

GENERAL NOTES:

1. THIS NON POROUS SYSTEM HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE 2023 (EIGHTH EDITION) OF THE FLORIDA BUILDING CODE (FBC) . THIS SYSTEM SHALL /SHALL NOT BE INSTALLED IN THE HIGH VELOCITY HURRICANE ZONE (MIAMI-DADE/ BROWARD COUNTIES), NOR ESSENTIAL FACILITIES.

THE ADEQUACY FOR IMPACT, DEFLECTION AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1609 OF THE ABOVE REFERENCED CODE, AND AS PER ASTM E1886-05, ASTM E1996-05 AND ASTM E330-02 AS LISTED HEREIN AS WELL AS ADDITIONAL STANDARDS AS MENTIONED ELSEWHERE ON SHEET 1 OF 4.

2. DESIGN PRESSURE REQUIREMENTS OF A SPECIFIC SITE SHALL BE DETERMINED BY OTHERS IN CONFORMANCE TO SECTION 1609 OF THE FBC FOR A BASIC WIND SPEED (ALLOWABLE STRESS DESIGN) AS REQUIRED BY THE JURISDICTION WHERE THE SYSTEM WILL BE INSTALLED. ULTIMATE DESIGN LOADS (UD) DETERMINED BY ASCE 7-22 SHALL BE REDUCED TO ALLOWABLE STRESS DESIGN LOADS (ASD) BY MULTIPLYING THE UDL BY 0.6. TO COMPARE THEM TO THE ASD PRESSURE RATINGS SHOWN HEREIN. USE OF DIRECTIONALITY FACTOR Kd=0.85 IS ALLOWED.

3. IMPACT AND FATIGUE RESISTANCE HAS BEEN DETERMINED IN ACCORDANCE WITH THE FBC SECTION 1609.1.2. MISSILE TYPE D AS LISTED HEREIN.

4. NO 33-1/3% INCREASE IN ALLOWABLE STRESS INCREASE HAS BEEN USED IN THE DESIGN OF THIS PRODUCT.

5. THIS PRODUCT EVALUATION DOCUMENT (PED) DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. IF SITE CONDITIONS DEVIATE FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS TO BE USED IN CONJUNCTION WITH THIS DOCUMENT.

6. THE CONTRACTOR AND / OR PERMIT HOLDER IS TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS SYSTEM, INCLUDING VERIFYING THE ADEQUACY OF THE EXISTING STRUCTURE TO WITHSTAND THE NEW SUPERIMPOSED LOADS SHOWN BELOW AND THE SOUNDNESS OF THE STRUCTURE WHERE THE SYSTEM IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE.

7. SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA LICENSED ENGINEER OR ARCHITECT WHO WILL BECOME THE ENGINEER OF RECORD (EOR) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE PED. THE ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE PED ENGINEER SHALL SUBMIT TO THIS ENGINEER THE SITE SPECIFIC DRAWINGS FOR REVIEW.

8. THIS PED SHALL BEAR THE DATE AND ORIGINAL SEAL OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT REGARDLESS OF ITS AVAILABILITY FROM THE FLORIDA PRODUCT APPROVAL WEBSITE.

9. THIS SYSTEM MAY ALSO BE INSTALLED HORIZONTALLY FOLLOWING INSTALLATION DETAILS SHOWN HEREIN.

10. LIMITATIONS OF USE:
THE MAXIMUM SIZE SHALL BE 56 PSF MAX. PRESSURE @300 INCHES MAXIMUM WIDTH (CENTER / CENTER OF WALL FASTENERS). SEE TABLES ON SHEETS 2 AND 3 OF 4. NO SEPARATION TO GLASS IS REQUIRED PER 2023 FBC.

11. FOR DETERMINING INTERNAL PRESSURE IN THE ABOVE REFERENCED CODES, THIS PRODUCT IS CLASSIFIED AS NON-POROUS WITH A POROSITY OF LESS THAN 10% FOR THE CONDITIONS SHOWN IN THIS PRODUCT EVALUATION DOCUMENT. PANELS MUST COMPLETELY COVER AN OPENING IN ALL DIRECTIONS.

12. ALL SCREWS TO BE STAINLESS STEEL 304 OR GALVANIZED A307 STEEL.

13. ALL BOLTS TO BE ASTM A307, GALVANIZED OR 304 SERIES STAINLESS STEEL.

14. SUPPORT BRACKETS AND ANCHORS :

A. ANCHORS INTO THE SUPPORT SUBSTRUCTURE (WALL, CEILINGS, BEAMS AND FLOORS) SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.

B. THE ANCHOR SPACINGS SHOWN REFERS TO CENTER OF SUPPORTING BRACKETS.

C. THE ANCHOR SPACING CHARTS ARE BASED ON A REMOVAL BRACKET SYSTEM USING MALE PANEL MATES WITH WING NUTS, FEMALE PANEL MATES, SAMMY'S AND DROP-IN ANCHORS WITH SIDEWALK BOLTS. TAPCONS OF THE SAME SIZE CAN BE SUBSTITUTED FOR PERMANENET BRACKET INSTALLATIONS.

D. ANCHOR MINIMUM EMBEDMENT AND EDGE DISTANCES SHALL BE MAINTAINED AS SHOWN ON SHEET 4 OF 4, AND PER MANUFACTURER'S SPECIFICATIONS IF UPDATED.

E. NO EMBEDMENT INTO NON-STRUCTURAL MATERIAL SUCH AS STUCCO, SIDING AND PAVERS SHALL BE INCLUDED AS PART OF THE EMBEDMENT REQUIREMENT.

15. STEEL SURFACES TO BE PLACED IN CONTACT WITH ALUMINUM SHALL BE GIVEN ONE COAT OF ZINC CHROMATE PRIMER IN ACCORDANCE WITH FEDERAL SPEC NO.: TTP-645, OR BE GALVANIZED.

16. MAXIMUM DESIGN PRESSURE VERSUS PANEL SPAN SHOWN ON SHEETS 2 AND 3 OF 4.

17. ALL ALUMINUM ALLOYS SHALL BE 6063-T5 UNO.

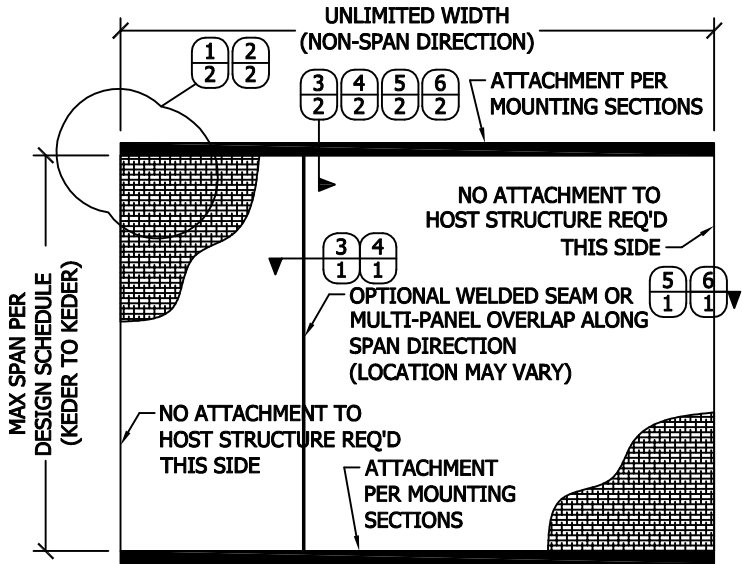
18. ANCHORING OR LOADING CONDITIONS OTHER THAN THOSE SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.

19. ALL FABRIC COMPONENTS SHALL HAVE MATERIAL PROPERTIES AS NOTED HEREIN OR IN THE ASSOCIATED EVALUATION REPORT FOR THIS PRODUCT. PROLONGED EXPOSURE TO UV IS NOT RECOMMENDED.

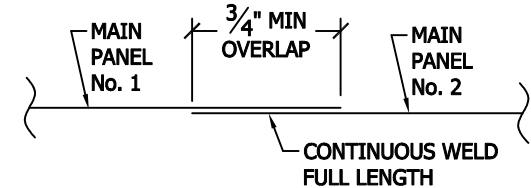
20. PANEL'S MANUFACTURER LABEL SHALL BE PLACED ON A READILY AND VISIBLE LOCATION ON THE PANEL. ONE LABEL SHALL BE PLACED FOR EVERY OPENING. LABEL SHALL READ AS FOLLOWS:

SENTINEL STORM PROTECTION
NAPLES, FL
FLORIDA PRODUCT APPROVAL NUMBER: FL-XXXX. OPENING NO.: XX

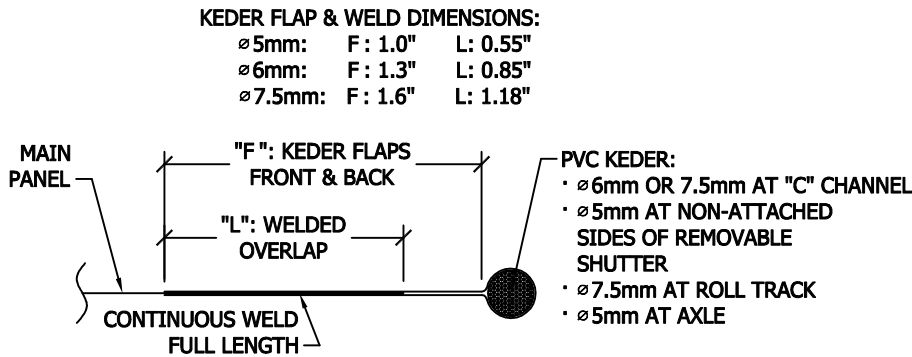
21. THIS DOCUMENT IN ITS ENTIRETY WILL BE CONSIDERED INVALID IF IT IS ALTERED BY ANY MEANS OR DOES NOT BEAR THE DATE AND ORIGINAL SEAL OF THE PROFESSIONAL ENGINEER OF RECORD THAT PREPARED IT.



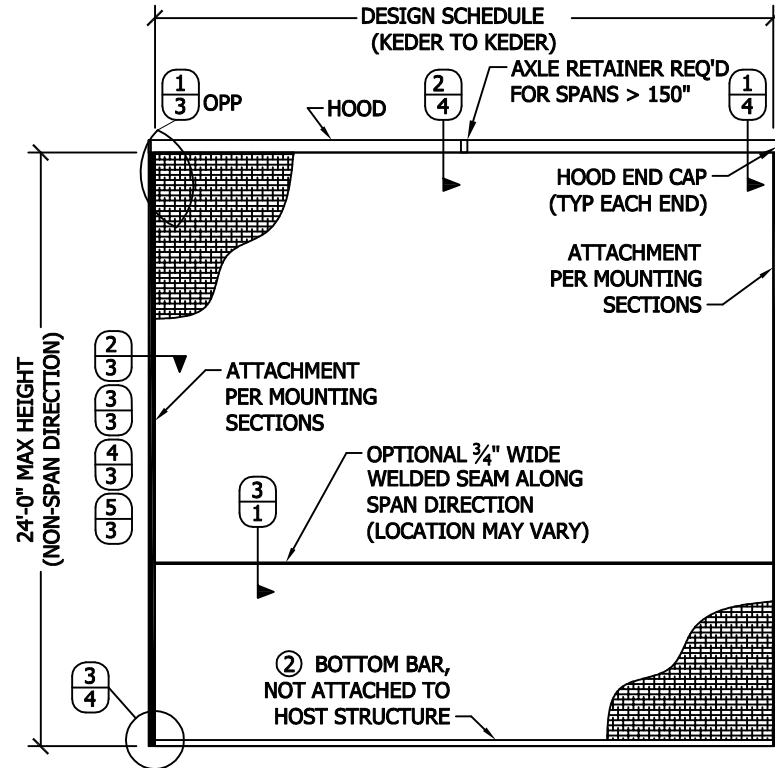
1 REMOVABLE SHUTTER
SCALE: NTS EXTERIOR ELEVATION



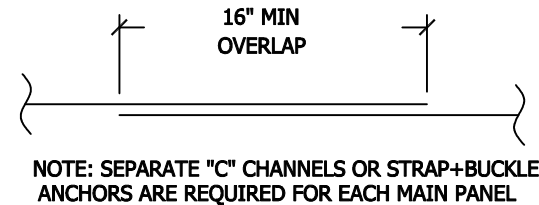
3 WELDED SEAM (OPTIONAL)
SCALE: NTS TYP SECTION



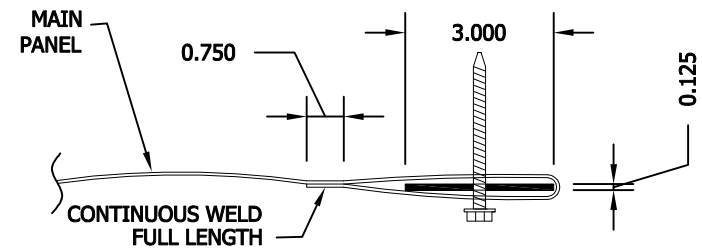
5 PERIMETER KEDER DETAIL
SCALE: NTS TYP SECTION



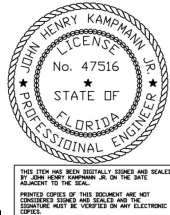
2 ROLL-UP SHUTTER
SCALE: NTS EXTERIOR ELEVATION



4 MULTI-PANEL OVERLAP (REMOVABLE SHUTTER ONLY)
SCALE: NTS TYP SECTION



6 PERIMETER ALUMINUM POCKET DETAIL
SCALE: NTS TYP SECTION



John Henry
Kampmann Jr.
2025.02.13 18:
47:13-05'00'

This item has been digitally signed and sealed by John Kampmann PE on the date of the digital seal on sheet 1. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

John H. Kampmann Jr., PE
FL License #: 47516
DATE:

CA #6752
WWW.MEAENGINEERS.COM

MEAEENGINEERS, INC.
2352 Appaloosa Circle
Sarasota, Florida 34240
(941) 922-3854 CA-6072

DESCRIPTION
SENTINEL STORM PROTECTION

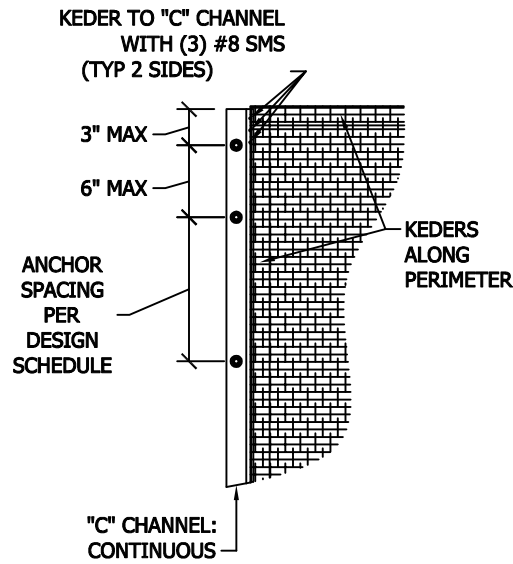
Project Name:
3673 Exchange Avenue, Suite 1
Naples, FL 34104
PHONE: (239) 263-9888
www.SentinelStormProtection.com

REV.
TYPHOON ARMOR

2023 FBC (NON-HIGH VELOCITY HURRICANE ZONE)

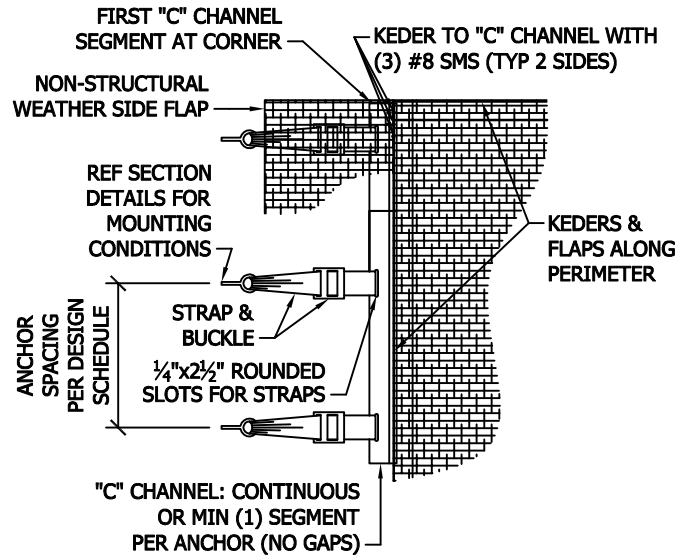
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Scale:	NTS
Date:	01/31/25
Sheet No.:	1 of 4

REMOVABLE SHUTTER DETAILS



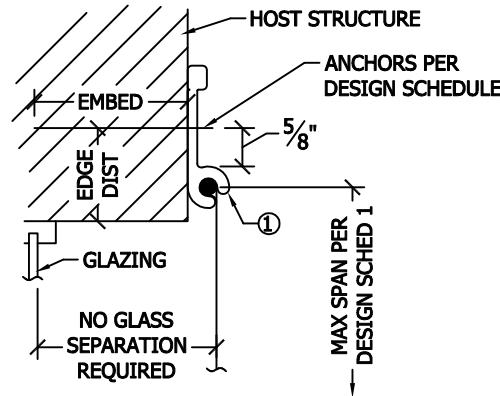
1 DIRECT MOUNT

SCALE: NTS EXTER ELEV



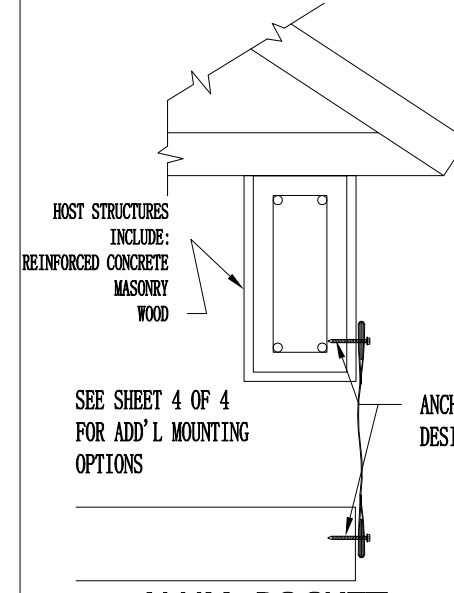
2 STRAP & BUCKLE MOUNT

SCALE: NTS EXTER ELEV



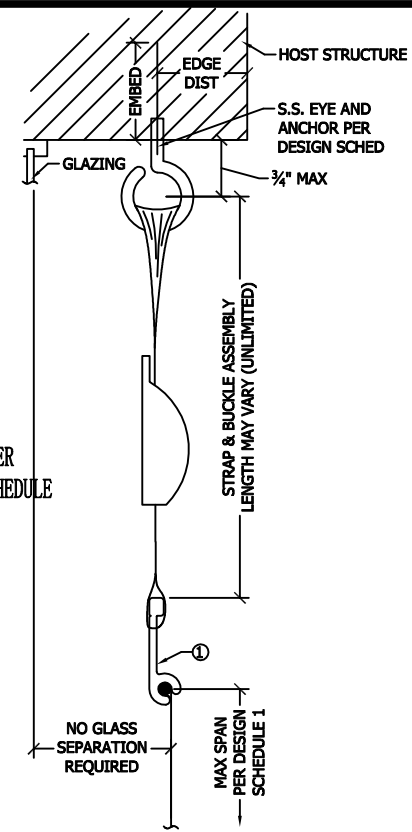
3 DIRECT WALL MOUNT

SCALE: NTS MOUNTING SECTION



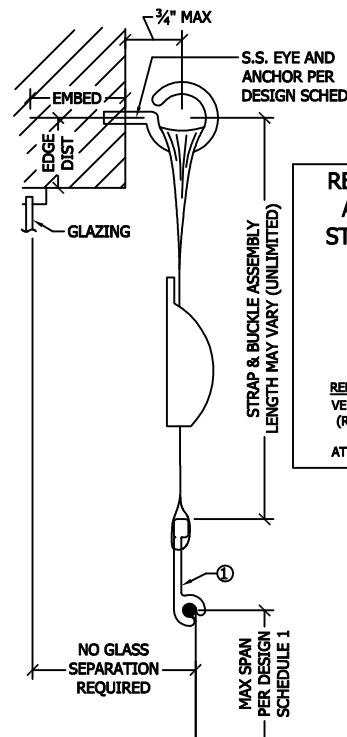
6 ALUM. POCKET: DIRECT MOUNT

SCALE: NTS MOUNTING SECTION



4 STRAP & BUCKLE: TRAPPED MOUNT

SCALE: NTS MOUNTING SECTION



5 STRAP & BUCKLE: WALL MOUNT

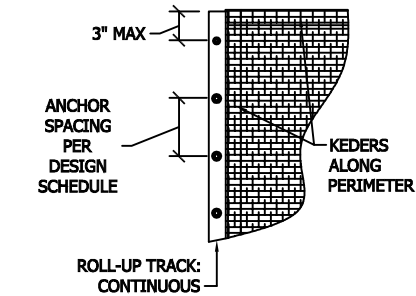
SCALE: NTS MOUNTING SECTION

This item has been digitally signed and sealed by John Kampmann PE on the date of the digital seal on sheet 1. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

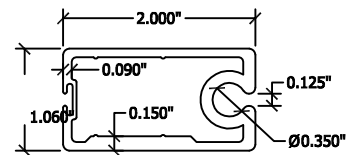
John H. Kampmann Jr., PE
FL License #: 47516
DATE:

Host Structure	SPAN UP TO: DESIGN PRESSURE (PSF): Tx (lbs) Ty (lbs)	DIRECT WALL MOUNT						STRAP & BUCKLE WALL MOUNT						STRAP & BUCKLE TRAPPED MOUNT					
		8'0"		16'0"		25'0"		8'0"		16'0"		25'0"		8'0"		16'0"		25'0"	
		50	70	50	70	40	56	50	70	50	70	40	56	50	70	50	70	40	56
CONCRETE	ANCHOR TYPE & SIZE	712	891	1131	1415	1312	1642	712	891	1131	1415	1312	1642	712	891	1131	1415	1312	1642
	1/2" HILTI HDI DROP-IN	12"	12"	12"	11"	12"	9"	12"	12"	12"	10"	11"	9"	12"	12"	12"	11"	12"	9"
	1/2" HILTI HIT-HY 200	12"	12"	12"	11"	12"	9"	12"	12"	12"	11"	12"	9"	12"	12"	12"	11"	12"	9"
	1/2" POWERS DROP-IN	12"	12"	12"	9"	10"	8"	12"	12"	9"	7"	8"	6"	12"	12"	12"	9"	10"	8"
	1/2" POWERS WEDGE BOLT	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"
	3/8" ELCO CONFLX	12"	12"	12"	10"	11"	9"	12"	12"	12"	10"	11"	9"	12"	12"	12"	10"	11"	9"
	3/8" HILTI HDI DROP-IN	12"	12"	9"	7"	8"	6"	12"	10"	8"	6"	7"	5"	12"	12"	9"	7"	8"	6"
	3/8" POWERS WEDGE BOLT	12"	12"	12"	10"	11"	9"	12"	12"	12"	12"	12"	11"	12"	12"	12"	10"	11"	9"
	3/8" POWERS DROP-IN	12"	11"	8"	6"	7"	5"	10"	8"	6"	5"	5"	4"	12"	11"	8"	6"	7"	5"
	5/16" ITW TAPCON	11"	9"	7"	5"	6"	4"	10"	8"	6"	5"	5"	4"	11"	9"	7"	5"	6"	4"
	1/4" ELCO PANELMATE	6"	4"	3"	3"	3"	2"	6"	5"	4"	3"	3"	3"	6"	4"	3"	3"	3"	2"
	1/4" HILTI HDI DROP-IN	8"	6"	5"	4"	4"	3"	7"	6"	5"	4"	4"	3"	8"	6"	5"	4"	4"	3"
	1/4" POWERS WEDGE BOLT	6"	5"	4"	3"	3"	3"	6"	5"	4"	3"	3"	3"	6"	5"	4"	3"	3"	3"
	1/4" POWERS DROP-IN	7"	6"	4"	3"	4"	3"	5"	4"	3"	3"	3"	2"	7"	6"	4"	3"	4"	3"
BLOCK	1/4-20 ALL POINTS SOLID SET	10"	8"	6"	5"	5"	4"	12"	11"	8"	6"	7"	5"	10"	8"	6"	5"	5"	4"
	1/4" ITW TAPCON	7"	6"	4"	3"	4"	3"	7"	6"	4"	3"	4"	3"	7"	6"	4"	3"	4"	3"
	1/2" HILTI HIT-HY 200	12"	12"	12"	11"	12"	9"	12"	12"	12"	11"	12"	9"	12"	12"	12"	11"	12"	9"
	1/2" POWERS HOLLOW SET DROPIN	9"	7"	6"	4"	5"	4"	9"	7"	6"	4"	5"	4"	9"	7"	6"	4"	5"	4"
	1/2" POWERS WEDGE BOLT	12"	12"	12"	10"	11"	9"	12"	12"	12"	10"	10"	8"	12"	12"	12"	10"	11"	9"
	3/8" POWERS HOLLOW SET DROPIN	6"	5"	4"	3"	3"	3"	6"	5"	4"	3"	3"	3"	6"	5"	4"	3"	3"	3"
	3/8" POWERS WEDGE BOLT	12"	11"	8"	7"	7"	6"	12"	12"	10"	8"	9"	7"	12"	11"	8"	7"	7"	6"
	5/16" ITW TAPCON	11"	8"	6"	5"	5"	4"	11"	9"	7"	5"	6"	5"	11"	8"	6"	5"	5"	4"
	1/4" POWERS WEDGE BOLT	7"	6"	4"	3"	4"	3"	8"	7"	5"	4"	4"	3"	7"	6"	4"	3"	4"	3"
	1/4" ELCO PANELMATE	3"	3"					3"	3"	2"				3"	3"				
WOOD	1/4" ITW TAPCON	4"	3"	2"		2"		4"	3"	3"	2"	2"		4"	3"	2"		2"	
	1/4-20 ALL POINTS SOLID SET	5"	4"	3"	2"	3"	2"	5"	4"	3"	2"	3"	2"	5"	4"	3"	2"	3"	2"
	1/4-20 ELCO PANELMATE INSERT	7"	5"	4"	3"	3"	3"	5"	5"	4"	3"	3"	2"	7"	5"	4"	3"	3"	3"
	1/2" LAG SCREW	6"	4"	3"	3"	3"	2"	7"	6"	4"	3"	4"	3"	6"	4"	3"	3"	3"	2"
	3/8" LAG SCREW	5"	4"	3"	3"	3"	2"	6"	6"	4"	3"	3"	3"	5"	4"	3"	3"	3"	2"
	5/16" ITW TAPCON	8"	7"	5"	4"	4"	3"	9"	8"	6"	4"	5"	4"	8"	7"	5"	4"	4"	3"

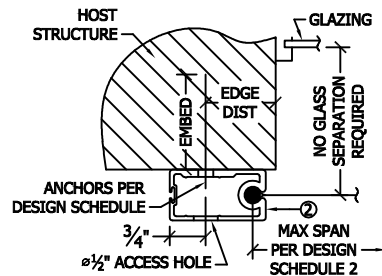
ROLL-UP SHUTTER DETAILS



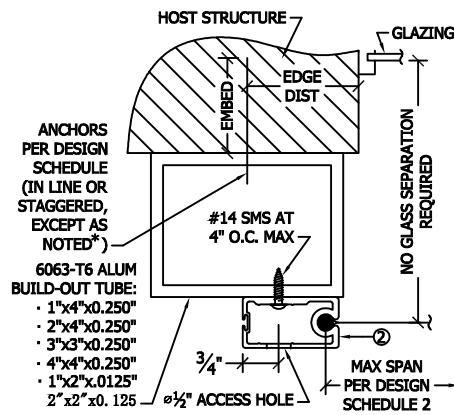
1 ROLL-UP TRACK MOUNT
3 SCALE: NTS



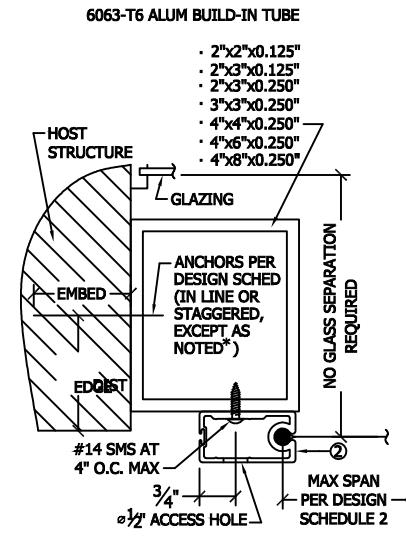
2 ROLL-UP TRACK
SCALE: NTS



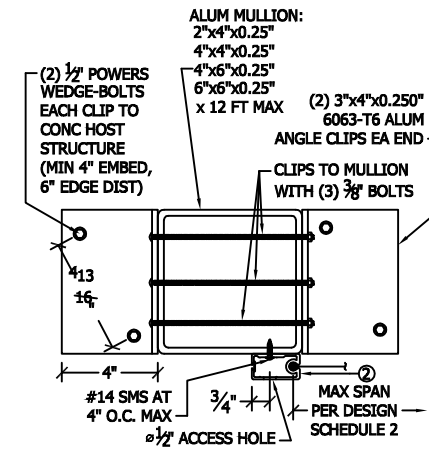
3 ROLL-UP TRACK: WALL MOUNT
SCALE: NTS MOUNTING SECTION



4 ROLL-UP TRACK: WALL BUILD-OUT MOUNT
3 SCALE: NTS MOUNTING SECTION



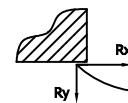
5 ROLL-UP TRACK: TRAPPED BUILD-IN MOUNT
3 SCALE: NTS MOUNTING SECTION



6 ROLL-UP TRACK: MULLION MOUNT
3 SCALE: NTS MOUNTING SECTION

Host Structure	SPAN UP TO: DESIGN PRESSURE (PSF): Tx (lbs) ANCHOR TYPE & SIZE Ty (lbs)	DIRECT WALL MOUNT								BUILD-OUT WALL MOUNT								TRAPPED BUILD-IN MOUNT							
		8'0"	12'6"	16'0"	25'0"	8'0"	12'6"	16'0"	25'0"	8'0"	12'6"	16'0"	25'0"	8'0"	12'6"	16'0"	25'0"	8'0"	12'6"	16'0"	25'0"	8'0"	12'6"	16'0"	25'0"
CONCRETE	1/2" POWERS WEDGE BOLT	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"
	3/8" ELCO CONFLX	12"	12"	12"	12"	12"	10"	11"	8"	12"	12"	12"	12"	12"	9"	10"	8"	12"	12"	12"	12"	12"	10"	11"	8"
	3/8" POWERS WEDGE BOLT	12"	12"	12"	12"	12"	10"	11"	8"	12"	12"	12"	12"	12"	12"	10"	12"	12"	12"	12"	12"	12"	10"	11"	8"
	5/16" ITW TAPCON	10"	8"	9"	6"	6"	5"	5"	4"	9"	8"	8"	6"	6"	5"	5"	4"	10"	8"	9"	6"	6"	5"	5"	4"
	1/4" ELCO PANELMATE	7"	5"	6"	4"	4"	3"	4"	3"	8"	6"	7"	5"	5"	4"	4"	3"	7"	5"	6"	4"	4"	3"	4"	
	1/4" POWERS WEDGE BOLT	6"	5"	5"	4"	4"	3"	3"	2"	6"	5"	5"	4"	4"	3"	3"		6"	5"	5"	4"	4"	3"	3"	
	1/4-20 ALL POINTS SOLID SET	9"	7"	8"	6"	6"	4"	5"	4"	12"	10"	11"	8"	8"	6"	6"	5"	9"	7"	8"	6"	6"	4"	5"	4"
BLOCK	1/4" ITW TAPCON	7"	5"	6"	4"	4"	3"	3"	3"	6"	5"	6"	4"	4"	3"	3"		7"	5"	6"	4"	4"	3"	3"	
	1/2" POWERS WEDGE BOLT	12"	12"	12"	12"	12"	9"	10"	8"	12"	12"	12"	12"	11"	9"	10"	8"	12"	12"	12"	12"	12"	9"	10"	8"
	3/8" POWERS WEDGE BOLT	12"	10"	11"	8"	8"	6"	7"	5"	12"	12"	12"	10"	10"	7"	8"	6"	12"	10"	11"	8"	8"	6"	7"	5"
	5/16" ITW TAPCON	10"	8"	8"	6"	6"	5"	5"	4"	10"	9"	9"	7"	7"	5"	6"	4"	10"	8"	8"	6"	6"	5"	5"	4"
	1/4" POWERS WEDGE BOLT	6"	5"	6"	4"	4"	3"	3"	3"	7"	6"	7"	5"	5"	4"	4"	3"	6"	5"	6"	4"	4"	3"	3"	
	1/4" ITW TAPCON	4"	3"	3"	2"	2"				4"	3"	3"		2"				4"	3"	3"		2"			
	1/4-20 ALL POINTS SOLID SET	5"	4"	4"	3"	3"	2"	2"		4"	4"	4"	3"	3"	2"			5"	4"	4"	3"	3"	2"		
WOOD	1/4-20 ELCO PANELMATE INSERT	6"	5"	5"	4"	4"	3"	3"	2"	5"	4"	5"	3"	3"	3"			6"	5"	5"	4"	4"	3"	3"	
	1/2" LAG SCREW	4"	3"	3"	3"	2"		2"		6"	5"	5"	4"	4"	3"	3"		4"	3"	3"		2"			
	3/8" LAG SCREW	4"	3"	3"	2"	2"				5"	5"	5"	4"	3"	3"			4"	3"	3"		2"			
	5/16" ELCO ULTRA CON	8"	6"	7"	5"	5"	4"	4"	3"	8"	7"	8"	6"	5"	4"	5"	4"	8"	6"	7"	5"	5"	4"	4"	3"
	1/4" ELCO PANELMATE	3"	3"	3"	2"	2"				6"	6"	7"	5"	4"	3"	4"		3"	3"		2"				
	1/4" ITW TAPCON	3"	2"	3"						6"	5"	6"	4"	4"	3"	3"		3"	2"						
	1/4" LAG SCREW	3"	2"	2"						5"	4"	5"	3"	3"	2"			3"	2"						

REACTIONS
AT HOST
STRUCTURE



ROLL-UP SHUTTER
HORIZ SECTION AT SIDE
(REFER TO MOUNTING
SECTIONS FOR
ATTACHMENT OPTIONS)

This item has been digitally signed and sealed by John Kampmann PE on the date of the digital seal on sheet 1. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

John H. Kampmann Jr., PE
FL License #: 47516
DATE:

2023 FBC (NON-HIGH VELOCITY HURRICANE ZONE)

Description:

Drawn: JK

Project #: 25-0131

Scale: NTS

Date: 01/31/25

Sheet No.:

3 of 4

SENTINEL STORM PROTECTION

3673 Exchange Avenue, Suite 1

Naples, FL 34104

PHONE: (239) 263-9888

www.SentinelStormProtection.com

TYPHOON ARMOR

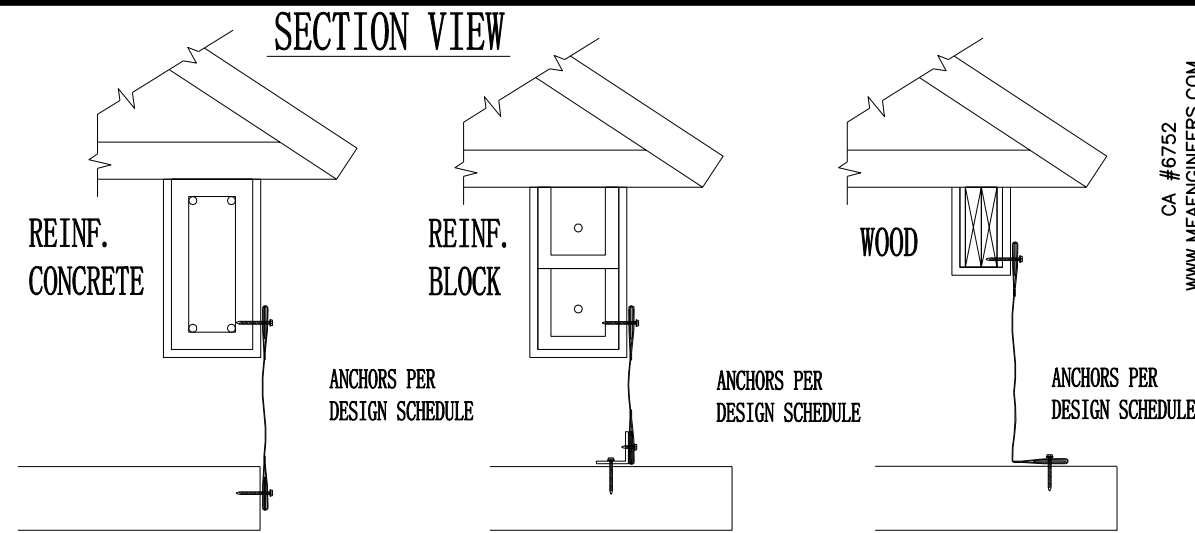
Removable and Roll-Up

Shutter

CA #6752
WWW.MEAENGINEERS.COM

MEA
ENGINEERS, INC.

2352 Appaloosa Circle
Sarasota, Florida 34240
(941) 922-3854 CA-6072



CA #6752
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ENGINEERS, INC.

2352 Appaloosa Circle
Sarasota, Florida 34240
(941) 922-3854 CA-6072

DESCRIPTION

REV.

SENTINEL STORM PROTECTION

3673 Exchange Avenue, Suite 1

Naples, FL 34104

PHONE: (239) 263-9888

www.SentinelStormProtection.com

Project Name:

TYPHOON ARMOR

Removable and Roll-Up

Shutter

Drawn: JK

Project #: 25-0131

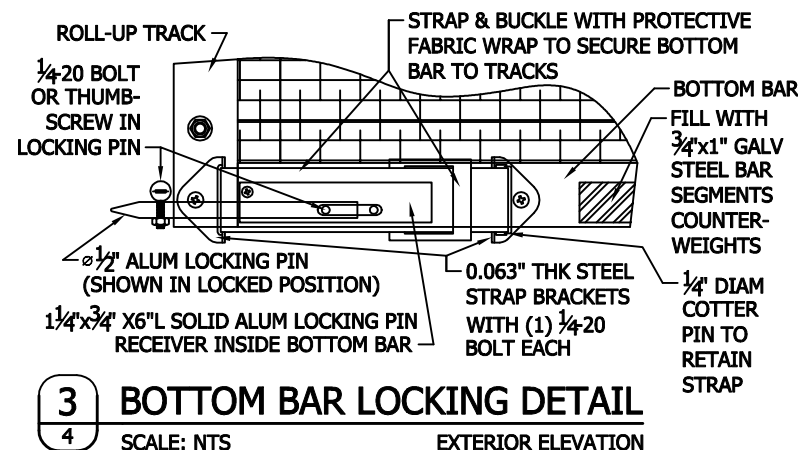
Scale: NTS

Date: 01/31/25

Sheet No. 1

4 of

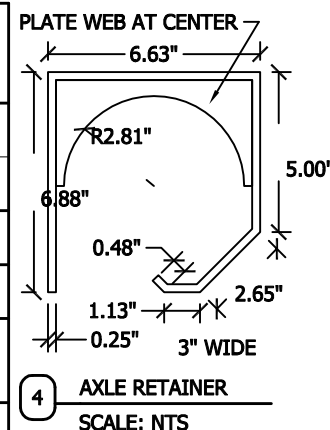
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1. THESE NOTES APPLY TO ALL DESIGN SCHEDULES.
2. SEE EXTERIOR ELEVATIONS FOR ANCHOR LOCATIONS AND/OR DEPICTION OF SPACING DIMENSION.
3. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' RECOMMENDATIONS.
4. MINIMUM EMBEDMENT AND EDGE DISTANCE SHALL BE AS NOTED IN "ANCHOR TYPES" SCHEDULE. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDES STUCCO, FOAM, BRICK, AND OTHER WALL FINISHES.
5. CONCRETE HOST STRUCTURE SHALL HAVE MIN STRENGTH 4,000 PSI.
6. "G.F. BLOCK" SHALL BE ASTM C90 MASONRY UNITS FILLED WITH MIN 2,000 PSI GROUT.
7. "BLOCK" HOST STRUCTURE SHALL BE ASTM C90 MASONRY UNITS EITHER WITH OR WITHOUT GROUT FILL.
8. WOOD HOST STRUCTURE SHALL BE "SOUTHERN PINE" $G=0.55$ OR GREATER DENSITY.
9. WHERE EXISTING STRUCTURE IS WOOD FRAMING, EXISTING CONDITIONS MAY VARY. FIELD VERIFY THAT FASTENERS ARE INTO ADEQUATE WOOD FRAMING MEMBERS, NOT INTO PLYWOOD (U.N.O.).
10. GROUND ANCHORS MAY BE USED FOR "REMOVABLE SHUTTER" - ENSURE ALLOWABLE RATING MEETS OR EXCEEDS COMBINED REACTIONS SHOWN IN DESIGN SCHEDULE (Tx,Ty).

	NOM. DIA.	INSTALLATION REQUIREMENTS
HILTI HIT-HY 200	1/2"	CONC: 4" EMBED, 8" EDGE DIST G.F. BLOCK: 4" EMBED, 8" EDGE DIST
POWERS DROP-IN	1/2"	CONC: 2" EMBED, 4.375" EDGE DIST
	3/8"	CONC: 1.5" EMBED, 3.5" EDGE DIST
	1/4"	CONC: 1" EMBED, 3.5" EDGE DIST
POWERS HOLLOW-SET DROP-IN	1/2"	BLOCK: 1.25" EMBED, 4" EDGE DIST.
	3/8"	BLOCK: 1" EMBED, 4" EDGE DIST.
HILTI HDI DROP-IN	1/2"	CONC: 2" EMBED, 4.375" EDGE DIST
	3/8"	CONC: 1.5" EMBED, 3.5" EDGE DIST
	1/4"	CONC: 1" EMBED, 3.5" EDGE DIST
ALL POINTS SOLID-SET	1/4-20	CONC: 7/8" EMBED, 3" EDGE DIST BLOCK: 7/8" EMBED, 3" EDGE DIST
ELCO PANELMATE INSERT	1/4-20	BLOCK: 1.5" EMBED, 3.5" EDGE DIST. WOOD: 1.625" EMBED, 0.75" EDGE DIST.
ELCO PANELMATE (Pro, Plus, Female, TVAS)	1/4-20	CONC: 2" EMBED, 2.5" EDGE DIST G.F. BLOCK: 2.25" EMBED, 4" EDGE DIST WOOD: 3" EMBED, 1.25" EDGE DIST

	NOM. DIA.	INSTALLATION REQUIREMENTS
POWERS WEDGE-BOLT	1/2"	CONC: 4" EMBED, 8" EDGE DIST G.F. BLOCK: 4" EMBED, 8" EDGE DIST
	3/8"	CONC: 3.5" EMBED, 6" EDGE DIST G.F. BLOCK: 3.5" EMBED, 6" EDGE DIST
	1/4"	CONC: 2.5" EMBED, 4" EDGE DIST G.F. BLOCK: 2.5" EMBED, 4" EDGE DIST
ELCO CONFLX	3/8"	CONC: 3.5" EMBED, 3.75" EDGE DIST
ITW TAPCON	5/16"	CONC: 2.25" EMBED, 4" EDGE DIST G.F. BLOCK: 2.25" EMBED, 4" EDGE DIST WOOD: 3" EMBED, 1.25" EDGE DIST
	1/4"	CONC: 1.75" EMBED, 2.5" EDGE DIST G.F. BLOCK: 1.5" EMBED, 2.5" EDGE DIST WOOD: 2" EMBED, 1" EDGE DIST
LAG SCREW	1/2"	WOOD: 3" EMBED, 2" EDGE DIST
	3/8"	WOOD: 3" EMBED, 1.5" EDGE DIST
	1/4"	WOOD: 3" EMBED, 1" EDGE DIST
METAL SCREW	#14	ALUM: FULL THREAD EMBED, 0.75" EDGE DIST.
ELCO ULTRACON	5/16"	WOOD: 3" EMBED, 1.25" EDGE DIST



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John H. Kampmann Jr., PE
FL License #: 47516
DATE: