

YKK AP AMERICA

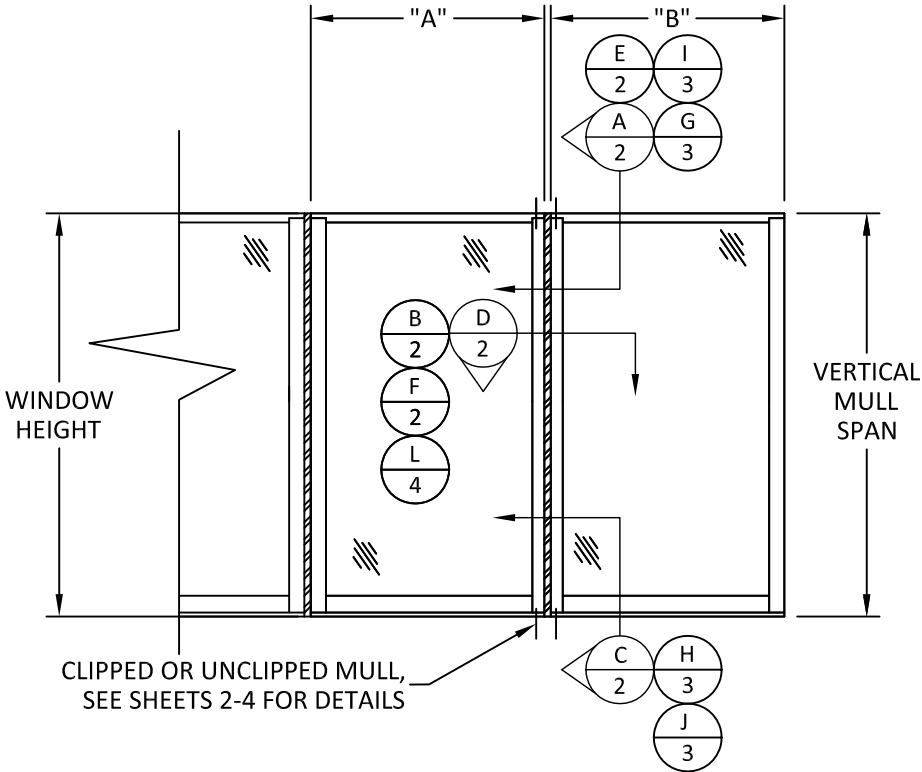
YOW-225H/YOW-225TU SERIES WINDOWS STACKING MULLIONS - 4427

INSTALLATION NOTES:

1. THE NUMBER OF INSTALLATION ANCHORS DEPICTED IS THE MINIMUM NUMBER OF ANCHORS TO BE USED FOR PRODUCT INSTALLATION.
2. INSTALL INDIVIDUAL ANCHORS WITHIN A TOLERANCE OF +/- 1/2 INCH OF THE DEPICTED LOCATION AS SPECIFIED. TOLERANCES ARE NOT CONSIDERED CUMULATIVE FROM ONE LOCATION TO THE NEXT.
3. FOR MULLION CLIP: USE TWO (2) #12 WOOD SCREWS, PER CLIP, OF SUFFICIENT LENGTH TO ACHIEVE MINIMUM EMBEDMENT OF 1 1/2" INTO WOOD FRAMING. (SEE INSTALLATION DETAILS ON SHEET 2).
4. FOR MULLION CLIP: USE TWO (2) 1/4" ITW TAPCONS PER MULLION END, ONE (1) PER CLIP, OF SUFFICIENT LENGTH TO ACHIEVE MINIMUM EMBEDMENT OF 1 1/2" INTO CONCRETE OR MASONRY. (SEE INSTALLATION DETAILS ON SHEET 2).
5. FOR MULLION CLIP: USE TWO (2) 1/4"-20 SAE GR. 5 SELF-DRILLING OR SELF-TAPPING SCREWS, PER CLIP, OF SUFFICIENT LENGTH TO ACHIEVE A MINIMUM 3 THREADS PENETRATION BEYOND METAL SUBSTRATE. (SEE INSTALLATION DETAILS ON SHEET 2).
4. FOR UNCLIPPED MULLIONS: USE FOUR (4) #12 WOOD SCREWS, PER MULLION END, OF SUFFICIENT LENGTH TO ACHIEVE MINIMUM EMBEDMENT OF 1 1/2" INTO WOOD FRAMING. (SEE INSTALLATION DETAILS ON SHEET 3).
5. FOR UNCLIPPED MULLIONS: USE FOUR (4) 1/4" ITW TAPCONS, PER MULLION END, OF SUFFICIENT LENGTH TO ACHIEVE MINIMUM EMBEDMENT OF 1 1/2" INTO CONCRETE OR MASONRY (SEE INSTALLATION DETAILS ON SHEET 3).
6. FOR UNCLIPPED MULLIONS: USE FOUR (4) 1/4"-20 SAE GR. 5 SELF-DRILLING OR SELF-TAPPING SCREWS, PER MULLION END, OF SUFFICIENT LENGTH TO ACHIEVE A MINIMUM 3 THREADS PENETRATION BEYOND METAL SUBSTRATE. (SEE INSTALLATION DETAILS ON SHEET 3).
7. MINIMUM EDGE DISTANCES ARE BASED ON 3/4" FOR #12 WOOD SCREWS, 2-1/2" FOR 1/4" TAPCONS, & 5/8" FOR 1/4"-20 GR. 5 SELF-TAPPING OR SELF-DRILLING SCREWS.
8. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDE WALL FINISHES INCLUDING BUT NOT LIMITED TO STUCCO, FOAM, BRICK, VENEER, AND SIDING.
9. INSTALLATION ANCHOR CAPACITIES FOR PRODUCTS HEREIN ARE BASED ON SUBSTRATE MATERIALS WITH THE FOLLOWING PROPERTIES:
 - A. WOOD - MINIMUM SPECIFIC GRAVITY OF 0.55.
 - B. CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI.
 - C. CMU - SHALL CONFORM TO MIN. REQUIREMENTS OF ASTM C90
 - D. STEEL - MINIMUM YIELD STRENGTH OF 33 KSI. MINIMUM 20 GA. (0.0359") WALL THICKNESS.
 - E. ALUMINUM - ALLOY SHALL BE 6063-T5 OR EQUIVALENT. MINIMUM (0.090") WALL THICKNESS.

GENERAL NOTES:

1. THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH THE CURRENT EDITION FBC, SECTION 1709.8 INCLUDING HVHZ, AND HAS BEEN TESTED & EVALUATED IN ACCORDANCE WITH:
 - TAS 201-94
 - TAS 202-94
 - TAS 203-94
2. APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED ON THESE PRODUCTS IN WIND BORNE DEBRIS REGIONS ZONE 4 OR LESS SUCH THAT ADJOINING WINDOWS ARE EQUALLY IMPACT RATED.
3. 2X WOOD BUCKS AND STEEL STUDS TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE AND IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
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 IN NON-HVHZ AREAS. IN HVHZ AREAS, A ONE-TIME NOA OR APPROVAL FROM THE AUTHORITY HAVING JURISDICTION (AHJ) MAY BE REQUIRED.
5. THIS MULLION IS ONLY VALID WHEN USED IN CONJUNCTION WITH APPLICABLE YKK AP AMERICA PRODUCTS. QUALIFIED CONFIGURATIONS INCLUDE FIXED-FIXED, FIXED-OPERABLE, & OPERABLE-OPERABLE CONFIGURATIONS OF CASEMENT, PROJECT OUT, AND FIXED WINDOW PRODUCTS.
6. ALL WINDOWS USED WITH THIS MULLION SHALL BE QUALIFIED UNDER SEPARATE APPROVAL. THE LESSER DESIGN PRESSURE RATING OF THE WINDOW OR THE MULLION OF INSTALLATION SHALL GOVERN THE OVERALL DESIGN PRESSURE OF THE ASSEMBLY.
7. MULLION MATERIAL: 6063-T5 ALUMINUM.
8. CLIP MATERIAL: 6063-T5 ALUMINUM.
9. IN ACCORDANCE WITH THE CURRENT EDITION FBC , DISSIMILAR METALS INCLUDING FASTENERS THAT MAY COME INTO CONTACT WITH ALUMINUM UNIT FRAMING SHALL BE PROTECTED.



VERTICAL MULLION

SEE GEN. NOTE 5 FOR QUALIFIED CONFIGURATIONS

TABLE OF CONTENTS		
SHEET	REVISION	SHEET DESCRIPTION
1	B	GENERAL NOTES & ELEVATION
2	B	CLIPPED MULL INSTALLATION DETAILS
3	B	UNCLIPPED MULL INSTALLATION DETAILS
4	B	4427 UNCLIPPED MULL DP CHART & INSTALLATION DETAILS
5	B	4427 CLIPPED MULL DP CHART, COMPONENTS, & B.OM.
6	B	4427 MULL ASSMEBLY ISO VIEW



YKK AP AMERICA

1229 HWY 441 BYPASS
DUBLIN, GEORGIA 31021
PH: (478)277-1955 FAX: (678)838-6001

TITLE:
SERIES 4562 STACKING MULLIONS

GENERAL NOTES AND ELEVATION

PREPARED BY:

BUILDING DROPS, INC.

398 E. DANIA BEACH BLVD., STE. 338
DANIA BEACH, FL 33004

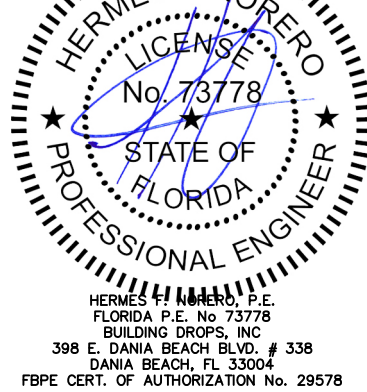
PH: (954)399-8478
FAX: (954)744-4738
WEB: www.buildingdrops.com



REMARKS	BY	DATE
A - 5TH EDITION FBC UPDATE	SM	02.23.15
B - 6TH EDITION FBC UPDATE	FM	08.22.17

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Digitally signed by Hermes F. Norero, P.E.
Reason: I am approving this document
Date: 2017.10.05 09:36:31 -0400

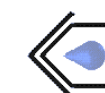


FL #:	FL15710
DATE:	8.22.17
DWG. BY:	FM
CHK. BY:	HFN
SCALE:	NTS
DWG. #:	YKK229
SHEET:	1



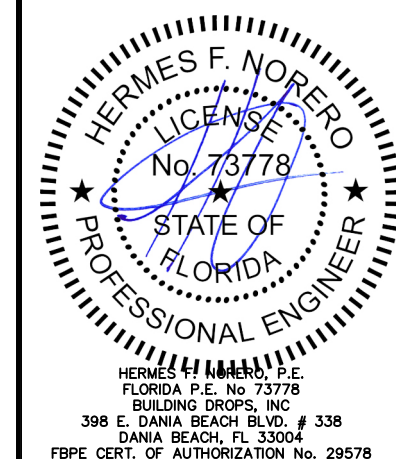
CLIPPED MULL INSTALLATION DETAILS

PREPARED BY:



REMARKS	BY	DATE
B - 6TH EDITION FBC UPDATE	FM	08.22.17

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SCALE: NTS

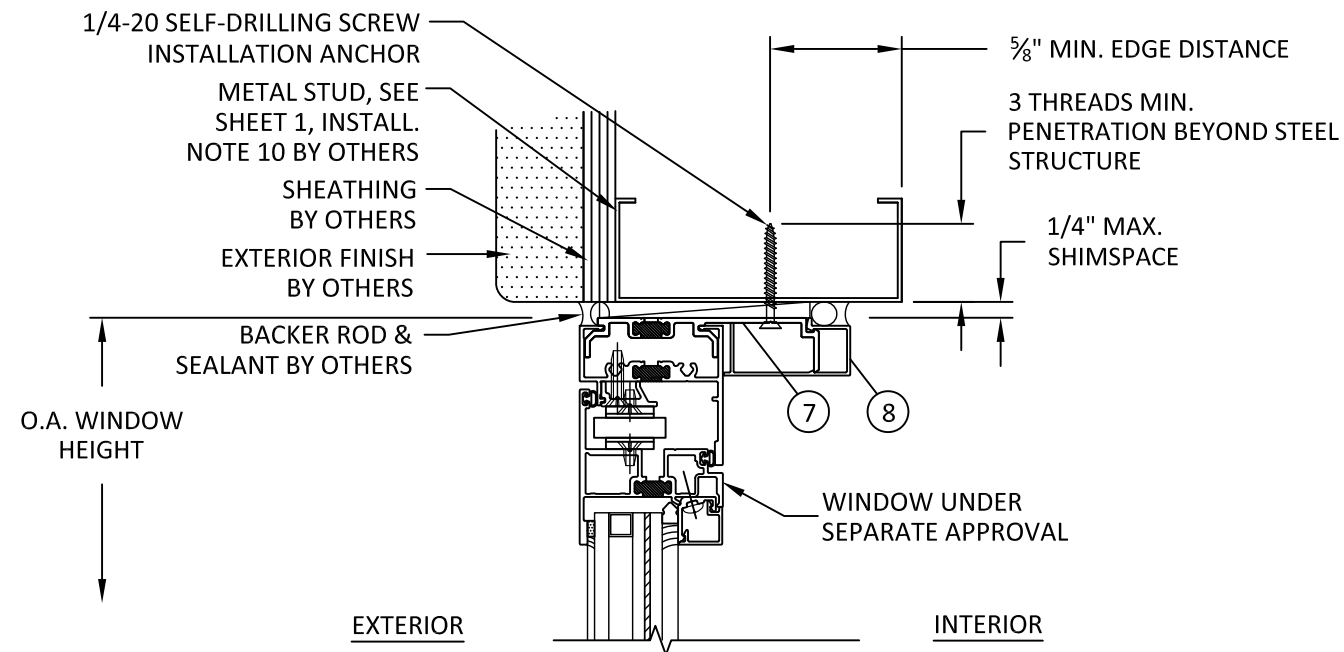
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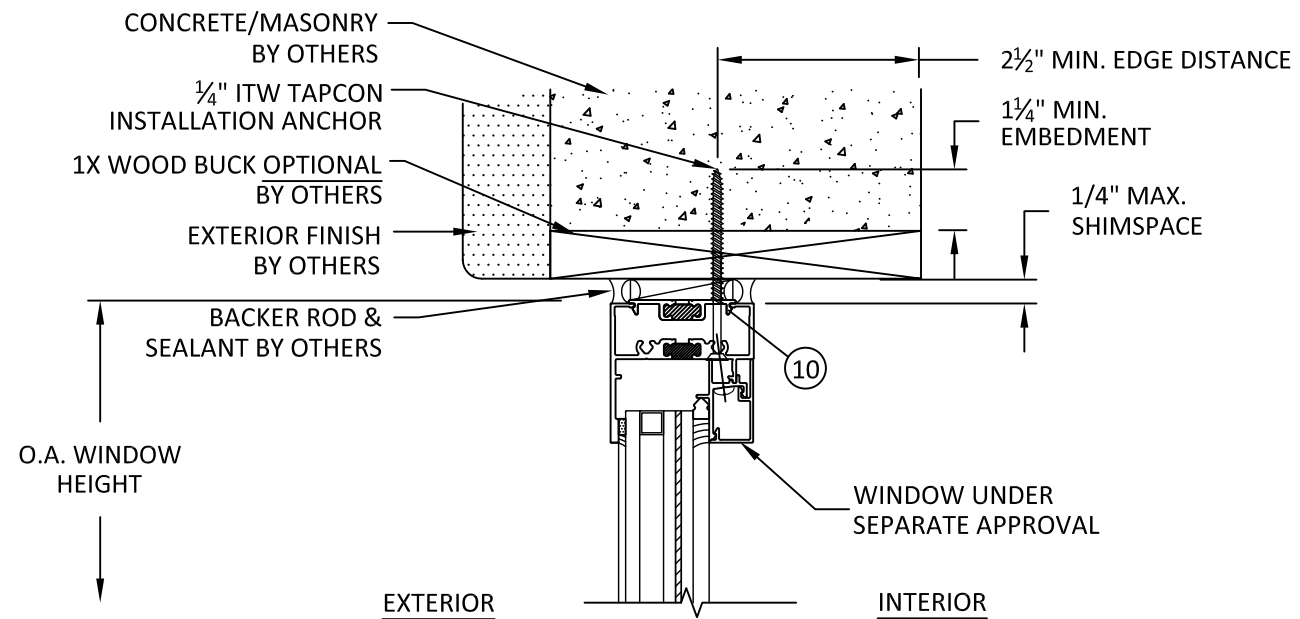
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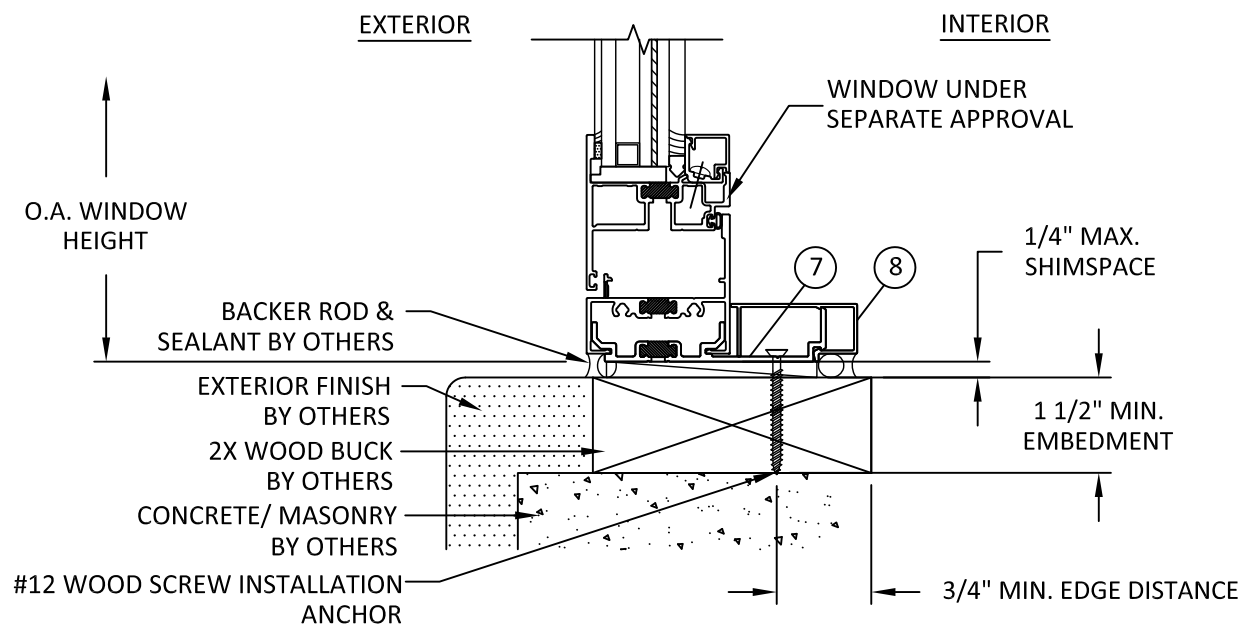
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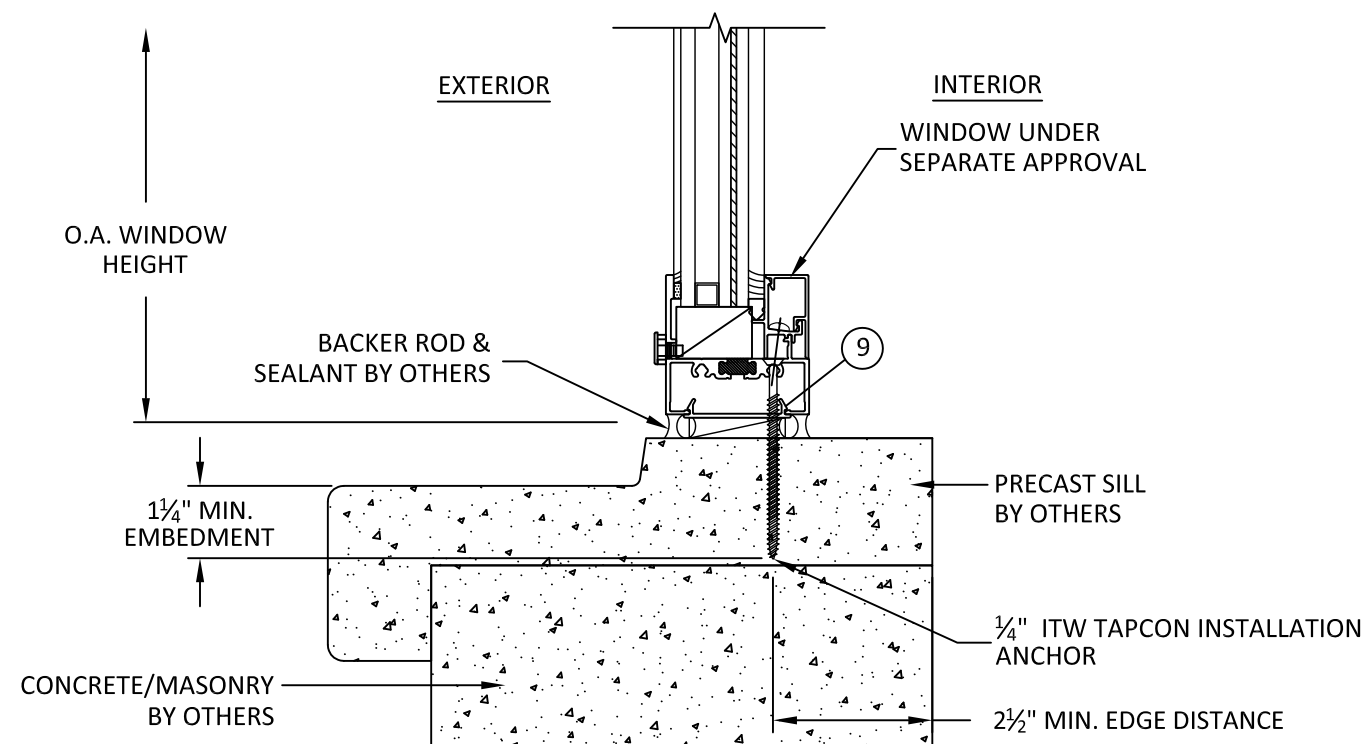
G
3 **VERTICAL SECTION**
HEAD - METAL STUD
UNCLIPPED MULLION (ALT. ANCHOR STRAP)



I
3 **VERTICAL SECTION**
HEAD - 1X WOOD BUCK
UNCLIPPED MULLION



H
3 **VERTICAL SECTION**
SILL - 2X WOOD BUCK
UNCLIPPED MULLION (ALT. ANCHOR STRAP)



J
3 **VERTICAL SECTION**
SILL - PRECAST SILL
UNCLIPPED MULLION

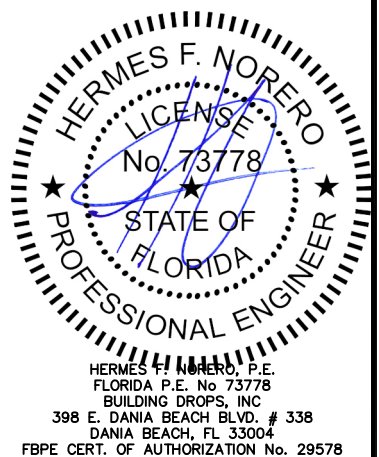


YKK AP AMERICA
1229 HWY 441 BYPASS
DUBLIN, GEORGIA 31021
PH: (478)277-1955 FAX: (678)838-6001

TITLE: SERIES 4562 STACKING MULLIONS
UNCLIPPED MULL
INSTALLATION DETAILS
PREPARED BY: BUILDING DROPS, INC.
398 E. DANIA BEACH BLVD., STE. 338
DANIA BEACH, FL 33004
PH: (954)399-8478
FAX: (954)744-4738
WEB: www.buildingdrops.com

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B - 6TH EDITION FBC UPDATE	FM	08.22.17

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DWG. #: **YKK229**
SHEET:

3



YKK AP AMERICA

1229 HWY 441 BYPASS
DUBLIN, GEORGIA 31021

PH: (478)277-1955 FAX: (678)838-6001

TITLE:
SERIES 4562 STACKING MULLIONS
4427 UNCLIPPED MULL DP CHART
& INSTALLATION DETAILS

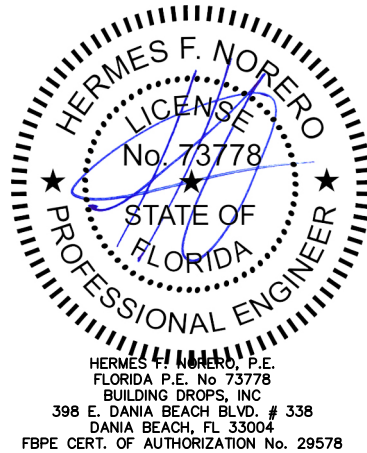
PREPARED BY:
BUILDING DROPS, INC.

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SHEET:
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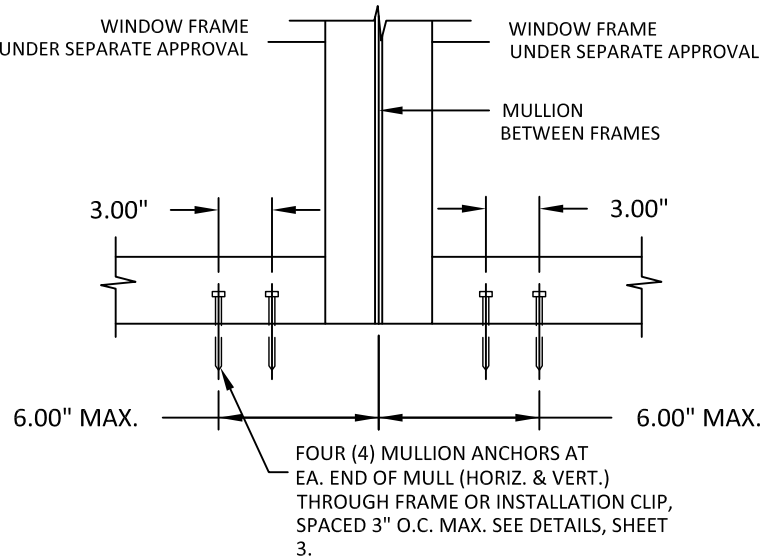
4427 UNCLIPPED MULL DP CHART

Maximum design pressure capacity (HVHZ-Impact)
YOW-225H/YOW-225TU Series Windows: Stacking Mullions - 4427
Design pressures are limited either by mullion or anchor screws

Span (in)	Tributary Width (in)							
	12.0	18.0	24.0	36.0	42.0	48.0	56.0	60.0
35.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0	150.0
48.0	150.0	150.0	150.0	133.7	125.1	122.3	122.3	122.3
54.0	150.0	150.0	137.9	100.8	92.2	87.4	85.9	85.9
62.0	150.0	134.0	102.8	73.4	65.9	61.0	57.5	56.8

NOTES FOR UNCLIPPED MULLION INSTALLATIONS:

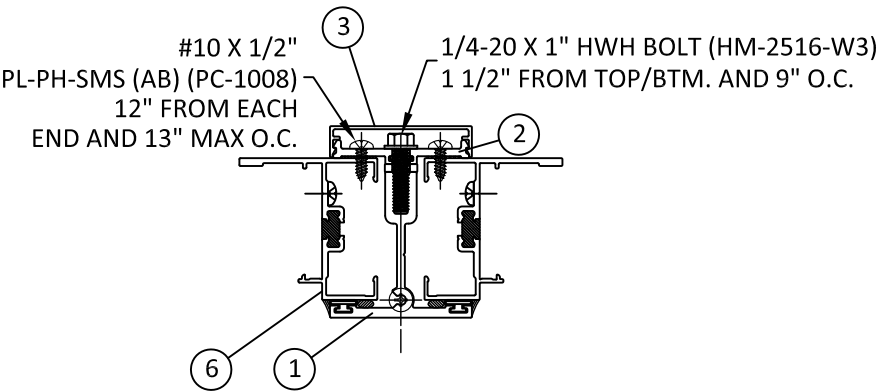
- THE DESIGN PRESSURES IN THIS CHART ARE FOR THE MULLIONS LISTED ABOVE WHEN INSTALLED WITHOUT A MULLION CLIP.
- DESIGN PRESSURES HAVE BEEN DETERMINED IN ACCORDANCE WITH FBC SECTION 1709.8
- READ WINDOW WIDTH AND MULL SPAN IN INCHES. DESIGN PRESSURE VALUES ON THIS CHART ARE POSITIVE AND NEGATIVE POUNDS PER SQUARE FOOT (PSF).
- TRIBUTARY WIDTH IS DETERMINED BY THE FOLLOWING (REFER TO ELEVATION, SHEET 1):
4.1. $TRIBUTARY\ WIDTH = (A+B)/2$
- DESIGN PRESSURE VALUES APPLY TO MULLION WHERE TWO OR MORE WINDOWS ARE LISTED IN A SINGLE OPENING. LESSER DESIGN PRESSURE OF INDIVIDUAL WINDOW OR MULLION OF INSTALLATION SHALL GOVERN.



K
4

FRONT VIEW

MULLION ANCHOR DETAIL
UNCLIPPED MULLION



L
4

HORIZONTAL VIEW

YOW-225H/TU MULL ASSEMBLY TYP.
UNCLIPPED MULLION

4427 CLIPPED MULL DP CHART

Maximum design pressure capacity (HVHZ-Impact)
YOW-225H/YOW-225TU Series Windows: Stacking Mullions - 4427
Design pressures are limited either by mullion or anchor screws or anchor clip capacity

Span (in)	Tributary Width (in)							
	12.0	18.0	24.0	36.0	42.0	48.0	56.0	60.0
35.0	150.0	148.9	126.3	113.8	113.8	113.8	113.8	113.8
48.0	138.3	99.3	80.7	64.5	61.5	60.5	60.5	60.5
54.0	121.0	86.1	69.2	53.8	50.3	48.4	47.8	47.8
62.0	103.7	73.1	58.1	44.0	40.5	38.2	36.6	36.3

NOTES FOR CLIPPED MULLION INSTALLATIONS:

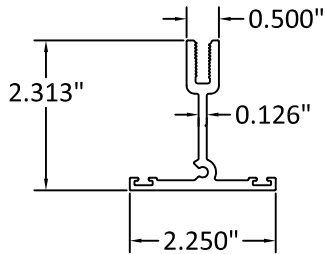
1. THE DESIGN PRESSURES IN THIS CHART ARE FOR THE MULLIONS LISTED ABOVE WHEN USED WITH THE APPLICABLE MULLION CLIP.
2. DESIGN PRESSURES HAVE BEEN DETERMINED IN ACCORDANCE WITH FBC SECTION 1709.8
3. READ WINDOW WIDTH AND MULL SPAN IN INCHES. DESIGN PRESSURE VALUES ON THIS CHART ARE POSITIVE AND NEGATIVE POUNDS PER SQUARE FOOT (PSF).
4. TRIBUTARY WIDTH IS DETERMINED BY THE FOLLOWING (REFER TO ELEVATION, SHEET 1):

4.1. TRIBUTARY WIDTH = (A+B)/2
5. DESIGN PRESSURE VALUES APPLY TO MULLION WHERE TWO OR MORE WINDOWS ARE LISTED IN A SINGLE OPENING. LESSER DESIGN PRESSURE OF INDIVIDUAL WINDOW OR MULLION OF INSTALLATION SHALL GOVERN.

BILL OF MATERIALS				
ITEM NO.	PART NO.	DESCRIPTION	MATERIAL	MANUFACTURER
1	E9-4427	MULLION	6063-T5	YKK AP
2	E9-4231	PRESSURE PLATE	6063-T5	YKK AP
3	E9-5111	PRESSURE PLATE COVER	6063-T5	YKK AP
4	BE9-4501	FRAME HEAD/SILL/JAMB	6063-T5	YKK AP
5	E1-1537	MULLION CLIP	6063-T5	YKK AP
6	BE9-4502	FRAME JAMB	6063-T5	YKK AP
7	BE9-4529	STRAP ANCHOR	6063-T5	YKK AP
8	E9-8431	STRAP ANCHOR COVER	6063-T5	YKK AP
9	E3-0038	FRAME ANCHOR CLIP	PVC	YKK AP
10	BE9-4566	FRAME ANCHOR CLIP	6063-T5	YKK AP

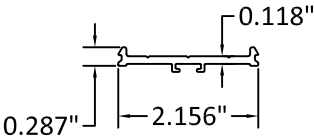
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MULLION
6063-T5



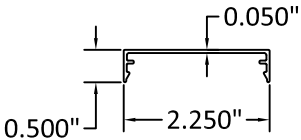
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PRESSURE PLATE
6063-T5



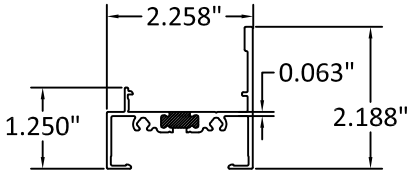
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PRESSURE PLATE COVER
6063-T5



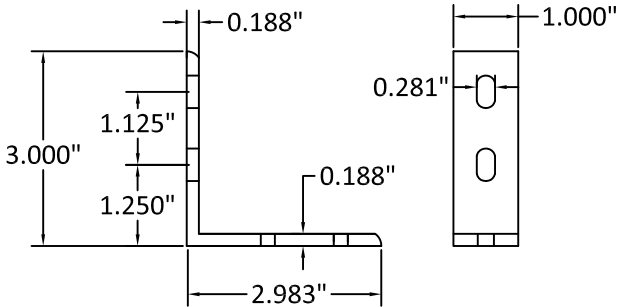
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FRAME HEAD/SILL/JAMB
6063-T5



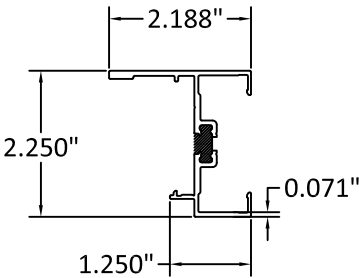
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MULLION CLIP
6063-T5



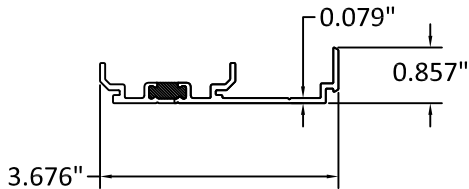
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FRAME JAMB
6063-T5



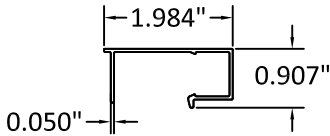
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STRAP ANCHOR
6063-T5



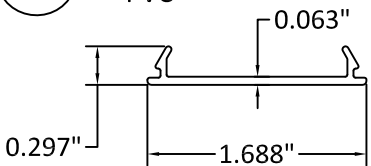
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STRAP ANCHOR COVER
6063-T5



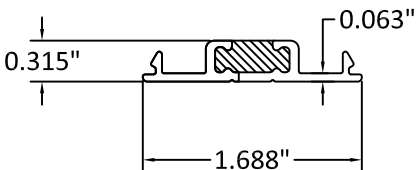
9

FRAME ANCHOR CLIP
PVC



10

FRAME ANCHOR CLIP
6063-T5



YKK AP AMERICA
1229 HWY 441 BYPASS
DUBLIN, GEORGIA 31021
PH: (478)277-1955 FAX: (678)838-6001

TITLE:
SERIES 4562 STACKING MULLIONS

4427 CLIPPED MULL DP CHART,
COMPONENTS, & B.O.M.

PREPARED BY:

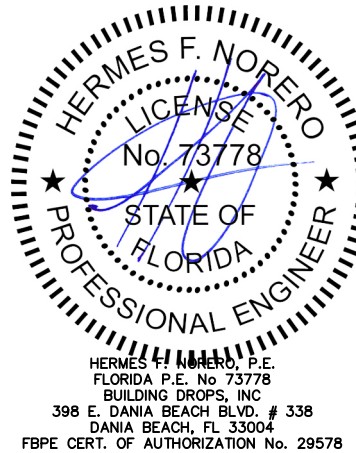
BUILDING DROPS, INC.

398 E. DANIA BEACH BLVD., STE. 338
DANIA BEACH, FL 33004
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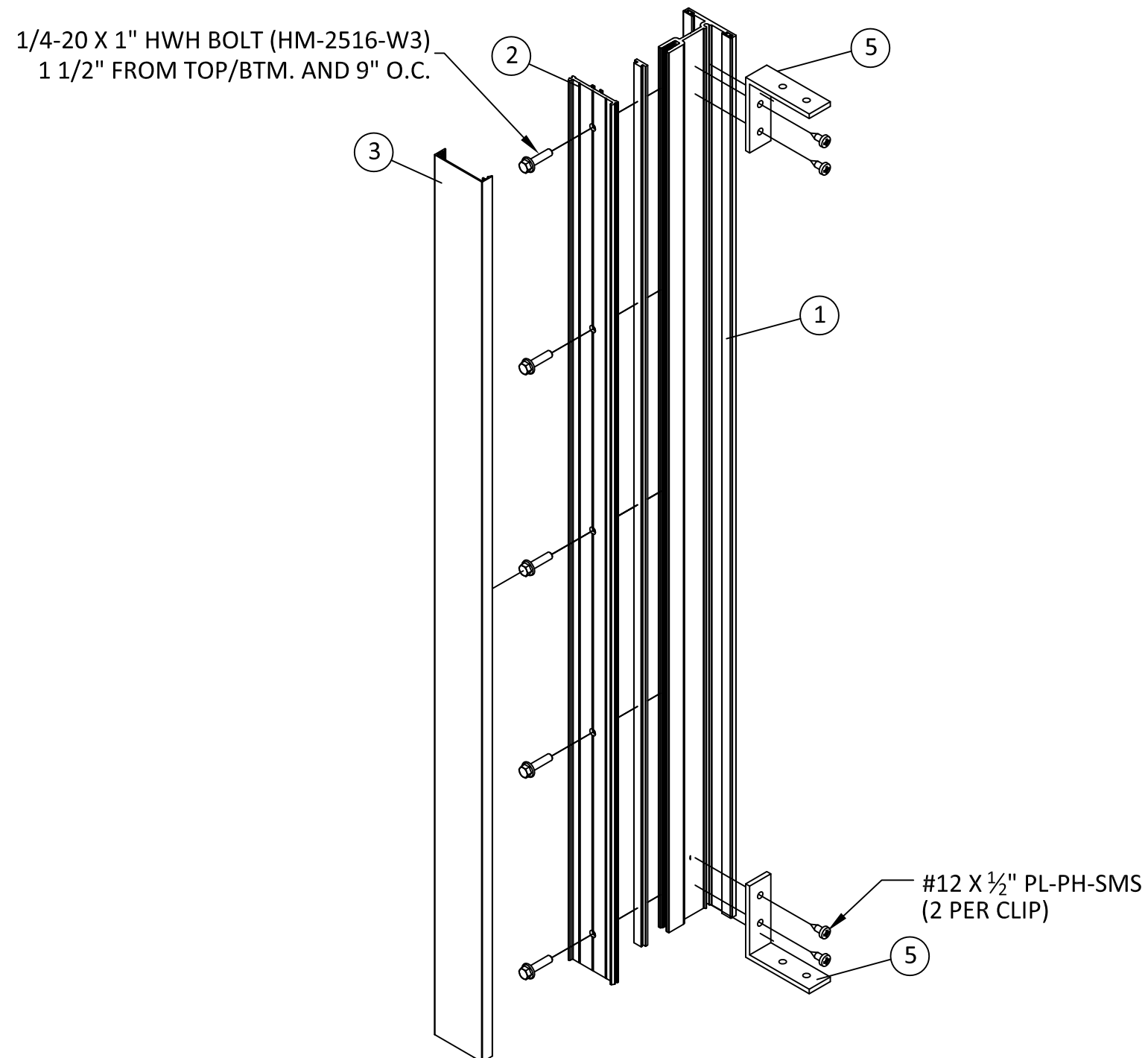
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SHEET:	5

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4427 STACKING MULL ASSEMBLY TYPICAL

NOTE: ITEM# 5 IS NOT REQUIRED FOR
"UNCLIPPED" INSTALLATIONS.



YKK AP AMERICA

1229 HWY 441 BYPASS
DUBLIN, GEORGIA 31021
PH: (478)277-1955 FAX: (678)838-6001

TITLE:
SERIES 4562 STACKING MULLIONS

4427 MULL ASSEMBLY ISO VIEW

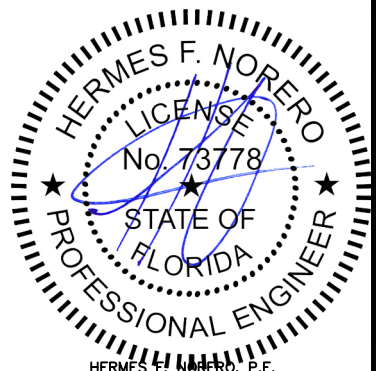
PREPARED BY:
BUILDING DROPS, INC.

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DANIA BEACH, FL 33004
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HERMES F. NORERO, P.E.
FLORIDA P.E. No. 73778
BUILDING DROPS, INC
398 E. DANIA BEACH BLVD. # 338
DANIA BEACH, FL 33004
FBPE CERT. OF AUTHORIZATION No. 29578

FL #:	FL15710
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