Installation Guide

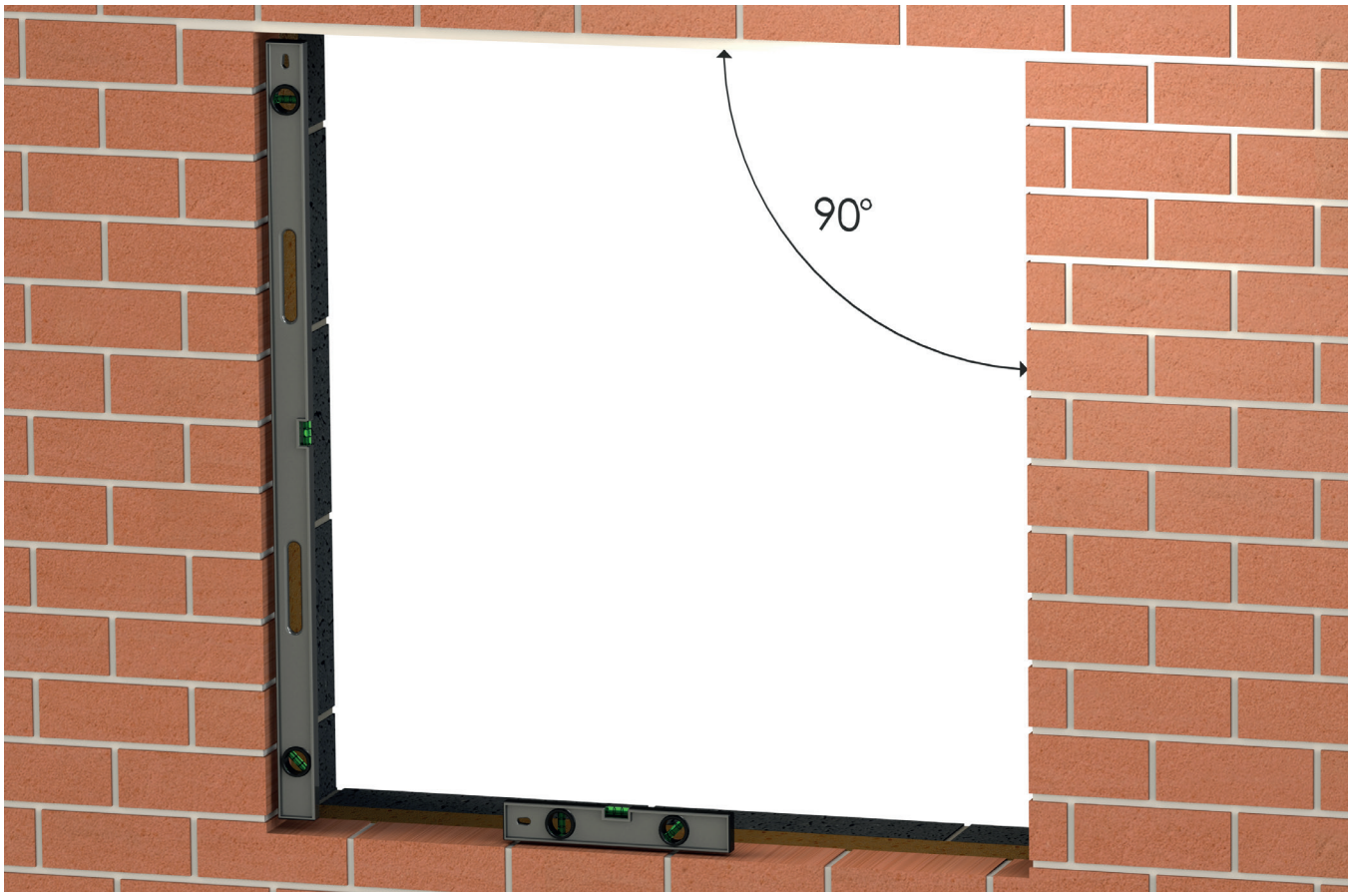
origin

DOORS AND WINDOWS

Windows

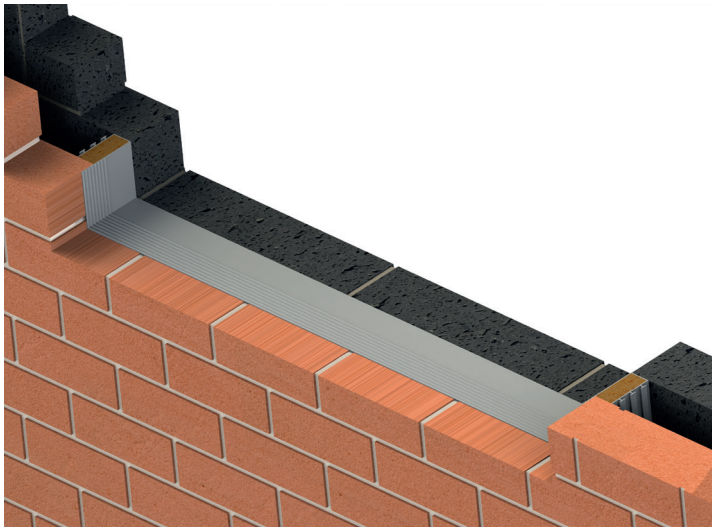
Installation Guide

Openings



Windows should be installed in the opening without twisting, racking or distorting.

Open cavities discovered between the inner and outer skins of brick or block work should be closed in accordance with the local building authority regulations.



1. Frame Fixing

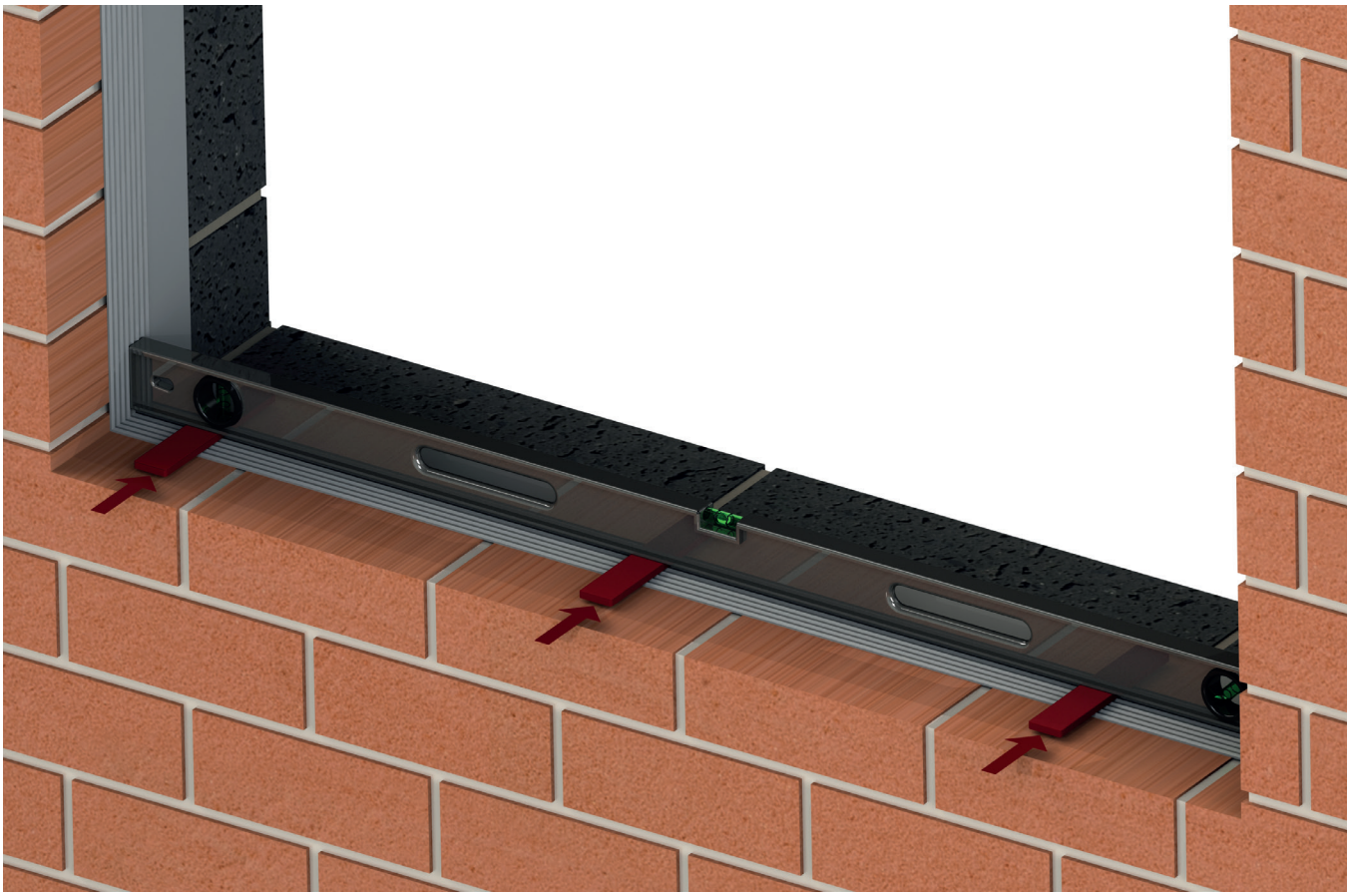


FIG 1

Measure the opening, checking it fits with all measurements on your Origin paperwork.

1.1. Place the correct frame shims along the bottom of the opening to create a level, well supported platform for the window to sit. (Fig.1). Each shim should be placed in line with the pre-drilled fixing hole in the window frame.

1. Frame Fixing (continued)

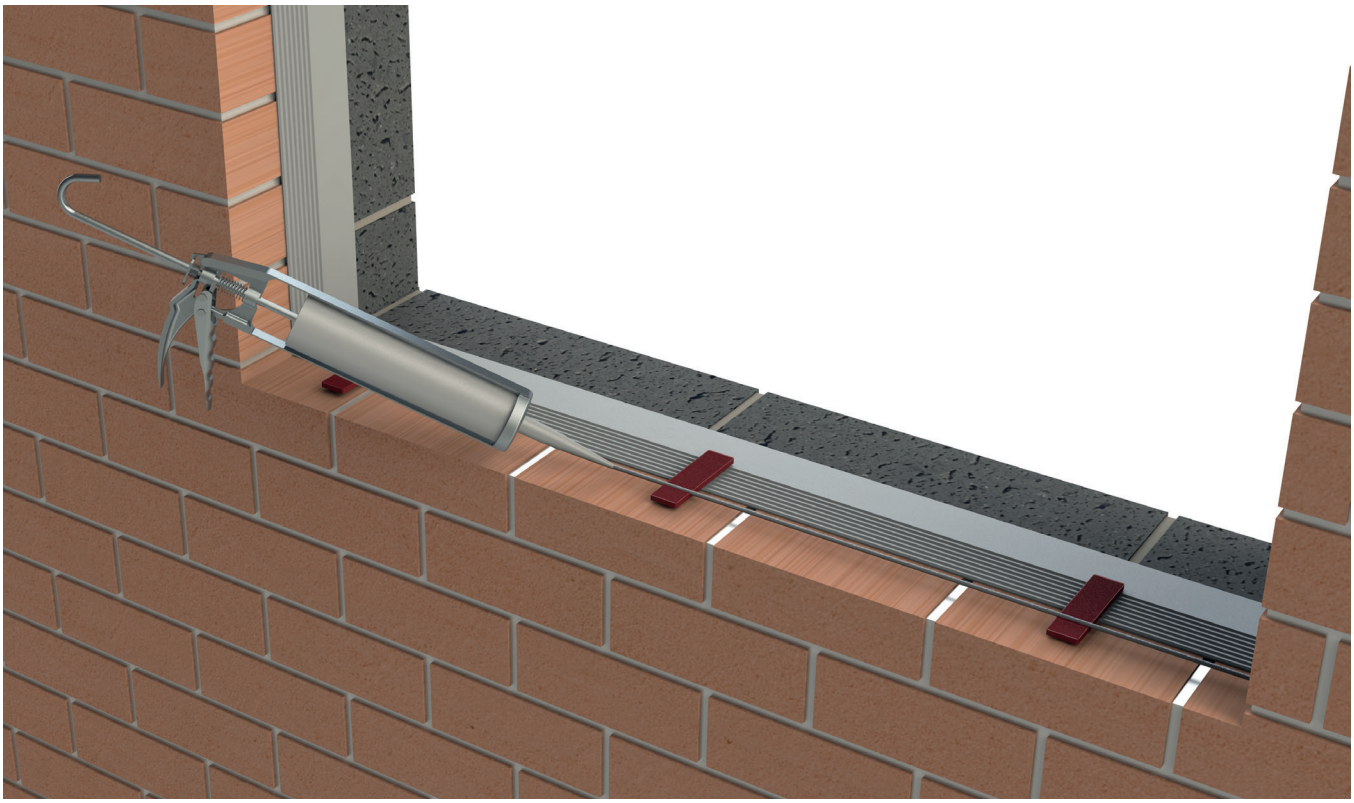


FIG 2

1.2. Place the window on the pre prepared frame shims and re-check for level. Adjust if necessary. Once complete, remove window from the opening once more. (Fig.2)

1.3. Run a bead of sealant across and in between shims for window to sit in.

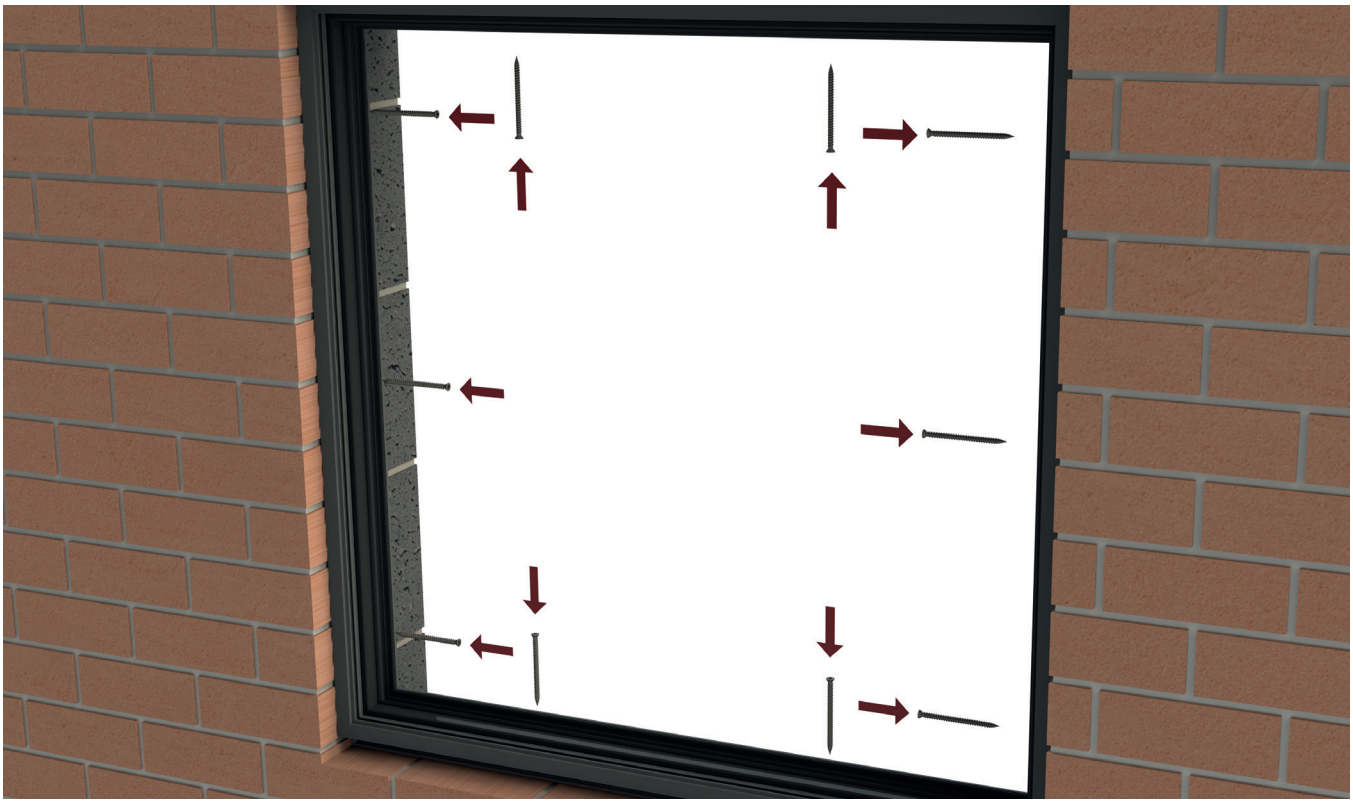


FIG 3

1.4. Place the window in the opening and secure all four sides of the frame as follows:

• Frame anchors to be installed at pre-drilled locations (please refer to the back of this guide for installation anchorage details for different substrates etc).

1.4.1. Insert suitable frame shims at the top and sides of the frame in line with each pre-drilled set of anchor holes. Care should be taken not to twist or bow the frame as the anchor is tightened.

1.4.2. Install one pair of frame anchors in the bottom of the frame close to the centre.

1.4.3. Making sure the frame is sitting plumb in the opening install the opposite pair of anchors in the top of the frame

1.4.4. Repeat this process until all frame anchors have been installed into all four sides of the frame. It is wise to check the frame for level and square after each pair of anchors has been installed.

1.4.5. Once all anchors are in place, work the sealant around each of the anchor heads to prevent water from leaking into the frame.

2. Glazing

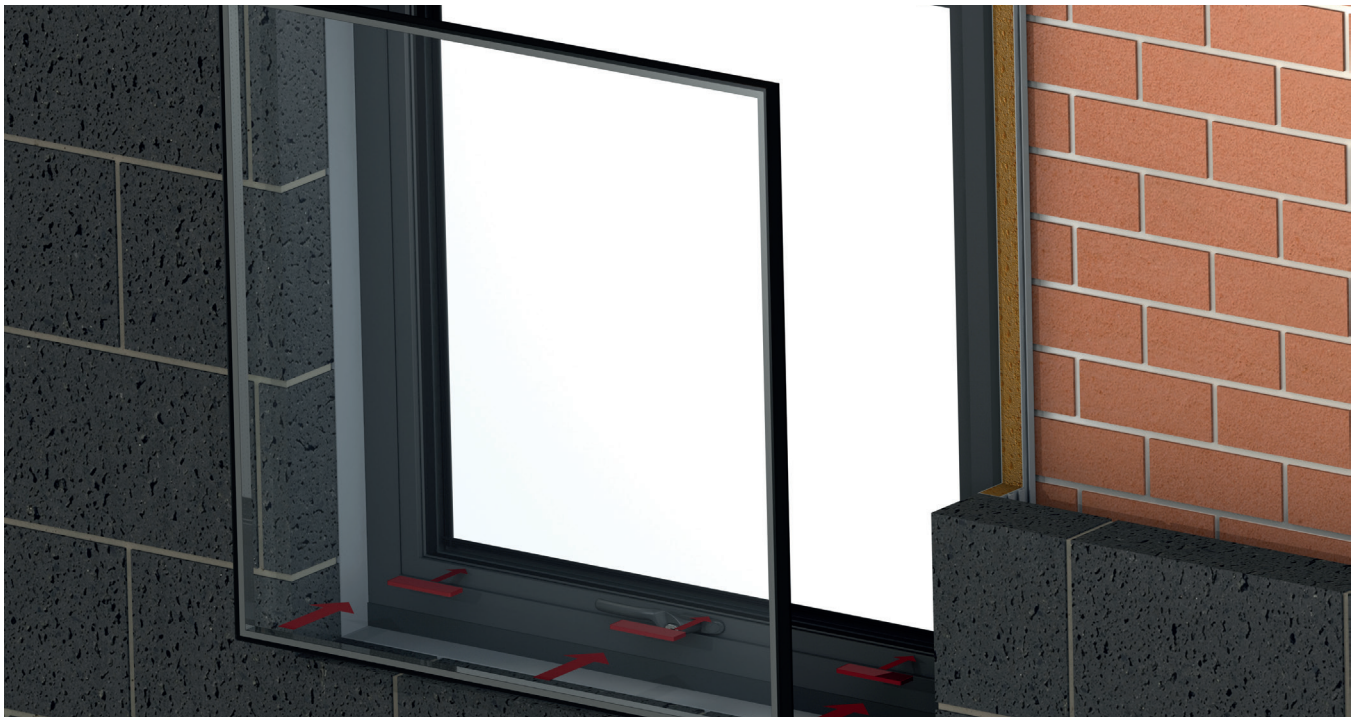


FIG 4

2.1. All insulated glass units should be examined for damages and defects before installation.

2.2. Close the window and fully engage the lock.

2.3. Remove the 4 glazing beads.

2.4. Place glazing shims in the bottom of the glazing chamber spaced approximately 2” in from each corner and no more than 18” centres. (Fig.4)

2.5. Install the glass on the shims.

2.6. Place the required shims between the glass and frame on the remaining 3 sides, spaced as in step 2.4. being careful not to bow or twist the sash.

2.7. Apply a small amount of sealant to the bottom of each shim on the vertical sides to stop the shim from slipping down over time.

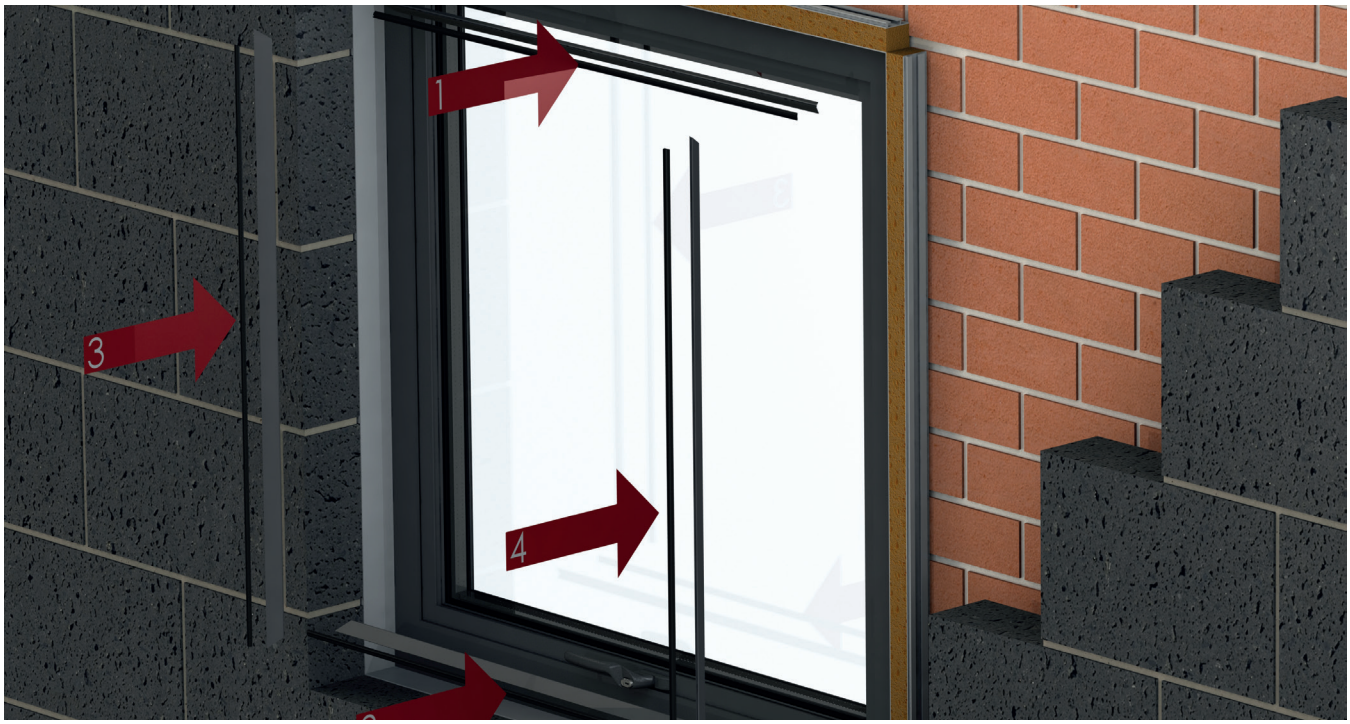
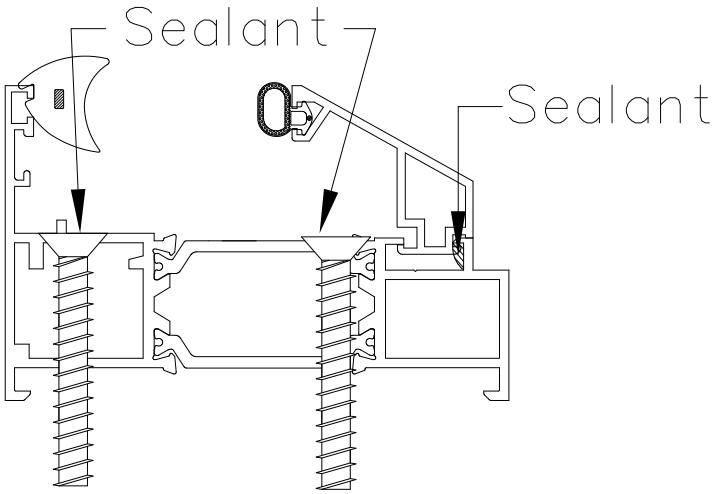


FIG 5

2.8. Re-install the four glazing beads. For safety, always ensure the top bead is installed first, followed by the bottom and then the side beads. (Fig.5) *For fixed/picture windows, apply sealant inside the channel from where the bead was removed prior to re-installing the bead.*



2.9. Insert the glazing wedge gasket between the glass unit and the glazing bead and cut to length.

3.0. *For fixed/picture windows, apply sealant along each mitered corner where glazing beads meet.*

origin

3. Finishing

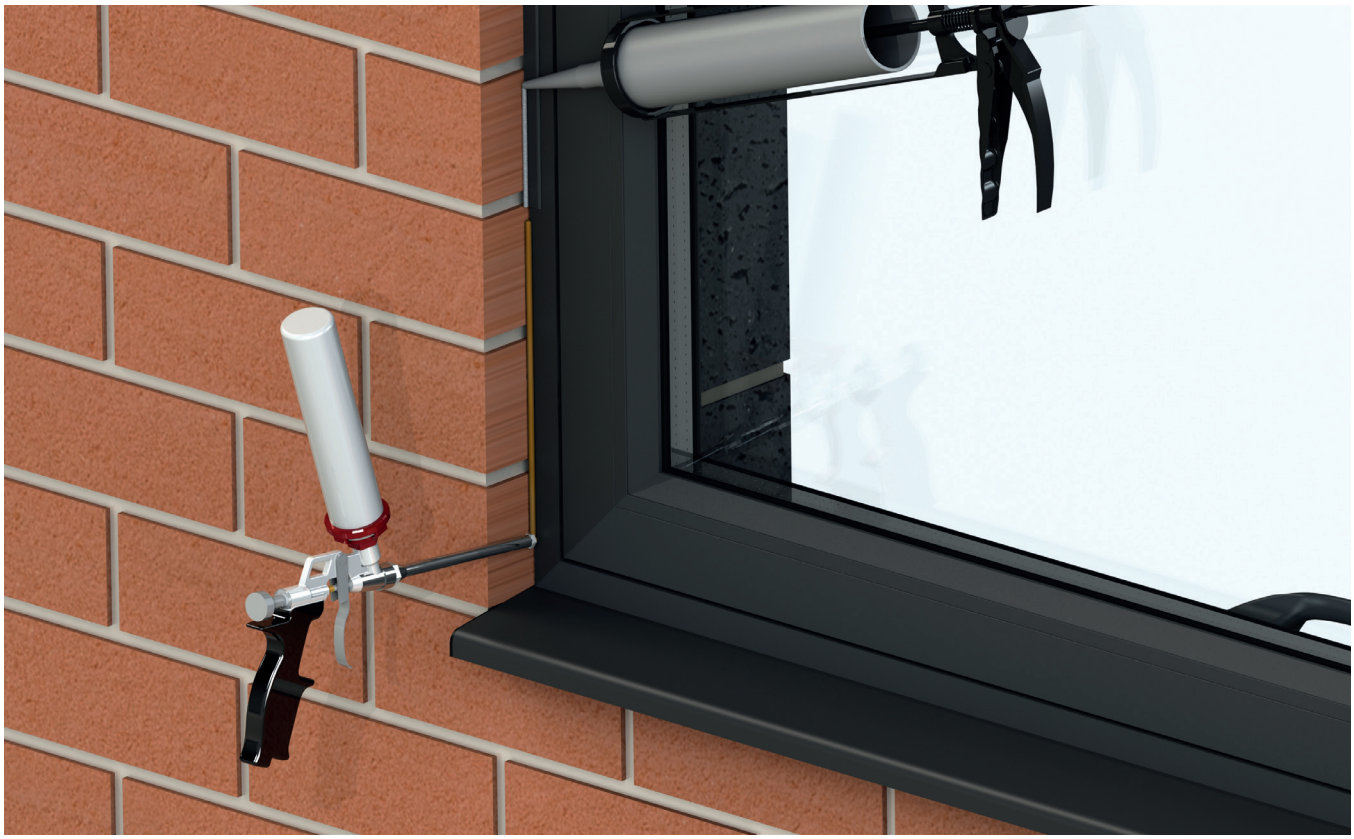
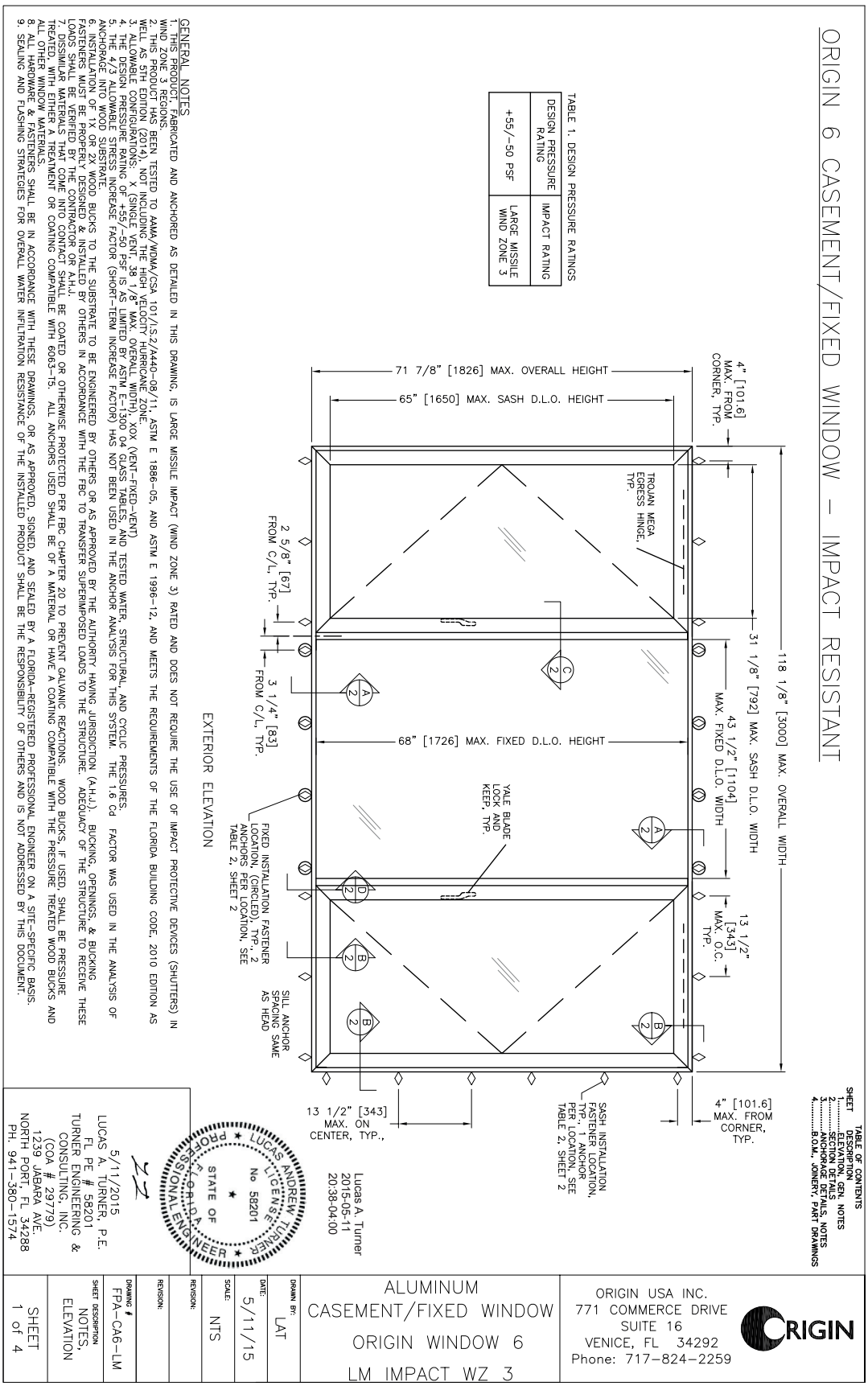


FIG 6

3.1. Wherever practical, the perimeter of the window should be foam filled between the window and the substrate.

3.2. Sealant must be applied around the outside perimeter of the window frame and opening /mull bar (if used). (Fig.6)


ORIGIN 6 CASEMENT/FIXED WINDOW – IMPACT RESISTANT
TABLE 1: DESIGN PRESSURE RATINGS
DESIGN PRESSURE RATING
IMPACT RATING
+55/-50 PSF
LARGE MISSILE WIND ZONE 3
TABLE OF CONTENTS
SHEET DESCRIPTION
1.....ELEVATION, GEN. NOTES
2.....SECTION DETAILS
3.....ANCHORAGE DETAILS, NOTES
4.....B.O.M., JOINERY, PART DRAWINGS
71 7/8" [1826] MAX. OVERALL HEIGHT
65" [1650] MAX. SASH D.L.O. HEIGHT
68" [1726] MAX. FIXED D.L.O. HEIGHT
118 1/8" [3000] MAX. OVERALL WIDTH
31 1/8" [792] MAX. SASH D.L.O. WIDTH
43 1/2" [1104] MAX. FIXED D.L.O. WIDTH
4" [101.6] MAX. FROM CORNER, TYP.
13 1/2" [343] MAX. O.C. TYP.
2 5/8" [67] FROM C/L, TYP.
3 1/4" [83] FROM C/L, TYP.
TROJAN MEGA EGRESS HINGE, TYP.
YALE BLADE LOCK AND KEEP, TYP.
FIXED INSTALLATION FASTENER LOCATION, (CIRCLED), TYP., 2 ANCHORS PER LOCATION, SEE TABLE 2, SHEET 2
SILL ANCHOR SPACING SAME AS HEAD
SASH INSTALLATION FASTENER LOCATION, TYP., 2 ANCHOR PER LOCATION, SEE TABLE 2, SHEET 2
13 1/2" [343] MAX. ON CENTER, TYP.,
4" [101.6] MAX. FROM CORNER, TYP.
EXTERIOR ELEVATION
GENERAL NOTES
1. THIS PRODUCT, FABRICATED AND ANCHORED AS DETAILED IN THIS DRAWING, IS LARGE MISSILE IMPACT (WIND ZONE 3) RATED AND DOES NOT REQUIRE THE USE OF IMPACT PROTECTIVE DEVICES (SHUTTERS) IN WIND ZONE 3 REGIONS.
2. THIS PRODUCT HAS BEEN TESTED TO AAMA/WDMA/CSA 101/I.S.2/A440-08/11, ASTM E 1886-05, AND ASTM E 1996-12, AND MEETS THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, 2010 EDITION AS WELL AS THE 2012 EDITION.
3. ALL ALLOWABLE CONFIGURATIONS, NOT INCLUDING THE HIGH VELOCITY OVERLAP WIDTH, OX (VENT-FIXED-VENT)
4. THE DESIGN PRESSURE RATING OF +55/-50 PSF IS AS LIMITED BY ASTM E-1300 04 GLASS TABLES, AND TESTED WATER, STRUCTURAL, AND CYCLIC PRESSURES.
5. THE 4/3 ALLOWABLE STRESS INCREASE FACTOR (SHORT-TERM INCREASE FACTOR) HAS NOT BEEN USED IN THE ANCHOR ANALYSIS FOR THIS SYSTEM. THE 1.6 Cd FACTOR WAS USED IN THE ANALYSIS OF ANCHORAGE INTO WOOD SUBSTRATE.
6. INSTALLATION OF 1X OR 2X WOOD BUCKS TO THE SUBSTRATE TO BE ENGINEERED BY OTHERS OR AS APPROVED BY THE AUTHORITY HAVING JURISDICTION (A.H.J.). BUCKING, OPENINGS, & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED BY OTHERS IN ACCORDANCE WITH THE FBC TO TRANSFER SUPERIMPOSED LOADS TO THE STRUCTURE. ADEQUACY OF THE STRUCTURE TO RECEIVE THESE LOADS SHALL BE VERIFIED BY THE CONTRACTOR OR A.H.J.
7. DISSIMILAR MATERIALS THAT COME INTO CONTACT SHALL BE COATED OR OTHERWISE PROTECTED PER FBC CHAPTER 20 TO PREVENT GALVANIC REACTIONS. WOOD BUCKS, IF USED, SHALL BE PRESSURE TREATED. WITH EITHER A TREATMENT OR COATING COMPATIBLE WITH 6063-T5. ALL ANCHORS USED SHALL BE OF A MATERIAL OR HAVE A COATING COMPATIBLE WITH THE PRESSURE TREATED WOOD BUCKS AND ALL OTHER WINDOW MATERIALS.
8. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS, OR AS APPROVED, SIGNED AND SEALED BY A FLORIDA-REGISTERED PROFESSIONAL ENGINEER ON A SITE-SPECIFIC BASIS.
9. SEALING AND FLASHING STRATEGIES FOR OVERALL WATER INFILTRATION RESISTANCE OF THE INSTALLED PRODUCT SHALL BE THE RESPONSIBILITY OF OTHERS AND IS NOT ADDRESSED BY THIS DOCUMENT.
Lucas A Turner
2015-05-11
20:38-04:00
PROFESSIONAL ENGINEER
LUCAS ANDREW TURNER
LICENSE
No 58201
STATE OF FLORIDA
5/11/2015
LUCAS A. TURNER, P.E.
FL PE # 58201
TURNER ENGINEERING & CONSULTING, INC.
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Phone: 717-824-2259
ORIGIN
ALUMINUM
CASEMENT/FIXED WINDOW
ORIGIN WINDOW 6
LM IMPACT WZ 3
DRAWN BY: LAT
DATE: 5/11/15
SCALE: NTS
REVISION:
REVISION:
DRAWING #: FPA-CA6-LM
SHEET DESCRIPTION: NOTES, ELEVATION
SHEET 1 of 4

TABLE 2: INSTALLATION ANCHOR REQUIREMENTS TABLE

SUBSTRATE TYPE	ANCHOR TYPE	MIN. EMBED	MIN. EDGE DIST.
CONCRETE (2.0 KSI MIN)	1/4" ITW TAPCON	1"	1 1/2"
HOLLOW OR GROUT-FILLED CMU (117 PSF MIN.)	1/4 ITW TAPCON	1"	2"
CONCRETE (2.85 KSI MIN.)	1/4" ELCO ULTRACON	1"	1"
HOLLOW OR GROUT-FILLED CMU (ASTM C90)	1/4" ELCO ULTRACON	1-1/4"	1"
2X MIN. SPRUCE-PINE-FIR WOOD (G=0.42)	1/4" ITW TAPCON OR 1/4" ELCO ULTRACON	1-3/8"	1"
2X MIN. SPRUCE-PINE-FIR WOOD (G=0.42)	#12 WOOD SCREW	1-3/8"	1"
16 GAUGE (0.060") MIN. STEEL STUD 33KSI YIELD MIN.	#12-24 ITW TEKS SELF-DRILLING SCREW	SEE ANCHOR NOTE 3	1/2"
1/8" ALUM. 6063-T5 MIN. OR 1/8" STEEL 36 KSI MIN.	#12 GRADE 5 SELF-TAPPING/ DRILLING SCREW	SEE ANCHOR NOTE 5	1/2"

GENERAL ANCHOR NOTES:
1. INSTALL TWO ANCHORS IN STAGGERED PATTERN AS SHOWN ABOVE AT EACH LOCATION SHOWN IN THE ELEVATIONS ON SHEET 1 FOR PRODUCT PERIMETER. USE ANCHORS APPROPRIATE FOR SUBSTRATE TYPE (SEE TABLE 2).
2. INSTALL SHIMS AT EACH ANCHOR LOCATION WHERE A GAP OF 1/16" OR GREATER EXISTS BETWEEN PRODUCT FRAME AND SUBSTRATE.
3. SHIMS SHALL BE LOAD-BEARING (PLASTIC OR METALLIC) AND CAPABLE OF TRANSFERRING LOADS TO SUBSTRATE.
4. SPECIFIED ANCHOR EMBEDMENT TO SUBSTRATE SHALL BE BEYOND WALL FINISH OR STUCCO.
5. FOR INSTALLATION TO METAL SUBSTRATES, ANCHORS SHALL BE LONG ENOUGH TO BE FULLY THREADED THROUGH THE METAL THICKNESS WITH AN ADDITIONAL 3/16" MIN. OF THREADS BEYOND.
6. A MINIMUM CENTER-TO-CENTER SPACING OF 4" SHALL BE MAINTAINED BETWEEN ALL CONCRETE OR CMU ANCHORS IN ANY DIRECTION. CONCRETE/MASONRY SUBSTRATES SHALL NOT BE CRACKED.

5/11/2015
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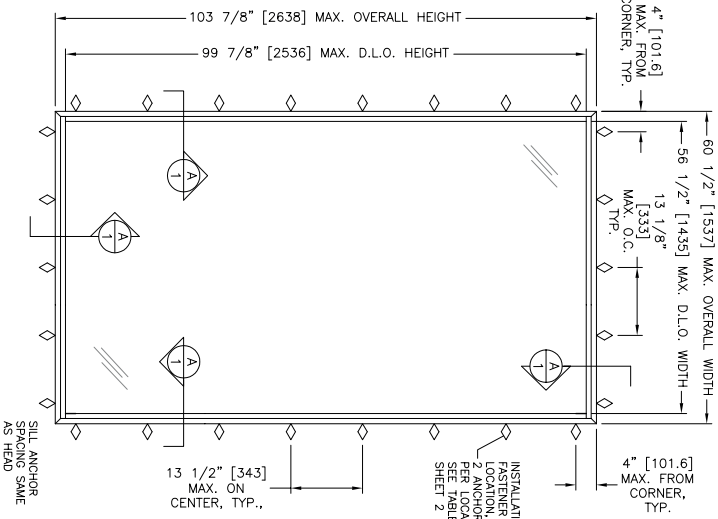
ORIGIN

ALUMINUM
CASEMENT/FIXED WINDOW
ORIGIN WINDOW 6
LM IMPACT WZ 3

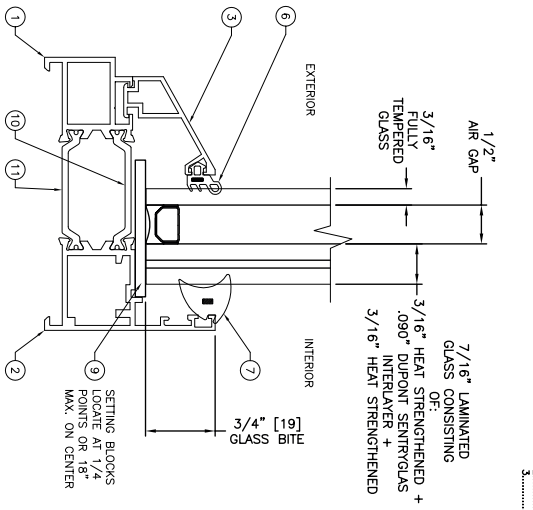
DRAWN BY: LAT
DATE: 5/11/15
SCALE: NTS
REVISION:
REVISION:
DRAWING #: FPA-CA6-LM
SHEET DESCRIPTION: INSTALLATION DETAILS
SHEET 3 of 4

ORIGIN FIXED WINDOW 6, LARGE MISSILE IMPACT

TABLE OF CONTENTS
SHEET DESCRIPTION
1.....GENERAL NOTES, ELEVATION, SECTION W/ GLAZING DET.
2.....ANCHORAGE DETAILS
3.....B.O.M., JOINERY, PART DRAWINGS



EXTERIOR ELEVATION



DETAIL A. TYPICAL SECTION HEAD, SILL, JAMB

DESIGN PRESSURE RATING	IMPACT RATING
+/- 55 PSF	LARGE AND SMALL MISSILE IMPACT

GENERAL NOTES
1. THIS PRODUCT, FABRICATED AND ANCHORED AS DETAILED IN THIS DRAWING, IS LARGE AND SMALL MISSILE IMPACT RESISTANT AND DOES NOT REQUIRE THE USE OF IMPACT PROTECTIVE DEVICES (SHUTTERS).
2. THIS PRODUCT HAS BEEN TESTED TO TAS 201-94, TAS 202-94, AND TAS 203-94, AND MEETS THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, 2010 EDITION AS WELL AS 5TH EDITION (2014), NOT INCLUDING THE HIGH VELOCITY HURRICANE ZONE.
3. ALLOWABLE CONFIGURATIONS: O PICTURE WINDOW AS LIMITED BY ASTM E-1300 04 GLASS TABLES, AND TESTED WATER, STRUCTURAL, AND CYCLIC PRESSURES.
4. THE DESIGN PRESSURE RATING +/- 55 PSF.
5. THE 4/3 ALLOWABLE STRESS INCREASE FACTOR (SHORT-TERM INCREASE FACTOR) HAS NOT BEEN USED IN THE ANCHOR ANALYSIS FOR THIS SYSTEM. THE 1.6 Cd FACTOR WAS USED IN THE ANALYSIS OF ANCHORAGE INTO WOOD SUBSTRATE.
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Lucas A. Turner
2015-04-27 18:46-04:00

4/23/2015
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ORIGIN

ALUMINUM FIXED WINDOW
ORIGIN WINDOW 6
Non-Impact

DRAWN BY: LAT
DATE: 4/18/15
SCALE: NTS
REVISION:
REVISION:
DRAWING #: FPA-PW6
SHEET DESCRIPTION: NOTES, ELEVATION, SECTION
SHEET 1 of 3

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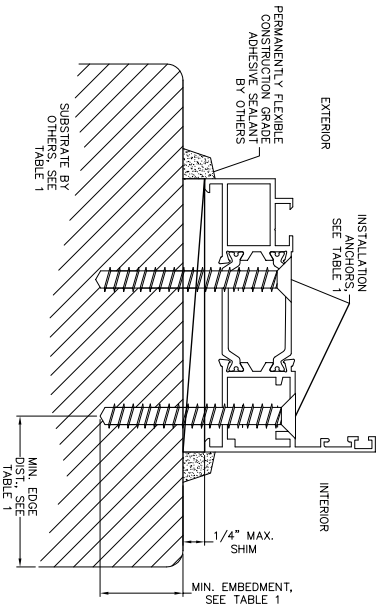
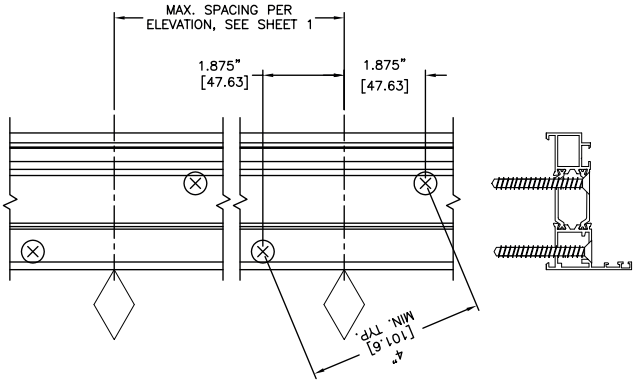
TYPICAL INSTALLATION, HEAD, SILL AND JAMB



ANCHOR STAGGER PATTERN



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ORIGIN

ALUMINUM FIXED WINDOW
ORIGIN WINDOW 6
Non-Impact

DRAWN BY: LAT
DATE: 4/18/15
SCALE: NTS
REVISION:
DRAWING #: FPA-PW6
SHEET DESCRIPTION: INSTALLATION DETAILS
SHEET 2 of 3

Notes

Notes

origin

DOORS AND WINDOWS

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