

INSTALLATION NOTES:

1. ONE (1) INSTALLATION ANCHOR IS REQUIRED AT EACH ANCHOR LOCATION SHOWN UNLESS OTHERWISE SPECIFIED.
2. THE NUMBER OF INSTALLATION ANCHORS DEPICTED IS THE MINIMUM NUMBER OF ANCHORS TO BE USED FOR PRODUCT INSTALLATION.
3. INSTALL INDIVIDUAL INSTALLATION ANCHORS WITHIN A TOLERANCE OF ±1/2 INCH OF THE DEPICTED LOCATION IN THE ANCHOR LAYOUT DETAIL (I.E., WITHOUT CONSIDERATION OF TOLERANCES). TOLERANCES ARE NOT CUMULATIVE FROM ONE INSTALLATION ANCHOR TO THE NEXT.
4. SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM(S). MAXIMUM ALLOWABLE SHIM STACK TO BE 3/8 INCH. SHIM WHERE SPACE OF 1/16 INCH OR GREATER OCCURS. SHIM(S) SHALL BE CONSTRUCTED OF HIGH DENSITY PLASTIC OR BETTER.
5. FOR INSTALLATION INTO WOOD FRAMING USE #14 WOOD SCREWS OF SUFFICIENT LENGTH TO ACHIEVE 1 1/2 INCH MINIMUM EMBEDMENT INTO WOOD SUBSTRATE.
6. FOR INSTALLATION THROUGH 1X BUCK TO CONCRETE/MASONRY, OR DIRECTLY INTO CONCRETE/MASONRY, USE 1/4 INCH DIAMETER ITW TAPCONS OF SUFFICIENT LENGTH TO ACHIEVE 1 1/4 INCH MINIMUM EMBEDMENT.
7. FOR INSTALLATION THROUGH METAL STUD USE 1/4 INCH DIAMETER SELF-DRILLING SCREWS, GR. 5 OF SUFFICIENT LENGTH TO ACHIEVE 3 THREADS MINIMUM PENETRATION BEYOND METAL FRAME SUBSTRATE.
8. FOR INSTALLATION THROUGH ALUMINUM USE 1/4 INCH DIAMETER SELF-DRILLING SCREWS, GR. 5 OF SUFFICIENT LENGTH TO ACHIEVE 3 THREADS MINIMUM PENETRATION BEYOND METAL FRAME SUBSTRATE.
9. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDE WALL FINISHES, INCLUDING BUT NOT LIMITED TO STUCCO, FOAM, BRICK VENEER, AND SIDING.
- 10.INSTALLATION ANCHORS AND ASSOCIATED HARDWARE MUST BE MADE OF CORROSION RESISTANT MATERIAL OR HAVE A CORROSION RESISTANT COATING.

FASTENERS USED WITHIN 3,000 FEET OF A SALTWATER COASTLINE AND INSTALLED IN ENCLOSED SPACES SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 1711.1.1 (E.G., ASTM A153 CLASS D, ASTM A641 CLASS 3S, OR EQUIVALENT CORROSION RESISTANCE).

CONNECTORS AND METAL PLATES USED WITHIN 3,000 FEET OF A SALTWATER COASTLINE SHALL BE STANDARD GALVANIZED IN ACCORDANCE WITH SECTION 1711.1.2 (E.G., ASTM A653 G90, ASTM A123, OR PROTECTIVE COATING PER TPI 1).
- 11.FOR HOLLOW BLOCK AND GROUT FILLED BLOCK, DO NOT INSTALL INSTALLATION ANCHORS INTO MORTAR JOINTS. EDGE DISTANCE IS MEASURED FROM FREE EDGE OF BLOCK OR EDGE OF MORTAR JOINT INTO FACE SHELL OF BLOCK.
- 12.INSTALLATION ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ANCHOR MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ANCHORS SHALL NOT BE USED IN SUBSTRATES WITH STRENGTHS LESS THAN THE MINIMUM STRENGTH SPECIFIED BY THE ANCHOR MANUFACTURER.
- 13.INSTALLATION ANCHOR CAPACITIES FOR PRODUCTS HEREIN ARE BASED ON SUBSTRATE MATERIALS WITH THE FOLLOWING PROPERTIES:

WOOD - MINIMUM SPECIFIC GRAVITY OF 0.55.

CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.

MASONRY - UNIT STRENGTH CONFORMS TO ASTM C-90 WITH MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AND GROUT CONFORMS TO ASTM C476, MINIMUM GROUT COMPRESSIVE STRENGTH OF 2000 PSI.

STEEL - MINIMUM YIELD STRENGTH OF 33 KSI. MINIMUM 18 GA. WALL THICKNESS.

ALUMINUM - MINIMUM 0.067" INCH THICK, 6063-T5 ALUMINUM.
14. INSTALLATION SHALL FOLLOW MANUFACTURERS RECOMMENDATIONS FOR SEALING WINDOWS AND ACCESSORY ITEMS.

YKK AP America Inc.

YOW 225 TU THERMAL ALUMINUM

CASEMENT OUTSWING / INSWING WINDOW

(NON-HVHZ) (NON-IMPACT)

GENERAL NOTES:

1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH THE CURRENT FLORIDA BUILDING CODE (FBC), EXCLUDING HVHZ AND HAS BEEN EVALUATED ACCORDING TO THE FOLLOWING:

AMMA/WDMA/CSA 101/I.S.2/A440-22
2. ADEQUACY OF THE EXISTING STRUCTURAL CONCRETE/MASONRY, 2X FRAMING AND METAL STUD FRAMING AS A MAIN WIND FORCE RESISTING SYSTEM CAPABLE OF WITHSTANDING AND TRANSFERRING APPLIED PRODUCT LOADS TO THE FOUNDATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
3. 1X AND 2X BUCKS (WHEN USED) SHALL BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO THE STRUCTURE. BUCK DESIGN AND INSTALLATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
4. THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.
5. APPROVED IMPACT PROTECTIVE SYSTEM **IS REQUIRED** ON THIS PRODUCT IN WIND BORNE DEBRIS REGIONS.
6. WINDOW FRAME MATERIAL: ALUMINUM 6063-T5
7. DISSIMILAR METALS INCLUDING FASTENERS THAT MAY COME INTO CONTACT WITH ALUMINUM UNIT FRAMING SHALL BE PROTECTED IN ACCORDANCE WITH THE FBC.
8. GLASS SHALL MEET THE REQUIREMENTS OF ASTM E1300 GLASS CHARTS. SEE SHEET 17 FOR GLAZING DETAIL.
9. GLAZING SELECTION SHALL MEET SAFETY GLAZING REQUIREMENTS PER FBC CHAPTER 24.

NOTES:

1. MAXIMUM SIZE LISTED RIGHT IS AS-TESTED OVERALL SINGLE UNIT VENT SIZE, SEE SHEETS 3 FOR ALTERNATE APPROVED VENT SIZES & HARDWARE OPTIONS AND SHEET 2 FOR QUALIFIED CONFIGURATIONS.
2. SEE SHEETS 4-6 FOR APPROVED VENT SIZE.
3. FOR MAXIMUM VENT SQUARE FOOTAGE LIMITATIONS, SEE SHEETS 4-6.
4. FURTHER LIMITATIONS OF DESIGN PRESSURES DUE TO HARDWARE ASSEMBLIES FOUND ON SHEETS 4-6.

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DESIGN PRESSURE TABLE		
MAX. VENT SIZE	MAX. DP	IMPACT RATING
SEE SHEETS 4 & 4A	+65/-65 PSF	NON-IMPACT
** SEE SHEETS 5 & 6	+65/-65 PSF	NON-IMPACT

** MEETS THE REQUIREMENTS OF AAMA 513-14 FORCES AND MOTIONS.



YKK AP America Inc.
101 MARIETTA STREET NW, SUITE 2100
ATLANTA, GA 30303
PH: (478)277-1955 FAX: (678)838-6001

TITLE:
YOW 225 TU THERMAL ALUMINUM
CASEMENT OUTSWING / INSWING WINDOW
(NON-HVHZ) (NON-IMPACT)

INSTALLATION & GENERAL NOTES

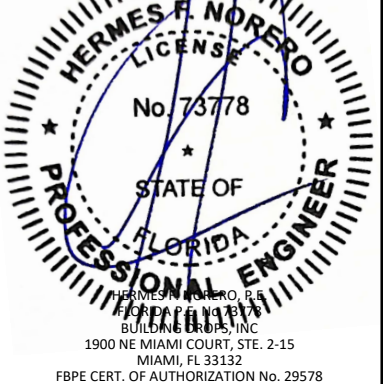
PREPARED BY:
BUILDING DROPS, INC.
1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
PH: (954)399-8478
FAX: (954)744-4738
WEB: www.buildingdrops.com

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2023 FBC CODE UPDATE	MS	05.05.23
MISC. UPDATE	SH	02.26.24
2026 FBC CODE UPDATE	SH	07.30.26

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Reason: I am approving this document
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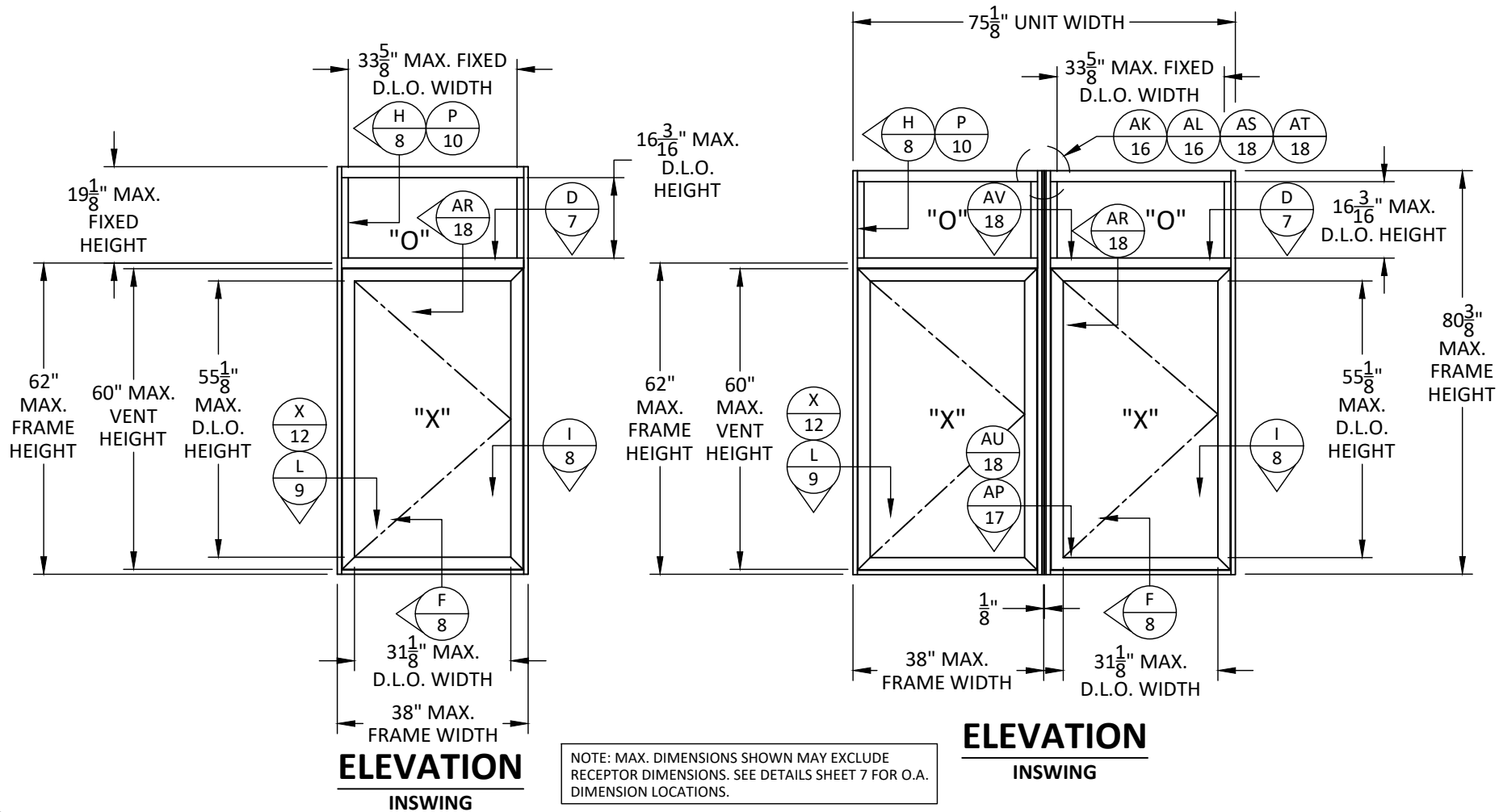
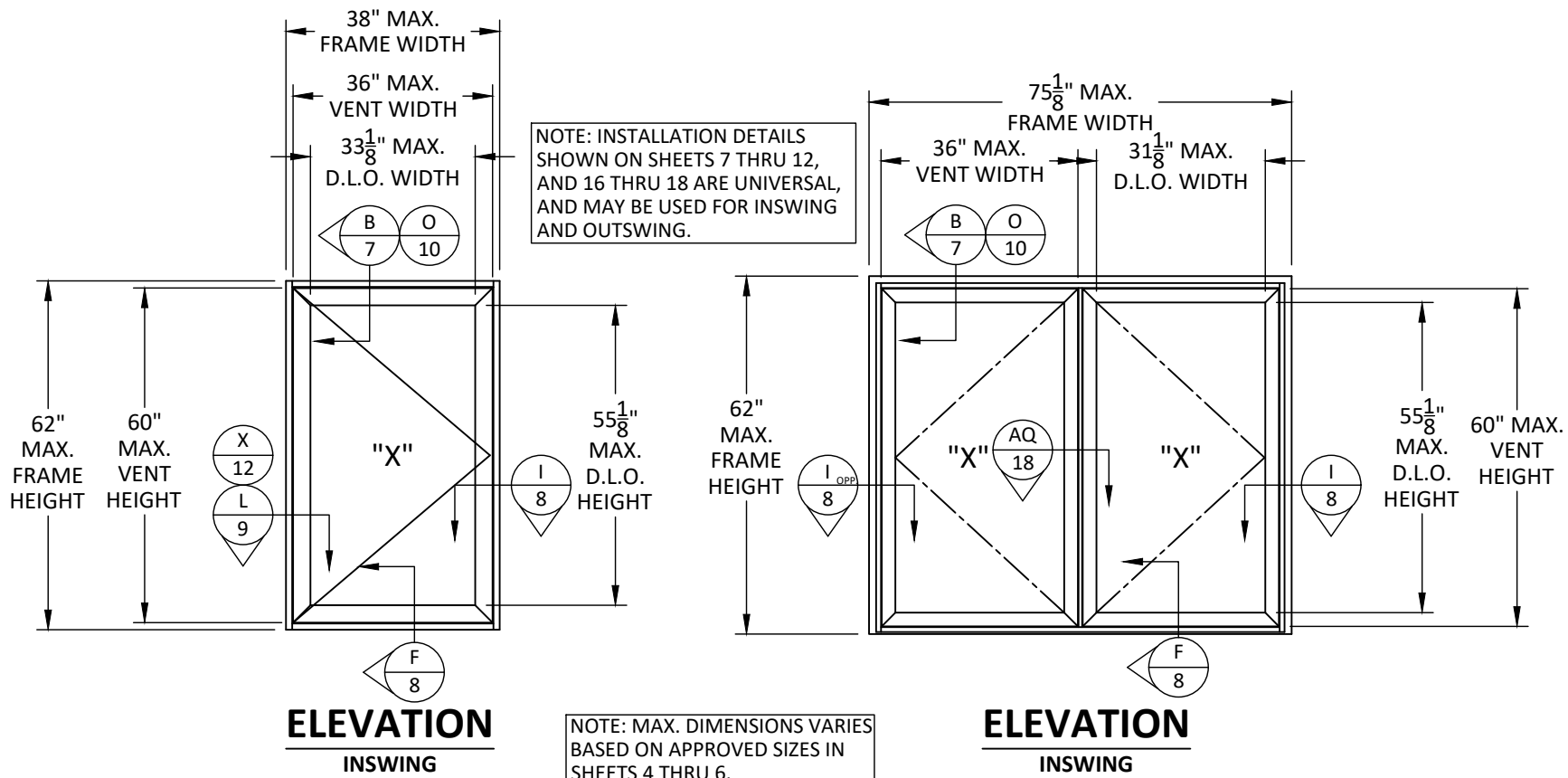
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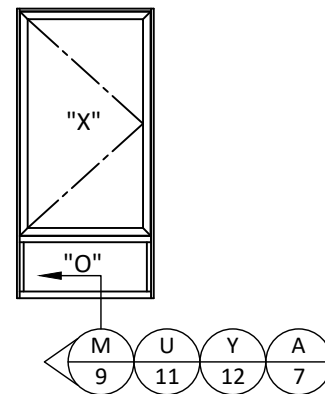
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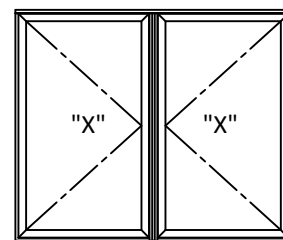
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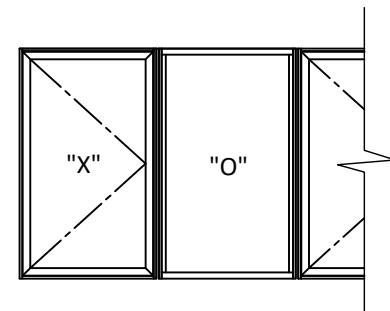
QUALIFIED CONFIGURATIONS



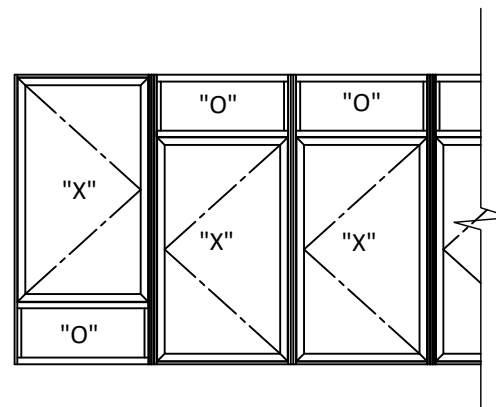
NOTE: UNITS MAY UTILIZE INTEGRAL MULLS FOR FIXED OVER CASEMENT OR CASEMENT OVER FIXED CONFIGURATIONS



NOTE: LEFT HAND & RIGHT HAND UNITS ARE INTERCHANGABLE. DETAILS SHALL BE SIMILAR TO THOSE SHOWN HEREIN.



NOTE: UNITS MAY BE MULLED SIDE BY SIDE IN COMBINATIONS OF CASEMENT/FIXED, CASEMENT/CASEMENT, CASEMENT/PROJECTED, AND/OR OTHER APPROVED PRODUCTS. MULLS SHALL BE AS SHOWN HEREIN OR APPROVED UNDER SEPARATE APPROVAL. FIXED WINDOWS AND OTHER ALTERNATE WINDOW TYPES UNDER SEPARATE APPROVAL (SEE APPROVED INSTALLATION INSTRUCTIONS YKK244 & YKK249).



YKK AP America Inc.
101 MARIETTA STREET NW, SUITE 2100
ATLANTA, GA 30303
PH: (478)277-1955 FAX: (678)838-6001

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ELEVATIONS & QUALIFIED CONFIGURATIONS

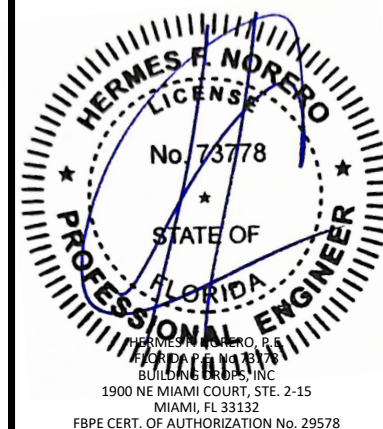
PREPARED BY: BUILDING DROPS, INC.

1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
PH: (954)399-8478
FAX: (954)744-4738
WEB: www.buildingdrops.com



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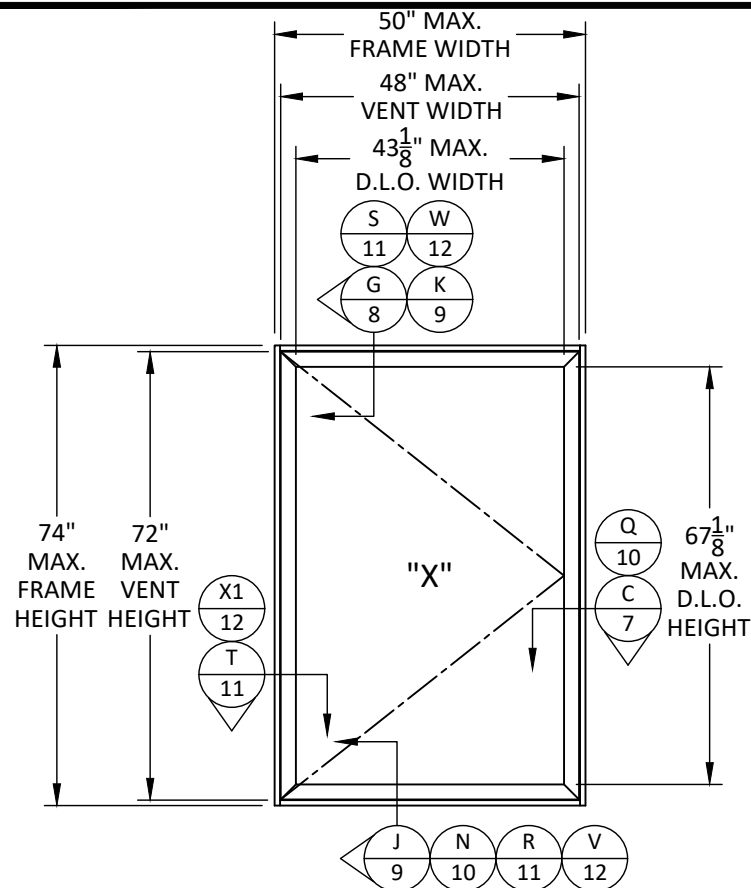
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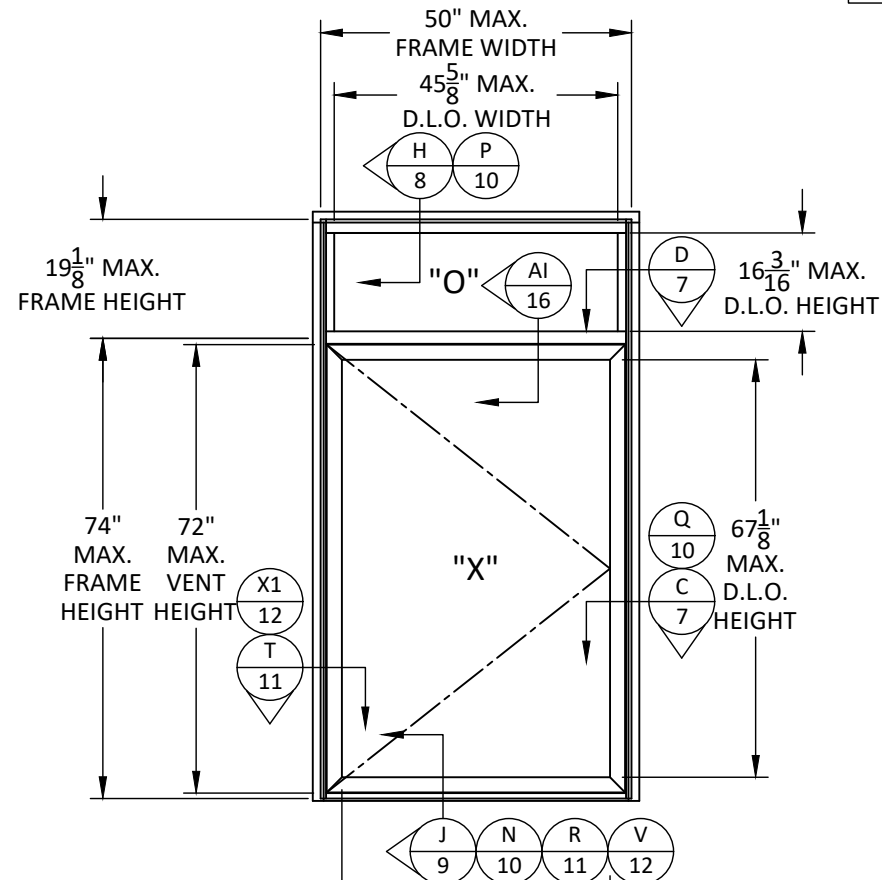
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ELEVATION

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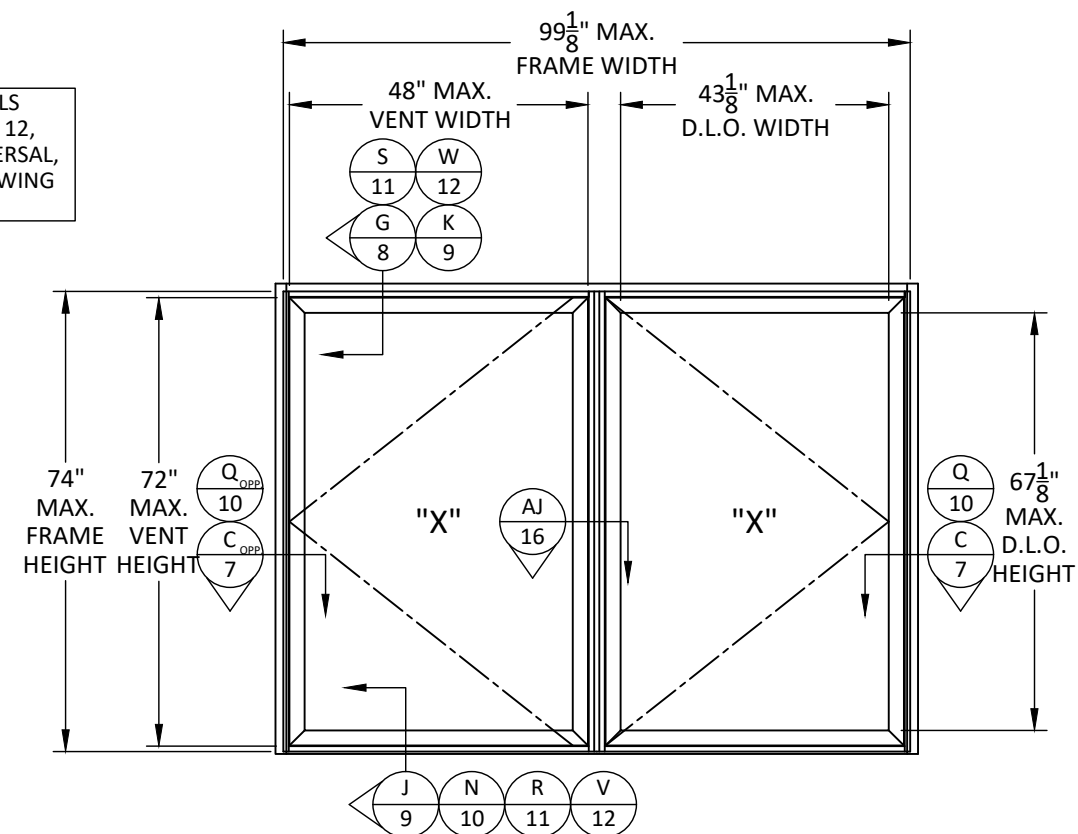
ELEVATION

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NOTE: INSTALLATION DETAILS SHOWN ON SHEETS 7 THRU 12, AND 16 THRU 18 ARE UNIVERSAL, AND MAY BE USED FOR INSWING AND OUTSWING.

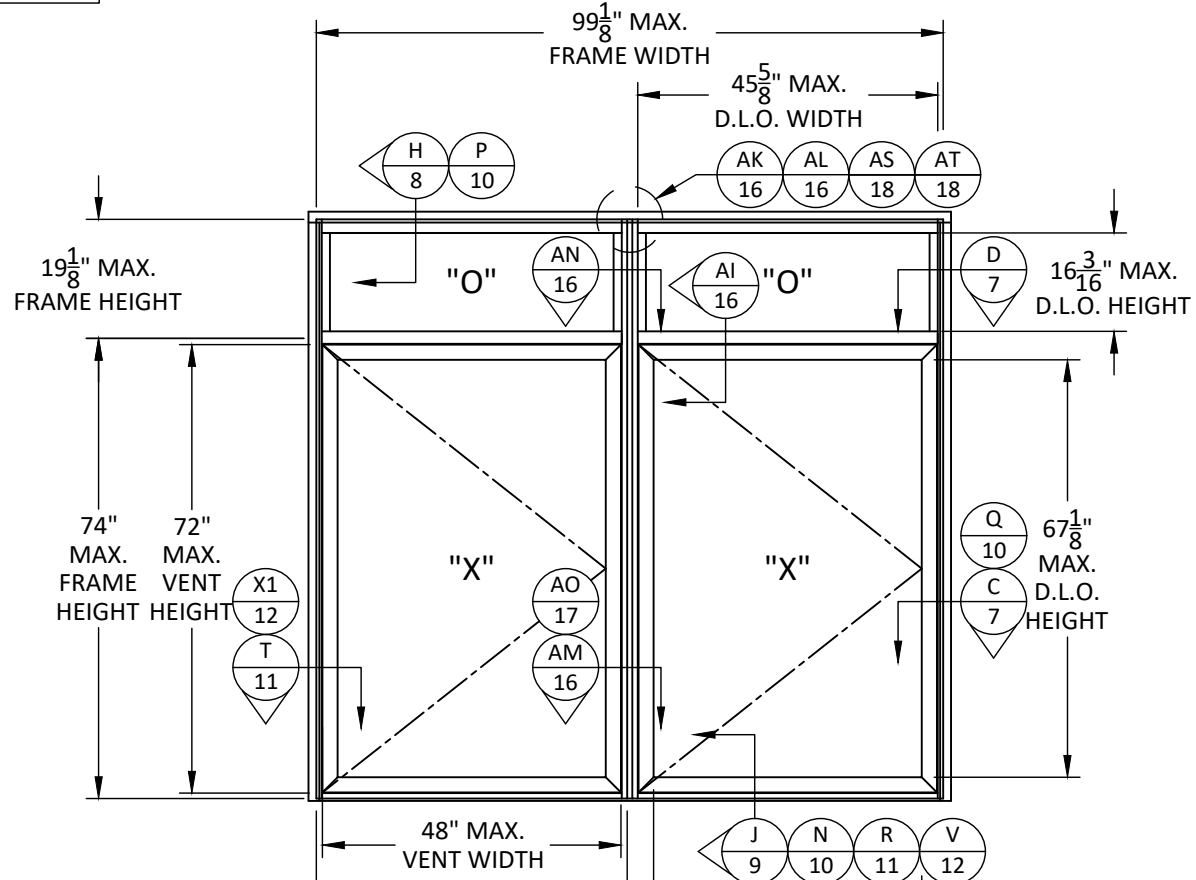
NOTE: MAX. DIMENSIONS VARIES BASED ON APPROVED SIZES IN SHEETS 4 THRU 6.

NOTE: MAX. DIMENSIONS SHOWN MAY EXCLUDE RECEPTOR DIMENSIONS. SEE DETAILS SHEET 7 FOR O.A. DIMENSION LOCATIONS.



ELEVATION

OUTSWING



ELEVATION

OUTSWING



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101 MARIETTA STREET NW, SUITE 2100
ATLANTA, GA 30303
PH: (478)277-1955 FAX: (678)838-6001

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ELEVATIONS

PREPARED BY:

BUILDING DROPS, INC.

1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132

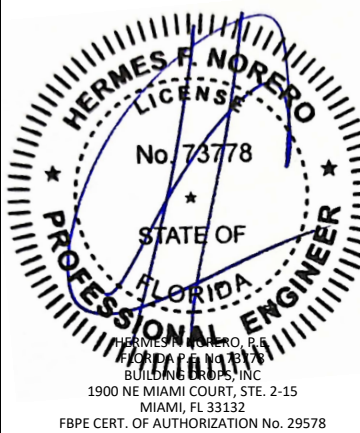
PH: (954)399-8478
FAX: (954)744-4738

WEB: www.buildingdrops.com



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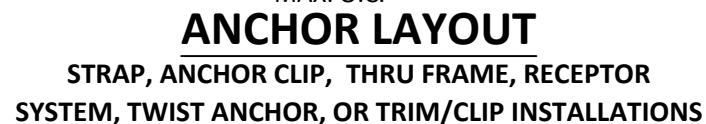
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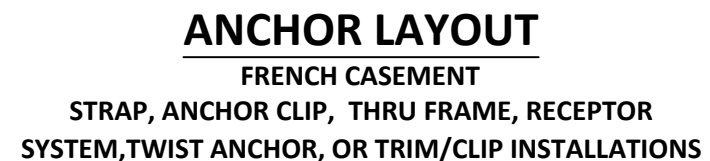


NOTE: 4 BAR HINGES AND BUTT HINGES CAN BE USED ON EITHER INSWING OR OUTSWING.

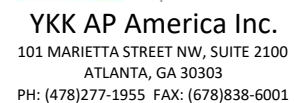


MAX. DESIGN PRESSURE (+/- PSF)	MIN. QTY REQUIRED AT EA. END OF STACK MULL*	MIN. QTY REQUIRED AT SILL OF STACK MULL FOR RECEPTOR INSTALLATION**
35	2	4
65	4	6

NOTE:
*** QUANTITY OF ANCHORS IS THE MINIMUM REQUIRED QUANTITY OF ANCHORS ADJACENT TO EA. SIDE OF STACK MULLION. ANCHORS SHALL BE SPACED 3" O.C. TO EA. SIDE OF MULL. APPLICABLE TO RECEPTOR AT HEAD ONLY, ANCHOR CLIP, STRAP, TWIST ANCHOR, AND THROUGH FRAME INSTALLATIONS.**
**** QUANTITY OF ANCHORS IS THE MINIMUM REQUIRED QUANTITY OF ANCHORS THROUGH THE RECEPTOR SILL (SEE TYP. DETAIL A/7) ADJACENT TO EA. SIDE OF STACK MULL. ANCHORS SHALL BE SPACED 3" O.C. TO EA. SIDE OF MULL.**



NOTE: ANCHOR LAYOUT SHOWN INCLUDE CASEMENT IN AND CASEMENT OUT WINDOWS .



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 **BUILDING DROPS**

BUILDING DROPS, INC.
1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
PH: (954) 395-8478
FAX: (954) 744-4738
WEB: www.buildingdrops.com

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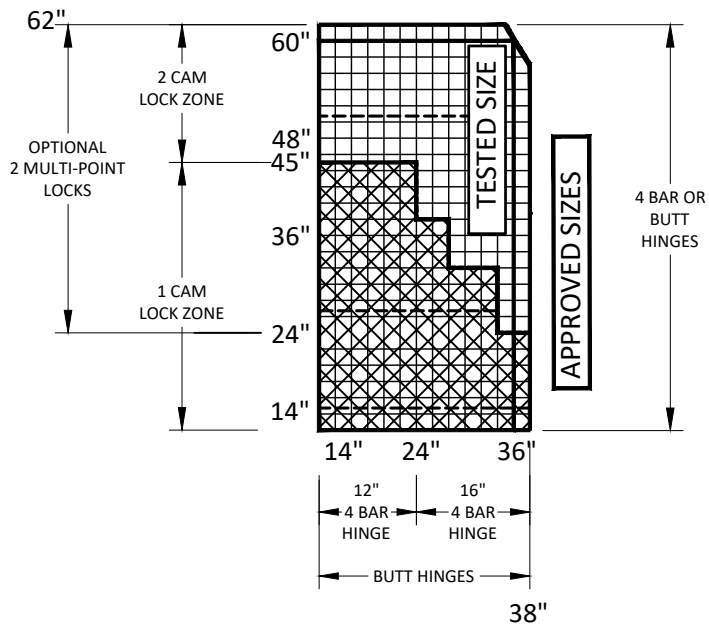
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APPROVED VENT SIZES
CASEMENT INSWING



BUTT HINGE SCHEDULE

NUMBER OF REQUIRED BUTT HINGES	VENT HEIGHT (H)
2	< 59.2" H
3	> 59.25"-78"H

HINGE LIMITS

- 12" 4 BAR - MAX. 20° OPENING (W/ LIMIT) 90 LB. MAX. VENT
- 16" 5 BAR - MAX. 30° OPENING (W/O LIMIT) 130 LB. MAX. VENT
- 22" 4 BAR - MAX. 45° OPENING (W/ LIMIT) 140 LB. MAX. VENT

FRAME HEIGHT = VENT HEIGHT + 2"
FRAME WIDTH = VENT WIDTH + 2"
GLASS WIDTH = VENT WIDTH - 4 ⁷ / ₈ "
GLASS HEIGHT = VENT HEIGHT - 4 ⁷ / ₈ "

HARDWARE SCHEDULE
CASEMENT INSWING

HARDWARE TYPE	OPTION#	DESCRIPTION
LOCK OPTIONS	1	BRONZECRAFT CAM HANDLES (E1-1503/1504) AT LOCK STILE OF VENT, 8" FROM EA. END SECURED WITH (2) #10 X 1/2" FH SMS. BRONZECRAFT KEEPERS (E1-1707) SECURED WITH (2) #10 X 1/2" FH SMS.
	2	MULTI-POINT LOCK ASSEMBLY (E1-1703(UPPER), E1-1701(LOWER)). LOCK KEEPERS (E1-1707) LOCATED AT 8" FROM EACH END, SECURED WITH (2) #10 X 1/2" FH SMS. ACTUATED BY E1-1505 OR E1-1966 OR E1-1994 MULTI LOCK HANDLE.
HINGE OPTIONS	1	BUTT HINGE (E1-1714/1715), EA. HINGE FASTENED TO FRAME WITH (3) #10-24 X 7/16" PL PH MS AND TO L-ANGLE WITH (3) #10-24 X 7/16" PL PH MS. L-ANGLE SECURED TO VENT WITH (3) #10-24 X 1/2" PL PH SMS. SEE BUTT HINGE SCHEDULE FOR REQUIRED QUANTITIES.
	2	16", 4-BAR HINGE (4K-14208) SECURED TO BASE WITH (3) #10-24 X 3/8" PL PH SMS AND TO VENT WITH (3) #10-24 X 3/8" PL FH SMS.
	3	12", 4-BAR HINGE (4K-14207) SECURED TO BASE WITH (3) #10-24 X 3/8" PL PH SMS AND TO VENT WITH (3) #10-24 X 3/8" PL FH SMS.

NOTES:

- VENT SIZES SHOWN IN DIAGRAM ABOVE ARE APPROVED FOR USE AT +65 / -65 PSF.
- MULLS SHALL BE AS SHOWN HEREIN OR APPROVED UNDER SEPARATE APPROVAL.
- VENT SIZE MAY NOT EXCEED OVERALL SQUARE FOOTAGE OF TESTED SIZE.
- FRAME SIZE MAY NOT EXCEED OVERALL SQUARE FOOTAGE OF TESTED SIZE.
- 1 CAM AND 2 CAM LOCK ZONE REPRESENTS SIZES WHICH MAY USE ONLY 1 CAM LOCK INSTEAD OF 2 AS-TESTED. SEE HARDWARE SCHEDULE FOR ALTERNATE MULTI-POINT LOCK HARDWARE REQUIREMENTS.
- GLASS TYPE SHALL COMPLY WITH ASTM E1300.
- UNITS SHALL FOLLOW HARDWARE REQUIREMENTS SHOWN ABOVE.



YKK AP America Inc.
101 MARIETTA STREET NW, SUITE 2100
ATLANTA, GA 30303
PH: (478)277-1955 FAX: (678)838-6001

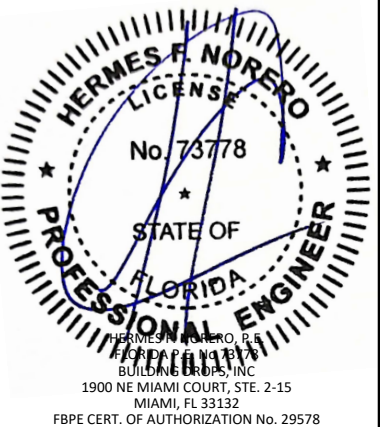
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YOW 225 TU THERMAL ALUMINUM
CASEMENT OUTSWING / INSWING WINDOW
(NON-HVHZ) (NON-IMPACT)
APPROVED SIZES &
HARDWARE SCHEDULE

PREPARED BY:
BUILDING DROPS, INC.
1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
PH: (954)399-8478
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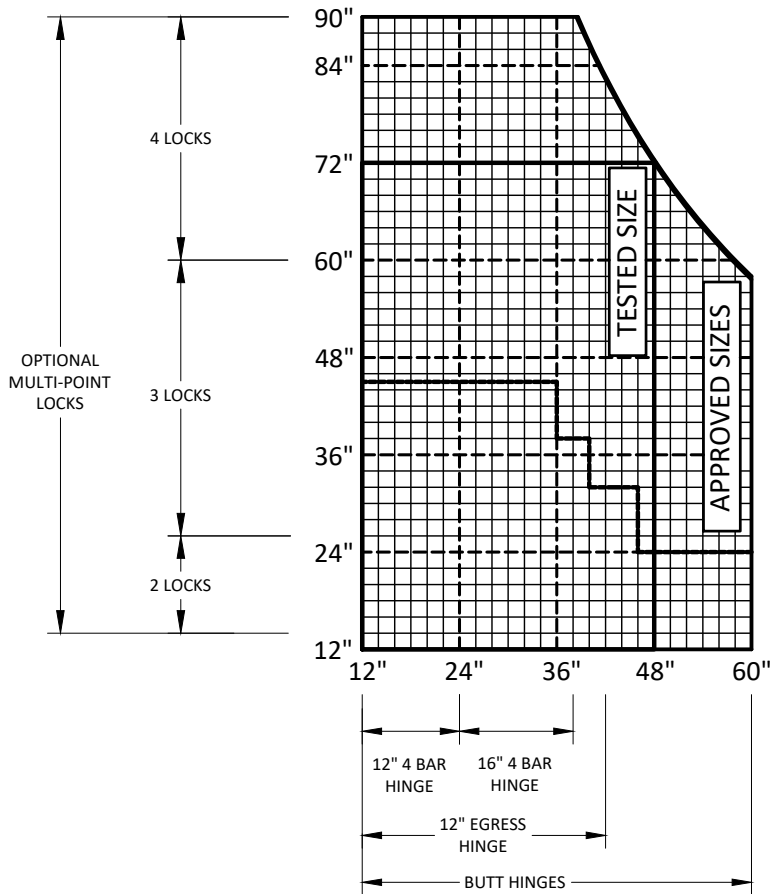
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APPROVED VENT SIZES
CASEMENT OUTSWING

MULTI-POINT LOCK SCHEDULE



MULTI-POINT SCHEDULE

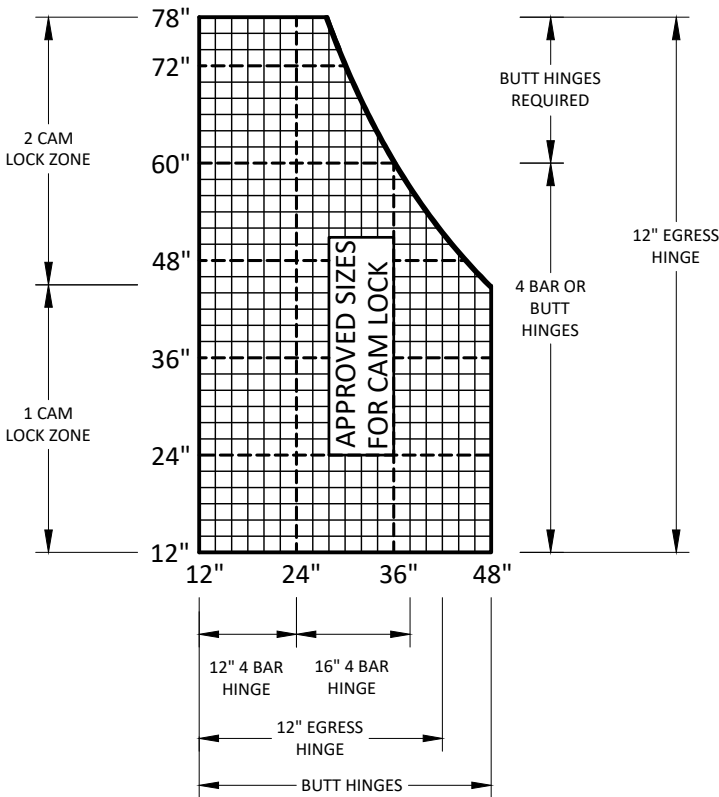
NUMBER OF REQUIRED LOCK ENGAGEMENTS	VENT HEIGHT (H)
4	90" > H > 60"
3	60" ≥ H > 26"
2	26" > H > 14"

NOTE: MAX. SPACING BETWEEN LOCK POINTS IS 24".

FRAME HEIGHT = VENT HEIGHT + 2"
FRAME WIDTH = VENT WIDTH + 2"

GLASS WIDTH = VENT WIDTH - 4 7/8"
GLASS HEIGHT = VENT HEIGHT - 4 7/8"

CAM LOCK SCHEDULE



BUTT HINGE SCHEDULE

NUMBER OF REQUIRED BUTT HINGES	VENT HEIGHT (H)
4	90" > H > 72"
3	72" ≥ H > 44"
2	44" ≥ H

NOTE: MAX. SPACING BETWEEN HINGES IS 28". HINGES 8" FROM CORNERS TYP.

HINGE LIMITS

- 12" 4 BAR - MAX. 20° OPENING (W/ LIMIT) 90 LB. MAX. VENT
- 16" 5 BAR - MAX. 30° OPENING (W/O LIMIT) 130 LB. MAX. VENT
- 22" 4 BAR - MAX. 45° OPENING (W/ LIMIT) 140 LB. MAX. VENT

HARDWARE SCHEDULE
CASEMENT OUTSWING

HARDWARE TYPE	OPTION#	DESCRIPTION
LOCK OPTIONS	1	BRONZECRAFT CAM HANDLES (E1-1541/1542) AT LOCK STILE OF VENT, 8" FROM EA. END SECURED WITH (2) #10 X 1/2" FH SMS. BRONZECRAFT KEEPERS (E1-519) SECURED WITH (2) #10 X 1/2" FH SMS.
	2	MULTI-POINT LOCK ASSEMBLY (E1-1505 OR E1-1966 OR E1-1994, E1-1954, E1-1955, E1-1952, E9-4593), SEE MULTI-POINT TABLE FOR REQUIRED LOCK POINT SCHEDULE. LOCK KEEPERS (E1-1954, E1-1955) SECURED WITH (2) #10 X 1/2" FH SMS.
HINGE OPTIONS	1	BUTT HINGE (E1-1714/1715), EA. HINGE FASTENED TO FRAME WITH (3) #10-24 X 7/16" PL PH MS AND TO L-ANGLE WITH (3) #10-24 X 7/16" PL PH MS. L-ANGLE SECURED TO VENT WITH (3) #10-24 X 1/2" PL PH SMS. SEE BUTT HINGE SCHEDULE FOR REQUIRED QUANTITY.
	2	16", 4-BAR HINGE (4K-14208) SECURED TO BASE WITH (3) #10-24 X 3/8" PL PH SMS AND TO VENT WITH (3) #10-24 X 3/8" PL FH SMS. SEE SNUBBER SCHEDULE FOR REQUIRED QUANTITY OF SNUBBERS.
	3	12", 4-BAR HINGE (4K-14207) SECURED TO BASE WITH (3) #10-24 X 3/8" PL PH SMS AND TO VENT WITH (3) #10-24 X 3/8" PL FH SMS.
	4	12", 4-BAR EGRESS HINGE ASSEMBLY (E1-1957/1960) SECURED TO BASE WITH (3) #10-24 X 3/8" PL PH SMS AND TO VENT WITH (3) #10-24 X 3/8" PL FH SMS. SEE SNUBBER SCHEDULE FOR REQUIRED QUANTITY OF SNUBBERS.

- NOTES:
- VENT SIZES SHOWN IN DIAGRAM ABOVE ARE APPROVED FOR USE AT +65 / -65 PSF.
 - MULLS SHALL BE AS SHOWN HEREIN OR APPROVED UNDER SEPARATE APPROVAL.
 - VENT SIZE MAY NOT EXCEED OVERALL SQUARE FOOTAGE OF TESTED SIZE.
 - FRAME SIZE MAY NOT EXCEED OVERALL SQUARE FOOTAGE OF TESTED SIZE.
 - 1 CAM AND 2 CAM LOCK ZONE REPRESENTS SIZES WHICH MAY USE ONLY 1 CAM LOCK INSTEAD OF 2 AS-TESTED. SEE HARDWARE SCHEDULE FOR ALTERNATE MULTI-POINT LOCK HARDWARE REQUIREMENTS.
 - GLASS TYPE SHALL COMPLY WITH ASTM E1300.
 - UNITS SHALL FOLLOW HARDWARE REQUIREMENTS SHOWN ABOVE.



YKK AP America Inc.
101 MARIETTA STREET NW, SUITE 2100
ATLANTA, GA 30303
PH: (478)277-1955 FAX: (678)838-6001

TITLE: YOW 225 TU THERMAL ALUMINUM CASEMENT OUTSWING / INSWING WINDOW (NON-HVHZ) (NON-IMPACT) APPROVED SIZES & HARDWARE SCHEDULE

PREPARED BY: BUILDING DROPS, INC. 1900 NE MIAMI COURT, STE. 2-15 MIAMI, FL 33132 PH: (954)399-8478 FAX: (954)744-4738 WEB: www.buildingdrops.com

BUILDING DROPS

REMARKS	BY	DATE
2023 FBC CODE UPDATE	MS	05.05.23
MISC. UPDATE	SH	02.26.24
2026 FBC CODE UPDATE	SH	07.30.26

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HERMES F. NORERO LICENSE No. 73778 STATE OF FLORIDA PROFESSIONAL ENGINEER

HERMES F. NORERO, P.E. BUILDING DROPS, INC. 1900 NE MIAMI COURT, STE. 2-15 MIAMI, FL 33132 FBPE CERT. OF AUTHORIZATION No. 29578

FL #: FL16312

DATE: 9.01.17

DWG. BY: FM CHK. BY: HFN

SCALE: NTS

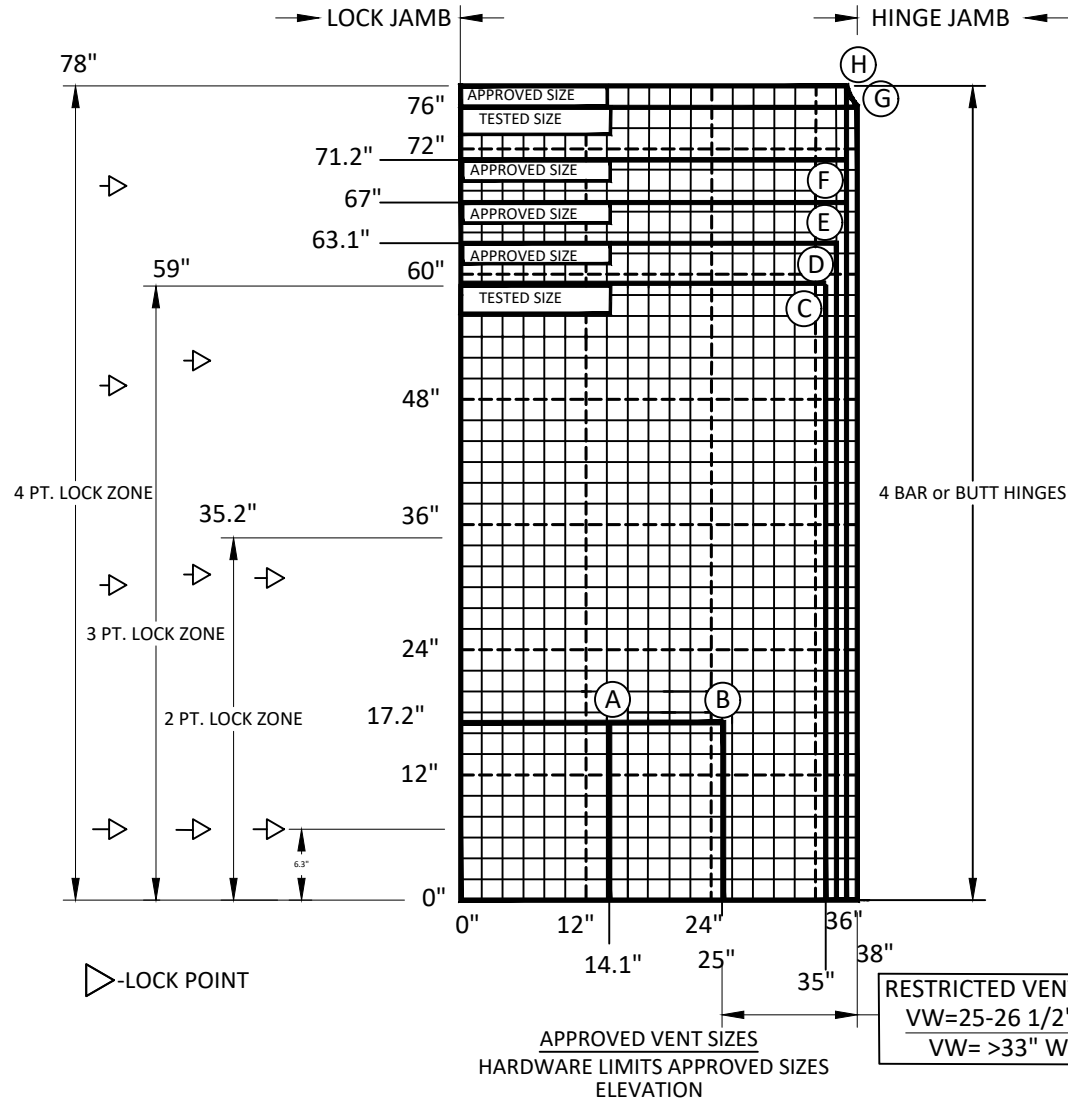
DWG. #: YKK247

SHEET: 4A REV. C

[Page 6 of 24]

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ACCESSIBLE WINDOW SYSTEM - (AAMA 513-14) VENT SIZES SHOWN



APPROVED VENT SIZES CASEMENT OUTSWING (ACCESSIBLE HARDWARE)

APPROVED VENT SIZE RANGES BASED ON 45 PSF & 65 PSF WITH ROTARY OPERATOR					
	VENT SIZE	VENT SQUARE FEET	ALLOWABLE DESIGN PRESSURE	VENT WEIGHT @ 7.1 Lbs. PER SQ. FT.	ROTATIONAL LOAD (REQ'D FOR 4 BAR HINGE ONLY) USING 1" IG (1/4" X 1/4")
A	MINIMUM SIZE: (BUTT HINGE ONLY) 14 1/8"[358.8] X 17 1/4"[438.1]	1.7	65	12.6	NOT REQUIRED
B	MINIMUM SIZE: (4 BAR HINGE ONLY) 25"[635] X 17 1/4"[438.1]	3.0	65	21.3	15.4 Lbs.
C	TESTED SIZE: 35"[889.0] X 59"[1499]	14.3	65	101.8	30.2 Lbs.
D	36"[914.4] X 63 1/8"[1603]	15.7	60	112.0	31.9Lbs.
E	37"[939.8] X 67"[1702]	17.2	55	122.2	33.8 Lbs.
F	37 1/2"[952.5] X 71 1/4"[1810]	18.6	50	131.7	34.7 Lbs.
G	TESTED SIZE: 38"[965.2] X 76"[1930]	20.1	45	142.4	35.6 Lbs.
H	MAXIMUM SIZE: 37"[939.8] X 78"[1981]	20.0	45	142.3	33.8 Lbs.

LOCK-POINT SCHEDULE

NUMBER OF REQUIRED LOCK ENGAGEMENTS	VENT HEIGHT (H)
2	≥ 17.2"-35.2"H
3	> 35.25"-59.2"H
4	> 59.25"-78"H

BUTT HINGE SCHEDULE

NUMBER OF REQUIRED BUTT HINGES	VENT HEIGHT (H)
2	< 59.2" H
3	> 59.25"-78"H

OPERATOR SCHEDULE

REQUIRED OPERATOR (1 PER VENT)	VENT WIDTH (W)		VENT OPENING ANGLE	
	4 BAR HINGE	BUTT HINGE	4 BAR HINGE	BUTT HINGE
8" SINGLE ARM E1-1987 LH OR E1-1988 RH WITH LARGE HANDLE CRANK E1-1983	(RESTRICTED) WITH 4 BAR HINGE 25"-26 1/2"W	14 1/8"-22"W	45° ± 5°	90° - 5°
14" SINGLE ARM E1-1989 LH OR E1-1990 RH WITH LARGE HANDLE CRANK E1-1983	(RESTRICTED) WITH 4 BAR HINGE ≥ 33"-38 W	≥ 22"-38W	45° ± 5°	90° - 5°

OUTSWING HARDWARE SCHEDULE

HARDWARE TYPE	OPTION#	DESCRIPTION
LOCK	1	MULTI-POINT BASE LOCK BAR (E1-2001), LOCK EXTENSION BAR (E1-2002). LOCK KEEPERS (4K-18584) LOCATED AT 6.3" FROM BOTTOM OF STILE AND MAX. OF 22.3" THERE AFTER, SECURED WITH (2) #8 X 7/16" PH SMS. ACTUATED BY E1-1966 4" STANDARD HANDLE OR E1-1994 8" EXTENDED HANDLE SECURED TO FRAME JAMB.
HINGE OPTIONS	1	BUTT HINGE (E1-1714/1715), EA. HINGE FASTENED TO FRAME WITH (3) #10-24 X 7/16" PL PH MS AND TO L-ANGLE WITH (3) #10-24 X 7/16" PL PH MS. L-ANGLE SECURED TO VENT WITH (3) #10-24 X 1/2" PL PH SMS. SEE BUTT HINGE SCHEDULE FOR REQUIRED QUANTITIES.
	2	12", 4-BAR HINGE (E1-1957) SECURED TO BASE WITH (3) #10-24 X 3/8" PL PH SMS AND TO VENT WITH (3) #10-24 X 3/8" PL FH SMS. NOTE: RESTRICTED VENTS WIDTHS
OPERATOR	1	BASED ON VENT WIDTH. AN 8" OR 14" SINGLE ARM OPERATOR IS MOUNTED TO THE FRAME SILL, SECURED WITH (4) #10 X 3/8" PPH SMS

FMPL SYSTEM - ACCESSIBILITY - HARDWARE MATRIX							
YOW225TU - CASEMENT IN/OUT SWING WITH E1-1957 12" 4 BAR HINGE or BUTT HINGES							
MINIMUM VENT HEIGHT DIMENSION	MAX. VENT WEIGHT RANGE			LOCK POINTS			
	4 BAR HINGE (per pair)	BUTT HINGE (58# CAPACITY)		BASE BAR	BASE BAR PART NUMBER	EXTENSION BAR	EXTENSION BAR PART NUMBER
17.25" - 23.24"	155# [70.3 Kg]	116# [52.6 Kg]	-	12"	E1-2001-0100	NONE	
23.25" - 29.24"	155# [70.3 Kg]	116# [52.6 Kg]	-	12"	E1-2001-0100	6"	E1-2002-0006
29.25" - 35.24"	155# [70.3 Kg]	116# [52.6 Kg]	-	24"	E1-2001-0200	NONE	
35.25" - 41.24"	155# [70.3 Kg]	116# [52.6 Kg]	-	24"	E1-2001-0200	6"	E1-2002-0006
41.25" - 47.24"	155# [70.3 Kg]	116# [52.6 Kg]	-	36"	E1-2001-0300	NONE	
47.25" - 53.24"	155# [70.3 Kg]	116# [52.6 Kg]	-	36"	E1-2001-0300	6"	E1-2002-0006
53.25" - 59.24"	155# [70.3 Kg]	116# [52.6 Kg]	-	48"	E1-2001-0400	NONE	
59.25" - 65.24"	155# [70.3 Kg]	-	174# [78.9 Kg]	48"	E1-2001-0400	6"	E1-2002-0006
65.25" - 72.24"	155# [70.3 Kg]	-	174# [78.9 Kg]	48"	E1-2001-0400	12"	E1-2002-0100
72.25" - 75.24"	155# [70.3 Kg]	-	174# [78.9 Kg]	48"	E1-2001-0400	18"	E1-2002-0106
75.25" - 78"	155# [70.3 Kg]	-	174# [78.9 Kg]	48"	E1-2001-0400	22"	E1-2002-0110



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ATLANTA, GA 30303
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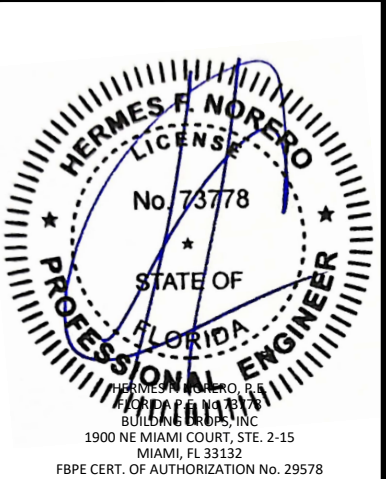
TITLE:
YOW 225 TU THERMAL ALUMINUM
CASEMENT OUTSWING / INSWING WINDOW
(NON-HVHZ) (NON-IMPACT)
APPROVED SIZES &
HARDWARE SCHEDULE

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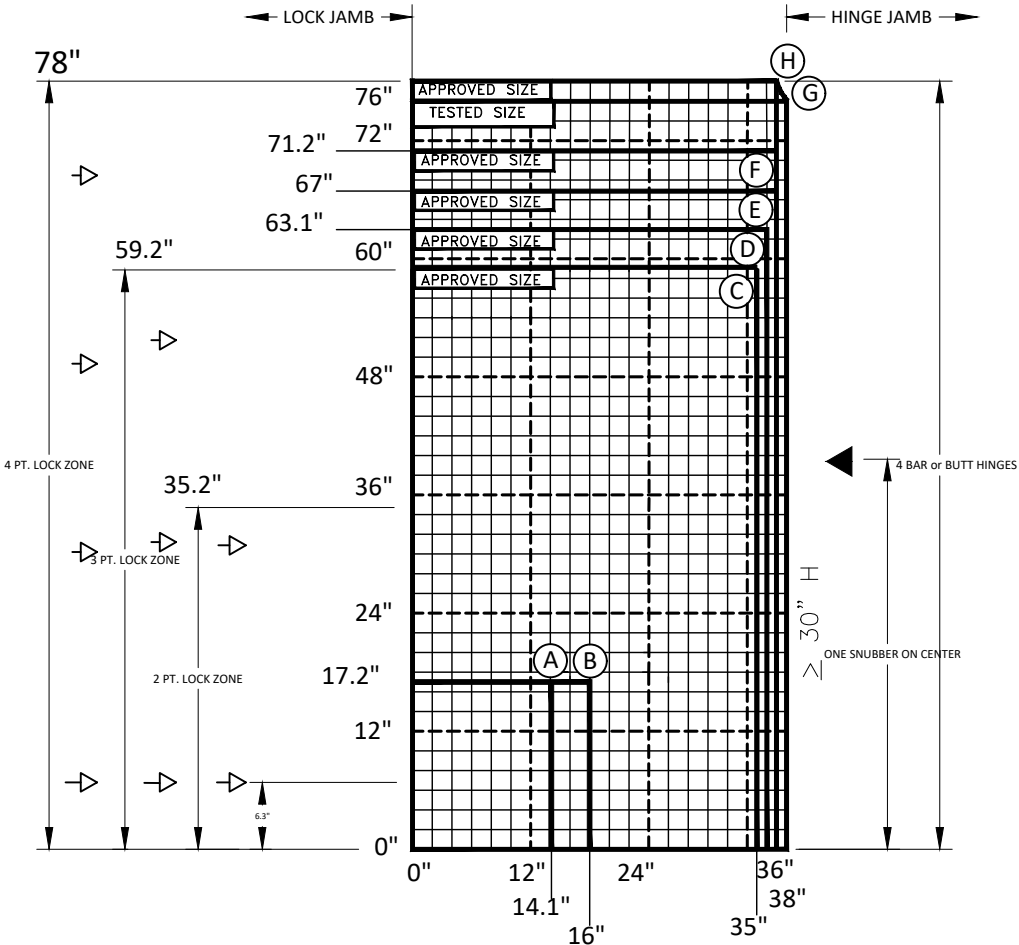
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DWG. #: YKK247

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REV. C

5

ACCESSIBLE WINDOW SYSTEM - (AAMA 513-14)
VENT SIZES SHOWN



APPROVED VENT SIZES
DESIGN LOADS LIMIT APPROVED MAX
SIZE

APPROVED VENT SIZES
CASEMENT INSWING (ACCESSIBLE HARDWARE)

APPROVED VENT SIZE RANGES BASED ON 45 PSF					
	VENT SIZE	VENT SQUARE FEET	ALLOWABLE DESIGN PRESSURE	VENT WEIGHT @ 7.2 Lbs. PER SQ. FT.	ROTATIONAL LOAD (REQ'D FOR 4 BAR HINGE ONLY) USING 1" IG (1/4" X 1/4")
A	MINIMUM SIZE: (BUTT HINGE ONLY) 14 1/8"[358.8] X 17 1/4"[438.2]	1.7	65	12.2	NOT REQUIRED
B	MINIMUM SIZE: (4 BAR HINGE ONLY) 16"[406.4] X 17 1/4"[438.2]	1.9	65	13.8	6.4 Lbs.
C	35"[889.0] X 59 1/4"[1505]	14.3	65	103.7	30.6
D	36"[914.4] X 63 1/8"[1603.4]	15.7	60	113.6	32.4
E	37"[939.8] X 67"[1701.8]	17.2	55	124.0	34.2
F	37 1/2"[952.5] X 71 1/4"[1809.8]	18.6	50	134.0	35.2
G	TESTED SIZE: 38"[965.2] X 76"[1930.4]	20.1	45	144.0	36.1
H	MAXIMUM SIZE: 37"[939.8] X 78"[1981.2]	20.1	45	144.0	34.2

LOCK-POINT SCHEDULE

NUMBER OF REQUIRED LOCK ENGAGEMENTS	VENT HEIGHT (H)
2	> 17.2"-35.2"H
3	≥ 35.25"-59.2"H
4	≥ 59.25"-78"H

SNUBBER SCHEDULE

NUMBER OF REQUIRED SNUBBERS AT HINGE JAMB	VENT HEIGHT (H)
1	≥ 30" H

BUTT HINGE SCHEDULE

NUMBER OF REQUIRED BUTT HINGES	VENT HEIGHT (H)
3	≥ 61.25"-78"H
2	< 61.2 H

INSWING HARDWARE SCHEDULE

HARDWARE TYPE	OPTION#	DESCRIPTION
LOCK	1	MULTI-POINT BASE LOCK BAR (E1-2001), LOCK EXTENSION BAR (E1-2002). LOCK KEEPERS (4K-18584) LOCATED AT 6.3" FROM BOTTOM OF VENT AND MAX. OF 22.3" THERE AFTER, SECURED WITH (2) #8 X 7/16" PH SMS. ACTUATED BY H-1906(LH) OR H-1907(RH) EXTENDED LOCK HANDLE SECURED TO VENT STILE.
HINGE OPTIONS	1	BUTT HINGE (E1-1714/1715), EA. HINGE FASTENED TO FRAME WITH (3) #10-24 X 7/16" PL PH MS AND TO L-ANGLE WITH (3) #10-24 X 7/16" PL PH MS. L-ANGLE SECURED TO VENT WITH (3) #10-24 X 1/2" PL PH SMS. SEE BUTT HINGE SCHEDULE FOR REQUIRED QUANTITIES.
	2	12", 4-BAR HINGE (E1-1957) SECURED TO BASE WITH (3) #10-24 X 3/8" PL PH SMS AND TO VENT WITH (3) #10-24 X 3/8" PL FH SMS.
LIMIT DEVICE	1	REQUIRED FOR BUTT HINGE ONLY LIMIT DEVICE E1-1904 LOCATED IN FRAME HEAD

VMPL SYSTEM - ACCESSIBILITY - HARDWARE MATRIX								
YOW225TU - CASEMENT INSWING WITH E1-1957 12" 4 BAR HINGE or BUTT HINGES								
MINIMUM VENT HEIGHT DIMENSION	MAX. VENT WEIGHT RANGE			LOCK POINTS				
	4 BAR HINGE (per pair)	BUTT HINGE (58# CAPACITY)		BASE BAR	BASE BAR PART NUMBER	EXTENSION BAR	EXTENSION BAR PART NUMBER	NUMBER OF LOCK POINTS
17.25" - 23.24"	155# [70.3 Kg]	116# [52.6 Kg]	-	12"	E1-2001-0100	NONE		2
23.25" - 29.24"	155# [70.3 Kg]	116# [52.6 Kg]	-	12"	E1-2001-0100	6"	E1-2002-0006	3
29.25" - 35.24"	155# [70.3 Kg]	116# [52.6 Kg]	-	24"	E1-2001-0200	NONE		2
35.25" - 41.24"	155# [70.3 Kg]	116# [52.6 Kg]	-	24"	E1-2001-0200	6"	E1-2002-0006	3
41.25" - 47.24"	155# [70.3 Kg]	116# [52.6 Kg]	-	36"	E1-2001-0300	NONE		3
47.25" - 53.24"	155# [70.3 Kg]	116# [52.6 Kg]	-	36"	E1-2001-0300	6"	E1-2002-0006	4
53.25" - 59.24"	155# [70.3 Kg]	116# [52.6 Kg]	-	48"	E1-2001-0400	NONE		3
59.25" - 65.24"	155# [70.3 Kg]	-	174# [78.9 Kg]	48"	E1-2001-0400	6"	E1-2002-0006	4
65.25" - 72.24"	155# [70.3 Kg]	-	174# [78.9 Kg]	48"	E1-2001-0400	12"	E1-2002-0100	4
72.25" - 75.24"	155# [70.3 Kg]	-	174# [78.9 Kg]	48"	E1-2001-0400	18"	E1-2002-0106	4
75.25" - 78"	155# [70.3 Kg]	-	174# [78.9 Kg]	48"	E1-2001-0400	22"	E1-2002-0110	4



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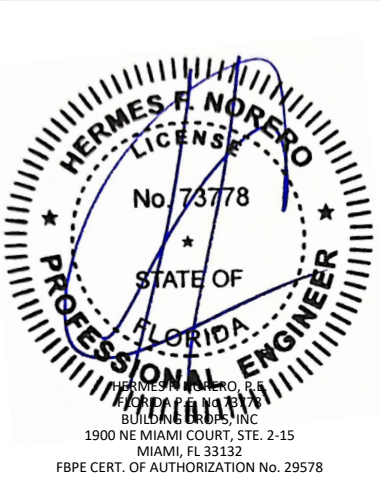
TITLE: YOW 225 TU THERMAL ALUMINUM CASEMENT OUTSWING / INSWING WINDOW (NON-HVHZ) (NON-IMPACT) APPROVED SIZES & HARDWARE SCHEDULE

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DWG. BY: FM

CHK. BY: HFN

SCALE: NTS

DWG. #: YKK247

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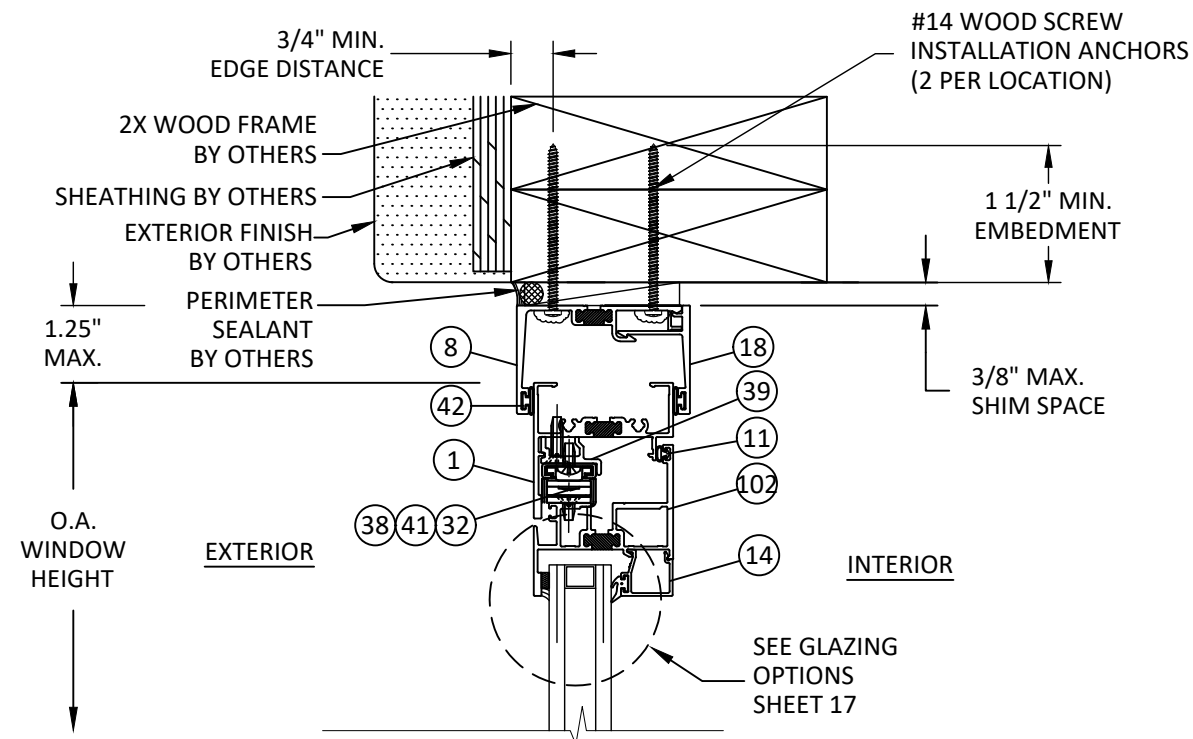
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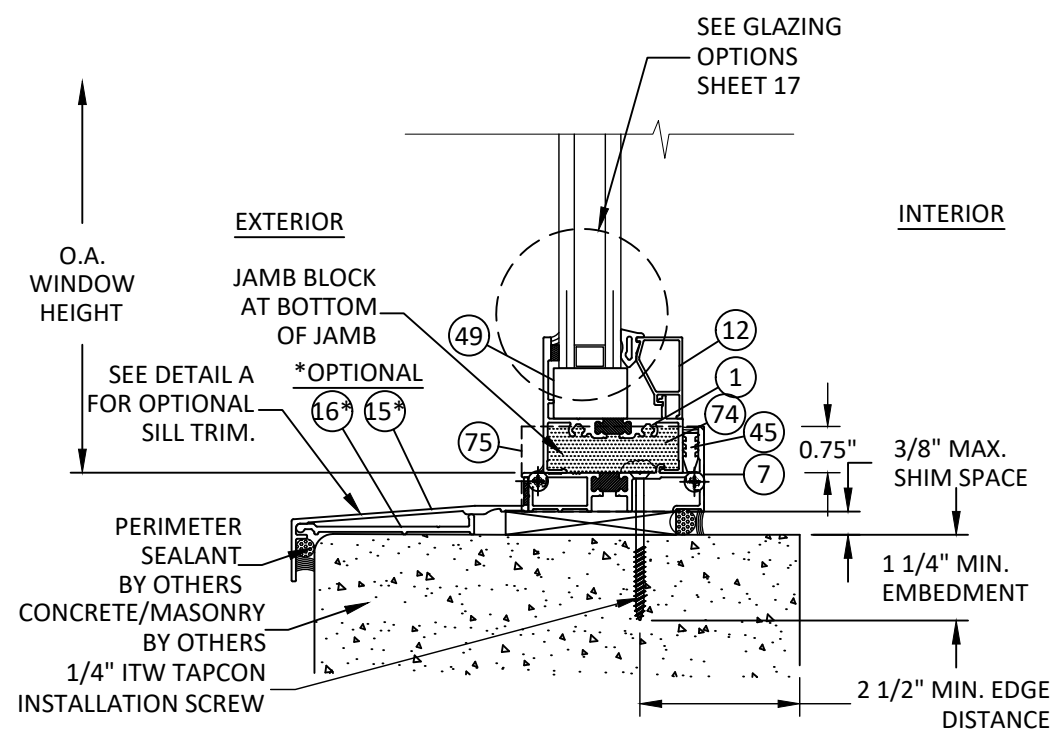
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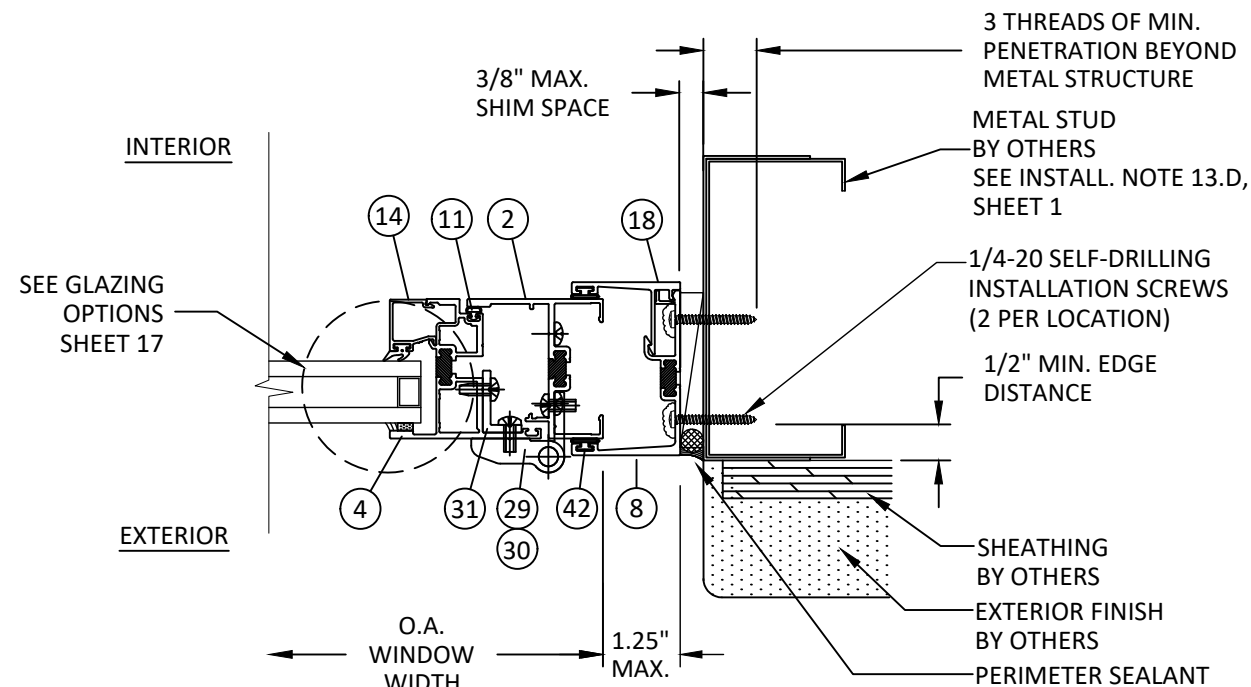
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7 **VERTICAL SECTION**
VENT HEAD - 2X WOOD FRAME
INT. SET RECEPTOR - TYP. "INSWING"



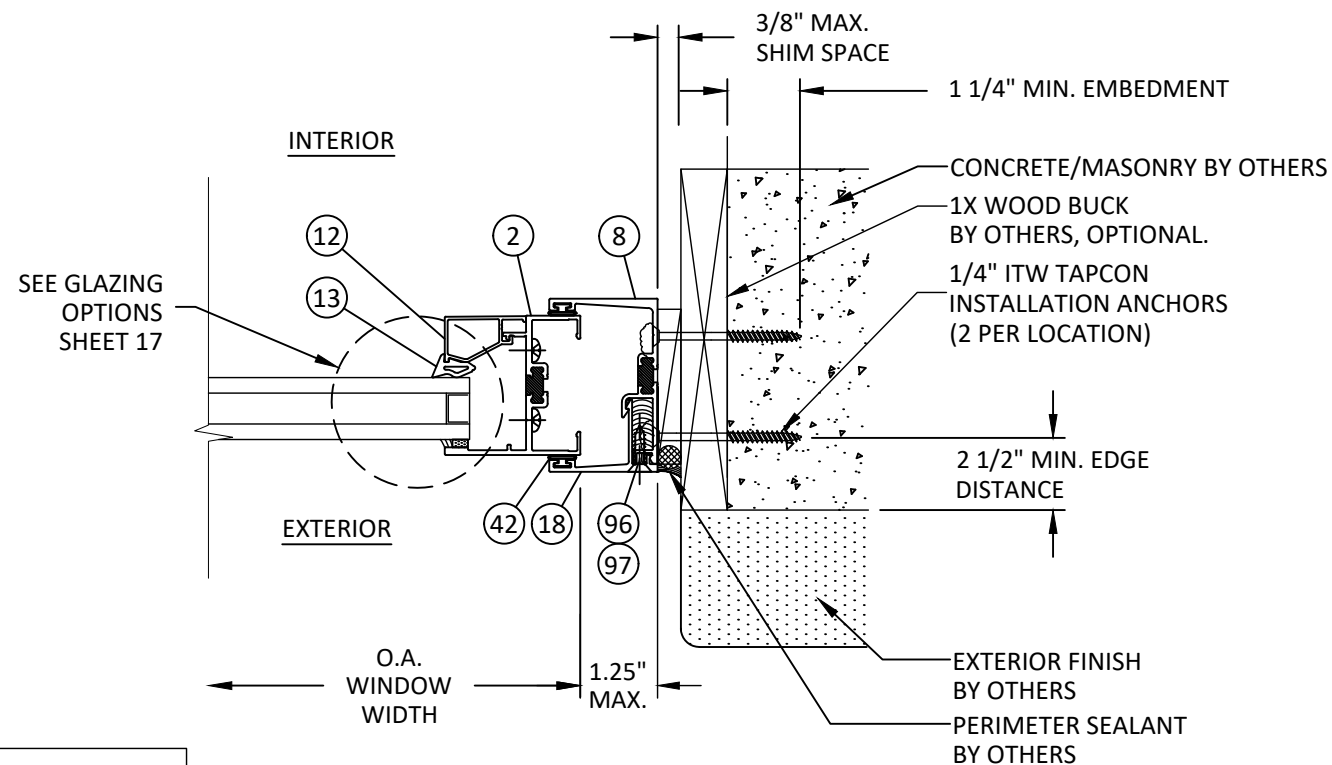
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7 **VERTICAL SECTION**
FIXED SILL - CONCRETE/MASONRY
RECEPTOR - TYP.



**OPTIONAL SILL TRIM
DETAIL A**



C
7 **HORIZONTAL SECTION**
VENT JAMB - METAL STUD FRAME
INT. SET RECEPTOR - TYP. "OUTSWING"



D
7 **HORIZONTAL SECTION**
FIXED JAMB - 1X/CONCRETE/MASONRY
EXT. SET RECEPTOR - TYP.

NOTE: UNITS MAY BE INTERIOR OR
EXTERIOR SET INSTALLATIONS. ITEMS
#96 & 97 NOT REQUIRED FOR INTERIOR
SET INSTALLATIONS.



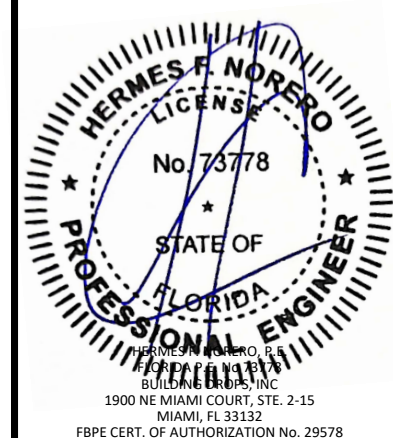
YKK AP America Inc.
101 MARIETTA STREET NW, SUITE 2100
ATLANTA, GA 30303
PH: (478)277-1955 FAX: (678)838-6001

TITLE: YOW 225 THERMAL ALUMINUM
CASEMENT OUTSWING / INSWING WINDOW
(NON-HVHZ) (NON-IMPACT)
RECEPTOR INSTALLATION DETAILS

PREPARED BY: BUILDING DROPS, INC.
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FM

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HFN

SCALE: **NTS**

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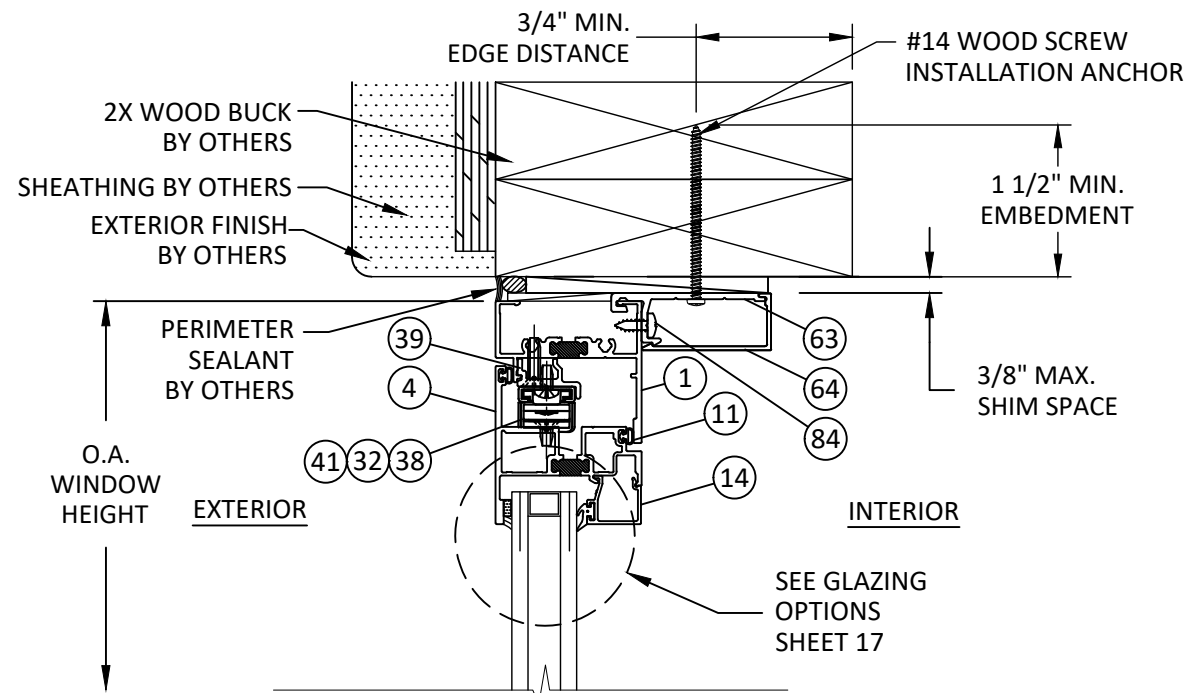
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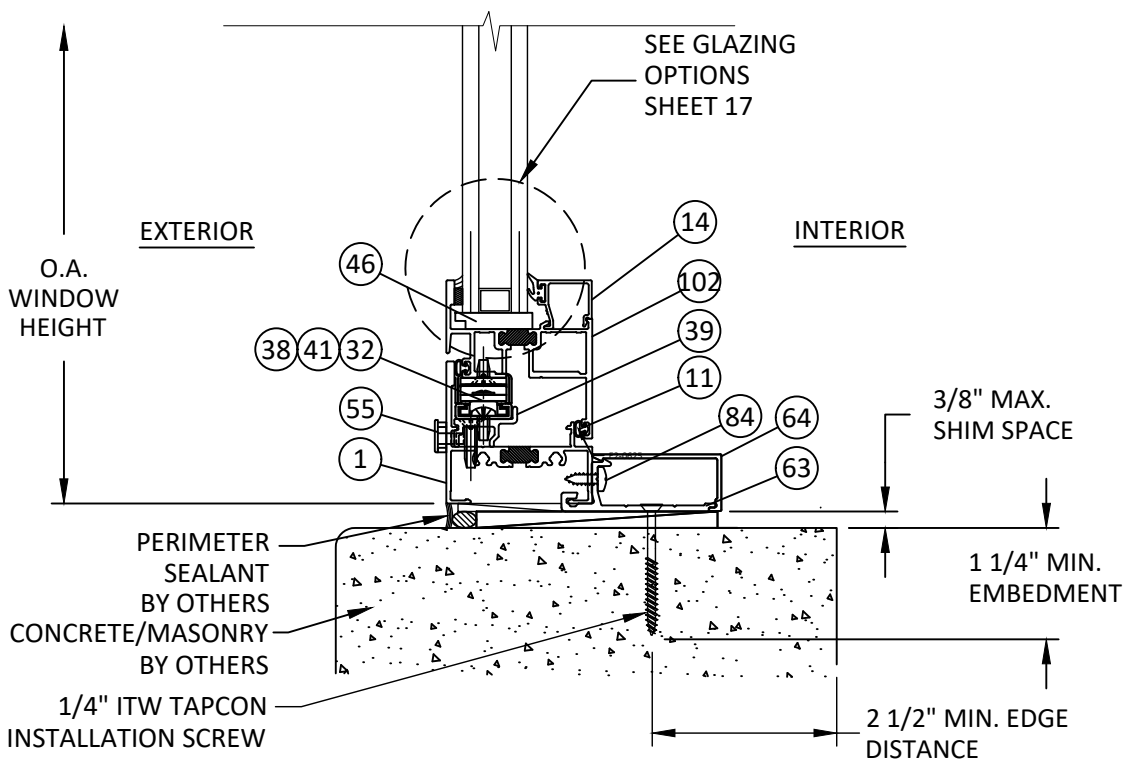
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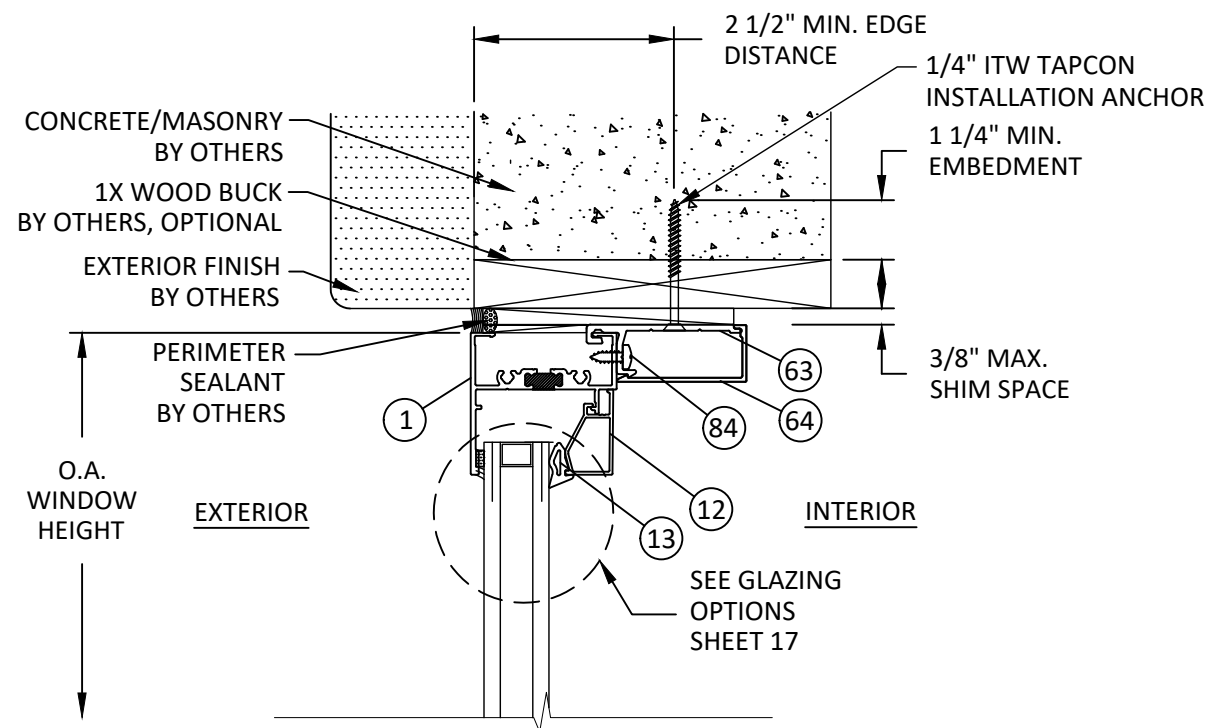
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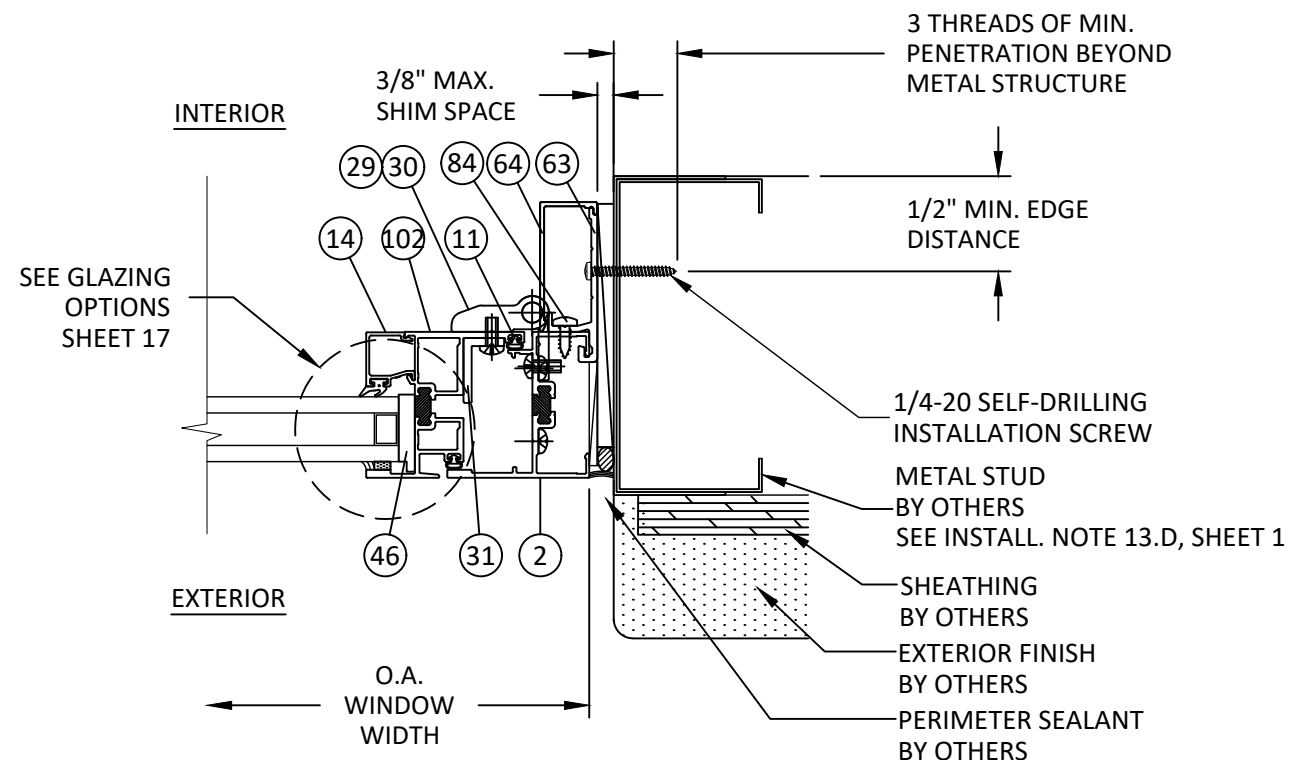
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8 **VERTICAL SECTION**
VENT HEAD - 2X WOOD FRAME
CLIP ANCHOR - TYP. "OUTSWING"



F
8 **VERTICAL SECTION**
VENT SILL - CONCRETE/MASONRY
CLIP ANCHOR - TYP. "INSWING"



H
8 **VERTICAL SECTION**
FIXED HEAD - 1X/CONCRETE/MASONRY
CLIP ANCHOR - TYP.



I
8 **HORIZONTAL SECTION**
VENT JAMB - METAL STUD FRAME
CLIP ANCHOR - TYP. "INSWING"



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TITLE: YOW 225 TU THERMAL ALUMINUM
CASEMENT OUTSWING / INSWING WINDOW
(NON-HVHZ) (NON-IMPACT)
CLIP INSTALLATION DETAILS

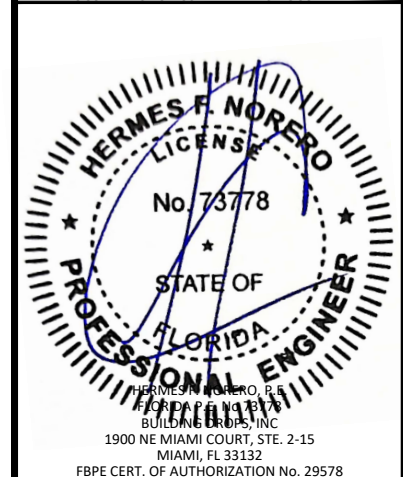
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FM

CHK. BY:
HFN

SCALE: **NTS**

DWG. #: **YKK247**

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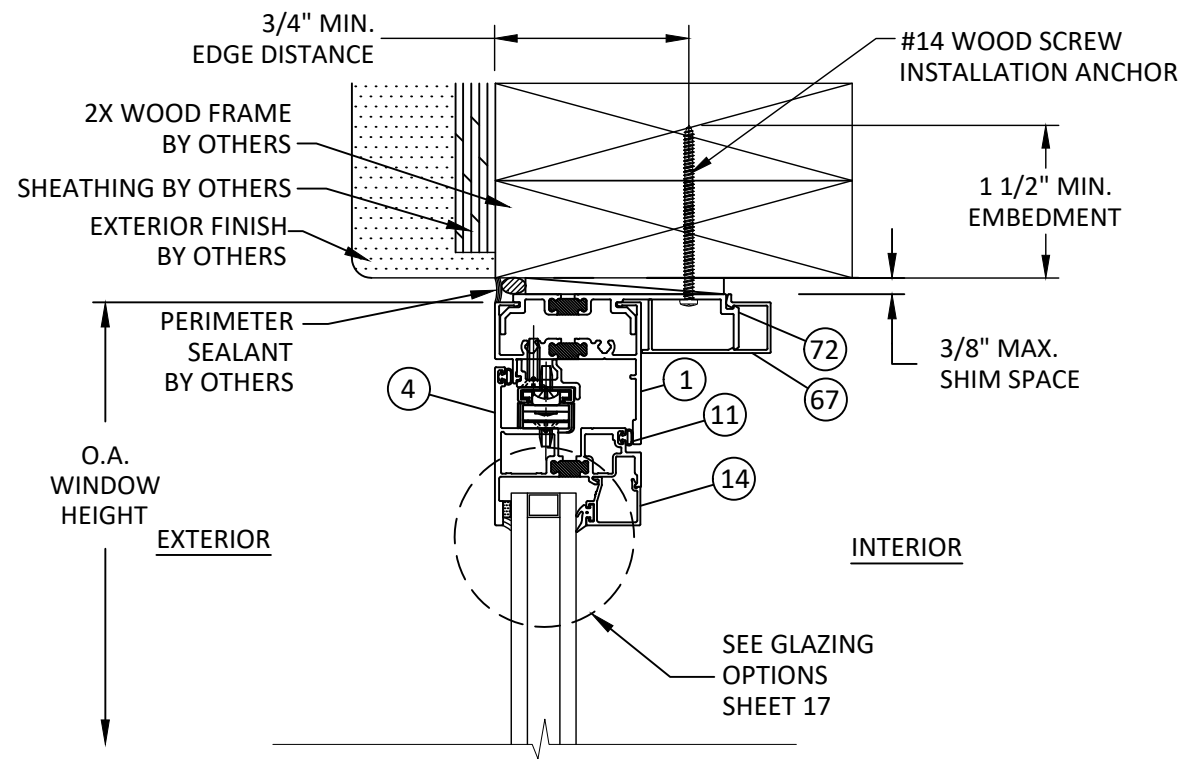
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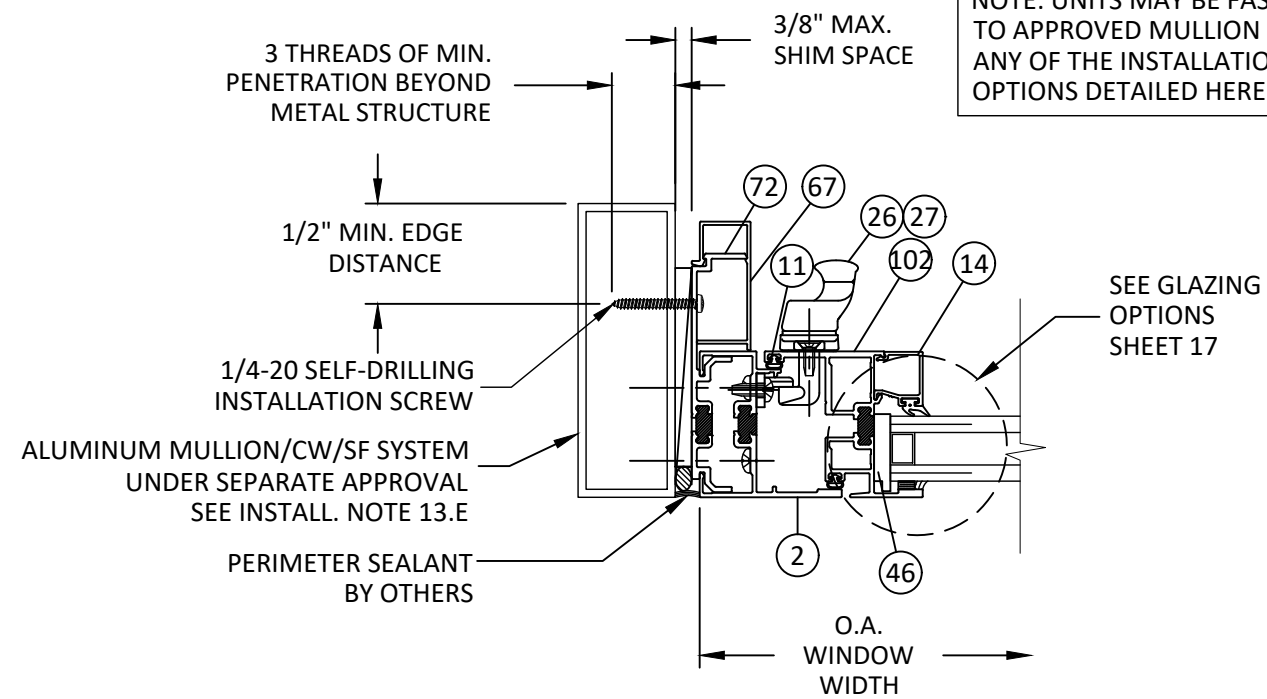
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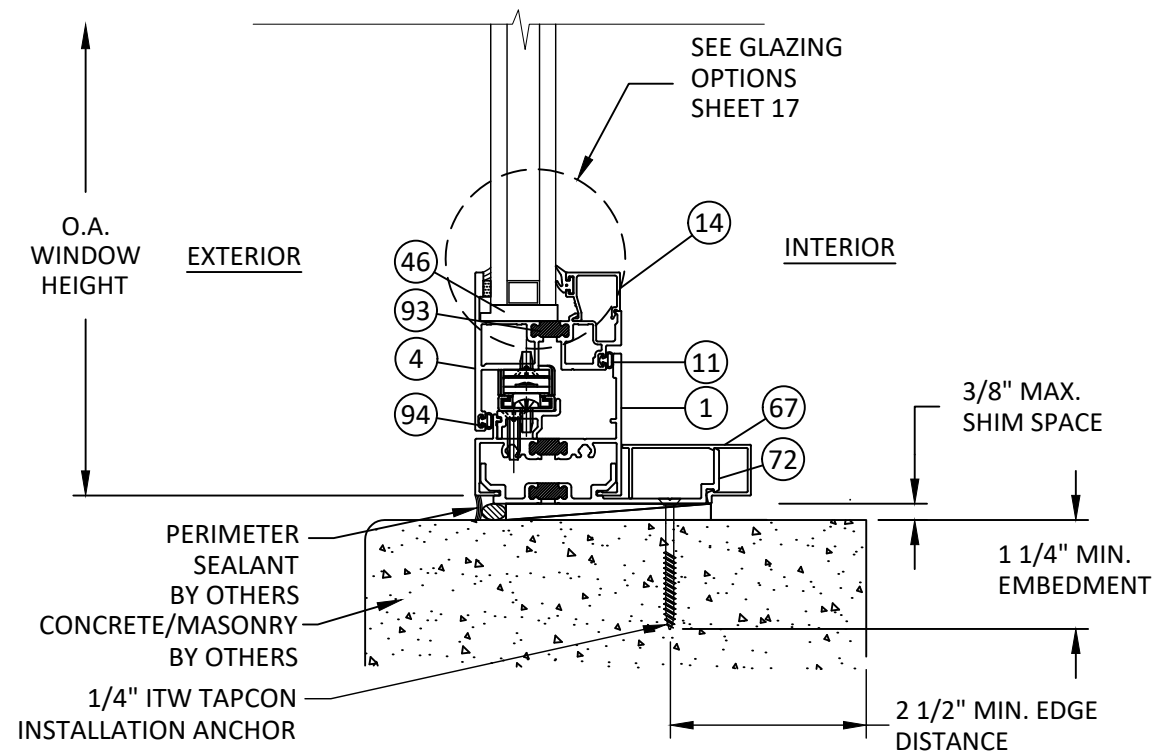
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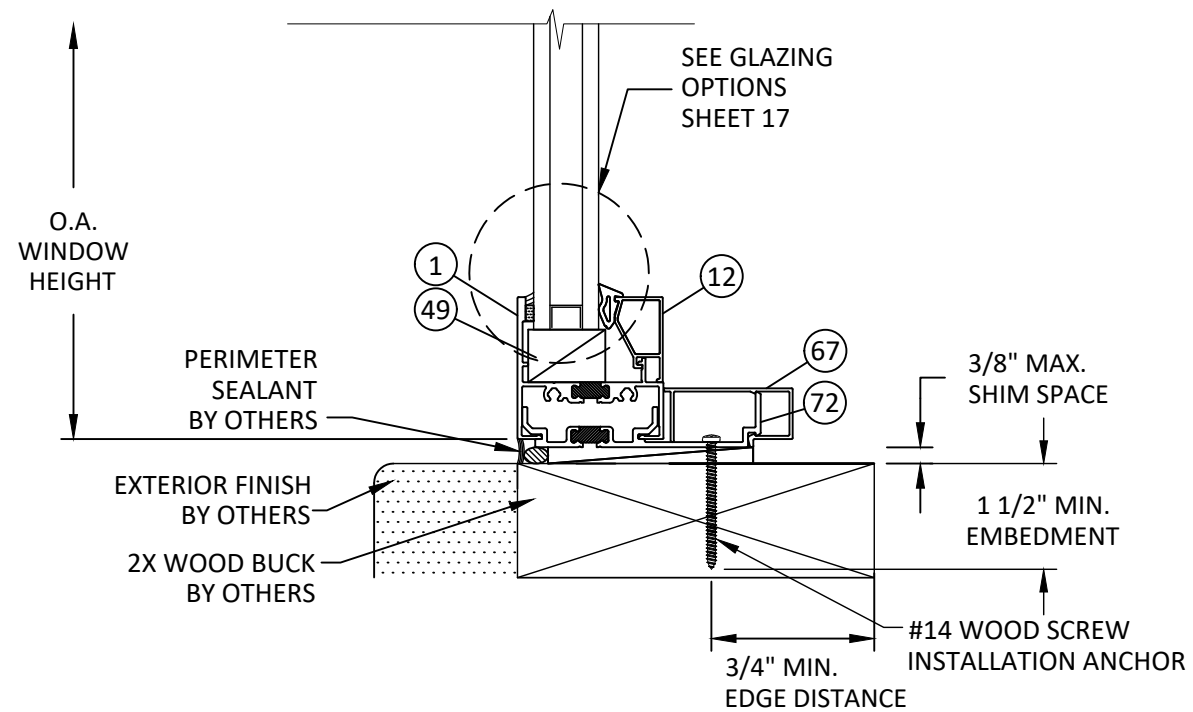
K
9 **VERTICAL SECTION**
VENT HEAD - 2X WOOD FRAME
STRAP ANCHOR - TYP. "OUTSWING"



L
9 **HORIZONTAL SECTION**
VENT JAMB - MULL TUBE FRAME
STRAP ANCHOR - TYP. "INSWING"



J
9 **VERTICAL SECTION**
VENT SILL - CONCRETE/MASONRY
STRAP ANCHOR - TYP. "OUTSWING"



M
9 **VERTICAL SECTION**
FIXED SILL - 2X WOOD BUCK
STRAP ANCHOR - TYP.



YKK AP America Inc.
101 MARIETTA STREET NW, SUITE 2100
ATLANTA, GA 30303
PH: (478)277-1955 FAX: (678)838-6001

TITLE: YOW 225 TU THERMAL ALUMINUM CASEMENT OUTSWING / INSWING WINDOW (NON-HVHZ) (NON-IMPACT)
STRAP INSTALLATION DETAILS
PREPARED BY: BUILDING DROPS, INC.
1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
PH: (954)399-8478
FAX: (954)744-4738
WEB: www.buildingdrops.com

REMARKS	BY	DATE
2023 FBC CODE UPDATE	MS	05.05.23
MISC. UPDATE	SH	02.26.24
2026 FBC CODE UPDATE	SH	07.30.26

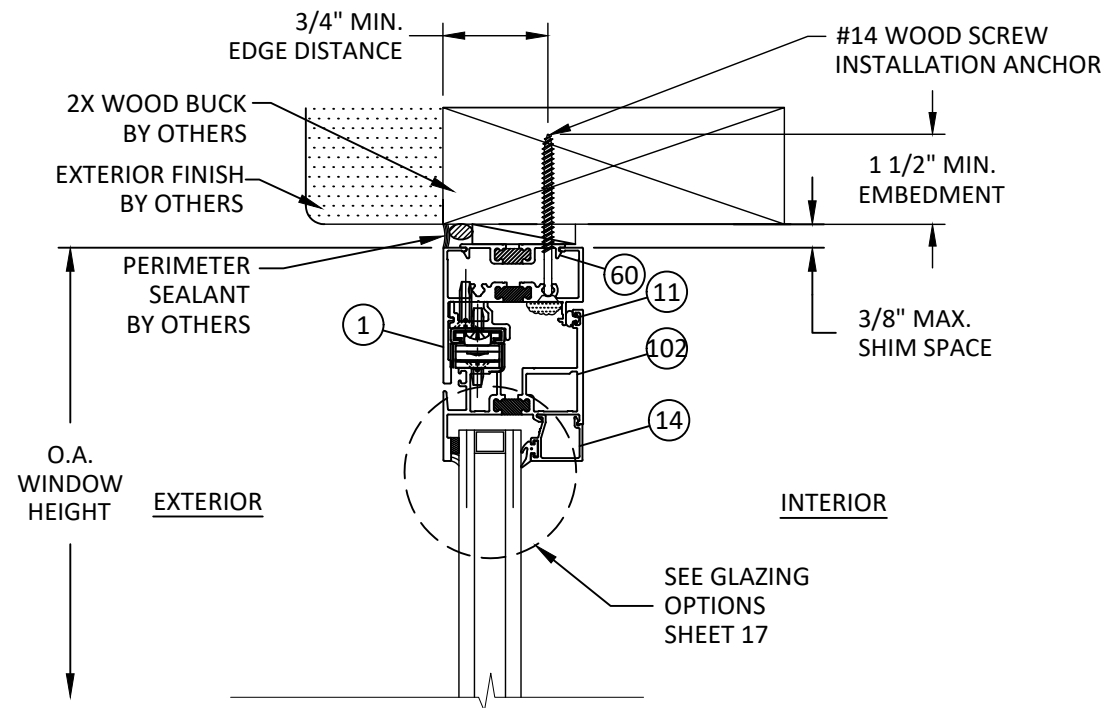
THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.



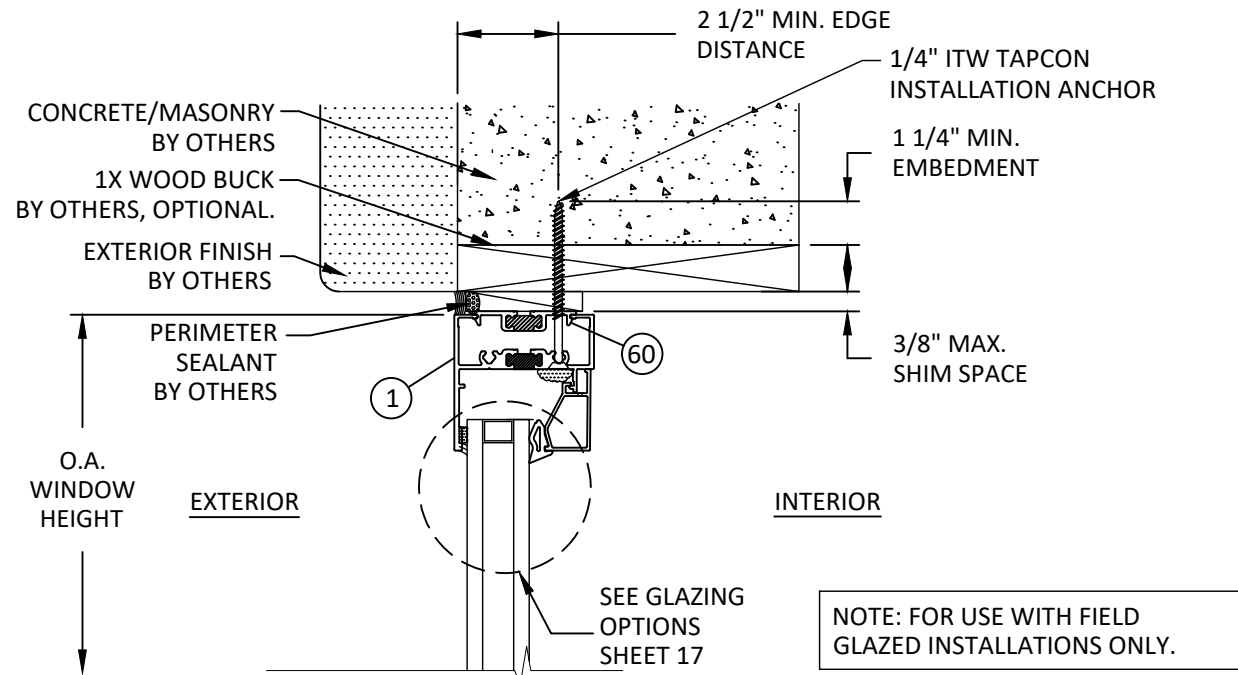
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DATE:	9.01.17
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SHEET:	9
REV.	C

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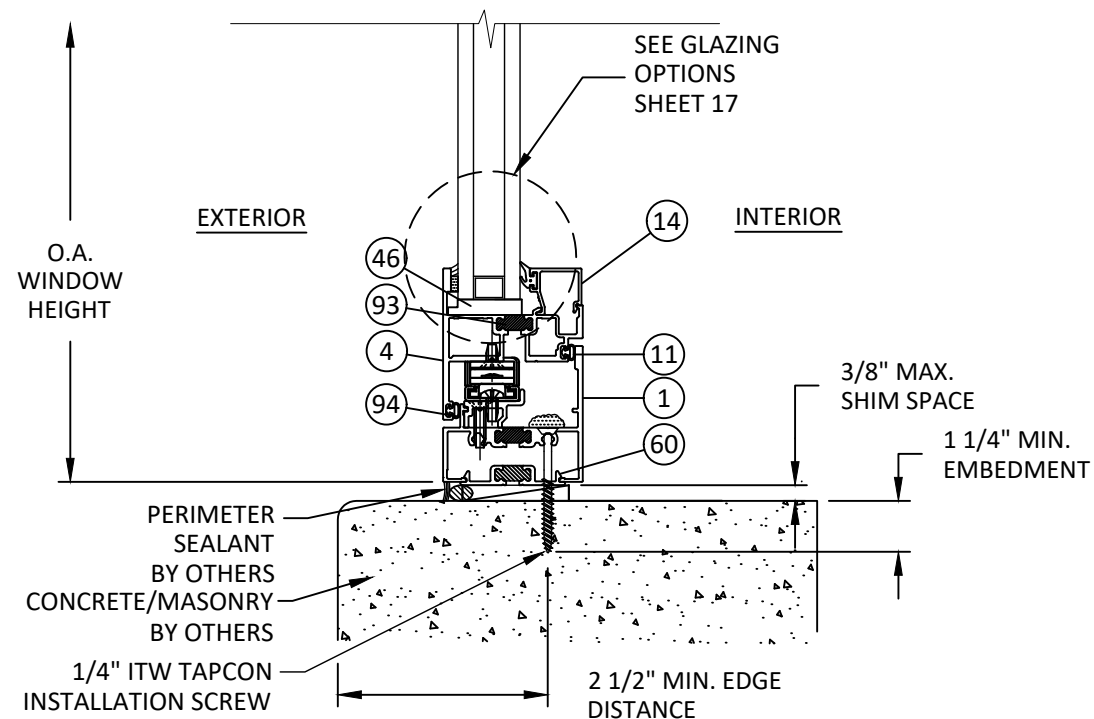
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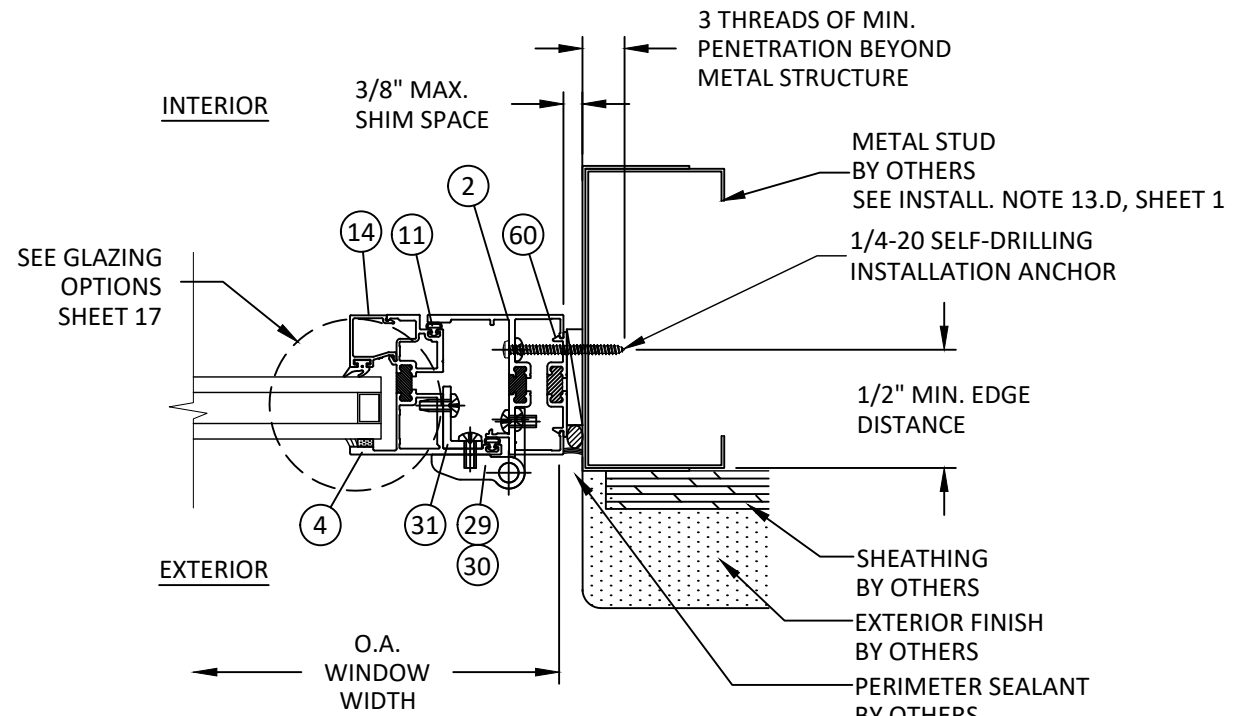
O10 VERTICAL SECTION
VENT HEAD - 2X WOOD BUCK
THROUGH FRAME- TYP. "INSWING"



P10 VERTICAL SECTION
FIXED HEAD - 1X/CONCRETE/MASONRY
THROUGH FRAME - TYP.



N10 VERTICAL SECTION
VENT SILL - CONCRETE/MASONRY
THROUGH FRAME - TYP. "OUTSWING"



Q10 HORIZONTAL SECTION
VENT JAMB - METAL STUD FRAME
THROUGH FRAME - TYP. "OUTSWING"



YKK AP America Inc.
101 MARIETTA STREET NW, SUITE 2100
ATLANTA, GA 30303
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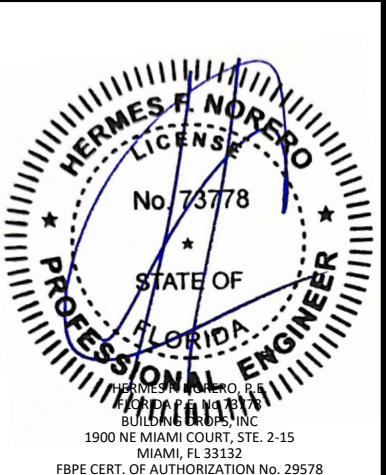
TITLE:
YOW 225 TU THERMAL ALUMINUM
CASEMENT OUTSWING / INSWING WINDOW
(NON-HVHZ) (NON-IMPACT)
THROUGH FRAME
INSTALLATION DETAILS

PREPARED BY:
BUILDING DROPS, INC.
1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
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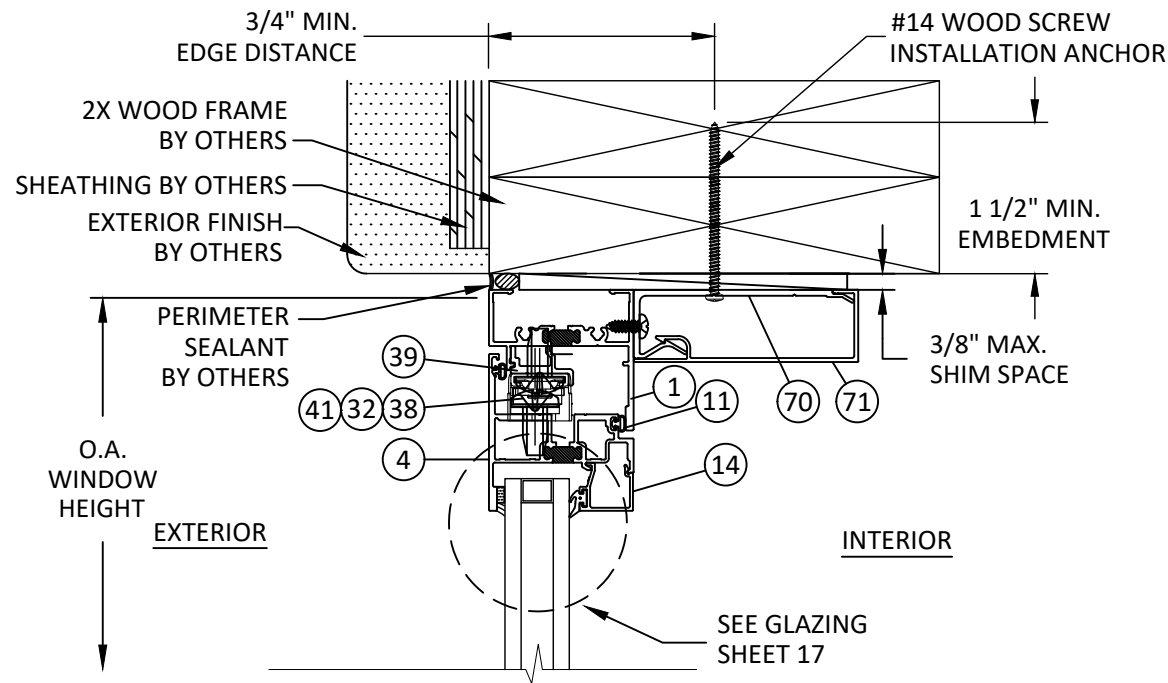
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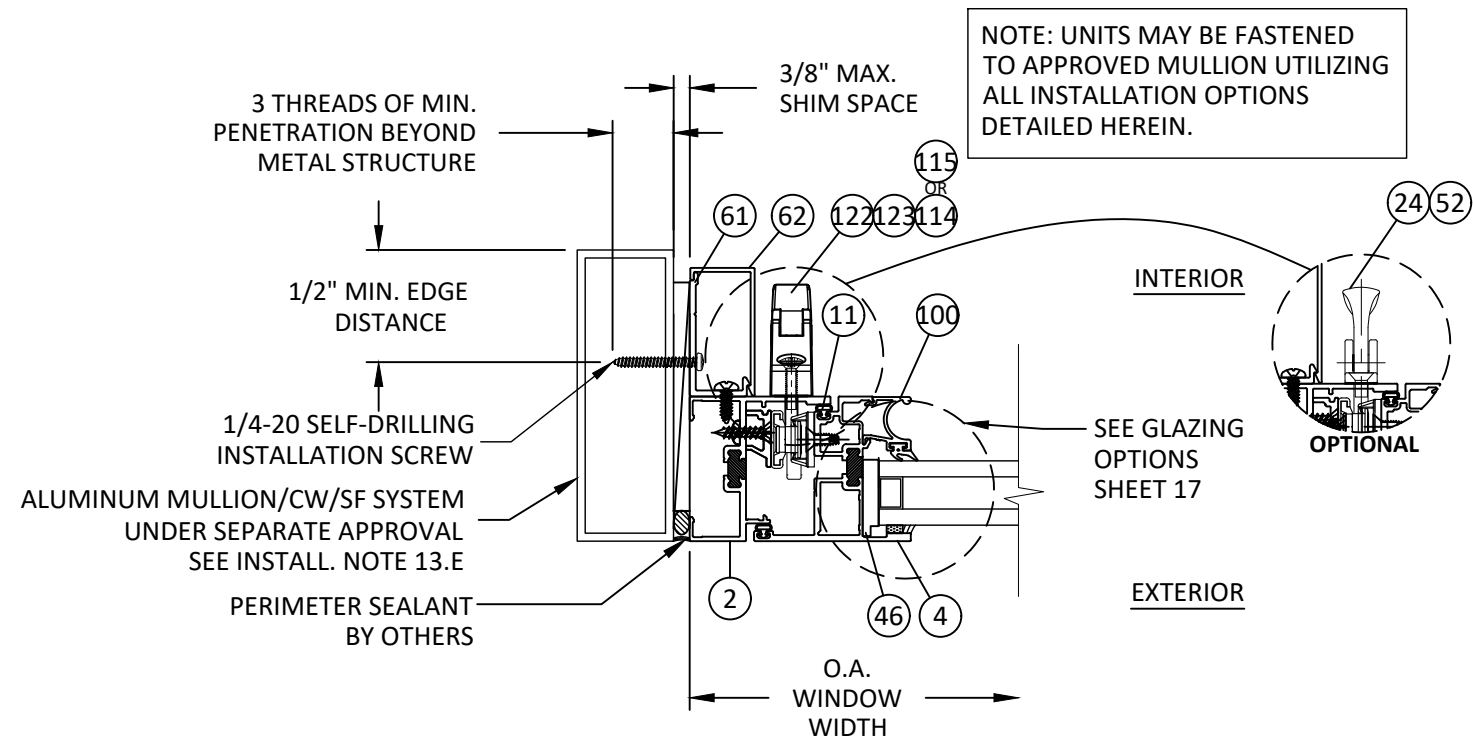
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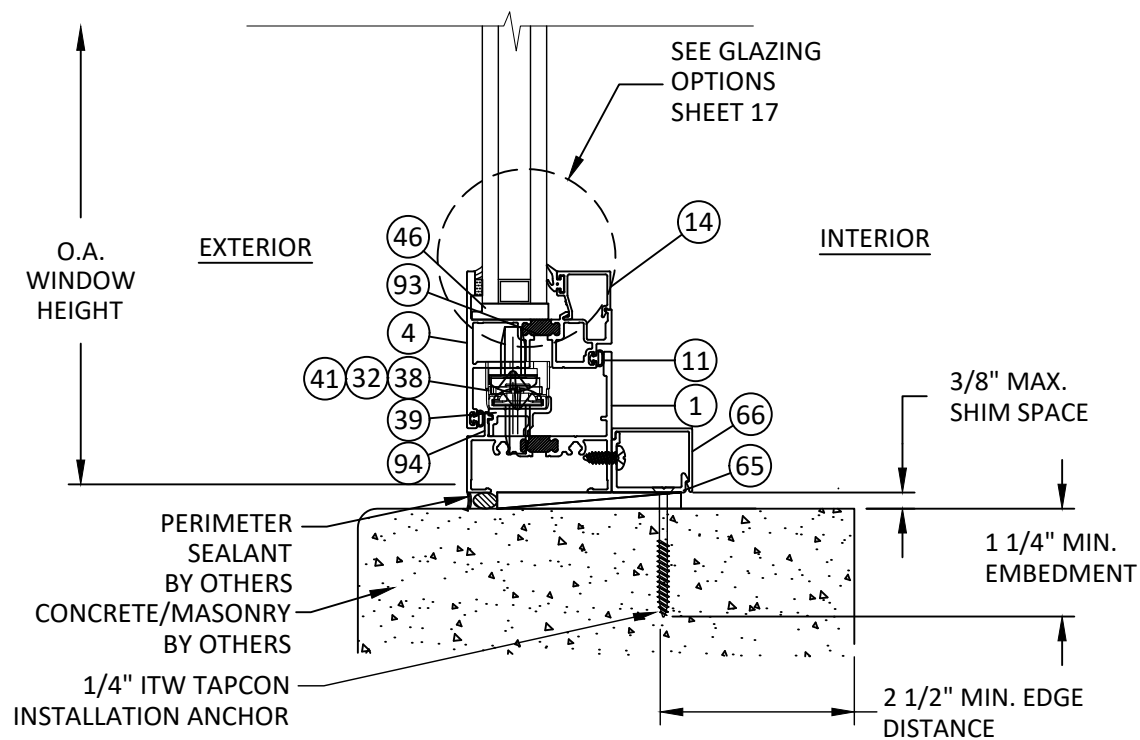
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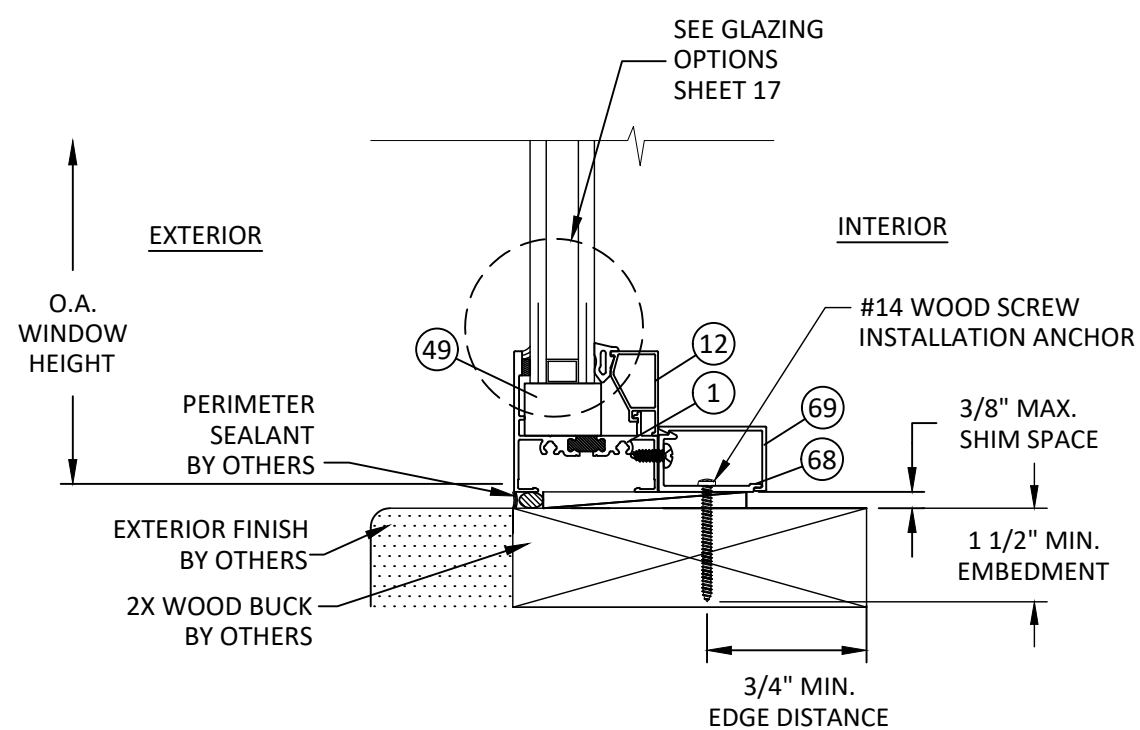
S
11 **VERTICAL SECTION**
VENT HEAD - 2X WOOD FRAME
TRIM CLIP ANCHOR - TYP. "OUTSWING"



T
11 **HORIZONTAL SECTION**
VENT JAMB - MULL TUBE FRAME
TRIM CLIP ANCHOR - TYP. "OUTSWING"
STANDARD



R
11 **VERTICAL SECTION**
VENT SILL - CONCRETE/MASONRY
TRIM CLIP ANCHOR - TYP. "OUTSWING"



U
11 **VERTICAL SECTION**
FIXED SILL - 2X WOOD BUCK
TRIM CLIP ANCHOR - TYP.

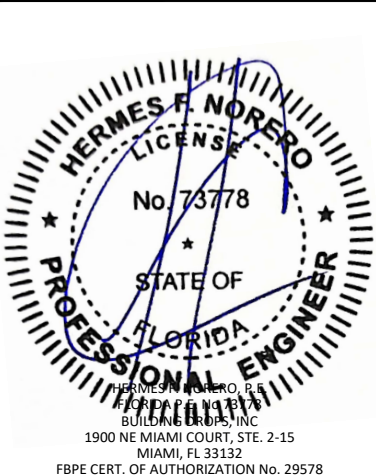


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101 MARIETTA STREET NW, SUITE 2100
ATLANTA, GA 30303
PH: (478)277-1955 FAX: (678)838-6001

TITLE: YOW 225 TU THERMAL ALUMINUM CASEMENT OUTSWING / INSWING WINDOW (NON-HVHZ) (NON-IMPACT)
TRIM CLIP ANCHOR INSTALLATION
PREPARED BY: BUILDING DROPS, INC.
1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
PH: (954)399-8478
FAX: (954)744-4738
WEB: www.buildingdrops.com

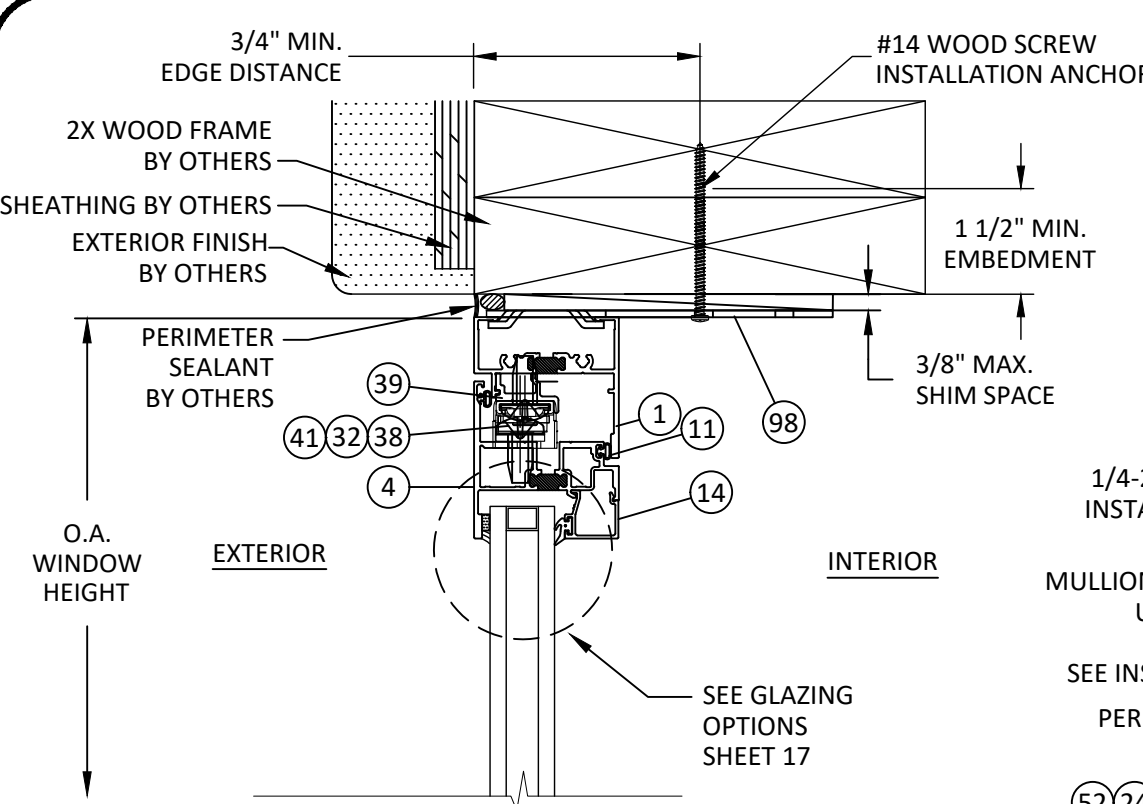
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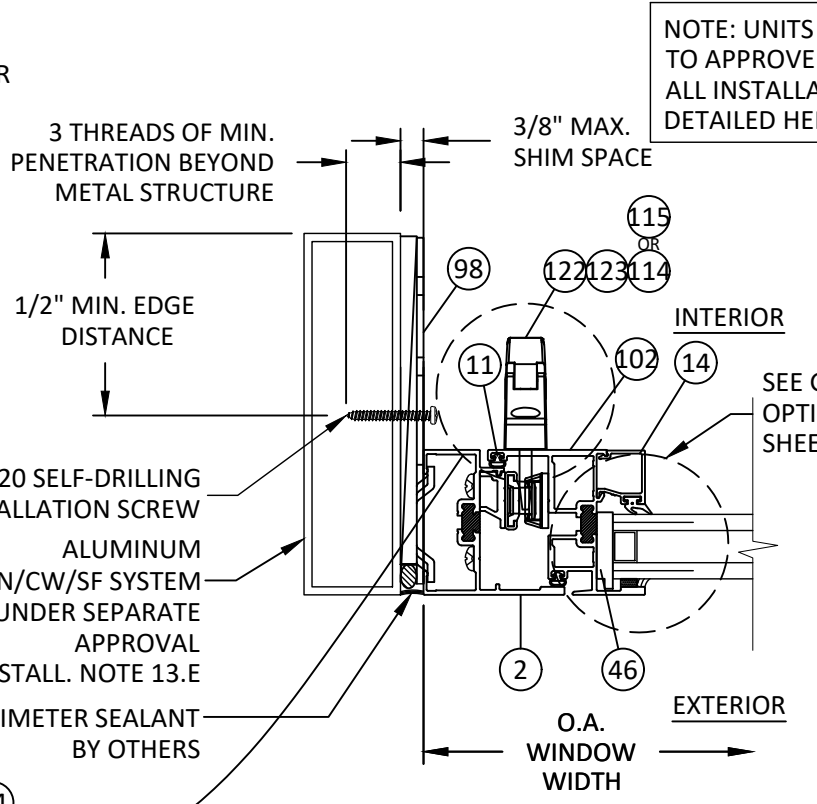


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DWG. #:	YKK247
SHEET:	11
REV.	C

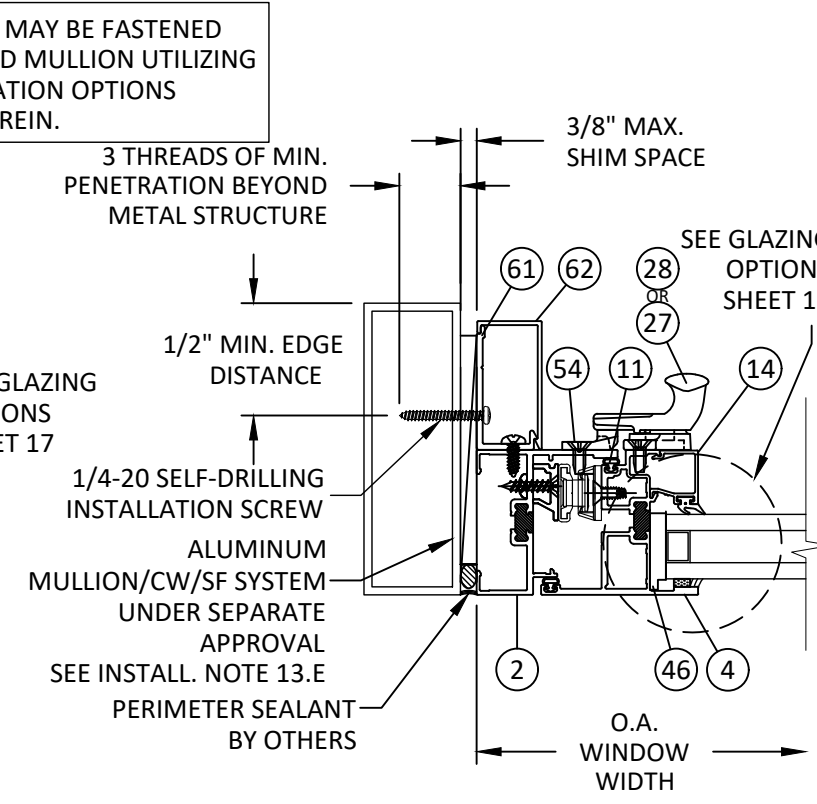
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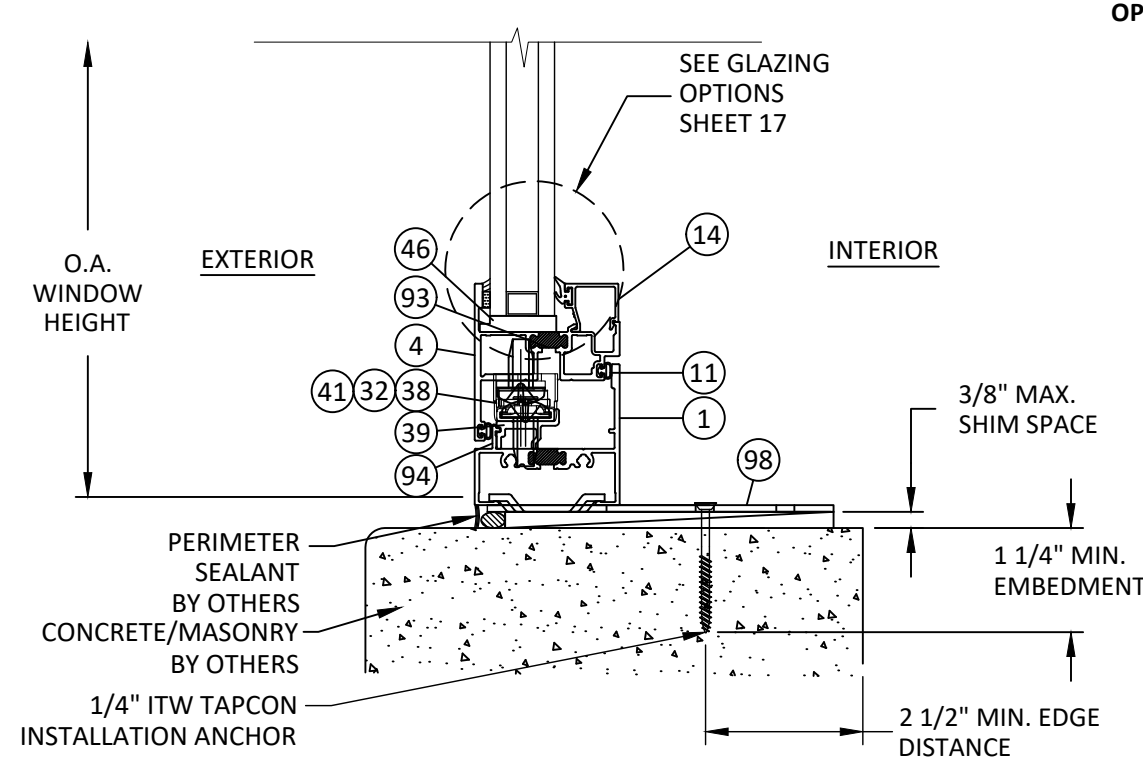
W 12 VERTICAL SECTION
VENT HEAD - 2X WOOD FRAME
TWIST ANCHOR - TYP. "OUTSWING"



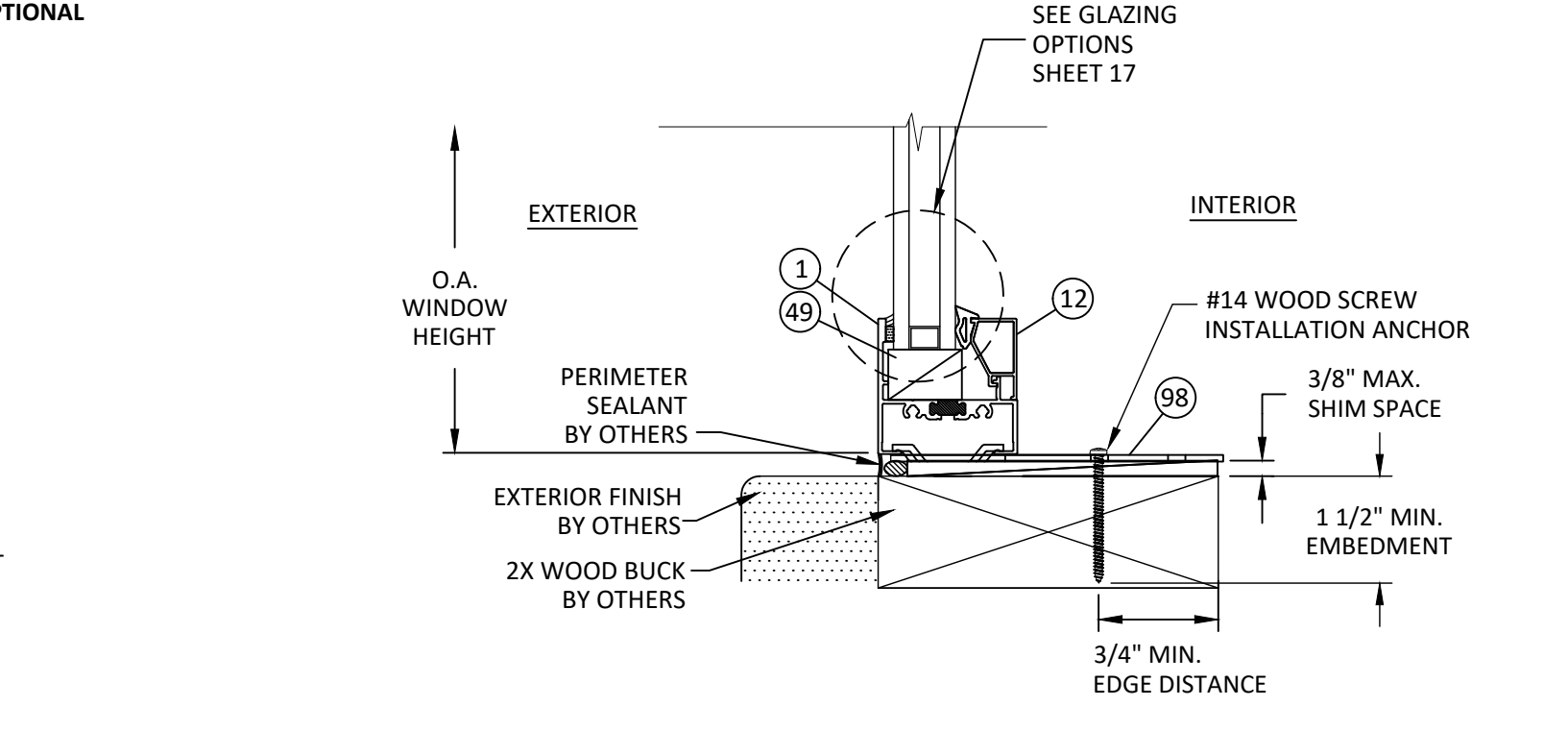
X 12 HORIZONTAL SECTION
VENT JAMB - MULL TUBE FRAME
TWIST ANCHOR - TYP. "INSWING" STANDARD



X1 12 HORIZONTAL SECTION
VENT JAMB - MULL TUBE FRAME
TWIST ANCHOR - TYP. "OUTSWING"



V 12 VERTICAL SECTION
VENT SILL - CONCRETE/MASONRY
TWIST ANCHOR - TYP. "OUTSWING"



Y 12 VERTICAL SECTION
FIXED SILL - 2X WOOD BUCK
TWIST ANCHOR - TYP.

NOTE: UNITS MAY BE FASTENED TO APPROVED MULLION UTILIZING ALL INSTALLATION OPTIONS DETAILED HEREIN.

YKK AP America Inc.
101 MARIETTA STREET NW, SUITE 2100
ATLANTA, GA 30303
PH: (478)277-1955 FAX: (678)838-6001

TITLE: YOW 225 TU THERMAL ALUMINUM CASEMENT OUTSWING / INSWING WINDOW (NON-HVHZ) (NON-IMPACT)

PREPARED BY: BUILDING DROPS, INC.
1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
PH: (954)399-8478
FAX: (954)744-4738
WEB: www.buildingdrops.com

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HERMES F. NORERO, P.E.
BUILDING DROPS, INC.
1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
FBPE CERT. OF AUTHORIZATION No. 29578

FL #: FL16312

DATE: 9.01.17

DWG. BY: FM CHK. BY: HFN

SCALE: NTS

DWG. #: YKK247

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YKK AP America Inc.
101 MARIETTA STREET NW, SUITE 2100
ATLANTA, GA 30303
PH: (478)277-1955 FAX: (678)838-6001

TITLE: YOW 225 TU THERMAL ALUMINUM CASEMENT OUTSWING / INSWING WINDOW (NON-HVHZ) (NON-IMPACT) ACCESSIBILITY HARDWARE INSTALLATION DETAILS

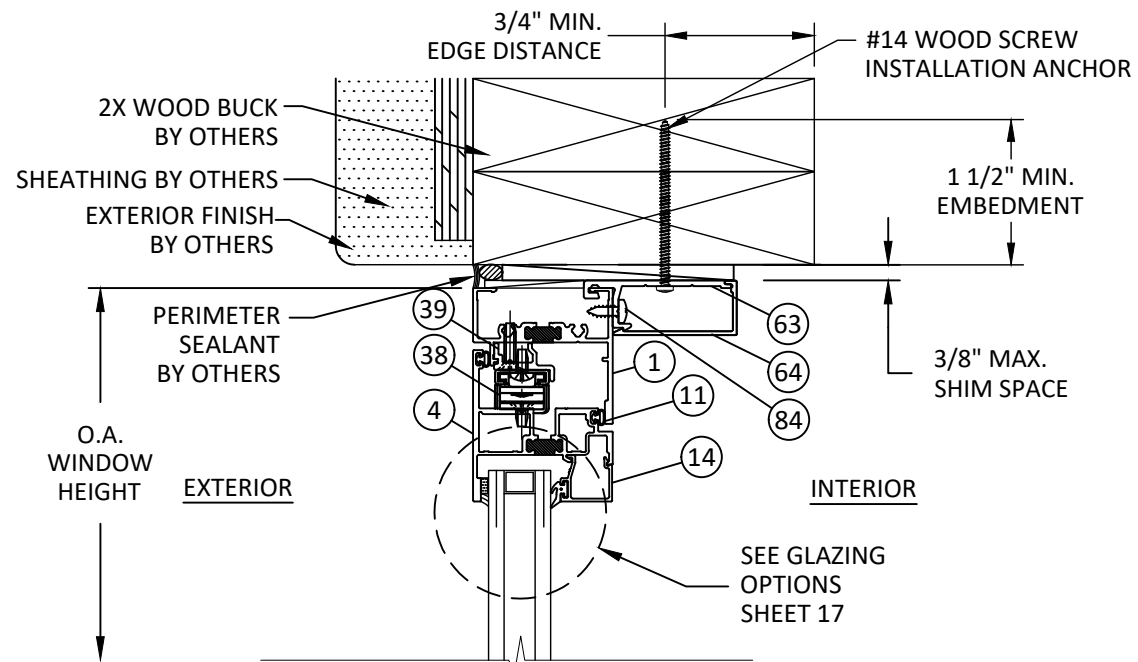
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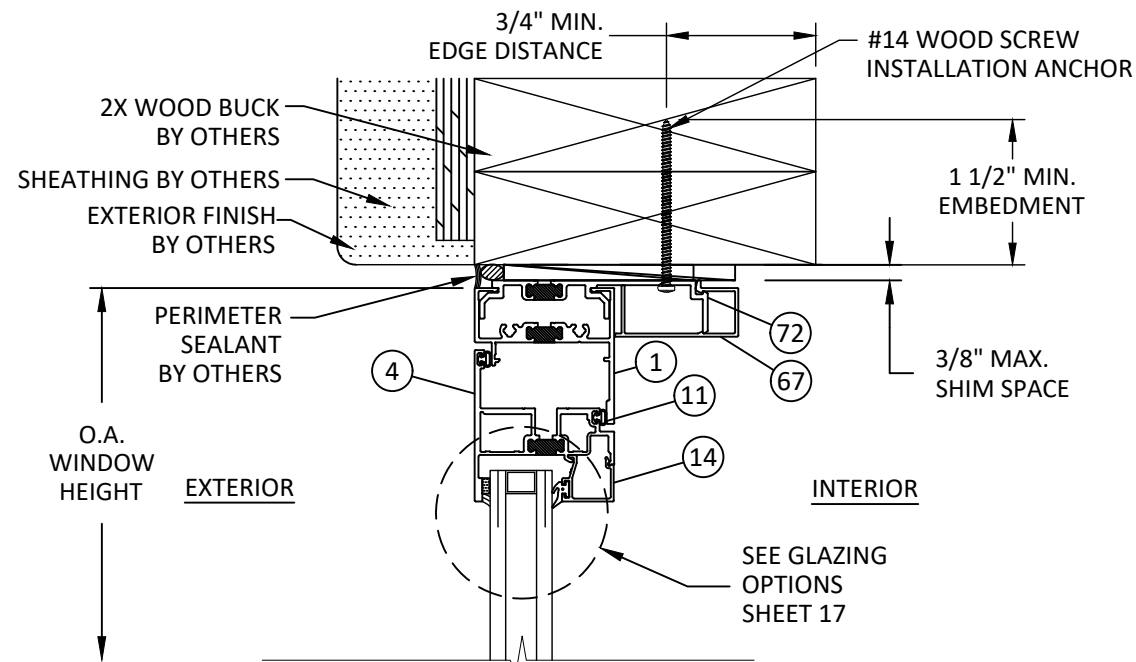
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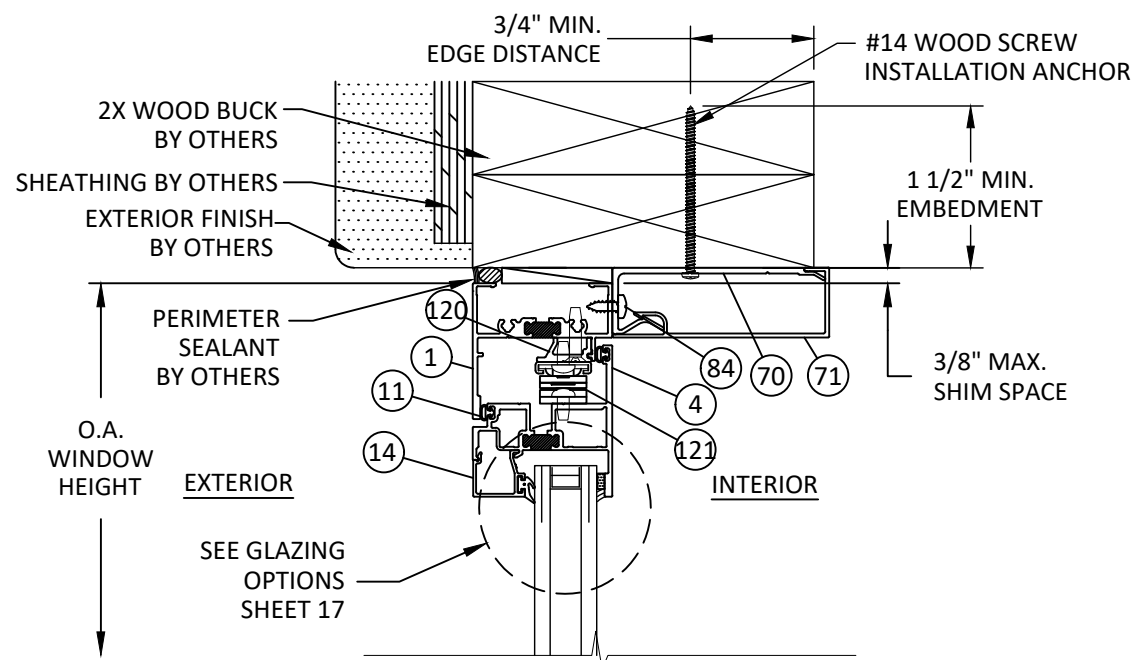
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SCALE:	NTS
DWG. #:	YKK247
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REV.	C



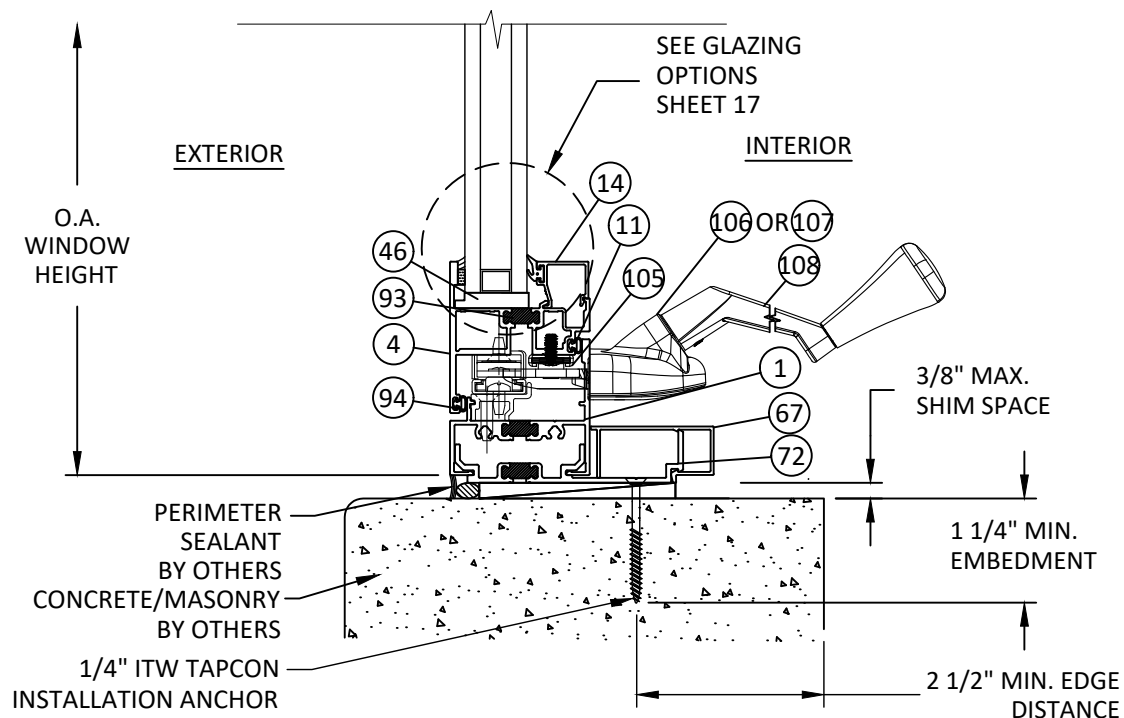
Z 13 VERTICAL SECTION
VENT HEAD - 2X WOOD FRAME
CLIP ANCHOR - TYP. "OUTSWING" - ACCESSIBLE HARDWARE



AA 13 VERTICAL SECTION
VENT HEAD - 2X WOOD FRAME
STRAP ANCHOR - TYP. "OUTSWING" - ACCESSIBLE HARDWARE

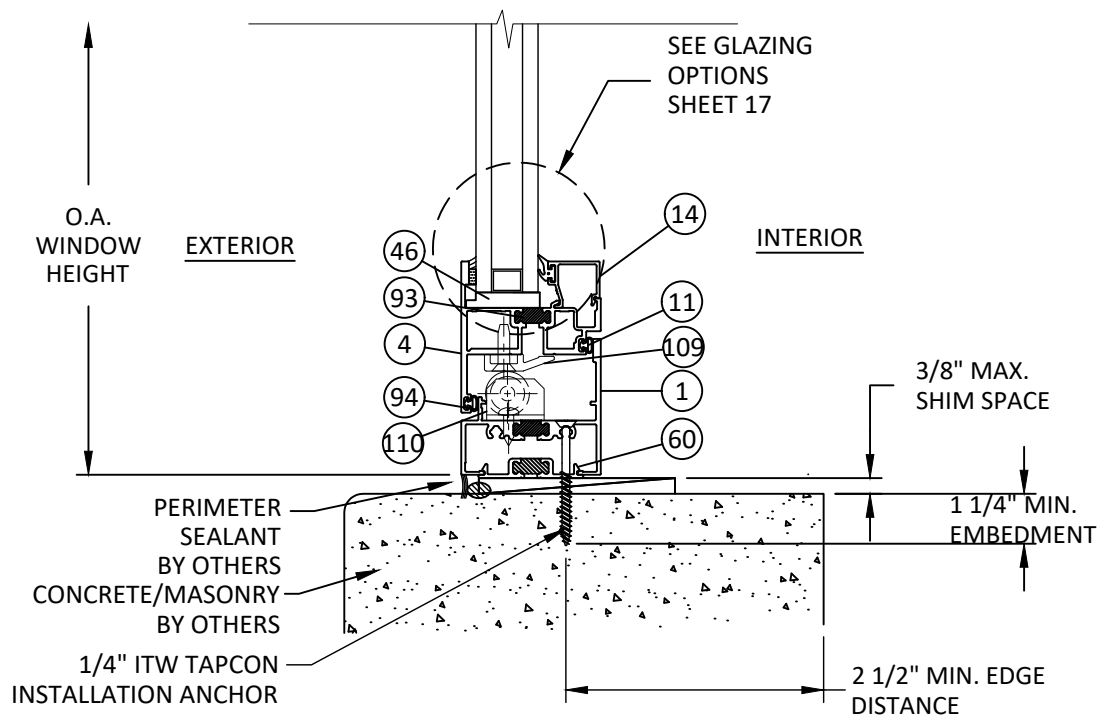


AB 13 VERTICAL SECTION
VENT HEAD - 2X WOOD FRAME
TRIM CLIP ANCHOR - TYP. "INSWING" - ACCESSIBLE HARDWARE

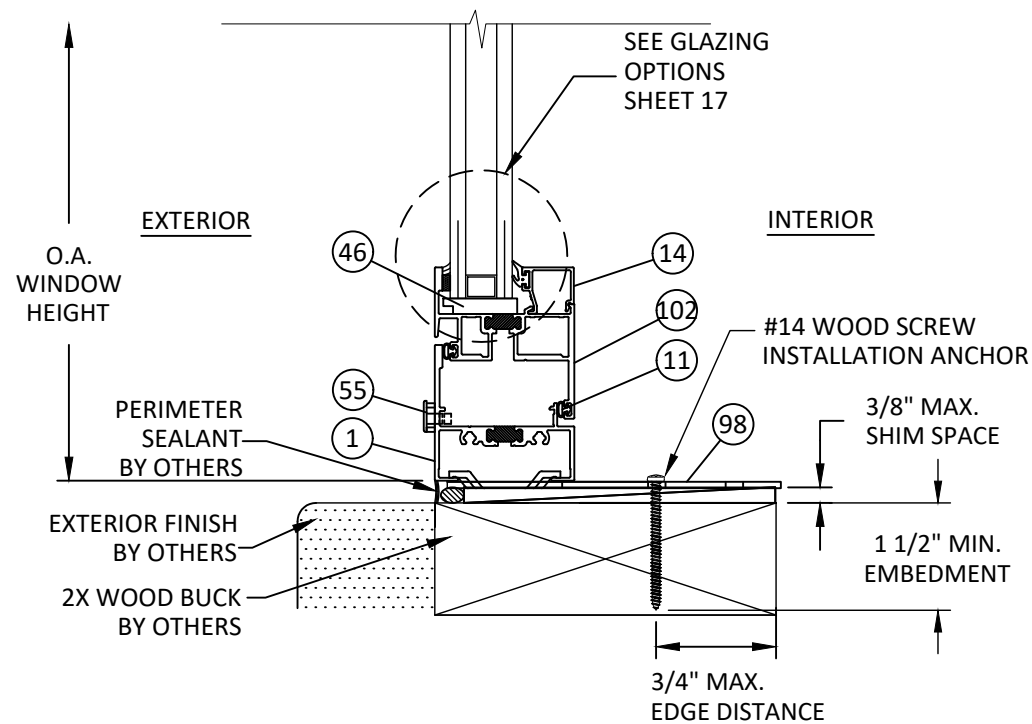


AC 13 VERTICAL SECTION
VENT SILL - CONCRETE/MASONRY
STRAP ANCHOR - TYP. "OUTSWING" - ACCESSIBLE HARDWARE

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AD 14 VERTICAL SECTION
VENT SILL - CONCRETE/MASONRY
THROUGH FRAME ANCHOR - TYP. "OUTSWING" - ACCESSIBLE HARDWARE



AF 14 VERTICAL SECTION
VENT SILL - 2X WOOD BUCK
TWIST ANCHOR - TYP. "INSWING" - ACCESSIBLE HARDWARE



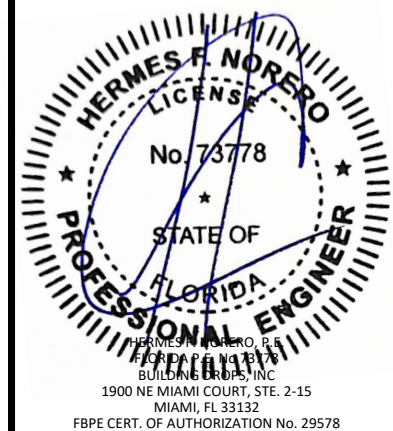
YKK AP America Inc.
101 MARIETTA STREET NW, SUITE 2100
ATLANTA, GA 30303
PH: (478)277-1955 FAX: (678)838-6001

TITLE:
YOW 225 TU THERMAL ALUMINUM
CASEMENT OUTSWING / INSWING WINDOW
(NON-HVHZ) (NON-IMPACT)
ACCESSIBILITY HARDWARE
INSTALLATION DETAILS

PREPARED BY:
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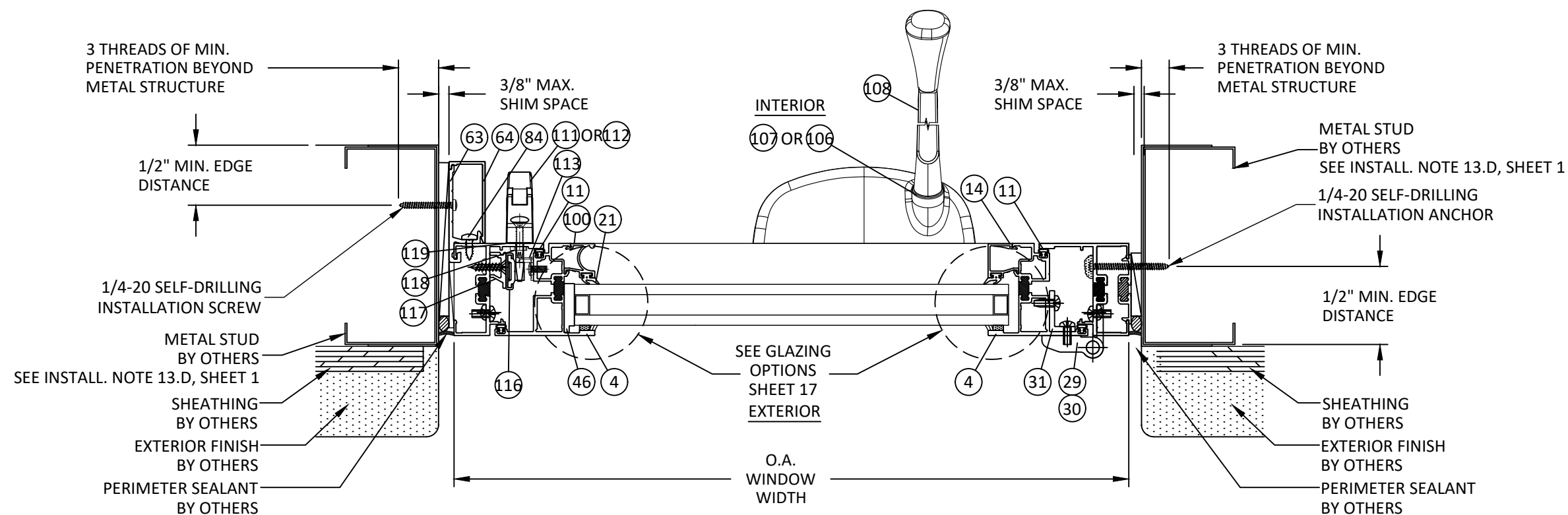
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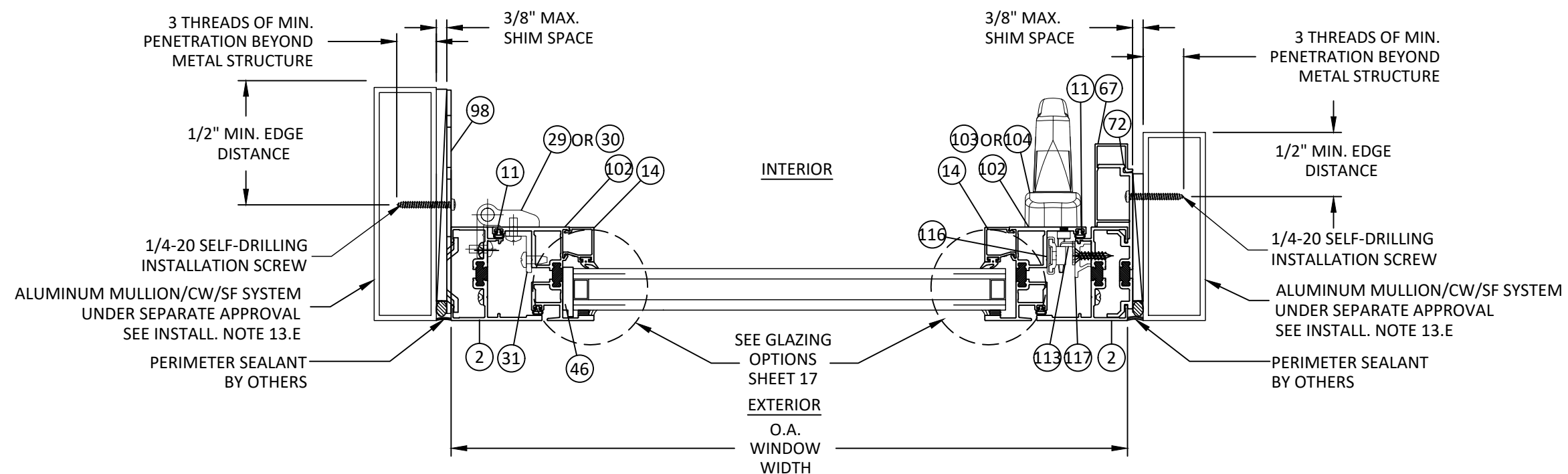


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SCALE:	NTS	
DWG. #:	YKK247	
SHEET:	14	REV. C

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AG HORIZONTAL SECTION
15 VENT JAMB - MULL TUBE FRAME
THROUGH FRAME/CLIP ANCHOR - TYP. "OUTSWING"
ACCESSIBLE HARDWARE



AH HORIZONTAL SECTION
15 VENT JAMB - MULL TUBE FRAME
STRAP/TWIST ANCHOR - TYP. "INSWING"
ACCESSIBLE HARDWARE



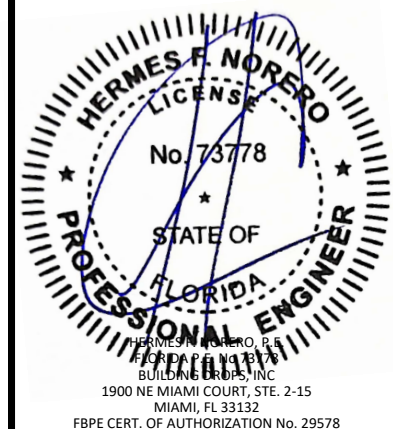
YKK AP America Inc.
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ATLANTA, GA 30303
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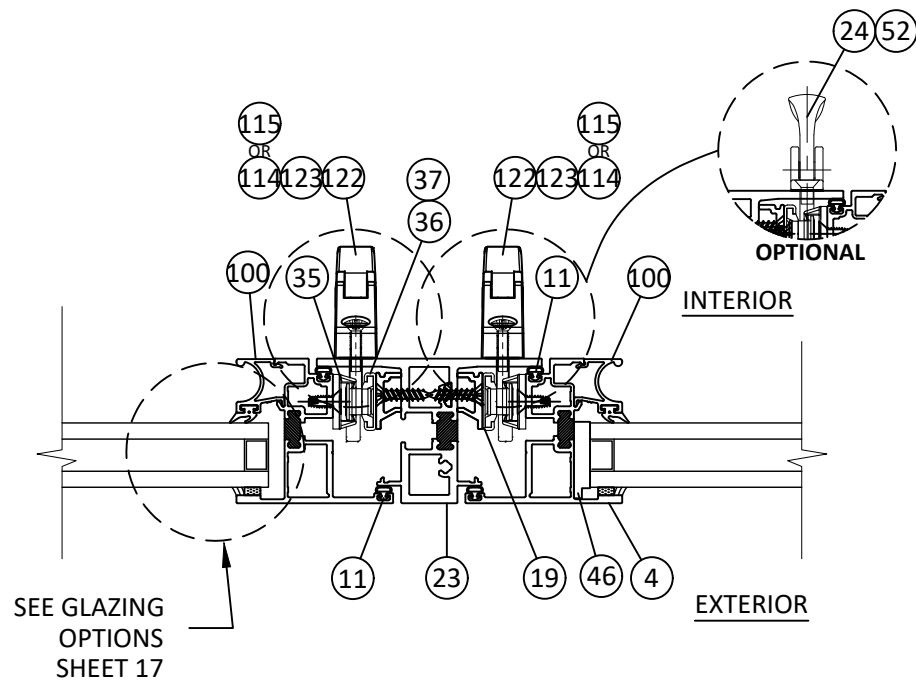
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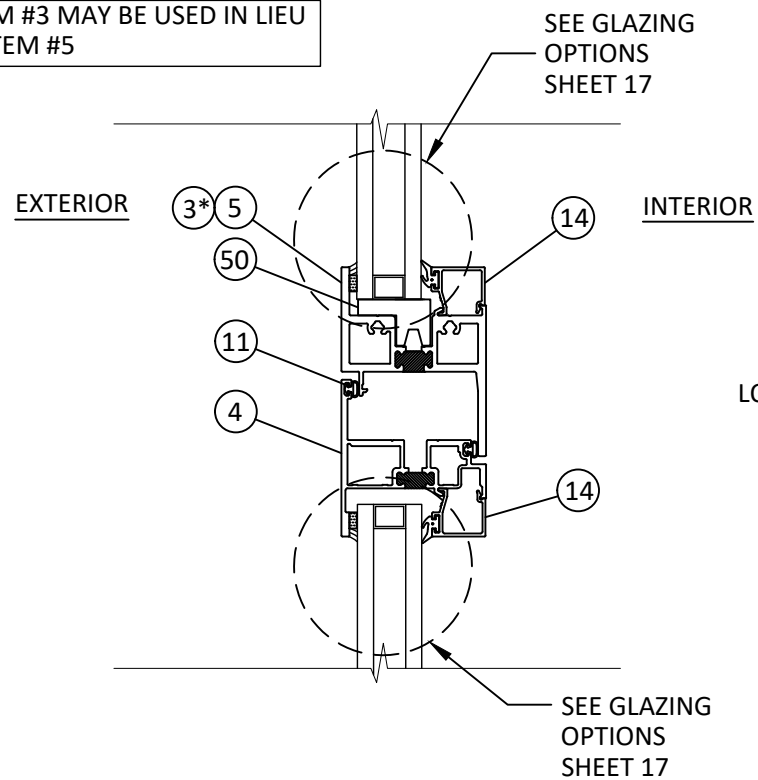
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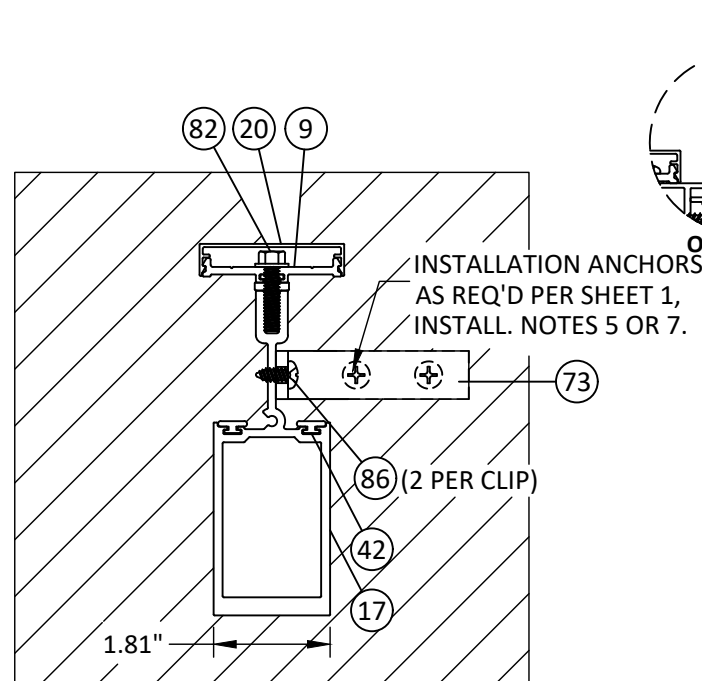


AJ **HORIZONTAL SECTION**
16 MEETING STILE
"OUTSWING"
STANDARD AT INTEGRAL MULLION

*ITEM #3 MAY BE USED IN LIEU
OF ITEM #5

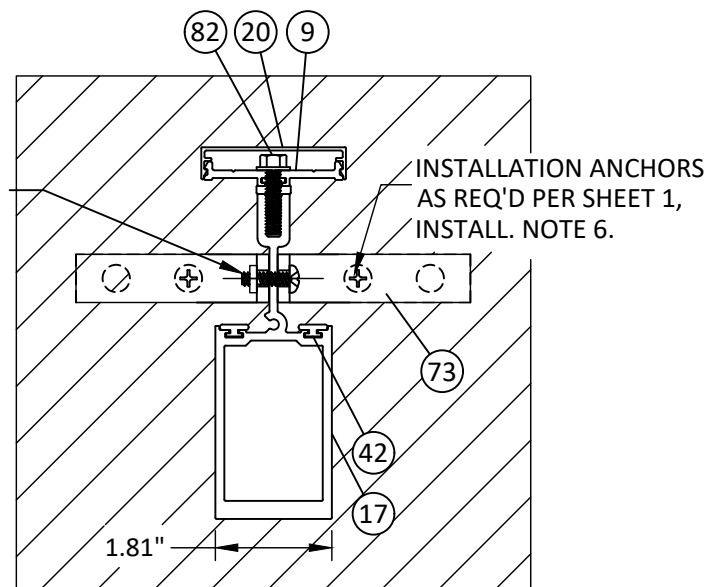


AI **VERTICAL SECTION**
16 INTEGRAL MULLION-TYP.
FIXED OVER CASEMENT "OUTSWING"

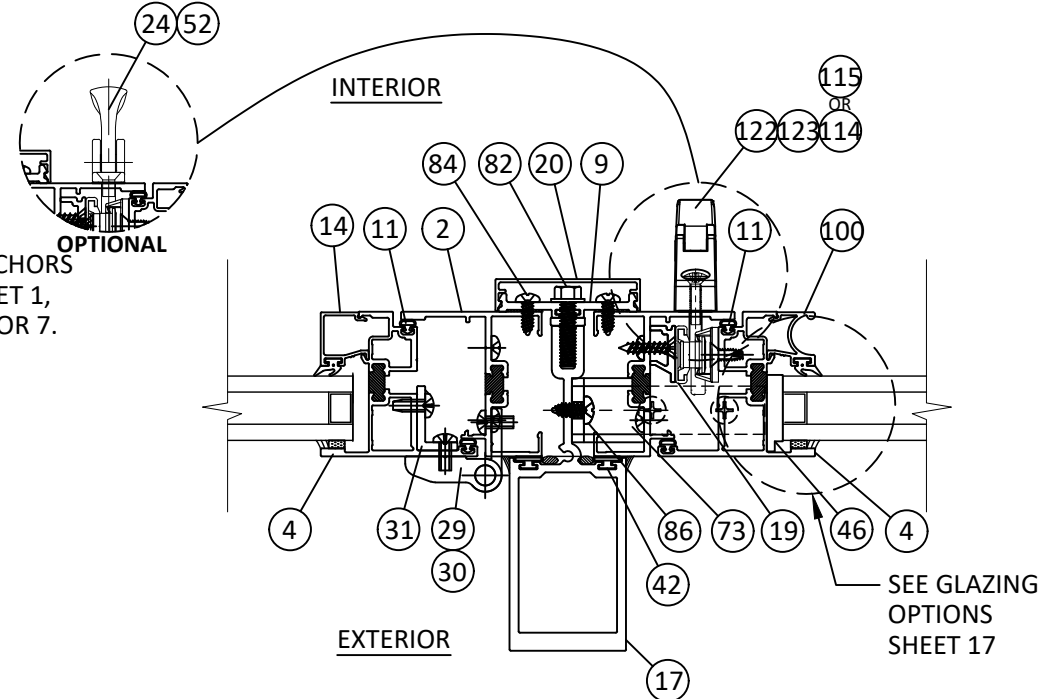


AK **HORIZONTAL SECTION**
16 STACK MULLION - TYP. JAMB INSTALLATION
INSTALL TO WOOD/METAL FRAME

1/4" X 3/4" BOLT WITH
LOCK WASHER (2 PER CLIP)

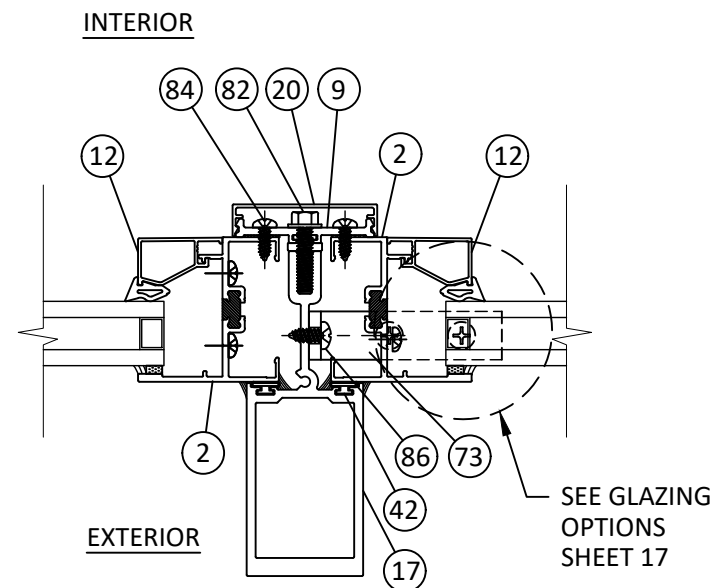


AL **HORIZONTAL SECTION**
16 STACK MULLION - TYP. INTERMEDIATE INSTALLATION
INSTALL TO CONCRETE/MASONRY



AM **HORIZONTAL SECTION**
16 STACK MULLION - TYP.
CASEMENT TO CASEMENT "OUTSWING"
STANDARD

NOTE: STACK MULLION (ITEM #17)
MAY BE INSTALLED IN REVERSE
ORIENTATION THAN SHOWN.



AN **HORIZONTAL SECTION**
16 STACK MULLION - TYP.
FIXED TO FIXED "OUTSWING"



YKK AP America Inc.
101 MARIETTA STREET NW, SUITE 2100
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TITLE:
YOW 225 TU THERMAL ALUMINUM
CASEMENT OUTSWING / INSWING WINDOW
(NON-HVHZ) (NON-IMPACT)

INTEGRAL & STACK MULL DETAILS

PREPARED BY:
BUILDING DROPS, INC.

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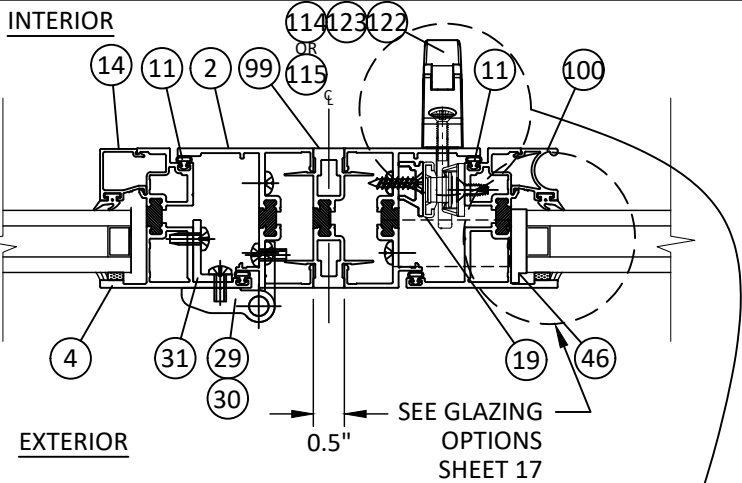
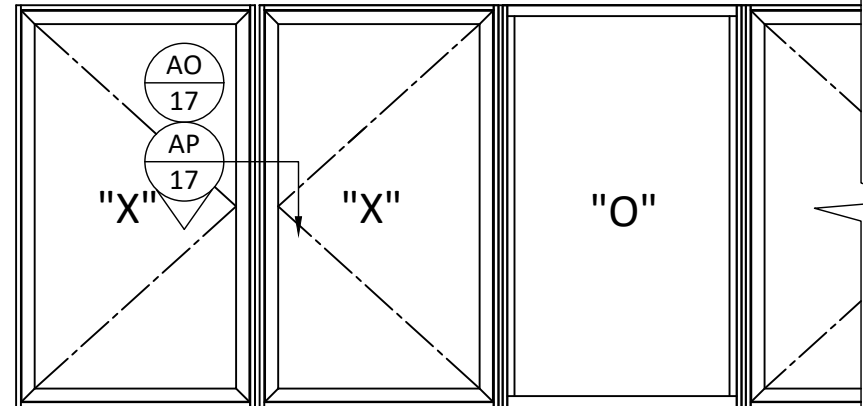
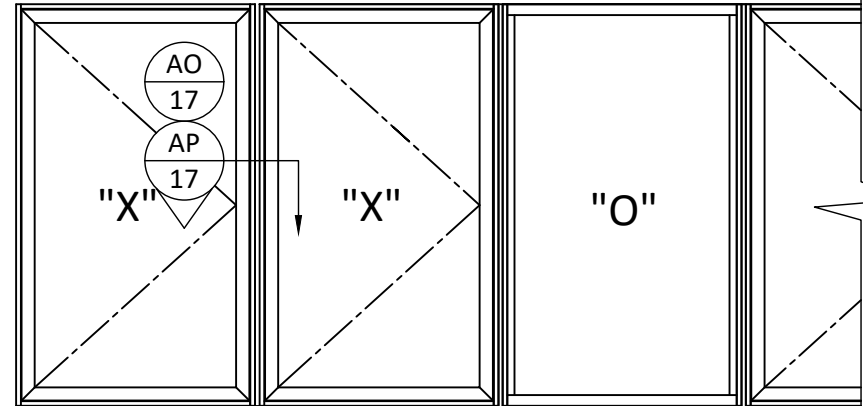
REV.

16

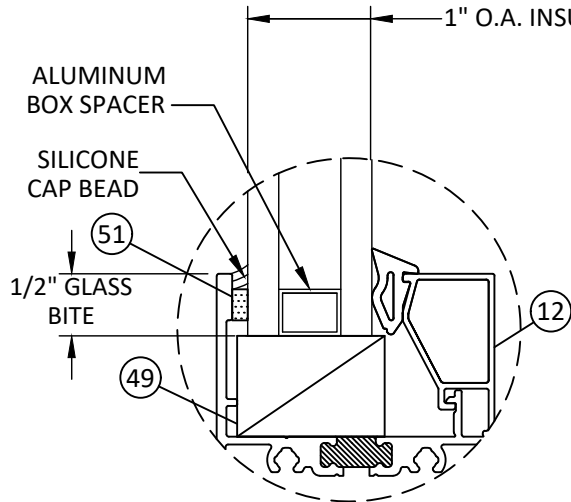
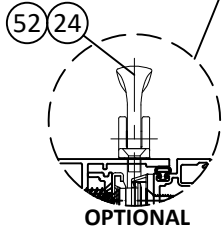
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"I" MULLION DESIGN PRESSURE		
VENT WIDTH	"MULL SPAN"	DESIGN PRESSURE
28	80	65.0
30	74	65.0
32	70	65.0
34	66	65.0
36	62	65.0
38	59	65.0
40	56	65.0
42	53	65.0
44	51	65.0
46	49	65.0
48	47	65.0



AO 17
"I" MULLION - TYP.
CASEMENT TO CASEMENT "OUTSWING" STANDARD



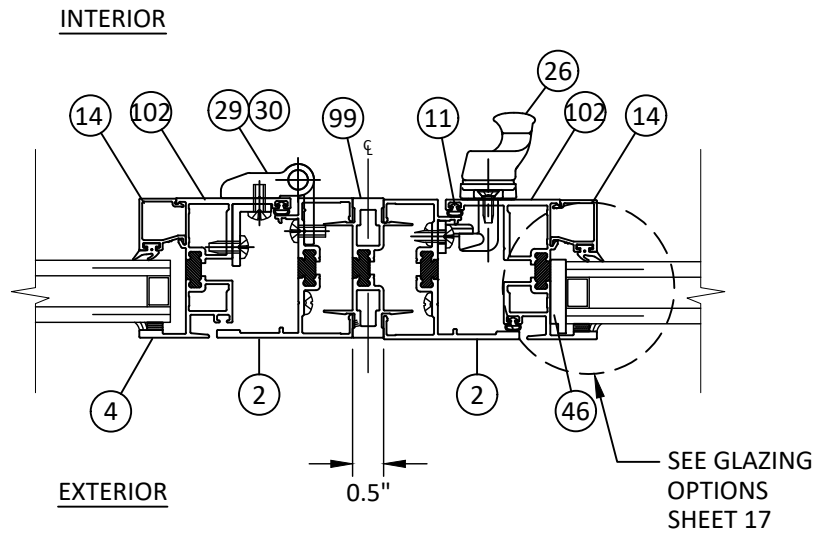
FIXED GLAZING DETAIL

ALUMINUM BOX SPACER:
AROUND THE PERIMETER OF THE GLASS

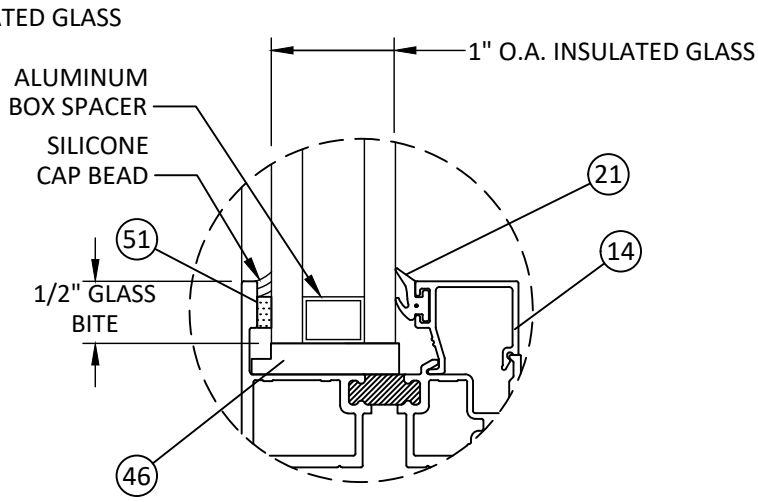
PRIMARY SEALANT:
POLYISOBUTYLENE (PIB)

SECONDARY SEALANT:
STRUCTURAL SILICONE INTENDED FOR
FABRICATION OF INSULATED GLASS
UNITS.

- NOTES:
1. I MULLION MAY BE USED ON A SINGLE ROW OF WINDOWS UP TO THE MAXIMUM APPROVED CASEMENT VENT HEIGHT OF 78" AT +/- 65 PSF.
 2. CONFIGURATIONS OF FIXED WINDOWS OVER CASEMENT WINDOWS OR CASEMENT WINDOWS OVER FIXED WINDOWS MULLED TO ADJACENT WINDOWS ARE QUALIFIED UP TO THE MAXIMUM FRAME HEIGHT OF 80.375" SHOWN ON SHEET 2 FOR +/- 65 PSF SUCH THAT CONTINUOUS FRAMES ARE USED.
 3. OTHER CONFIGURATIONS SHALL BE EVALUATED FOR STRUCTURAL ADEQUACY ON A SITE BY SITE BASIS.
 4. MULL SPAN = VENT HEIGHT + 2"



AP 17
"I" MULLION - TYP.
CASEMENT TO CASEMENT "INSWING"



VENT GLAZING DETAIL

- NOTES:
1. GLASS THICKNESS AND TYPE SHALL COMPLY WITH ASTM E 1300 GLASS CHART REQUIREMENTS.
 2. ALL GLAZING CONFIGURATIONS SHALL COMPLY WITH SAFETY GLAZING REQUIREMENTS OUTLINED IN THE FBC.
 3. ALL LITES GREATER THAN 36" IN WIDTH SHALL UTILIZE SETTING BLOCKS IN ACCORDANCE WITH THE FBC.
 4. SETTING BLOCK DUROMETER HARDNESS OF 70-90 (SHORE A) AS REFERENCED IN CHAPTER 24.



YKK AP America Inc.
101 MARIETTA STREET NW, SUITE 2100
ATLANTA, GA 30303
PH: (478)277-1955 FAX: (678)838-6001

TITLE:
YOW 225 TU THERMAL ALUMINUM
CASEMENT OUTSWING / INSWING WINDOW
(NON-HVHZ) (NON-IMPACT)

"I" MULLION DETAILS

PREPARED BY:

BUILDING DROPS, INC.

1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
PH: (954)399-8478
FAX: (954)744-4738
WEB: www.buildingdrops.com



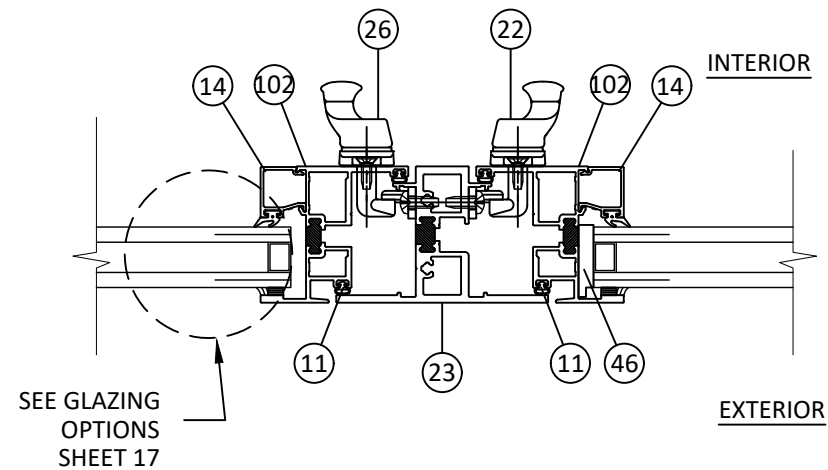
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2023 FBC CODE UPDATE	MS	05.05.23
MISC. UPDATE	SH	02.26.24
2026 FBC CODE UPDATE	SH	07.30.26

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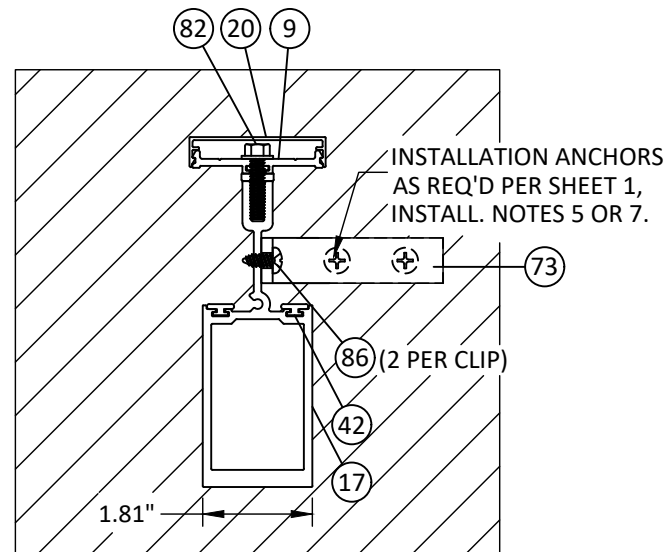


FL #:	FL16312	
DATE:	9.01.17	
DWG. BY:	FM	CHK. BY: HFN
SCALE:	NTS	
DWG. #:	YKK247	
SHEET:	17	REV. C

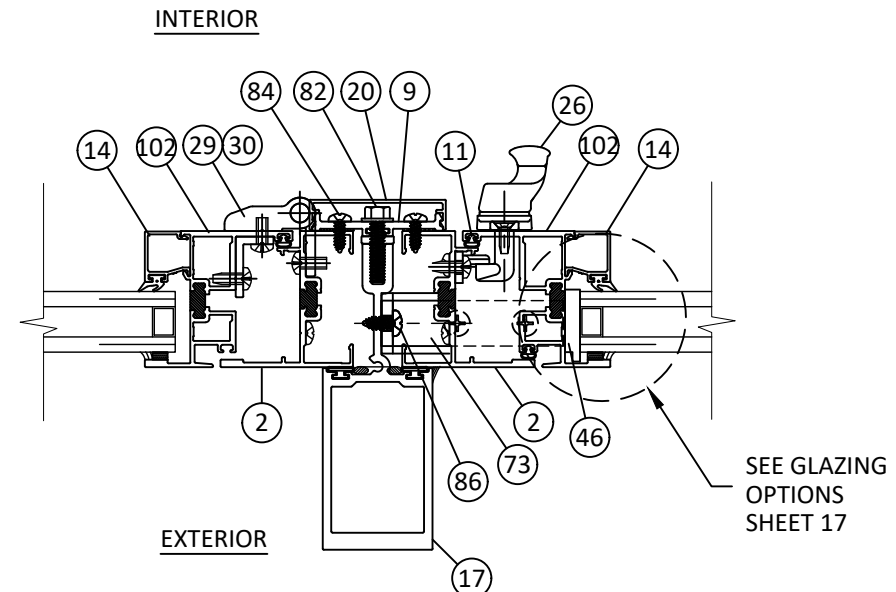
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AQ **HORIZONTAL SECTION**
18 MEETING STILE
"INSWING"

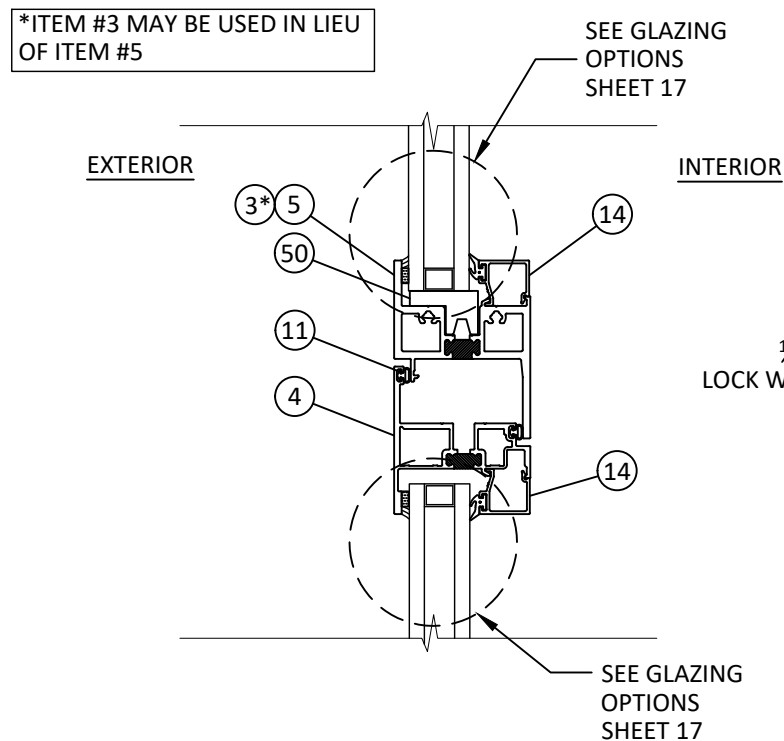


AS **HORIZONTAL SECTION**
18 STACK MULLION - TYP. JAMB INSTALLATION
INSTALL TO WOOD/METAL FRAME

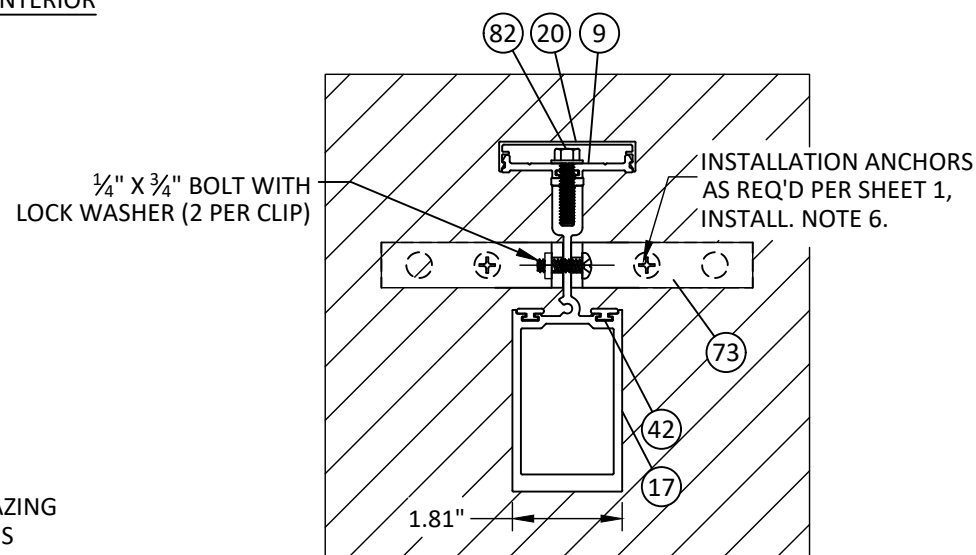


AU **HORIZONTAL SECTION**
18 STACK MULLION - TYP.
CASEMENT TO CASEMENT "INSWING"

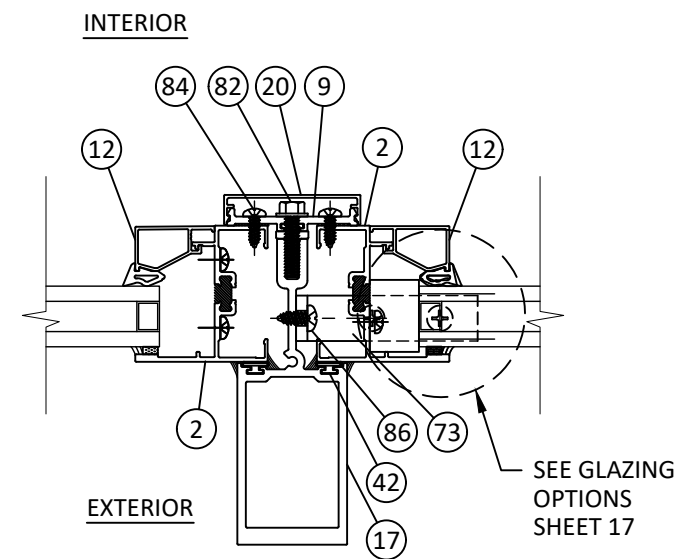
NOTE: STACK MULLION (ITEM #17)
MAY BE INSTALLED IN REVERSE
ORIENTATION THAN SHOWN.



AR **VERTICAL SECTION**
18 INTEGRAL MULLION-TYP.
FIXED OVER CASEMENT "INSWING"



AT **HORIZONTAL SECTION**
18 STACK MULLION - TYP. INTERMEDIATE INSTALLATION
INSTALL TO CONCRETE/MASONRY



AV **HORIZONTAL SECTION**
18 STACK MULLION - TYP.
FIXED TO FIXED "INSWING"



YKK AP America Inc.
101 MARIETTA STREET NW, SUITE 2100
ATLANTA, GA 30303
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TITLE:
YOW 225 TU THERMAL ALUMINUM
CASEMENT OUTSWING / INSWING WINDOW
(NON-HVHZ) (NON-IMPACT)
CASEMENT IN DETAILS

PREPARED BY:
BUILDING DROPS, INC.
1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
PH: (954)399-8478
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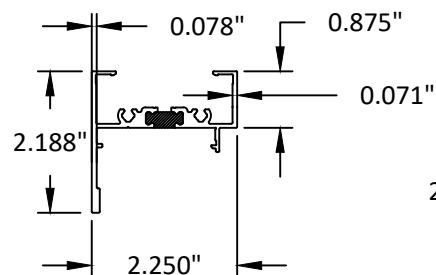


FL #:	FL16312
DATE:	9.01.17
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CHK. BY:	HFN
SCALE:	NTS
DWG. #:	YKK247
SHEET:	18
REV.	C

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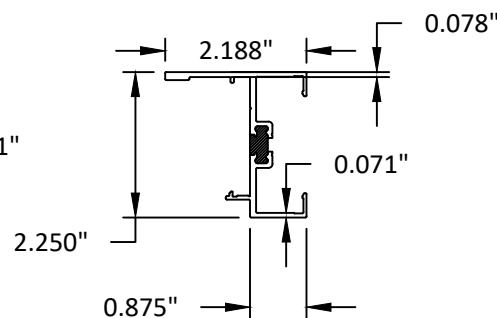
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FRAME HEAD & SILL



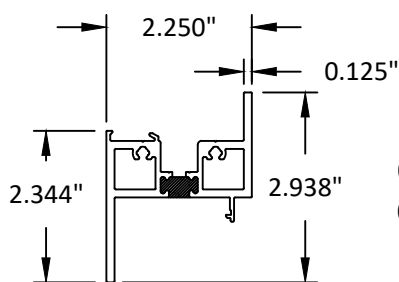
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FRAME JAMB



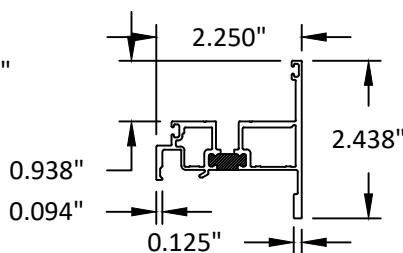
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MULLION



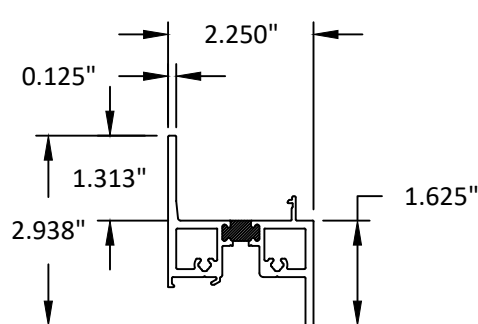
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VENT OUTSWING



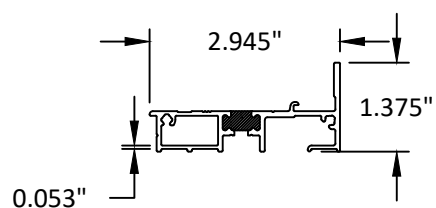
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MULLION



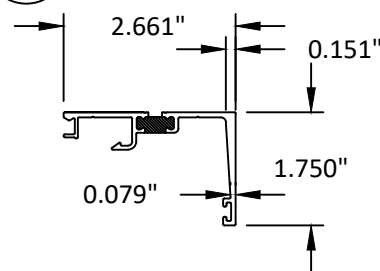
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SILL FLASHING



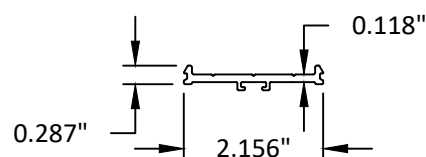
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RECEPTOR



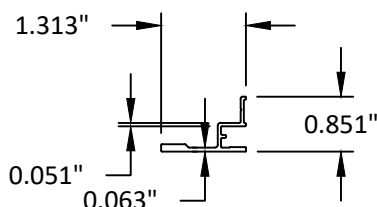
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PRESSURE BAR



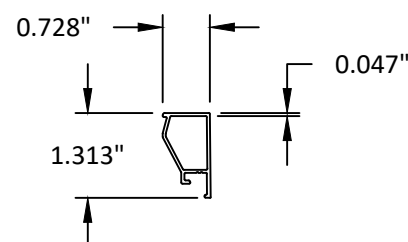
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ADAPTOR



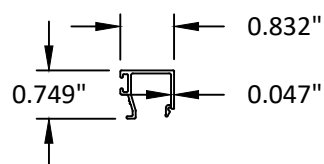
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FIXED GLASS STOP



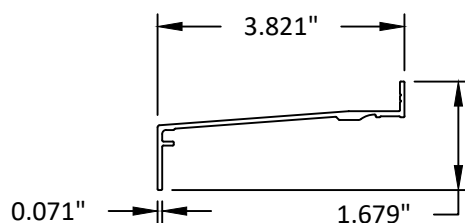
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VENT GLASS STOP



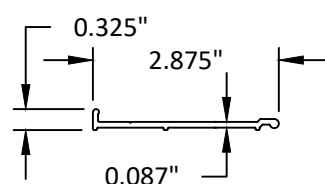
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3\" SILL TRIM



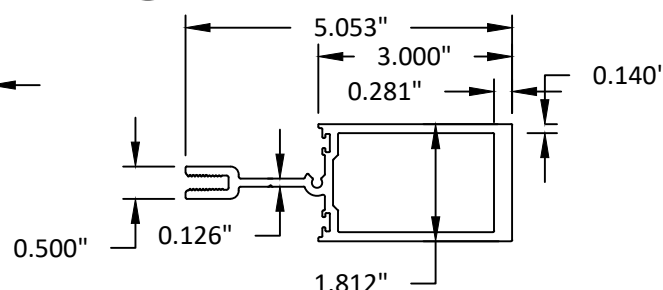
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SILL TRIM BASE



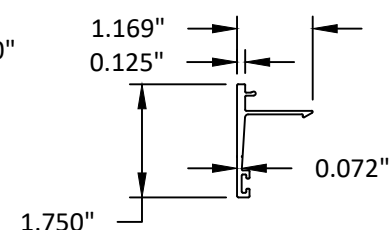
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STACKING MULLION



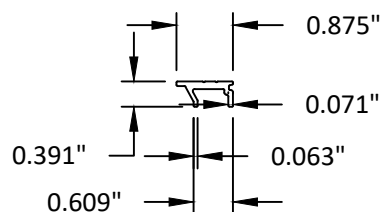
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RECEPTOR STOP



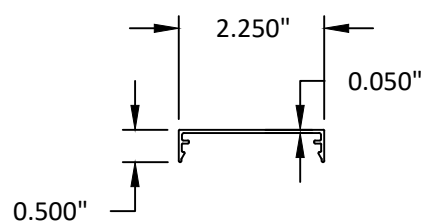
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LOCK BAR BASE



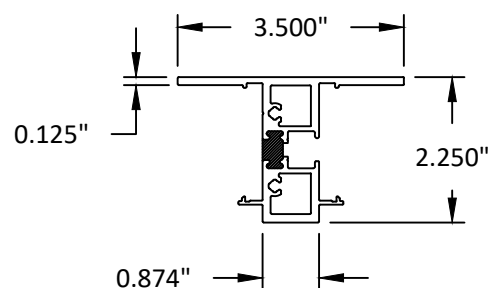
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COVER



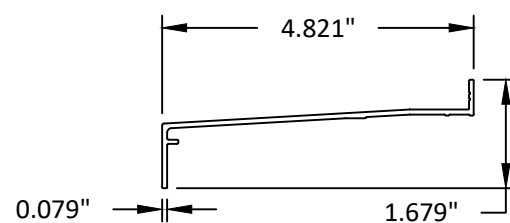
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MEETING STILE INTEGRAL MULLION



58

4\" SILL TRIM



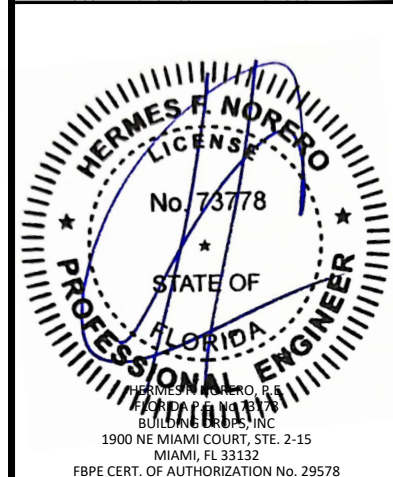
YKK AP America Inc.
101 MARIETTA STREET NW, SUITE 2100
ATLANTA, GA 30303
PH: (478)277-1955 FAX: (678)838-6001

TITLE: YOW 225 TU THERMAL ALUMINUM
CASEMENT OUTSWING / INSWING WINDOW
(NON-HVHZ) (NON-IMPACT)
COMPONENTS 1

PREPARED BY: BUILDING DROPS, INC.
1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
PH: (954)399-8478
FAX: (954)744-4738
WEB: www.buildingdrops.com

REMARKS	BY	DATE
2023 FBC CODE UPDATE	MS	05.05.23
MISC. UPDATE	SH	02.26.24
2026 FBC CODE UPDATE	SH	07.30.26

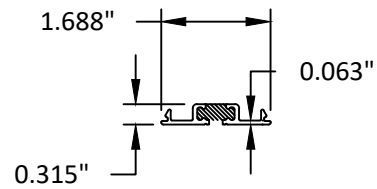
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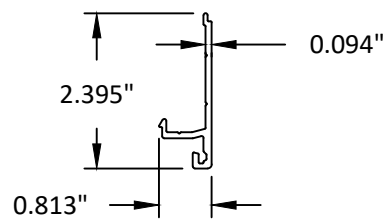
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DATE:	9.01.17
DWG. BY:	FM
CHK. BY:	HFN
SCALE:	NTS
DWG. #:	YKK247
SHEET:	19
REV.	C

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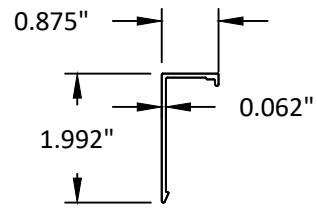
60 THROUGH FRAME FILLER PLATE
MINIMUM 3" LENGTH



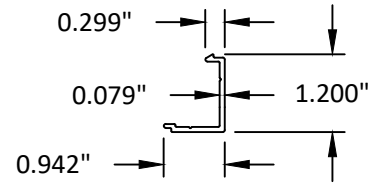
63 ANCHOR CLIP



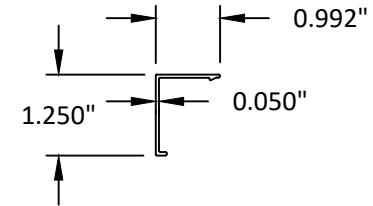
64 ANCHOR CLIP COVER



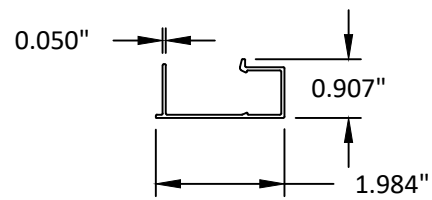
65 1 1/4" X 1" CLIP
CONTINUOUS



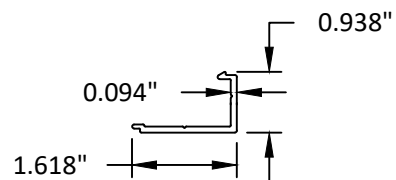
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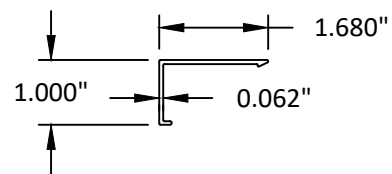
67 STRAP ANCHOR COVER



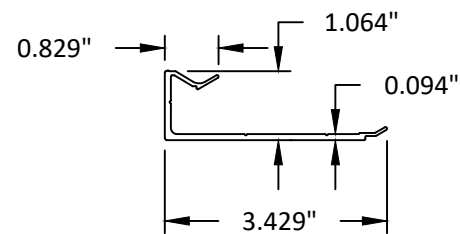
68 1" X 1 11/16" CLIP
CONTINUOUS



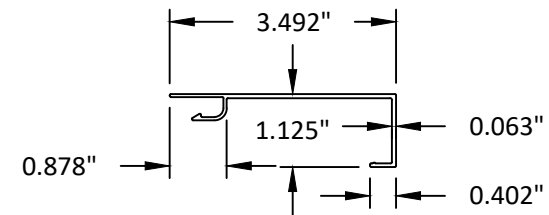
69 1" X 1 11/16" COVER



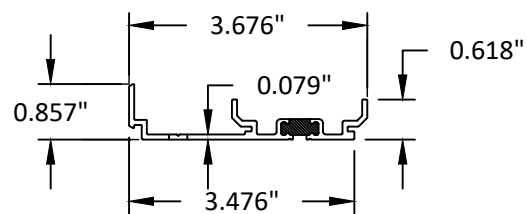
70 1 1/8" X 3 1/2" CLIP



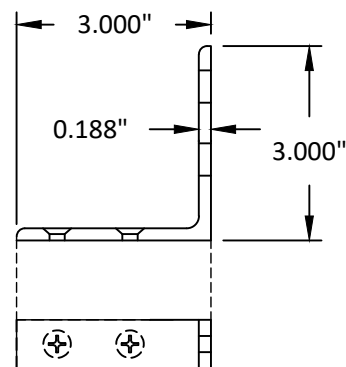
71 1 1/8" X 3 1/2" COVER



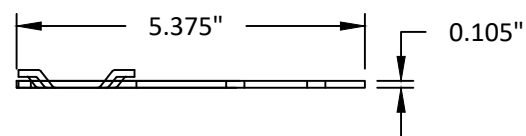
72 STRAP ANCHOR
MINIMUM 4 1/2" LENGTH



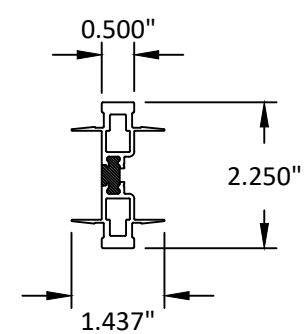
73 MULLION CLIP



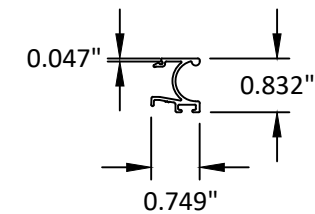
98 TWIST ANCHOR



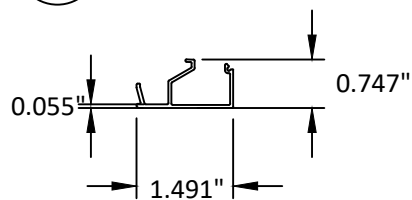
99 "I" MULLION



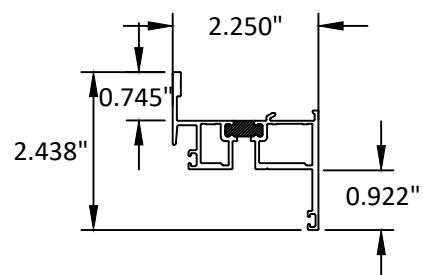
100 OUTSWING VENT GLASS STOP



101 VENT GLASS STOP



102 VENT INSWING



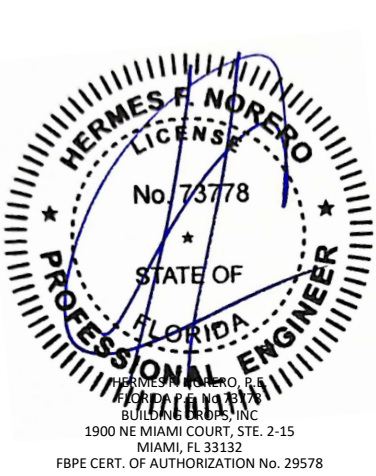
YKK AP America Inc.
101 MARIETTA STREET NW, SUITE 2100
ATLANTA, GA 30303
PH: (478)277-1955 FAX: (678)838-6001

TITLE: YOW 225 TU THERMAL ALUMINUM CASEMENT OUTSWING / INSWING WINDOW (NON-HVHZ) (NON-IMPACT) COMPONENTS 2

PREPARED BY: BUILDING DROPS, INC.
1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
PH: (954)399-8478
FAX: (954)744-4738
WEB: www.buildingdrops.com

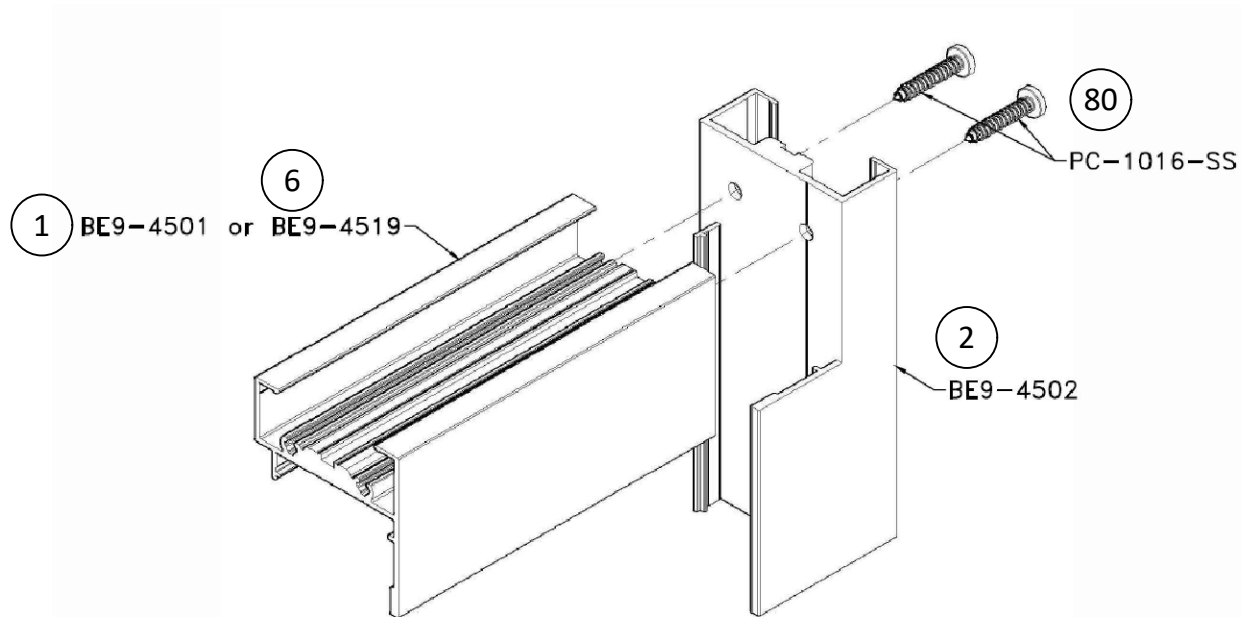
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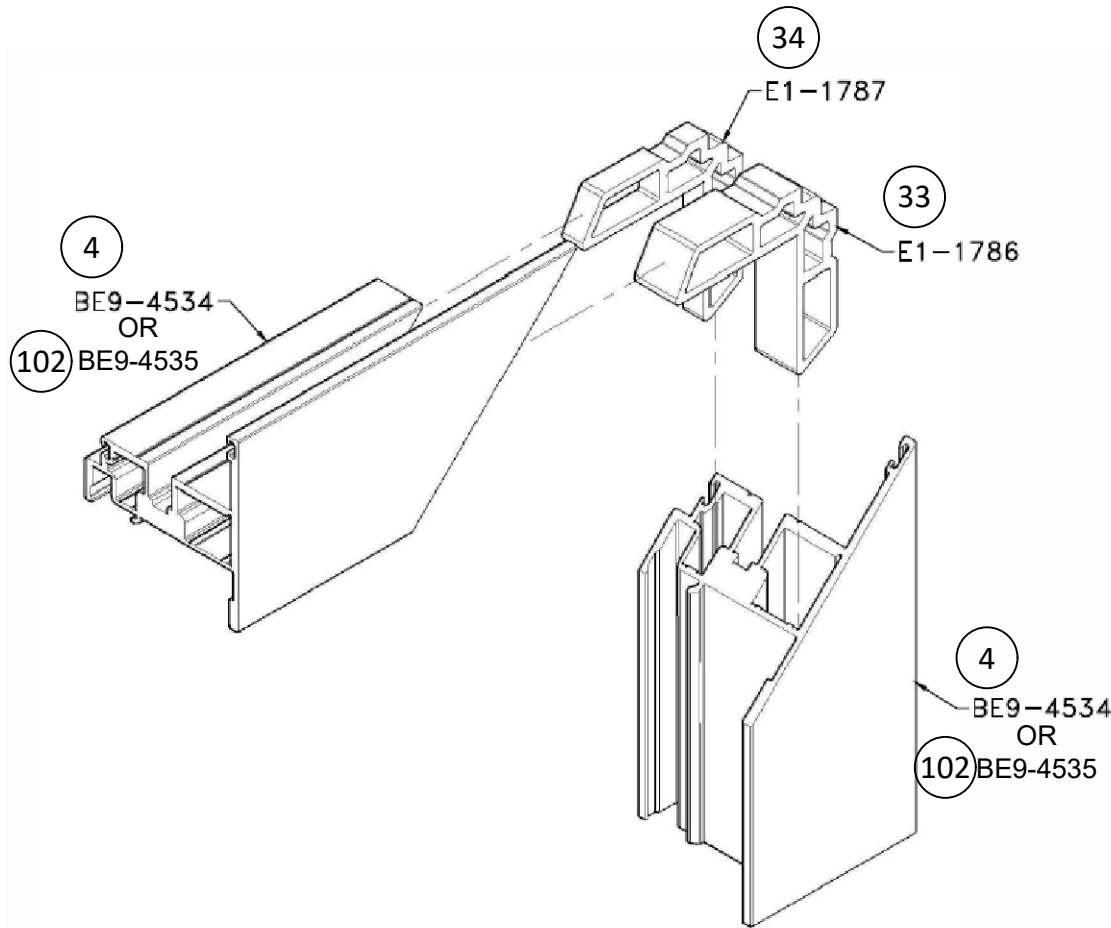


FL #:	FL16312
DATE:	9.01.17
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CHK. BY:	HFN
SCALE:	NTS
DWG. #:	YKK247
SHEET:	20
REV.	C

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FRAME CORNER CONSTRUCTION
TYPICAL



VENT CORNER CONSTRUCTION



Quality
inspires™

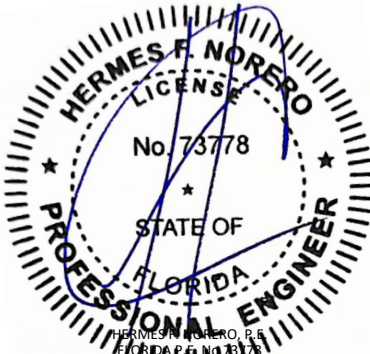
YKK AP America Inc.
101 MARIETTA STREET NW, SUITE 2100
ATLANTA, GA 30303
PH: (478)277-1955 FAX: (678)838-6001

TITLE:
YOW 225 TU THERMAL ALUMINUM
CASEMENT OUTSWING / INSWING WINDOW
(NON-HVHZ) (NON-IMPACT)
CORNER CONSTRUCTION

PREPARED BY:
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1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
PH: (954)399-8478
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HERMES F. NORERO
LICENSE
No. 73778
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
HERMES F. NORERO, P.E.
BUILDING DROPS, INC.
1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
FBPE CERT. OF AUTHORIZATION No. 29578

FL #:
FL16312

DATE: 9.01.17

DWG. BY: FM
CHK. BY: HFN

SCALE: NTS

DWG. #: YKK247

SHEET: 21
REV. C

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BILL OF MATERIALS			
ITEM	PART No.	DESCRIPTION	MATERIAL
1	BE9-4501	FRAME HEAD AND SILL	6063-T5
2	EB9-4502	FRAME JAMB	6063-T5
3	BE9-4509	MULLION	6063-T5
4	BE9-4534	VENT - OUTSWING	6063-T5
5	BE9-4560	MULLION	6063-T5
6	BE9-4519	FRAME HEAD/SILL - HEAVY DUTY	6063-T5
7	BE9-4583	SILL FLASHING	6063-T5
8	BE9-4577	RECEPTOR	6063-T5
9	E9-4231	PRESSURE BAR	6063-T5
10	E9-4513	ADAPTOR	6063-T5
11	E2-0625	AIRTIGHT GASKET	EPDM
12	E9-4507	FIXED GLASS STOP	6063-T5
13	E9-0672	WEDGE GASKET	EPDM
14	E9-5218	VENT GLASS STOP	6063-T5
15	E9-4586	3" SILL TRIM	6063-T5
16	E9-4559	SILL TRIM BASE	6063-T5
17	E9-4562	STACKING MULLION	6063-T5
18	E9-4578	RECEPTOR STOP	6063-T5
19	E9-4593	LOCK BAR BASE	6063-T5
20	E9-5111	COVER	6063-T5
21	E2-0050	PRESET GASKET	EPDM
22	E1-1504	CAM HANDLE (RH) INSWING	WHITE BRONZE
23	BE9-4512	MEETING STILE INTEGRAL MULLION	6063-T5
24	E1-1505	MULTI POINT LOCK HANDLE	WHITE BRONZE
25	E1-1508	PULL HANDLE	WHITE BRONZE
26	E1-1503	CAM HANDLE (LH) INSWING	WHITE BRONZE
27	E1-1541	CAM HANDLE (RH) OUTSWING	WHITE BRONZE
28	E1-1542	CAM HANDLE (LH) OUTSWING	WHITE BRONZE
29	E1-1714	BUTT HINGE	6063-T5
30	E1-1715	BUTT HINGE - RT	6063-T5
31	E1-1723	L-ANGLE FOR BUTT HINGE	6063-T5
32	4K-14207	12" 4 BAR HINGE	SS
33	E1-1786	CORNER BLOCK	6063-T5
34	E1-1787	CORNER BLOCK	6063-T5
35	E1-1952	KEEPER	STAINLESS STEEL
36	E1-1954	LOCK BAR - BASE	SS/ALUMINUM
37	E1-1955	LOCK BAR - EXTENSION	SS/ALUMINUM
38	E1-1957	12" EGRESS 4 BAR HINGE (OUTSWING ONLY)	304SS
39	E1-1960	4 BAR HINGE BASE	6063-T5
40	E1-1967	HP SNUBBER KIT BASE	6063-T5
41	4K-14208	16" 4 BAR HINGE	SS
42	E2-0051	AT GASKET	SANTOPRENE
43	E2-0133PC	SIDE BLOCK	EPDM
44	E2-0359	PUSH-IN SPACER	SCR 900
45	E2-0367	PUSH-IN SPACER	SCR 900
46	E2-0626PC	SETTING BLOCK	EPDM
47	E2-0623	SETTING BLOCK	EPDM
48	-	-	-
49	E2-0646PC	SETTING BLOCK	EPDM
50	E2-0647PC	SETTING BLOCK	EPDM
51	E2-0670	BACKER TAPE	POLYURETHANE FOAM
52	E2-0682	GASKET - RUBBER	BUTYL

BILL OF MATERIALS			
ITEM	PART No.	DESCRIPTION	MATERIAL
53	E2-0672	WEDGE GASKET	EPDM
54	E1-1519	KEEPER	WHITE BRONZE
55	E3-1132	WEEP COVER	MOLDED POLYAMIDE 6
56	H-1901	HP-SNUBBER KIT	STAINLESS STEEL
57	-	-	-
58	E9-4587	4" SILL TRIM	6063-T5
59	-	-	-
60	BE9-4566	THROUGH FRAME FILLER PLATE	6063-T5
61	E9-4031	1" X 2" CLIP	6063-T5
62	E9-4032	1" X 2" COVER	6063-T5
63	E1-1922	ANCHOR CLIP	6063-T5
64	E9-4035	ANCHOR CLIP COVER	6063-T5
65	E9-4556	1-1/4" X 1" CLIP	6063-T5
66	E9-4557	1-1/4" X 1" COVER	6063-T5
67	E9-8431	STRAP ANCHOR COVER	6063-T5
68	E9-8537	1" X 1-11/16" CLIP	6063-T5
69	E9-8538	1" X 1-11/16" COVER	6063-T5
70	E9-8562	1-1/8" X 3 1/2" CLIP	6063-T5
71	E9-8563	1-1/8" X 3-1/2" COVER	6063-T5
72	E9-4529	STRAP ANCHOR MIN. LENGTH: 4-1/2"	6063-T5
73	E1-1965	MULLION CLIP AT 3/4"	6063-T5
74	E2-0768	JAMB BLOCK	-
75	E1-2003	END DAM	-
76	FF-0808-SS	#8 X 1/2" FH SMS SS F	300 SS
77	FF-1006-SS	-	-
78	FF-1008-SS	#10 X 24 FH MS SS F	300 SS
79	FF-1012-SS	#10-24 X-3/4" FH MS SS F	300 SS
80	FF-1016-SS	#10-24 X 1" FH MS SS F	300 SS
81	FM-1006-SS	#10-24 X 3/8" FH MS SS F	300 SS
82	HD-2516-W3	1/4-20 X 1" HWHS SS	300 SS
83	PC-0808	#8 X 1/2" PH SMS SS AB	300 SS
84	PC-1008-SS	#10 X 1/2" PH SMS SS AB	300 SS
85	PC-1016-SS	#10 X 1" PH SMS SS AB	300 SS
86	PC-1208-SS	#12 X 1/2" PH SMS SS AB	300 SS
87	PC-1006-SS	#10-24 X 3/8" FM MS SS F	300 SS
88	PF-1008-SS	#10 X 1/2" PH SMS SS F	300 SS
89	PM-1007-SS	#10-24 X 7/16" PH MS SS	300 SS
90	PS-0808-SS	#8 X 1/2" PH SMS SS SELF DRILLING	410 SS
91	PS-1016-SS	#10 X 1" PH SMS SS SELF DRILLING	410 SS
92	-	-	-
93	-	9/32" Ø WEEP HOLE	-
94	-	1-1/16" X 1/4" WEEP SLOT	-
95	-	-	-
96	-	#10-16 X 3/4" SSMS (PH OR FH)	-
97	-	DOW 995 SILICONE ADHESIVE	SILICONE
98	E1-1970	TWIST ANCHOR	GALVANIZED STEEL
99	BE9-4579	"I" MULLION	6063-T5
100	E9-5219	OUTSWING VENT GLASS STOP	6063-T5
101	E9-4521	VENT GLASS STOP	
102	BE9-4535	VENT - INSWING	6063-T5

BILL OF MATERIALS			
ITEM	PART No.	DESCRIPTION	MATERIAL
103	H-1906	EXTENDED HANDLE - LH	ZAMACK / STEEL
104	H-1907	EXTENDED HANDLE - RH	ZAMACK / STEEL
105	E1-1982	TRACK	STAINLESS STEEL
106	E1-1989	SINGLE ARM OPERATOR LH	ZAMACK/STEEL
107	E1-1990	SINGLE ARM OPERATOR RH	ZAMACK/STEEL
108	E1-1983	LARGE HANDLE CRANK	ZAMACK
109	E1-1713	ROLLER GUIDE	6063-T5
110	K 10639	GUIDE ROLLER	STAINLESS/NYLON
111	E1-1966	STANDARD MPL HANDLE	ZAMACK /STEEL
112	E1-1994	EXTENDED MPL HANDLE	ZAMACK / STEEL
113	4K-18584	KEEPER	PLATED STEEL
114	E1-1966	STANDARD MULTI LOCK HANDLE	DIE CAST / STEEL
115	E1-1994	EXTENDED MULTI LOCK HANDLE	DIE CAST / STEEL
116	E1-2001	LOCK BAR	STAINLESS/ALUM.
117	E1-1993	KEEPER BASE	6063-T5
118	E1-1980	BACKER PLATE	STAINLESS STEEL
119	E1-1979	HANDLE GASKET	RUBBER/BUTYL
120	E1-1906	LIMIT BASE	6063-T5
121	E1-1904	LIMIT DEVICE	STAINLESS STEEL
122	E1-1979	HANDLE GASKET	BUTYL
123	E1-1980	BACKER PLATE	STAINLESS STEEL

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TITLE:
YOW 225 TU THERMAL ALUMINUM
CASEMENT OUTSWING / INSWING WINDOW
(NON-HVHZ) (NON-IMPACT)

BILL OF MATERIALS

PREPARED BY:
BUILDING DROPS, INC.
1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
PH: (954)399-8478
FAX: (954)744-4738
WEB: www.buildingdrops.com

BD

BUILDING DROPS

REMARKS	BY	DATE
2023 FBC CODE UPDATE	MS	05.05.23
MISC. UPDATE	SH	02.26.24
2026 FBC CODE UPDATE	SH	07.30.26

THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.

HERMES F. NORERO

LICENSE

No. 73778

STATE OF FLORIDA

PROFESSIONAL ENGINEER

HERMES F. NORERO, P.E.

BUILDING DROPS, INC.

1900 NE MIAMI COURT, STE. 2-15
MIAMI, FL 33132
FBPE CERT. OF AUTHORIZATION No. 29578

FL #:

FL16312

DATE:

9.01.17

DWG. BY:

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CHK. BY:

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SCALE:

NTS

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