

MODEL D-HV-5 HORIZONTAL & VERTICAL LOUVER SYSTEM LARGE MISSILE IMPACT RESISTANT

GENERAL NOTES

1. MODEL D-HV-5 HORIZONTAL & VERTICAL LOUVER SYSTEM (L.M.I) SHOWN ON THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) HAS BEEN VERIFIED FOR COMPLIANCE IN ACCORDANCE WITH THE **2023 (8th EDITION)** OF THE FLORIDA BUILDING CODE. THIS ALUMINUM LOUVER SYSTEM MAY BE INSTALLED AT HIGH VELOCITY HURRICANE ZONES (H.V.H.Z) AND OUT OF IT.

DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTIONS **1620 & 1609** OF THE ABOVE MENTIONED CODE, USING **ASCE 7-22** AND SHALL NOT EXCEED THE MAXIMUM (A.S.D.) DESIGN PRESSURE RATING INDICATED ON THIS SHEET.

IN ORDER TO VERIFY THE ABOVE CONDITION, ULTIMATE DESIGN WIND LOADS DETERMINED PER ASCE 7-22 SHALL BE FIRST REDUCED TO A.S.D. DESIGN WIND LOADS BY MULTIPLYING THEM BY 0.6 IN ORDER TO COMPARE THESE W/ MAX. (A.S.D.) DESIGN PRESSURE RATING INDICATED ON THIS SHEET.

MODEL D-HV-5 CONSISTING OF THE INSTALLATION OF HORIZONTAL LOUVER SYSTEM AS FRONT DECORATIVE COVER TO REAR VERTICAL LARGE MISSILE IMPACT RESISTANT ALUM. LOUVER SYSTEM ADEQUACY FOR WIND AND FATIGUE DUE TO WING RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTIONS **1626 & 1609.1.2** OF THE ABOVE MENTIONED CODE AS PER PRI CONSTRUCTION MATERIALS TECHNOLOGIES LLC. REPORTS #1697T007, 1697T0006, 1697T0005 AS PER TAS 201 (80 FT/SEC), TAS-202, TAS-203 AND AMCA 540 & AMCA 550.

2. ALL ALUMINUM EXTRUSIONS SHALL BE 6063-T5 ALLOY & TEMPER, UNLESS NOTED OTHERWISE.

3. ALL SCREWS TO BE STAINLESS STEEL 304 OR 316 SERIES WITH 50 ksi YIELD STRENGTH AND 90 ksi TENSILE STRENGTH OR CORROSION RESISTANT CARBON STEEL AS PER DIN 50018 AND SHALL COMPLY W/ FLORIDA BUILDING CODE SECTION 2411.3.3.4.

4. ANCHORS **(16)** USED FOR CONNECTION TO EXISTING STRUCTURE SHALL BE AS FOLLOWS (SEE SHEET 15 FOR MAX. SPACING).

ANCHORS **(16)** SHALL BE INSTALLED FOLLOWING ALL THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHORS MANUFACTURER. E.D. IS BEYOND ANY WALL FINISH. LAG SCREWS SHALL COMPLY WITH 2018 NDS.

ANCHOR TYPE	MANUFACTURER	DIAMETER OR GAGE	MIN. EMBEDMENT				MIN. EDGE DISTANCE (E.D)		
			TO CONCRETE (f'c=3,000 psi) MIN.	TO CONCRETE BLOCK ASTM (C-90 UNIT) (f'c=1.5 ksi) GROUTED	1/8" MIN. (Fy=36ksi) GALV. STEEL OR 1/8" 6063-T6 ALUMINUM	TO WOOD (G ≥ 0.55)	CONCRETE OR GROUTED CONCRETE BLOCK	STEEL & ALUM.	WOOD
SCREW-BOLT	DEWALT	3/8"	3 1/4"	3 1/4"	N/A	N/A	1 1/2"	N/A	N/A
LAG SCREW	-	3/8"	N/A	N/A	N/A	1 1/2"	N/A	N/A	1 1/2"
TAP-FLEX	ELCO CONSTRUCTION PRODUCTS	3/8"	N/A	N/A	FULLY EMB. PLUS 3 THREADS BEYOND.	N/A	N/A	3/4"	N/A

5. MODEL D-HV-5 CONSISTING OF THE INSTALLATION OF HORIZONTAL LOUVER SYSTEM AS FRONT DECORATIVE COVER TO REAR VERTICAL LARGE MISSILE IMPACT RESISTANT ALUM. LOUVER SYSTEM MAY BE INSTALLED IN LOCATIONS WHERE THE ROOM BEHIND IS NOT DESIGNED TO DRAIN WATER PENETRATING INTO THE ROOM, OR THE ROOM WILL HOUSE NON-WATER RESISTANT EQUIPMENT. COMPONENTS OR SUPPLIES INSTALLATION ON LOUVER IS LIMITED TO 40 FT. IN HEIGHT ACCORDING TO TABLE 3 OF TAS 100(A)-95 OR AMCA 550.

6. ALUMINUM MEMBERS IN CONTACT WITH DISSIMILAR MATERIALS SHALL COMPLY WITH SECTION III-6 OF THE 2020 ALUMINUM DESIGN MANUAL.

7. IT SHALL BE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE LOUVER SYSTEM IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE.

8. (A). THIS PRODUCT EVALUATION DOCUMENT (P.E.D.) PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC PROJECT; i.e. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.E.D.

(B). CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION INCLUDING LIFE SAFETY OF THIS PRODUCT, BASED ON THIS P.E.D., 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 EVALUATION 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.

(E). ORIGINAL P.E.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER THAT PREPARED IT.

9. PRODUCT MANUFACTURER'S LABEL SHALL BE LOCATED ON A READILY VISIBLE LOCATION AT PRODUCT IN ACCORDANCE WITH SECTION 1703.5 OF FLORIDA BUILDING CODE. ONE LABEL SHALL BE PLACED FOR EVERY OPENING.

A.S.D DESIGN PRESSURE RATING:

+110, -110 psf. FOR SINGLE & MULTIPLE PANELS W/ (11)

**+110, -110 psf. ONLY FOR SINGLE PANELS W/ (10) & W/O (11)
(FOR SPECIFIC CONNECTION TO CURTAIN WALLS
SEE SHEETS 6, 11 & 14)**

THIS DRAWING SHALL ONLY BE USED TO OBTAIN PERMITS IN THE STATE OF FLORIDA

W.H. DRAWN BY: **04/02/2025**
DATE: **25-023**
DRAWING NO. **25-023**
SHEET 1 OF 15

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONE)

MODEL D-HV-5 HORIZONTAL & VERTICAL LOUVER SYSTEM LARGE MISSILE IMPACT RESISTANT

United Eneritech
an S&P Air Control Company.
3005 South Hickory St. Chattanooga, TN 37407

©2025 TILTECO, INC.
TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 26th St., Suite 305, Virginia Gardens, FL 33186
Phone: (305)871-1530, Fax: (305)871-1531
CA-0006719
WALTER A. TILLIT, Jr., P.E.
FLORIDA Lic. # 44167

P.E. SEAL/SIGNATURE/DATE

No. 44167
STATE OF FLORIDA
WALTER A. TILLIT, JR.
PROFESSIONAL ENGINEER

3/31/2025

BILL OF MATERIALS

COMPONENT #	DESCRIPTION	MATERIAL	NOTES
①	HEAD	6063-T5 ALUMINUM ALLOY/TEMPER	CONTINUOUS W/(2) ⑫ TO ③ AT CORNERS
②	SILL	6063-T5 ALUMINUM ALLOY/TEMPER	CONTINUOUS USE W/(8)
③	SIDE JAMB	6063-T5 ALUMINUM ALLOY/TEMPER	CONTINUOUS, CONNECTED TO SILL AT CORNERS W/(2) ⑫
③A	LAST BLADE BLANK-OFF ANGLE	6063-T5 ALUMINUM ALLOY/TEMPER	W/ ⑬ @8"O.C TO ③
④	BIRD SCREEN FRAME	6063-T5 ALUMINUM ALLOY/TEMPER	OPTIONAL
⑤A	HORIZONTAL FRONT BLADE	6063-T5 ALUMINUM ALLOY/TEMPER	SPACED @ 2 3/8"O.C W/(2) ⑬ AT ENDS TO JAMBS ③
⑤B	VERTICAL REAR BLADE	6063-T5 ALUMINUM ALLOY/TEMPER	SPACED AT 13/16"O.C & W/(2) ⑬ TO HEAD ① & SILL ② AT ENDS.
⑥	BLADE BRACE FOR ⑤B	6063-T5 ALUMINUM ALLOY/TEMPER	2" LONG, SHALL CATCH (3) BLADES ⑤B & FASTENED TO ⑥A W/(15)
⑥A	BLADE BRACE STRIP FOR ⑤B	6063-T5 ALUMINUM ALLOY/TEMPER	CONTINUOUS HORIZONTALLY ACROSS UNIT W/(1) ⑭ TO ③ EA END
⑦	STANDARD BIRD SCREEN	3/4" x 0.051" FLATTENED ALUMINUM	OPTIONAL
⑧	SILL BAFFLE	3003 H14 ALUMINUM ALLOY/HARDNESS	CONTINUOUS, CONNECTED TO ② W/ ⑬ @8"O.C
⑨	HEAD FLANGE	6063-T5 ALUMINUM ALLOY/TEMPER	OPTIONAL
⑩	GLAZING ADAPTER FOR CURTAIN WALL	6063-T5 ALUMINUM ALLOY/TEMPER	PER CURTAIN WALL MANUFACTURER
⑪	HEAD/SILL MOUNTING ANGLE	6061-T6 ALUMINUM ALLOY/TEMPER	CONTINUOUS
⑫	#8 x 1-1/2" HEX HEAD, ZINC PLATED S.M.S.	MIN. Fy=90 ksi	USE AT FRAME ASSEMBLY AT CORNERS
⑬	#10 x 1-1/2" HEX HEAD, ZINC PLATED S.M.S.	-	USE (2) FOR BLADES ATTACHMENT EA. END
⑭	1/4 -14 x 1-1/2" HEX HEAD TEK SCREW	-	ATTACHMENT OF ⑪ TO HEAD & SILL & FOR ⑥A TO ③
⑮	#10 x 3/4" HEX HEAD TEK SCREW	-	⑥A CONNECTION TO ⑥
⑯	ANCHOR FOR ⑪	VARIES SEE NOTE 4/1	SEE NOTE 4/1
⑰	STRUCTURAL SILICONE DOW 795 (SEE NOTES)	SILICONE SEALANT	QUALIFIES ALSO DOW 983. USE ONLY AT SPECIFIC CURTAIN WALL SUBSTRATE, SEE SHEET 11

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONE)

MODEL D-HV-5 HORIZONTAL & VERTICAL LOUVER SYSTEM LARGE MISSILE IMPACT RESISTANT

©2025 TILTECO, INC.

TILTECO INC.
 TILLIT TESTING & ENGINEERING COMPANY
 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
 Phone: (305)871-1530 Fax: (305)871-1531
 CA-0006719
 WALTER A. TILLIT JR., P.E.
 FLORIDA Lic. # 44167

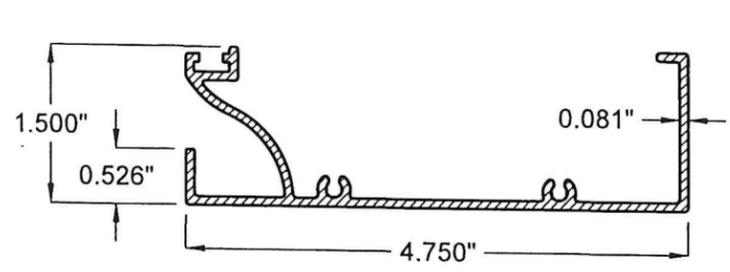
W.H. DRAWN BY: 04/02/2025 DATE: 25-023 DRAWING NO.
 SHEET 2 OF 15

REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1			3		
2			4		

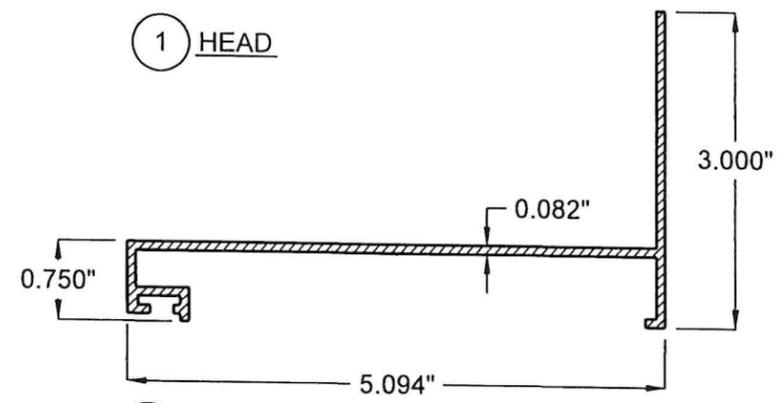
SEAL/SIGNATURE/DATE

WALTER A. TILLIT JR.
 LICENSE
 No. 44167
 STATE OF
 FLORIDA
 PROFESSIONAL ENGINEER

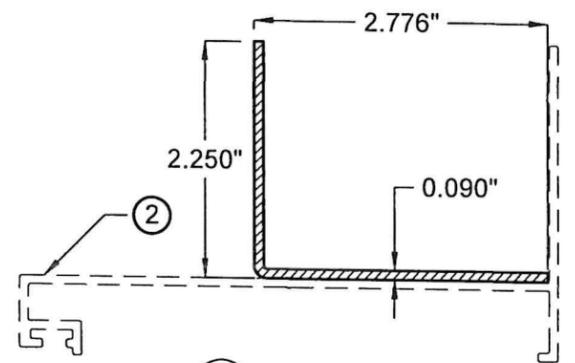
[Signature]
 3/31/2025



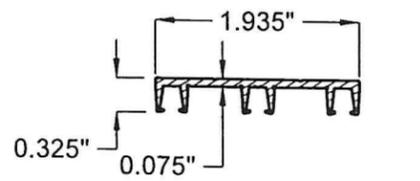
1 HEAD



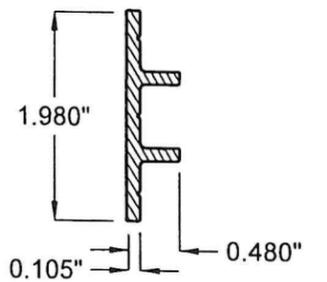
2 SILL



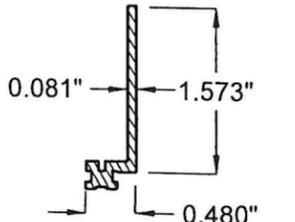
8 SILL BAFFLE



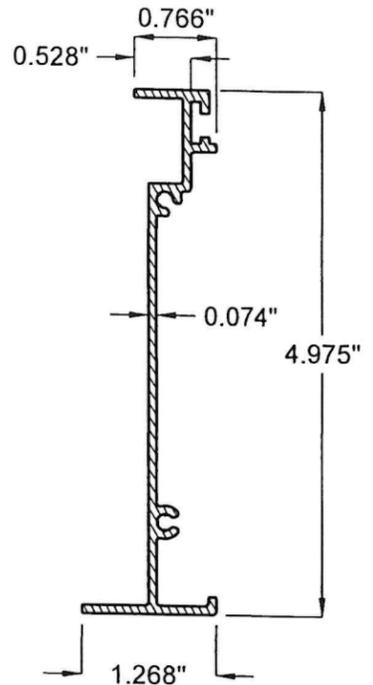
6 BLADE BRACE FOR (5B) 2" LONG.



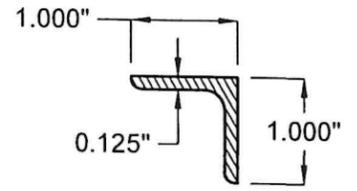
6A BLADE BRACE STRIP FOR (5B) CONT.



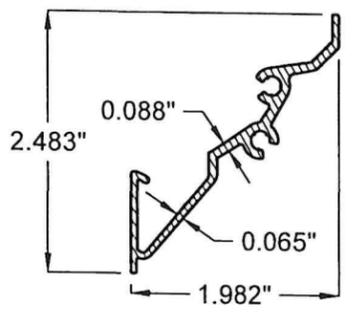
9 HEAD FLANGE (OPTIONAL)



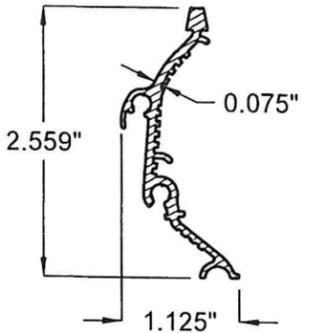
3 SIDE JAMB



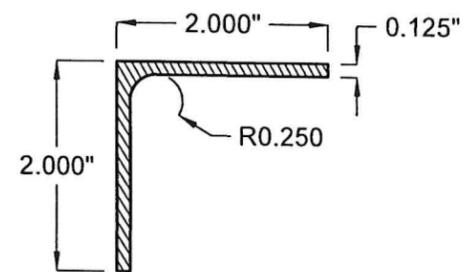
3A LAST BLADE BLANK-OFF ANGLE



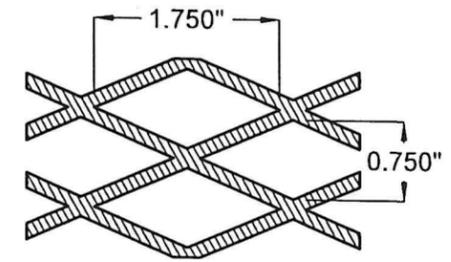
5A HORIZONTAL FRONT BLADE



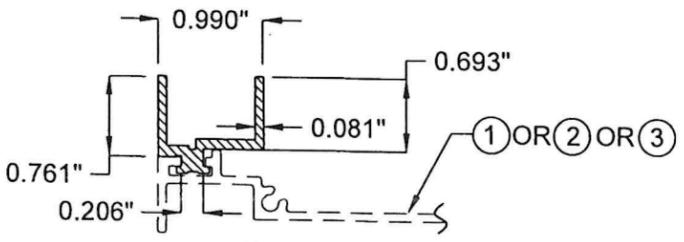
5B VERTICAL REAR BLADE



11 HEAD/SILL MOUNTING ANGLE



7 OPTIONAL BIRD SCREEN



10 GLAZING ADAPTER

COMPONENTS
SCALE: N.T.S

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONE)

W.H. DRAWN BY: 04/02/2025 DATE: 25-023 DRAWING NO. SHEET 3 OF 15

MODEL D-HV-5 HORIZONTAL & VERTICAL LOUVER SYSTEM LARGE MISSILE IMPACT RESISTANT

United Nertech
an S&P Air Control Company.
3005 South Hickory St. Chattanooga, TN 37407

REV. NO.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-
4	-	-

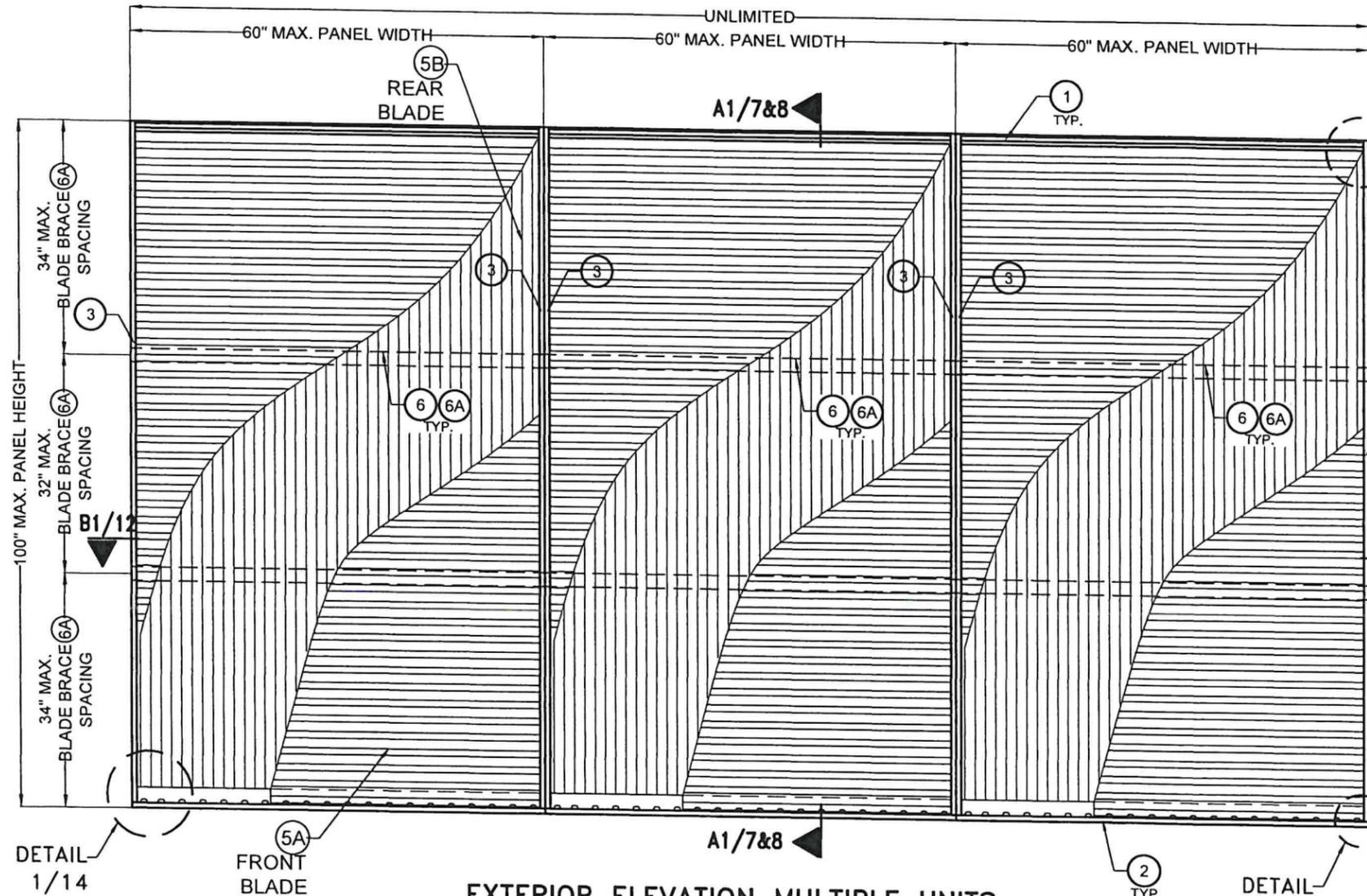
©2025 TILTECO, INC.

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St. Suite 305, Virginia Gardens, FL 33166
Phone: (305)971-1530 Fax: (305)971-1531
CA-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. # 44167

WALTER A. TILLIT JR.
LICENSE No. 44167
STATE OF FLORIDA
PROFESSIONAL ENGINEER

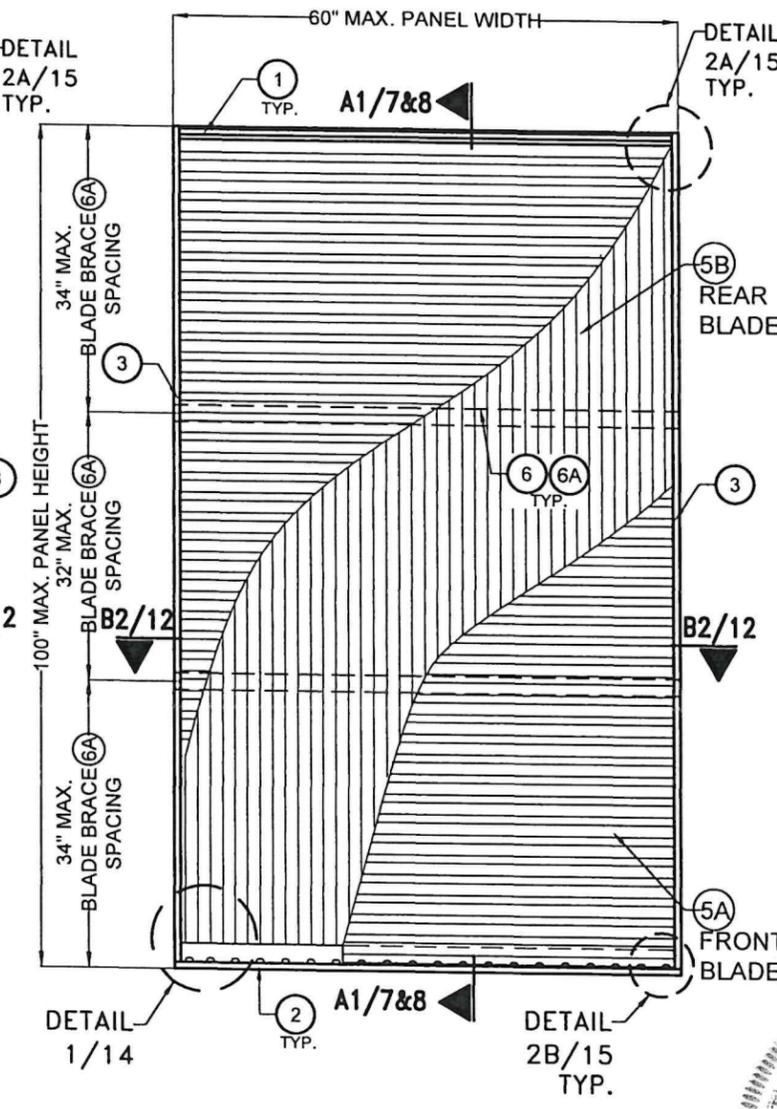
WALT
3/1/2025

P.E. SEAL/SIGNATURE/DATE



EXTERIOR ELEVATION MULTIPLE UNITS
 W/ (6) & (6A) BLADE BRACE @ REAR BLADE (5B) * W/(11)
 SCALE: N.T.S

*** NOTE:**
 (NOT VALID FOR INSTALLATION WHERE LOUVER PANEL IS CLIPPED W/ COMPONENT (10) TO SPECIFIC CURTAIN WALLS. SEE SHEETS 6, 11 & 14 FOR DETAILS COVERING THIS LATTER CASE)

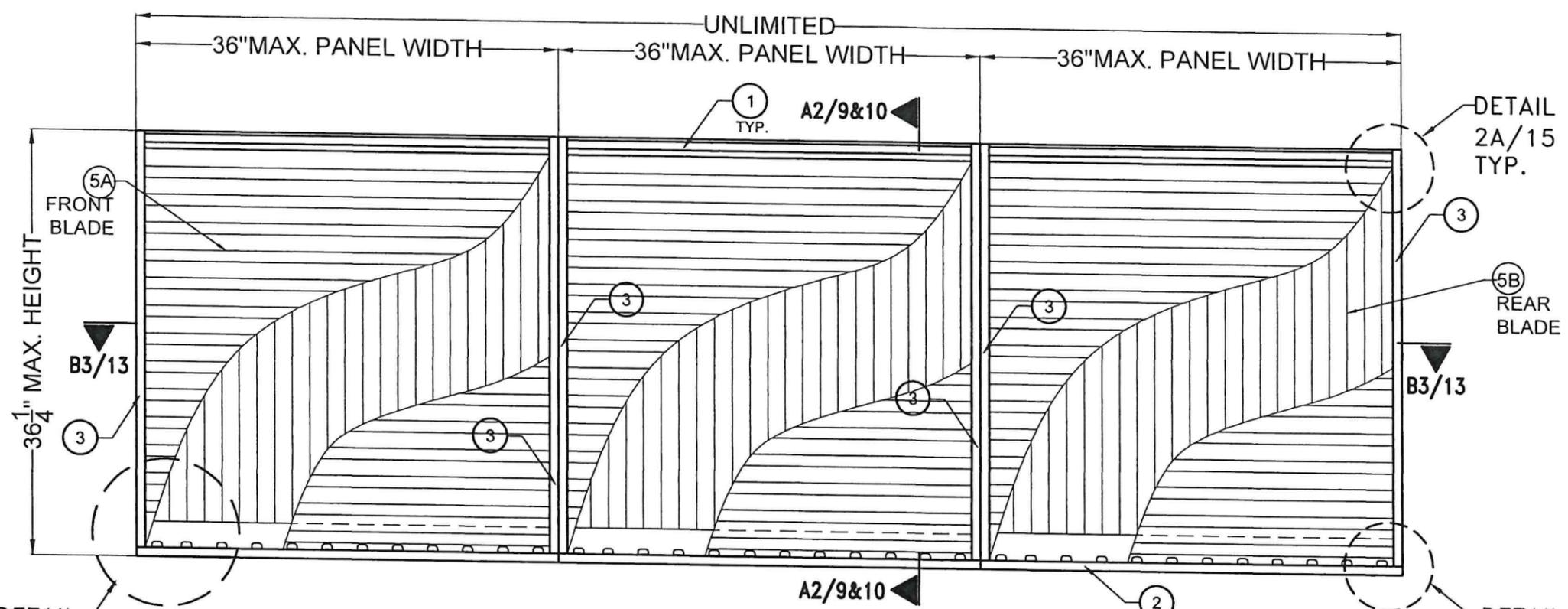


EXTERIOR ELEVATION SINGLE UNIT
 W/ (6) & (6A) BLADE BRACE
 @ REAR BLADE (5B) * W/(11)
 SCALE: N.T.S

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONE)	
MODEL D-HV-5 HORIZONTAL & VERTICAL LOUVER SYSTEM LARGE MISSILE IMPACT RESISTANT	W.H. DRAWN BY: 04/02/2025 DATE: 25-023 DRAWING No. SHEET 4 OF 15
United Enertech an S&P Air Control Company. 3005 South Hickory St. Chattanooga, TN 37407	REV. NO. 1 DATE - DESCRIPTION - REV. NO. 2 DATE - DESCRIPTION -

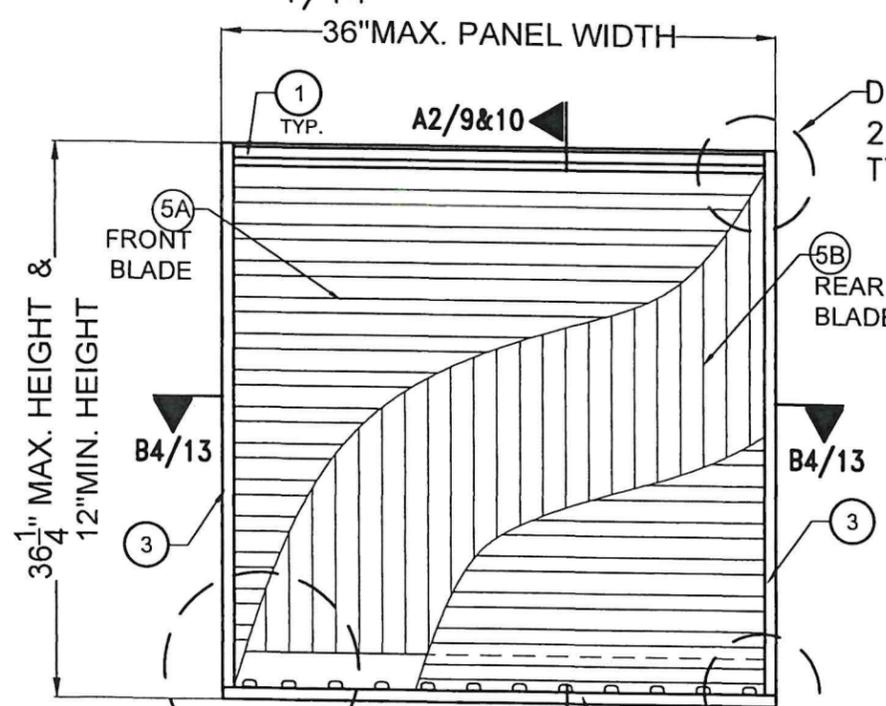
TILECO INC.
 ©2025 TILECO, INC.
 TILLIT TESTING & ENGINEERING COMPANY
 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
 Phone : (305)971-1530 . Fax : (305)971-1531
 CA-0006719
 WALTER A. TILLIT JR., P.E.
 FLORIDA Lic. # 44167

WALTER A. TILLIT JR.
 LICENSE No. 44167
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 P.E. SEAL/SIGNATURE/DATE
 3/31/2025



**EXTERIOR ELEVATION MULTIPLE UNITS
W/O (6) & (6A) BLADE BRACE * W/(11)**

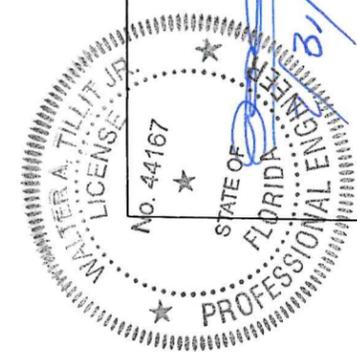
SCALE: N.T.S



**EXTERIOR ELEVATION SINGLE UNIT
W/O (6) & (6A) BLADE BRACE * W/(11)**

SCALE: N.T.S

*** NOTE:**
(NOT VALID FOR INSTALLATION WHERE LOUVER PANEL IS CLIPPED W/ COMPONENT (10) TO SPECIFIC CURTAIN WALLS. SEE SHEETS 6, 11 & 14 FOR DETAILS COVERING THIS LATTER CASE)



P.E. SEAL/SIGNATURE/DATE

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONE)

©2025 TILTECO, INC.

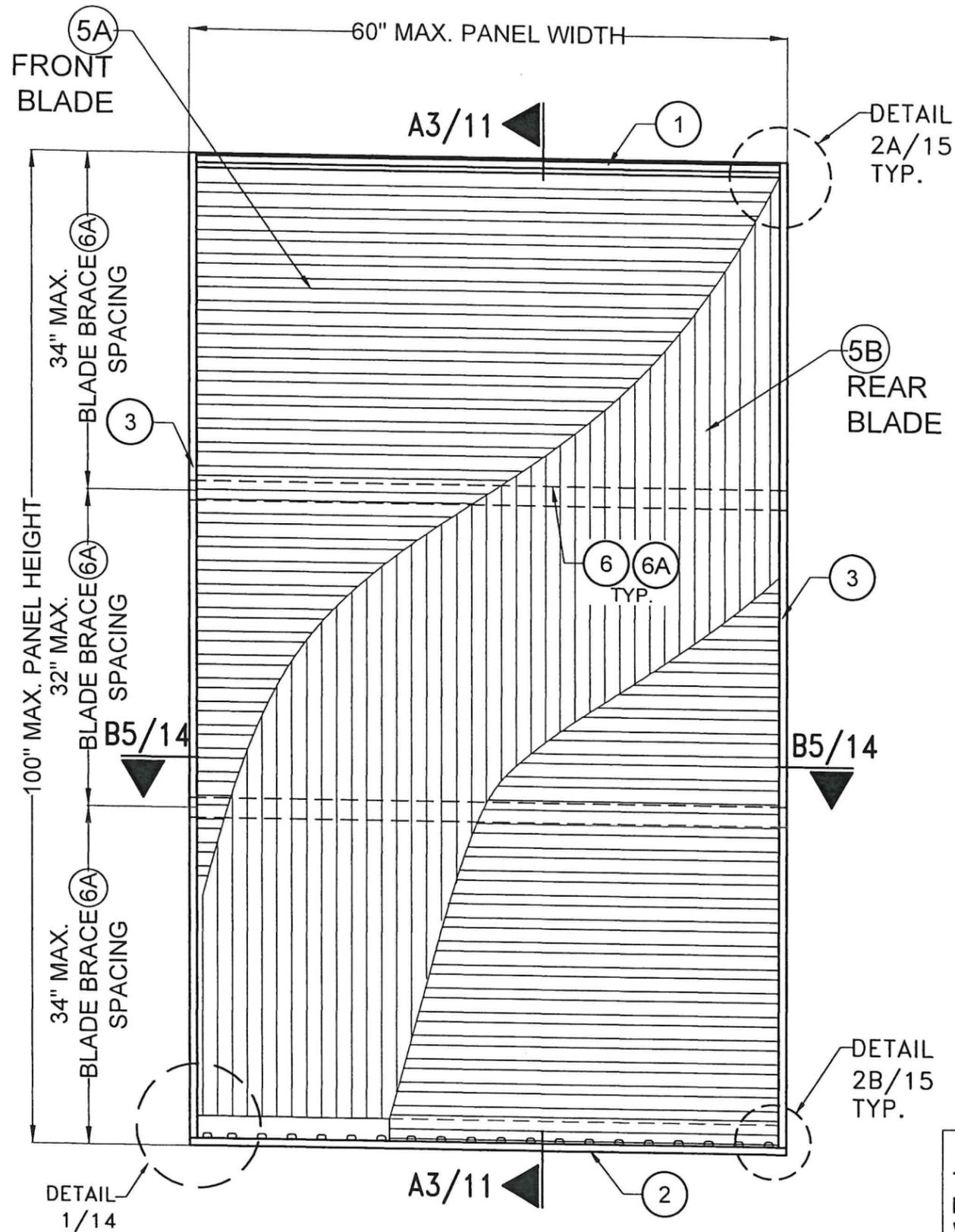
TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
an S&P Air Control Company.
3005 South Hickory St. Chattanooga, TN 37407
Phone: (305)871-1530 Fax: (305)871-1531
CA-0006719
WALTER A. TILLIT JR. P.E.
FLORIDA Lic. # 44167

MODEL D-HV-5 HORIZONTAL & VERTICAL LOUVER SYSTEM LARGE MISSILE IMPACT RESISTANT

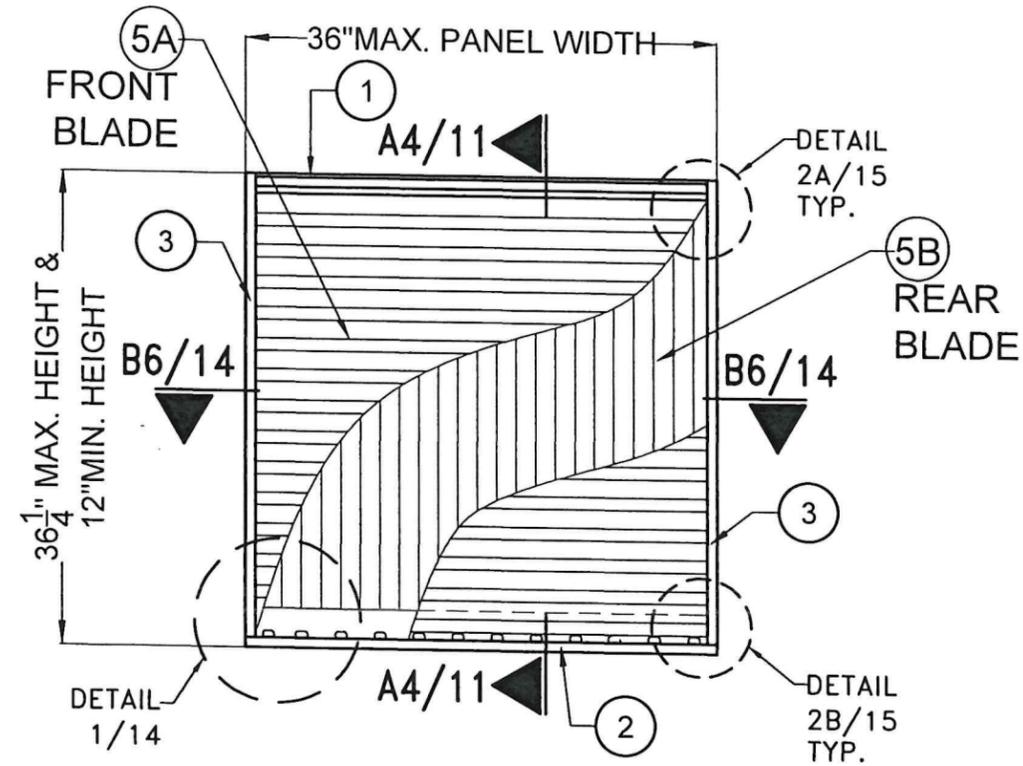
United Enertech

W.H. DRAWN BY: 04/02/2025 DATE: 25-023 DRAWING NO. SHEET 5 OF 15

REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
1			3		
2			4		



**EXTERIOR ELEVATION SINGLE UNIT
W/ (6) & (6A) BLADE BRACE AT REAR BLADE (5B)*
(CURTAIN WALL INSTALLATION)
SCALE: N.T.S**



**EXTERIOR ELEVATION SINGLE UNIT
W/O (6) & (6A) BLADE BRACE
AT REAR BLADE (5B)*
(CURTAIN WALL INSTALLATION)
SCALE: N.T.S**

NOTE: *
THIS INSTALLATION IS ONLY VALID FOR SINGLE LOUVER
PANEL CLIPPED W/ COMPONENT (10) TO SPECIFIC CURTAIN
WALLS. ALL AROUND. SEE SHEET 1 FOR MAXIMUM
PRESSURE RATING.

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONE)

W.H. DRAWN BY: 04/02/2025 DATE: 25-023 DRAWING No. SHEET 6 OF 15

MODEL D-HV-5 HORIZONTAL & VERTICAL
LOUVER SYSTEM LARGE MISSILE IMPACT RESISTANT

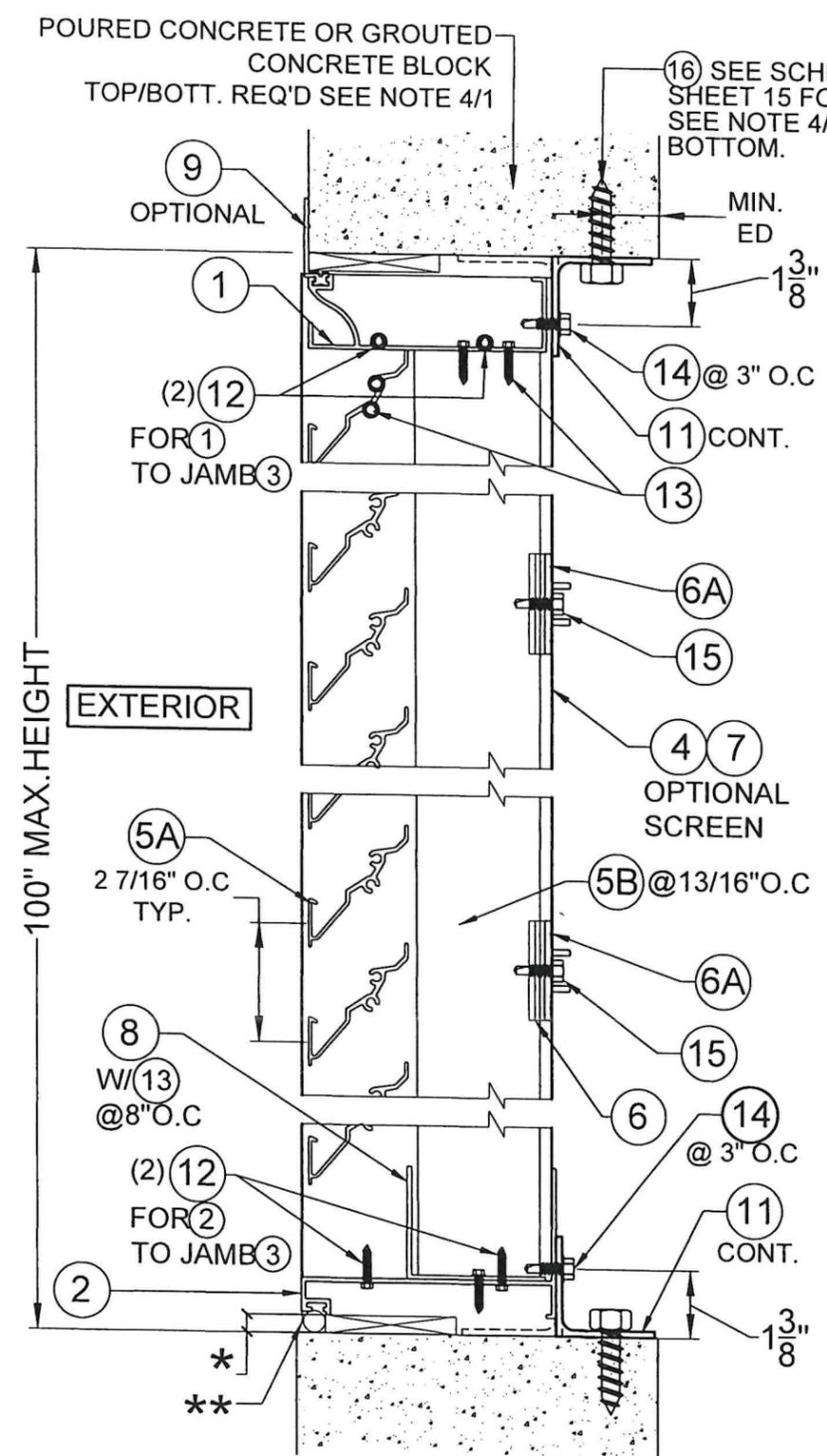
United Enertech
an S&P Air Control Company.
3005 South Hickory St. Chattanooga, TN 37407

©2025 TILTECO, INC.

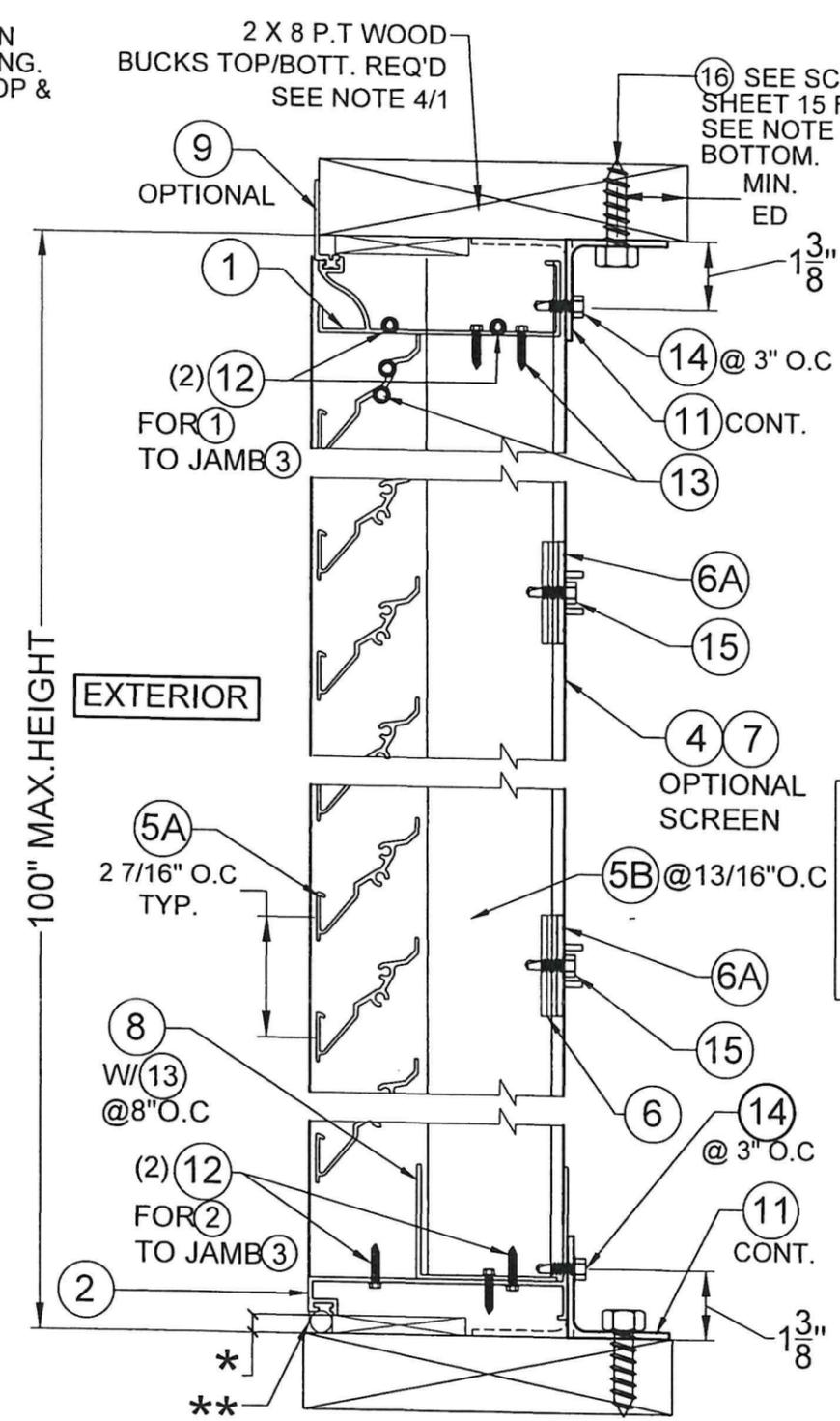
TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th. Ft. Lauderdale, FL 33166
Phone: (305) 971-1531 Fax: (305) 971-1531
CA-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. # 44167

WALTER A. TILLIT JR.
LICENSE
No. 44167
STATE OF FLORIDA
PROFESSIONAL ENGINEER
3/1/2025
P.E. SEAL/SIGNATURE/DATE



**SECTION A1 W/ (6) & (6A):
CONCRETE OR GROUTED
CONCRETE BLOCK SUBSTRATE**
SCALE: N.T.S



**SECTION A1 W/ (6) & (6A):
WOOD SUBSTRATE**
SCALE: N.T.S

*MAX. 3/8" ALLOWABLE SHIM SPACE (REQUIRED FOR MOUNTING ANGLE (11) INSTALLATION)
**BACKER ROD & CAULK NOT SUPPLIED BY S&P

W.H. DRAWN BY:	04/02/2025	DATE:
25-023	DRAWING NO.	
SHEET 7 OF 15		

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONE)	
MODEL D-HY-5 HORIZONTAL & VERTICAL LOUVER SYSTEM LARGE MISSILE IMPACT RESISTANT	
United Eneitech an S&P Air Control Company.	
3005 South Hickory St. Chattanooga, TN 37407	
REV. NO.	DATE
1	
2	
3	
4	

©2025 TILTECO, INC.

TILTECO INC.

TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone: (305)871-1530, Fax: (305)871-1531
CA-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. # 44167

No. 44167

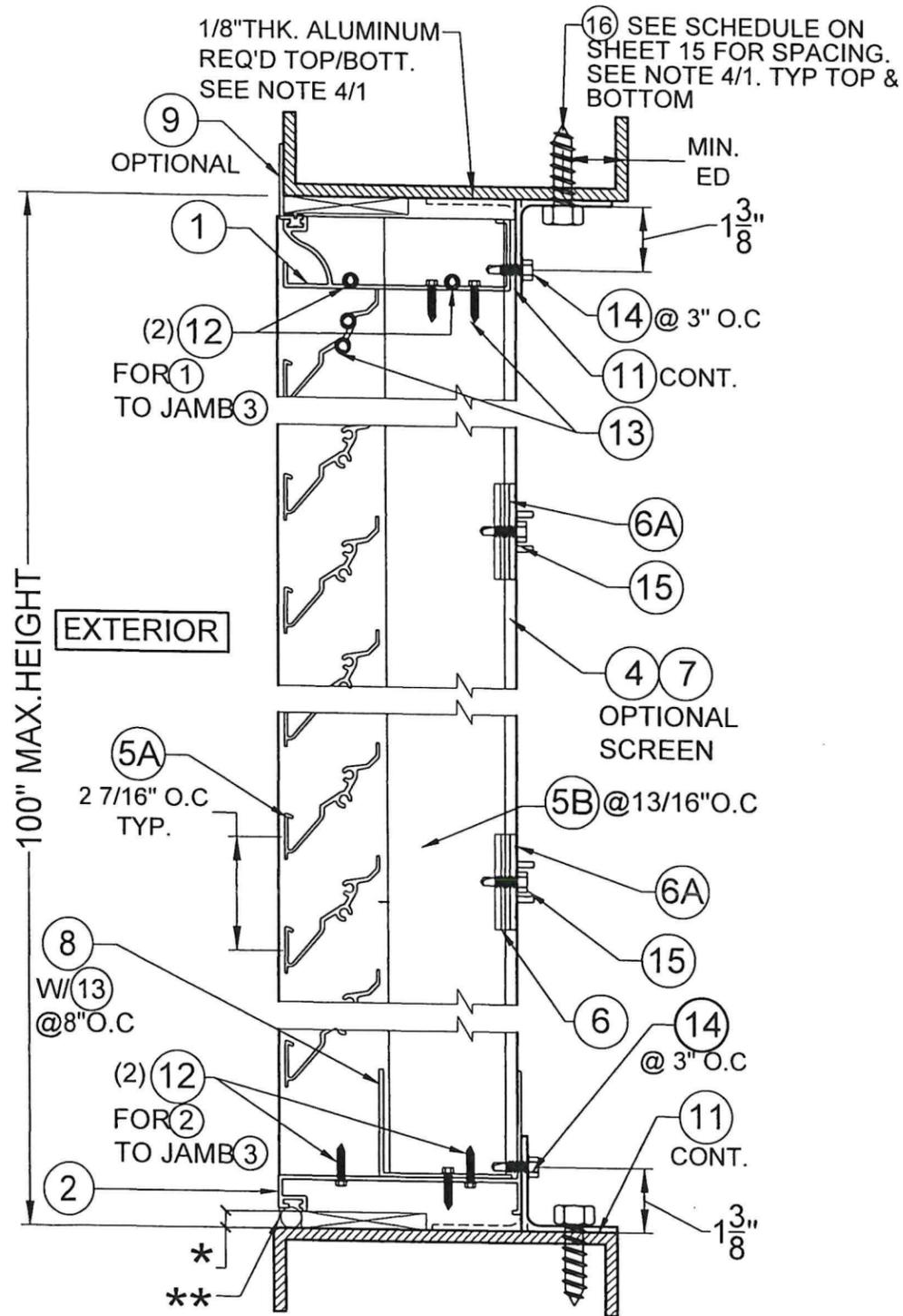
STATE OF FLORIDA

PROFESSIONAL ENGINEER

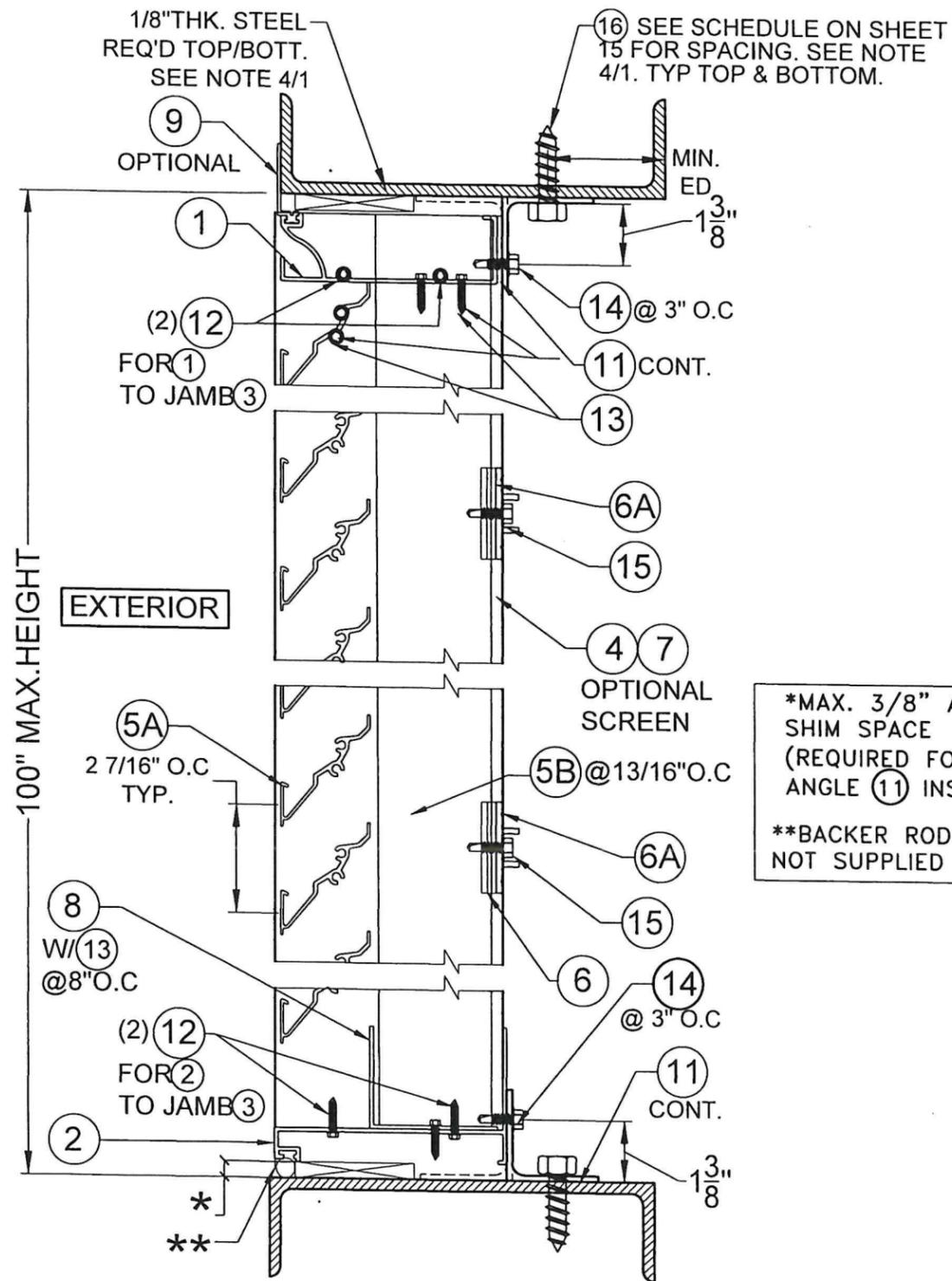
WALTER A. TILLIT JR.

3/4/2025

P.E. SEAL/SIGNATURE/DATE



**SECTION A1 W/ (6) & (6A):
ALUMINUM SUBSTRATE**
SCALE: N.T.S



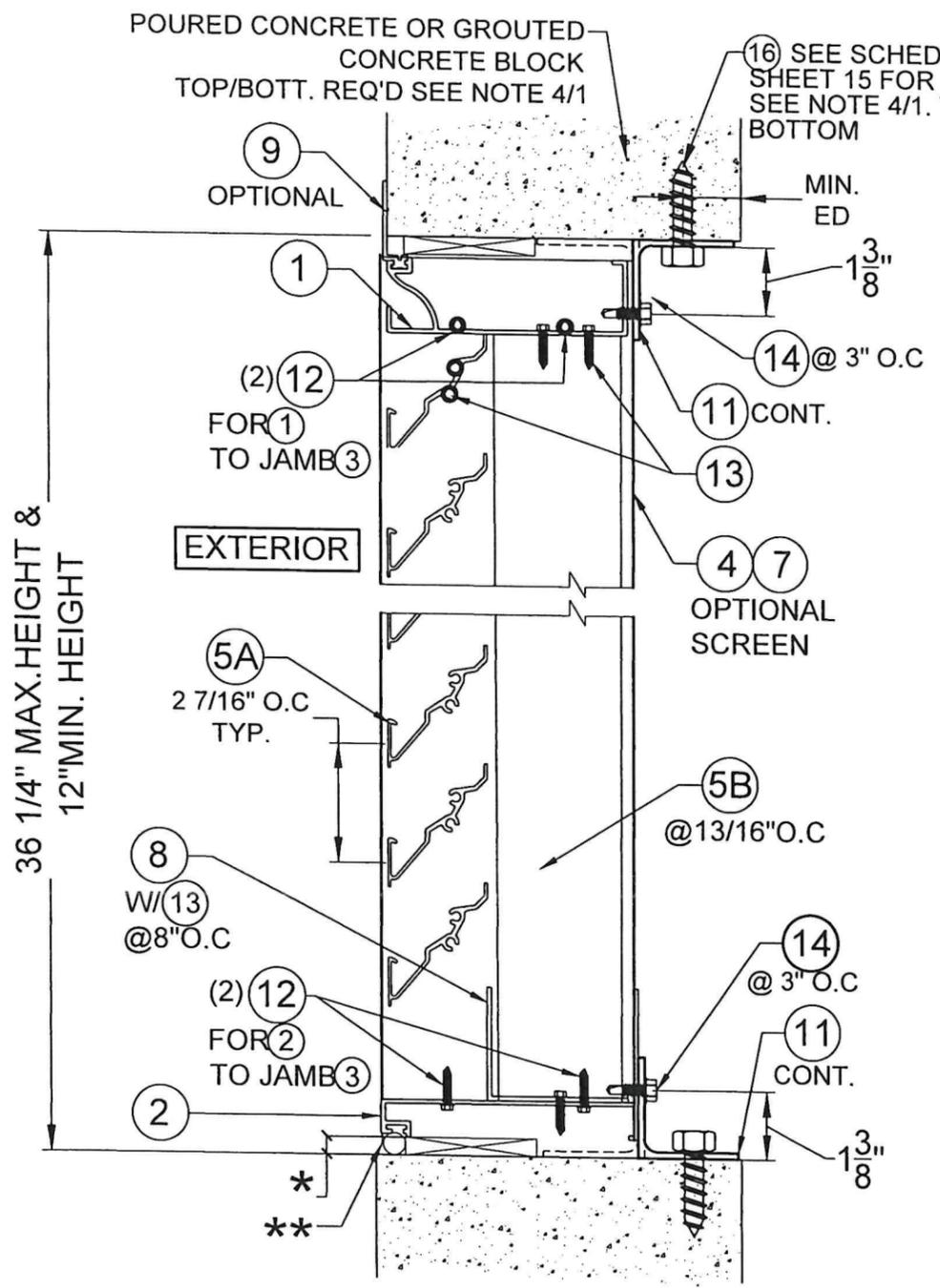
**SECTION A1 W/ (6) & (6A):
STEEL SUBSTRATE**
SCALE: N.T.S

*MAX. 3/8" ALLOWABLE SHIM SPACE (REQUIRED FOR MOUNTING ANGLE (1) INSTALLATION)
**BACKER ROD & CAULK NOT SUPPLIED BY S&P

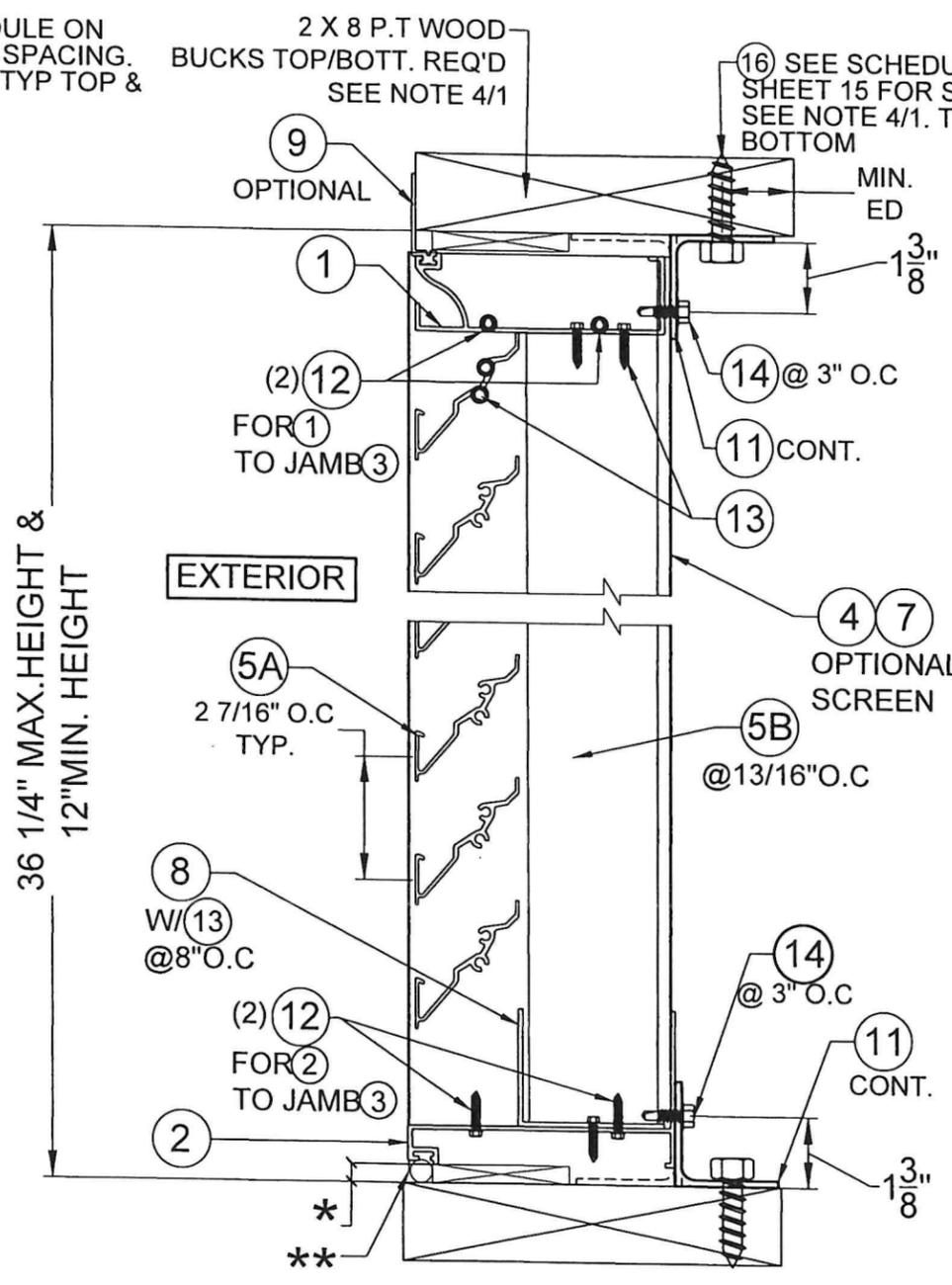
FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONE)		W.H. DRAWN BY:	04/02/2025	DATE:	25-023	DRAWING NO.
MODEL D-HV-5 HORIZONTAL & VERTICAL LOUVER SYSTEM LARGE MISSILE IMPACT RESISTANT		United Enertech an S&P Air Control Company.		3005 South Hickory St. Chattanooga, TN 37407		
©2025 TILTECO, INC.		TILTECO INC.		TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone: (305) 871-1530, Fax: (305) 871-1531 CA-0006719 WALTER A. TILLIT JR., P.E. FLORIDA Lic. # 44167		
REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE	
1			3			
2			4			

WALTER A. TILLIT JR.
LICENSE No. 44167
STATE OF FLORIDA
PROFESSIONAL ENGINEER
P.E. SEAL/SIGNATURE/DATE

Walter A. Tillit Jr.
04/02/2025



**SECTION A2 W/O (6) & (6A):
CONCRETE OR GROUTED
CONCRETE BLOCK SUBSTRATE**
SCALE:N.T.S



**SECTION A2 W/O (6) & (6A):
WOOD SUBSTRATE**
SCALE:N.T.S

*MAX. 3/8" ALLOWABLE SHIM SPACE (REQUIRED FOR MOUNTING ANGLE (1) INSTALLATION)
**BACKER ROD & CAULK NOT SUPPLIED BY S&P

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONE)

W.H. DRAWN BY: 04/02/2025 DATE: 25-023 DRAWING NO. SHEET 9 OF 15

MODEL D-HV-5 HORIZONTAL & VERTICAL LOUVER SYSTEM LARGE MISSILE IMPACT RESISTANT

United Enertech
an S&P Air Control Company.
3005 South Hickory St. Chattanooga, TN 37407

REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1			3		
2			4		

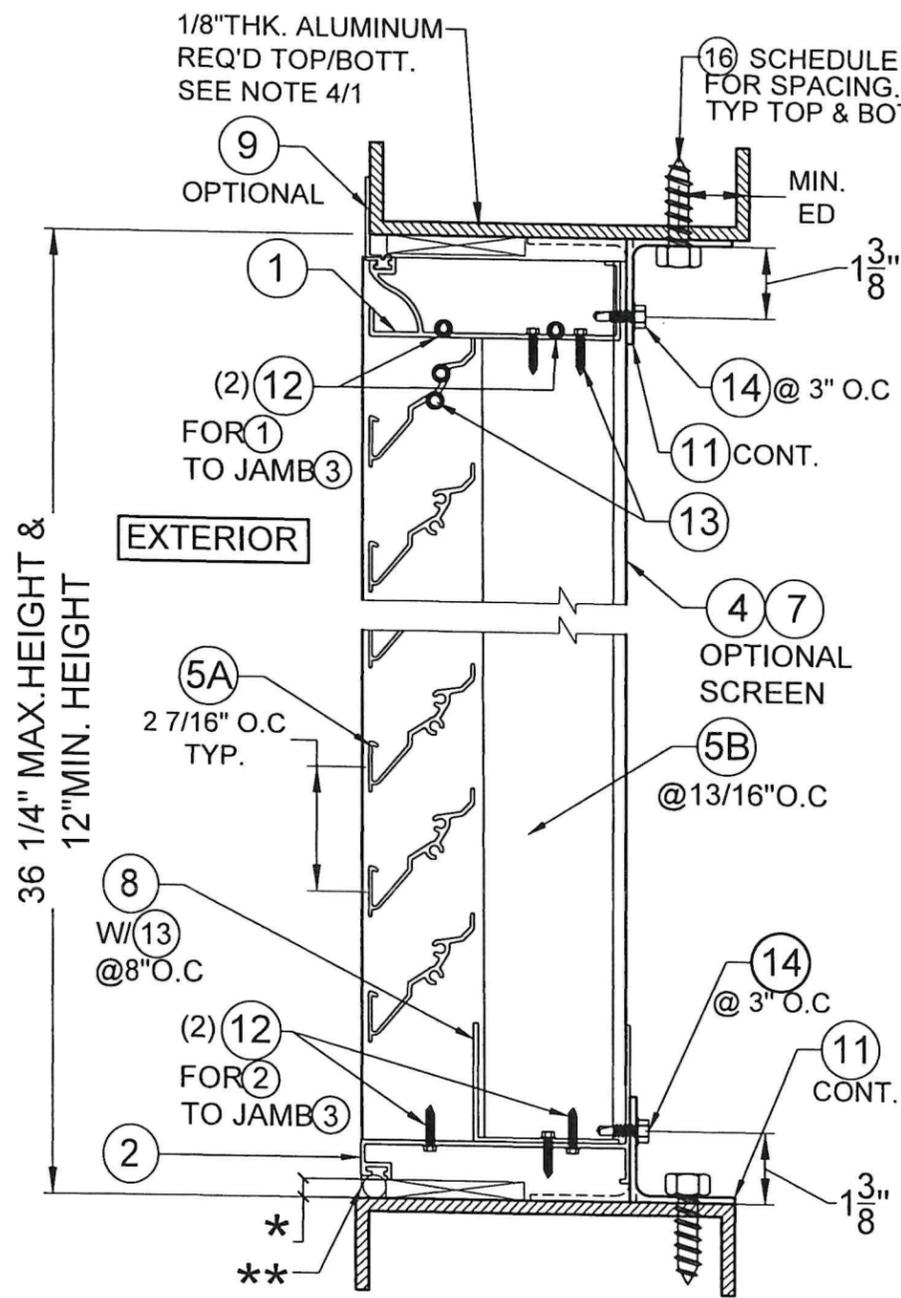
©2025 TILTECO, INC.

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)971-1530 • Fax : (305)971-1531
CA-0006719
WALTER A. TILLIT JR., P.E.
FLORIDA Lic. # 44167

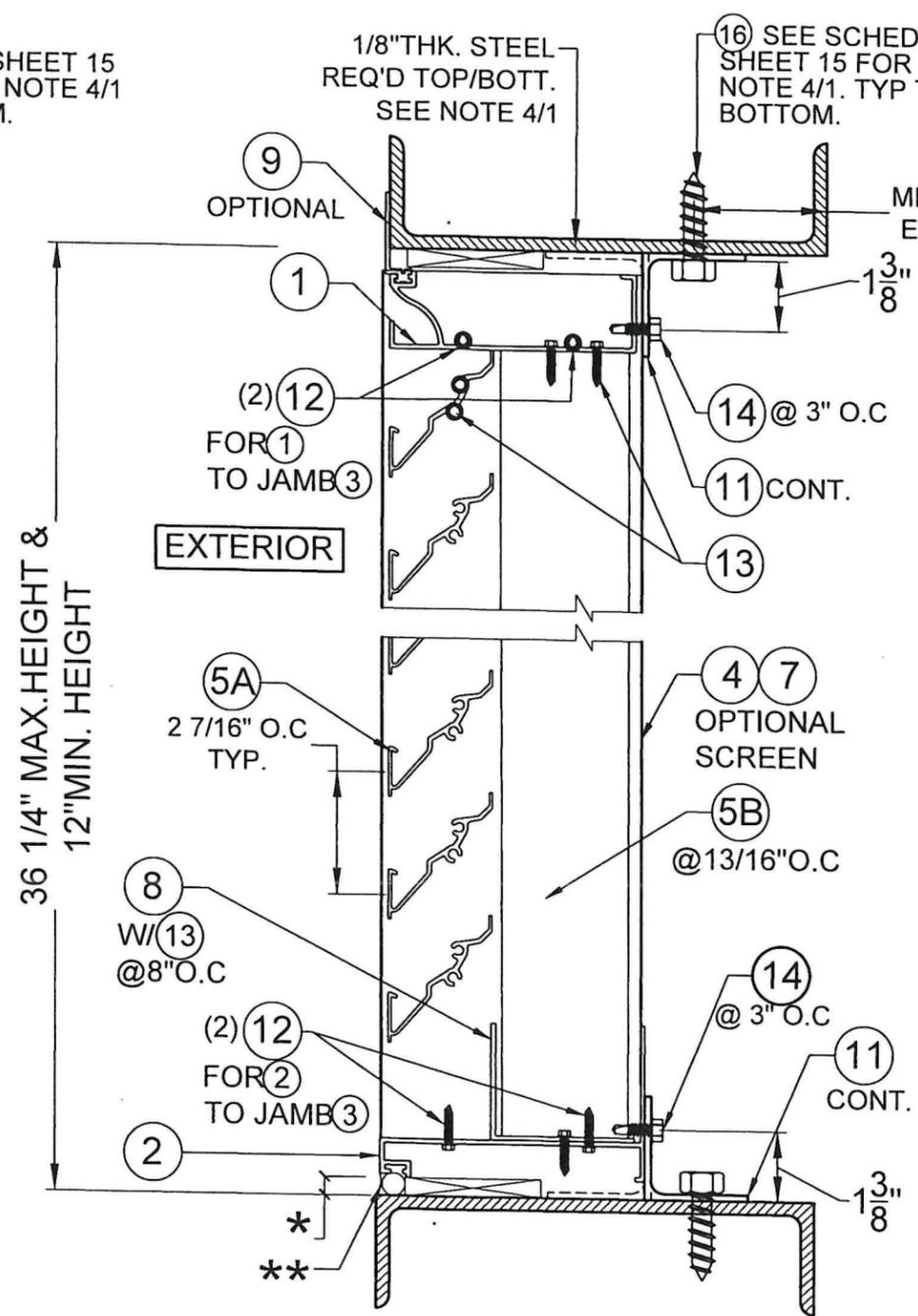
No. 44167

STATE OF FLORIDA
WALTER A. TILLIT JR.
LICENSE
PROFESSIONAL ENGINEER

[Signature]
P.E. SEAL/SIGNATURE/DATE



**SECTION A2 W/O (6) & (6A):
ALUMINUM SUBSTRATE**
SCALE: N.T.S



**SECTION A2 W/ (6) & (6A):
STEEL SUBSTRATE**
SCALE: N.T.S

*MAX. 3/8" ALLOWABLE SHIM SPACE (REQUIRED FOR MOUNTING ANGLE (11) INSTALLATION)
**BACKER ROD & CAULK NOT SUPPLIED BY S&P

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONE)

MODEL D-HV-5 HORIZONTAL & VERTICAL LOUVER SYSTEM LARGE MISSILE IMPACT RESISTANT

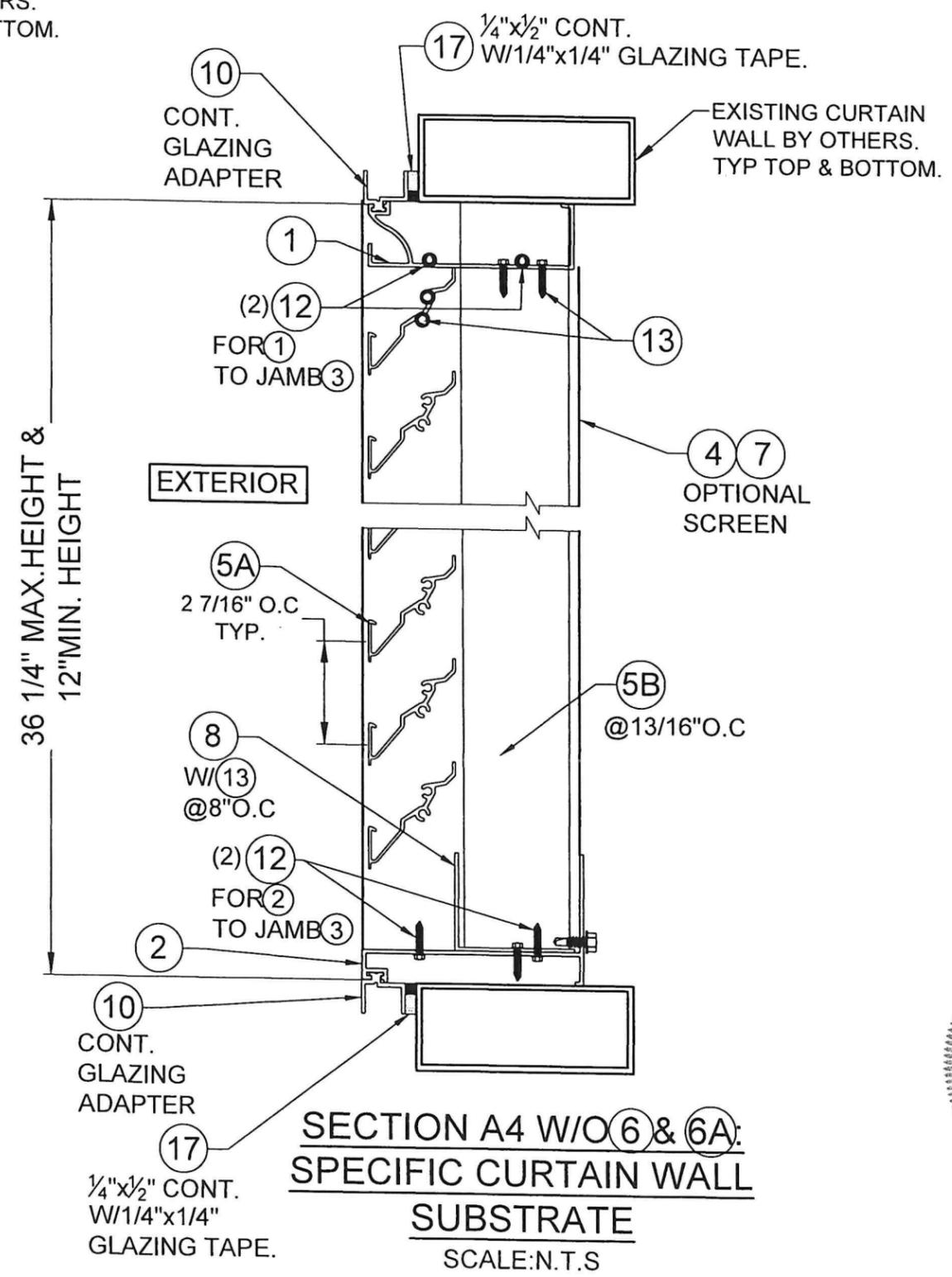
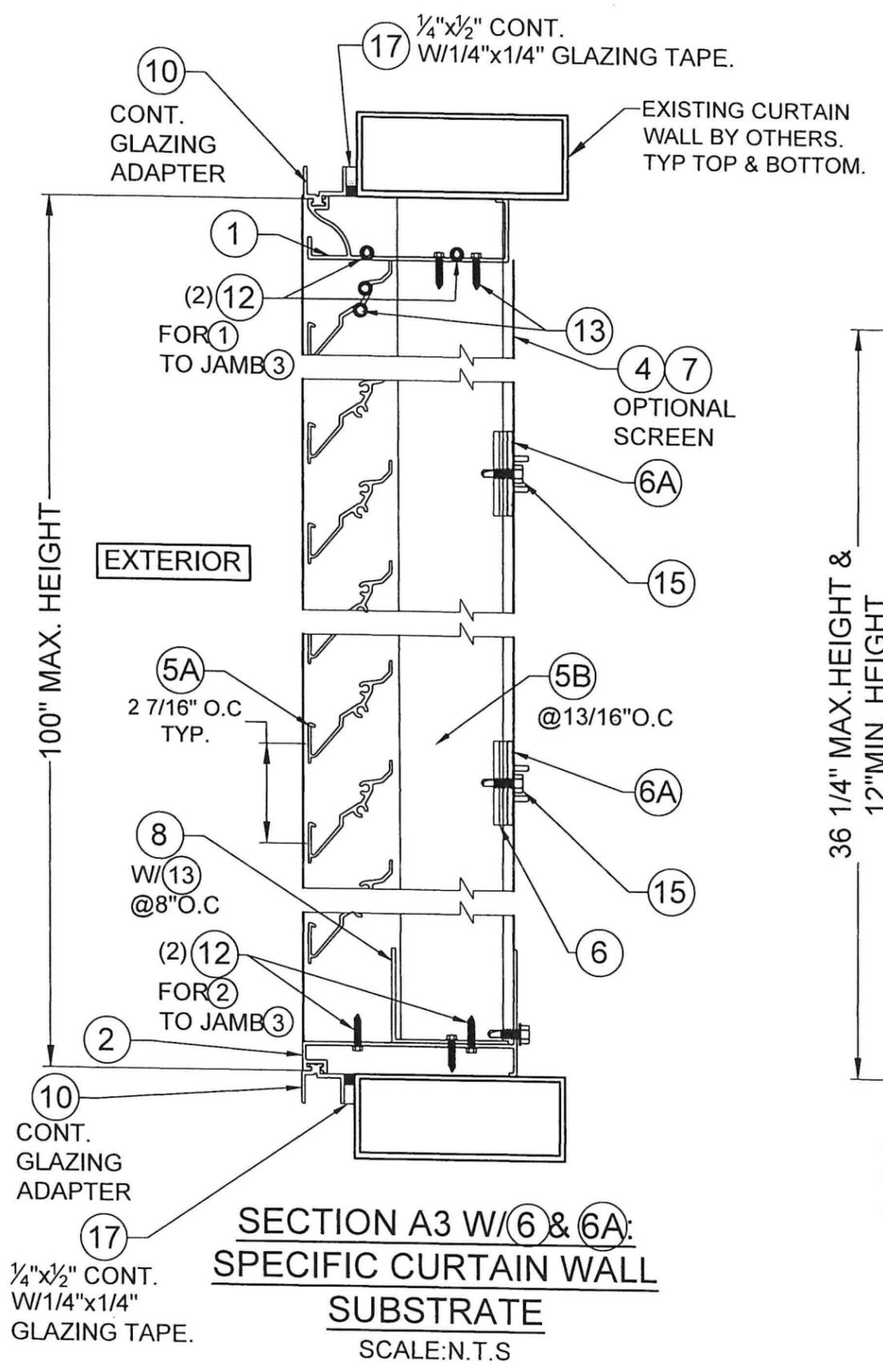
United Enertech
an S&P Air Control Company.
3005 South Hickory St. Chattanooga, TN 37407

TILECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)971-1530 Fax : (305)971-1531
CA-0006719
WALTER A. TILLIT JR. P.E.
FLORIDA Lic. # 44167

No. 44167
STATE OF FLORIDA
WALTER A. TILLIT JR.
LICENSE
P.E. SEAL/SIGNATURE/DATE
31/2025

W.H. DRAWN BY: 04/02/2025 DATE: 25-023 DRAWING No. SHEET 10 OF 15

REV. NO	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-



FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONE)

©2025 TILTECO, INC.

TILTECO INC.
 TILLIT TESTING & ENGINEERING COMPANY
 6355 N.W. 38th St., Ste. 305, VIRGINIA GARDENS, FL 33166
 Phone: (305)871-1530 Fax: (305)871-1531
 CA-0006719
 WALTER A. TILLIT Jr. P.E.
 FLORIDA Lic. # 44167

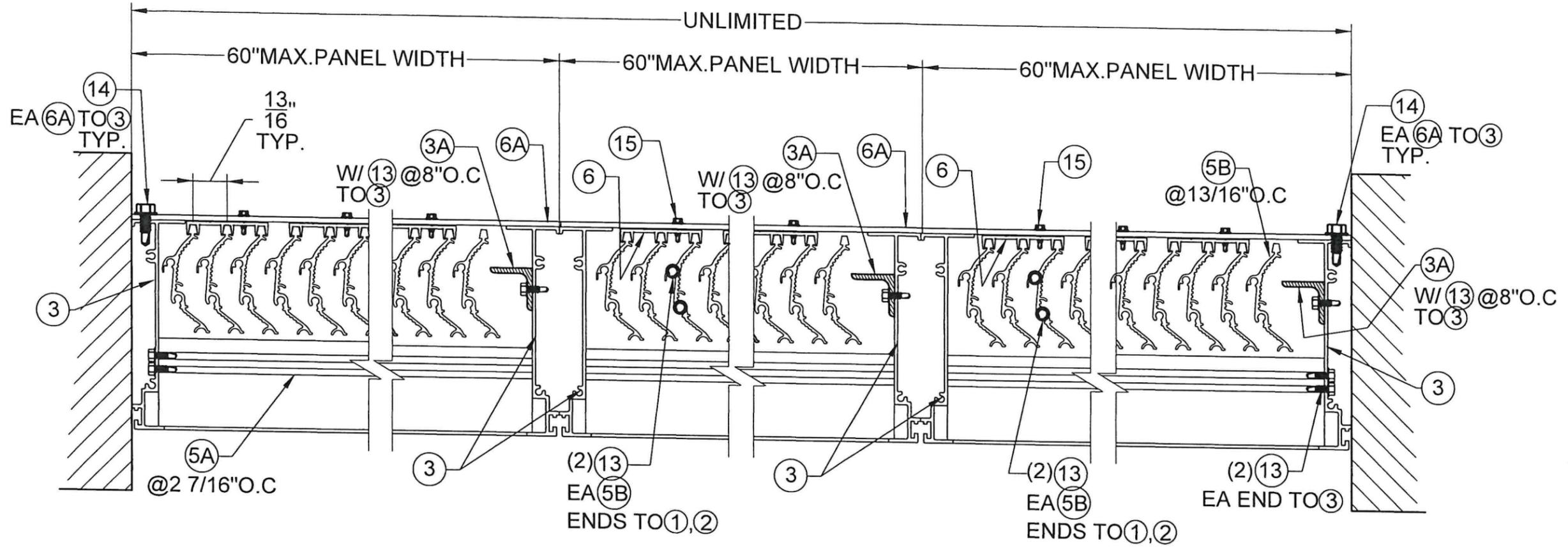
MODEL D-HY-5 HORIZONTAL & VERTICAL LOUVER SYSTEM LARGE MISSILE IMPACT RESISTANT

United Eneitech
 an S&P Air Control Company.
 3005 South Hickory St. Chattanooga, TN 37407

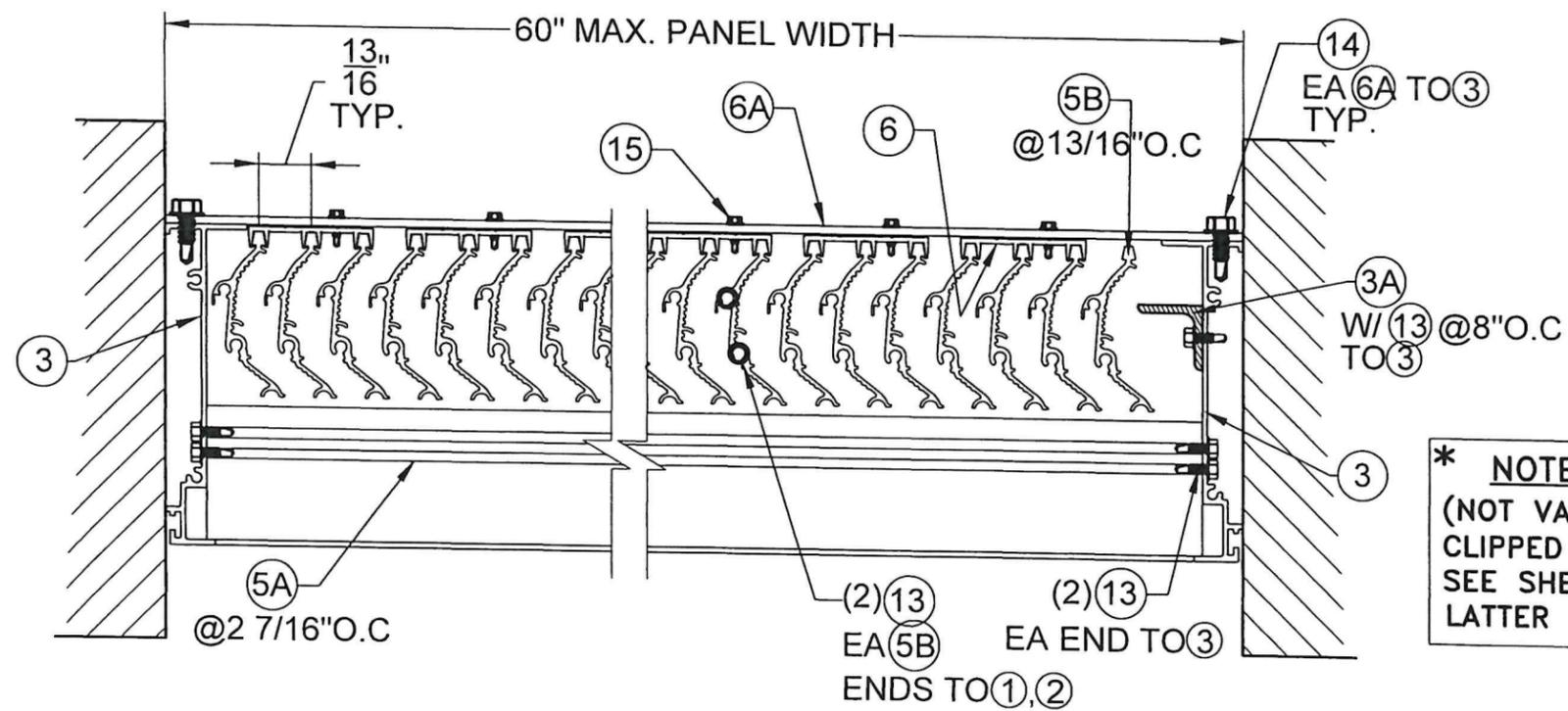
W.H. DRAWN BY: 04/02/2025 DATE: 25-023 DRAWING NO. SHEET 11 OF 15

REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
1			3		
2			4		

WALTER A. TILLIT JR.
 LICENSE No. 44167
 STATE OF FLORIDA
 PROFESSIONAL ENGINEER
 P.E. SEAL/SIGNATURE/DATE



SECTION B1 W/ (6) & (6A) MULTIPLE PANELS W/(11) (NOT SHOWN)*
SCALE:N.T.S



SECTION B2 W/ (6) & (6A) SINGLE PANELS W/(11) (NOT SHOWN)*
SCALE:N.T.S

*** NOTE:**
(NOT VALID FOR INSTALLATION WHERE LOUVER PANEL IS CLIPPED W/ COMPONENT (10) TO SPECIFIC CURTAIN WALLS. SEE SHEETS 6, 11 & 14 FOR DETAILS COVERING THIS LATTER CASE)

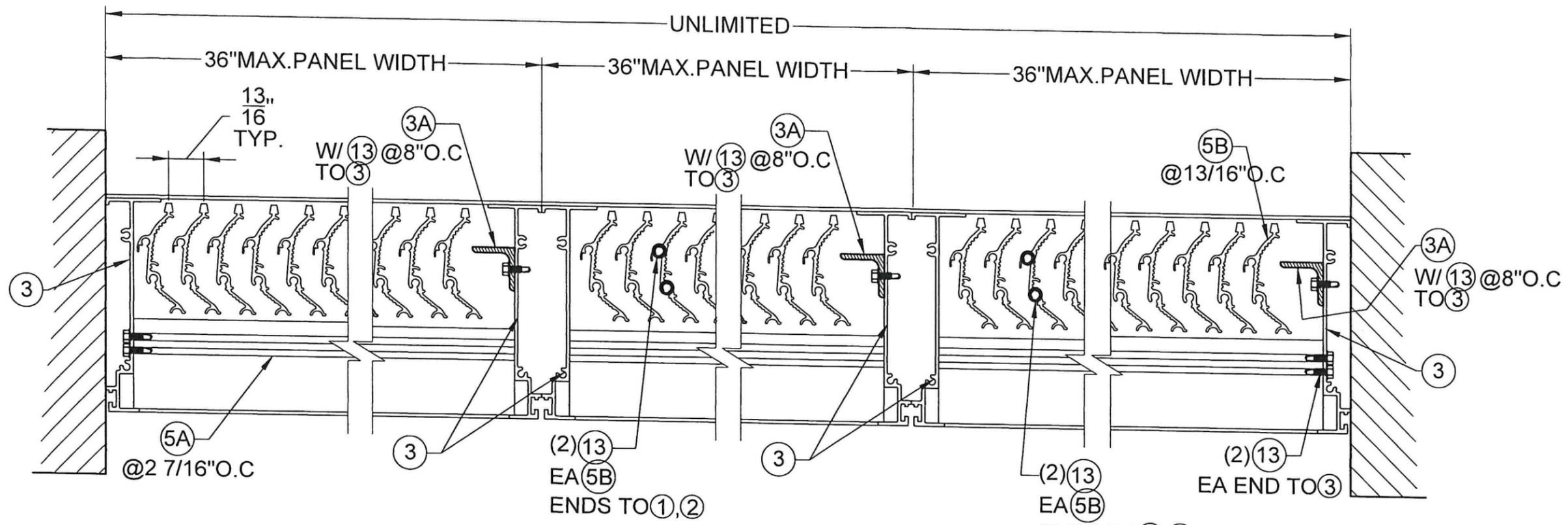
FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONE)
W.H. DRAWN BY: 04/02/2025 DATE:
25-023 DRAWING NO.
SHEET 12 OF 15

MODEL D-HV-5 HORIZONTAL & VERTICAL LOUVER SYSTEM LARGE MISSILE IMPACT RESISTANT
United Eneritech
an S&P Air Control Company.
3005 South Hickory St. Chattanooga, TN 37407

REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
1			3		
2			4		

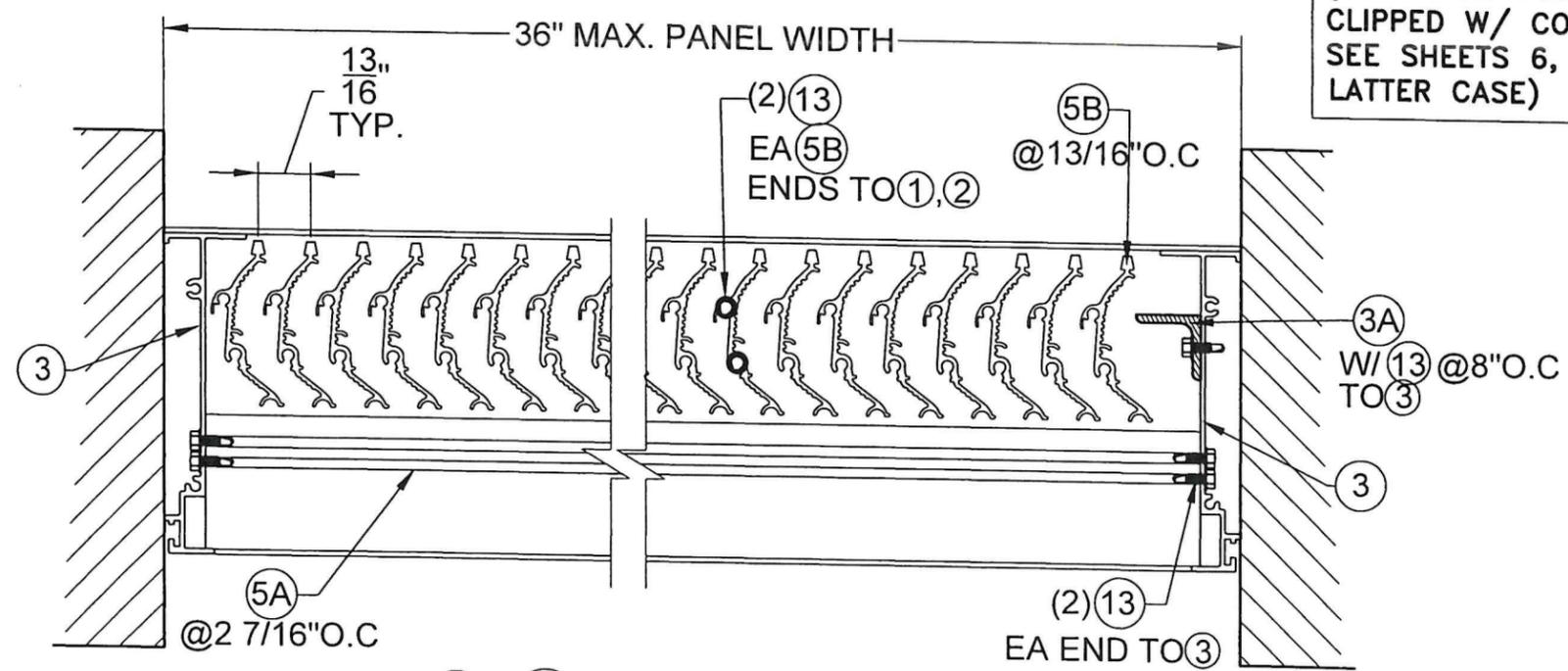
©2025 TILTECO, INC.
TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6335 W. 38th St., Ft. Worth, TX 76116
Phone: (817) 351-1530 Fax: (817) 351-1531
WALTER A. TILLIT JR., P.E.
CA-0006719 FLORIDA Lic. # 44167

P.E. SEAL/SIGNATURE/DATE
Professional Engineer Seal for Walter A. Tillit Jr., No. 44167, State of Florida.



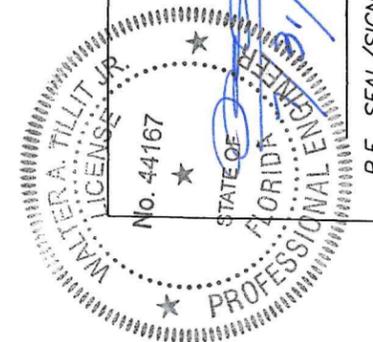
SECTION B3 W/O (6) & (6A): MULTIPLE PANELS W/(11) (NOT SHOWN)*
SCALE:N.T.S

*** NOTE:**
(NOT VALID FOR INSTALLATION WHERE LOUVER PANEL IS CLIPPED W/ COMPONENT (10) TO SPECIFIC CURTAIN WALLS. SEE SHEETS 6, 11 & 14 FOR DETAILS COVERING THIS LATTER CASE)

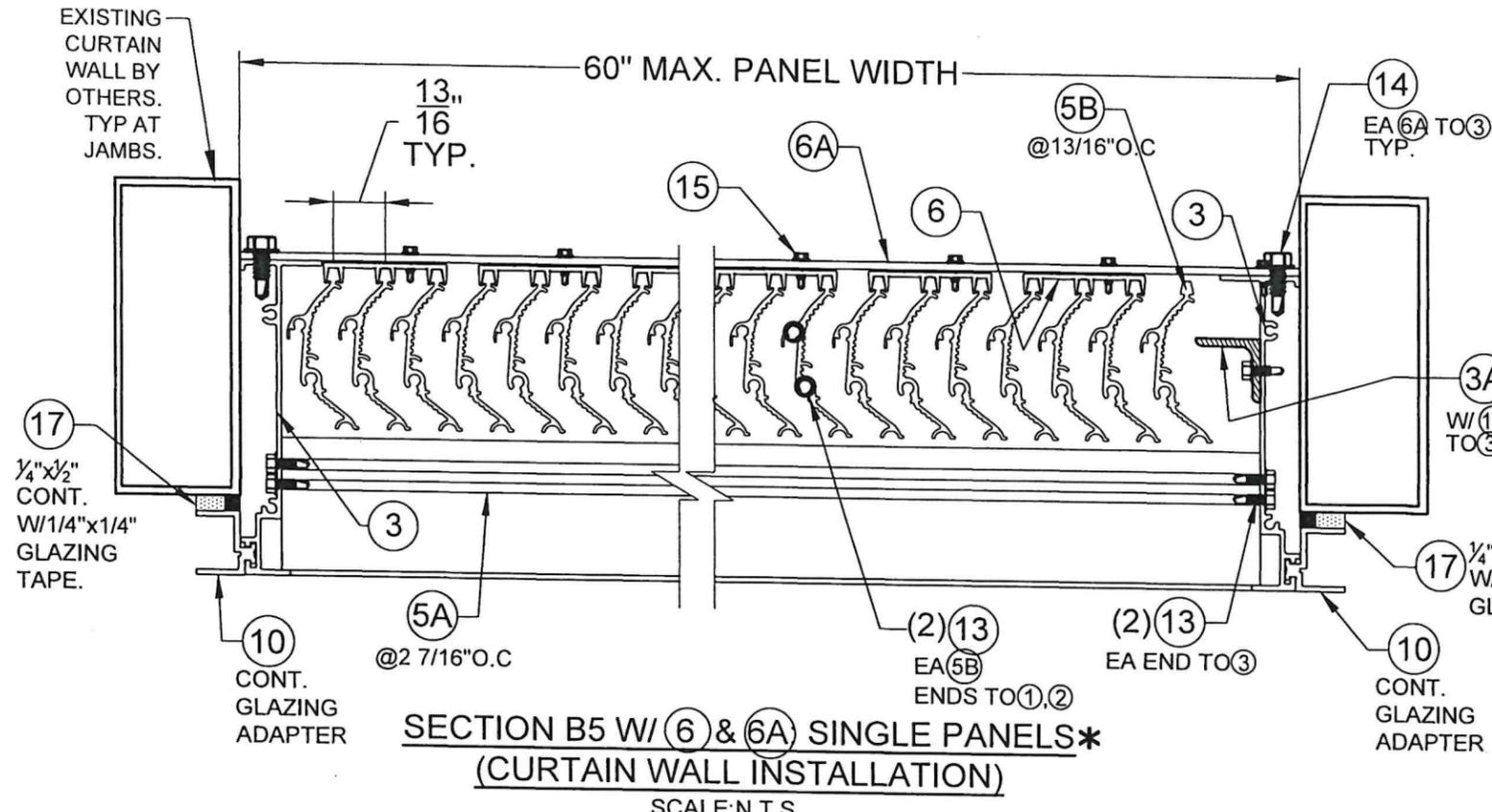


SECTION B4 W/O (6) & (6A): SINGLE PANELS W/(11) (NOT SHOWN)*
SCALE:N.T.S

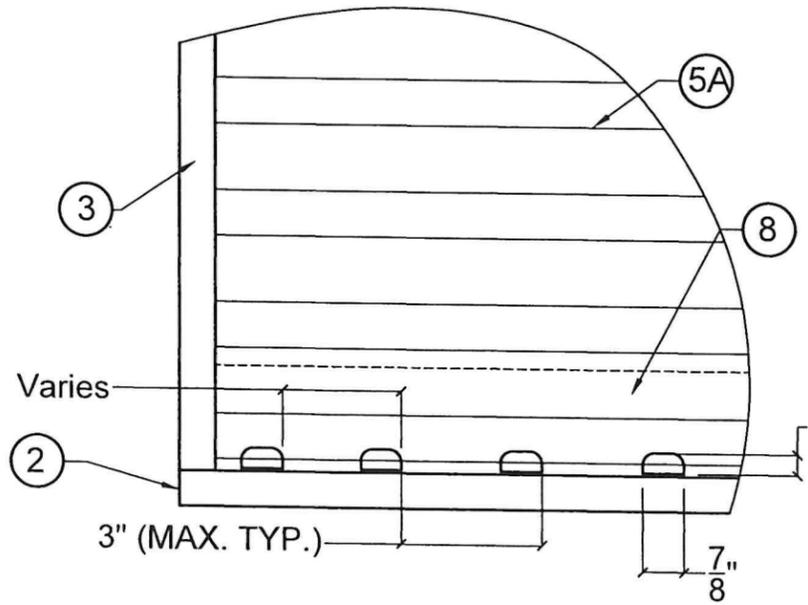
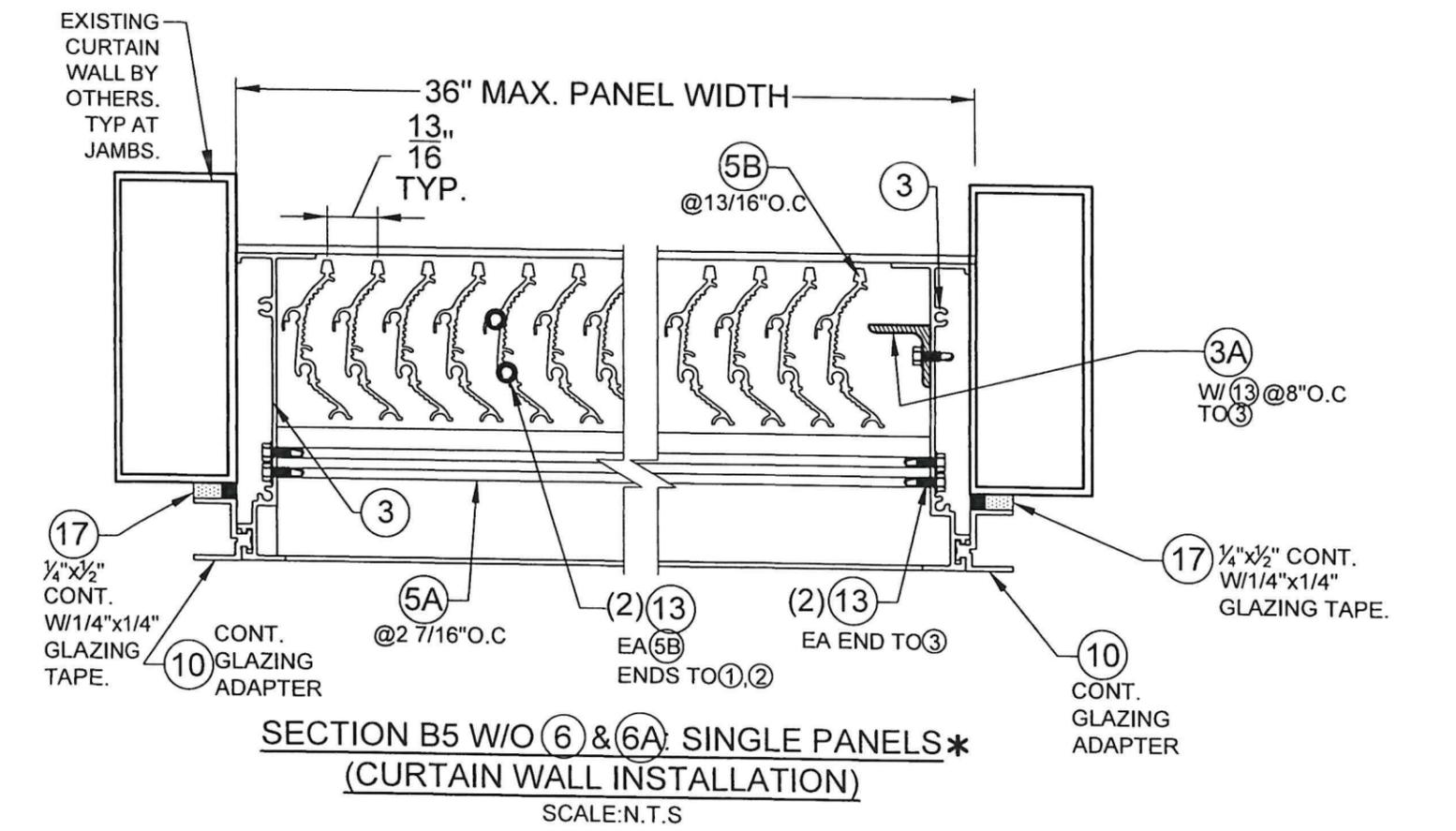
FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONE)		W.H. DRAWN BY: 04/02/2025	DATE: 25-023
MODEL D-HV-5 HORIZONTAL & VERTICAL LOUVER SYSTEM LARGE MISSILE IMPACT RESISTANT		REV. NO. 1	DESCRIPTION
United Enertech an S&P Air Control Company. 3005 South Hickory St. Chattanooga, TN 37407		REV. NO. 2	DATE
TILECO INC. TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone: (305)971-1530, Fax: (305)971-1531 CA-0006719 WALTER A. TILLIT Jr., P.E. FLORIDA Lic. # 44167		REV. NO. 3	DATE
		REV. NO. 4	DATE
		REV. NO. 5	DATE
		REV. NO. 6	DATE
		REV. NO. 7	DATE
		REV. NO. 8	DATE
		REV. NO. 9	DATE
		REV. NO. 10	DATE
		REV. NO. 11	DATE
		REV. NO. 12	DATE
		REV. NO. 13	DATE
		REV. NO. 14	DATE
		REV. NO. 15	DATE



P.E. SEAL/SIGNATURE/DATE



NOTE: *
 THIS INSTALLATION IS ONLY VALID FOR SINGLE LOUVER PANEL CLIPPED W/ COMPONENT 10 TO SPECIFIC CURTAIN WALLS. ALL AROUND. SEE SHEET 1 FOR MAXIMUM PRESSURE RATING.



FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONE)

W.H. DRAWN BY: 04/02/2025 DATE: 25-023 DRAWING NO. SHEET 14 OF 15

MODEL D-HV-5 HORIZONTAL & VERTICAL LOUVER SYSTEM LARGE MISSILE IMPACT RESISTANT

United Eneitech
 an S&P Air Control Company.
 3005 South Hickory St. Chattanooga, TN 37407

REV. NO.	DESCRIPTION	DATE	REV. NO.	DESCRIPTION	DATE
1			3		
2			4		

©2025 TILTECO, INC.

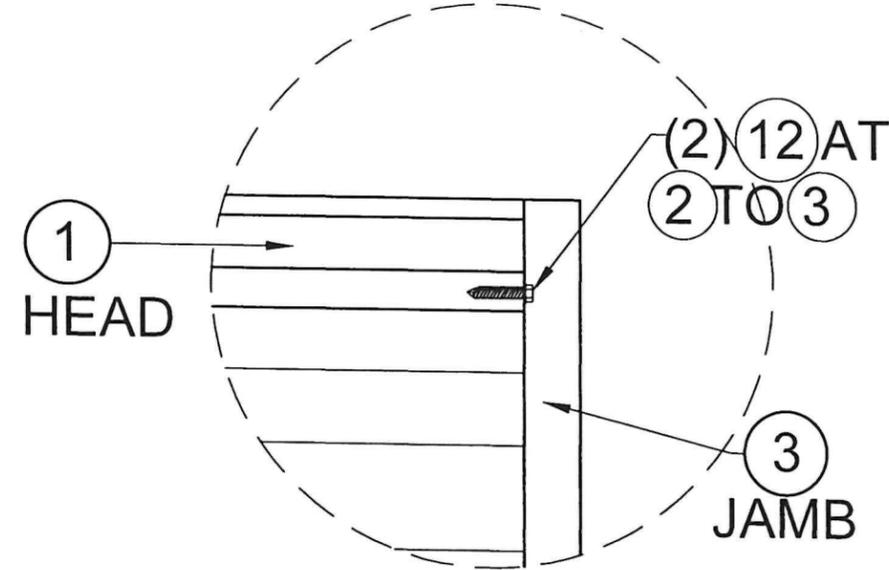
TILTECO INC.
 TILLIT TESTING & ENGINEERING COMPANY
 an S&P Air Control Company.
 6355 N.W. 36th St., Ste. 305, VIRGINIA GARDENS, FL 33166
 Phone : (305)871-1530 • Fax : (305)871-1531
 CA-0006719
 WALTER A. TILLIT Jr., P.E.
 FLORIDA Lic. # 44167

FLORIDA PROFESSIONAL ENGINEER
 WALTER A. TILLIT JR.
 LICENSE No. 44167
 STATE OF FLORIDA

P.E. SEAL/SIGNATURE/DATE

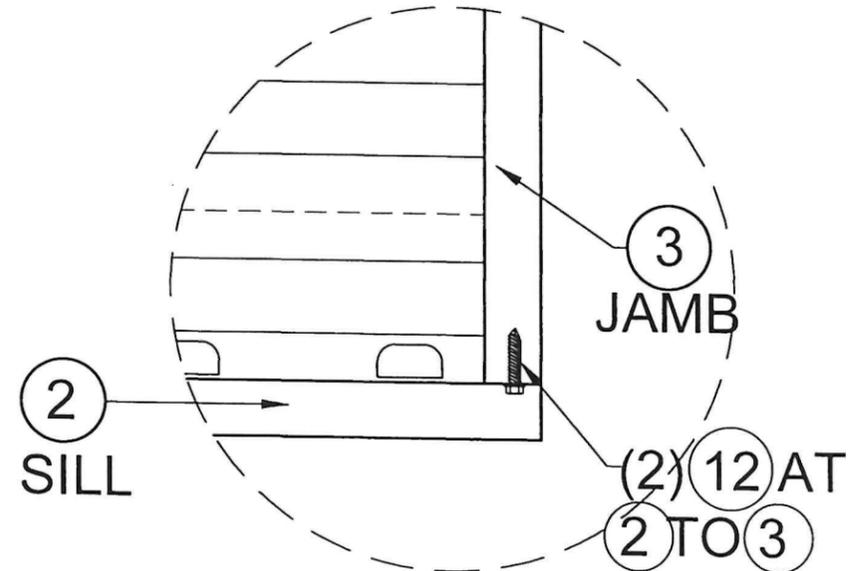
MAX. ANCHOR (16) SPACING SCHEDULE AS PER NOTE 4/1
AT INSTALLATION WITH SINGLE & MULTIPLE PANELS
W/ ANGLE (11) PER SECTIONS A1 & A2 (TOP & BOTTOM)

A.S.D. DESIGN LOAD (p.s.f.)	MAX. UNIT HEIGHT (FT)	SUBSTRATE		
		POURED CONCRETE OR GROUTED CONCRETE BLOCK	ALUMINUM OR STEEL	WOOD
≤ 75.0	≤ 5'-0"	6" O.C.	6" O.C.	6" O.C.
	> 5'-0" - 8'-4"	6" O.C.	6" O.C.	3 1/2" O.C.
>75-110	≤ 5'-0"	6" O.C.	6" O.C.	4" O.C.
	>5'-0" - 8'-4"	6" O.C.	6" O.C.	N/A



**DETAIL 2A: PANEL
ASSEMBLY**

SCALE: N.T.S



**DETAIL 2B: PANEL
ASSEMBLY**

SCALE: N.T.S

FLORIDA BUILDING CODE (HIGH & NON HIGH VELOCITY HURRICANE ZONE)

MODEL D-HV-5 HORIZONTAL & VERTICAL
LOUVER SYSTEM LARGE MISSILE IMPACT RESISTANT

©2025 TILTECO, INC.

TILTECO INC.
TILLIT TESTING & ENGINEERING COMPANY
6355 N.W. 38th St., Ste. 305, VIRGINIA GARDENS, FL 33166
Phone : (305)871-1530 • Fax : (305)871-1531
CA-0006719
WALTER A. TILLIT Jr., P.E.
FLORIDA Lic. # 44167

United Eneitech
an S&P Air Control Company.
3005 South Hickory St. Chattanooga, TN 37407

W.H. DRAWN BY: 04/02/2025 DATE: 25-023 DRAWING NO. SHEET 15 OF 15

REV. NO	DESCRIPTION	DATE	REV. NO	DESCRIPTION	DATE
1			3		
2			4		

No. 44167

STATE OF FLORIDA
WALTER A. TILLIT JR.
PROFESSIONAL ENGINEER

P.E. SEAL/SIGNATURE/DATE

Walter A. Tillit Jr.
04/02/2025