminate non-factor cut edges into trim where possible, and caulk. Color-matched caulk can be purchased from your ColorPlus dealer.
- Treat all other non-factor cut edges using the ColorPlus technology edge cap, available from your ColorPlus dealer.

PAINTING JAMES HARDE® SIDING AND TRIM PRODUCTS WITH COLORPLUS® TECHNOLOGY
James Hardie products with ColorPlus Technology may be repainted or at rear the end of the paint warranty period or solely for the purpose of changing the color scheme of the home. When repainting ColorPlus products, James Hardie recommends the following regarding surface preparation and topcoat application:
- Ensure the surface is dry, free of any dust, dirt, or moisture.
- Repainting is not necessary.
- 100% acrylic toppings are recommended.
- Clear base coats or semi-transparent stains are not recommended.
- Apply finish coat in accordance with paint manufacturer’s written instructions regarding coverage, application methods, and application temperature.

COVERAGE CHARTING GUIDE

| Number of 12” planks | Does not include waste
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>10</td>
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<td>1000</td>
<td>15000 sq ft</td>
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*This 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.

**Contains recycled materials. ColorPlus Technology® with HardieRex™ lap siding is a protected trademark in many countries including the U.S., Mexico, Canada, and Australia. This publication is designed for builders who are not expert in the use of these products. The building designs and construction methods shown are not intended to address all possible circumstances. James Hardie Technical Assistance Center (JHATAC) can be contacted for proper installation. JHATAC is available to answer your questions about ColorPlus Technology and how to incorporate it into your building projects. JHATAC is available to answer your questions about ColorPlus Technology and how to incorporate it into your building projects. Please contact JHATAC at 877-627-5611.
**Important: Failure to install and finish this product in accordance with applicable building codes and James Hardie written application instructions may lead to personal injury, affect system performance, violate local building codes, and void the product warranty.**

**Installation Instructions - Primewash Sealer and Primer & ColorPlus Technology Treated Products**

**SELECT CEDARMILL® - SMOOTH, COLONIAL SMOOTH® - COLONIAL ROUGHSAWN® - BEADED CEDARMILL® - BEADED SMOOTH® - STRAIGHT-EDGE SINGLE PLY**

**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. Protected edges and corners from breakage. James Hardie is not responsible for damage caused by improper storage and handling of the product.

**Cutting Instructions:**
- **Tools:**
  - 1. Plunge cutting station so that knife will cut away from user and others working area,
  - 2. Use one of the following methods:
  - a. Sheet: use plunge cutter or a woodcutting tool
  - b. Block: use a plunge cutter or a woodcutting tool

**Risers:**
- 1. Cut end of siding and snap, or chamfer (optional) or chamfered
- 2. Cut ends (optional) or with a circular saw

**Important Note:** For maximum protection (floor, roof, and siding), a James Hardie recommends always using a floor elevating method when available.

**NPSD-approved nailing systems can be used in conjunction with above cutting practices to further reduce duct exposures.** Additional information is available at www.jameshardie.com to help determine the best application method for your requirements. Note collateral and appropriate code - if you do not comply with the above practices, you should consult a qualified professional and contact James Hardie for further information.

**General Requirements:**
- Hardieplank™ lap siding can be installed over brace wood or steel studs spaced a maximum of 24" o.c. or directly to minimum 7/16" thick OSB sheathing. Hardieplank lap siding can also be installed over foam insulation up to 1" thick. Irregularities in framing, sheathing, and/or foam insulation may reappear through the finished application.
- A weather-resistant barrier is required in accordance with local building code requirements. The weather resistant barrier must be properly installed with penetration and junction flashings in accordance with local building code requirements. James Hardie assumes no responsibility for water infiltration.
- Install James Hardie® products with a minimum 6" clearance to the finished grade on the exterior of the building in accordance with local building codes if greater than 6" is required (Fig. 5).
- Maintain a minimum 2" clearance between James Hardie products and roofs, decks, patios, steps, and driveways (Figs. 4 & 5).
- Maintain a 1/4" clearance between James Hardie products and horizontal flashing (Fig. 6).
- Install kickout flashing at roof-wall junctions (Fig. 7). Ensure gutters have end caps and do not terminate against siding and trim.
- Adjacent finished grade must slope away from the building in accordance with local building codes, typically a minimum of 6" in the first 10'.
- Do not install James Hardie products, such as they may remain in contact with standing water.

**Installation:**
- Install a 1 1/4" starter strip to ensure a consistent plank angle (Fig. 1).
- Install factory finished edges together at butt joints.
- For other nailing options, refer to local building codes or NER 409.

**Joint Treatment:**
- Joint treatment is required at both 100% and 50% laps.
- Use 1/2" diameter, 1 1/4" long screws with a #8 self-drilling point.
- Use 1/4" diameter, 1 1/4" long screws with a #6 self-drilling point.

**WARNING:** Avoid breathing silica dust.