GENERAL NOTES:

- 1. THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE HIGH VELOCITY HURRICANE ZONE (HVHZ) AND NON-HIGH VELOCITY HURRICANE ZONE (NON-HVHZ) OF THE 5TH EDITION FLORIDA BUILDING CODE (2014).
- 2. SYSTEM RATED FOR LARGE AND SMALL MISSILE IMPACT.
- 3. STAINLESS STEEL SHEET METAL SCREWS USED AT LOUVER PIN SHALL BE # 14 x 3", 410-HT MINIMUM SERIES W/ 135.0 ksi YIELD STRENGTH & 180 ksi TENSILE STRENGTH. SCREWS SHALL BE COATED WITH XYLAN 5000 SERIES FLUOROPOLYMER COATINGS AS MANUFACTURED BY WHITFORD Co, BOX 507. WEST CHESTER PA 19381.
- 4. ALL ALUMINUM EXTRUSIONS SHALL BE 6063-T6 ALLOY WITH MINIMUM YIELD STRENGTH OF Fy=31.0 ksi.
- 5. ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON DETAILS. ANCHORS EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
- 6. ANCHORING OR LOADING CONDITIONS NOT SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.
- 7. WOOD BUCKS BY OTHERS MUST BE SOUTHERN PINE, G = 0.55 AND MUST BE ANCHORED PROPERLY TO TRANSFER LOADS TO THE STRUCTURE.
- 8. ALL ALUMINUM POP RIVETS TO BE 5052 ALUMINUM ALLOY WITH ALUMINUM MANDREL.
- 9. BOLTS TO BE GALVANIZED OR STAINLESS STEEL WITH 36 ksi MINIMUM YIELD STRENGTH.
- 10. SHUTTER'S COMPONENTS ARE PATENT PENDING.
- 11. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE SHUTTER IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE. THIS SHUTTER SHALL ONLY BE ATTACHED TO CONCRETE, BLOCK OR WOOD FRAME BUILDINGS.
- 12. A PERMANENT SHUTTER MANUFACTURER'S LABEL SHALL BE PLACED ON THE EXPOSED SURFACE OF THE CENTER MATE. ONE LABEL SHALL BE PLACED FOR EVERY OPENING.

LABEL SHALL READ AS FOLLOWS:

"PERFORMANCE SYSTEM 2 ACCORDION SHUTTER" HURRICANE PROTECTION MANUFACTURERS ASSOCIATION OPA-LOCKA, FLORIDA MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED TEST REPORT TAS-201, 202 & 203.

- 13. (a) THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) PREPARED BY THIS ENGINEER IS GENERIC.
 - (b) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT BASED ON THIS PRODUCT APPROVAL PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT. CONSTRUCTION SAFETY AT SITE IS THE CONTRACTOR'S RESPONSIBILITY.
 - (c) THIS PRODUCT APPROVAL DOCUMENT WILL BE CONSIDERED INVALID IF MODIFIED.
 - (d) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R.) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.E.D. ENGINEER OF RECORD, ACTING AS DELEGATED ENGINEER TO THE P.E.D. ENGINEER, SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.
- (e) THIS P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER THAT PREPARED IT.
- 14. ULTIMATE LOAD OBTAINED FROM ASCE 7-10, MULTIPLY BY 0.6 SHALL BE LESS THAN OR EQUAL TO MAX. DESIGN LOAD IN THIS DOCUMENT. THE DESIGN LOADS SHOWN IN THIS DOCUMENT ARE ALLOWABLE DESIGN LOADS.

TYPICAL ANCHORS: (SEE CHARTS FOR ANCHOR SPACING)

1/4" DIA. ITW TAPCON BY ITW BUILDEX

Fu = 120 KSI, Fy = 92 KSI INTO CONCRETE fc'=3000 PSI

1-3/4" MIN. EMBED

2-1/2" MIN. EDGE DISTANCE

TYPE A1. INTO CONCRETE BLOCK

1-1/4" MIN. EMBED

2-1/2" MIN. EDGE DISTANCE

TYPE B. 1/4"-20 CALK-IN BY 'POWERS' FASTENERS

INTO CONCRETE fc'=3000 PSI 7/8" MIN. EMBED 3" MIN. EDGE DISTANCE

TYPE B1. INTO CONCRETE BLOCK

7/8" MIN. EMBED

3" MIN. EDGE DISTANCE

TYPE C. 1/4" CRETE-FLEX SS4 MASONRY ANCHOR BY "ELCO" CONSTRUCTION PRODUCTS

Fu = 120 KSI, Fy = 92 KSI

INTO CONCRETE fc'=3000 PSI

1 3/4" MIN. EMBED

2 1/2" MIN. EDGE DISTANCE

TYPE C1. INTO CONCRETE BLOCK

1 1/4" MIN. EMBED

2 1/2" MIN. EDGE DISTANCE

NOTES:

WHEN EDGE DISTANCE EQUAL OR GREATER THAN 2" AND LESS THAN MIN. EDGE DISTANCE SPECIFIED ABOVE THE ANCHOR SPACE IN ANCHOR CHARTS ON THE DRAWINGS MUST MULTIPLY BY FOLLOWING REDUCTION FACTOR:

ANCHOR TYPE A, & A1: REDUCTION FACTOR = 0.77 ANCHOR TYPE B & B1: REDUCTION FACTOR = 0.50 ANCHOR TYPE C & C1: REDUCTION FACTOR = 0.77

PLEASE NOTE THIS INSTALLATION ARE ONLY VALID FOR THE RESULTING ANCHOR SPACE EQUAL OR GREATER THAN 3".



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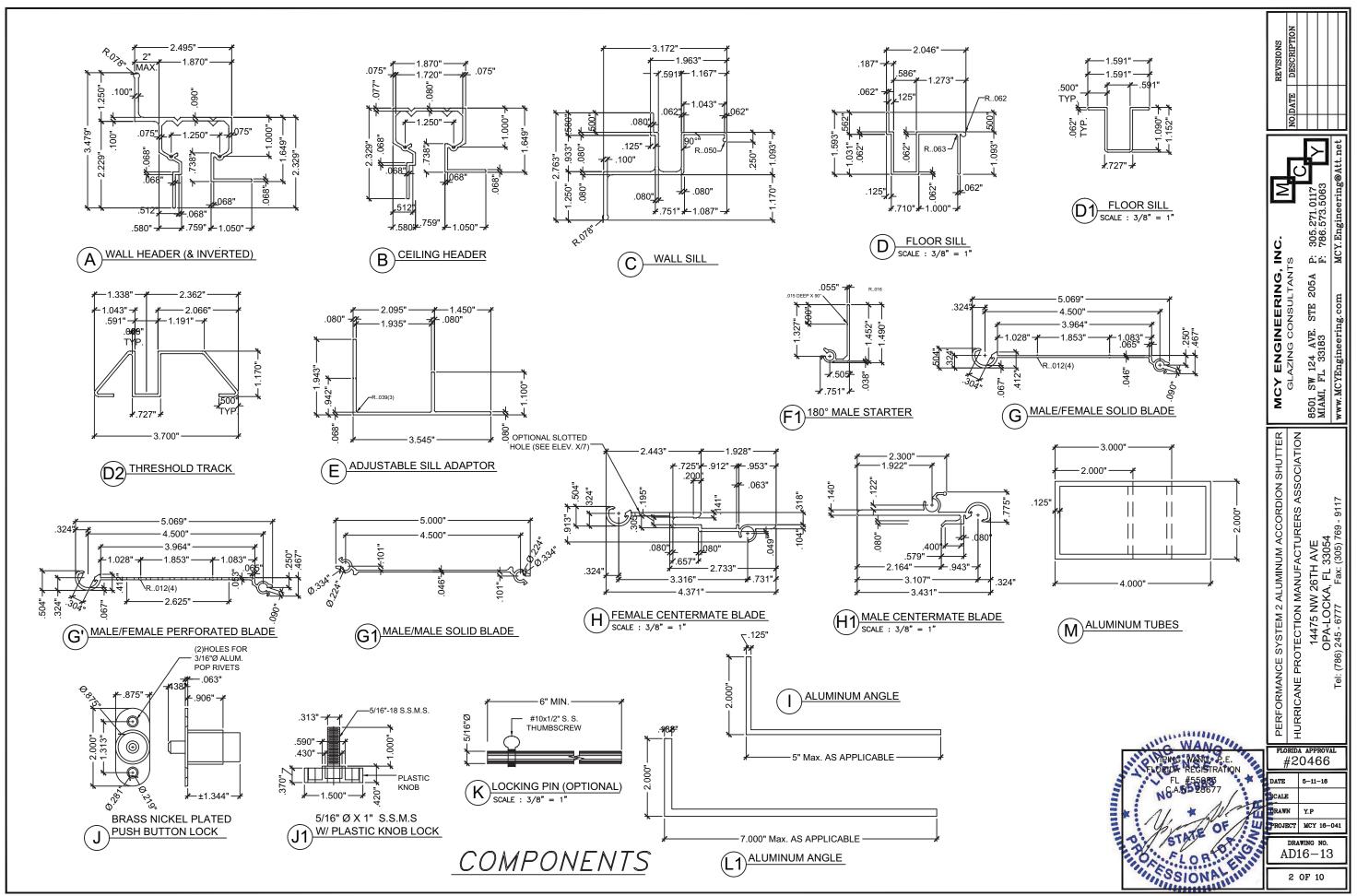
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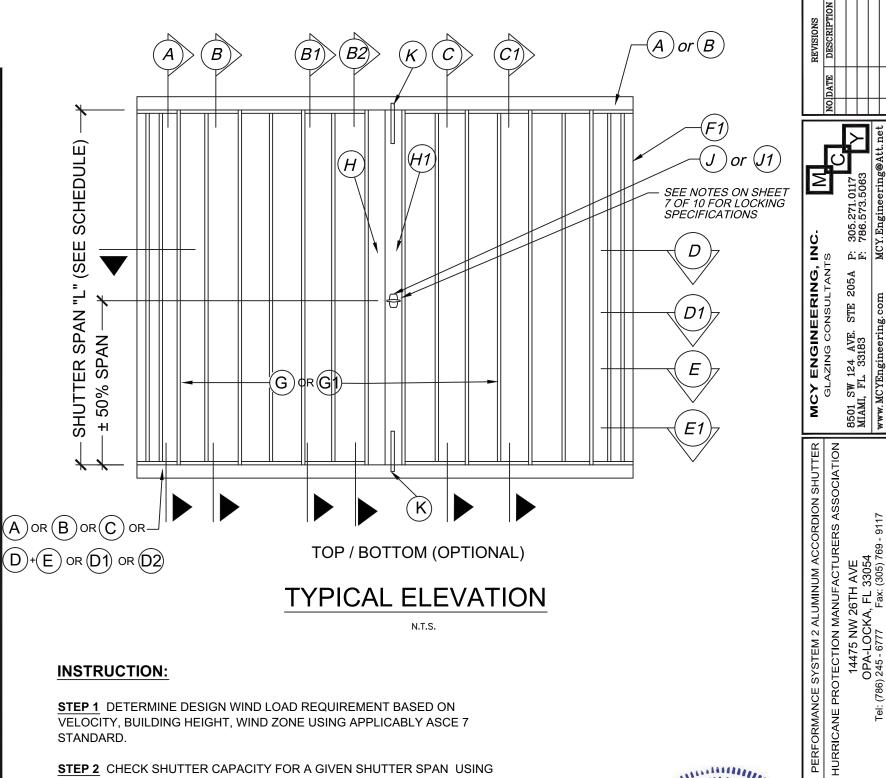
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MAXIMUM DESIGN PRESSURE RATING "Pd" (PSF) AND CORRESPONDING MAXIMUM SPAN "L" SCHEDULE.

MAXIMUM DESIGN LOAD "Pd" (PSF)	MAXIMUM SHUTTER SPAN FOR ALL SECTIONS			NON-HVHZ NO MIN. SEPARATION
	Max. PANEL LENGTH L+ (ft.)	Max. PANEL LENGTH L- (ft.)	TO GLASS (in.) ALL SECTIONS	IS REQUIRED
40	13'-2"	14'-1"	3.0	-
45	12'-9"	14'-1"	3.0	-
50	12'-5"	14'-1"	3.0	-
55	12'-2"	13'-5"	3.0	-
60	11'-11"	12'-10"	3.0	-
65	11'-8"	12'-4"	3.0	-
70	11'-5"	11'-11"	3.0	-
75	11'-3"	11'-6"	3.0	-
80	11'-1"	11'-2"	3.0	-
85	10'-10"	10'-10"	3.0	-
90	10'-6"	10'-6"	3.0	-
95	10'-3"	10'-3"	2.875	-
100	10'	10'	2.875	-
105	9'-9"	9'-9"	2.625	-
110	9'-6"	9'-6"	2.5	-
115	9'-4"	9'-4"	2.5	-
120	9'-1"	9'-1"	2.5	-
125	8'-10"	8'-10"	2.5	-
130	8'-6"	8'-6"	2.375	-
135	-	8'-2"	2.375	-
140	-	7'-11"	2.375	-
145	-	7'-7"	2.375	-
150	-	7'-4"	2.375	-
155	-	7'-2"	2.375	-
160	-	6'-11"	2.375	-
165	-	6'-8"	2.375	-
170	-	6'-6"	2.375	-
175	-	6'-4"	2.375	-
180	-	6'-2"	2.375	-
185	-	6'	2.375	-
190	-	5'-10"	2.375	-
195	-	5'-8"	2.375	-



TYPICAL ELEVATION

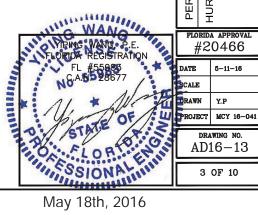
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INSTRUCTION:

STEP 1 DETERMINE DESIGN WIND LOAD REQUIREMENT BASED ON VELOCITY, BUILDING HEIGHT, WIND ZONE USING APPLICABLY ASCE 7 STANDARD.

STEP 2 CHECK SHUTTER CAPACITY FOR A GIVEN SHUTTER SPAN USING CHARTS ON SHEET 3. MAX. DESIGN LOAD FROM CHART HAS TO BE GREATER THAN DESIGN WIND LOAD FROM STEP 1.

STEP 3 USING CHARTS ON SHEET 4 THRU SHEET 10 SELECT ANCHOR TYPE AND SPACING BASED ON DESIGN LOAD AND SHUTTER SPAN FOR THE ANCHOR DETAIL USED.



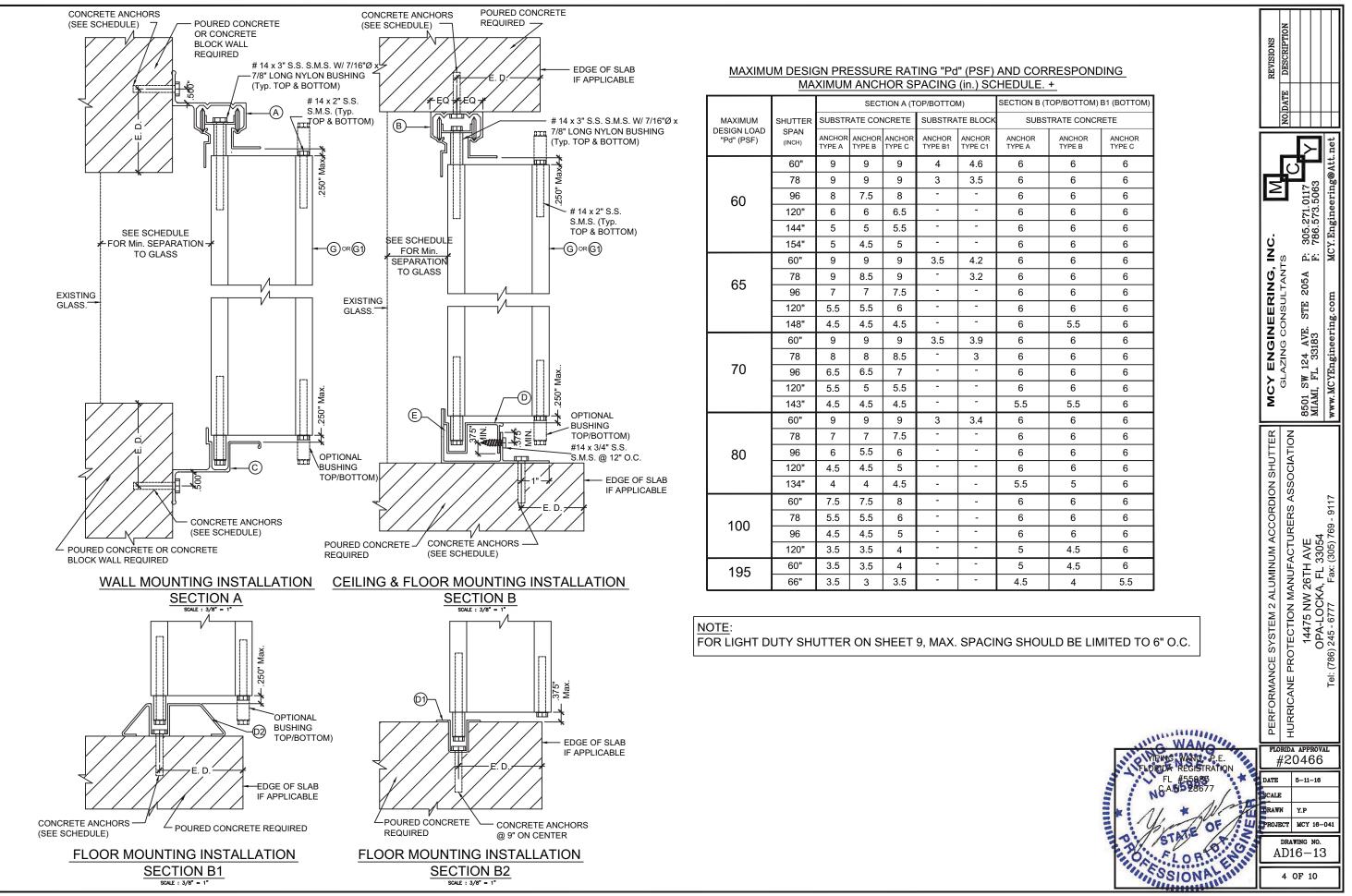
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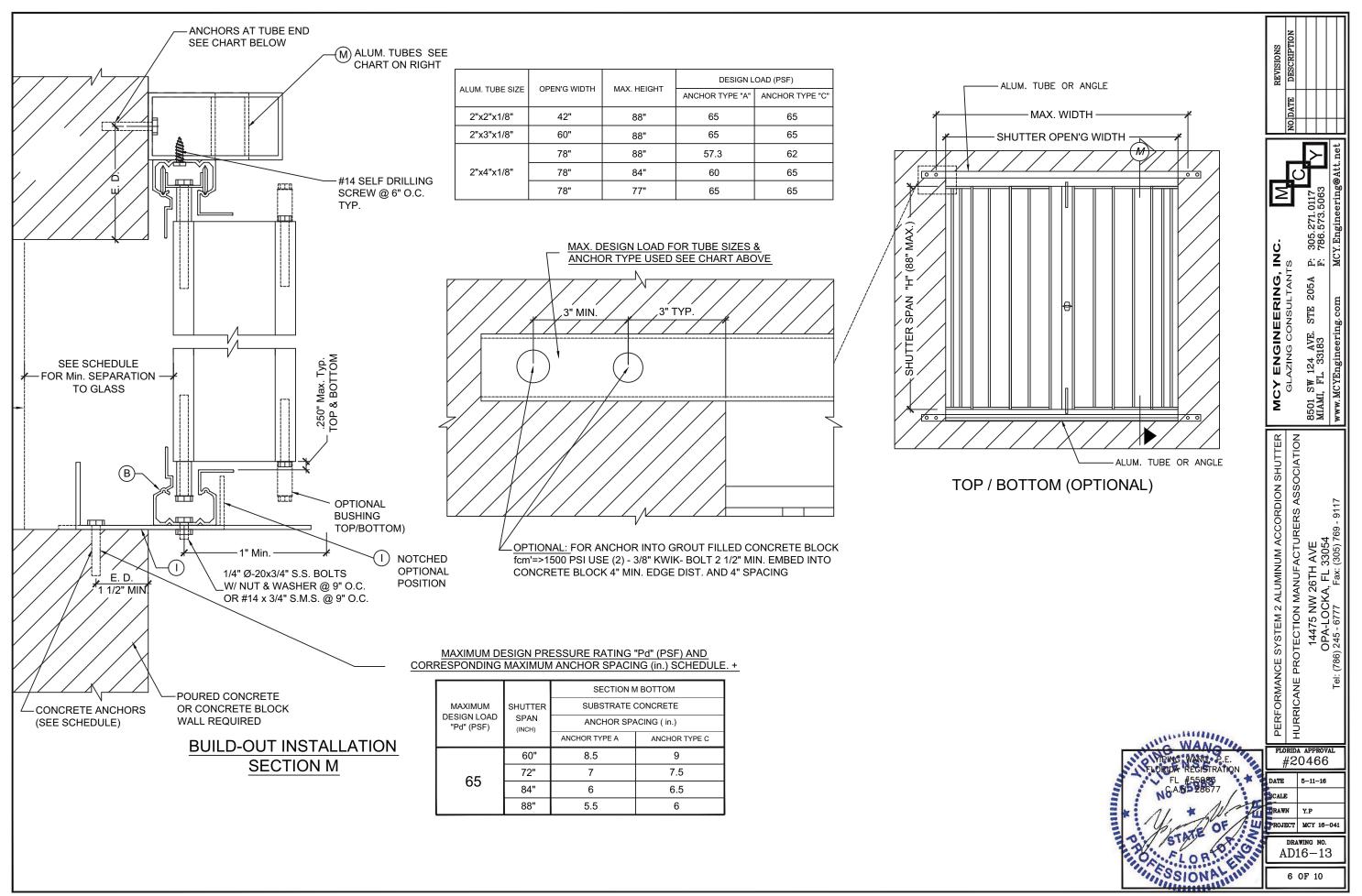
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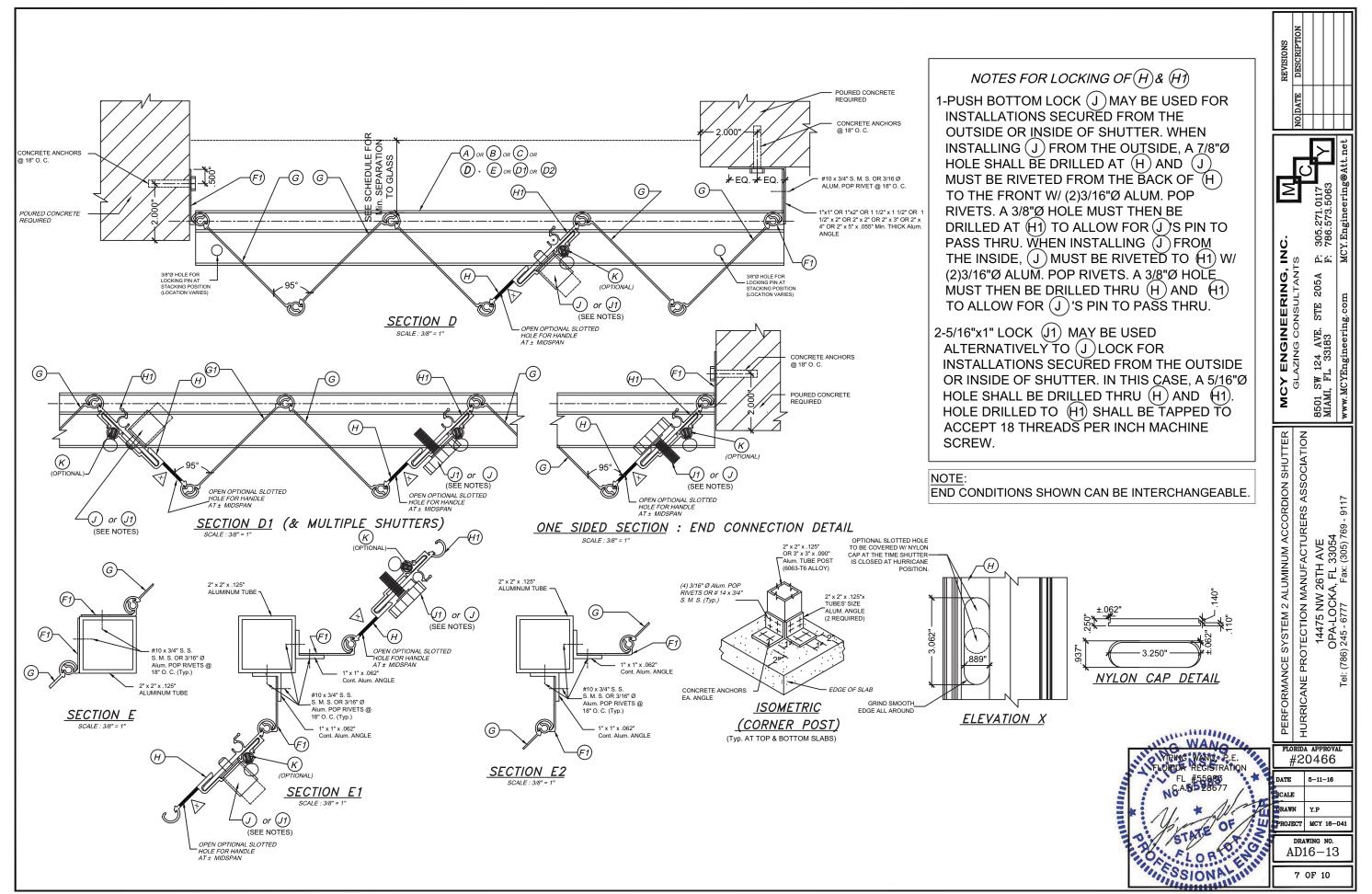
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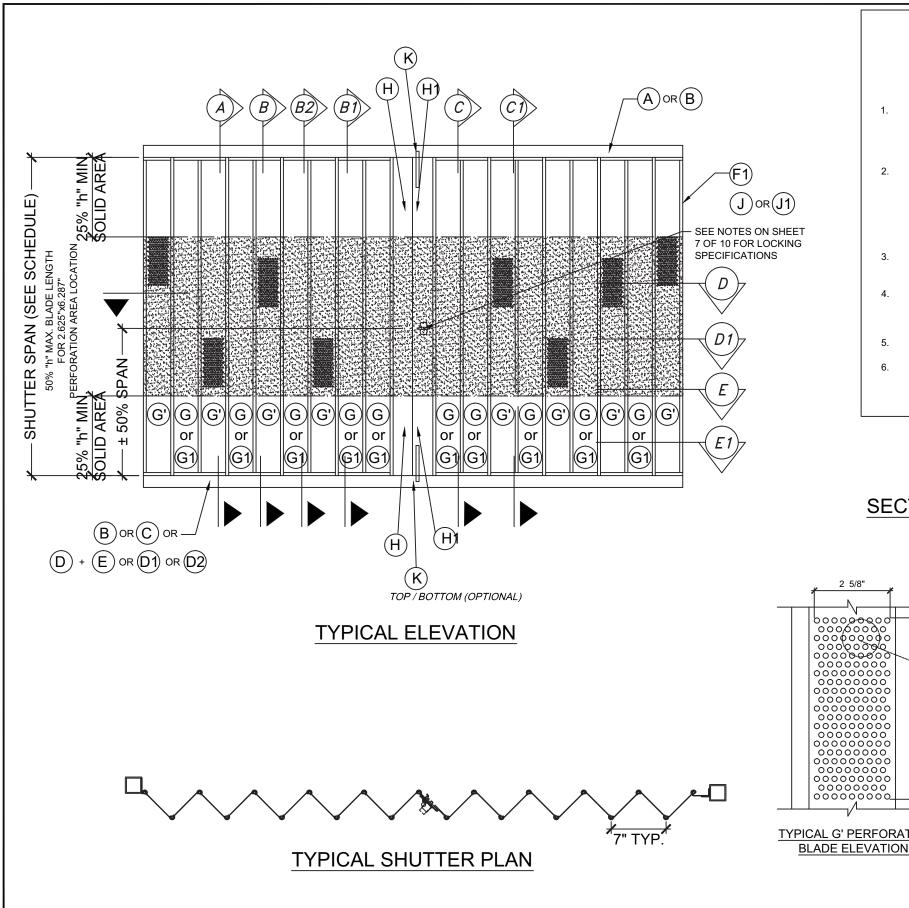
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MAXIMUM DESIGN PRESSURE RATING "Pd" (PSF) AND CORRESPONDING MAXIMUM ANCHOR SPACING (in.) SCHEDULE. + SECTION C1 BOTTOM SECTION C TOP/BOTTOM SUBSTRATE CONCRETE SUBSTRATE BLOCK SUBSTRATE CONCRETE SUBSTRATE BLOCK MAXIMUM SHUTTER DESIGN LOAD ANCHOR ANCHOR ANCHOR ANCHOR ANCHOR ANCHOR TYPE A1 TYPE B1 TYPE C1 ANCHOR ANCHOR ANCHOR ANCHOR ANCHOR TYPE A TYPE B TYPE C TYPE A1 TYPE B1 TYPE C1 "Pd" (PSF) 60" 5.5 8.1 4 6 6 6 4 6 78" 3 4.5 4.5 6 6.3 6 6 6.3 60 3.5 5.1 5.1 96" 6 4 6 6 120' 4.1 6 3 4.1 POURED CONCRETE 144" 6 6 3.4 6 6 6 3.4 6 .0117 .5063 OR CONCRETE BLOCK WALL REQUIRED 154" 6 6 3.2 6 3.2 6 6 271. 573. 1/4" Ø-20x3/4" S.S. BOLTS 60" 3.7 7.5 3.7 5.5 CONCRETE ANCHORS 6 6 6 5 6 6 6 7.5 W/ NUT & WASHER @ 9" O.C. (SEE SCHEDULE) 78 6 6 4 5.8 6 6 4.5 5.8 305. 6 OR #14 x 3/4" S.M.S. 65 ENGINEERING, INC. AZING CONSULTANTS @ 9" O.C. 96 6 3 4.7 6 3.5 4.7 6 6 6 -(1) 댓닭 🔀 120" 3.8 3.8 6 6 6 6 6 6 205A 148" 6 6 6 3.1 6 6 6 3.1 *EQ *EQ + 60" 6 3.4 3.4 5.5 6 6 5 6 6 STE 78 6 6 3.5 5.4 6 6 4 5.4 # 14 x 3" S.S. S.M.S. W/ 7/16"Ø x 70 7/8" LONG NYLON BUSHING 3 4.4 96 6 3 4.4 6 6 6 6 6 8501 SW 124 AVE. MIAMI, FL. 33183 (Typ. TOP & BOTTOM) 120" 3.5 6 3.5 6 6 6 6 6 143" 6 6 6 6 6 60" 4 6.1 6 4.5 6.1 MCY GL, 3.5 78 6 6 3 4.7 6 6 4.7 6 6 # 14 x 2" S.S. S.M.S. (Typ. TOP 80 3.8 3 96 6 6 6 6 6 6 3.8 & BOTTOM) ANGLE (1) 120" 3.1 3.1 6 6 6 6 6 6 PERFORMANCE SYSTEM 2 ALUMINUM ACCORDION SHUTTER CAN BE PROTECTION MANUFACTURERS ASSOCIATION 14475 NW 26TH AVE OPA-LOCKA, FL 33054 : (786) 245 - 6777 Fax: (305) 769 - 9117 134" 5.5 INVERTED -GORG1 60" 3.5 4.9 3.5 4.9 6 6 6 6 3.8 78 6 6 3.8 6 6 6 SEE SCHEDULE 100 — FOR Min. SEPARATION — 96 3.1 3.1 6 6 6 6 6 TO GLASS 120' 5.5 5 5 5.5 5 6 **EXISTING** 5.5 5 5.5 60" 5 5 6 GLASS. -195 66" 4.5 4.5 5 5 5.5 ANGLE (1) ANGLE (1) CAN BE CAN BE INVERTED INVERTED POURED CONCRETE OPTIONAL HURRICANE OR CONCRETE BLOCK **OPTIONAL** BUSHING WALL REQUIRED TOP/BOTTOM) BUSHING TOP/BOTTOM) #14 x 3/4" S.M.S. VIEWS WANG P.E. FLORIDA REGISTRATION @ 12" O.C. 1/4" Ø-20x3/4" S.S. BOLTS FLORIDA APPROVAL _W/ NUT & WASHER @ 9" O.C. #20466 OR #14 x 3/4" S.M.S. 1/4" Ø-20x3/4" S.S. BOLTS @ 9" O.C. 5-11-16 W/ NUT & WASHER @ 9" O.C. CONCRETE ANCHORS CONCRETE ANCHORS (SEE OR #14 x 3/4" S.M.S. (SEE SCHEDULE) -POURED CONCRETE SCHEDULE) @ 9" O.C. Y.P OR CONCRETE BLOCK PROJECT MCY 16-041 WALL REQUIRED Way 10" **BUILD-OUT INSTALLATION BUILD-OUT INSTALLATION** DRAWING NO. SECTION C SECTION C1 AD16-13 5 OF 10







GENERAL LIMITATIONS AND CONDISTIONS OF USE FOR G OR G1 BLADE ACCORDIAN SHUTTER SYSTEM WORKING IN UNISON WITH G' BLADES.

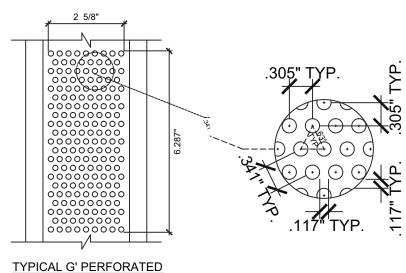
- MAXIMUM SHUTTER SPAN AND PRESSURE RATING, MAXIMUM ANCHOR SPACING AND MINIMUM SEPARATION TO GLASS FOR G' AND G1' WORKING IN UNISON WITH G AND G1 ARE AS PER SCHEDULES ON SHEET 3, 4, 5 & 9.
- MAXIMUM PERFORATION AREA AT G', G1' IS ±2.625" x 6.28" AND 2. MUST BE LOCATED WITHIN THE CENTRAL 50% OF THE BLADE

PERFORATED BLADES G, G1 MUST BE SOLID AT THE TOP AND BOTTOM 25% OF BLADES SPAN.

- PERFORATED BLADES G', G1' SHALL BE INSTALLED AT EVERY OTHER BLADE (FREQUENCY).
- CENTERMATES H, H1 MUST ALWAYS BE ACCOMPANIED BY 4. TWO SOLID BLADES G, G1 AT EITHER SIDE OF EACH CENTERMATE.
 - STARTERS AND CENTERMATES MUST BE ALWAYS SOLID.
- STARTERS CONNECTION TO EXISTING BUILDING OR TO 6. END/CORNER TUBES MUST BE AS PER DETAILS INDICATED ON

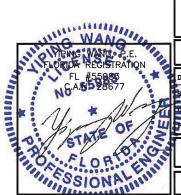


SECTION S-S THRU G MALE/FEMALE BLADE



3.

5.



PERFORMANCE SYSTEM 2 ALUMINUM ACCORDION SHUTTER
HURRICANE PROTECTION MANUFACTURERS ASSOCIATION
14475 NW 26TH AVE
OPA-LOCKA, FL 33054
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MCY ENGINEERING, INC. GLAZING CONSULTANTS

