



FeelSafe & FeelSafe IG
Monument Double Hung/Single Hung
Operating Window w/ Transom Window Stack
with 1/4" x 5" Aluminum Horizontal Plate Mull
82.63"W x 106.19"H Mull Assembly
Nail Fin & L-Clip Installation / Impact

Element Materials Technology TEST REPORT #: ESP015004P-1482

**FeelSafe Monument Clad Double Hung/Single Hung Operating with Transom Window Stack
w/ 1/4"x5" Aluminum Horizontal Plate Mull Reinforcement, Aluminum Nail Fin & L-Clip Install/WDMA**

SHEET: 1 OF 5

DRAWING REV. A, 4/22/21

DRAWN BY: H.W.D.

CHECKED BY: R.J.A.

DATE: 07/29/2014

DWG. No.: HURD0015

TEST REPORT SUMMARY:

- OVERALL BASIC UNIT FRAME SIZE:

82.63" (2099mm) x 106.19" (2697mm)

DOUBLE HUNG/SINGLE HUNG OPERATING UNIT MAX.
SIZE: **41.31" (1049mm) X 76.63" (1946mm)**

TRANSOM SASH'N FRAME OR DIRECT SET UNIT
MAXIMUM SIZE: **82.63" (2099mm) X 29.31" (744mm)**

- OVERALL DESIGN PRESSURE: **+65 / - 75 pf**

- RATING: **+65/-75, Missile D, Wind Zone 4**

ALUMINUM NAIL FIN & L-CLIP ANCHOR REQUIREMENTS TABLE

THRU NAIL FIN UTILIZING SCREWS & L-CLIPS

OPENING TYPE (SUBSTRATE)	JAMB TO OPENING FASTENER TYPE, FASTENER SPACING	MINIMUM EMBED	MINIMUM EDGE DIST.
2X_ WOOD FRAME OR BUCK	HEAD, SILL & SIDE JAMBS; #8 X 1-1/4" PPH SCREWS THRU THE NAIL FIN SPACED MAXIMUM 2" FROM EACH CORNER & MAXIMUM 8" ON CENTER THEREAFTER (SEE ELEVATIONS ON PAGES 2 & 3). DH/SH 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 & (2) #8 X 1-1/4" PPH SS SCREWS INTO THE WOOD BUCK FRAMING MAT'L. MAX. 3" & 6" FROM EACH SIDE OF THE VERTICAL MULL AT SILL LOCATION (SEE ELEVATIONS ON PAGES 2 & 3). HORIZONTAL MULL LOCATION, JAMBS; INSTALL (6) #10 x 2-1/2" PFH SS SCREWS THRU THE JAMBS INTO THE FRAMING MATERIAL, MAXIMUM 3", 4.5" & 6" FROM EACH SIDE OF THE HORIZONTAL MULL (SEE ELEVATIONS ON PAGES 2 & 3). INSTALL APPLIED NAIL FIN USING (1) #6 X 5/8" OR (1) #6 X 1/2" PPH SS SCREW THROUGH APPLIED NAIL FIN INTO WINDOW UNIT CLADDING. SCREW NAIL FIN AT END HOLES AND SPACED 8" TO 10" ON CENTER TYPICAL. PREDRILLING OF FRAME OPTIONAL.	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:

- FIXED UNIT CAN BE A TRANSOM SASH'N FRAME OR DIRECT SET UNIT.
- SILL MAY BE 2 PIECE CONSTRUCTION. SINGLE UNIT INSTALLATION DO NOT REQUIRE L-CLIPS AT SILL.
- SINGLE UNIT INSTALLATION DO NOT REQUIRE L-CLIPS AT SILL. SINGLE UNIT INSTALLATION REQUIRE SEPARATE FRAMING OR THE USE OF 2" TUBE MULL.
- SILL MUST BE A MINIMUM OF 7" WHEN INSTALLING WITH THE 1/4" VERTICAL ALUMINUM PLATE MULL. SILL MAY BE 2 PIECE CONSTRUCTION.

1. USE 2" x _ WOOD BUCK OR FRAME.

2. 1/4" MAXIMUM SHIM SPACE AT HEAD, SILL & JAMBS. PLACE WOOD SHIM EVERY 6-10".

3. APPLY A CONTINUOUS BEAD OF SEALANT BETWEEN THE ALUMINUM NAIL FIN AT HEAD, JAMBS AND SILL AND THE BUCK.

4. - **UNIT IS TO BE INSTALLED UTILIZING** #8 X 1-1/4" PPH SCREWS SPACED MAXIMUM 2" FROM EACH CORNER AND MAXIMUM 8" ON CENTER THEREAFTER THRU THE ALUMINUM NAIL FIN AT HEAD, JAMBS & SILL INTO THE WOOD BUCK FRAMING MATERIAL. SILICONE SEAL OVER SCREW HEADS (SEE ELEVATIONS P.2 & P.3.)

- **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 & (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 ELEVATIONS ON PAGES 2 & 3).

- **HORIZONTAL MULL LOCATION, JAMBS;** INSTALL (6) #10 x 2-1/2" PFH SS SCREWS THRU THE JAMBS INTO THE FRAMING MATERIAL, MAXIMUM 3", 4.5" & 6" FROM EACH SIDE OF THE HORIZONTAL MULL (SEE ELEVATIONS ON PAGES 2 & 3).

- SEE ANCHOR REQUIREMENTS TABLE ABOVE AND SCREW TYPES & LOCATIONS FOR HURRICANE L-CLIPS AT RIGHT.

5. 1-1/4" MINIMUM FASTENER EMBEDMENT INTO FRAMING MATERIAL, SILICONE SEAL OVER SCREW HEADS.

6. MAXIMUM WINDOW BASIC UNIT FRAME SIZES:

DOUBLE HUNG/SINGLE HUNG OPERATING UNIT MAXIMUM SIZE: **41.31" (1049mm)W X 76.63" (1946mm)H**

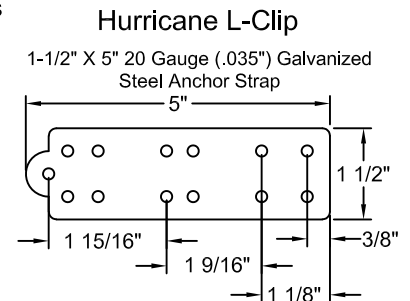
TRANSOM UNIT MAXIMUM SIZE: **82.63" (2099mm)W X 29.31" (744mm)H**

7. See sheet 3 for GLAZING SPECIFICATION.

- 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.

(3) #6 x 1/2" Self-tapping Tek Screws attached to the aluminum cladding of the window frame

Screw types for Sill Location

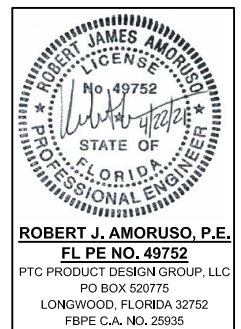


Hurricane L-Clip

1-1/2" X 5" 20 Gauge (.035") Galvanized Steel Anchor Strap

(2) #8 x 1-1/4" PPH SS Screws applied through the clip into the wood buck framing

Installation requirements may vary in particular locations and in other types of construction. Proper installation is essential, and Hurd Windows & Doors, recommends consultation with an AAMA Certified Installer, or other qualified, registered building professional before installation of any Hurd product. Proper installation of Hurd products is the responsibility of the installer. Hurd is not responsible for proper installation. Hurd is not responsible for the design of, conditions in, or performance of building construction beyond the perimeters of the Hurd units. Hurd is not responsible for proper integration of the Hurd units with the weather-repellent systems of the building.





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w/ 1/4" x 5" Aluminum Horizontal Plate Mull Reinforcement, Aluminum Nail Fin & L-Clip Install/WDMA**

SHEET: 2 OF 5

DRAWING REV. A, 4/22/21

DRAWN BY: H.W.D.

CHECKED BY: R.J.A.

DATE: 07/29/2014

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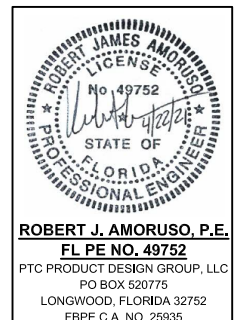
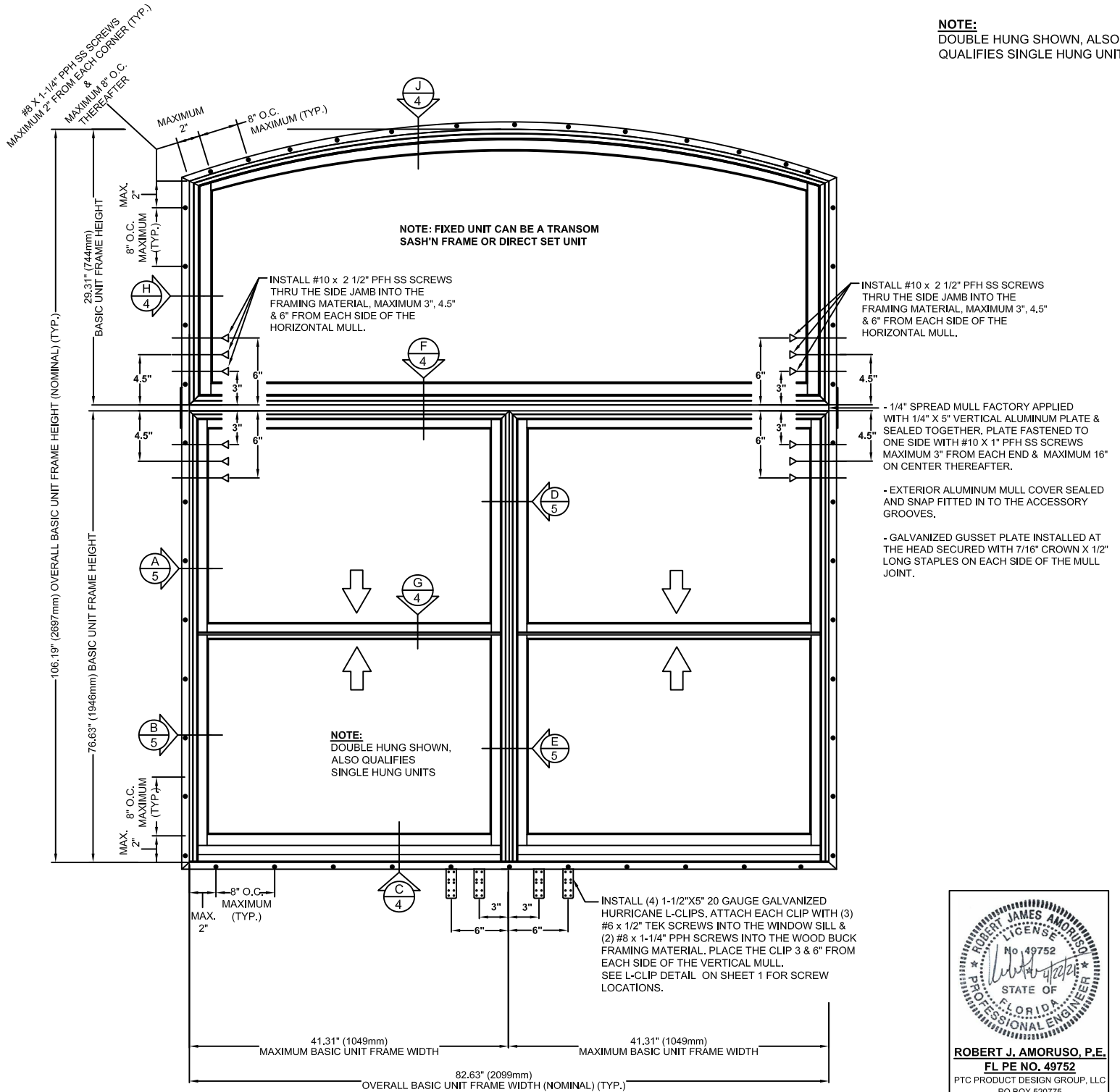
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MAXIMUM SIZE: **82.63" (2099mm) X 29.31" (744mm)**

- OVERALL DESIGN PRESSURE: **+65 / - 75 psf**

- RATING: **+65/-75, Missile D, Wind Zone 4**

NOTE:

DOUBLE HUNG SHOWN, ALSO
QUALIFIES SINGLE HUNG UNITS





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SHEET: 3 OF 5

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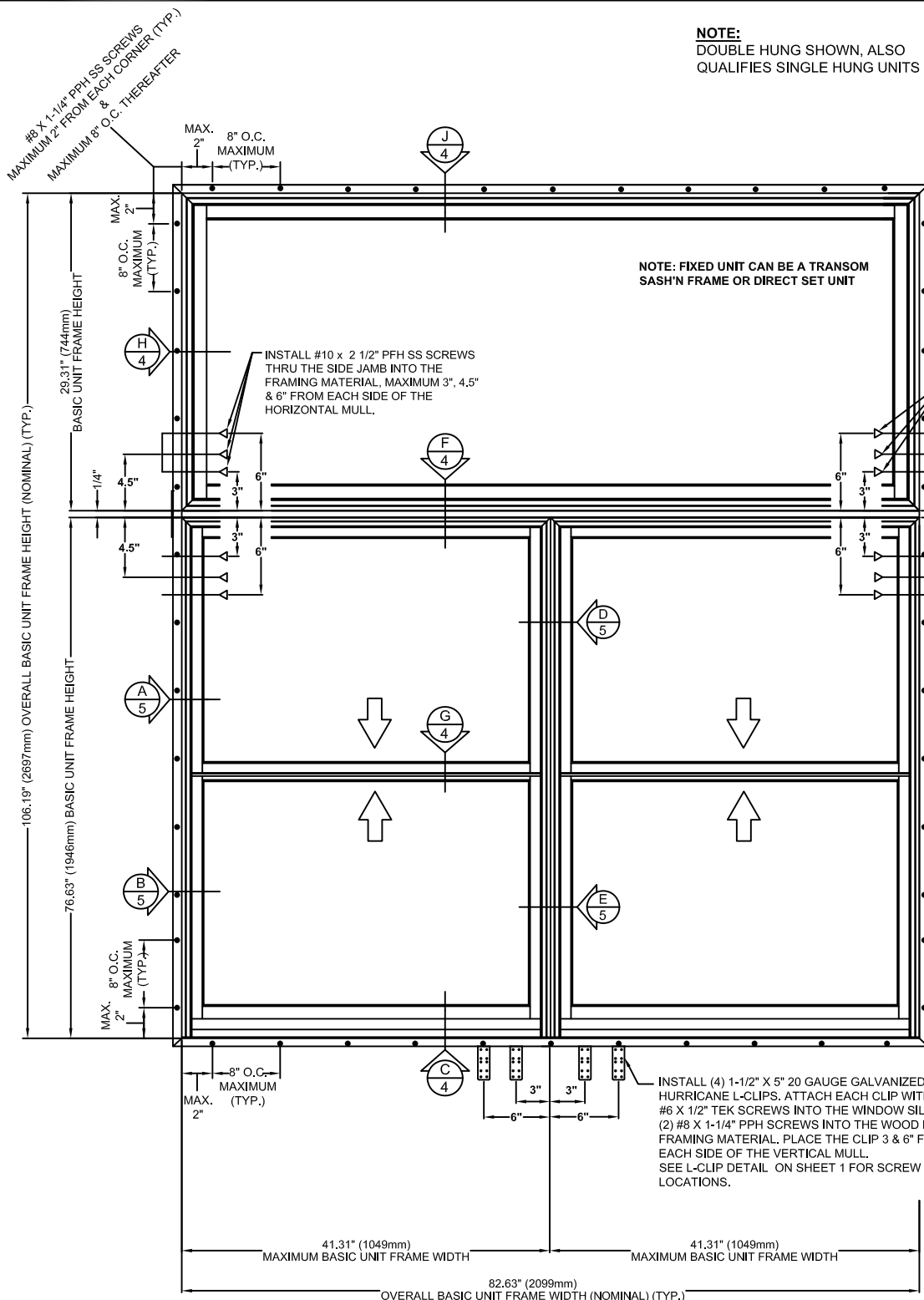
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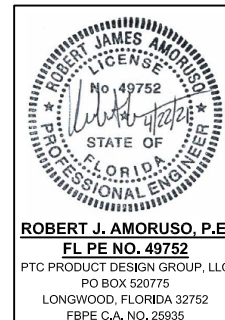
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INSTALL #10 x 2 1/2" PFH SS SCREWS
THRU THE SIDE JAMB INTO THE
FRAMING MATERIAL, MAXIMUM 3", 4.5"
& 6" FROM EACH SIDE OF THE
HORIZONTAL MULL.

- 1/4" SPREAD MULL FACTORY APPLIED
WITH 1/4" X 5" VERTICAL ALUMINUM PLATE &
SEALED TOGETHER, PLATE FASTENED TO
ONE SIDE WITH #10 X 1" PFH SS SCREWS
MAXIMUM 3" FROM EACH END & MAXIMUM
16" ON CENTER THEREAFTER.

- EXTERIOR ALUMINUM MULL COVER SEALED
AND SNAP FITTED IN TO THE ACCESSORY
GROOVES.

- GALVANIZED GUSSET PLATE INSTALLED AT
THE HEAD SECURED WITH 7/16" CROWN X
1/2" LONG STAPLES ON EACH SIDE OF THE
MULL JOINT.

GLAZING SPECIFICATION

Laminated Insulated Glass - DH/SH and Sash Set Transom Window

15/16" O.A. Thickness IGU Old Castle KeepSafe; consisting of 3mm tempered interior lite x .438" aluminum box spacer bar x 8.6mm lami consisting of 3mm annealed glass x .090" Saflex PVB interlayer x 3mm annealed glass

Laminated Insulated Glass - Direct Set Transom Window

1" O.A. Thickness IGU Old Castle KeepSafe; consisting of 4mm tempered interior lite x .438" aluminum box spacer bar x 10.3mm lami consisting of 4mm annealed glass x .090" Saflex PVB interlayer x 4mm annealed glass.

Monolithic Laminated Glass - DH/SH

11/32" O.A. Thickness Single Laminated Old Castle KeepSafe; consisting of 3mm annealed glass x .090" Saflex PVB interlayer x 3mm annealed glass.

Monolithic Laminated Glass - Sash Set Transom Window

9/16" O.A. Thickness Single Laminated Old Castle KeepSafe; consisting of 6mm annealed glass x .090" Saflex PVB interlayer x 4mm annealed glass.

Monolithic Laminated Glass - Direct Set Transom Window

13/32" O.A. Thickness Single Laminated Old Castle KeepSafe; consisting of 4mm annealed glass x .090" Saflex PVB interlayer x 4mm annealed glass.

MD NOA Component Approvals. Current 2020 FBC approvals shown. Later approvals may be applicable.

Saflex PVB Interlayer; NOA No. 20-0622.01
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 systems 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 backfilled.
 - 3.3. Interior glazing stops secured with 1" galvanized T-nails spaced 2" from each corner and 8" - 10" on center thereafter. 3m bump-on glass shims placed between glass and sash cladding.



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**FeelSafe Monument Clad Double Hung/Single Hung Operating with Transom Window Stack
w/ 1/4"x5" Aluminum Horizontal Plate Mull Reinforcement, Aluminum Nail Fin & L-Clip Install/WDMA**

SHEET: 4 OF 5

DRAWING REV. A, 4/22/21

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NOTE:
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QUALIFIES SINGLE HUNG UNITS

HEAD DETAIL

HURD FEELSAFE MONUMENT CLAD FIXED TRANSOM

5. 1-1/4" MIN. EMBEDMENT
INTO FRAMING MATERIAL (TYP.)

1. 2" x _ WOOD
BUCK OR FRAME

4. #8 X 1-1/4" PPH SCREWS
MAXIMUM 2" FROM EACH CORNER
MAXIMUM 8" ON CENTER SILICONE
SEAL OVER SCREW HEADS

3. CONTINUOUS BEAD
OF SEALANT BEHIND
STRUCTURAL ALUMINUM
NAIL FIN

4. #6 X 5/8" PPH
OR #6 X 1/2" PPH
SCREW. SCREW
NAIL FIN AT END
HOLES AND
8"-10" O.C.
(TYPICAL).
PREDRILLING OF
FRAME
OPTIONAL.

Monolithic
Laminated
Glass

2. WOOD SHIMS
PLACED
EVERY 6-10"

2. 1/4" MAXIMUM
SHIM SPACE

EXTERIOR

HURD 1/4"
ALUMINUM
EXTERIOR MULL
COVER

1/4" PLATE IS FASTENED TO HEAD OF
OPERATING UNIT WITH #10 x 1" PPH SS
SCREWS, PLACED 3" FROM EACH END AND
12-16" O.C. THEREAFTER

2-3/8" X 10-1/4" GALVANIZED GUSSET PLATE AT
EACH END OF HORIZONTAL MULL. FACTORY
FASTENED WITH (QTY 10) 7/16"x1/2" CROWN
STAPLES EACH SIDE OF THE MULL JOINT

1/4" PLATE HORIZONTAL MULL DETAIL
FEELS SAFE HURD MONUMENT CLAD DOUBLE HUNG WINDOW
WITH FIXED TRANSOM STACK

1/4" MULL PLATE BAR
CONTINUOUS BETWEEN
FRAMES

1/4"

Monolithic
Laminated
Glass

2. 1/4" MAXIMUM
SHIM SPACE

4. #6 X 5/8" PPH OR #6
X 1/2" PPH SCREW.
SCREW NAIL FIN AT
END HOLES AND 8"-10"
O.C. (TYPICAL).
PREDRILLING OF
FRAME OPTIONAL.

2. WOOD SHIM
PLACED
EVERY 6-10"

4. #8 X 1-1/4" PPH SCREWS
MAXIMUM 2" FROM EACH CORNER
MAXIMUM 8" ON CENTER SILICONE
SEAL OVER SCREW HEADS

3. CONTINUOUS BEAD
OF SEALANT BEHIND ALUMINUM NAIL FIN

5. 1-1/4" MIN. EMBEDMENT
INTO FRAMING MATERIAL (TYP.)

1. 2" x _ WOOD
BUCK OR FRAME

JAMB DETAIL (TYPICAL)

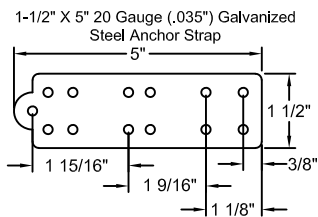
HURD FEELSAFE
MONUMENT CLAD
FIXED TRANSOM

**NOTE: FIXED UNIT CAN
BE A TRANSOM SASH'N
FRAME OR DIRECT SET
UNIT**

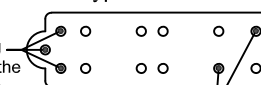


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Hurricane L-Clip



Screw types for Sill Location



(2) #8 x 1-1/4" PPH SS Screws
applied through the clip into the
wood buck framing
wood buck framing

MEETING RAIL DETAIL

FEELS SAFE HURD MONUMENT CLAD
DOUBLE HUNG WINDOW

(3) #6 x 1/2" Self-tapping
Tek Screws attached to the
aluminum cladding of the
window frame

4. #6 X 5/8" PPH OR #6
X 1/2" PPH SCREW
(NOT SHOWN FOR
CLARITY). SCREW NAIL
FIN AT END HOLES AND
8"-10" O.C. (TYPICAL).
2. WOOD PREDRILLING OF
PLACEMENT OF
FRAME OPTIONAL.
AT SCREW LOCATIONS

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

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

1. 2" x _ WOOD
BUCK OR FRAME

2. 1/4" MAXIMUM
SHIM SPACE

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

FEELS SAFE HURD MONUMENT CLAD DOUBLE HUNG WINDOW

4. #6 X 5/8" PPH OR #6
X 1/2" PPH SCREW.
SCREW NAIL FIN AT
END HOLES AND 8"-10"
O.C. (TYPICAL).
PREDRILLING OF
FRAME
OPTIONAL.

4. #8 X 1-1/4" PPH SCREWS
MAXIMUM 2" FROM EACH CORNER
& MAXIMUM 8" ON CENTER THEREAFTER
SILICONE SEAL OVER
SCREW HEADS

3. CONTINUOUS BEAD
OF SEALANT BEHIND
ALUMINUM NAIL FIN

1. 2" x _ WOOD
BUCK OR FRAME

5. 1-1/4" MIN. EMBEDMENT
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MATERIAL (TYP.)

SILL DETAIL

FEELS SAFE HURD MONUMENT
CLAD DOUBLE HUNG WINDOW



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SHEET: 5 OF 5

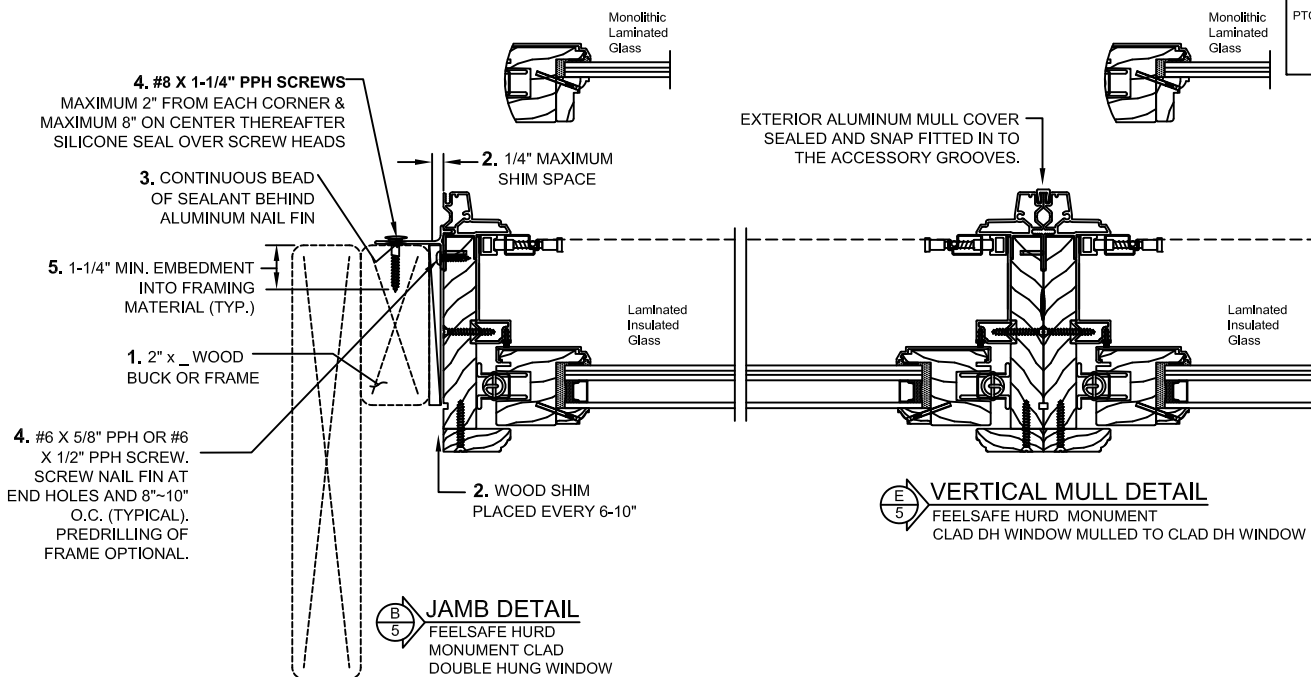
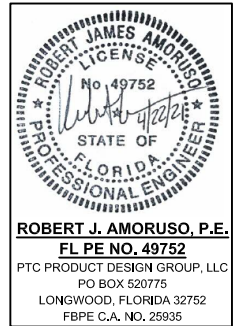
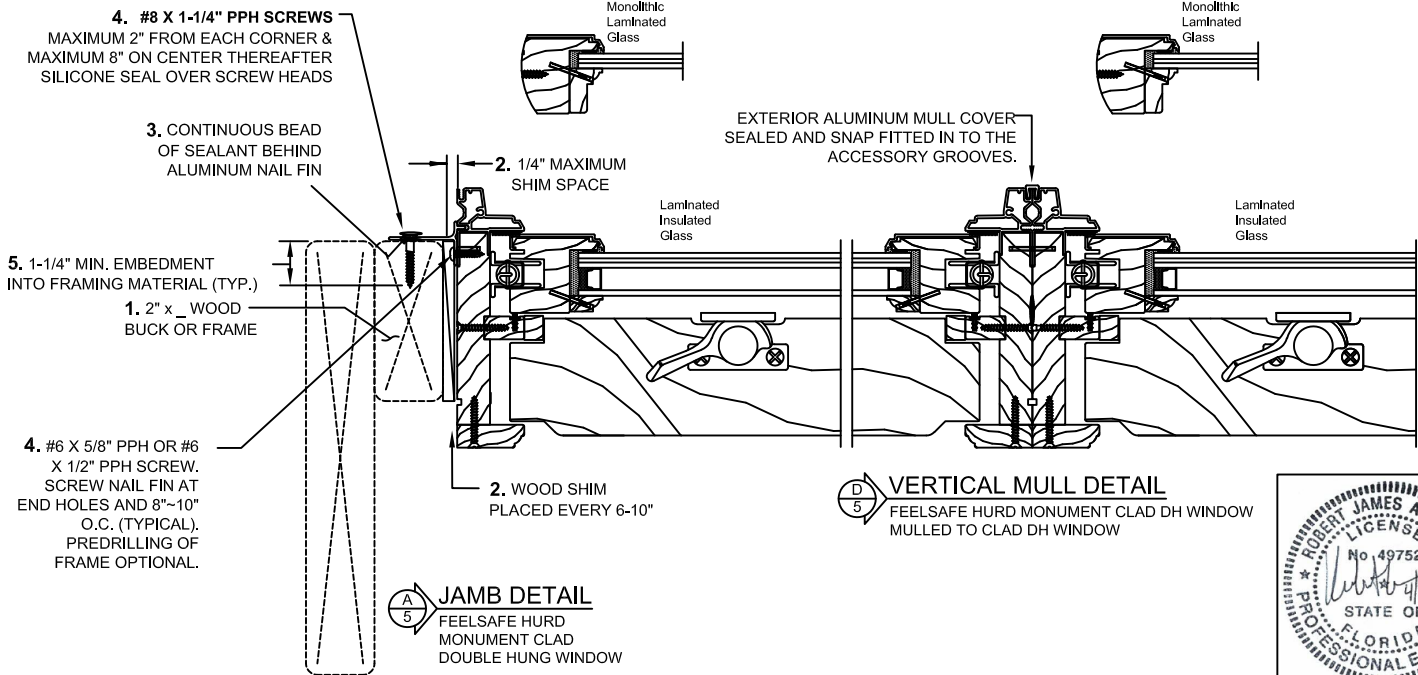
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