Essential Window Installation

Replacement Installation Instruction

These instructions are applicable for the following products:

- Essential Casement (ESCA)
- Essential Single Hung (ESSH)
- Essential Double Hung (ESDH)
- Essential Glider (ESGL)
- Essential Awning (ESAWN)
- Essential Direct Glaze (ESDG) Rectangles

NOTE: **Please read these instructions in their entirety before beginning to install your Essential window product.**

ABSTRACT: These installation instructions demonstrate the installation of Essential windows in existing wood frame construction using an industry-approved water management system. For other construction methods, such as remodeling and recessed openings, refer to ASTM E2112, Standard Practice for Installation of Exterior Windows, Doors and Skylights for installation suggestions. Information for ASTM E2112 can be found on the ASTM website, www.astm.org.

For product specific issues, service instructions and other field service guides, refer to the Service Manual, visit our website and www.marvin.com, or contact your Essential representative.

Regional standard practices, environmental conditions, and codes may vary and supersede the procedures contained within. The responsibility for compliance is yours: the installer, inspector, and owner(s).

After Market Products

Alterations to Integrity products including window films, insulating or reflective interior window treatments or additional glazings can cause excessive heat buildup and/or condensation. They may lead to premature failures not covered under warranty by Marvin Windows and Doors

Before purchasing or applying any product that may affect the installation or performance of Integrity windows contact the manufacturer of after market product/glazings that are not supplied by Integrity and request written product use, associated warranties and damage coverage. Provide this information and warranties to the end user and/or building owner for future reference.

Before You Begin

These instructions detail how to prep an existing double hung frame for a new Essential window. Installation into other window frames may require adapting the window opening preparation process. Consult with your Integrity representative concerning installation into other window frame openings.

Installer and Builder Information

- It is the responsibility of the builder, installer and subcontractors to protect the interior and exterior of windows from contact with harsh chemical washes, construction material contamination and moisture. Damage to glazing, hardware, weather strip and cladding/wood can occur. Protect with painters tape and/or protective sheathing as required. Follow all guidelines regarding material use, preparation, personal safety and disposal.
- Refer to the enclosed painting instructions on the last page for exterior and interior finish instructions.
- Contact your Marvin supplier if you have any questions regarding product and materials used in manufacturing or questions on replacement parts.
- Units are sent with hardware and fasteners. Follow installation instructions included with part if applicable. Follow all guidelines regarding material use, preparation, personal safety and disposal.

WARNING!

This product can expose you to chemicals including titanium oxide, which is known to the state of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

WARNING!

This product can expose you to chemicals including methanol, which is known to the state of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

WARNING!

Always practice safety! Wear the appropriate eye, ear and hand protection, especially when working with power tools.

You Will Need To Supply

- Safety glasses
- Level
- Hammer
- Hand saw
- Chisel
- Fiberglass insulation
- Utility knife
- Reciprocating saw
- Hearing protection
- Square
- Wood shims
- Tape measure
- 2" Roofing nails
- Foam backer rod
- Insulation
- Power drill with bits

NOTE: Sealants used for installation must be Grade NS Class 25 per ASTM C920 and compatible with the building exterior, window exterior surface, and flashing/water management materials.

NOTE: Numbers in parentheses () are metric equivalents in millimeters rounded to the nearest whole number.

ATTENTION

Remove the screen prior to installation.

Preparing the Unit

NOTE: Inspect unit for color, damage, and size prior to installation.

1. Remove and properly discard all shipping material.

2. Remove all screens and loose hardware, set aside for future use.

NOTE: For Field Mulled units, please follow instructions that came with that kit at this time.

3. Install a bracket at every installation hole in the jamb and head jamb.

4. Be sure operating units are in the closed and locked position until secured in the opening and ready for final adjustments. Once the unit has been shimmed and secured in the opening, open the unit and remove any shipping blocks placed between the frame and sash. Operate the sash and perform final adjustments to the frame to ensure smooth operation of the unit.

NOTE: Operator units must be locked when handling/placing the unit in the opening. Damage to the frame due to racking can occur. Until unit is in place and properly shimmed, the sash may disengage if unlocked and could cause personal injury as well as damage the sash and/or frame.

Exterior Installation-Prepare the Opening

NOTE: ***The following instructions detail the removal of sash and jamb hardware on windows that utilize a pulley and weight system. Your existing window may differ from those shown. All jamb hardware and/or jamb liners must be removed prior to installation of the Integrity unit.***

IMPORTANT

Before beginning installation be sure to inspect the existing opening for any signs of rot, decay, or other deterioration. It is essential that all substrates and sheathing be solid and free from defects to ensure proper installation. If the above conditions are not met, please take corrective action and repair and/or replace components as necessary

1. On exterior applications, use a reciprocating saw or hammer and chisel to remove the blind stop. Cut it flush with the exterior casing and frame. See Figure 1.

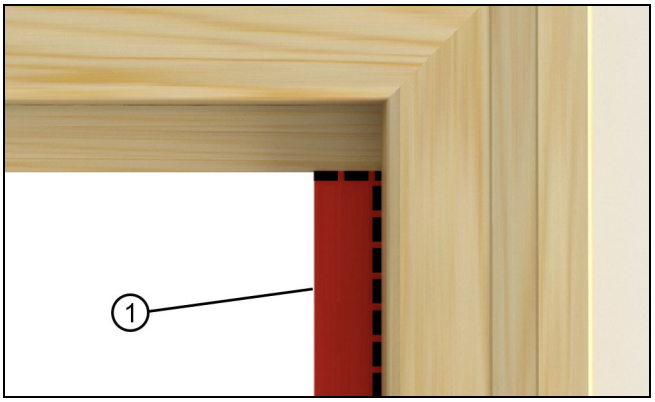


Figure 1

1	Remove this portion of the jamb blind stop

2. If the existing window unit used a weight pocket and pulley system, lower the top sash and cut the balance cords to remove the sash. Disconnect and remove any balance mechanisms attached to existing window frame.

3. Remove the head jamb and side jamb parting stops with a pry bar or adjustable pliers. See Figure 2 and Figure 3

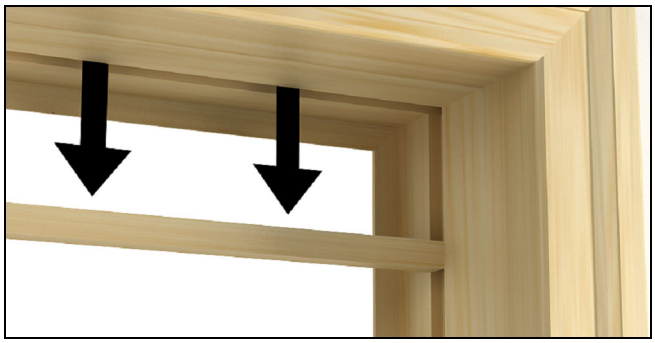


Figure 2 Remove head jamb parting stop

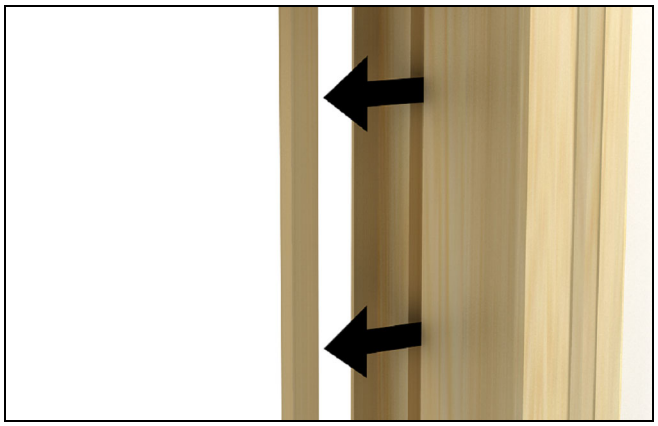


Figure 3 Remove parting stops from side jambs

4. If applicable, cut the balance cords on the lower sash and remove them from frame. Remove any remaining balance mechanism hardware from the existing frame that may hinder installation. If your frame used weight pockets at the jambs, remove them (if possible) and fill cavity with insulation.

5. Apply a 1/4" (6) bead of sealant at both sill to jamb joints and on the back of the interior sash stops or moulding. Apply a secondary continuous bead of sealant on sill. See Figure 4.

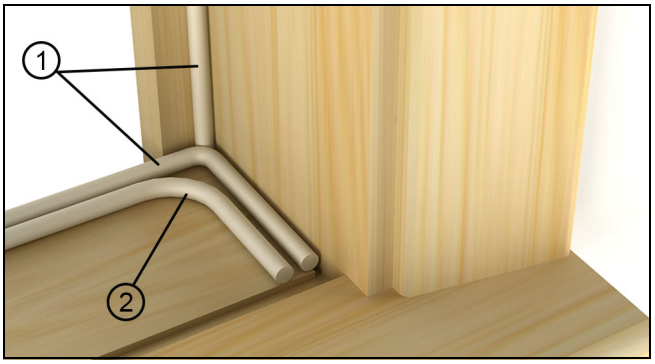


Figure 4

1	Primary 1/4" beads of sealant
2	Secondary 1/4" beads of sealant

NOTE: The placement of the secondary continuous bead of sealant is the same on interior and exterior installation.

Interior Installation-Prepare the Opening

IMPORTANT

Before beginning installation be sure to inspect the existing opening for any signs of rot, decay or other deterioration. It is essential that all substrates and sheathing be solid and free from defects to ensure proper installation. If the above conditions are not met please take corrective action and repair and/or replace components as necessary.

IMPORTANT

Do not break or damage interior stops if they are to be reused.

6. Remove all interior stops with a pry bar or stiff putty knife. It may be necessary to break the paint seal with a utility knife.

7. Remove the lower sash from the frame. If the existing window unit used a weight pocket and pulley system, raised the lower sash, cut the balance cords, and then remove the sash.

8. Remove the parting stop from head jamb with a stiff putty knife or pry bar. See Figure 5.

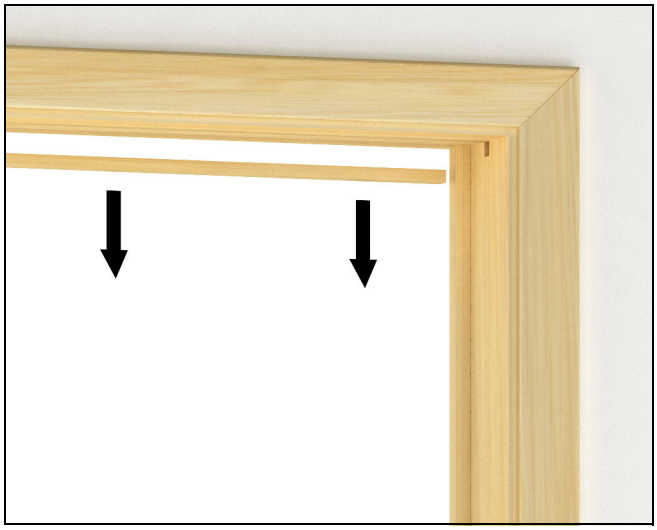


Figure 5 Remove parting stop from head jamb

9. Remove parting stops from both side jambs. See Figure 6. Lower the top sash and cut the balance cords. Remove the top sash, disconnect and remove any balance mechanisms attached.

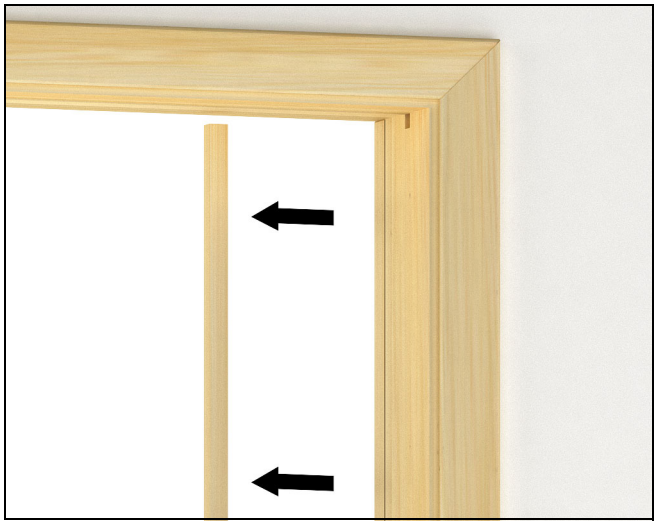


Figure 6 Remove parting stops from side jambs

10. For sliding window products with exterior drain weeps in the lower corners, remove material from bottom of both exterior jamb stops to provide clearance for drain weeps. See Figure 7.

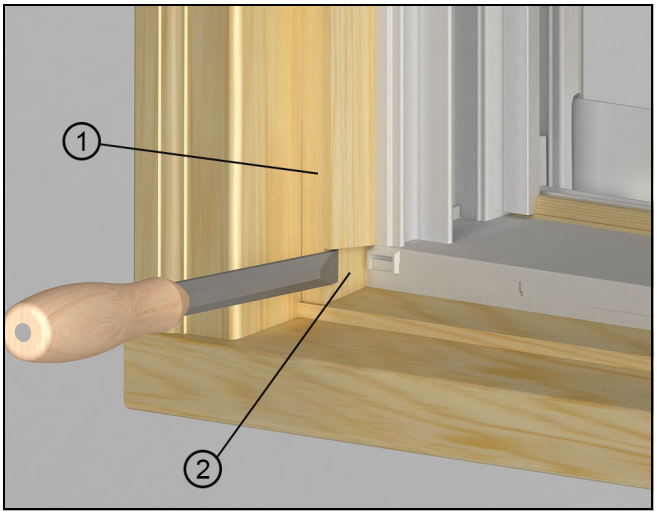


Figure 7

1	Exterior jamb stop
2	Remove this material before installing window

11. Remove any remaining balance mechanism hardware from the existing frame such as balance cords, balance cord pulleys, etc. If your frame used weight pockets at the jambs, remove the weights (if possible) and fill cavity with fiberglass insulation.

12. Apply a 1/4" (6) bead of sealant at sill to jamb joints, sill to sill liner/stool joints, and on the back of the blind stop of existing window frame. Apply a secondary continuous bead of sealant. See Figure 8.

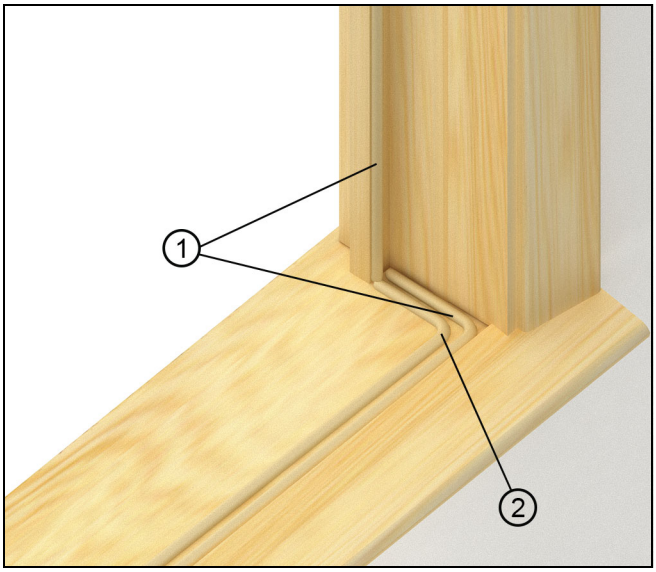


Figure 8

1	Primary 1/4" beads of sealant
2	Secondary 1/4" beads of sealant

NOTE: The placement of the secondary continuous bead of sealant is the same on interior and exterior installation.

Installing the Replacement Window

Seek Assistance

Installation of the insert will be easier if another person is helping to hold the unit in place, especially on larger and heavier units

1. Center the unit in the opening. Depending on interior or exterior installation, press unit against interior or exterior sash stop or blind stop. See Figure 9.



Figure 9

2. If necessary, place shims under corners of unit to level. Level the unit horizontally from jamb to jamb at the sill of the unit. See Figure 10.



Figure 10

3. Place shims at the bottom corners at the pre-drilled screw holes in the jamb. See Figure 11. (horseshoe type stackable shims recommended.)

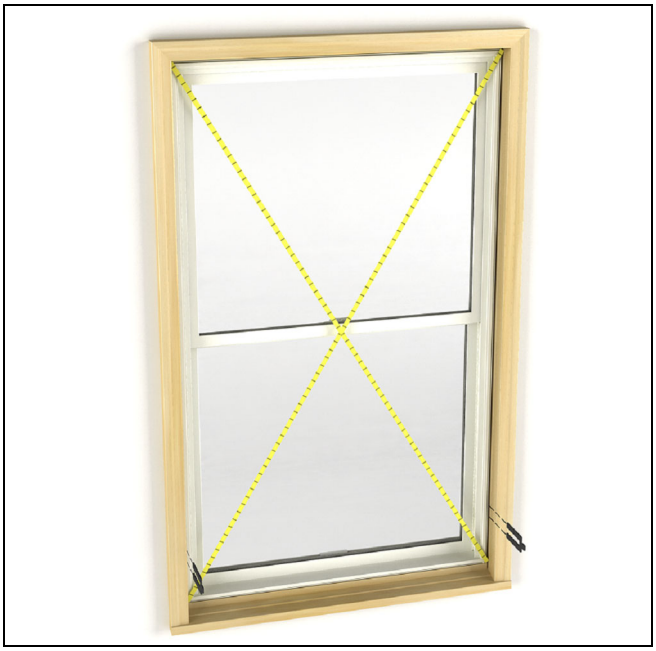


Figure 11

IMPORTANT

Take care not to over or under shim the jambs.

4. While pressing the unit against stops, drive the #8x3"(76) screws into pre-drilled screw holes at the bottom corners. Only tighten until snug. See Figure 12.

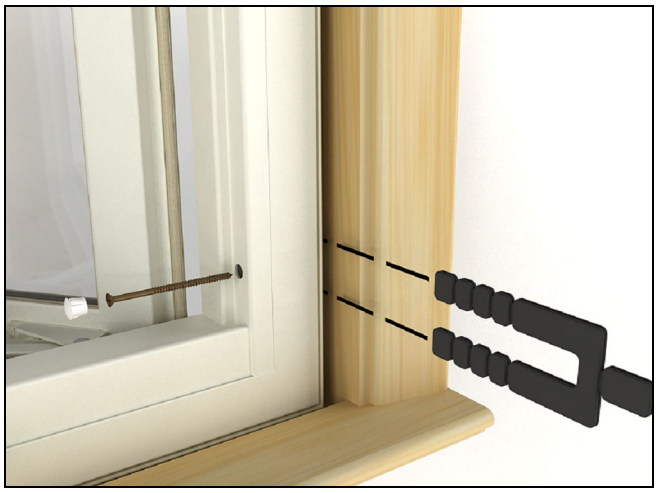


Figure 12

5. On installations with a sloped existing sill, install a wedge shaped block underneath sill at both corners, in the center of the unit, at all meeting stiles and mull locations to provide adequate support. Blocking material to be held back 3/4" (19) from exterior of unit to allow for proper installation of frame expander. See Figure 13.

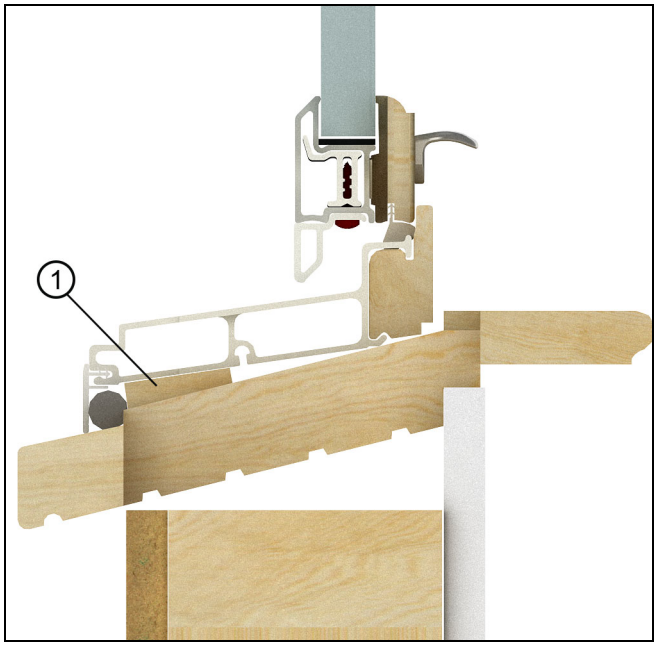


Figure 13

1	Wedge-shaped block

6. Square frame by taking diagonal measurements. Measurements should be equal. Adjust frame by applying shims at pre-drilled screw holes in jambs. Adjust upper shims as necessary. See Figure 14.



Figure 14

7. When the window is square and plumb, hold the unit firmly against the blind stop or interior stop (depending on installation method), drive the installation screws provided through pre-drilled holes in jambs at the top corners. Do not over tighten screws. See Figure 15.

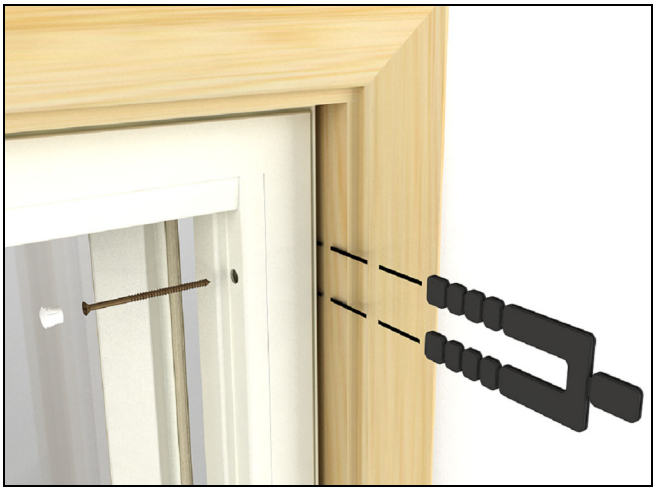


Figure 15

8. Recheck diagonals for squareness. See Figure 14. Adjust screws as necessary to obtain frame squareness. If square apply additional shims between the side jambs and existing window opening at additional pre-drilled holes.

9. Fasten unit in the opening through additional installation holes. On picture units shim at the head jamb and fasten with installation screw.

10. Once the unit is flush, square, and plumb in the opening and sash operate properly, cut shims flush with the interior jamb or exterior of frame.

Sealing the Opening

1. Fill gaps between the new window frame and existing window frame with fiberglass insulation. Do not pack tightly.

NOTE: Foam type insulation may be used to form an infiltration seal as required by some building codes. However, a low expansion and low compression type foam should be used in combination with fiberglass insulation.

CAUTION!

When using expanding foam insulation it is very important not to bow the head jamb or side jambs of the replacement unit.

2. For **interior installation**, run a bead of sealant between the new frame and existing frame around the entire interior perimeter. If necessary install backer rod prior to sealant application. See Figure 16. Replace interior sash stops or new trim as desired.



Figure 16

3. For **exterior installations**, apply a backer rod between the new frame and existing window frame. Place a bead of sealant over the backer rod, so that it contacts both the new frame and existing window frame. See Figure 17.



Figure 17

CAUTION!

Take care to keep sealant away from drain weeps in lower corners of sliding window products. See Figure 18.

4. For both installation types, trim out the sill with frame expander.

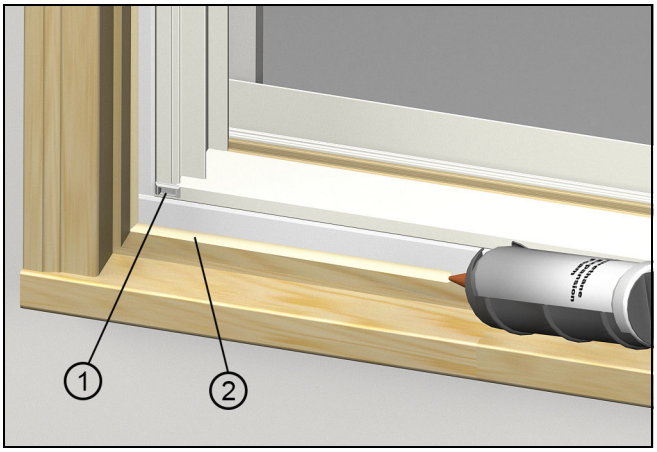


Figure 18

1	Drain weep
2	Bead of sealant

IMPORTANT

Finish the cut edge of the blind stop on exterior installations with paint, stain, or other type of sealer.

Technical Installation Specifications

NOTE: The following details are specified for proper installation and for the unit to meet the advertised design pressure (DP) rating.

- Shim 4″-6″ (102-152) from each corner on jambs and head jambs. Install additional shims at 15″ (381) on center and at all locking points. Always shim at the check rails and meeting stiles.
- Do not use chemically treated products for shim material.
- Fasteners penetrating chemically treated lumber must be a minimum of 0.90 oz/ft2 zinc hot dipped galvanized or stainless steel type 304 or 316.
- The window frame must not come into direct contact with chemically treated wood products.
- Properly seal all windows at the exterior perimeter.
- Sealants used for installation must be Grade NS Class 25 per ASTM C920 and compatible with the building exterior, window exterior surface, and flashing/water management materials.
- Optional foams used for installation must be low expansion only. Foam and foam application must comply with ASTM E2112.