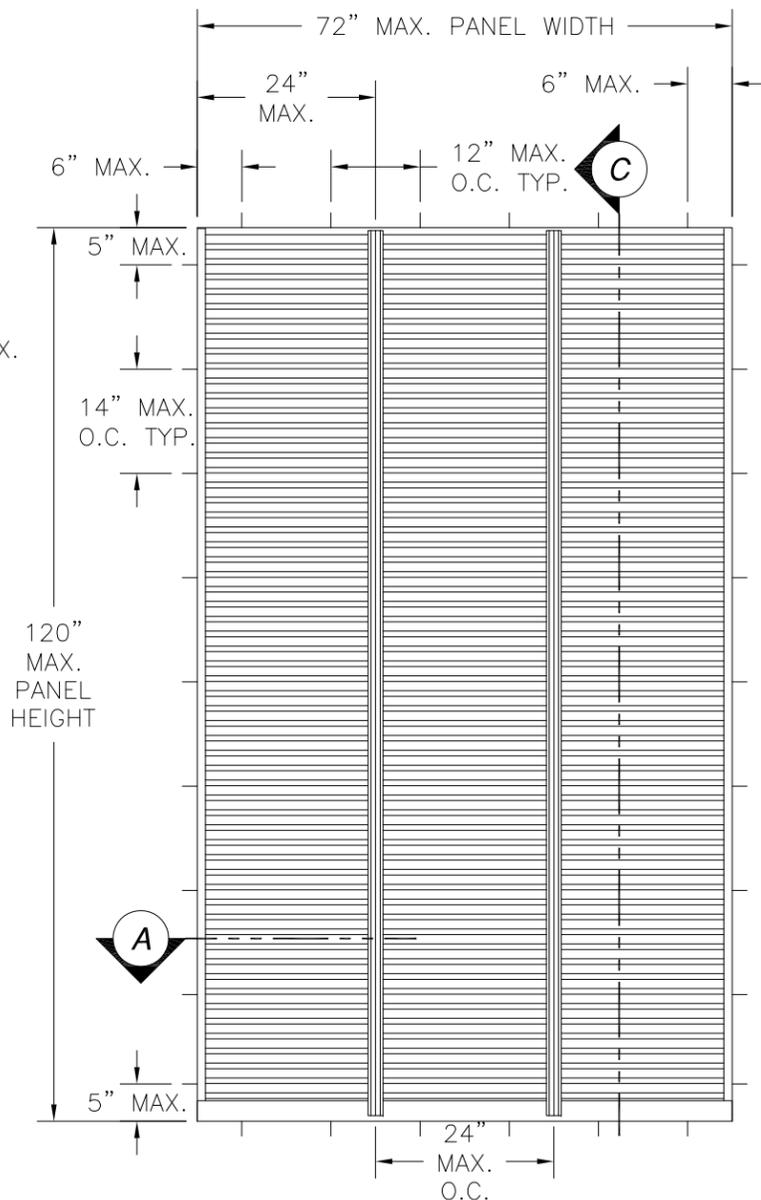


DC-HWD550 ALUMINUM SINGLE VERTICAL LOUVER
INTERIOR VIEW

DESIGN PRESSURE RATING	IMPACT RATING
±120PSF	LARGE MISSILE IMPACT



DC-HWD550 ALUMINUM SINGLE VERTICAL LOUVER
INTERIOR VIEW

DESIGN PRESSURE RATING	IMPACT RATING
±120PSF	LARGE MISSILE IMPACT

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

- NOTES:
- 1) THE PRODUCT SHOWN HEREIN IS DESIGNED AND MANUFACTURED TO COMPLY WITH REQUIREMENTS OF THE 2006 INTERNATIONAL BUILDING CODE AND 2006 INTERNATIONAL RESIDENTIAL CODE WITH TEXAS STATE MODIFICATIONS.
 - 2) WOOD FRAMING, STEEL FRAMING AND CONCRETE OPENING TO BE DESIGNED AND ANCHORED TO PROPERLY TRANSFER ALL LOADS TO STRUCTURE. FRAMING AND CONCRETE OPENING IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
 - 3) 1X BUCK OVER CONCRETE IS OPTIONAL. WHERE 1X BUCK IS NOT USED DISSIMILAR MATERIALS MUST BE SEPARATED WITH APPROVED COATING OR MEMBRANE. SELECTION OF COATING OR MEMBRANE IS THE RESPONSIBILITY OF THE ARCHITECT OR ENGINEER OF RECORD.
 - 4) ALLOWABLE STRESS INCREASE OF 1/3 WAS NOT USED IN THE DESIGN OF THE PRODUCT SHOWN HEREIN. WIND LOAD DURATION FACTOR Cd=1.6 WAS USED FOR WOOD ANCHOR CALCULATIONS.
 - 5) FRAME MATERIAL: EXTRUDED ALUMINUM 6063-T5 .080" THICK.
 - 6) APPROVED IMPACT PROTECTIVE SYSTEM IS NOT REQUIRED FOR THIS PRODUCT IN WIND BORNE DEBRIS REGIONS.
 - 7) SHIM AS REQUIRED AT EACH INSTALLATION ANCHOR WITH LOAD BEARING SHIM. SHIM WHERE SPACE OF 1/16" OR GREATER OCCURS. MAXIMUM ALLOWABLE SHIM STACK TO BE 1/4".
 - 8) ALL FASTENERS TO BE CORROSION RESISTANT.
 - 9) 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 BELOW:
 - A. WOOD - MINIMUM SPECIFIC GRAVITY OF G=0.46
 - B. CONCRETE - MINIMUM COMPRESSIVE STRENGTH OF 3,200 PSI.
 - C. STEEL - 16GA. (.060") MINIMUM (WELDING INSTALLATION).
 - D. STEEL - .1875" MINIMUM (3/8" MACHINE SCREW OR 3/8" BOLT AND NUT INSTALLATION).
 - E. STEEL - 14GA. (.078") MINIMUM (5/16" SELF-TAPPING SCREW INSTALLATION).
 - 10) LOUVER TO BE INSTALLED IN LOCATION WHERE ROOM HAS BEEN DESIGNED FOR WATER DRAINAGE.
 - 11) LOUVER MAYBE INSTALLED WITH OR WITHOUT EAD DAMPER. SEE SECTION C SHEET 5.

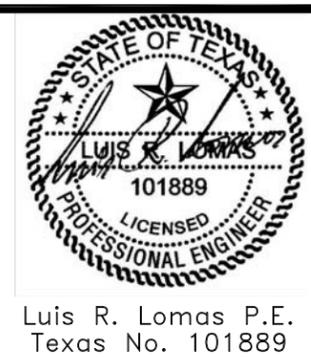
SIGNED: 10/08/2010

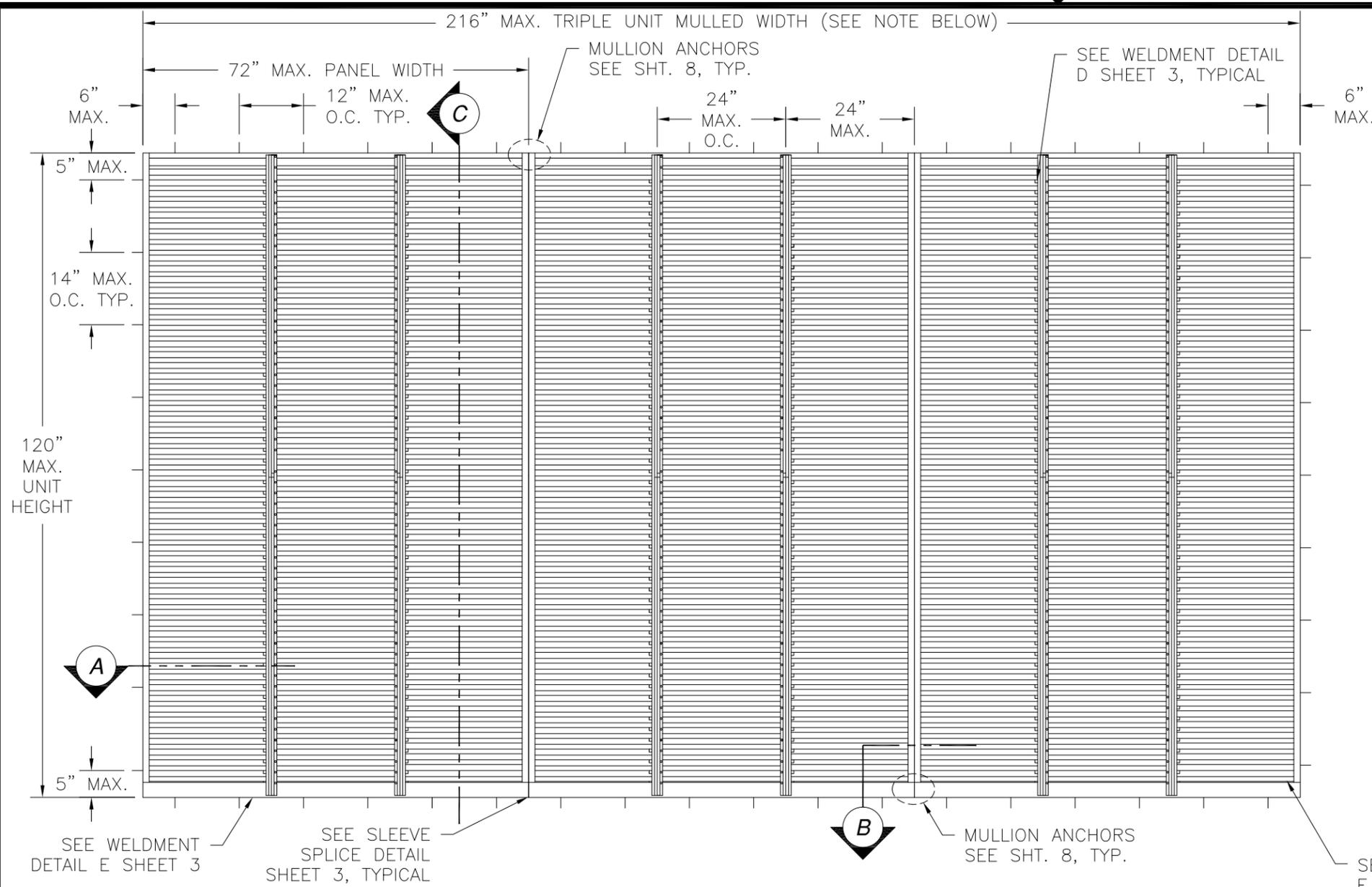
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1 - 2	ELEVATION, ANCHORING AND NOTES
3	BILL OF MATERIALS AND WELDMENT DETAILS
4 - 5	CROSS SECTIONS
6 - 9	INSTALLATION DETAILS
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LEADER INDUSTRIES, INC.
2509 CRUSEN STREET
NASHVILLE, TN 37211

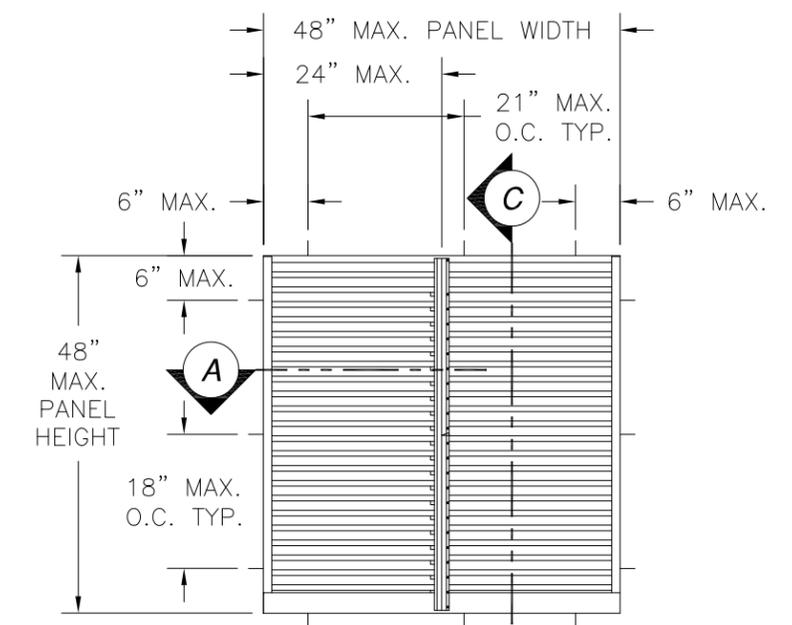
DC-HWD550 ALUMINUM VERTICAL LOUVER
MULLED AND SINGLE UNITS - LARGE MISSILE IMPACT
SINGLE ELEVATIONS, ANCHORING AND NOTES

DRAWN: TJH	DWG NO. 08-01060	REV -
SCALE NTS	DATE 08/23/10	SHEET 1 OF 11





REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



DC-HWD550 ALUMINUM SINGLE VERTICAL LOUVER
INTERIOR VIEW

DESIGN PRESSURE RATING	IMPACT RATING
±180PSF	LARGE MISSILE IMPACT

DC-HWD550 ALUMINUM MULLED VERTICAL LOUVER
INTERIOR VIEW

3 PANEL MULLED UNIT SHOWN, UNLIMITED MULTIPLES ARE APPROVED AS LONG AS SINGLE PANEL DOES NOT EXCEED SINGLE PANEL SIZE SHOWN IN ELEVATIONS.
UNITS MAY BE MULLED AS 72" x 120" OR AS 120" x 72"

DESIGN PRESSURE RATING	IMPACT RATING
±120PSF	LARGE MISSILE IMPACT

LEADER INDUSTRIES, INC.
2509 CRUSEN STREET
NASHVILLE, TN 37211

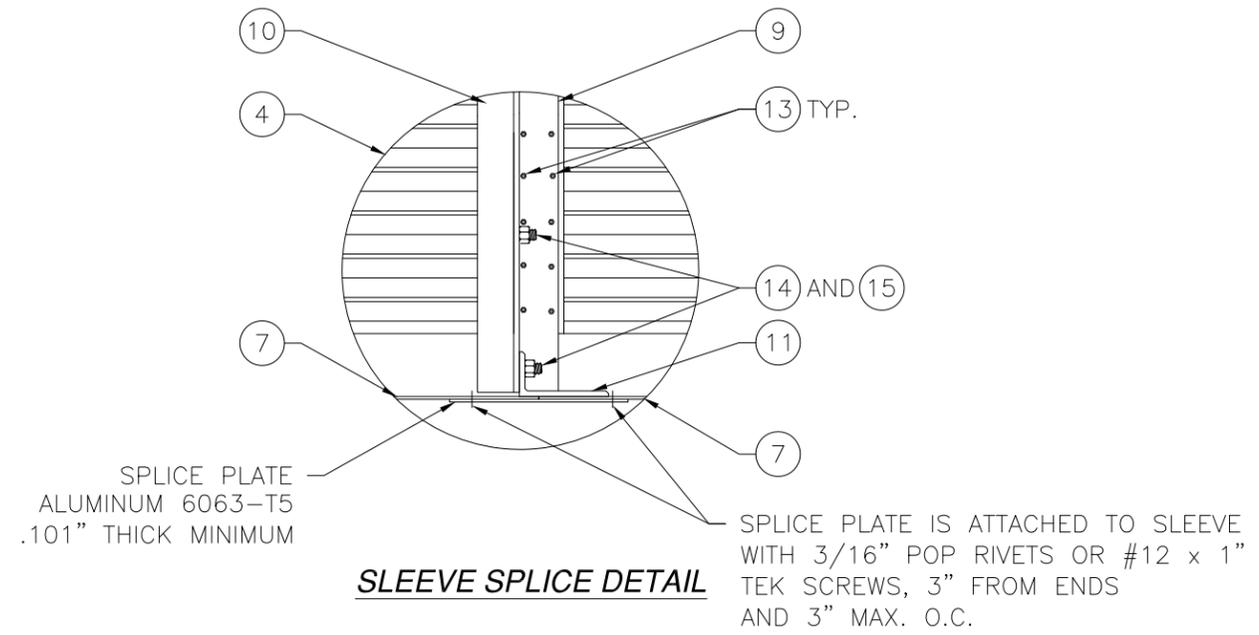
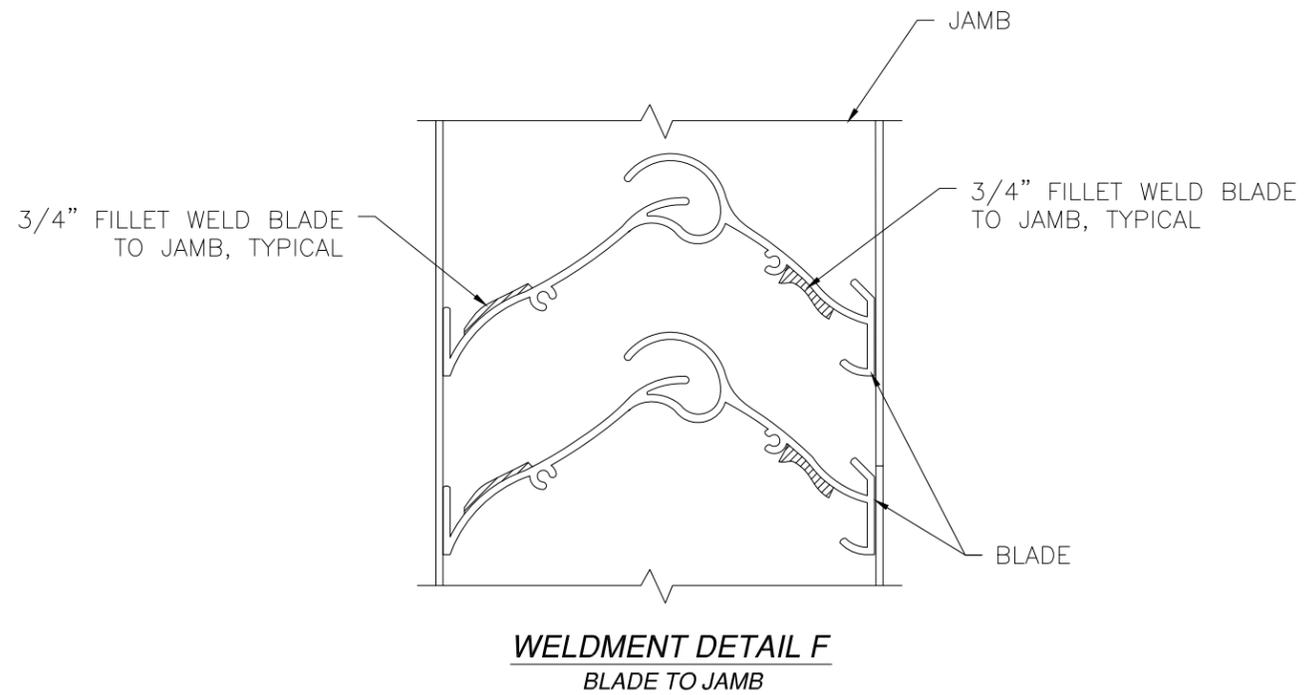
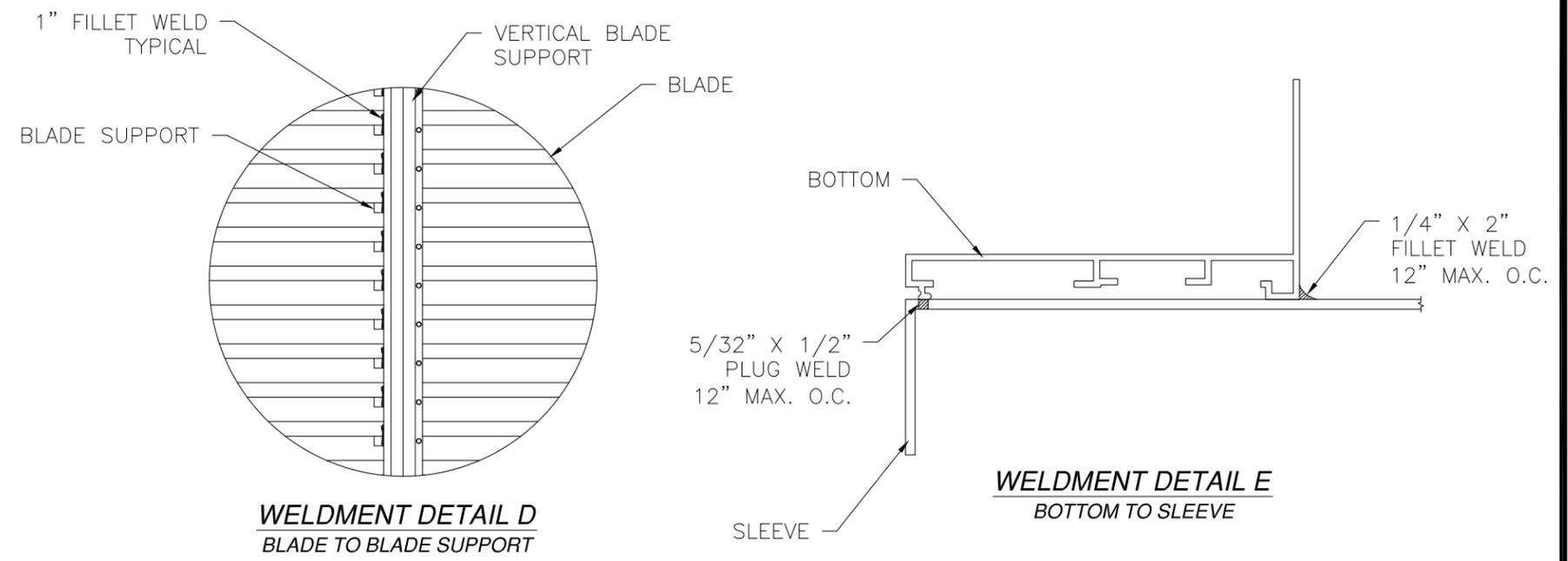
DC-HWD550 ALUMINUM VERTICAL LOUVER
MULLED AND SINGLE UNITS – LARGE MISSILE IMPACT
MULLED AND SINGLE ELEVATIONS AND NOTES

DRAWN: TJH	DWG NO. 08-01060	REV -
SCALE NTS	DATE 08/23/10	SHEET 2 OF 11

Luis R. Lomas P.E.
Texas No. 101889

PARTS LIST				
NO.	PART NUMBER	DESCRIPTION	MANUFACTURER	MATERIAL
1	HWD550H	HWD550 HEAD	LEADER INDUSTRIES	ALUMINUM 6063-T5
2	HWD550B0	HWD550 BOTTOM	LEADER INDUSTRIES	ALUMINUM 6063-T5
3	HWD550J	HWD550 JAMB	LEADER INDUSTRIES	ALUMINUM 6063-T5
4	HWD550B	HWD550 BLADE	LEADER INDUSTRIES	ALUMINUM 6063-T5
5	HWD550BS	HWD550 BLADE SUPPORT	LEADER INDUSTRIES	ALUMINUM 6063-T5
6		VERTICAL BLADE SUPPORT	LEADER INDUSTRIES	ALUMINUM 6063-T5
7		INSTALLATION SLEEVE	LEADER INDUSTRIES	ALUMINUM 3003
8		2" x 2" x 3/16" INSTALL ANGLE	LEADER INDUSTRIES	ALUMINUM 6063-T5
9		2" x 4" x 1/4" MULLION ANGLE	LEADER INDUSTRIES	ALUMINUM 6063-T5
10	C4X5.4	MULLION C-CHANNEL	LEADER INDUSTRIES	A36 STEEL
11		2" x 4" x 1/4" x 3 1/2" CLIP	LEADER INDUSTRIES	ALUMINUM 6063-T5
12		#8 x 3/4" TEK SCREW		
13		#12 x 1" TEK SCREW		
14		1/2-13 x 1 1/2" HH BOLT		
15		1/2-13 NUT		
16		#10 x 3/4" TEK		
17		2" x 2" x 3/16" CONTINUOUS ANGLE	LEADER INDUSTRIES	ALUMINUM 6063-T5
18		EAD DAMPER BLADE	LEADER INDUSTRIES	ALUMINUM 6063-T5
19		HAND QUADRANT	LEADER INDUSTRIES	ALUMINUM 6063-T5
20		#14 x 7/8" TEK SCREW		
21		EAD DAMPER HAT CHANNEL	LEADER INDUSTRIES	ALUMINUM 6063-T5
22		EAD DAMPER BLADE STOP	LEADER INDUSTRIES	ALUMINUM 6063-T5

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



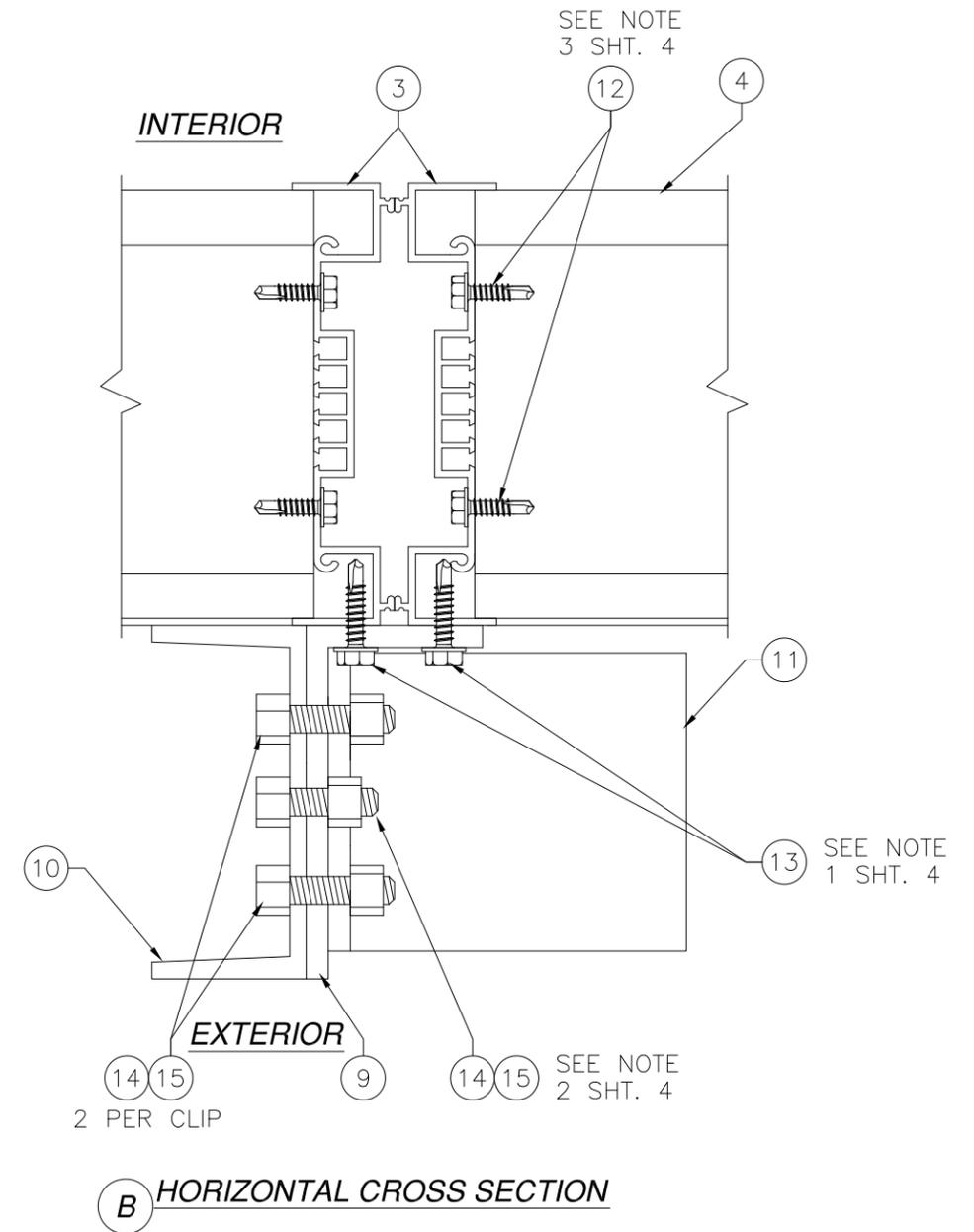
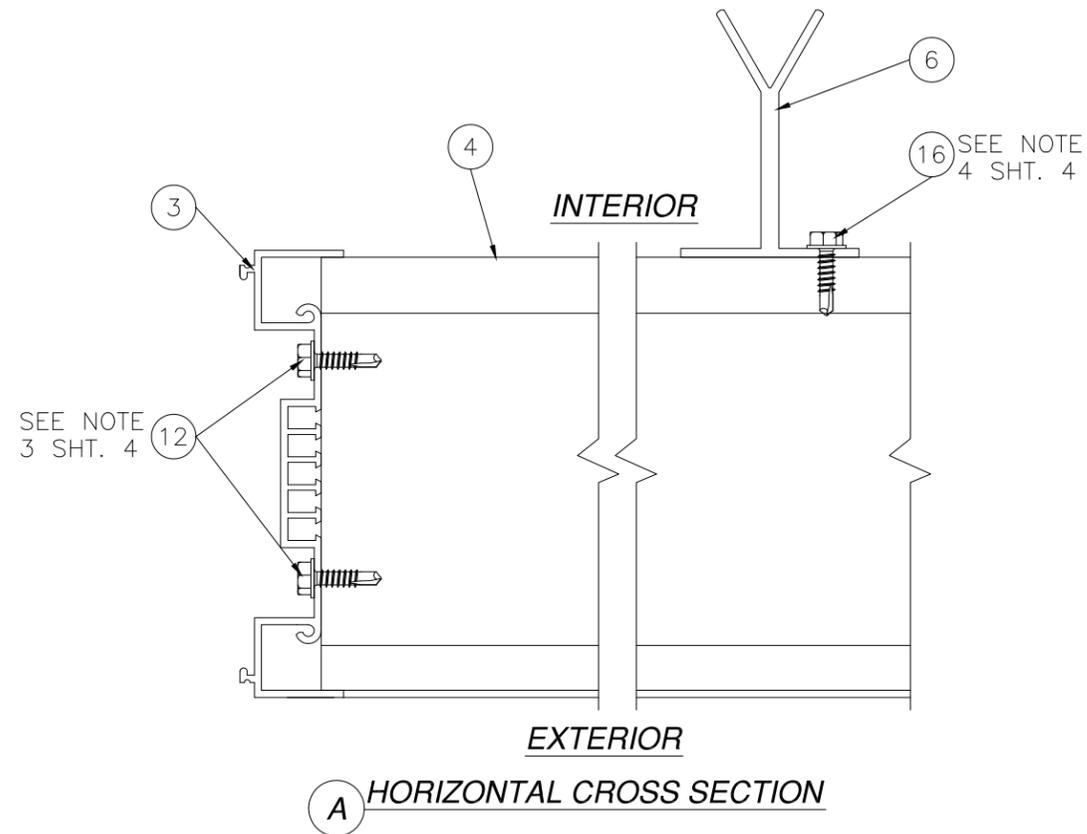
LEADER INDUSTRIES, INC.
2509 CRUSEN STREET
NASHVILLE, TN 37211

DC-HWD550 ALUMINUM VERTICAL LOUVER
MULLED AND SINGLE UNITS - LARGE MISSILE IMPACT
BILL OF MATERIALS AND WELDMENT DETAILS

DRAWN: TJH	DWG NO. 08-01060	REV -
SCALE NTS	DATE 08/23/10	SHEET 3 OF 11

Luis R. Lomas P.E.
Texas No. 101889

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



NOTES:

- 1) LOCATE #12 x 1" TEK SCREW 6" FROM ENDS AND 6" MAXIMUM O.C. THEREAFTER.
- 2) LOCATE 1/2" BOLT AND NUT 6" FROM ENDS AND 12" MAXIMUM O.C. THEREAFTER.
- 3) INSTALL (2) #8 x 3/4" TEK SCREW PER BLADE LOCATION.
- 4) LOCATE #10 x 3/4" TEK SCREW ATTACHING VERTICAL BLADE SUPPORT TO UNIT 2" FROM ENDS AND 2" MAX. O.C. THEREAFTER.

LEADER INDUSTRIES, INC.

2509 CRUSEN STREET
NASHVILLE, TN 37211

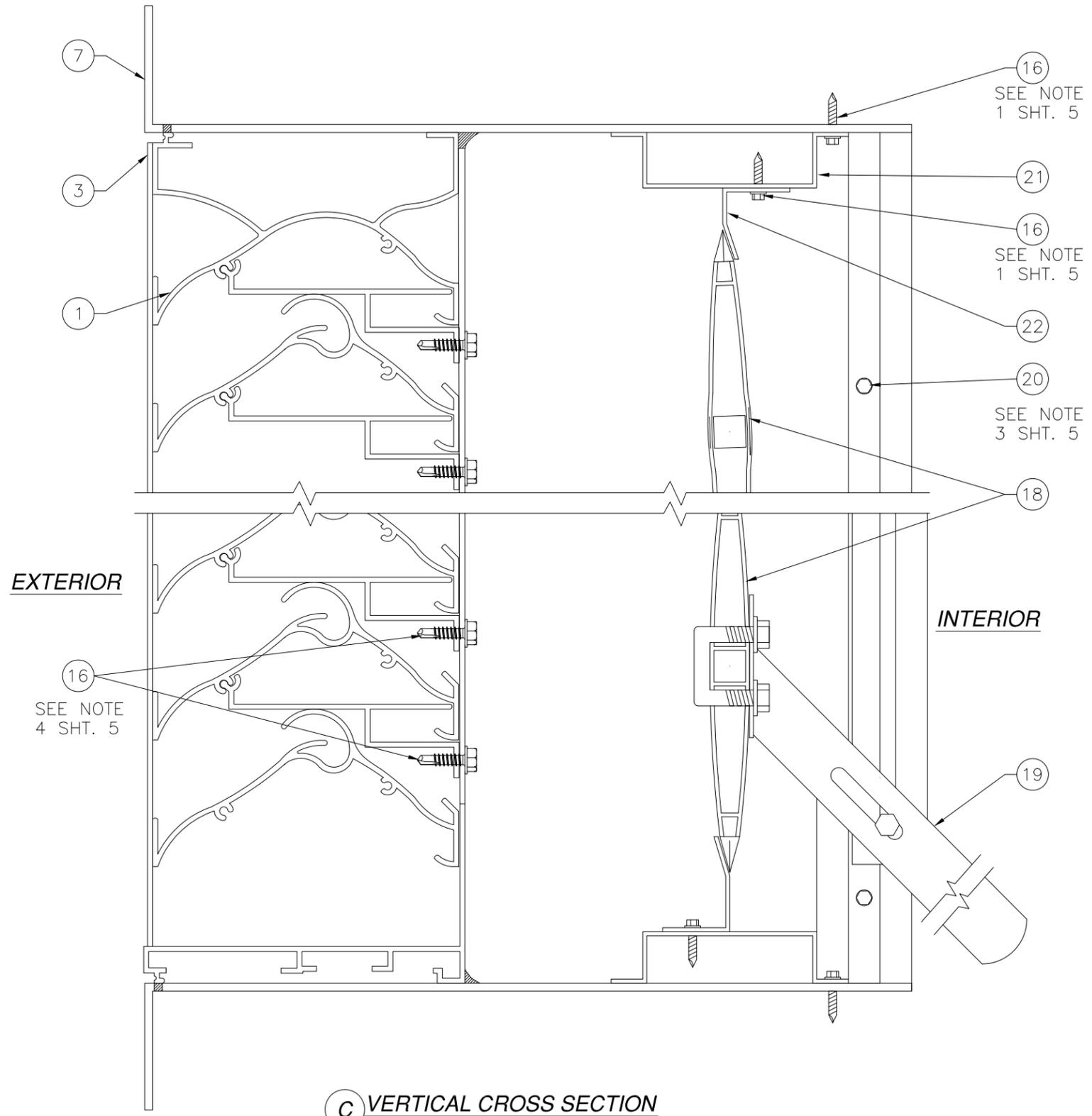
DC-HWD550 ALUMINUM VERTICAL LOUVER
MULLED AND SINGLE UNITS - LARGE MISSILE IMPACT
CROSS SECTIONS

DRAWN: TJH	DWG NO. 08-01060	REV -
SCALE NTS	DATE 08/23/10	SHEET 4 OF 11

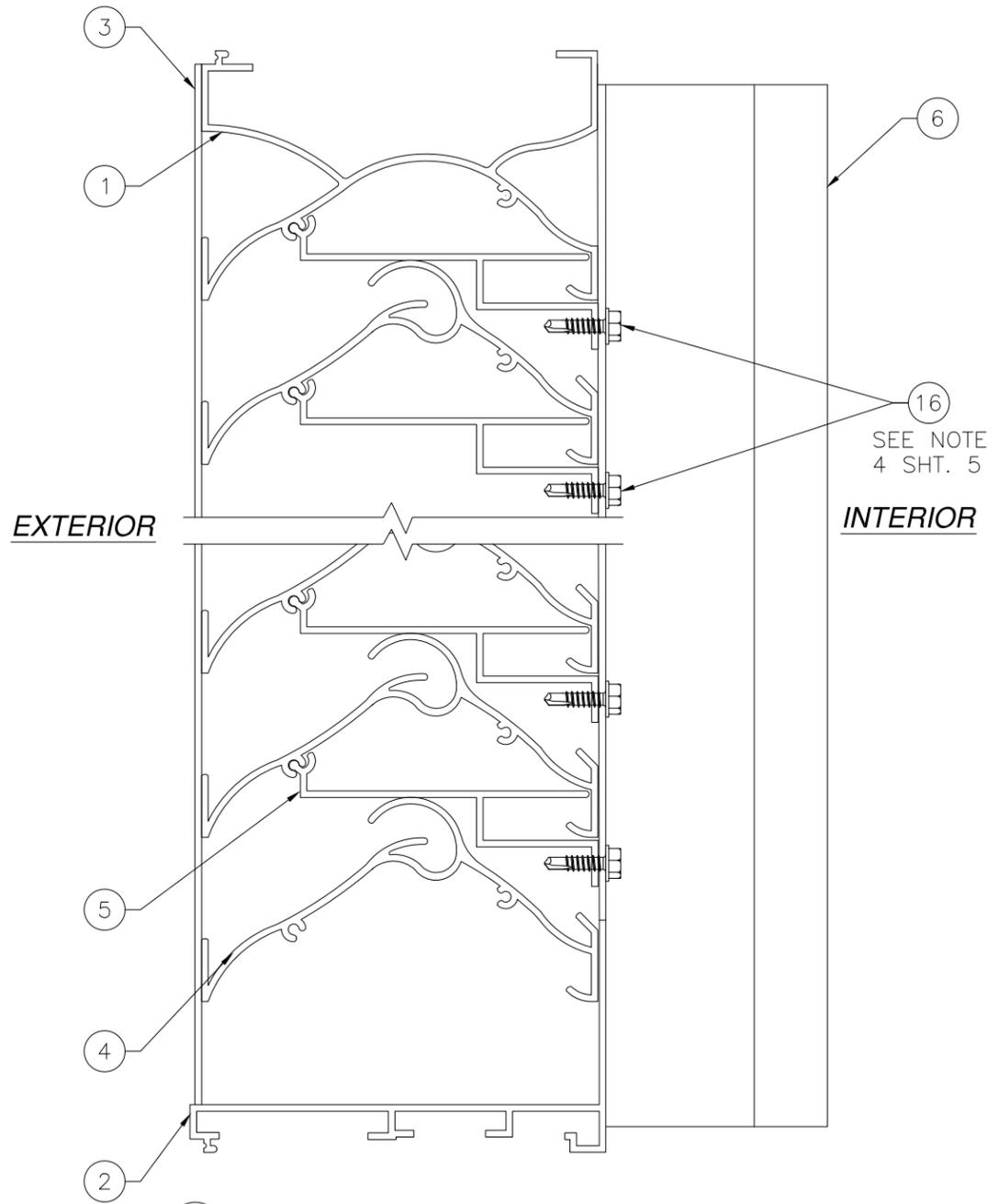


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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



C VERTICAL CROSS SECTION
WITH SLEEVE AND EAD DAMPER



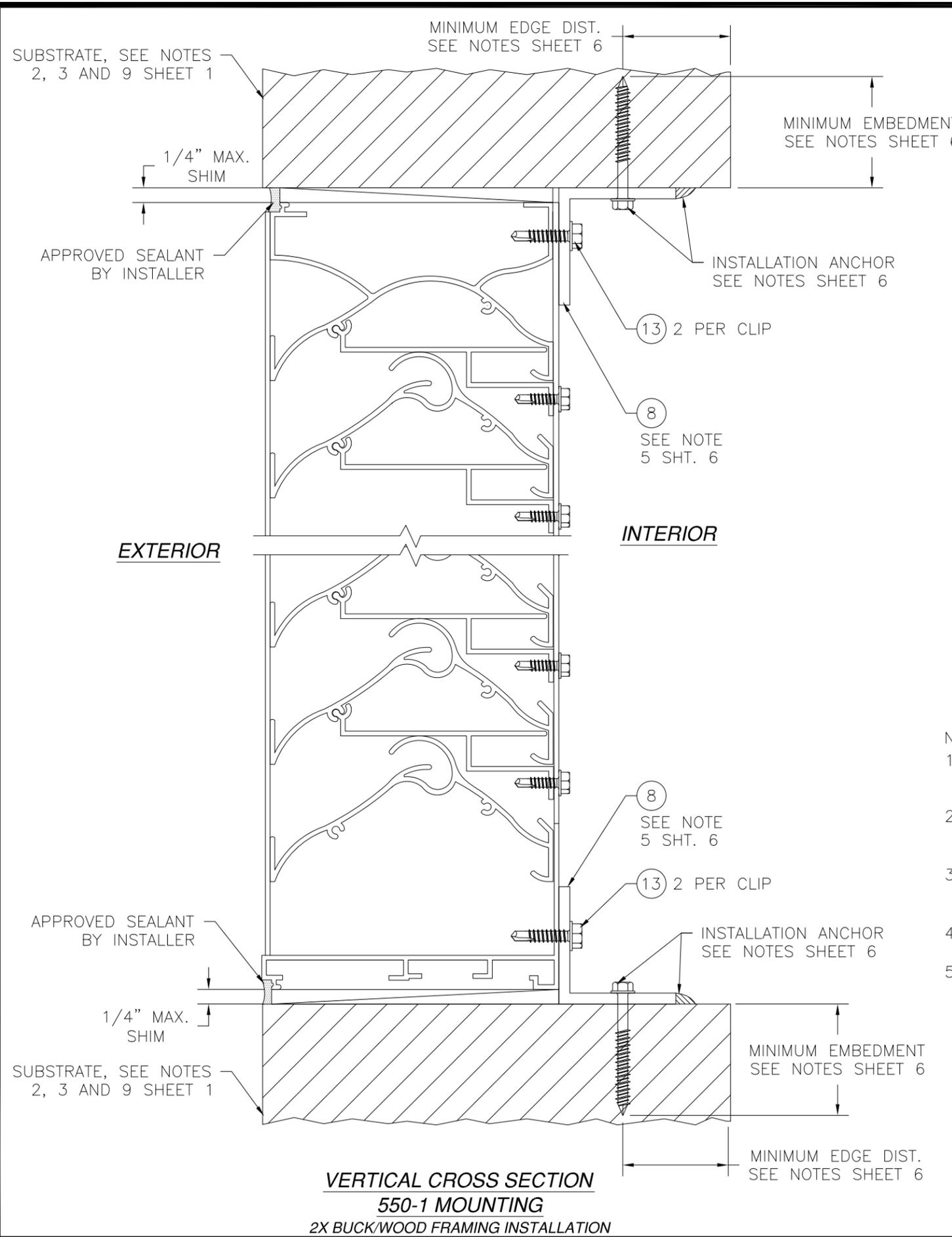
C VERTICAL CROSS SECTION
WITHOUT SLEEVE AND EAD DAMPER

NOTES:

- 1) EAD DAMPER BLADE STOP IS ATTACHED TO HAT CHANNEL WITH #10 x 3/4" TEK SCREWS SPACED 12" MAX. O.C.
- 2) HAT CHANNEL IS ATTACHED TO INSTALLATION SLEEVE WITH #10 x 3/4" TEK SCREWS SPACED 12" MAX. O.C.
- 3) #14 IS SPACED 12" FROM ENDS AND 12" MAX. O.C. THEREAFTER.
- 4) LOCATE #10 x 3/4" TEK SCREW ATTACHING VERTICAL BLADE SUPPORT TO UNIT 2" FROM ENDS AND 2" MAX. O.C. THEREAFTER.

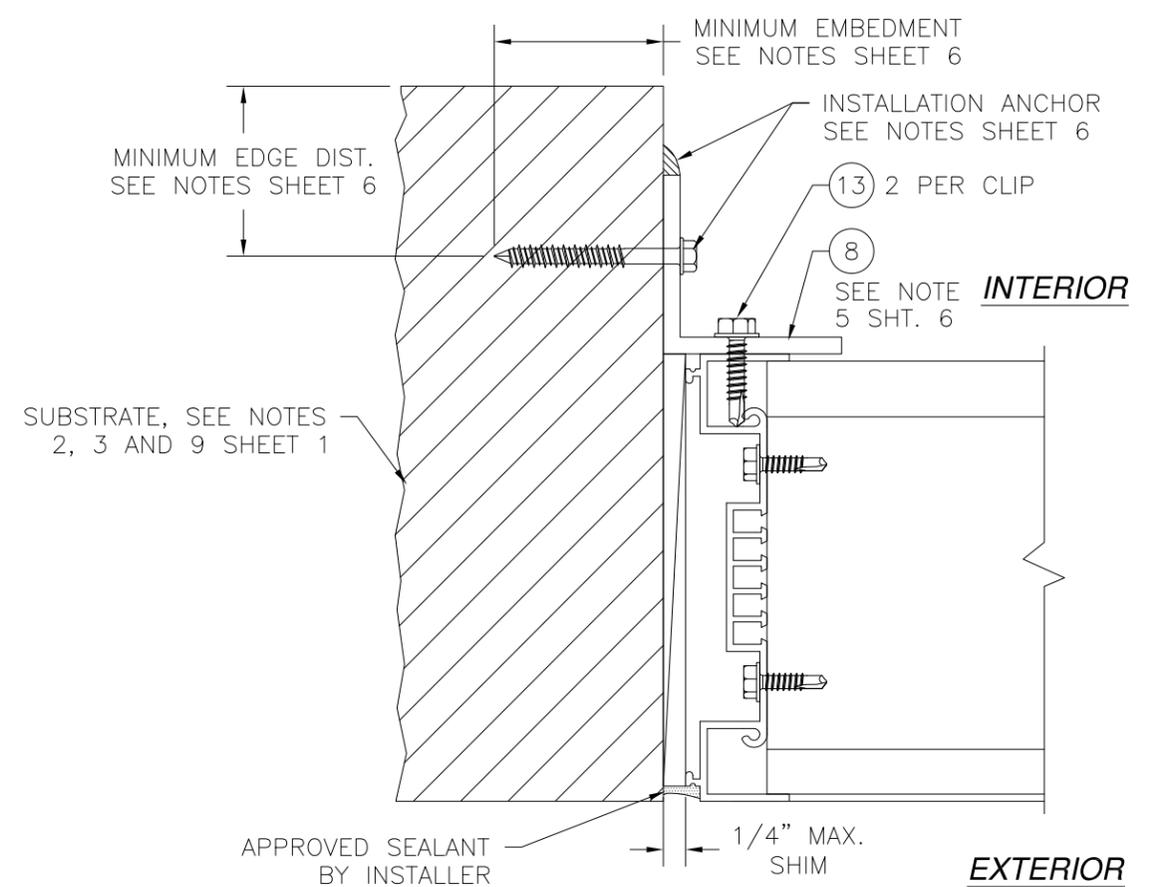
LEADER INDUSTRIES, INC. 2509 CRUSEN STREET NASHVILLE, TN 37211		
DC-HWD550 ALUMINUM VERTICAL LOUVER MULLED AND SINGLE UNITS - LARGE MISSILE IMPACT CROSS SECTIONS		
DRAWN: TJH	DWG NO. 08-01060	REV -
SCALE NTS	DATE 08/23/10	SHEET 5 OF 11

Luis R. Lomas P.E.
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VERTICAL CROSS SECTION
550-1 MOUNTING
 2X BUCK/WOOD FRAMING INSTALLATION

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



HORIZONTAL CROSS SECTION
550-1 MOUNTING
 2X BUCK/WOOD FRAMING INSTALLATION

NOTES:

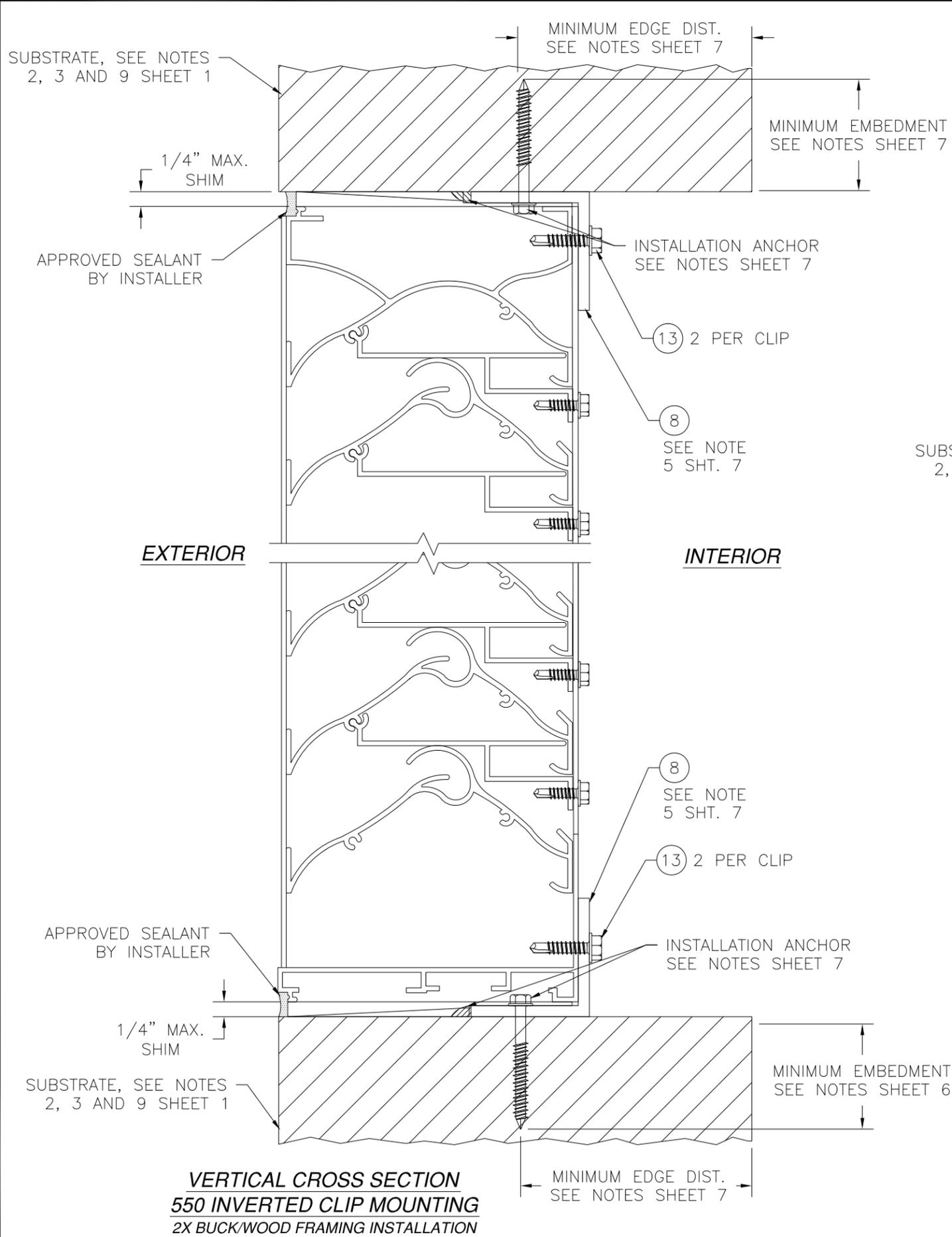
- 1) FOR ANCHORING CLIP INTO CONCRETE USE 5/16" ITW TAPCON WITH SUFFICIENT LENGTH TO ACHIEVE A 1 3/4" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 2 3/16" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
- 2) FOR ANCHORING CLIP INTO WOOD FRAMING OR 2X BUCK USE 5/16" LAG SCREW SCREW WITH SUFFICIENT LENGTH TO ACHIEVE A 1 5/16" MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
- 3) FOR ANCHORING INTO 14GA. (.078" MIN.) STEEL FRAMING USE 5/16" DIAMETER SELF-TAPPING SCREW WITH SUFFICIENT LENGTH TO ACHIEVE 3-THREAD PITCH MINIMUM BEYOND THE SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
- 4) FOR WELDING TO 16GA. (.060" MIN.) STEEL FRAMING USE (2) 1/4" x 1 1/2" FILLET WELDS. LOCATE WELDS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
- 5) FOR ANCHOR SCREWS USE ITEM #8. FOR WELDING INSTALLATION USE 2" x 2" x 1/8" x 2" LONG A36 STEEL CLIP.

LEADER INDUSTRIES, INC.
 2509 CRUSEN STREET
 NASHVILLE, TN 37211

DC-HWD550 ALUMINUM VERTICAL LOUVER
 MULLED AND SINGLE UNITS - LARGE MISSILE IMPACT
 INSTALLATION DETAILS - 550-1 MOUNTING

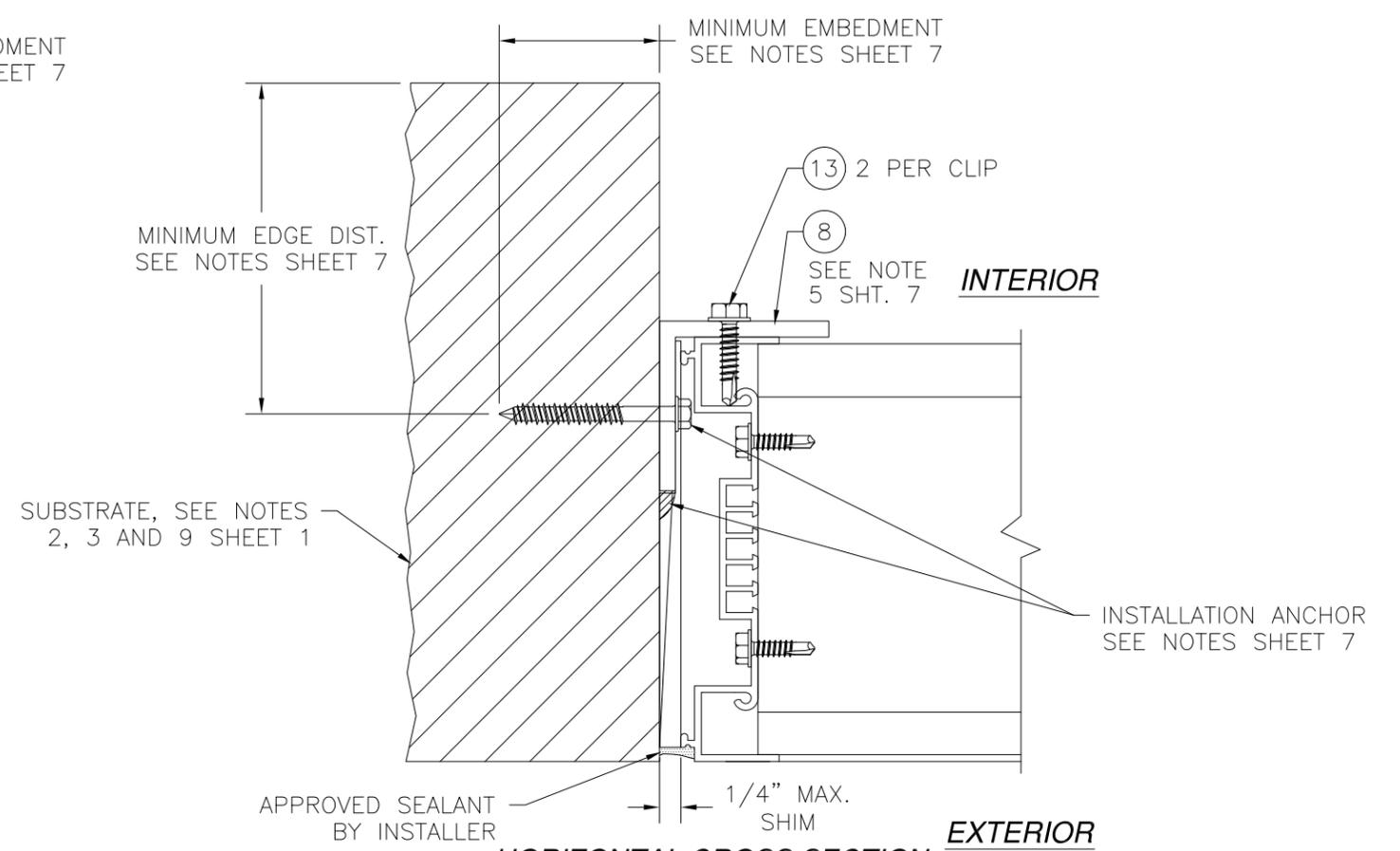
DRAWN: TJH	DWG NO. 08-01060	REV -
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VERTICAL CROSS SECTION
550 INVERTED CLIP MOUNTING
2X BUCK/WOOD FRAMING INSTALLATION

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



HORIZONTAL CROSS SECTION
550 INVERTED CLIP MOUNTING
2X BUCK/WOOD FRAMING INSTALLATION

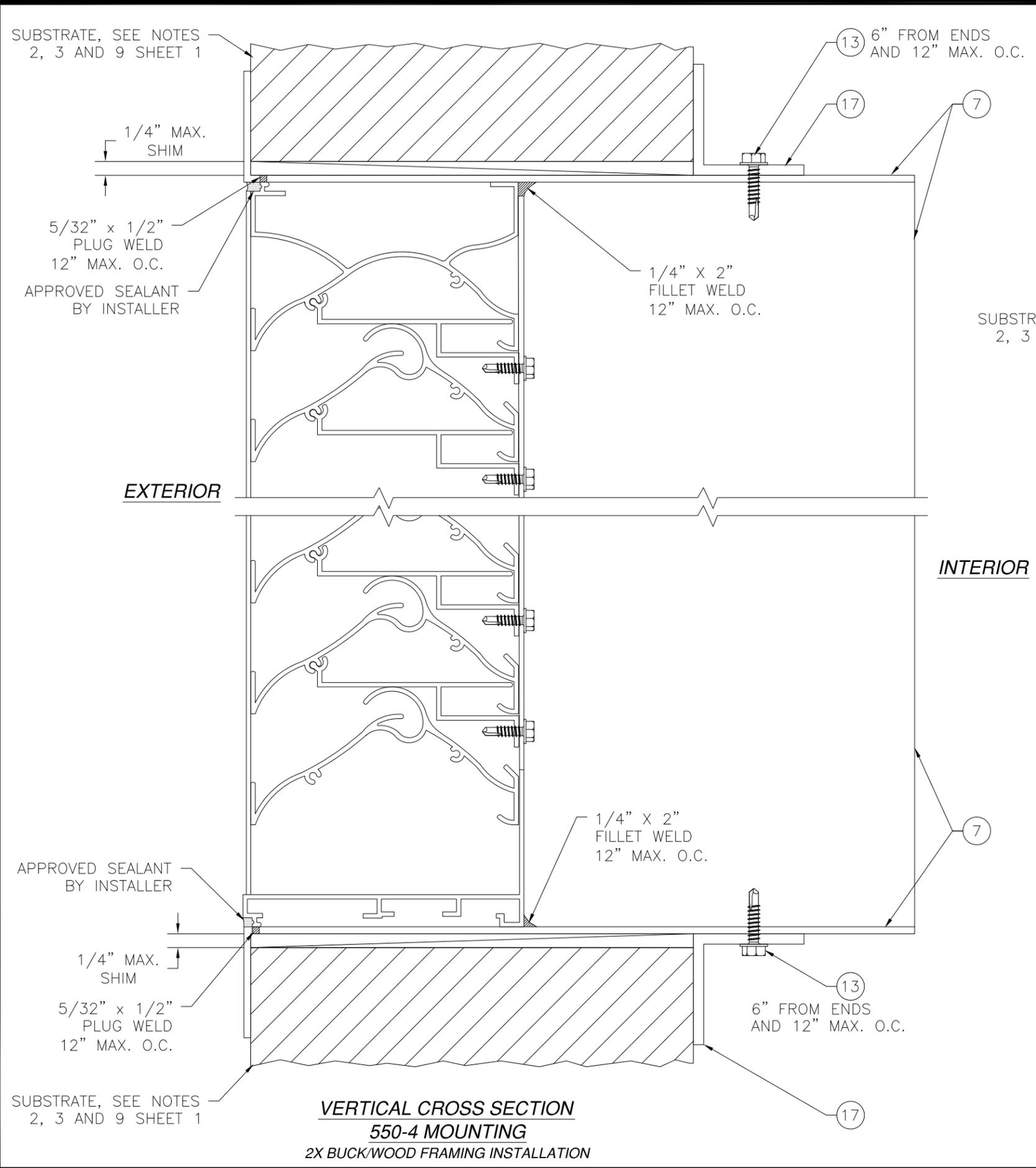
- NOTES:
- 1) FOR ANCHORING CLIP INTO CONCRETE USE 5/16" ITW TAPCON WITH SUFFICIENT LENGTH TO ACHIEVE A 1 3/4" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 2 3/16" MINIMUM EDGE DISTANCE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
 - 2) FOR ANCHORING CLIP INTO WOOD FRAMING OR 2X BUCK USE 5/16" LAG SCREW SCREW WITH SUFFICIENT LENGTH TO ACHIEVE A 1 5/16" MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
 - 3) FOR ANCHORING INTO 14GA. (.078" MIN.) STEEL FRAMING USE 5/16" DIAMETER SELF-TAPPING SCREW WITH SUFFICIENT LENGTH TO ACHIEVE 3-THREAD PITCH MINIMUM BEYOND THE SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
 - 4) FOR WELDING TO 16GA. (.060" MIN.) STEEL FRAMING USE (2) 1/4" x 1 1/2" FILLET WELDS. LOCATE WELDS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
 - 5) FOR ANCHOR SCREWS USE ITEM #8. FOR WELDING INSTALLATION USE 2" x 2" x 1/8" x 2" LONG A36 STEEL CLIP.

LEADER INDUSTRIES, INC.
 2509 CRUSEN STREET
 NASHVILLE, TN 37211

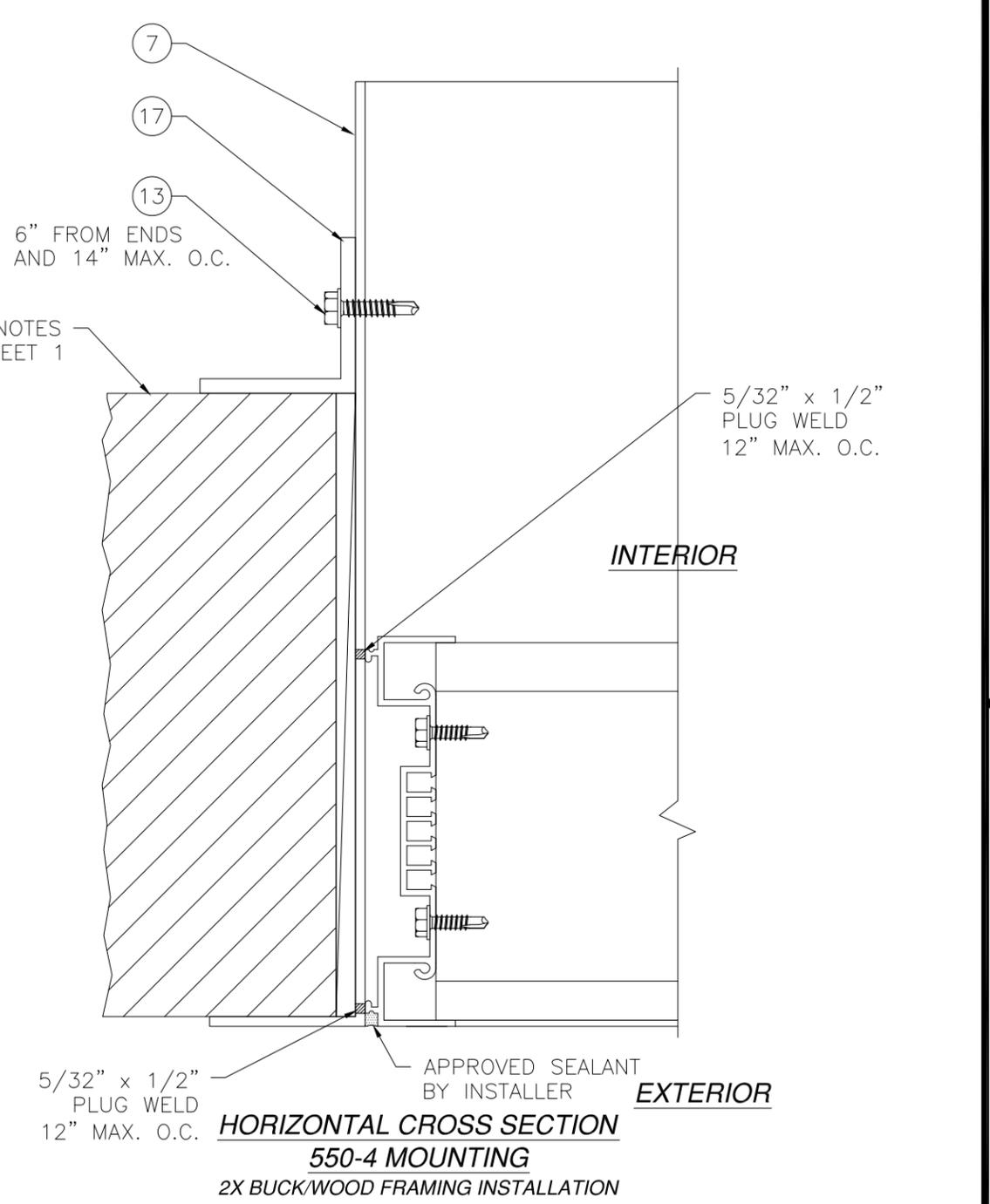
DC-HWD550 ALUMINUM VERTICAL LOUVER
 MULLED AND SINGLE UNITS - LARGE MISSILE IMPACT
 INSTALLATION DETAILS - INVERTED CLIP MOUNTING

DRAWN: TJH	DWG NO. 08-01060	REV -
SCALE NTS	DATE 08/23/10	SHEET 7 OF 11

Luis R. Lomas P.E.
 Texas No. 101889



REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



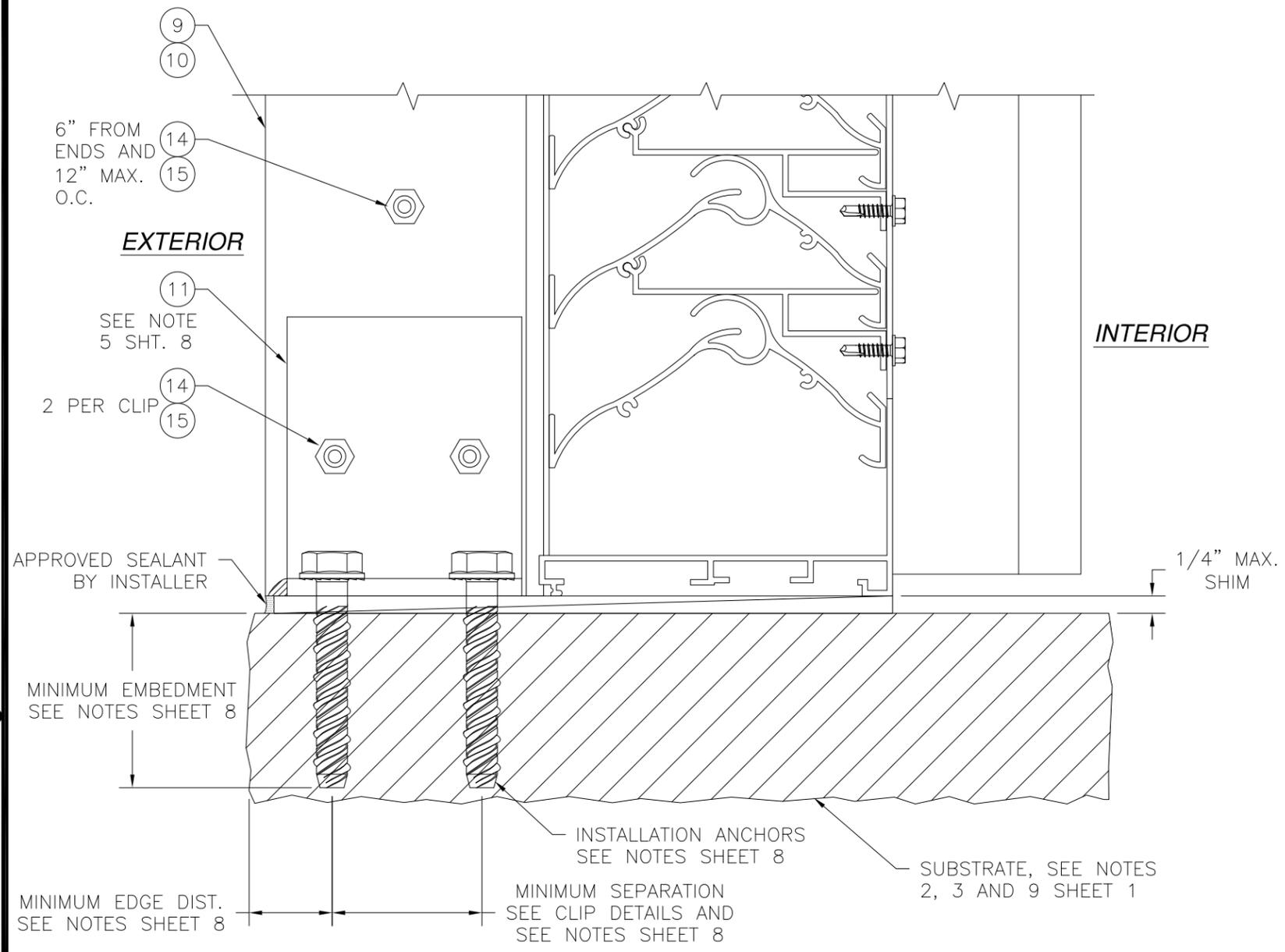
LEADER INDUSTRIES, INC.
2509 CRUSEN STREET
NASHVILLE, TN 37211

DC-HWD550 ALUMINUM VERTICAL LOUVER
MULLED AND SINGLE UNITS - LARGE MISSILE IMPACT
INSTALLATION DETAILS - 550-4 MOUNTING

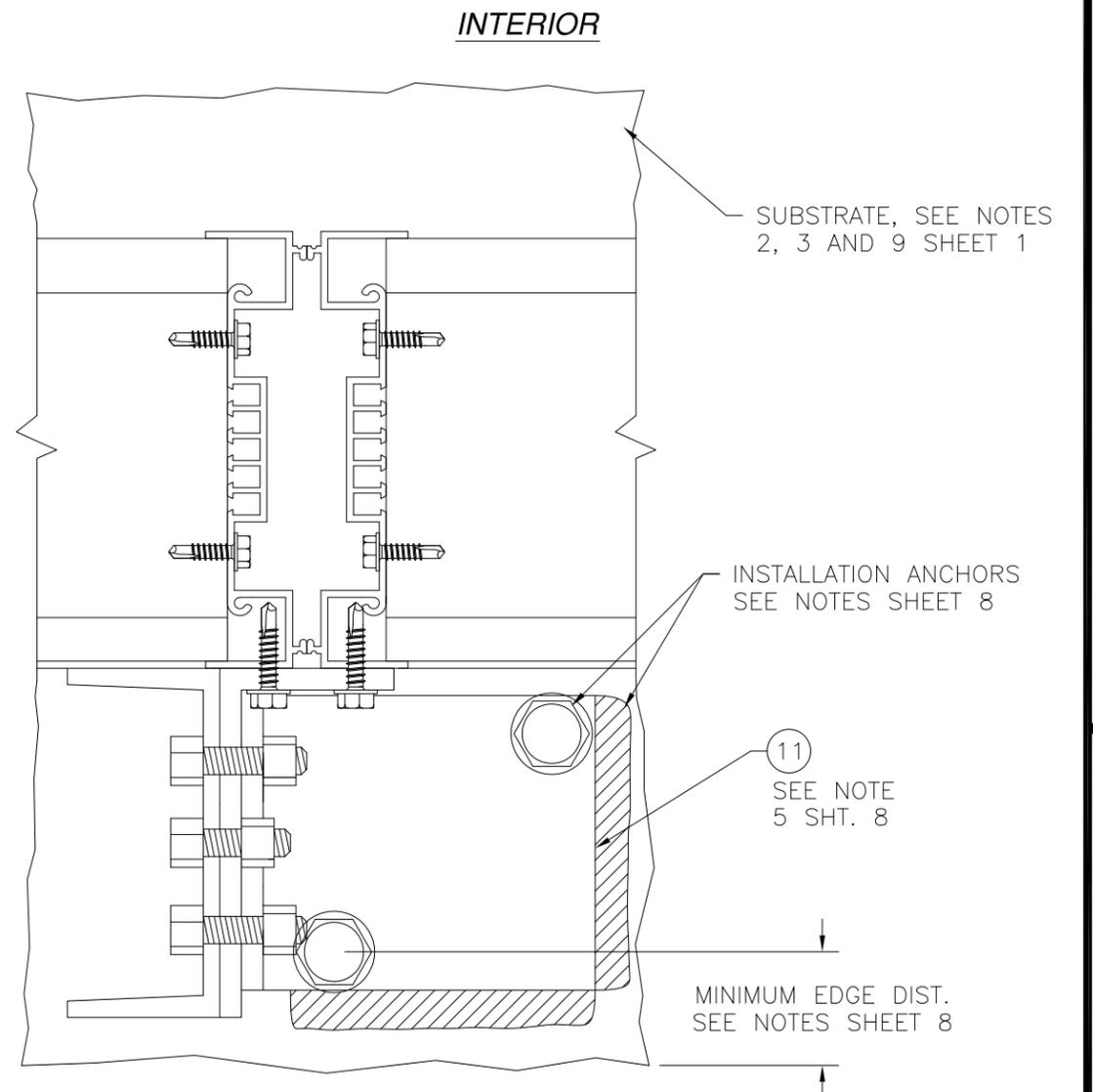
DRAWN: TJH	DWG NO. 08-01060	REV -
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Luis R. Lomas P.E.
Texas No. 101889

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



VERTICAL MULLION DETAIL
BOTTOM SHOWN, HEAD SIMILAR



HORIZONTAL MULLION DETAIL
BOTTOM SHOWN, HEAD SIMILAR

NOTES:

- 1) FOR ANCHORING CLIP INTO CONCRETE USE 1/2" WEDGE BOLT ANCHOR WITH SUFFICIENT LENGTH TO ACHIEVE A 2 1/2" MINIMUM EMBEDMENT INTO SUBSTRATE WITH 5" MINIMUM EDGE DISTANCE AND 2" MINIMUM SEPARATION. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
- 2) FOR ANCHORING CLIP INTO WOOD FRAMING OR 2X BUCK USE 1/2" LAG SCREW SCREW WITH SUFFICIENT LENGTH TO ACHIEVE A 2 1/2" MINIMUM EMBEDMENT INTO SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
- 3) FOR ANCHORING CLIP INTO 3/16" MINIMUM STEEL FRAMING USE 3/8" DIAMETER SELF-TAPPING SCREW WITH SUFFICIENT LENGTH TO ACHIEVE 3-THREAD PITCH MINIMUM BEYOND THE SUBSTRATE. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
- 4) FOR ANCHORING CLIP INTO 3/16" MINIMUM STEEL FRAMING USE 3/8-16 GRADE 5 BOLT AND NUT. BOLT TO BE OF SUFFICIENT LENGTH TO ACHIEVE 3-THREAD PITCH MINIMUM BEYOND THE NUT. LOCATE ANCHORS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
- 5) FOR WELDING TO 16GA. (.060" MIN.) STEEL FRAMING USE (2) 1/4" x 3 1/2" FILLET WELDS. LOCATE WELDS AS SHOWN IN ELEVATIONS AND INSTALLATION DETAILS.
- 6) FOR ANCHOR SCREWS OR BOLTS USE ITEM #11. FOR WELDING INSTALLATION USE 2" x 4" x 1/8" x 3 1/2" LONG A36 STEEL CLIP.

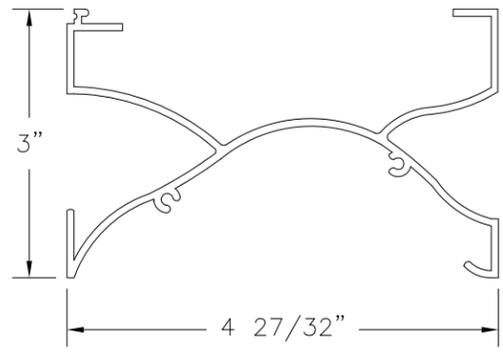
LEADER INDUSTRIES, INC.
2509 CRUSEN STREET
NASHVILLE, TN 37211

DC-HWD550 ALUMINUM VERTICAL LOUVER
MULLED AND SINGLE UNITS - LARGE MISSILE IMPACT
INSTALLATION DETAILS - MULLION ANCHOR CLIP

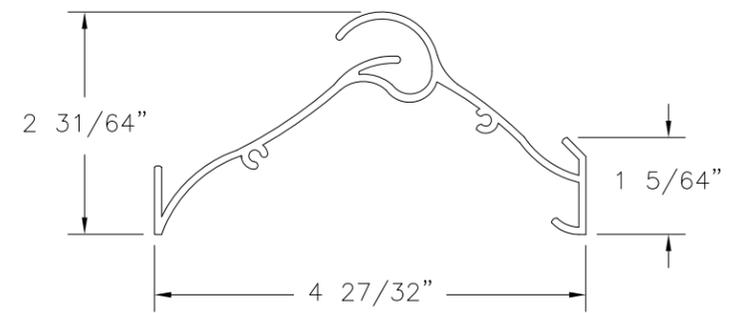
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SCALE NTS	DATE 08/23/10	SHEET 9 OF 11

Luis R. Lomas P.E.
Texas No. 101889

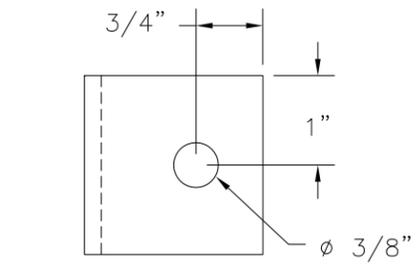
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



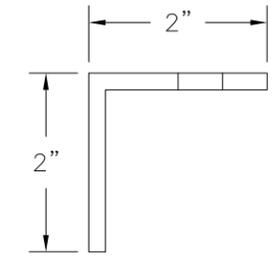
① **HDW550 HEAD**
EXTRUDED ALUMINUM
6063-T5 .080" THICK



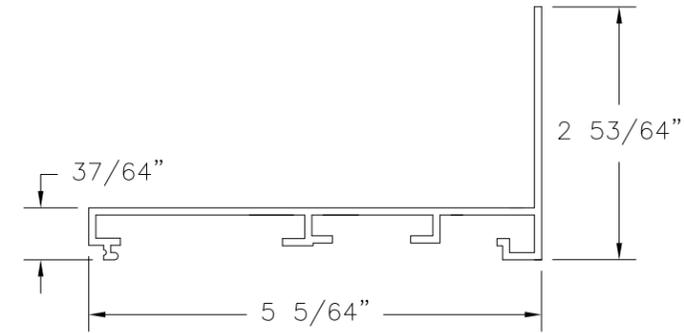
④ **HDW550 BLADE**
EXTRUDED ALUMINUM
6063-T5 .080" THICK



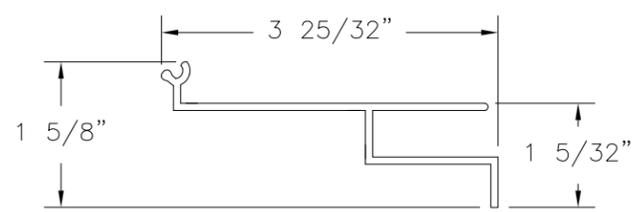
⑧ **2" x 2" x 3/16" INSTALLATION ANGLE**
EXTRUDED ALUMINUM 6063-T5 .1875" THICK



⑰ **2" x 2" x 3/16" CONTINUOUS ANGLE**
EXTRUDED ALUMINUM 6063-T5 .1875" THICK



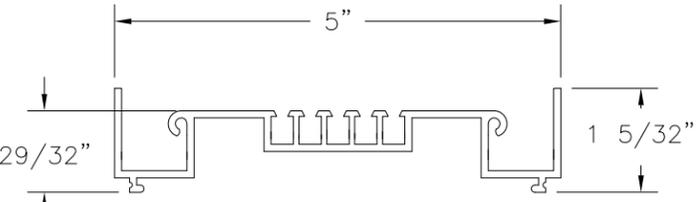
② **HDW550 BOTTOM**
EXTRUDED ALUMINUM
6063-T5 .080" THICK



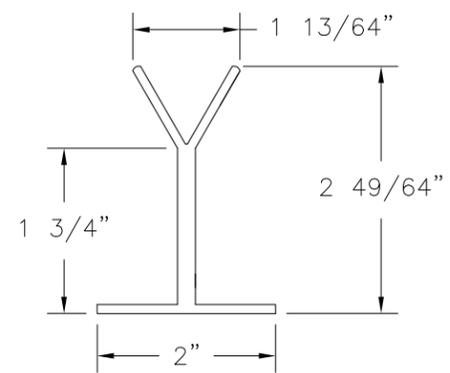
⑤ **HDW550 BLADE SUPPORT**
EXTRUDED ALUMINUM
6063-T5 .080" THICK



⑦ **INSTALLATION SLEEVE**
EXTRUDED ALUMINUM
3003 .101" THICK



③ **HDW550 JAMB**
EXTRUDED ALUMINUM
6063-T5 .080" THICK



⑥ **HDW550 VERTICAL BLADE SUPPORT**
EXTRUDED ALUMINUM
6063-T5 .202" THICK

LEADER INDUSTRIES, INC.
2509 CRUSEN STREET
NASHVILLE, TN 37211

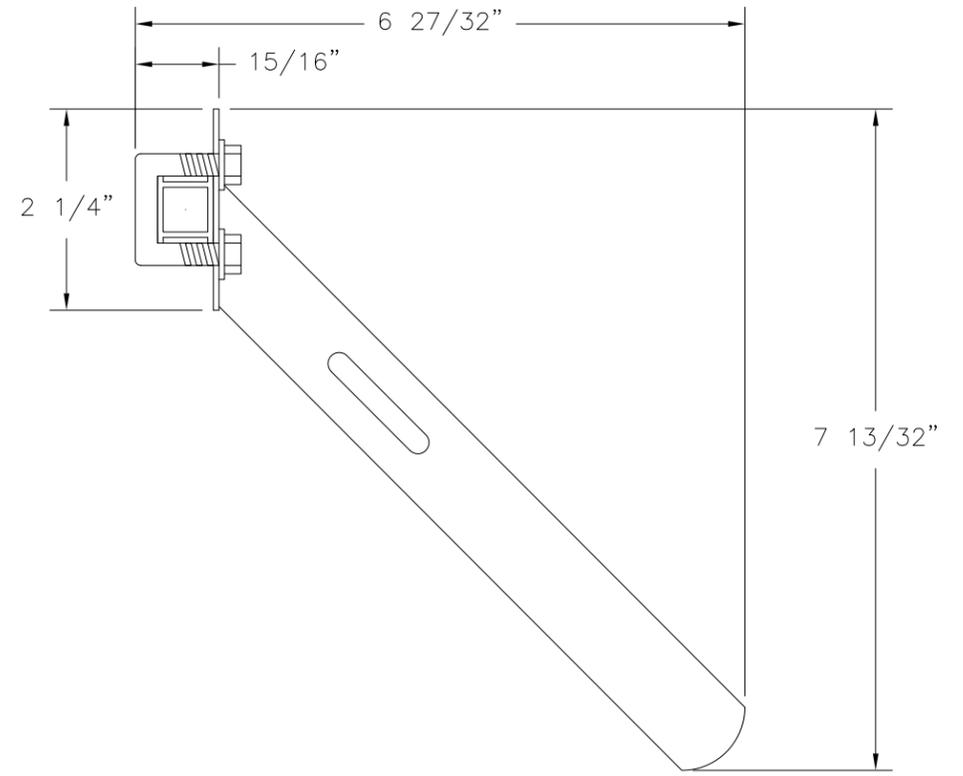
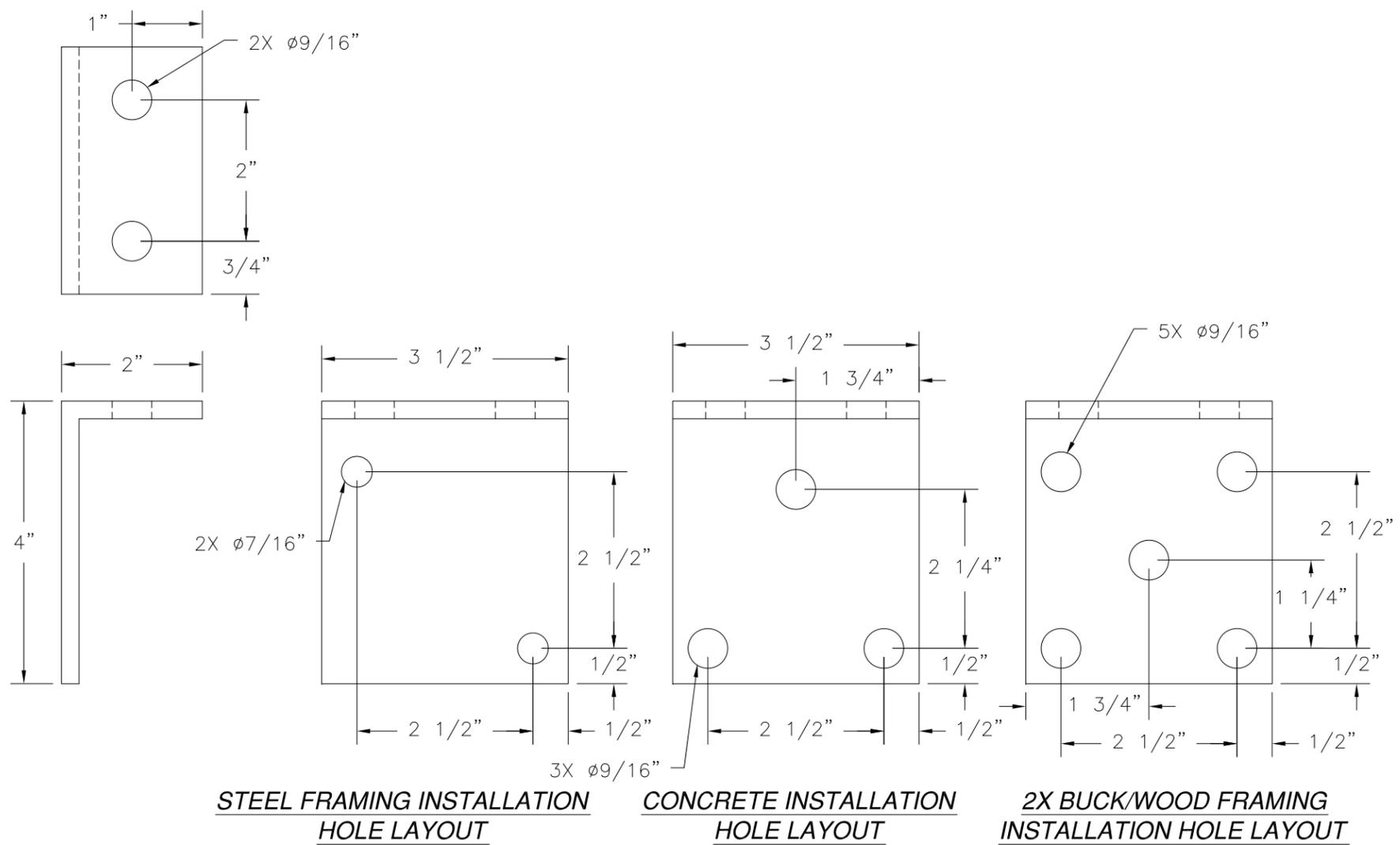
DC-HWD550 ALUMINUM VERTICAL LOUVER
MULLED AND SINGLE UNITS – LARGE MISSILE IMPACT
COMPONENTS

DRAWN: TJH	DWG NO. 08-01060	REV -
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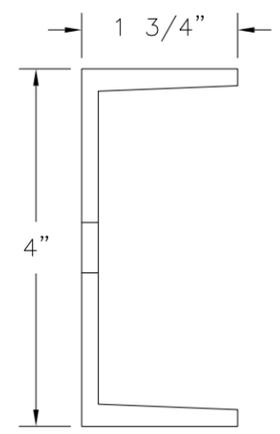
Luis R. Lomas P.E.
Texas No. 101889

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

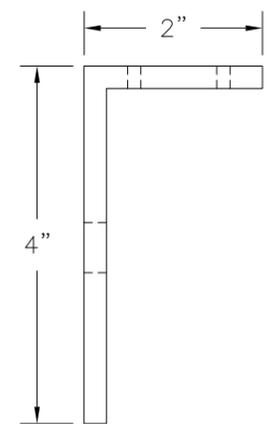


19 HAND QUADRANT
ALUMINUM 6063-T5

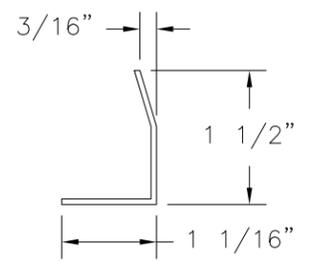
11 2" x 4" x 1/4" x 3 1/2" CLIP
EXTRUDED ALUMINUM 6063-T5 .25" THICK



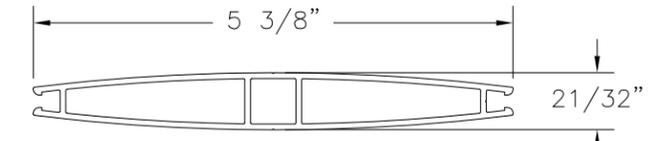
10 MULLION C-CHANNEL
A36 STEEL .1875" THICK



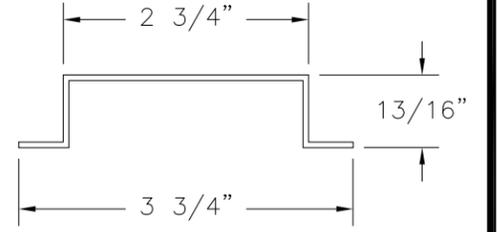
9 2" x 4" x 1/4" MULLION ANGLE
EXTRUDED ALUMINUM 6063-T5 .25" THICK



22 EAD DAMPER BLADE STOP
EXTRUDED ALUMINUM 6063-T5 .0625" THICK



18 EAD DAMPER BLADE
EXTRUDED ALUMINUM 6063-T5 .064" THICK



21 EAD DAMPER HAT CHANNEL
EXTRUDED ALUMINUM 6063-T5 .0625 THICK

LEADER INDUSTRIES, INC.
 2509 CRUSEN STREET
 NASHVILLE, TN 37211

DC-HWD550 ALUMINUM VERTICAL LOUVER
 MULLED AND SINGLE UNITS - LARGE MISSILE IMPACT
 COMPONENTS

DRAWN: TJH	DWG NO. 08-01060	REV -
SCALE NTS	DATE 08/23/10	SHEET 11 OF 11



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