

IMPACT HURRICANE SYSTEMS

55 MM ROLL DOWN SHUTTERS

IMPACT RATED (HVHZ)

INSTALLATION NOTES:

- ONE (1) INSTALLATION ANCHOR IS REQUIRED AT EACH ANCHOR LOCATION SHOWN, UNLESS OTHERWISE STATED.
- THE NUMBER OF INSTALLATION ANCHORS DEPICTED IS THE MINIMUM NUMBER OF ANCHORS TO BE USED FOR PRODUCT INSTALLATION.
- 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.
- REFER TO ANCHOR SCHEDULE CHART ON SHEETS 5, 6, 7, 8 & 12 FOR ANCHOR TYPE, SUBSTRATE TYPE, EDGE DISTANCE AND MINIMUM EMBEDMENT.
- MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDE WALL FINISHES, INCLUDING BUT NOT LIMITED TO STUCCO, FOAM, BRICK VENEER, AND SIDING.
- INSTALLATION ANCHORS AND ASSOCIATED HARDWARE MUST BE MADE OF CORROSION RESISTANT MATERIAL OR HAVE A CORROSION RESISTANT COATING.
- 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.
- 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.
- 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 2700 PSI.
 - MASONRY - STRENGTH CONFORMANCE TO ASTM C-90, GRADE N (OR GREATER).
 - STEEL - MINIMUM YIELD STRENGTH OF 33 KSI. MINIMUM 18 GA WALL THICKNESS.
 - ALUMINUM - MINIMUM ALLOY 6063-T5. MINIMUM WALL THICKNESS OF 1/16" (0.0625).

GENERAL NOTES:

- THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH THE CURRENT FLORIDA BUILDING CODE (FBC), INCLUDING HVHZ AND HAS BEEN EVALUATED ACCORDING TO THE FOLLOWING:
 - ASTM E330-02
 - ASTM E1996-14a
 - ASTM E1996-13a
 - TAS 201-94
 - TAS 202-94
 - TAS 203-94
- ADEQUACY OF THE EXISTING STRUCTURAL CONCRETE/MASONRY AND 2X 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.
- 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.
- 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.
- INSTALLATION OF ROLL DOWN MAY EITHER BE INSIDE OR OUTSIDE OF THE TIE BEAM.
- ALL EXTRUSION MATERIAL: 6063-T6 ALUMINUM ALLOY, UNLESS OTHERWISE NOTED.
- OPERATION OF ROLLLUP MECHANISM IS NOT PART OF THIS APPROVAL. CARE SHOULD BE TAKEN WHEN SHUTTER IS IN MOTION ENSURING THAT PERSONAL INJURY OR DAMAGE TO THIS PRODUCT DOES NOT OCCUR.
- FOR DESIGN PRESSURES SEE SHEETS 2. SEE SHEET 11 FOR DESIGN PRESSURE BASED ON MULLIONS.
- HOOD ASSEMBLY IS IMPACT RATED AND CAN BE PLACED INSIDE FRAME OPENING AS AN EXPOSED FEATURE.
- SHUTTER MANUFACTURER LABEL SHALL BE LOCATED IN A READILY VISIBLE LOCATION, PER FBC CHAPTER 17.

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IMPACT HURRICANE
SYSTEMS, INC.
1114 SE 12TH COURT
CAPE CORAL, FL 33390
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TITLE:
55 MM ROLL DOWN SHUTTERS
GENERAL & INSTALLATION NOTES

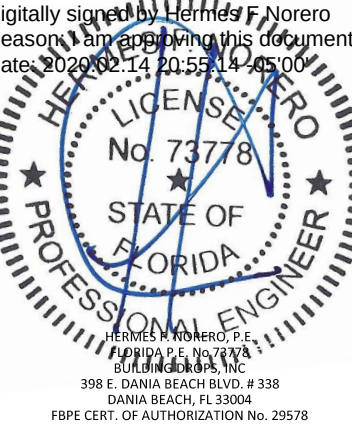
PREPARED BY:
BUILDING DROPS, INC.
398 E. DANIA BEACH BLVD., STE. 338
DANIA BEACH, FL 33004
PH: (954)399-8478
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REMARKS	BY	DATE

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Digitally signed by Hermes F. Norero
Reason: I am approving this document
Date: 2020.02.14 20:55:14 -0500



FL #:
FL31649

DATE: **01.10.2020**

DWG. BY: **YC** CHK. BY: **HFN**

SCALE: **NTS**

DWG. #: **IHS003**

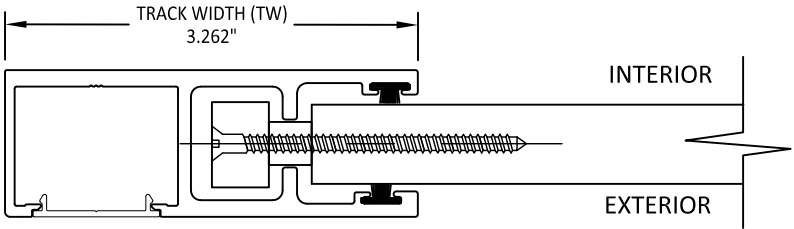
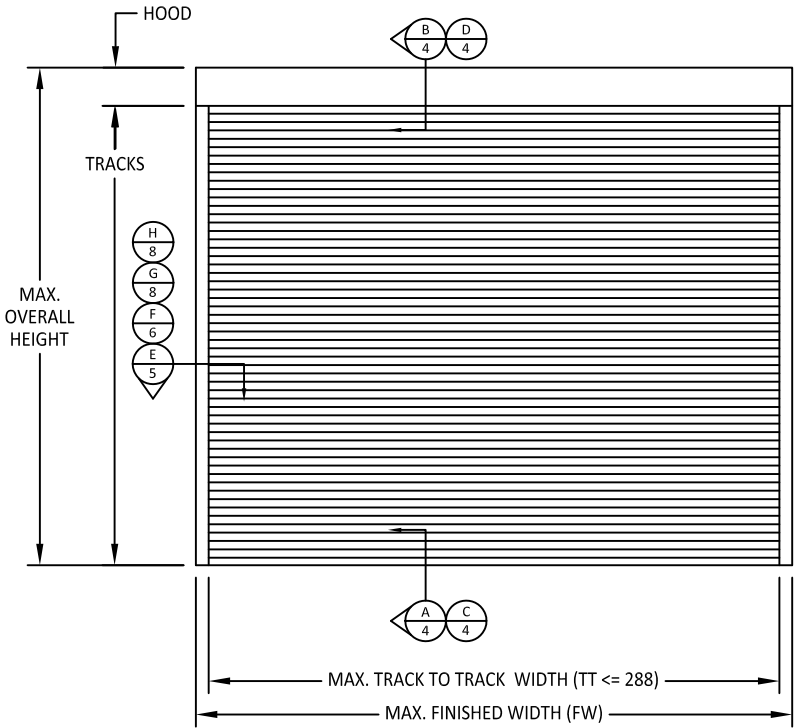
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TABLE 1 - MAX ALLOWABLE DESIGN		
W/ END RETENTION		
TT MAX	POSITIVE	NEGATIVE
288	40	40
264	60	60
240	75	75
216	95	95
204	100	100
192	105	105
180	120	120
168	130	130
144	145	145
132	155	155
120	160	160
108	170	170
96	180	180

NOTES:
1. DESIGN PRESSURES MUST NOT EXCEED 180 PSF FOR END RETENTION SYSTEM.
2. SHUTTER SIZE (TT) MUST NOT EXCEED 288.00".
3.LINEAR INTERPOLATION BETWEEN ABOVE TABLE VALUES ARE ACCEPTABLE

MULTIPLE SHUTTER NOTES:
1. USE TABLE 1 TO VERIFY MAXIMUM ALLOWABLE PRESSURE.
2.USE TABLE 2, 3 & 4 TO SELECT INTERMEDIATE
3. SELECT PROPER MULLION ANCHORAGE.

DESIGN PRESSURE RATING



WITH END RETENTION

TABLE 2: GLASS SEPARATION (GS) INCHES													
LOAD (PSF)	TRACK TO TRACK (IN)												
	96	108	120	132	144	168	180	192	204	216	240	264	288
40	2.56	3.88	3.88	3.88	3.88	3.75	4.25	5.25	5.25	5.25	6.25	8.00	11.25
60	2.97	3.88	4.50	5.00	5.25	6.50	7.00	7.50	8.25	9.00	11.00	-	-
75	2.97	4.25	4.50	5.00	5.25	6.50	7.00	7.50	8.25	9.00	-	-	-
95	3.76	5.00	5.50	6.00	6.50	8.00	8.75	9.50	10.25	11.25	-	-	-
100	3.96	5.25	5.75	6.25	6.75	8.25	9.00	9.75	10.75	-	-	-	-
105	4.16	5.50	6.00	6.50	7.25	8.50	9.50	10.25	-	-	-	-	-
120	4.75	6.25	6.75	7.25	8.00	9.75	10.75	-	-	-	-	-	-
130	5.15	6.50	7.25	8.00	8.75	10.50	-	-	-	-	-	-	-
145	5.74	7.25	8.00	8.75	9.50	-	-	-	-	-	-	-	-
155	6.14	7.75	8.50	9.25	-	-	-	-	-	-	-	-	-
160	6.34	8.00	8.75	-	-	-	-	-	-	-	-	-	-
170	6.74	8.25	-	-	-	-	-	-	-	-	-	-	-
175	6.93	-	-	-	-	-	-	-	-	-	-	-	-
180	8.00	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:
1. MINIMUM GLASS SEPARATION BASED ON MAXIMUM DEFLECTION +1"
2. ANALYSIS IS LIMITED BY DEFLECTION UNDER STRUCTURAL LOADS AS WELL AS DEFLECTION DUE TO LARGE MISSILE IMPACTS
3. APPROPRIATE INSTALLATION METHOD SHALL BE USED TO ACHIEVE THE REQUIRED SEPARATION IN THE ABOVE TABLE

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TITLE:
55 MM ROLL DOWN SHUTTERS
ELEVATION & DESIGN PRESSURE
TABLE

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REMARKS	BY	DATE

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 H. 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 #:
FL31649

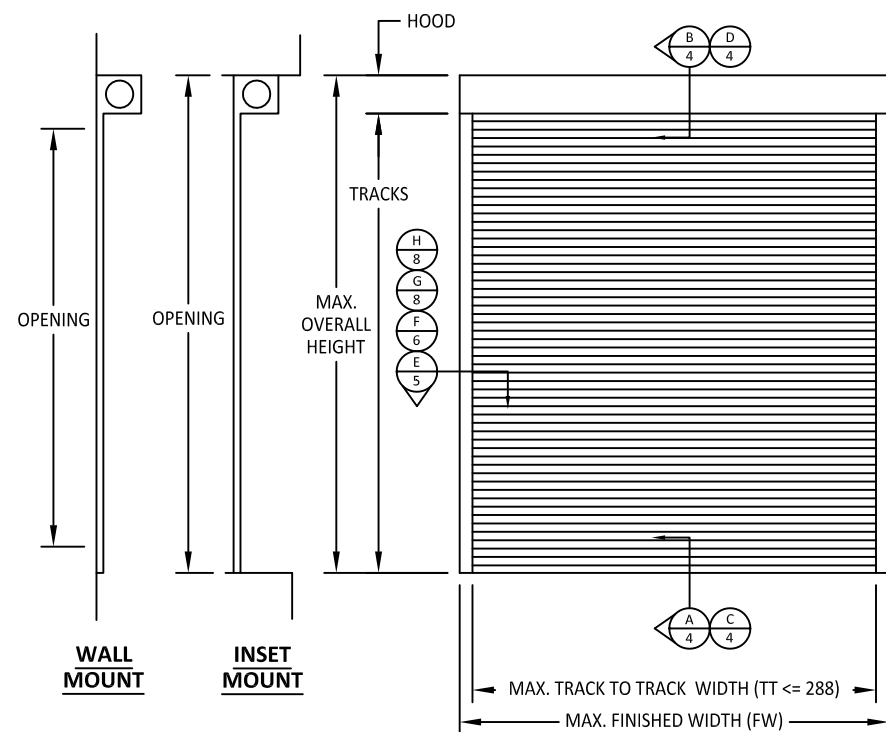
DATE: **01.10.2020**

DWG. BY: **YC** CHK. BY: **HFN**

SCALE: **NTS**

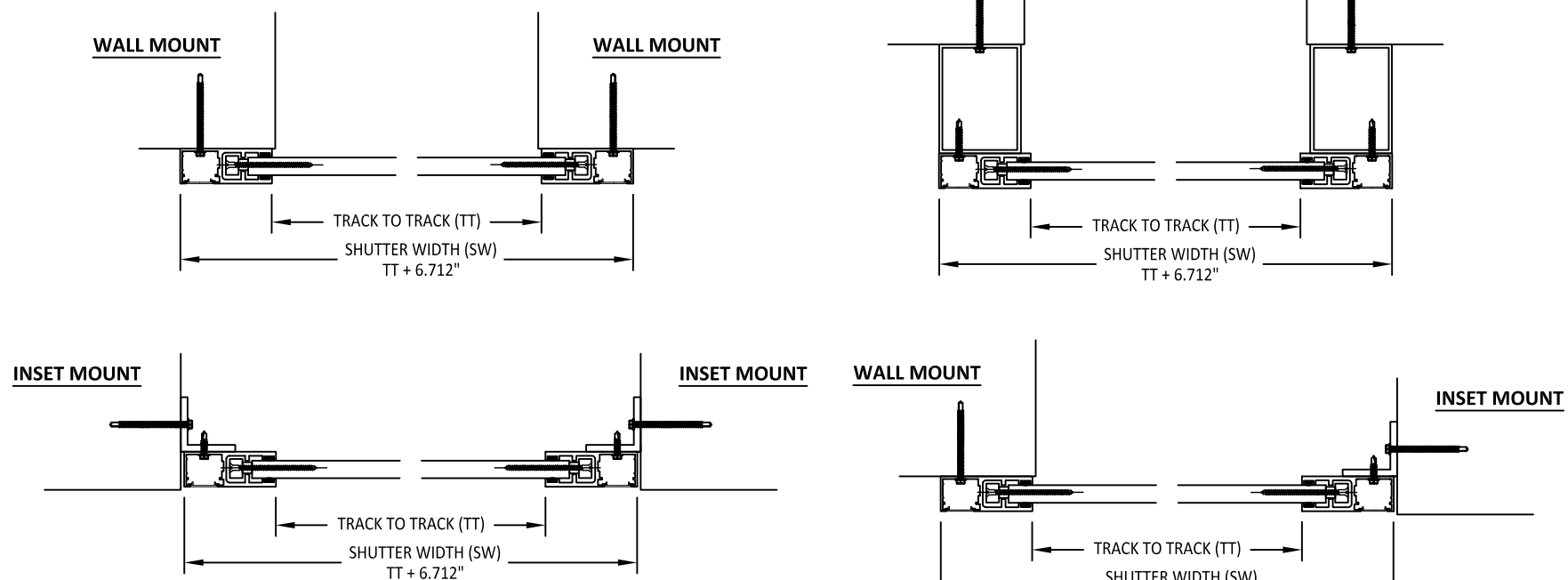
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SHEET:



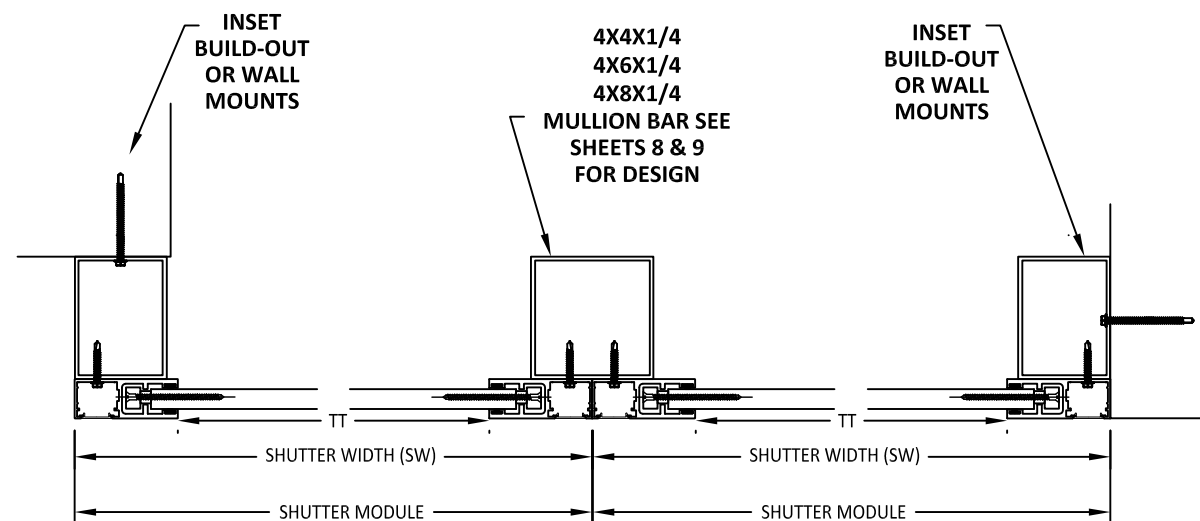
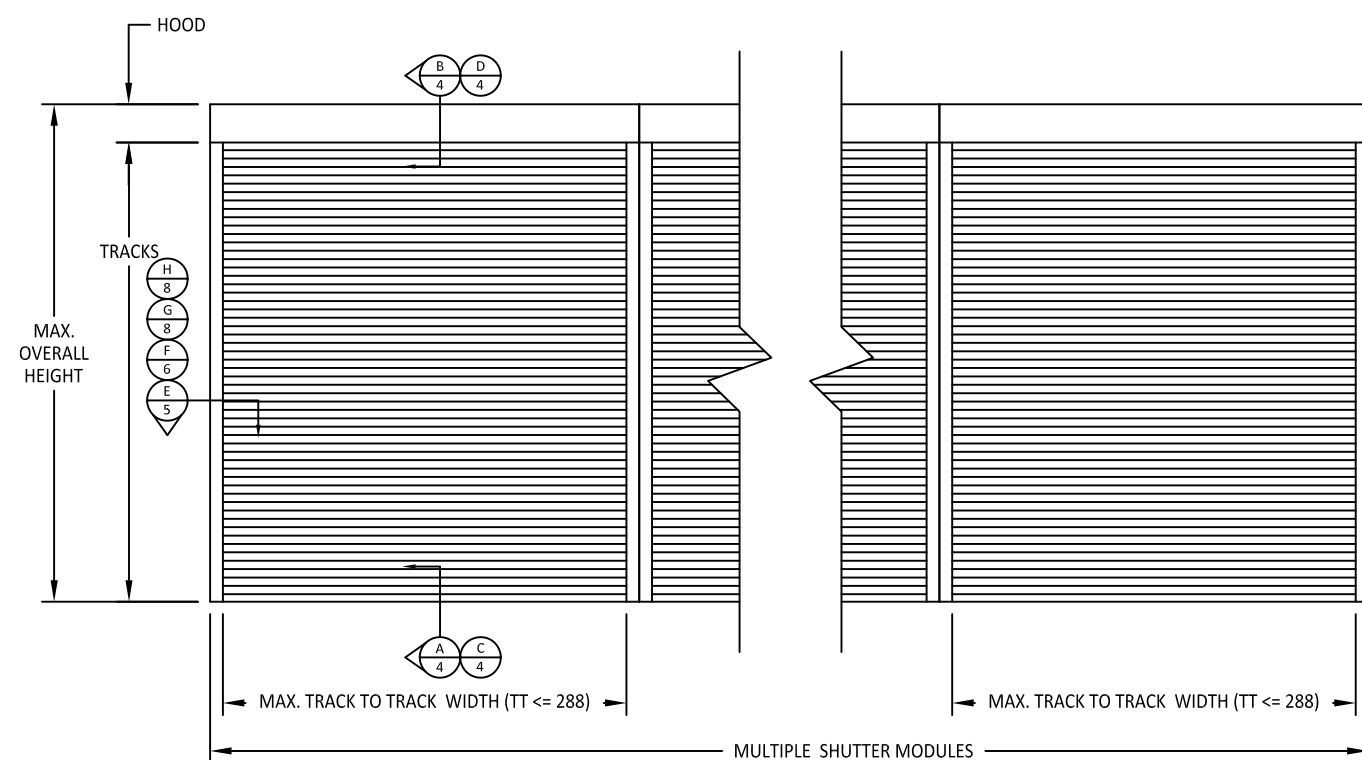
REVERSED INSTALLATION IS ACCEPTABLE

TYPICAL SINGLE UNIT ELEVATION



COMBINATION MOUNTED:
WALL, INSET, AND BUILD-OUT
MOUNTS CAN BE INSTALLED BY MIXING
AS MANY POSSIBLE COMBINATIONS

TYPICAL MULTIPLE UNITS ELEVATION

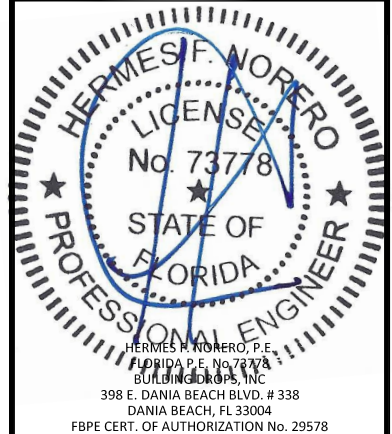


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DWG. BY: YC
CHK. BY: HFN
SCALE: NTS
DWG. #: IHS003
SHEET:

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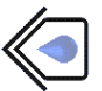
TYPICAL VERTICAL SECTIONS

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SYSTEMS, INC.
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PHONE: (786) 367-8740

TITLE:
55 MM ROLL DOWN SHUTTERS

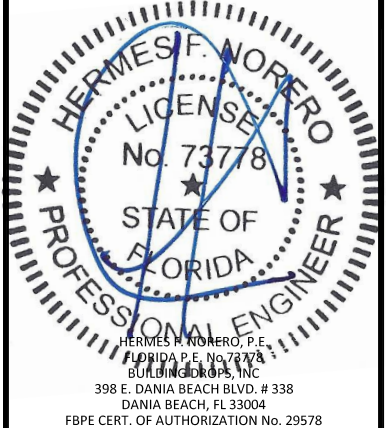
VERTICAL SECTIONS

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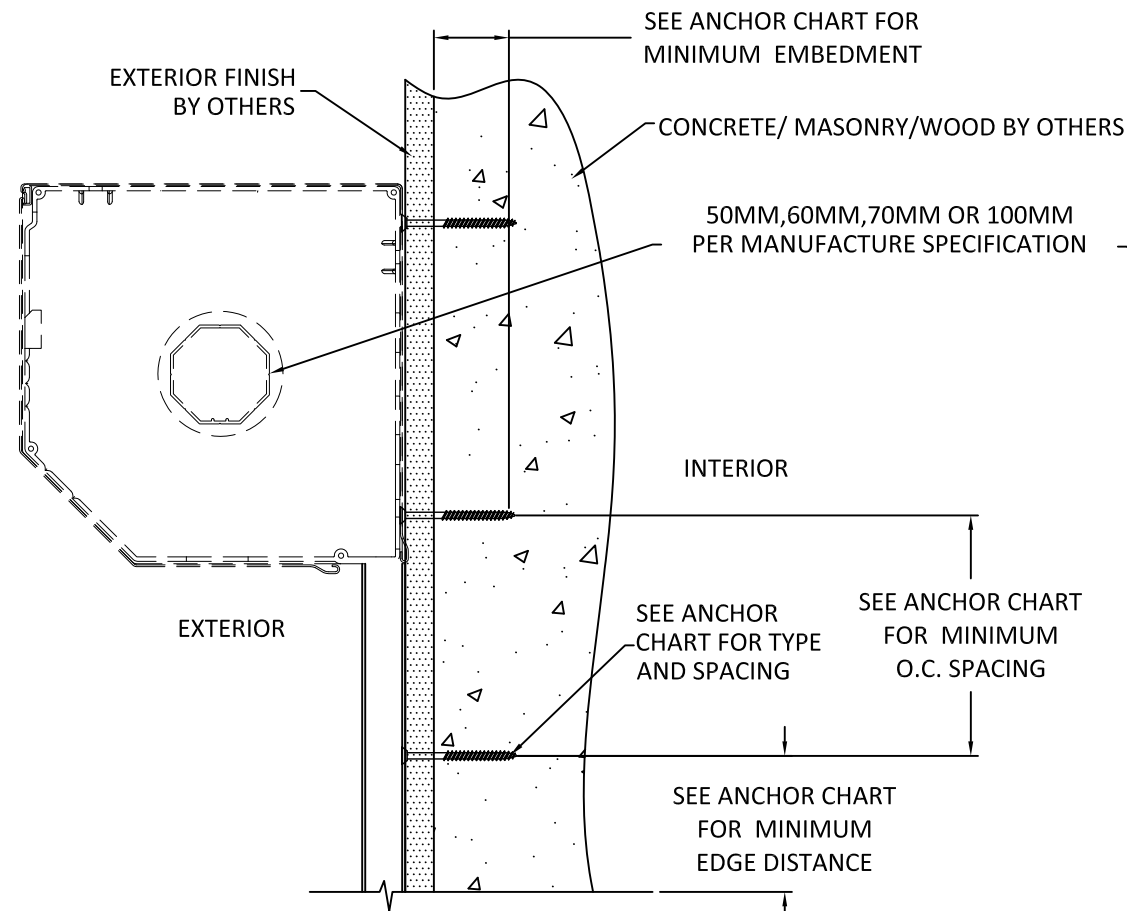
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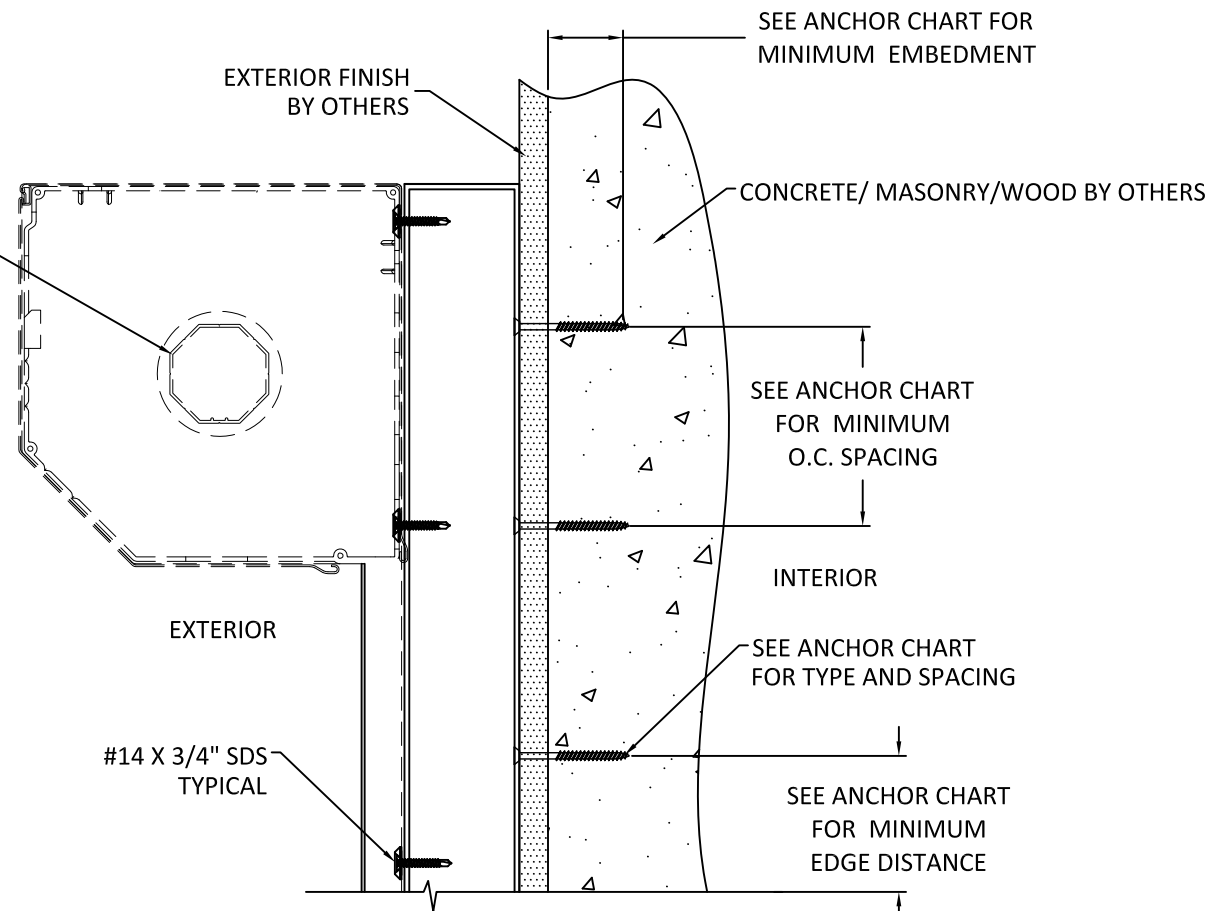
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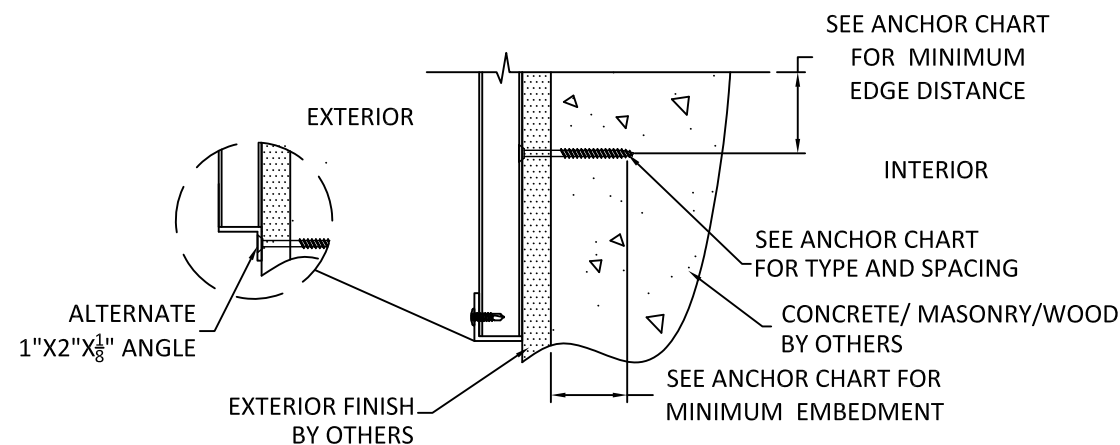
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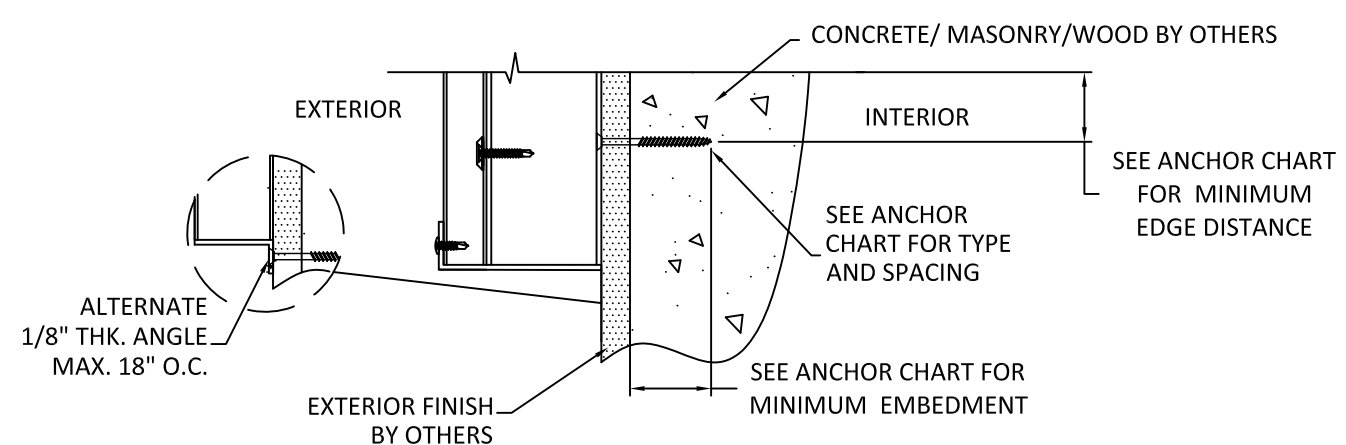
B
4
VERTICAL SECTION
MASONRY/CONCRETE/WOOD SUBSTRATE
SEE CHARTS ON SHEETS 5 & 6 FOR OTHER SUBSTRATES



D
4
VERTICAL SECTION
MASONRY/CONCRETE/WOOD SUBSTRATE
SEE CHARTS ON SHEETS 5 & 6 FOR OTHER SUBSTRATES



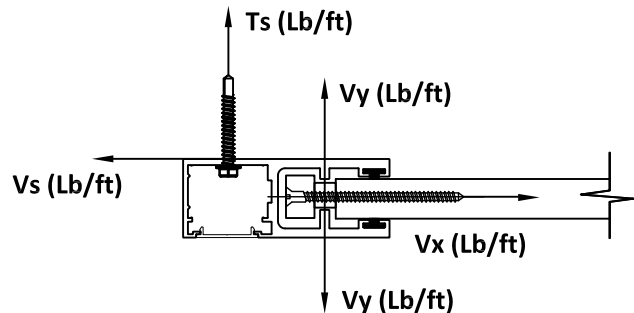
A
4
VERTICAL SECTION
MASONRY/CONCRETE/WOOD SUBSTRATE
SEE CHARTS ON SHEETS 5 & 6 FOR OTHER SUBSTRATES
WALL MOUNT



C
4
VERTICAL SECTION
MASONRY/CONCRETE/WOOD SUBSTRATE
SEE CHARTS ON SHEETS 5 & 6 FOR OTHER SUBSTRATES
BUILD-OUT

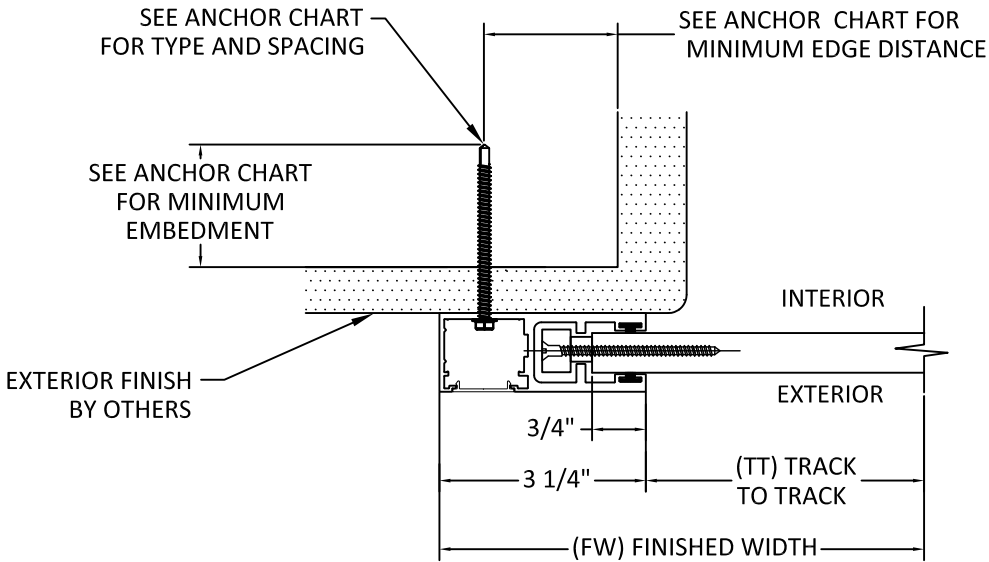
- NOTES:
1. SLATS NOT SHOWN FOR CLARITY
 2. REVERSED INSTALLATION IS ACCEPTABLE

TABLE 3 - ANCHOR SPACING						ANCHOR TYPE & SPACING WALL - MOUNT 1						ANCHOR TYPE & SPACING 1x3, 2x3, 2X4, 3X4, OR 3X3 MOUNT 2					
TT	PD	Vy	Vx	Ts	Vs	A	B	C	D	E	F	A	B	C	D	E	F
96	40	14.2	0.0	12.1	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	45	16.0	0.0	13.7	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	50	17.8	0.0	15.2	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	55	19.6	0.0	16.7	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	60	21.4	0.0	18.2	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	65	23.1	0.0	19.7	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	70	24.9	0.0	21.3	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	75	26.7	0.0	22.8	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	80	28.5	0.0	24.3	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	85	30.3	0.0	25.8	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	90	32.0	0.0	27.3	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	95	33.8	0.0	138.3	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	100	35.6	0.0	145.6	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	105	37.4	0.0	152.9	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	110	39.1	0.0	160.2	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	115	40.9	0.0	167.5	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	120	42.7	0.0	174.7	0.0	6	6	6	6	6	6	6	6	6	6	6	6
108	125	44.5	0.0	182.0	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	130	46.3	0.0	189.3	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	135	48.0	37.6	225.8	37.6	6	6	5	6	6	6	6	6	6	6	6	6
	140	49.8	37.7	233.1	37.7	6	6	5	6	5	6	6	6	6	6	6	6
	145	51.6	37.7	240.5	37.7	6	6	4	6	5	5	6	6	6	6	6	6
	150	53.4	37.8	247.8	37.8	6	6	4	6	5	5	6	6	6	6	6	6
	155	55.2	37.8	255.1	37.8	6	6	4	5	5	5	6	6	6	6	6	6
	160	56.9	37.9	262.4	37.9	6	5	4	5	4	5	6	6	6	6	6	6
	165	58.7	37.9	269.7	37.9	6	5	4	5	4	4	6	6	6	6	6	6
	170	60.5	37.9	277.0	37.9	6	5	3	5	4	4	6	6	6	6	6	6
	175	62.3	38.0	284.3	38.0	6	5	3	4	4	4	6	6	6	6	6	6
	180	64.1	38.0	291.6	38.0	6	4	3	4	4	4	6	6	6	6	6	6
	40	15.9	0.0	13.6	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	45	17.9	0.0	15.3	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	50	19.9	0.0	17.0	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	55	21.9	0.0	18.7	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	60	23.9	0.0	20.4	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	65	25.8	0.0	22.0	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	70	27.8	0.0	23.7	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	75	29.8	0.0	25.4	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	80	31.8	0.0	27.1	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	85	33.8	0.0	28.8	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	90	35.8	0.0	30.5	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	95	37.8	0.0	32.2	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	100	39.8	0.0	33.9	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	105	41.7	0.0	170.8	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	110	43.7	39.8	209.9	39.8	6	6	5	6	6	6	6	6	6	6	6	6
	115	45.7	40.2	218.3	40.2	6	6	5	6	6	6	6	6	6	6	6	6
	120	47.7	40.5	226.7	40.5	6	6	5	6	6	6	6	6	6	6	6	6
	125	49.7	40.8	235.0	40.8	6	6	4	6	5	6	6	6	6	6	6	6
	130	51.7	41.1	243.4	41.1	6	6	4	6	5	5	6	6	6	6	6	6
	135	53.7	41.3	251.7	41.3	6	6	4	5	5	5	6	6	6	6	6	6
	140	55.7	41.6	260.0	41.6	6	5	4	5	4	5	6	6	6	6	6	6
	145	57.6	41.8	268.4	41.8	6	5	4	5	4	4	6	6	6	6	6	6
	150	59.6	42.0	276.7	42.0	6	5	3	5	4	4	6	6	6	6	6	6
	155	61.6	42.2	285.0	42.2	6	5	3	4	4	4	6	6	6	6	6	6
	160	63.6	42.4	293.2	42.4	6	4	3	4	4	4	6	6	6	6	6	6
	165	65.6	42.6	301.5	42.6	6	4	3	4	3	4	6	6	6	6	6	6
	170	67.6	42.8	309.8	42.8	6	4	3	4	3	3	6	6	6	6	6	6



CONTRACTOR TO VERIFY ADEQUACY OF STRUCTURE
NOTE: LOADS Vy AND Vx ARE LOADS IMPOSED BY
SLAT ON TRACK. LOADS Ts AND Vs ARE LOADS
IMPOSED ON STRUCTURE BY ANCHORS.

TYPICAL HORIZONTAL SECTIONS WALL MOUNT



E 5

HORIZONTAL SECTION

MOUNT TYPE 1
WALL MOUNT
*WITH END RETENTION

ANCHOR SCHEDULE:

ANCHOR	DESCRIPTION	MATERIAL	EMBEDMENT	EDGE DISTANCE
A	3/8" X 4" WEDGE BOLT	MIN. 3000 PSI CONCRETE	3 1/2"	3 3/4"
B	5/16" X 3" TAPCON	MIN. 3513 PSI CONCRETE	2"	3 1/8"
C	3/8" X 4" WEGDE BOLT	GROUT FILLED C-90 BLOCK	3 1/2"	3 3/4"
D	5/16" X 3" TAPCON	GROUT FILLED C-90 BLOCK	2 1/4"	4"
E	#14 X 3/4" DRIL-FLEX SELF DRILLING SCREW	MIN 1/4" 6063-T6 ALUM. OR A36 3/16" STEEL	3 threads penetration	1/2" 3/8"
F	5/16" ELCO Ultracon	MIN. SG = 0.55 WOOD	2"	1 9/16"

IMPACT HURRICANE
SYSTEMS, INC.
1114 SE 12TH COURT
CAPE CORAL, FL 33390
PHONE: (786) 367-8740

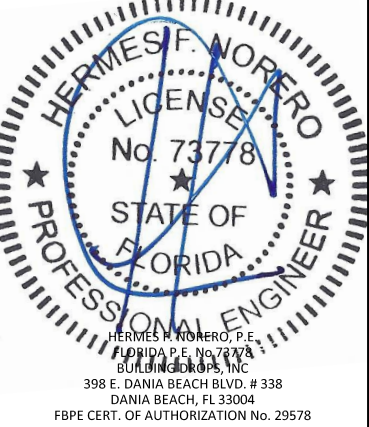
TITLE:
55 MM ROLL DOWN SHUTTERS
WALL MOUNT HORIZONTAL
SECTIONS & ANCHOR SPACING

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

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.



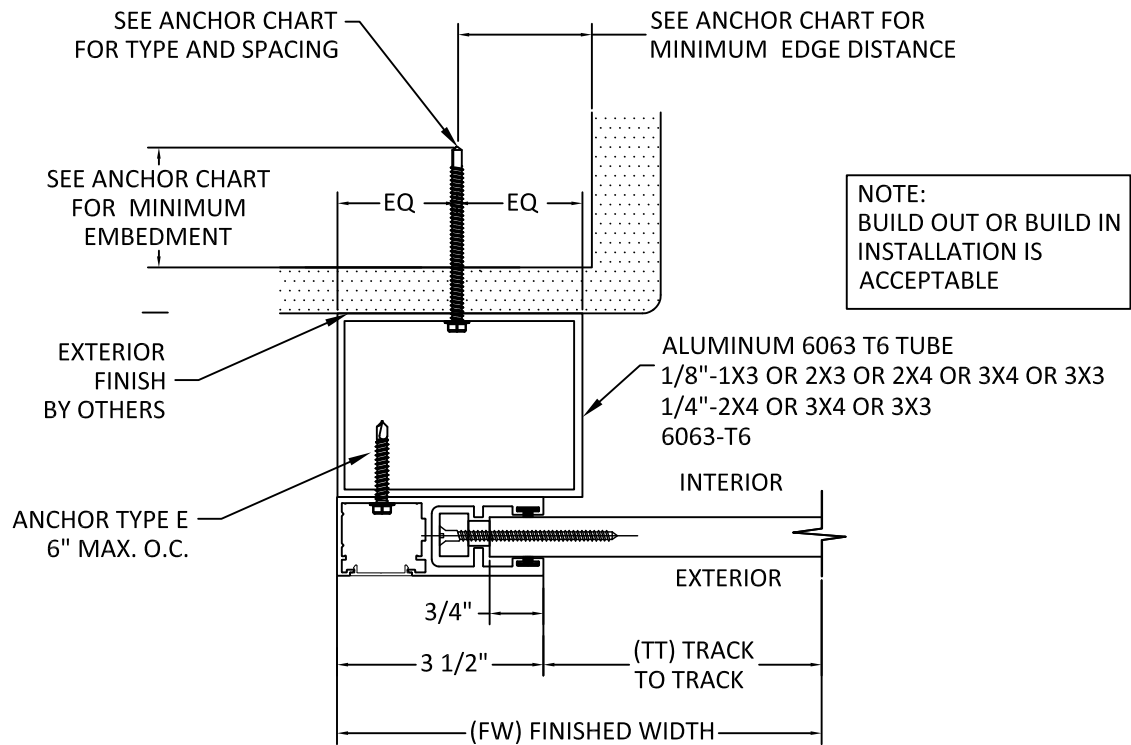
FL #:
FL31649

DATE: **01.10.2020**
DWG. BY: **YC** CHK. BY: **HFN**
SCALE: **NTS**
DWG. #: **IHS003**
SHEET:

5

TABLE 3 - ANCHOR SPACING						ANCHOR TYPE & SPACING WALL - MOUNT 1						ANCHOR TYPE & SPACING 1x3,2x3,2X4,3X4,OR 3X3 MOUNT 2					
TT	PD	Vy	Vx	Ts	Vs	A	B	C	D	E	F	A	B	C	D	E	F
120	40	17.6	0.0	15.0	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	45	19.8	0.0	16.9	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	50	22.0	0.0	18.7	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	55	24.2	0.0	20.6	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	60	26.4	0.0	22.5	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	65	28.6	0.0	24.4	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	70	30.7	0.0	26.2	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	75	32.9	0.0	28.1	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	80	35.1	0.0	30.0	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	85	37.3	0.0	31.9	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	90	39.5	39.9	114.6	39.9	6	6	6	6	6	6	6	6	6	6	6	6
	95	41.7	40.6	117.4	40.6	6	6	6	6	6	6	6	6	6	6	6	6
	100	43.9	41.3	147.6	41.3	6	6	6	6	6	6	6	6	6	6	6	6
	105	46.1	41.9	156.1	41.9	6	6	6	6	6	6	6	6	6	6	6	6
	110	48.3	42.6	164.6	42.6	6	6	6	6	6	6	6	6	6	6	6	6
132	115	50.5	43.1	173.1	43.1	6	6	6	6	6	6	6	6	6	6	6	6
	120	52.7	43.7	181.7	43.7	6	6	6	6	6	6	6	6	6	6	6	6
	125	54.9	44.2	190.3	44.2	6	6	6	6	6	6	6	6	6	6	6	6
	130	57.1	44.6	198.9	44.6	6	6	6	6	6	6	6	6	6	6	6	6
	135	59.3	45.1	207.6	45.1	6	6	5	6	6	6	6	6	6	6	6	6
	140	61.5	45.5	216.2	45.5	6	6	5	6	6	6	6	6	6	6	6	6
	145	63.7	45.9	224.9	45.9	6	6	5	6	6	6	6	6	6	6	6	6
	150	65.9	46.3	233.6	46.3	6	6	4	6	5	6	6	6	6	6	6	6
	155	68.1	46.7	242.3	46.7	6	6	4	6	5	5	6	6	6	6	6	6
	160	70.3	47.0	251.0	47.0	6	6	4	5	5	5	6	6	6	6	6	6
	40	19.2	0.0	16.4	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	45	21.6	0.0	18.5	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	50	24.0	0.0	20.5	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	55	26.4	0.0	22.6	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	60	28.9	0.0	24.6	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	65	31.3	0.0	26.7	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	70	33.7	37.2	105.4	37.2	6	6	6	6	6	6	6	6	6	6	6	6
	75	36.1	38.4	109.6	38.4	6	6	6	6	6	6	6	6	6	6	6	6
	80	38.5	39.6	113.6	39.6	6	6	6	6	6	6	6	6	6	6	6	6
	85	40.9	40.7	117.4	40.7	6	6	6	6	6	6	6	6	6	6	6	6
	90	43.3	41.8	121.0	41.8	6	6	6	6	6	6	6	6	6	6	6	6
	95	45.7	42.8	153.7	42.8	6	6	6	6	6	6	6	6	6	6	6	6
	100	48.1	43.7	162.8	43.7	6	6	6	6	6	6	6	6	6	6	6	6
	105	50.5	44.5	172.0	44.5	6	6	6	6	6	6	6	6	6	6	6	6
	110	52.9	45.4	181.2	45.4	6	6	6	6	6	6	6	6	6	6	6	6
	115	55.3	46.1	190.4	46.1	6	6	6	6	6	6	6	6	6	6	6	6
	120	57.7	46.9	199.7	46.9	6	6	5	6	6	6	6	6	6	6	6	6
	125	60.1	47.6	209.0	47.6	6	6	5	6	6	6	6	6	6	6	6	6
	130	62.5	48.2	218.3	48.2	6	6	5	6	6	6	6	6	6	6	6	6
	135	64.9	48.9	227.6	48.9	6	6	4	6	5	6	6	6	6	6	6	6
	140	67.3	49.4	237.0	49.4	6	6	4	6	5	5	6	6	6	6	6	6
	145	69.7	50.0	246.4	50.0	6	6	4	5	5	5	6	6	6	6	6	6
	150	72.1	50.6	255.8	50.6	6	6	4	5	4	5	6	6	6	6	6	6
	155	74.5	51.1	265.3	51.1	6	5	3	5	4	4	6	6	6	6	6	6

TYPICAL HORIZONTAL SECTIONS BUILD OUT

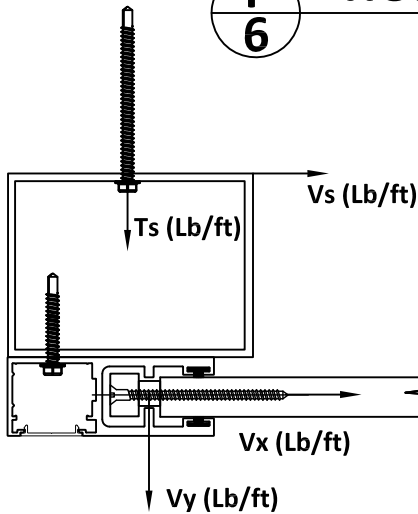


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6

HORIZONTAL SECTION

**MOUNT TYPE 2
BUILD-OUT MOUNT**

***WITH END RETENTION**



CONTRACTOR TO VERIFY ADEQUACY OF STRUCTURE
NOTE: LOADS Vy AND Vx ARE LOADS IMPOSED BY
SLAT ON TRACK. LOADS Ts AND Vs ARE LOADS
IMPOSED ON STRUCTURE BY ANCHORS.

ANCHOR SCHEDULE:

ANCHOR	DESCRIPTION	MATERIAL	EMBEDMENT	EDGE DISTANCE
A	3/8" X 4" WEDGE BOLT	MIN. 3000 PSI CONCRETE	3 1/2"	3 3/4"
B	5/16" X 3" TAPCON	MIN. 3513 PSI CONCRETE	2"	3 1/8"
C	3/8" X 4" WEGDE BOLT	GROUT FILLED C-90 BLOCK	3 1/2"	3 3/4"
D	5/16" X 3" TAPCON	GROUT FILLED C-90 BLOCK	2 1/4"	4"
E	#14 X 3/4" DRIL-FLEX SELF DRILLING SCREW	MIN 1/4" 6063-T6 ALUM. OR A36 3/16" STEEL	3 threads penetration	1/2" 3/8"
F	5/16" ELCO Ultracon	MIN. SG = 0.55 WOOD	2"	1 9/16"

**IMPACT HURRICANE
SYSTEMS, INC.**
1114 SE 12TH COURT
CAPE CORAL, FL 33390
PHONE: (786) 367-8740

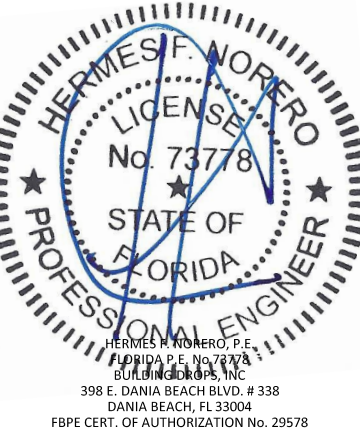
TITLE:
55 MM ROLL DOWN SHUTTERS
BUILD OUT HORIZONTAL
SECTIONS & ANCHOR SPACING

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

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.



FL #:
FL31649

DATE: 01.10.2020

DWG. BY: YC
CHK. BY: HFN

SCALE: NTS

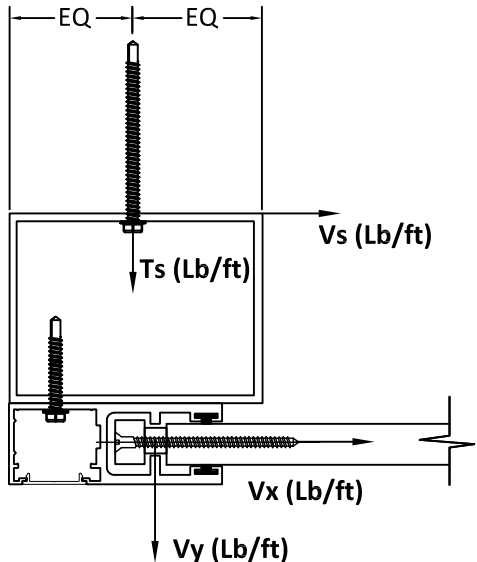
DWG. #: IHS003

SHEET:

6

TABLE 3 - ANCHOR SPACING						ANCHOR TYPE & SPACING WALL - MOUNT 1						ANCHOR TYPE & SPACING 1x3,2x3,2X4,3X4,OR 3X3-MOUNT 2					
TT	PD	Vy	Vx	Ts	Vs	A	B	C	D	E	F	A	B	C	D	E	F
144	40	20.9	0.0	17.8	0.0	6	6	6	6	6	6	6	6	6	6	6	6
	45	23.5	29.2	81.5	29.2	6	6	6	6	6	6	6	6	6	6	6	6
	50	26.1	31.3	87.7	31.3	6	6	6	6	6	6	6	6	6	6	6	6
	55	28.7	33.2	93.6	33.2	6	6	6	6	6	6	6	6	6	6	6	6
	60	31.4	35.1	99.2	35.1	6	6	6	6	6	6	6	6	6	6	6	6
	65	34.0	36.8	104.6	36.8	6	6	6	6	6	6	6	6	6	6	6	6
	70	36.6	38.4	109.6	38.4	6	6	6	6	6	6	6	6	6	6	6	6
	75	39.2	39.9	114.5	39.9	6	6	6	6	6	6	6	6	6	6	6	6
	80	41.8	41.3	119.1	41.3	6	6	6	6	6	6	6	6	6	6	6	6
	85	44.4	42.6	123.5	42.6	6	6	6	6	6	6	6	6	6	6	6	6
	90	47.0	43.8	158.3	43.8	6	6	6	6	6	6	6	6	6	6	6	6
	95	49.6	45.0	168.1	45.0	6	6	6	6	6	6	6	6	6	6	6	6
	100	52.3	46.2	177.9	46.2	6	6	6	6	6	6	6	6	6	6	6	6
	105	54.9	47.2	187.8	47.2	6	6	6	6	6	6	6	6	6	6	6	6
	110	57.5	48.2	197.7	48.2	6	6	5	6	6	6	6	6	6	6	6	6
	115	60.1	49.2	207.6	49.2	6	6	5	6	6	6	6	6	6	6	6	6
	120	62.7	50.1	217.6	50.1	6	6	5	6	6	6	6	6	6	6	6	6
168	125	65.3	51.0	227.6	51.0	6	6	4	6	5	6	6	6	6	6	6	6
	130	67.9	51.8	237.6	51.8	6	6	4	6	5	5	6	6	6	6	6	6
	135	70.5	52.6	247.7	52.6	6	6	4	5	5	5	6	6	6	6	6	6
	140	73.2	53.4	257.8	53.4	6	5	4	5	4	5	6	6	6	6	6	6
	145	75.8	54.1	267.9	54.1	6	5	3	5	4	4	6	6	6	6	6	6
	40	24.2	27.7	78.1	27.7	6	6	6	6	6	6	6	6	6	6	6	6
	45	27.3	30.3	85.7	30.3	6	6	6	6	6	6	6	6	6	6	6	6
	50	30.3	32.7	93.0	32.7	6	6	6	6	6	6	6	6	6	6	6	6
	55	33.3	35.0	100.0	35.0	6	6	6	6	6	6	6	6	6	6	6	6
	60	36.4	37.2	106.7	37.2	6	6	6	6	6	6	6	6	6	6	6	6
	65	39.4	39.3	113.1	39.3	6	6	6	6	6	6	6	6	6	6	6	6
	70	42.4	41.3	119.3	41.3	6	6	6	6	6	6	6	6	6	6	6	6
	75	45.4	43.1	125.3	43.1	6	6	6	6	6	6	6	6	6	6	6	6
	80	48.5	44.9	163.4	44.9	6	6	6	6	6	6	6	6	6	6	6	6
	85	51.5	46.6	174.4	46.6	6	6	6	6	6	6	6	6	6	6	6	6
	90	54.5	48.3	185.6	48.3	6	6	6	6	6	6	6	6	6	6	6	6
180	95	57.6	49.8	196.8	49.8	6	6	5	6	6	6	6	6	6	6	6	6
	100	60.6	51.3	208.0	51.3	6	6	5	6	6	6	6	6	6	6	6	6
	105	63.6	52.8	219.3	52.8	6	6	4	6	6	6	6	6	6	6	6	6
	110	66.6	54.1	230.6	54.1	6	6	4	6	5	6	6	6	6	6	6	6
	115	69.7	55.5	242.0	55.5	6	6	4	5	5	5	6	6	6	6	6	6
	120	72.7	56.7	253.4	56.7	6	6	4	5	4	5	6	6	6	6	6	6
	125	75.7	58.0	264.8	58.0	6	5	3	5	4	4	6	6	6	6	6	6
	130	78.8	59.1	276.3	59.1	6	5	3	4	4	4	6	6	6	6	6	6
	40	25.9	28.3	80.3	28.3	6	6	6	6	6	6	6	6	6	6	6	6
	45	29.1	31.0	88.4	31.0	6	6	6	6	6	6	6	6	6	6	6	6
	50	32.4	33.6	96.2	33.6	6	6	6	6	6	6	6	6	6	6	6	6
	55	35.6	36.1	103.7	36.1	6	6	6	6	6	6	6	6	6	6	6	6
	60	38.9	38.5	110.9	38.5	6	6	6	6	6	6	6	6	6	6	6	6
	65	42.1	40.7	117.9	40.7	6	6	6	6	6	6	6	6	6	6	6	6
	70	45.3	42.9	124.6	42.9	6	6	6	6	6	6	6	6	6	6	6	6
	75	48.6	44.9	163.8	44.9	6	6	6	6	6	6	6	6	6	6	6	6
	80	51.8	46.9	175.5	46.9	6	6	6	6	6	6	6	6	6	6	6	6
	85	55.0	48.8	187.3	48.8	6	6	6	6	6	6	6	6	6	6	6	6

TABLE 3 - ANCHOR SPACING						ANCHOR TYPE & SPACING WALL - MOUNT 1						ANCHOR TYPE & SPACING 1x3,2x3,2X4,3X4, OR 3X3-MOUNT 2					
TT	PD	Vy	Vx	Ts	Vs	A	B	C	D	E	F	A	B	C	D	E	F
192	40	27.6	26.6	77.1	26.6	6	6	6	6	6	6	6	6	6	6	6	6
	45	31.0	29.0	84.4	29.0	6	6	6	6	6	6	6	6	6	6	6	6
	50	34.5	31.2	91.4	31.2	6	6	6	6	6	6	6	6	6	6	6	6
	55	37.9	33.3	98.1	33.3	6	6	6	6	6	6	6	6	6	6	6	6
	60	41.4	35.3	104.5	35.3	6	6	6	6	6	6	6	6	6	6	6	6
	65	44.8	37.2	110.7	37.2	6	6	6	6	6	6	6	6	6	6	6	6
	70	48.2	39.0	167.1	39.0	6	6	6	6	6	6	6	6	6	6	6	6
	75	51.7	40.7	179.9	40.7	6	6	6	6	6	6	6	6	6	6	6	6
	80	55.1	42.2	192.8	42.2	6	6	6	6	6	6	6	6	6	6	6	6
	85	58.6	43.8	205.7	43.8	6	6	5	6	6	6	6	6	6	6	6	6
	90	62.0	45.2	218.7	45.2	6	6	5	6	6	6	6	6	6	6	6	6
	95	65.5	46.6	231.7	46.6	6	6	4	6	5	6	6	6	6	6	6	6
204	100	68.9	47.9	244.8	47.9	6	6	4	5	5	5	6	6	6	6	6	6
	40	29.2	28.6	82.6	28.6	6	6	6	6	6	6	6	6	6	6	6	6
	45	32.9	31.0	90.2	31.0	6	6	6	6	6	6	6	6	6	6	6	6
	50	36.5	33.3	97.4	33.3	6	6	6	6	6	6	6	6	6	6	6	6
	55	40.2	35.4	104.2	35.4	6	6	6	6	6	6	6	6	6	6	6	6
	60	43.9	37.4	110.7	37.4	6	6	6	6	6	6	6	6	6	6	6	6
	65	47.5	39.3	163.8	39.3	6	6	6	6	6	6	6	6	6	6	6	6
	70	51.2	41.0	177.4	41.0	6	6	6	6	6	6	6	6	6	6	6	6
216	75	54.8	42.7	191.1	42.7	6	6	6	6	6	6	6	6	6	6	6	6
	40	34.8	33.1	96.0	33.1	6	6	6	6	6	6	6	6	6	6	6	6
	45	38.6	35.4	103.4	35.4	6	6	6	6	6	6	6	6	6	6	6	6
240	50	42.5	37.5	110.3	37.5	6	6	6	6	6	6	6	6	6	6	6	6
	40	34.2	34.6	99.4	34.6	6	6	6	6	6	6	6	6	6	6	6	6
	45	38.5	37.2	107.6	37.2	6	6	6	6	6	6	6	6	6	6	6	6
264	50	42.8	39.5	144.4	39.5	6	6	6	6	6	6	6	6	6	6	6	6
	40	37.6	38.6	123.7	38.6	6	6	6	6	6	6	6	6	6	6	6	6
288	45	42.3	41.3	140.8	41.3	6	6	6	6	6	6	6	6	6	6	6	6
	40	40.9	42.6	134.2	42.6	6	6	6	6	6	6	6	6	6	6	6	6



CONTRACTOR TO VERIFY ADEQUACY OF STRUCTURE
NOTE: LOADS Vy AND Vx ARE LOADS IMPOSED BY
SLAT ON TRACK. LOADS Ts AND Vs ARE LOADS
IMPOSED ON STRUCTURE BY ANCHORS.

ANCHOR SCHEDULE:

ANCHOR	DESCRIPTION	MATERIAL	EMBEDMENT	EDGE DISTANCE
A	3/8" X 4" WEDGE BOLT	MIN. 3000 PSI CONCRETE	3 1/2"	3 3/4"
B	5/16" X 3" TAPCON	MIN. 3513 PSI CONCRETE	2"	3 1/8"
C	3/8" X 4" WEGDE BOLT	GROUT FILLED C-90 BLOCK	3 1/2"	3 3/4"
D	5/16" X 3" TAPCON	GROUT FILLED C-90 BLOCK	2 1/4"	4"
E	#14 X 3/4" DRIL-FLEX SELF DRILLING SCREW	MIN 1/4" 6063-T6 ALUM. OR A36 3/16" STEEL	3 threads penetration	1/2" 3/8"
F	5/16" ELCO Ultracon	MIN. SG = 0.55 WOOD	2"	1 9/16"

IMPACT HURRICANE
SYSTEMS, INC.
1114 SE 12TH COURT
CAPE CORAL, FL 33390
PHONE: (786) 367-8740

TITLE:
55 MM ROLL DOWN SHUTTERS
WALL MOUNT & BUILD OUT
ANCHOR SPACING

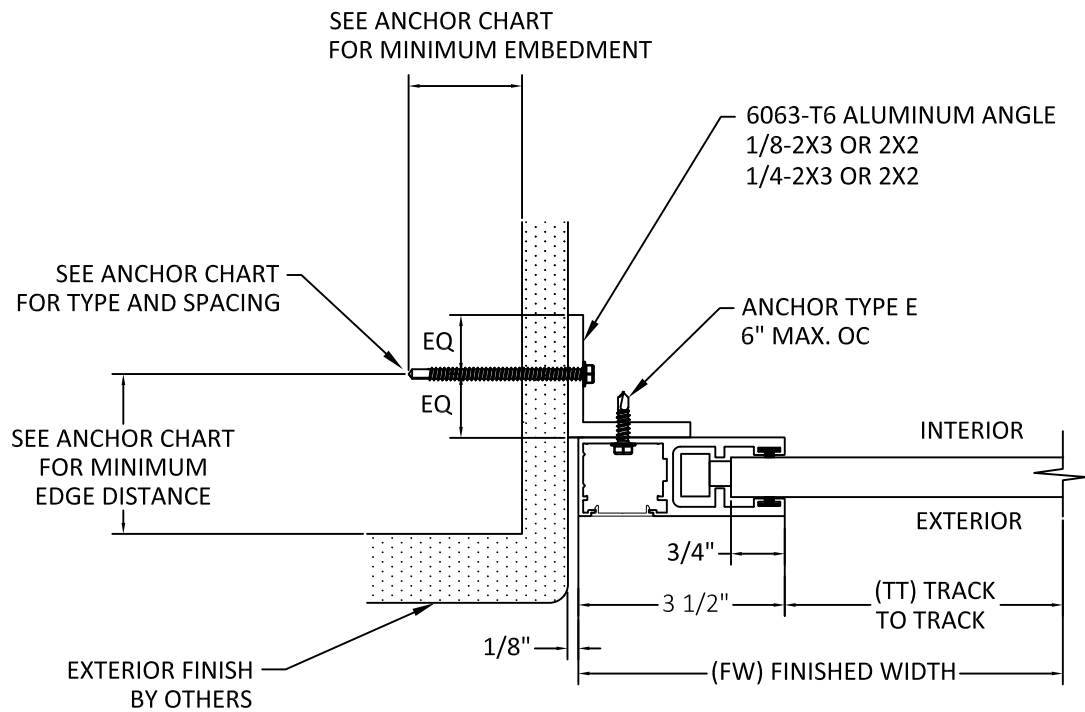
PREPARED BY:

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

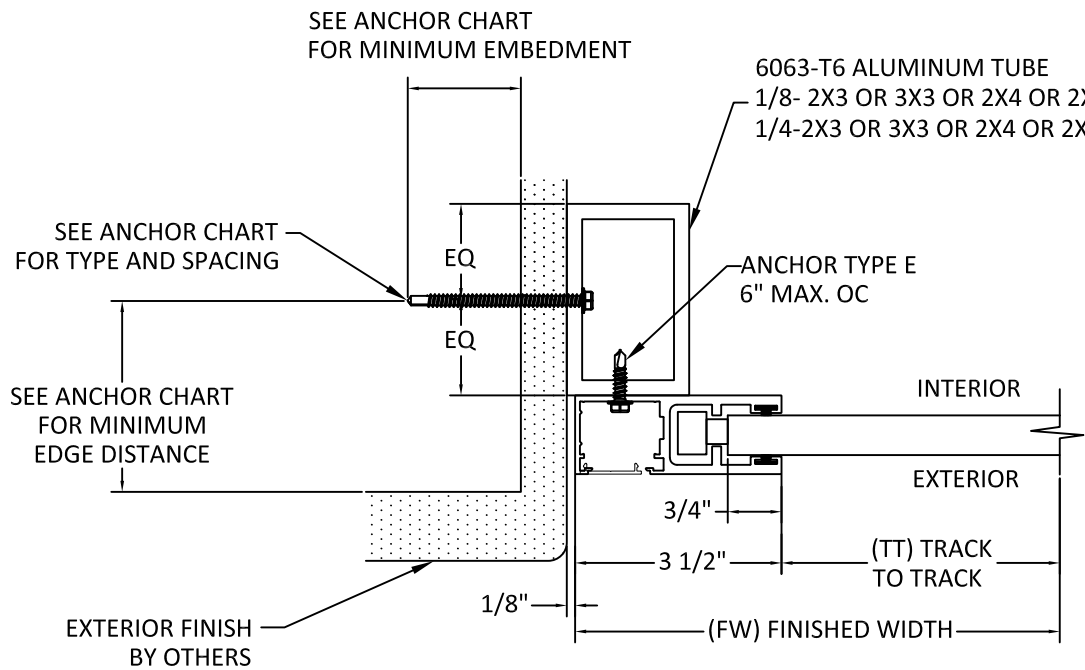


REMARKS	BY	DATE

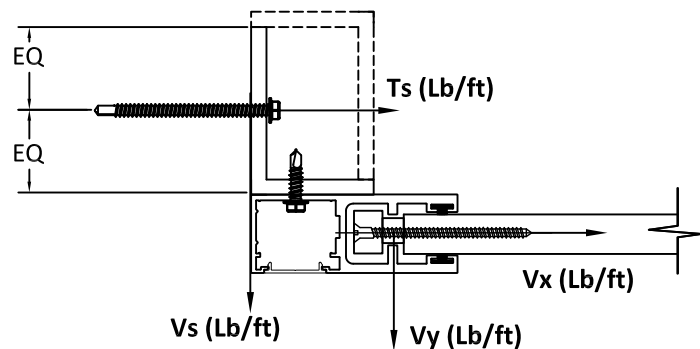
TYPICAL HORIZONTAL SECTIONS
INSET MOUNT



G
8 **HORIZONTAL SECTION**
MOUNT TYPE 3
INSET MOUNT
*WITH OR WITHOUT END RETENTION



H
8 **HORIZONTAL SECTION**
MOUNT TYPE 3
INSET MOUNT
*WITH OR WITHOUT END RETENTION



CONTRACTOR TO VERIFY ADEQUACY OF STRUCTURE
NOTE: LOADS V_y AND V_x ARE LOADS IMPOSED BY
SLAT ON TRACK. LOADS T_s AND V_s ARE LOADS
IMPOSED ON STRUCTURE BY ANCHORS

SEE SHEET 9 & 10 FOR ANCHOR SPACING TABLES

ANCHOR SCHEDULE:

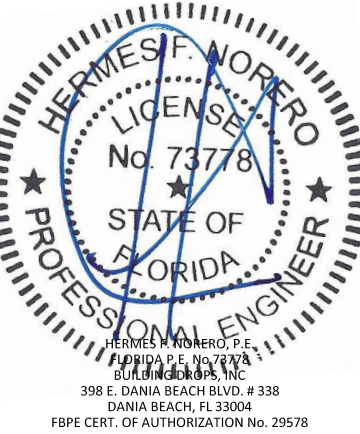
ANCHOR	DESCRIPTION	MATERIAL	EMBEDMENT	EDGE DISTANCE
A	3/8" X 4" WEDGE BOLT	MIN. 3000 PSI CONCRETE	3 1/2"	3 3/4"
B	5/16" X 3" TAPCON	MIN. 3513 PSI CONCRETE	2"	3 1/8"
C	3/8" X 4" WEGDE BOLT	GROUT FILLED C-90 BLOCK	3 1/2"	3 3/4"
D	5/16" X 3" TAPCON	GROUT FILLED C-90 BLOCK	2 1/4"	4"
E	#14 X 3/4" DRIL-FLEX SELF DRILLING SCREW	MIN 1/4" 6063-T6 ALUM. OR A36 3/16" STEEL	3 threads penetration	1/2" 3/8"
F	5/16" ELCO Ultracon	MIN. SG = 0.55 WOOD	2"	1 9/16"

IMPACT HURRICANE
SYSTEMS, INC.
1114 SE 12TH COURT
CAPE CORAL, FL 33390
PHONE: (786) 367-8740

TITLE: 55 MM ROLL DOWN SHUTTERS
INSET MOUNT
HORIZONTAL SECTION
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

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.

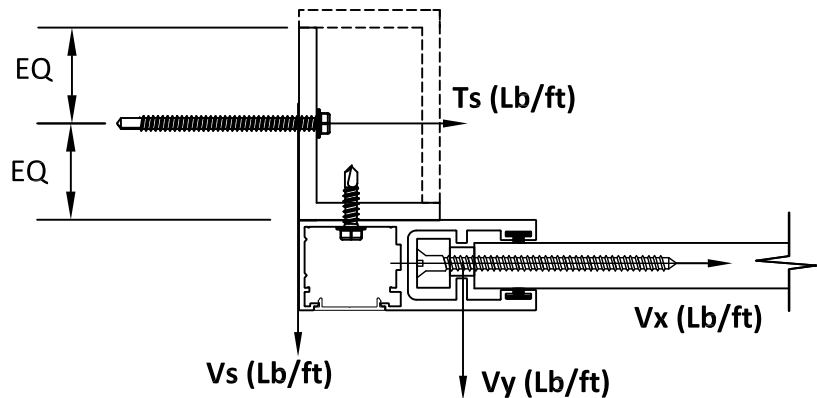


FL #:
FL31649

DATE: 01.10.2020
DWG. BY: YC
CHK. BY: HFN
SCALE: NTS
DWG. #: IHS003
SHEET:

8

TABLE 4 - ANCHOR SPACING						ANCHOR TYPE & SPACING 2X3 OR 3X3 INSET - MOUNT 3						ANCHOR TYPE & SPACING 2X4 OR 4X4 INSET - MOUNT 3						ANCHOR TYPE & SPACING 2X5 INSET - MOUNT 3					
TT	PD	Vx	Vy	Vs	Ts	A	B	C	D	E	F	A	B	C	D	E	F	A	B	C	D	E	F
120	45	0	19.77	19.77	36.87	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	50	0	21.96	21.96	40.97	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	55	0	24.16	24.16	45.06	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	60	0	26.35	26.35	49.16	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	65	0	28.55	28.55	53.26	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	70	0	30.75	30.75	57.35	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	75	0	32.94	32.94	61.45	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	80	0	35.14	35.14	158.30	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	85	0	37.34	37.34	164.12	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	90	39.86563	39.53	39.53	169.83	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	95	40.60745	41.73	41.73	175.43	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	100	41.2991	43.92	43.92	180.93	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	105	41.9455	46.12	46.12	186.35	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	110	42.55095	48.32	48.32	191.69	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	115	43.11922	50.51	50.51	196.96	6	6	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	120	43.65363	52.71	52.71	202.16	6	6	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	125	44.15713	54.90	54.90	207.30	6	6	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	130	44.63231	57.10	57.10	212.39	6	6	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
135	45.08151	59.30	59.30	217.42	6	6	4	6	6	6	6	6	6	5	6	6	6	6	6	6	6	6	
140	45.50679	61.49	61.49	222.41	6	6	4	6	5	6	6	6	5	6	6	6	6	6	6	6	6	6	
145	45.91002	63.69	63.69	227.35	6	6	4	6	5	5	6	6	5	6	6	6	6	6	6	6	6	6	
150	46.29287	65.89	65.89	232.26	6	6	4	6	5	5	6	6	5	6	6	6	6	6	5	6	6	6	
155	46.65684	68.08	68.08	235.55	6	6	6	6	6	6	6	6	4	6	6	6	6	6	5	6	6	6	
160	47.0033	70.28	70.28	240.45	6	6	6	6	6	6	6	6	4	6	6	6	6	6	5	6	6	6	
132	80	0	19.24	19.24	35.88	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	45	0	21.64	21.64	40.37	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	50	0	24.05	24.05	44.85	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	55	0	26.45	26.45	49.34	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	60	0	28.85	28.85	53.82	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	65	0	31.26	31.26	58.31	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	70	37.16681	33.66	33.66	149.27	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	75	38.43984	36.07	36.07	156.71	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	80	39.62749	38.47	38.47	163.96	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	85	40.73807	40.88	40.88	171.03	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	90	41.77884	43.28	43.28	177.94	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	95	42.7562	45.69	45.69	184.70	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	100	43.67575	48.09	48.09	191.32	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	105	44.54249	50.49	50.49	197.82	6	6	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	110	45.36083	52.90	52.90	204.21	6	6	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	115	46.13472	55.30	55.30	210.50	6	6	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	120	46.86769	57.71	57.71	216.69	6	6	4	6	6	6	6	6	5	6	6	6	6	6	6	6	6	6
	125	47.56289	60.11	60.11	222.79	6	6	4	6	5	6	6	6	5	6	6	6	6	6	6	6	6	6
130	48.22318	62.52	62.52	228.81	6	6	4	6	5	5	6	6	5	6	6	6	6	6	5	6	6	6	
135	48.85112	64.92	64.92	234.76	6	6	4	6	5	5	6	6	5	6	6	6	6	6	5	6	6	6	
140	49.44902	67.33	67.33	240.63	6	6	4	5	5	5	6	6	4	6	6	6	6	6	5	6	6	6	
145	50.019	69.73	69.73	246.45	6	6	3	5	4	5	6	6	4	6	6	6	6	6	5	6	6	6	
150	50.56296	72.14	72.14	252.20	6	5	3	5	4	4	6	6	4	6	6	6	6	6	5	6	6	6	
155	51.08265	74.54	74.54	257.89	6	5	3	5	4	4	6	6	4	6	5	5	6	6	4	6	6	6	



CONTRACTOR TO VERIFY ADEQUACY OF STRUCTURE
NOTE: LOADS V_y AND V_x ARE LOADS IMPOSED BY
SLAT ON TRACK. LOADS T_s AND V_s ARE LOADS
IMPOSED ON STRUCTURE BY ANCHORS

IMPACT HURRICANE SYSTEMS, INC. 1114 SE 12TH COURT CAPE CORAL, FL 33390 PHONE: (786) 367-8740																							
TITLE: 55 MM ROLL DOWN SHUTTERS INSET MOUNT ANCHOR SPACING	 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																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; padding: 5px;">REMARKS</th> <th style="text-align: left; padding: 5px;">BY</th> <th style="text-align: left; padding: 5px;">DATE</th> </tr> </thead> <tbody> <tr><td style="height: 30px;"></td><td></td><td></td></tr> <tr><td style="height: 30px;"></td><td></td><td></td></tr> <tr><td style="height: 30px;"></td><td></td><td></td></tr> <tr><td style="height: 30px;"></td><td></td><td></td></tr> <tr><td style="height: 30px;"></td><td></td><td></td></tr> <tr><td style="height: 30px;"></td><td></td><td></td></tr> </tbody> </table>	REMARKS	BY	DATE																			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.	
REMARKS	BY	DATE																					
 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																							

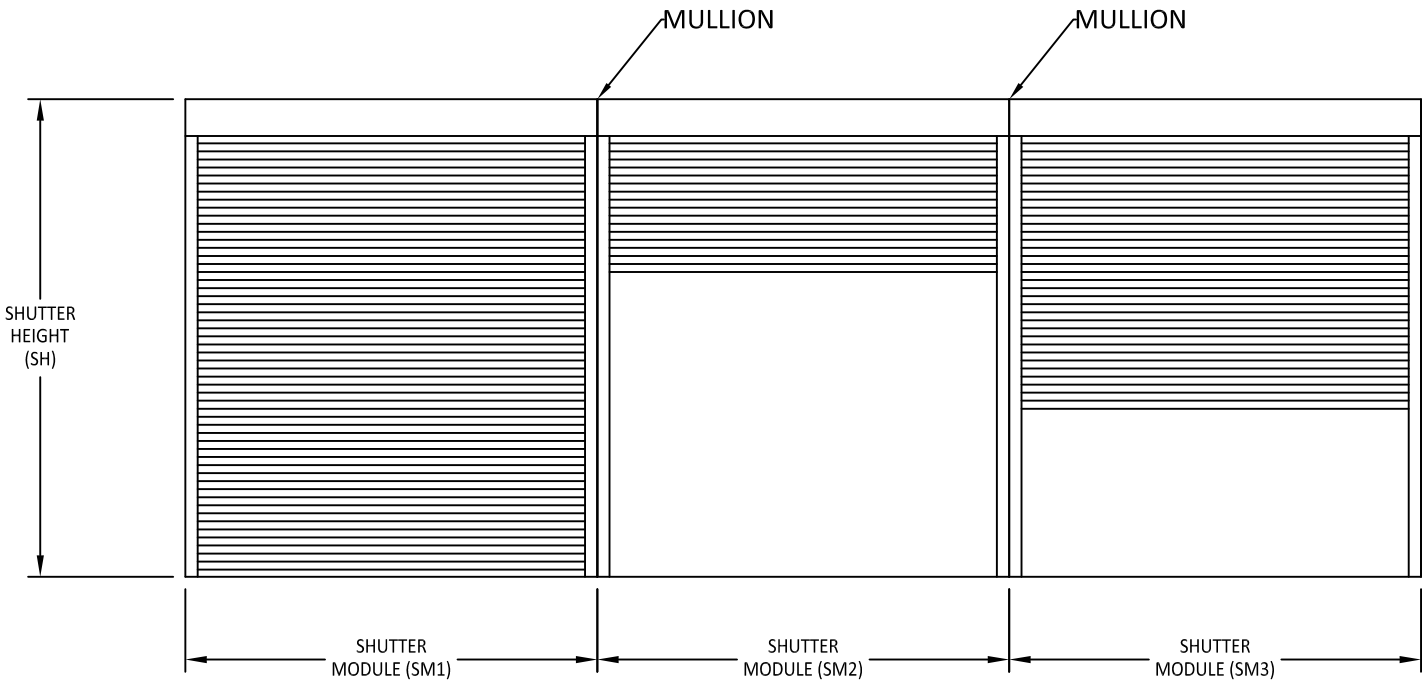
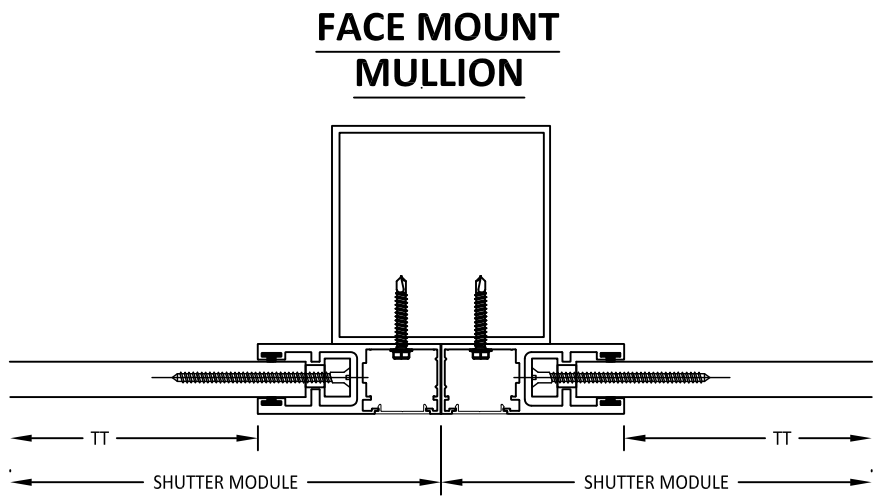
FL #:		FL31649	
DATE:		01.10.2020	
DWG. BY:	YC	CHK. BY:	HFN
SCALE:		NTS	
DWG. #:	IHS003		
SHEET:			

TABLE 4 - ANCHOR SPACING						ANCHOR TYPE & SPACING 2X3 OR 3X3 INSET - MOUNT 3						ANCHOR TYPE & SPACING 2X4 OR 4X4 INSET - MOUNT 3						ANCHOR TYPE & SPACING 2X5 INSET - MOUNT 3					
TT	PD	Vx	Vy	Vs	Ts	A	B	C	D	E	F	A	B	C	D	E	F	A	B	C	D	E	F
180	40	28.28182	25.90	25.90	114.12	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	45	31.01748	29.14	29.14	126.52	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	50	33.61902	32.38	32.38	138.61	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	55	36.09606	35.62	35.62	150.42	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	60	38.45733	38.85	38.85	161.95	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	65	40.71076	42.09	42.09	173.23	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	70	42.86358	45.33	45.33	184.28	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	75	44.92237	48.57	48.57	195.11	6	6	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	80	46.89317	51.81	51.81	205.74	6	6	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	85	48.7815	55.04	55.04	216.17	6	6	5	6	6	6	6	6	5	6	6	6	6	6	6	6	6	6
	90	50.59242	58.28	58.28	226.42	6	6	4	6	5	6	6	6	5	6	6	6	6	6	6	6	6	6
	95	52.3306	61.52	61.52	236.51	6	6	4	6	5	5	6	6	5	6	6	6	6	6	6	5	6	6
	100	54.00035	64.76	64.76	246.43	6	6	3	5	5	5	6	6	4	6	6	6	6	6	6	5	6	6
	105	55.60561	67.99	67.99	256.20	6	5	3	5	4	4	6	6	4	6	5	6	6	6	6	5	6	6
110	57.15006	71.23	71.23	265.84	6	5	3	4	4	4	6	6	4	6	5	5	6	6	4	6	6	6	
115	58.63709	74.47	74.47	275.34	6	5	3	4	4	4	6	6	3	5	5	5	6	6	4	6	6	6	
120	60.06984	77.71	77.71	284.71	6	4	3	4	3	4	6	6	3	5	4	5	6	6	4	6	5	5	
192	40	26.6151	27.57	27.57	113.35	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	45	28.99952	31.02	31.02	125.32	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	50	31.23841	34.46	34.46	136.96	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	55	33.3447	37.91	37.91	148.29	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	60	35.32984	41.35	41.35	159.34	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	65	37.20398	44.80	44.80	170.13	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	70	38.97618	48.25	48.25	180.68	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	75	40.65454	51.69	51.69	191.01	6	6	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	80	42.24632	55.14	55.14	201.14	6	6	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	85	43.75804	58.59	58.59	211.09	6	6	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	90	45.19561	62.03	62.03	220.86	6	6	4	6	5	6	6	6	5	6	6	6	6	6	6	6	6	6
	95	46.56435	65.48	65.48	230.47	6	6	4	6	5	5	6	6	5	6	6	6	6	6	6	5	6	6
100	47.86908	68.92	68.92	239.94	6	6	3	5	5	5	6	6	4	6	6	6	6	6	6	5	6	6	
204	40	28.5988	29.24	29.24	121.07	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	45	31.03665	32.89	32.89	133.56	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	50	33.30807	36.55	36.55	145.66	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	55	35.42955	40.20	40.20	157.42	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	60	37.41546	43.85	43.85	168.85	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	65	39.27839	47.51	47.51	180.00	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	70	41.02942	51.16	51.16	190.90	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
75	42.67835	54.82	54.82	201.55	6	6	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
216	40	30.58901	30.90	30.90	128.81	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	45	33.07671	34.77	34.77	141.81	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	50	35.37847	38.63	38.63	154.37	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	55	37.5144	42.49	42.49	166.54	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
240	40	34.58568	34.24	34.24	144.33	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	45	37.16404	38.52	38.52	158.31	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	50	39.52107	42.80	42.80	171.78	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
264	40	38.59982	37.57	37.57	159.89	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	45	41.259	42.27	42.27	174.83	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
288	40	42.62764	40.90	40.90	175.47	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6



OF 14

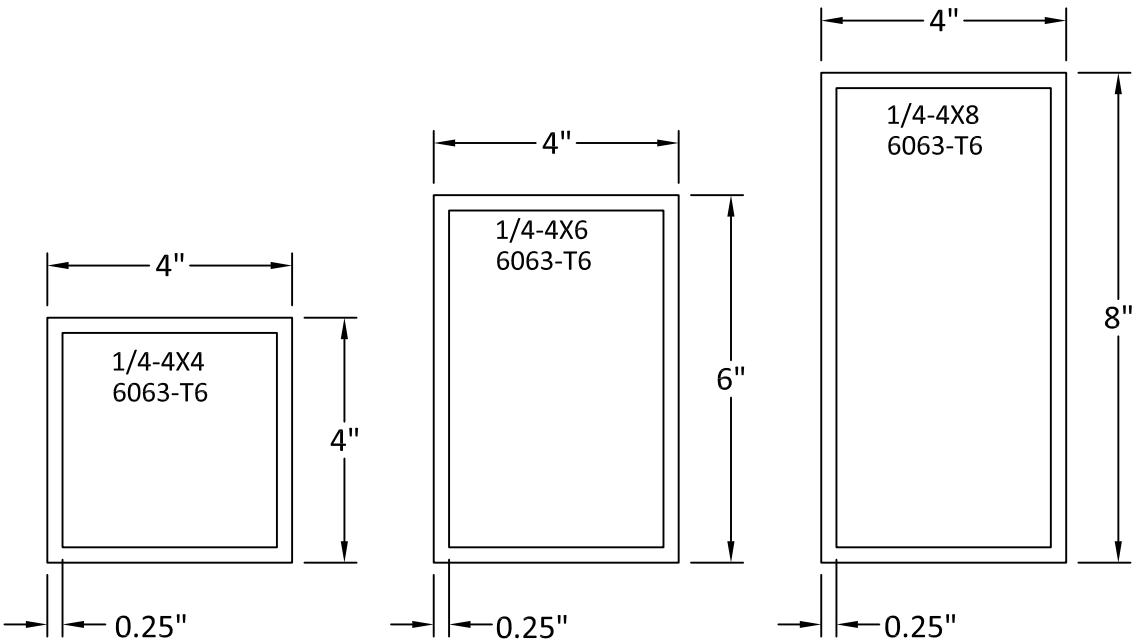
EQUALLY SPACED MULLIONS SELECTION



SM1 = SM2 = SM3

MAXIMUM MULLION DESIGN PRESSURE (PSF)									
TT Max.	1/4-4x8 MULLION SPAN			1/4-4x6 MULLION SPAN			1/4-4x4 MULLION SPAN		
	144	120	96	144	120	96	144	120	96
288	34	40	40	N/A	29	40	N/A	N/A	21
264	37	60	60	N/A	31	60	N/A	N/A	23
240	41	71	75	20	35	68	N/A	N/A	25
216	45	79	95	22	39	76	N/A	N/A	28
204	48	83	100	23	41	80	N/A	N/A	30
192	51	89	105	25	43	85	N/A	N/A	32
180	54	95	120	27	46	91	N/A	N/A	34
168	58	101	130	29	50	98	N/A	N/A	36
144	68	118	145	33	58	114	N/A	22	42
132	74	129	155	36	63	124	N/A	24	46
120	82	142	160	40	70	137	N/A	26	51
108	91	158	170	45	78	152	N/A	29	57
96	103	178	180	50	87	171	N/A	33	64

- NOTES:
- MULLIONS WERE DESIGNED BY RATIONAL ANALYSIS BASED ON THE ALUMINUM DESIGN MANUAL AND THE FLORIDA BUILDING CODE. ABOVE LOADS ARE ALSO LIMITED BY THE MAX. CAPACITY OF THE PRODUCT.
 - DEFLECTION CRITERIA: MAX. SPAN/180
 - VALUES ABOVE ARE APPLICABLE ONLY FOR EQUAL MODULES SM1=SM2=SM3
 - UNEQUAL MODULES ARE TO BE DESIGNED BY RATIONAL ANALYSIS IN A CASE BY CASE BASIS.



IMPACT HURRICANE
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CAPE CORAL, FL 33390
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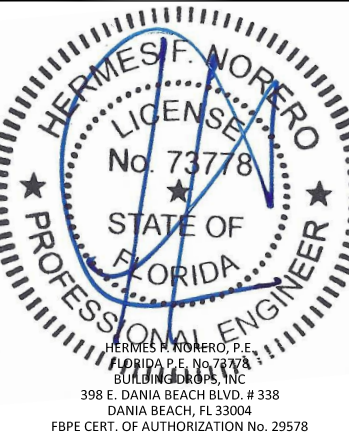
TITLE:
55 MM ROLL DOWN SHUTTERS
EQUALLY SPACED MULLIONS

PREPARED BY:
BUILDING DROPS, INC.
398 E. DANIA BEACH BLVD., STE. 338
DANIA BEACH, FL 33004
PH: (954)399-8478
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REMARKS	BY	DATE

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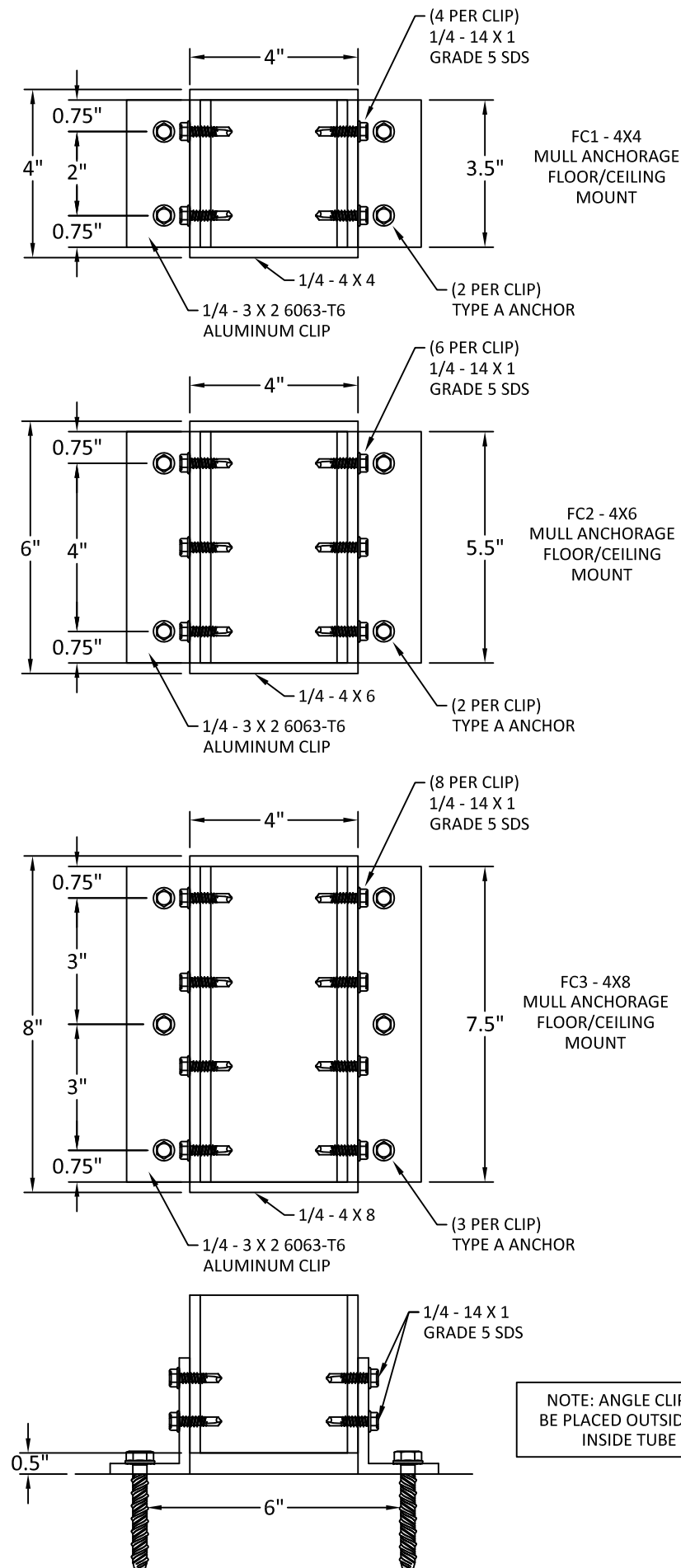
DATE: **01.10.2020**

DWG. BY: **YC** CHK. BY: **HFN**

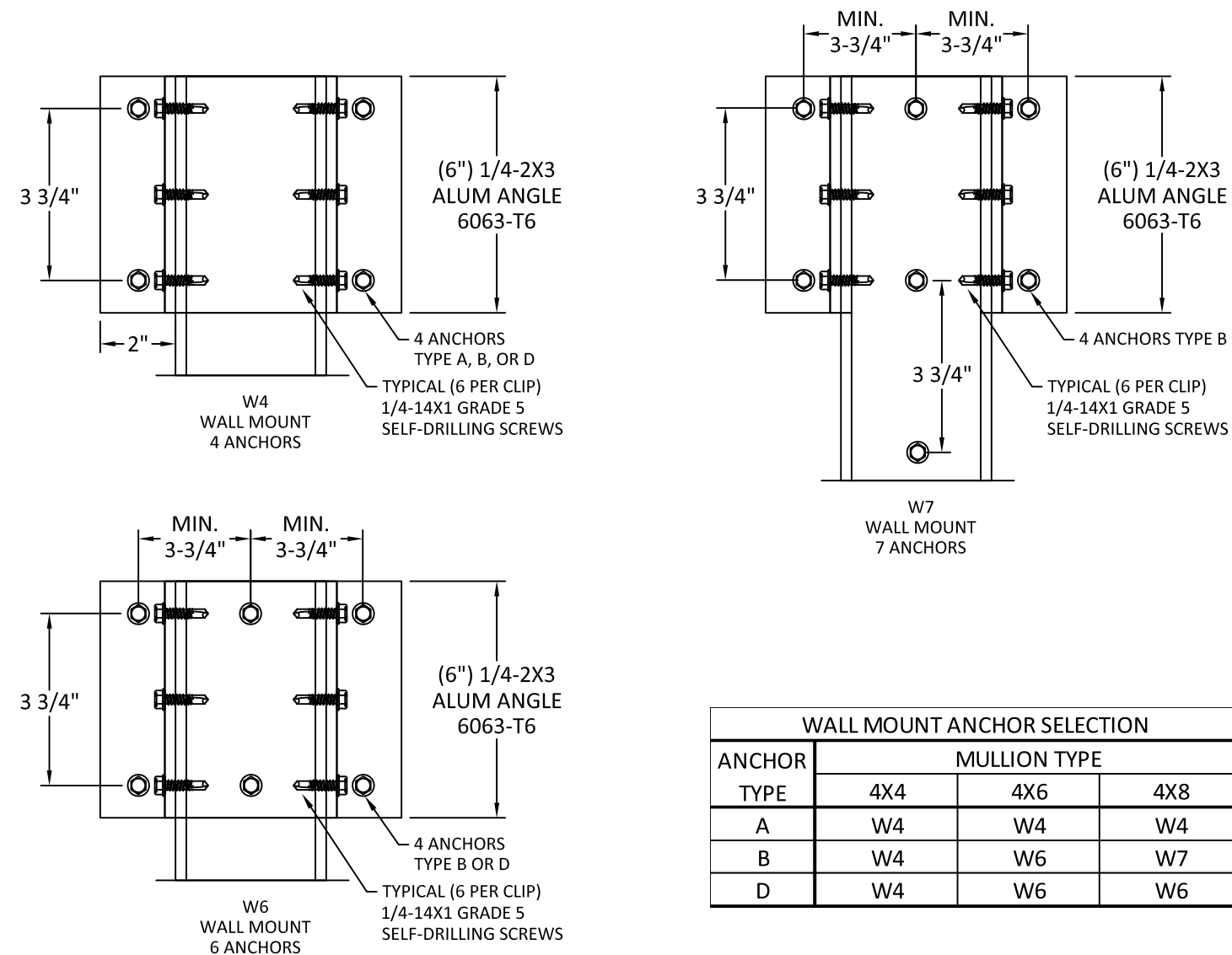
SCALE: **NTS**

DWG. #: **IHS003**

SHEET:



EQUALLY SPACED MULLIONS WALL AND INSET CONNECTIONS



WALL MOUNT ANCHOR SELECTION			
ANCHOR TYPE	MULLION TYPE		
	4X4	4X6	4X8
A	W4	W4	W4
B	W4	W6	W7
D	W4	W6	W6

FLOOR/CEILING MOUNT ANCHOR SELECTION			
ANCHOR TYPE	MULLION TYPE		
	4X4	4X6	4X8
A	FC1	FC2	FC3

ANCHOR SCHEDULE:

ANCHOR	DESCRIPTION	MATERIAL	EMBEDMENT	EDGE DISTANCE
A	3/8" X 4" WEDGE BOLT	MIN. 3000 PSI CONCRETE	3 1/2"	3 3/4"
B	5/16" X 3" TAPCON	MIN. 3513 PSI CONCRETE	2"	3 1/8"
D	5/16" X 3" TAPCON	GROUT FILLED C-90 BLOCK	2 1/4"	4"

IMPACT HURRICANE
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TITLE: 55 MM ROLL DOWN SHUTTERS

MULLION CONNECTIONS

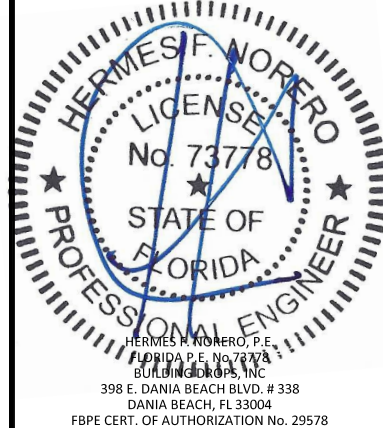
PREPARED BY: BUILDING DROPS, INC.

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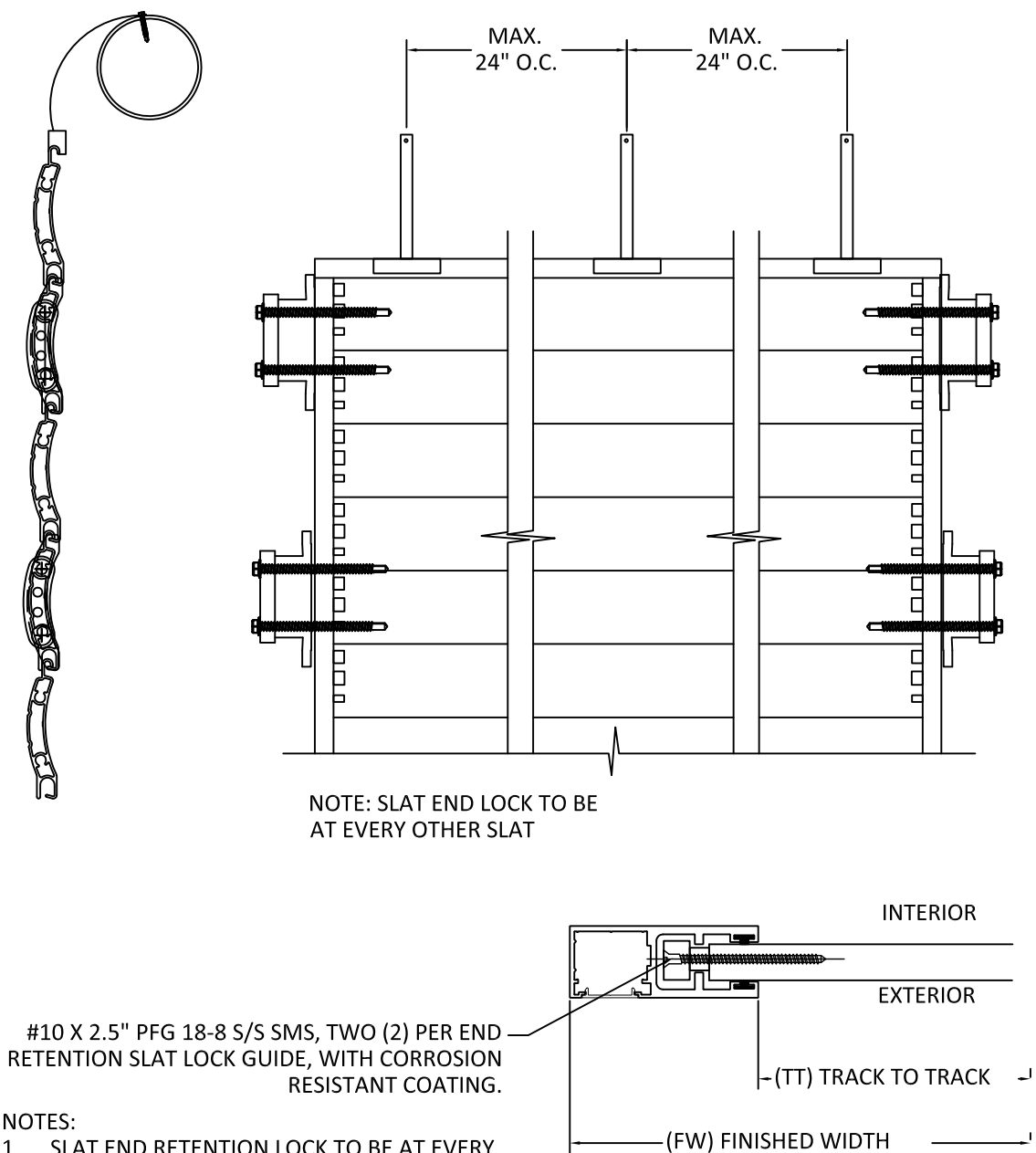
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DWG. #: IHS003

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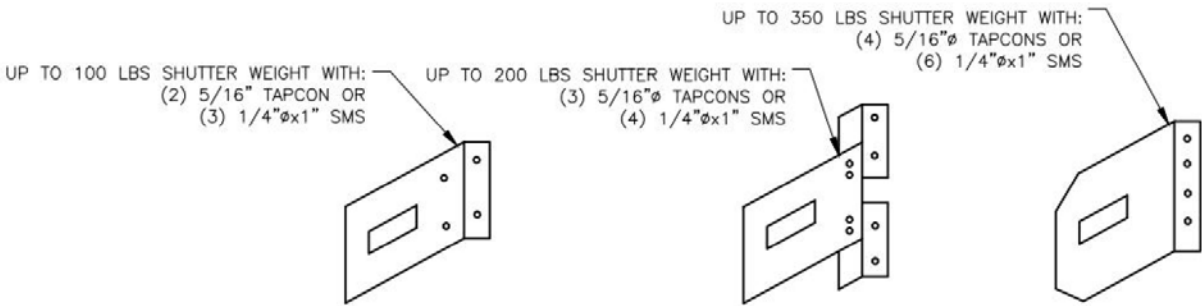
12

SLAT END RETENTION LAY-OUT

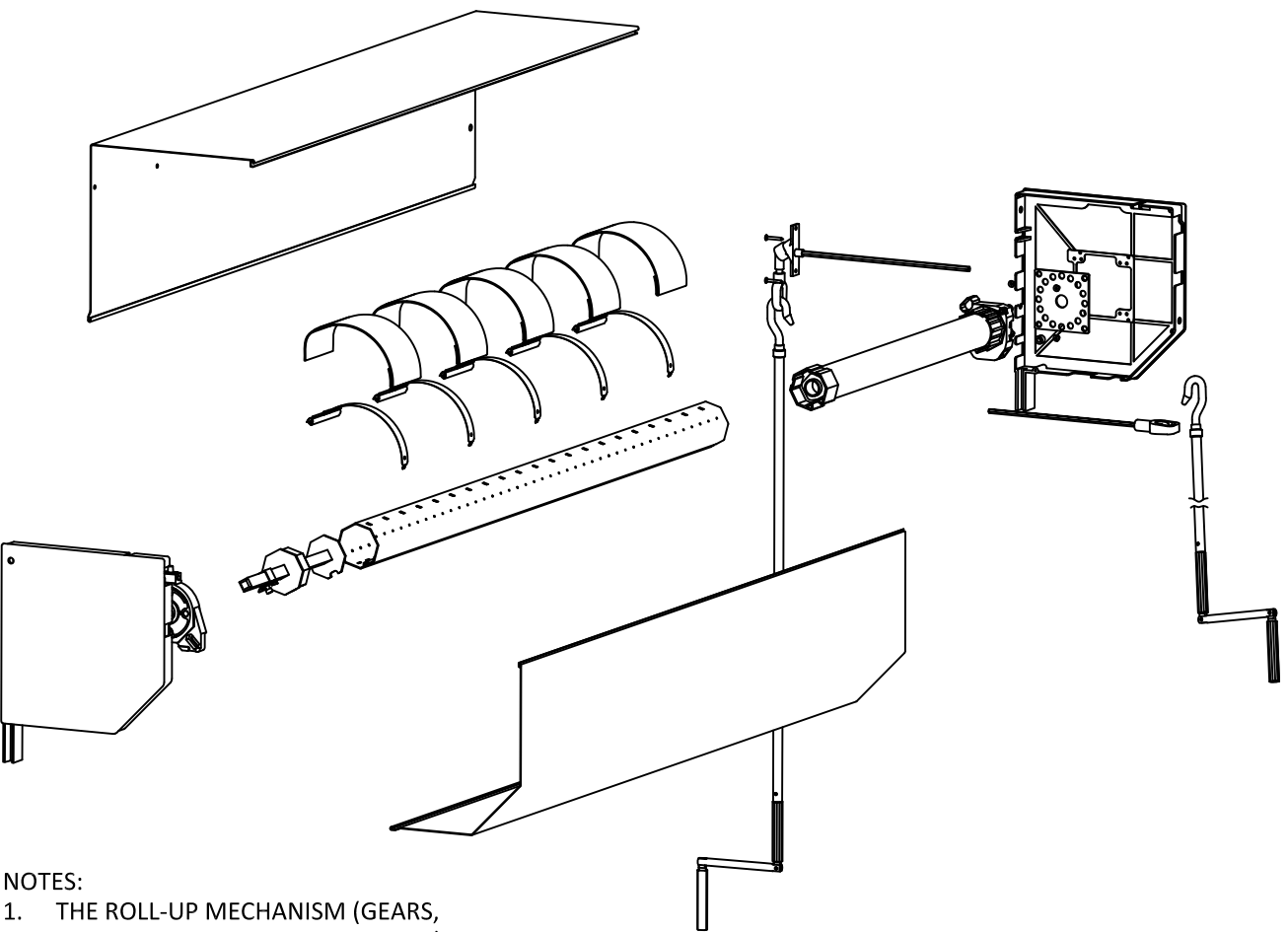


NOTES:
1. SLAT END RETENTION LOCK TO BE AT EVERY OTHER SLAT.

MOUNTING BRACKET



HOOD ASSEMBLY EXPLODED



- NOTES:
- 1. THE ROLL-UP MECHANISM (GEARS, MOTOR, SUPPORTING END PLATES) ARE NOT APART OF THIS APPROVAL.
 - 2. THE USE OF 50MM, 60 MM, 70MM AND 100MM ALUMINUM TUBE IS ACCEPTABLE.
 - 3. TUBULAR MOTOR MAY BE REPLACED WITH GEAR FOR MANUAL OPERATION.

IMPACT HURRICANE
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TITLE:
55 MM ROLL DOWN SHUTTERS
SLAT END RETENTION & HOOD
ASSEMBLY

PREPARED BY:
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HERMES H. 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 #:
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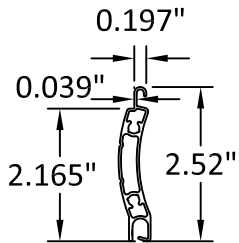
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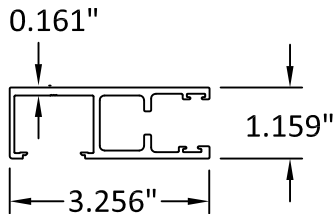
BILL OF MATERIALS			
ITEM NO.	DESCRIPTION	MATERIAL	MANUFACTURER
1	SLAT	6063-T6	ALUMINA
2	HEAVY GUIDE RAIL	6063-T6	ALUMINA
3			
4	COVER CAP	6063-T6	ALUMINA
5	SLAT LOCK	POLYACETAL	-
6	ALUMINUM L ANGLE	6063-T6	-

1 SLAT
6063-T6

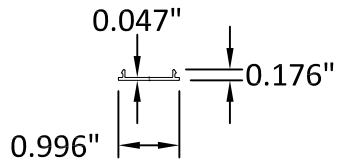


2 HEAVY GUIDE RAIL
6063-T6

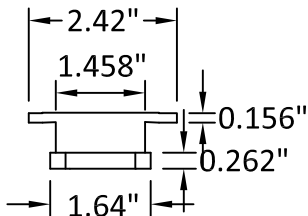
END RETENTION
SPAN > 72"



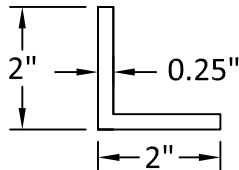
4 COVER CAP
6063-T6



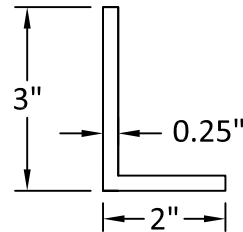
5 SLAT LOCK-
POLYACETAL



6 ALUMINUM L ANGLE
6063-T6



6A ALUMINUM L ANGLE
6063-T6



IMPACT HURRICANE
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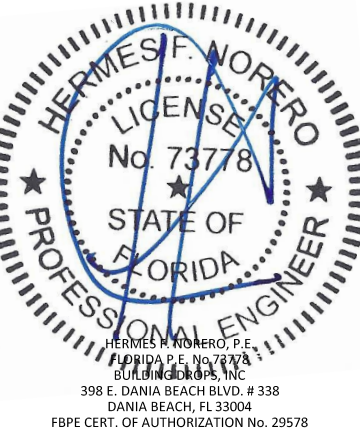
TITLE:
55 MM ROLL DOWN SHUTTERS
BILL OF MATERIALS AND
COMPONENTS

PREPARED BY:
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14
OF 14