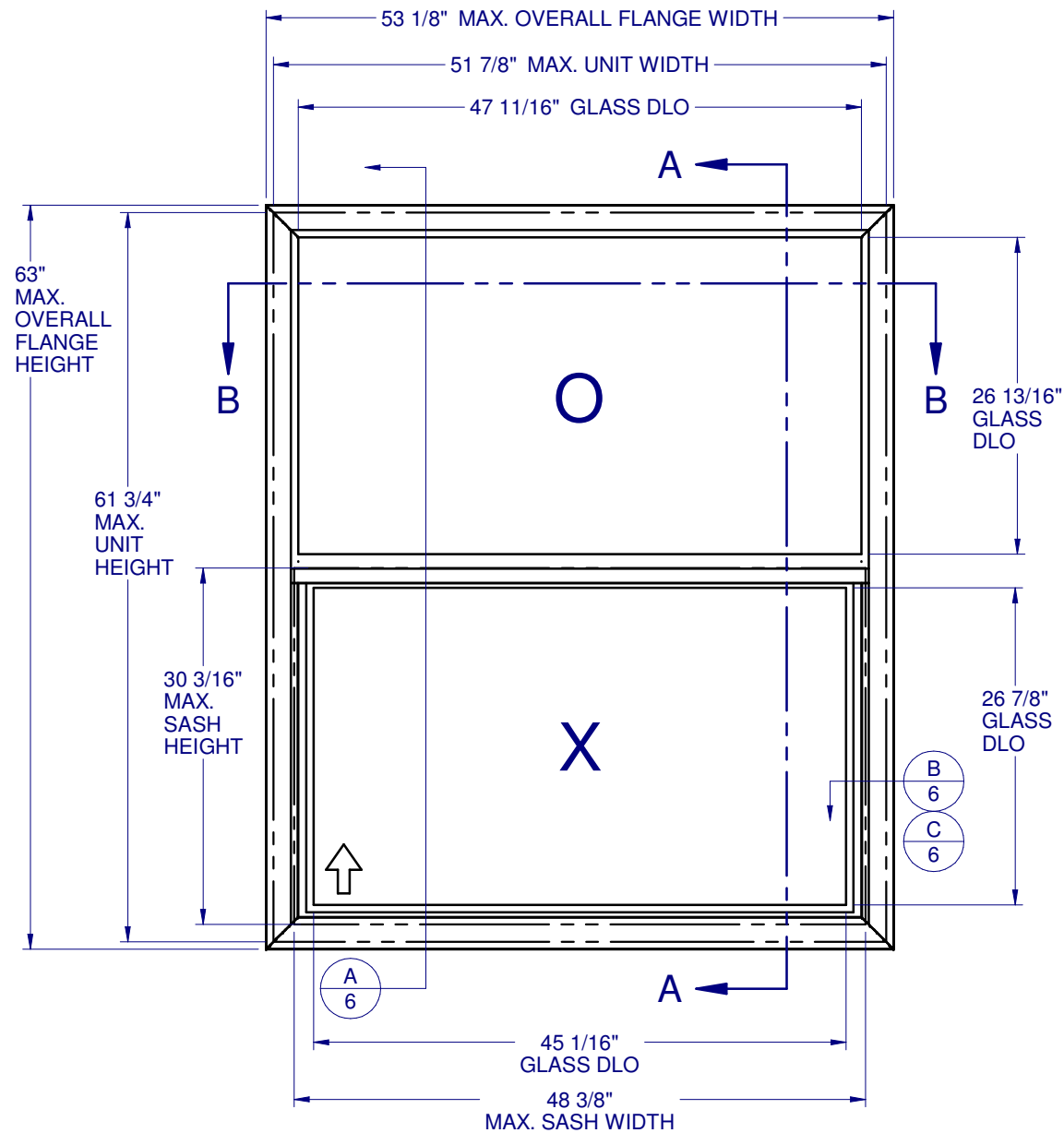


# SINGLE HUNG - LARGE MISSILE IMPACT



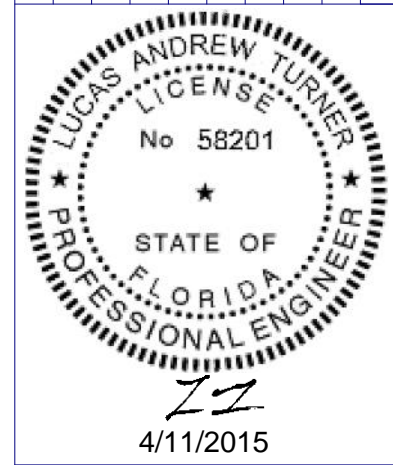
## GENERAL NOTES:

1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH THE FLORIDA BUILDING CODE (FBC), CURRENT EDITION INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ) AND IS RATED FOR WIND ZONE 4 MISSILE LEVEL D IMPACT USE AS DEFINED IN ASTM E 1996 PER THE FBC.
2. GLAZING OPTIONS: (SEE SHEET 2)
3. CONFIGURATIONS: "O/X".
4. DESIGN PRESSURE RATING:
  - NEGATIVE DESIGN LOADS BASED ON, TESTED PRESSURE AND GLASS TABLES ASTM E-1300-04.
  - POSITIVE DESIGN LOADS BASED ON, TESTED PRESSURE, WATER INFILTRATION TEST PRESSURE AND GLASS TABLES ASTM E-1300-04.
5. ANCHORAGE: THE 33 1/3% STRESS INCREASE HAS NOT BEEN USED IN THE DESIGN OF THIS PRODUCT. SEE SHEET 6 FOR ANCHOR DETAILS. WINDLOAD DURATION FACTOR Cd=1.6 WAS USED FOR WOOD ANCHOR CALCULATIONS.
6. PRODUCT APPROVED FOR IMPACT RESISTANCE. SHUTTERS ARE NOT REQUIRED.
7. ALL FRAMES AND VENTS FULLY WELDED. SMALL JOINT SEAM SEALANT USED AT FIXED MEETING RAIL AND JAMB.
8. SERIES / MODEL DESIGNATION SH-8100.
9. THE DESIGNATION X AND O STAND FOR THE FOLLOWING:  
X = OPERABLE SASH, O = FIXED SASH
10. SECTION CALLOUTS APPLY TO ALL ELEVATIONS IN A SIMILAR LOCATION.
11. EXTERNAL WEEP SLOT = 1/4" x 1-1/4" LOCATED 4" FROM BOTH ENDS.

**Custom WINDOW SYSTEMS**  
 1900 SW 44TH AVE.  
 OCALA, FLORIDA 34474  
 WWW.CWS.CC

## 8100 PVC SINGLE HUNG IMPACT

NO.	DESCRIPTION:	BY:	DATE:
B	UPDATED PER 2014 FBC	EMK	04/03/15
A	RECONFIGURED 9/2012	BAT	10/18/12



LUCAS A. TURNER, P.E.  
 FL PE # 58201  
 1239 JABARA AVE.  
 NORTH PORT, FL 34288  
 PH. 941-380-1574

SHEET DESCRIPTION:  
**GENERAL NOTES AND ELEVATIONS**

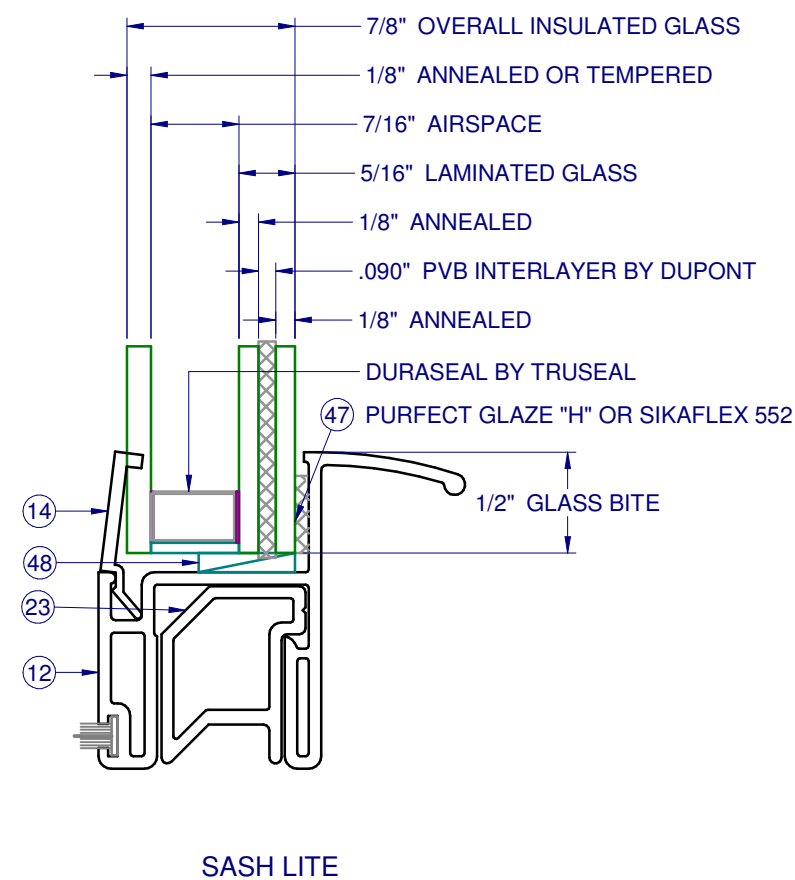
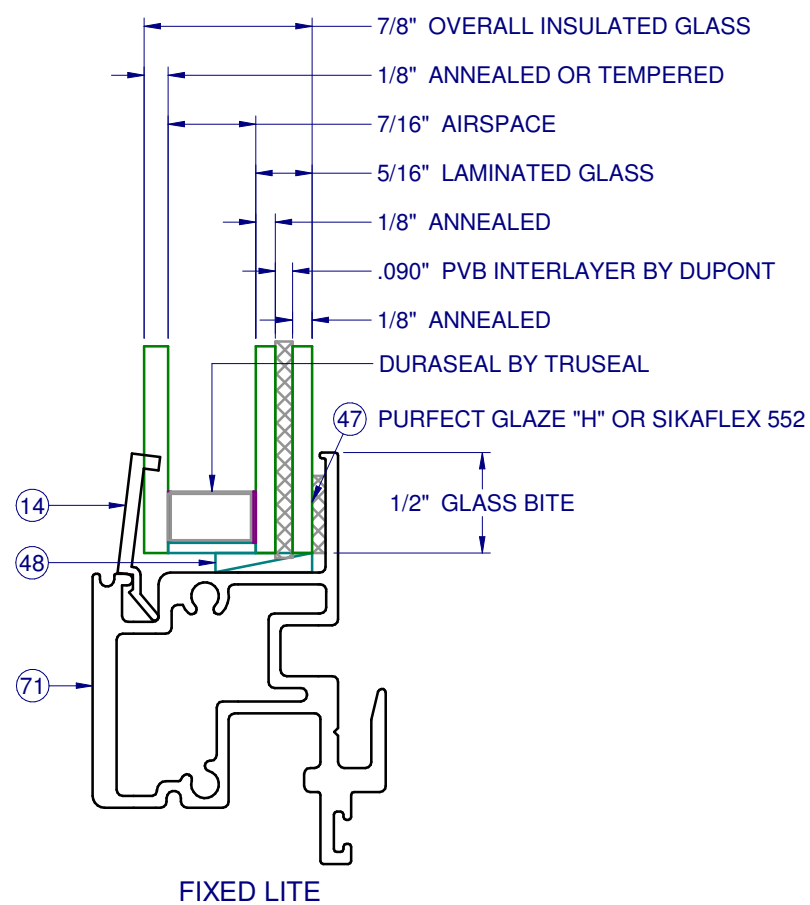
DRAWN BY:	DATE:
BAT	06/18/12
DWG #:	REV.:
CWS-812	B
SCALE:	SHEET
1:15	1 OF 6

### TABLE OF CONTENTS

GENERAL NOTES & ELEVATIONS.....	1
GLAZING DETAIL.....	2
SECTION VIEWS.....	3
EXTRUSIONS & B.O.M.....	4
ANCHOR SCHEDULE & NOTES.....	5
INSTALLATION DETAILS.....	6

MAX. UNIT SIZE	DESIGN PRESSURE RATING	IMPACT RATING
51-7/8" x 61-3/4"	+/- 70 PSF	LARGE MISSILE IMPACT

**8100 PVC  
SINGLE HUNG  
IMPACT**



									EMK	04/03/15
									BAT	10/18/12
									NO.:	DATE:
									DESCRIPTION:	REVISIONS
									B	UPDATED PER 2014 FBC
									A	RECONFIGURED 9/2012

LUCAS ANDREW TURNER  
 LICENSE No. 58201  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
*LT*  
 4/11/2015

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FL PE # 58201  
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PH. 941-380-1574

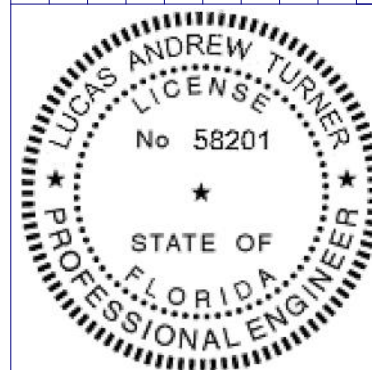
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**GLAZING DETAILS**

DRAWN BY:	DATE:
BAT	06/18/12
DWG #:	REV.:
CWS-812	B
SCALE:	SHEET
1:1	2 OF 6

**8100 PVC  
SINGLE HUNG  
IMPACT**

NO.:	DESCRIPTION:	BY:	DATE:
B	UPDATED PER 2014 FBC	EMK	04/03/15
A	RECONFIGURED 9/2012	BAT	10/18/12

REVISIONS



*LT*  
4/11/2015

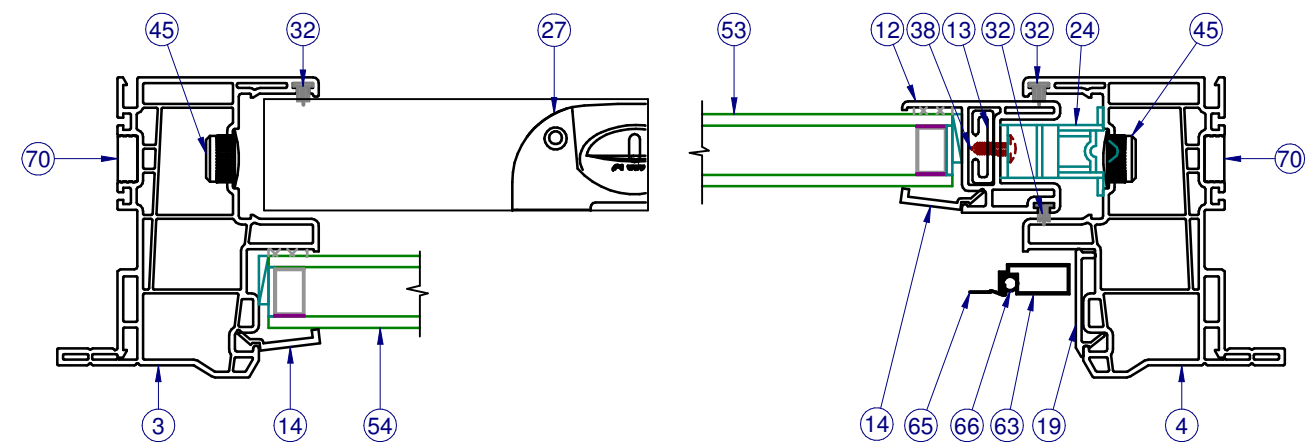
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FL PE # 58201  
1239 JABARA AVE.  
NORTH PORT, FL 34288  
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SHEET DESCRIPTION:

**SECTION VIEWS**

DRAWN BY:	DATE:
BAT	06/18/12
DWG #:	REV.:
CWS-812	B
SCALE:	SHEET
1:2	3 OF 6

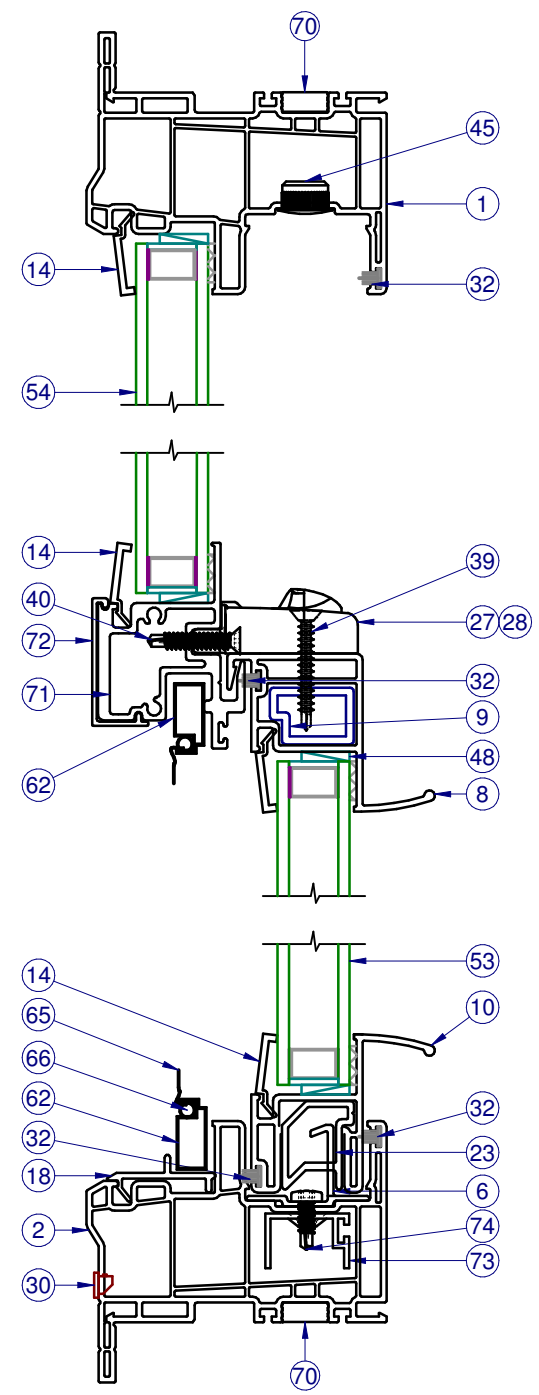
INTERIOR



SECTION B-B

NOTE: LEFT SIDE SHOWS FIXED SECTION VIEW,  
RIGHT SIDE SHOWS SASH SECTION VIEW.

INTERIOR

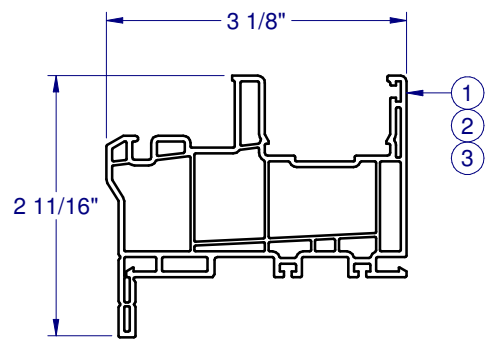


SECTION A-A

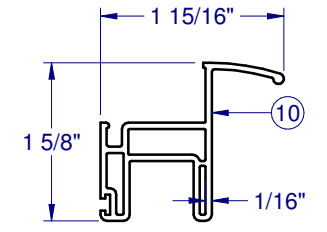
NOTE: ITEMS NOT SHOWN FOR CLARITY:  
20, 25-26, 36-37, 44, 51-52, 55-56, 64, 67-68

PARTS LIST				
ITEM	PART #	DESCRIPTION	VENDOR	MATERIAL
1	H-6031	Main Fr., SH, w/Flg., PVC, Head	Mikron	Vinyl
2	H-6031	Main Fr., SH, w/Flg., PVC, Sill	Mikron	Vinyl
3	H-6031	Main Fr., SH, w/Flg., PVC, L. Jb.	Mikron	Vinyl
4	H-6031	Main Fr., SH, w/Flg., PVC, R. Jb.	Mikron	Vinyl
6	S-1577	Impact Hook	Keymark	Alum
8	H-6027	Sash Meet. Rail, PVC	Mikron	Vinyl
9	H-1497	Reinf. Sash Meet. Rail	Keymark	Alum
10	H-6028	Sash Bottom Rail, PVC	Mikron	Vinyl
12	H-6004	Sash Side/Top/Bot. Rail	Mikron	Vinyl
13	S-1498	Reinf. S.B.R./S.S.R		
14	S-6064	Glz. Bd., 7/8"	Mikron	Vinyl
18	S-6013	Scrn. Adapt., w/Nib, PVC, Horiz.	Mikron	Vinyl
19	S-6014	Scrn. Adapt., PVC, Vert.	Mikron	Vinyl
20	S-6029	Sash Stop / Filler, PVC, Vert.	Mikron	Vinyl
23	H-1699	Reinforcement, SBR	Keymark	Alum
24	P-2190	Balance	BSI	
25	P-3059	Sash Cam, PVC	BSI	Plastic
26	P-3046	Take Out Clip	BSI	SS
27	P-3783	Lock, Impact, PVC	Interlock	
28	P-4069	Keeper, Impact, PVC	Interlock	Zamac
30	P-3215	Weep Cover w/ Flap	Gaer	Plastic
32	P-3429	Wstp., 0.270 x .187 back FinSeal, Gray	Ultrafab	
37	P-4638	#8 x 2-1/2 PH Mod. Truss, Type A, TEK 2	Fastenal	Steel
38	P-3768	#8 x 0.625 Ph PH SMS	Hub City	Steel
39	P-4051W	#8 x 1.250 Ph FH TEK, Wht.	Hub City	Steel
40	P-4264W	#8 x 3/4 FH PH w/#6 Head, TEK, Wht.	Hub City	Steel
44	P-3342	Seam Sealer, SM-5504	Schnee	
45	P-3752	Cap Plug, 1/2" Hole	M&M	Nylon
47	P-3438	Sikaflex 552 or Purfect Glaze "H"	Sika/Henkel	
48	P-3352	Set. Blk., 85 Dur., 1/8" x 5/8" x 2" Lg.	F. Lowe	Rubber
51	P-3881	Temporary Lbl. (NFRC/DP)		
52	P-3613	CWS Lbl. (logo)	Pro Label	
53	Sash	SEE SHEET 2	GLASS	
54	Fixed	SEE SHEET 2	GLASS	
56	P-3281	Spacer	Duraseal	
62	P-3218	Screen Frame, Horiz.	Allmetal	Alum
63	P-3218	Screen Frame, Vert.	Allmetal	Alum
64	P-3321	Screen Frame Corner Key	Allmetal	Plastic
65	P-3581	Screen Cloth, 18 x 16 Fiberglass	Bettervue	Fiberglass
66	P-3228	Screen Spline, .155 Dia., Blk.	Dapa	Vinyl
67	P-3029	Screen Pull Tab	Summit	Alum
68	P-3033	Screen Spring, SS	Fl. Screen	SS
70	P-3113	Screw Support for PVC	T. Plastics	Nylon
71	H-1836	Alum. Fixed Rail	Keymark	Alum
72	S-6063	Cover, Fixed Rail	Mikron	Vinyl
73	S-1112	Reinforcement, Impact Hook	Keymark	Alum
74	P-3541	#8 x 1/2", Pan Head, TEK	Fastenal	Steel

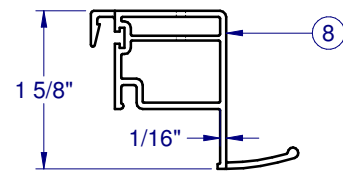
LINE ITEMS NOT USED:  
5, 7, 11, 15-17, 21-22, 29, 31, 33-36, 41-43, 46, 49-50, 55, 57-61, 69



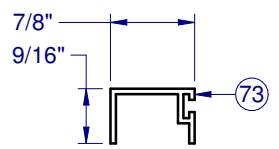
PVC FRAME FLANGE-6031



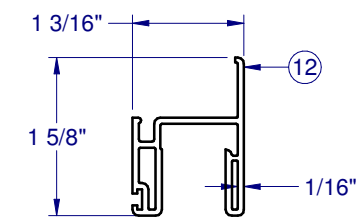
PVC SASH BTM. RAIL-6028



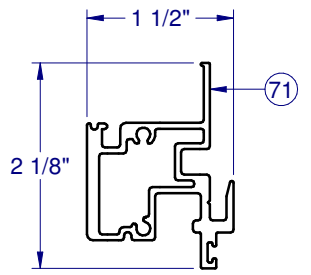
PVC SASH TOP RAIL-6027



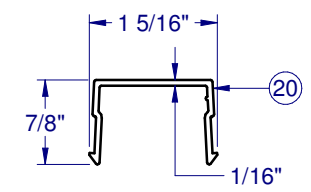
REINF., IMPACT HOOK - 1112



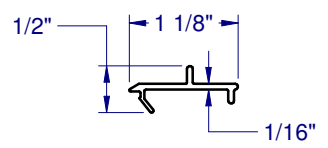
PVC SASH SIDE RAIL - 6004



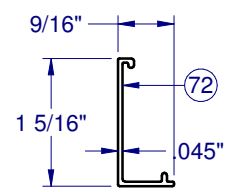
FIXED RAIL - 1836



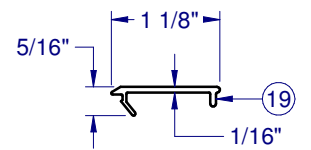
PVC SASH STOP - 6025



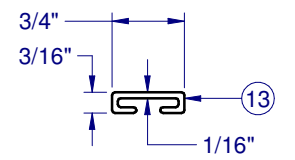
PVC SCREEN CATCH - 6013



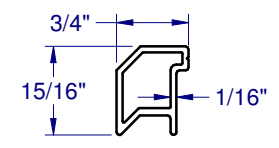
PVC FIXED RAIL COVER - 6063



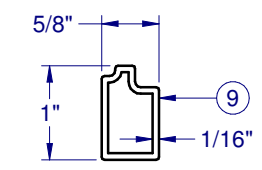
PVC SCREEN SUPPORT - 6014



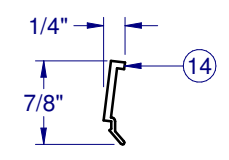
REINF. S.B.R./S.S.R. - 1498



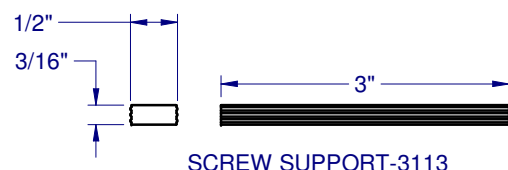
REINF. BTM RAIL-1699



REINF. TOP RAIL-1497

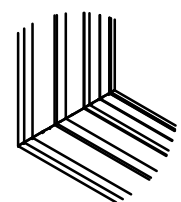


PVC GLAZING BEAD-6064

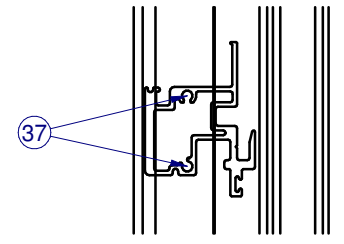


SCREW SUPPORT-3113

FRAME CORNER CONSTRUCTION



CORNER WELD (ALL SIDES) 1:8



FIXED MEETING RAIL SCREWED TOGETHER WITH OUTERFRAME 1:8



1900 SW 44TH AVE.  
OCALA, FLORIDA 34474  
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8100 PVC SINGLE HUNG IMPACT

NO.	DESCRIPTION:	BY:	DATE:
B	UPDATED PER 2014 FBC	EMK	04/03/15
A	RECONFIGURED	BAT	10/18/12



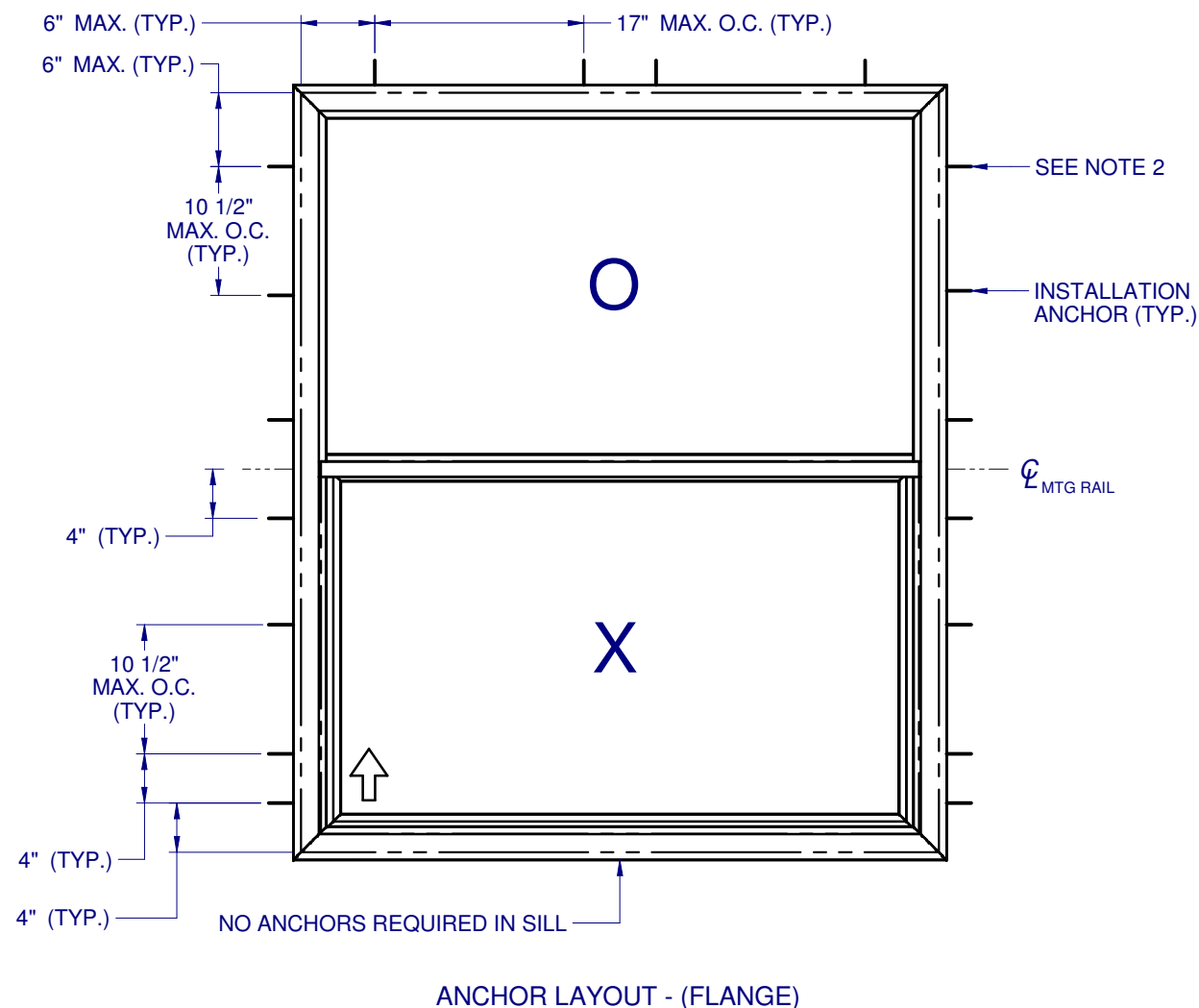
LUCAS A. TURNER, P.E.  
FL PE # 58201  
1239 JABARA AVE.  
NORTH PORT, FL 34288  
PH. 941-380-1574

SHEET DESCRIPTION:

BOM AND EXTRUSIONS

DRAWN BY: BAT	DATE: 06/18/12
DWG #: CWS-812	REV.: B
SCALE: 1:2	SHEET 4 OF 6

**8100 PVC  
SINGLE HUNG  
IMPACT**

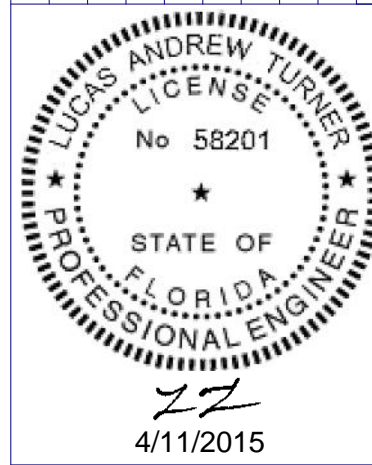


ANCHOR LAYOUT - (FLANGE)

NOTES:

1. INSTALL ONE ANCHOR AT EACH INSTALLATION LOCATION. NO ANCHORS REQUIRED IN SILL.
2. SHIM AS REQ AT EACH INSTALLATION ANCHOR USING LOAD BEARING SHIMS. MAX. ALLOWABLE SHIM STACK TO BE 1/4". USE SHIMS WHERE SPACE GREATER THAN 1/16" IS PRESENT. LOAD BEARING SHIMS SHALL BE CONSTRUCTED OF HIGH DENSITY PLASTIC OR BETTER. WOOD SHIMS ARE NOT ALLOWED.
3. ANCHOR TYPE, SIZE, SPACING AND EMBEDMENT SHALL BE AS SPECIFIED IN THESE DRAWINGS, SEE TABLE 1, SHEET 6.
4. ALL INSTALLATION ANCHORS MUST BE MADE OF OR PROTECTED WITH A CORROSION RESISTANT MATERIAL OR COATING. DISSIMILAR METALS OR MATERIALS IN CONTACT WITH PRESSURE TREATED WOOD MUST BE PROTECTED TO PREVENT REACTION.
5. INSTALLATION ANCHORS SHALL BE IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM SPECIFIED IN TABLE 1, SHEET 6.
6. ANCHOR EMBEDMENT TO SUBSTRATE SHALL BE BEYOND WALL DRESSING OR STUCCO. FOR CONCRETE/CMU OPENINGS, EMBEDMENT SHALL BE BEYOND WOOD BUCKS, IF USED, INTO SUBSTRATE. INSTALLATIONS TO SOLID CONCRETE OR GROUT-FILLED CMU MAY INCLUDE BUT DO NOT REQUIRE 1X WOOD BUCKS BETWEEN THE PRODUCT AND THE SUBSTRATE. INSTALLATIONS TO HOLLOW CMU REQUIRE THE USE OF 1X BUCKS BETWEEN THE PRODUCT AND SUBSTRATE.
7. A MINIMUM CENTER-TO-CENTER SPACING SHALL BE MAINTAINED BETWEEN ALL FASTENERS: 3" FOR MASONRY, 1" FOR WOOD AND METAL.
8. WOOD OR MASONRY OPENINGS, BUCKS AND BUCK FASTENERS SHALL BE PROPERLY DESIGNED BY THE ARCHITECT OR ENGINEER OF RECORD AND INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE. SUBSTRATES SHALL MEET THE MINIMUM STRENGTH REQUIREMENTS AS SHOWN IN TABLE 1, SHEET 6. CONCRETE AND MASONRY SUBSTRATES MAY NOT BE CRACKED.
9. SEALING AND FLASHING STRATEGIES FOR OVERALL WATER RESISTANCE OF INSTALLATION SHALL BE DONE BY OTHERS FOLLOWING THE CURRENT VERSION OF THE REFERENCE DOCUMENTS: FMA/AAMA 100(FIN WINDOWS), FMA/AAMA 200(FLANGE WINDOWS), FMA/WDMA 250(BOX WINDOWS), FMA/AAMA/WDMA 300(EXTERIOR DOORS)

NO.:	DESCRIPTION:	BY:	DATE:
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LUCAS A. TURNER, P.E.  
FL PE # 58201  
1239 JABARA AVE.  
NORTH PORT, FL 34288  
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SHEET DESCRIPTION:  
**ANCHOR SCHEDULE AND NOTES**

DRAWN BY: BAT	DATE: 06/18/12
DWG #: CWS-812	REV.: B
SCALE: 1:15	SHEET 5 OF 6

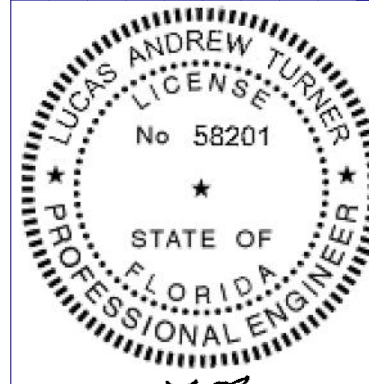
REVISIONS



**8100 PVC  
SINGLE HUNG  
IMPACT**

				EMK	04/03/15
				BAT	10/18/12
				NO.:	DESCRIPTION:
				BY:	DATE:

REVISIONS



*LT*  
4/11/2015

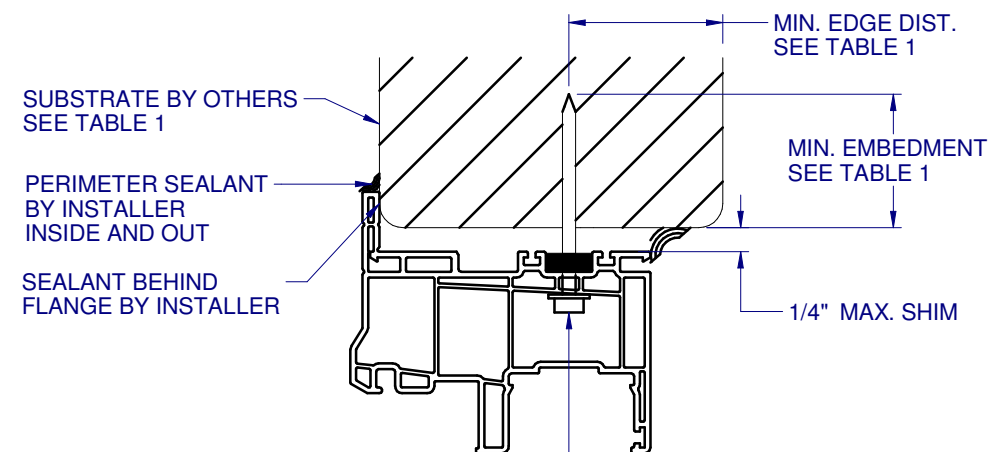
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FL PE # 58201  
1239 JABARA AVE.  
NORTH PORT, FL 34288  
PH. 941-380-1574

SHEET DESCRIPTION:

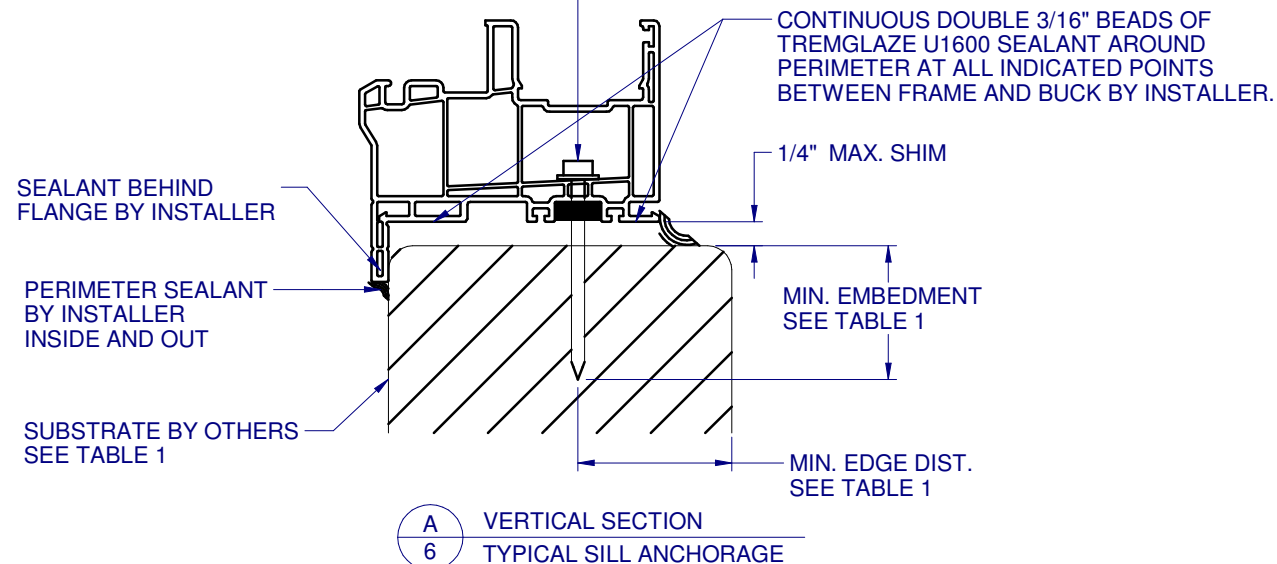
**INSTALLATION DETAILS**

DRAWN BY:	DATE:
BAT	06/18/12
DWG #:	REV.:
CWS-812	B
SCALE:	SHEET
1:2	6 OF 6

TYPICAL HEAD ANCHORAGE

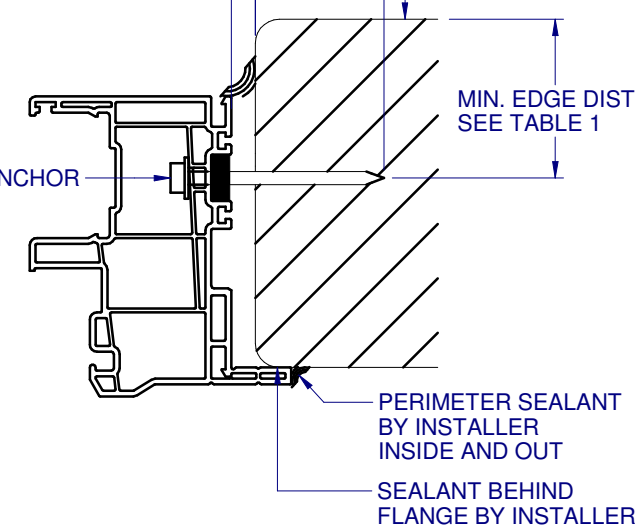


INSTALLATION ANCHOR SEE TABLE 1

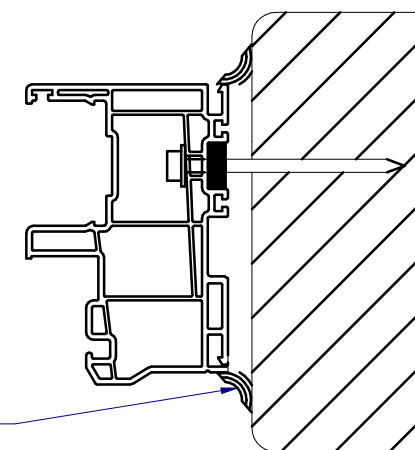


MIN. EMBEDMENT SEE TABLE 1  
1/4" MAX. SHIM  
SUBSTRATE BY OTHERS SEE TABLE 1

INSTALLATION ANCHOR SEE TABLE 1



**B**  
6 HORIZONTAL SECTION  
TYPICAL JAMB ANCHORAGE



**C**  
6 HORIZONTAL SECTION  
BOX FRAME INSTALLATION  
HEAD AND SILL SIMILAR FOR BOX INSTALLATION

FLANGE REMOVAL NOTE: PARTIALLY OR FULLY REMOVING THE FLANGE, UP TO AND INCLUDING A BOX-FRAME APPLICATION IS ACCEPTABLE PROVIDED:

- MIN. 1/4" FILLET OF CONSTRUCTION-GRADE ADHESIVE CAULK IS APPLIED INSIDE AND OUT, FULL PERIMETER, BY INSTALLER.
- PRODUCT ANCHORAGE IS IN ACCORDANCE WITH REQUIREMENTS AS SHOWN FOR FLANGE WINDOWS.

**TABLE 1: APPROVED INSTALLATION FASTENERS**

SUBSTRATE TYPE	ANCHOR TYPE	MIN. EMBEDMENT	MIN. EDGE DIST.
CONCRETE (2.0 KSI MIN.)	3/16" ITW TAPCON	1-1/2"	1-1/8"
HOLLOW OR GROUT-FILLED CMU (117 PCF MIN.)	3/16" ITW TAPCON	1"	2"
CONCRETE (2.85 KSI MIN.)	3/16" ELCO ULTRACON	1"	1"
GROUT-FILLED CMU (ASTM C-90)	3/16" ELCO ULTRACON	1-1/4"	2-1/2"
2X MIN. SOUTHERN PINE (G=0.55)	3/16" ITW TAPCON OR ELCO ULTRACON	1-3/8"	7/8"
2X MIN. SOUTHERN PINE (G=0.55)	#10 WOOD SCREW	1-3/8"	7/8"
16 GAUGE (0.060") MIN. STEEL STUD (33 KSI YIELD MIN)	#10-16 HILTI KWIK-FLEX OR ITW TEKS SELF-DRILLING SCREW	FULL THREAD THRU 0.060"	7/16"
1/8" ALUM. (6063-T5 MIN.) OR 1/8" STEEL (33 KSI MIN.)	#10 GRADE 5 SELF-TAPPING / DRILLING SCREW	FULL THREAD THRU 0.125"	7/16"