

Monument Double Hung/Single Hung Operating 2-Wide Window

with 1/4" x 5" Aluminum Vertical Plate Mull

96.25"W x 100"H Mull Assembly

L-Clip Installation / Impact



CCL Listing# 436-H-615.74-76

Element Materials Technology TEST REPORT #: ESP015004P-1482

TEST REPORT SUMMARY:

- OVERALL BASIC UNIT FRAME SIZE:
96.25" (2445mm) x 100" (2540mm)
DOUBLE HUNG/SINGLE HUNG OPERATING UNIT MAX. SIZE: 48.00" (1219mm) X 100" (2540mm)
- OVERALL DESIGN PRESSURE: +60 / - 60 psf
- RATING: +60/-60, Missile D, Wind Zone 4

FeelSafe Monument Clad Double Hung/Single Hung 2-Wide Operating Window
w/ 1/4" x 5" Aluminum Vertical Plate Mull Reinforcement, L-Clip Install/WDMA

SHEET: 1 OF 4

UPDATED: 9/12/2018

DRAWN BY: BK

L-CLIP INSTALL & SCREWS AT MULL LOCATIONS ANCHOR REQUIREMENTS TABLE

INSTALLATION UTILIZING L-CLIPS & SCREWS

Opening type (Substrate)	JAMB TO OPENING FASTENER TYPE, FASTENER SPACING	Minimum embed	Minimum edge distance
2X_ Wood frame or buck	4. Double Hung Operating Units: • Head: Fasten 1-1/2" x 5" long, 20 gauge galvanized hurricane L-clip to the window unit with (1) #6 x 1/2" Tek screw into the cladding and (2) #7 x 1/2" PFH screws & (2) #8 x 1-1/4" PPH SS screws into the wood buck framing material. Spaced 6" from each corner and 12" on center thereafter. • Jambs: Fasten 1-1/2" x 5" long, 20 gauge galvanized hurricane L-clip to the window unit with (1) #6 x 1/2" Tek screw into the cladding and (2) #7 x 1/2" PFH screws & (2) #8 x 1-1/4" PPH SS screws into the wood buck framing material. Spaced 6" from each corner and 10" on center thereafter. • At the Sill: Fasten 1-1/2" x 5" long, 20 gauge galvanized hurricane L-clip to the window unit with (3) #6 x 1/2" Tek screw into the cladding & (2) #8 x 1-1/4" PPH SS screws into the wood buck framing material. Spaced 6" from each corner and 12" on center thereafter. • Vertical Mull Location, SILL: Install (4) 1-1/2" X 5" Long, 20 Gauge galvanized hurricane mounting L-Clips with (3) #6 X 1/2" TEK Screws into the window unit sill cladding AND (2) #8 X 1-1/4" PPH SS Screws into the wood buck framing material, MAXIMUM 3" & 6" from each side of the vertical mull (SEE ELEVATION ON PAGE 4). • Vertical Mull Location, HEAD: Install (4) #10 x 2-1/2" PFH SS Screws thru the head into the wood buck framing material, MAXIMUM 3" & 6" from each side of the vertical mull (SEE ELEVATION ON PAGE 4).	1-1/4"	3/4"
		Maximum shim space	Shim Placement
		1/4" each side	Every 6-10"

Anchors must be into a min. 2x_ wood member. If space between wall frame & window frame is greater than that required for a 2x_ wood member and a space exists, the space must be filled with a wood member of equal depth to the window frame member or buck and of length = min. 20". the frame anchor must then be run through the frame & wood shim and into the opening.

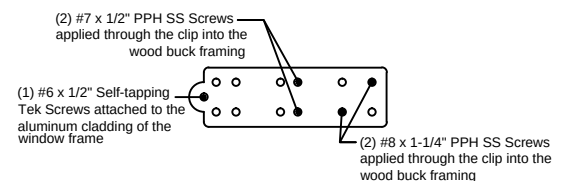
INSTALLATION NOTES:

1. Anchors must be into a min. 2x_ wood member. If space between wall frame & window frame is greater than that required for a 2x_ wood member and a space exists, the space must be filled with a wood member of equal depth to the window frame member or buck and of length = min. 20". The frame anchor must then be run through the frame & wood shim and into the opening.
2. Use 2" x _ wood frame or buck.
- Sill must be a minimum of 7" when installing with the 1/4" vertical aluminum plate mull.
3. 1/4" maximum shim space at head, sill & jambs.
- Place wood shim every 6-10" and where screw anchors are located.
4. 1-1/4" minimum fastener embedment into framing material, silicone seal over screw heads.
See above in Anchor table for more information.
5. Cap bead between the window frame and the buck, full perimeter.
6. MAXIMUM WINDOW SIZES: B.U.S. (Basic Unit Size) =
2-WIDE DOUBLE HUNG/SINGLE HUNG OPERATING UNIT MAXIMUM SIZE:
96.25" (2445mm)W X 100" (2540mm)H
1-WIDE UNIT MAXIMUM SIZE: 48" (1219mm)W X 100" (2540mm)H

- Check rough opening for proper size, plumb, level and square.
- Make all necessary adjustments to ensure rough opening is plumb, level & square.
- Sill must be flat, level and capable of supporting the weight of the unit.
- Opening should allow a maximum of 1/4" shim space at head, sill and jambs.
- Wood buck, framing, fasteners, sealant and all wall system materials are provided by others.

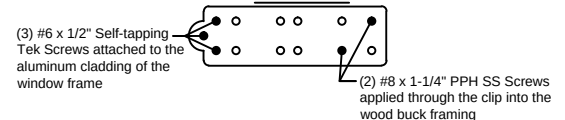
Screw types and locations for
Hurricane L-Clips

At the Head and Jambs



Screw types and locations for
Hurricane L-Clips

At the Sill



FeelSafe & FeelSafe IG

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FeelSafe Monument Clad Double Hung/Single Hung 2-Wide Operating Window
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SHEET: 2 OF 4

UPDATED: 9/12/2018

DRAWN BY: BK

TEST REPORT SUMMARY:

- OVERALL BASIC UNIT FRAME SIZE:

96.25" (2445mm) x 100" (2540mm)

DOUBLE HUNG/SINGLE HUNG OPERATING UNIT MAX.
SIZE: 48.00" (1219mm) X 100" (2540mm)

- OVERALL DESIGN PRESSURE: +60 / - 60 psf

- RATING: +60/-60, Missile D, Wind Zone 4

HEAD DETAIL

FEELSAFE MONUMENT CLAD
DOUBLE HUNG WINDOW

1. 2" x _ WOOD
BUCK OR FRAME

4. 1-1/2" X 5", 20 GAUGE
GALVANIZED HURRICANE L-CLIPS

4. CAP BEAD BETWEEN THE
WINDOW FRAME AND THE
BUCK, FULL PERIMETER

4. (1) #6 x 1/2" TEK SCREWS
THROUGH L-CLIP INTO
WINDOW UNIT. INSTALLED PER
FRAME ANCHOR REQUIREMENT
TABLE ON PAGE 1.

4. (2) #8 X 1-1/4" PPH SCREWS
THROUGH L-CLIP INTO WOOD
BUCK FRAMING. INSTALLED PER
FRAME ANCHOR REQUIREMENT
TABLE ON PAGE 1.

2. 1/4" MAX.
SHIM SPACE

2. WOOD SHIMS
PLACED EVERY 6-10" &
AT SCREW LOCATIONS

4. (1) #7 X 1/2" PFH SCREWS THROUGH
L-CLIP INTO WOOD PORTION OF THE
WINDOW FRAME. INSTALLED PER FRAME
ANCHOR REQUIREMENT TABLE ON PAGE 1.

Laminated
Insulated
Glass

Monolithic
Laminated
Glass

MEETING RAIL DETAIL

FEELSAFE MONUMENT CLAD DOUBLE
HUNG WINDOW

EXTERIOR

Monolithic
Laminated
Glass

Laminated
Insulated
Glass

2. WOOD SHIMS
PLACED EVERY 6-10" &
AT SCREW LOCATIONS

2. 1/4" MAX.
SHIM SPACE

4. (3) #6 x 1/2" TEK SCREWS
THROUGH L-CLIP INTO WINDOW UNIT.
INSTALLED PER FRAME ANCHOR
REQUIREMENT TABLE ON PAGE 1.

4. CAP BEAD BETWEEN
THE WINDOW FRAME
AND THE BUCK, FULL
PERIMETER

1. 2" x _ WOOD
BUCK OR FRAME

4. 1-1/2" X 5", 20-
GAUGE GALVANIZED
HURRICANE L-CLIPS

4. (2) #8 X 1-1/4" PPH SCREWS
THROUGH L-CLIP INTO WOOD
BUCK FRAMING. INSTALLED PER
FRAME ANCHOR REQUIREMENT
TABLE ON PAGE 1.

SILL DETAIL, L-CLIP AT MULL LOCATION

FEELSAFE MONUMENT CLAD
DOUBLE HUNG WINDOW

GLAZING SPECIFICATION

LAMINATED INSULATED GLASS - DH/SH

15/16" O.A. THICKNESS IGU CARDINAL: CONSISTING OF 4mm TEMPERED
INTERIOR LITE X .438" STAINLESS STEEL BOX SPACER X 8.6mm LAMI
CONSISTING OF 3mm ANNEALED GLASS X .090" SAFLEX PVB INTERLAYER X 3mm
ANNEALED GLASS

MONOLITHIC LAMINATED GLASS - DH/SH

11/32" O.A. THICKNESS SINGLE LAMINATED CARDINAL: CONSISTING OF 3mm
ANNEALED GLASS X .090" SAFLEX PVB INTERLAYER X 3mm ANNEALED GLASS.

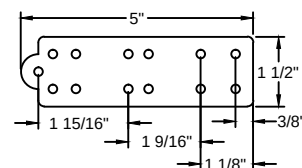
SAFLEX PVB INTERLAYER: NOA No. 18-0301.05

NOTES:

1. A MINIMUM OF TWO (2) NEOPRENE SETTING BLOCKS WITH 70 TO 90
SHORE A DUROMETER HARDNESS ARE REQUIRED AT BOTTOM (SILL) OF
GLAZING LITES MORE THAN 3 FEET IN WIDTH.
2. AS-TESTED SINGLE-PLY LAMINATED AND IGU LAMINATED SYSTEM SHOWN.
3. GLAZING STOP ATTACHMENT:
 - 3.1. MECHANICALLY ATTACHED TO ADJACENT PANEL MEMBER.
 - 3.2. CONTINUOUS BEAD OF TREMCO S-900 GLAZING COMPOUND 1/8" X 1/4"
APPLIED TO THE GLASS/EXPOSED SASH CLADDING WITH A 9/16"
GLASS BITE AND BACKFILL.
 - 3.3. INTERIOR GLAZING STOPS SECURED WITH 1" GALVANIZED T-NAILS
SPACED 2" FROM EACH CORNER AND 8" - 10" ON CENTER
THEREAFTER. 3mm BUMP-ON GLASS SHIMS PLACED BETWEEN GLASS
AND SASH CLADDING.

Hurricane L-Clip

1 1/2" X 5", 20 GAUGE (.035") GALVANIZED
STEEL ANCHOR STRAP



Screw types and locations for
Hurricane L-Clips

At the Head and Jamb

- (1) #6 x 1/2" Self-tapping
Tek Screws attached to the
aluminum cladding of the
window frame
- (2) #8 x 1-1/4" PPH SS Screws
applied through the clip into the
wood buck framing
- (2) #7 x 1/2" PFH SS
Wood Screws applied
through the clip into the
window frame

Screw types and locations for
Hurricane L-Clips

At the Sill

- (3) #6 x 1/2" Self-tapping
Tek Screws attached to the
aluminum cladding of the
window frame
- (2) #8 x 1-1/4" PPH SS Screws
applied through the clip into the
wood buck framing

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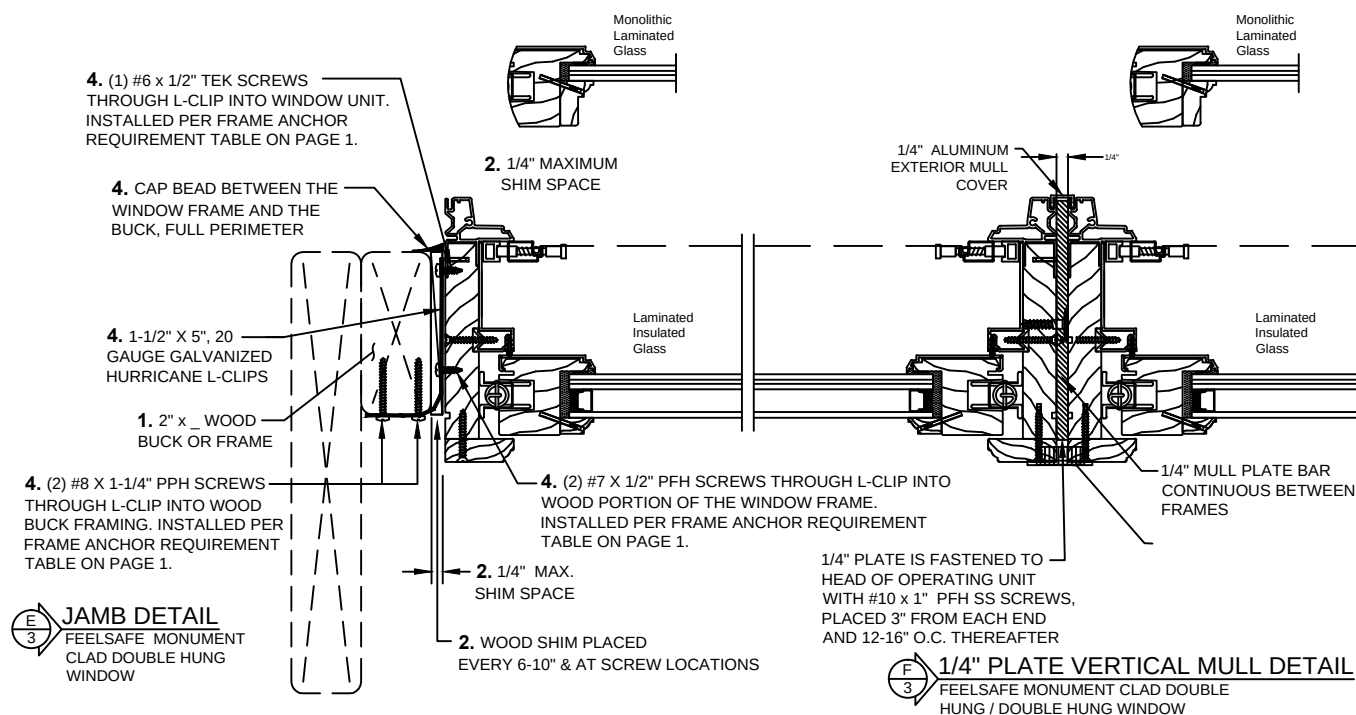
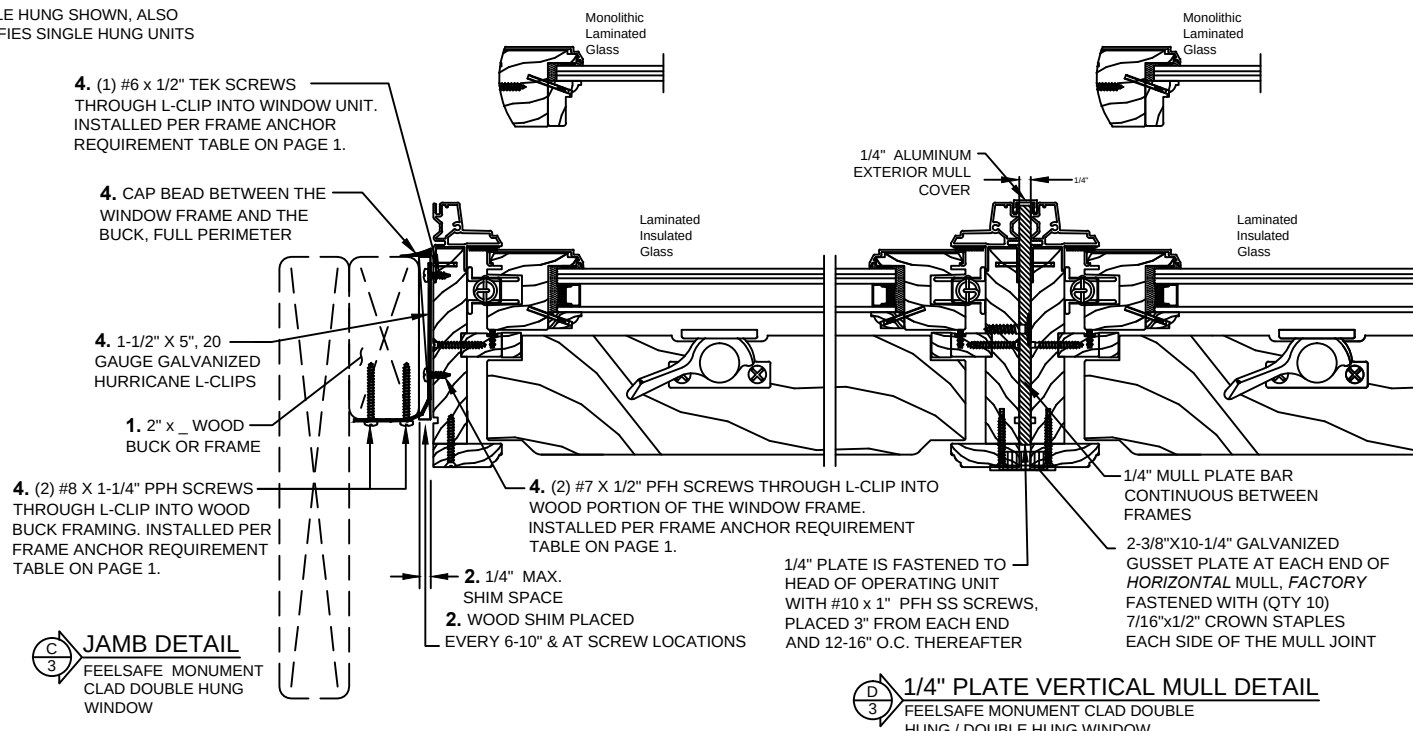
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SHEET: 3 OF 4

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NOTE:
DOUBLE HUNG SHOWN, ALSO
QUALIFIES SINGLE HUNG UNITS





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SHEET: 4 OF 4

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- RATING: +60/-60, Missile D, Wind Zone 4

**PLEASE NOTE: INSTALLATION SHOWN IS FOR
MONOLITHIC AND LAMINATED INSULATED
GLASS UNITS**

NOTE:
DOUBLE HUNG SHOWN, ALSO
QUALIFIES SINGLE HUNG UNITS

**ELEVATION SHOWING
FASTENER LOCATION & SPACING**

