



Acoustical/Thermal Enclosures

Acoustical/Thermal Enclosures for Fan Housings, Air Intake or Exhaust, and other similar plenums are easily field erected using the AeroSonics double wall acoustical panel system. Structural strength, ease of installation, and excellent sound absorption qualities make for a highly effective acoustical enclosure. Performance ratings are derived from Independent certified test reports for transmission loss and sound absorption coefficients.

4" & 2" panel construction features:

- 18 gauge galvanized exterior panel skins
- 22 gauge solid or perforated interior panel skins
- Optional gauge available up to 16 gauge
- 4# density mineral wool fill
- Septum panel construction available
- 18 gauge galvanized internal stiffeners 16" o.c.
- Stainless steel or aluminum construction available
- Access doors with optional view window
- All trim, screws, caulking, and complete assembly drawings provided

ASTM E-84 ratings for the acoustical fill are:

- Flamespread 15
- Smoke Developed 5

4" Panel - Acoustical Performance							
Octave Band	2	3	4	5	6	7	8
Center Frequency, Hz	125	250	500	1K	2K	4K	8K
Transmission Loss, dB	26	30.5	41	49.5	57.5	63	--
Sound Absorption	0.76	1.41	1.32	1.15	1.11	1.00	--
STC Class =	40		Noise Reduction Coefficient 0.95				
Heat Transfer factor: "U" = 0.07BTU/hr./sq.ft./deg F							

The enclosure shall be self-supporting and able to withstand a differential pressure of 10" w.g. The panel shall not deflect more than L/240 of the longest span.

GENERAL INSTALLATION INSTRUCTIONS AND PERFORMANCE CHARACTERISTICS

A- NO. 12 X 1" LONG SHEET METAL SCREWS TO BE USED WHERE SHOWN ON DRAWINGS, FURNISHED BY AeroSonicS. (12"OC., TYP.)

C- FASTENERS SUITABLE FOR ATTACHMENT INTO MASONRY WALL OR FLOORS.

WHERE PANELS ARE JOINED AND VOIDS ARE CREATED, FILL VOIDS WITH INSULATION (1"-1.5# FIBERGLASS, SLIT 6" WIDE) SUPPLIED BY AeroSonicS # SYMBOL.

STRUCTURAL STEEL AND SUPPORTING PIPE COLUMNS ALSO SUPPLIED BY AeroSonicS WHERE NEEDED.

ALL TRIM AND FLOOR CHANNEL WILL BE 18 GA. GALVANIZED STEEL AND WILL BE SUPPLIED IN 10 FT. SECTIONS, TO BE CUT AND NOTCHED AS REQUIRED BY MECHANICAL CONTRACTOR.

SEALANT TO BE APPLIED TO BOTH SIDES OF PANEL AS INDICATED BY THE * SYMBOL, FURNISHED BY AeroSonicS.

FIRE RATINGS IN ACCORDANCE WITH ASTM E84, NFPA-255, UL-723 TEST METHODS:

FLAMESPREAD.....15
SMOKE DEVELOPED.....5

THERMAL PERFORMANCE: U FACTOR= 0.07 BTU/Hr./SQ.FT./DEG. F

ACOUSTICAL PERFORMANCE: PANELS HAVE BEEN TESTED ACOUSTICALLY BY A NATIONALLY KNOWN QUALIFIED INDEPENDENT LABORATORY IN ACCORDANCE WITH ASTM E90, E413, E423, AND E795.

OCTAVE BAND	1	2	3	4	5	6	7	8				
CENTER FREQUENCY (Hz)	63	125	250	500	1K	2K	4K	8K				
SOUND ABSORPTION COEFF.	-	.76	1.41	1.32	1.15	1.11	1.0	-				
TRANSMISSION LOSS (dB)	-	26	30.5	41	49.5	57.5	63	-				
SOUND TRANSMISSION CLASS	40											

ABBREVIATION & SYMBOLS:

- FC = FLOOR CHANNEL
- HJ = H-JOINER
- OC-1 = 2"x 6" TRIM ANGLE
- OC-2 = 2"x 4" TRIM ANGLE
- 1T-1 = 2"x 2" TRIM ANGLE
- A = 12x1 MECHANICAL FASTENERS
- C = ANCHORS/FASTENERS BY OTHERS
- * = CAULK SEALANT TO BE APPLIED
- # = 1"-1.5# x 6"W FILLER INSULATION

LEGEND

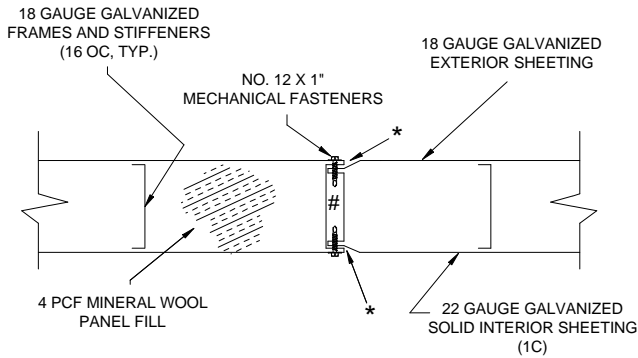


DETAIL NO.
SHEET NO.



ELEVATION NO.
SHEET NO.

DIRECTION OF ERECTION IS LEFT TO RIGHT UNLESS OTHERWISE INDICATED ON ELEVATIONS



1 TYPICAL JOINT DETAILS

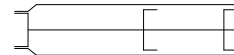
NO SCALE

STANDARD PANEL (1A) OR (2A)



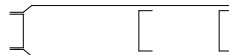
- 18 GAUGE GALV. EXTERIOR SHEET
- 22 GAUGE GALV. INTERIOR SHEET
- 18 GAUGE GALV. FRAMES AND STIFFENERS
- 4 PCF MINERAL WOOL FILL
- 18 GAUGE GALV. TRIM AND ACCESSORIES

SEPTUM (1S)



- 18 GAUGE GALV. INTERIOR AND EXTERIOR SHEET
- 22 GAUGE GALV. CENTER SHEET
- 18 GAUGE GALV. FRAMES AND STIFFENERS
- 4 PCF MINERAL WOOL FILL
- 18 GAUGE GALV. TRIM AND ACCESSORIES

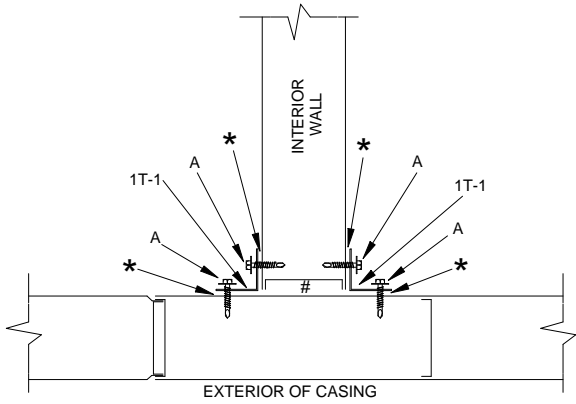
THERMAL PANEL (1C) OR (2C)



- 18 GAUGE GALV. EXTERIOR SHEET
- 22 GAUGE GALV. INTERIOR SHEET
- 18 GAUGE GALV. FRAMES AND STIFFENERS
- 4 PCF MINERAL WOOL FILL
- 18 GAUGE GALV. TRIM AND ACCESSORIES

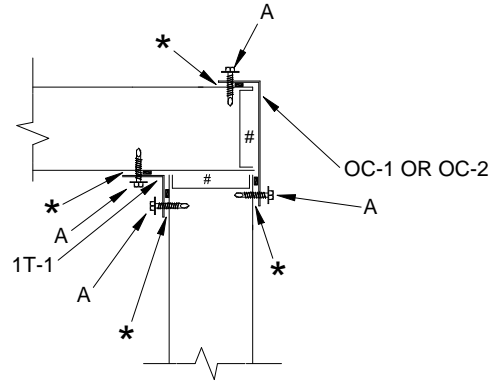
2 TYPICAL PANEL DETAILS

NO SCALE



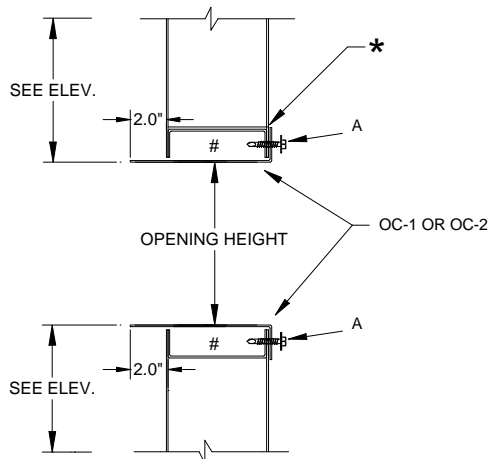
3 **INTERIOR TO EXTERIOR WALL CONNECTION**
VIEWED FROM ABOVE PANEL

NO SCALE



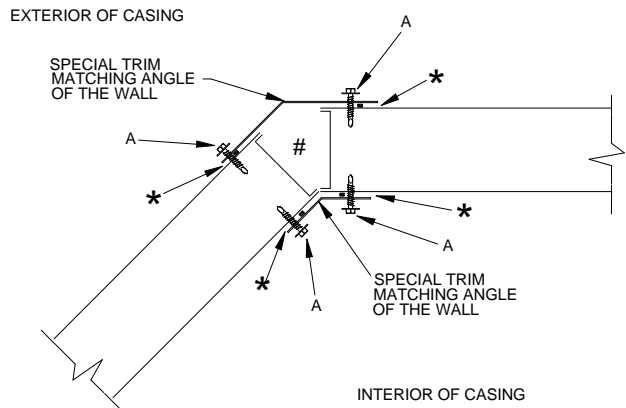
4 **CORNER PANEL ASSEMBLY**

NO SCALE



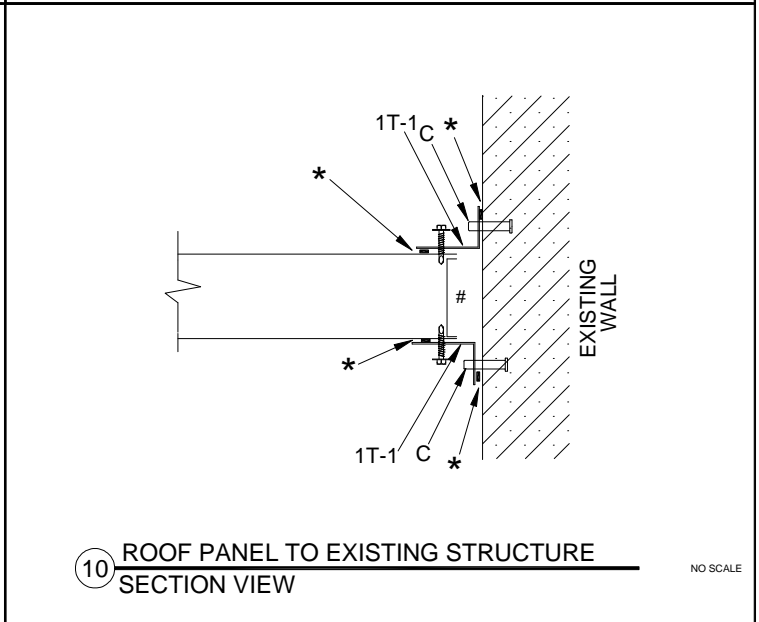
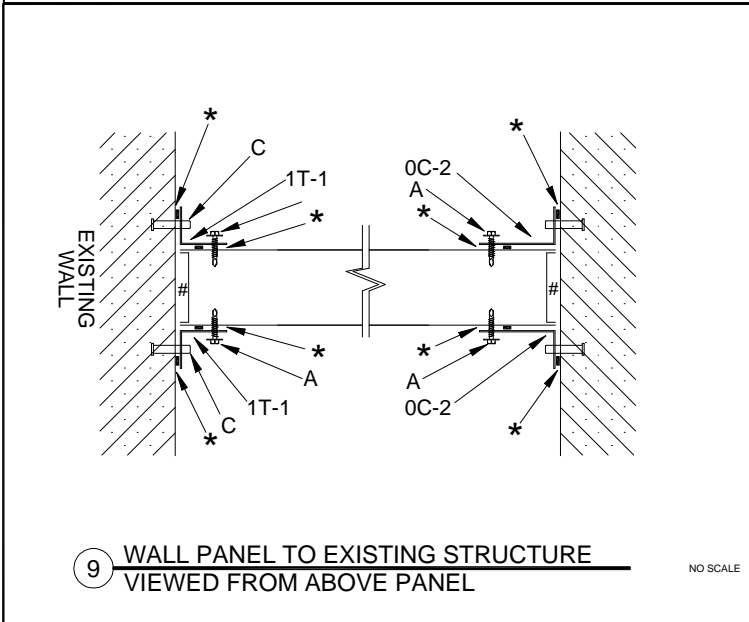
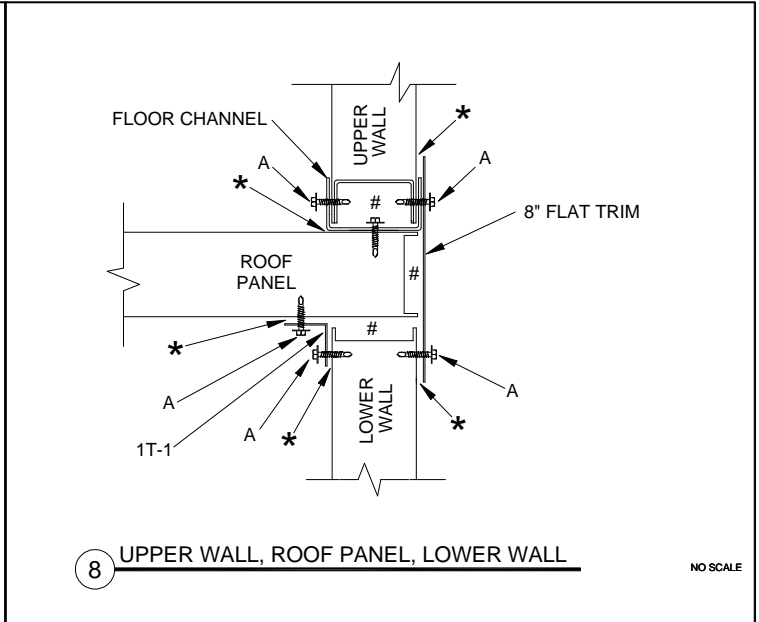
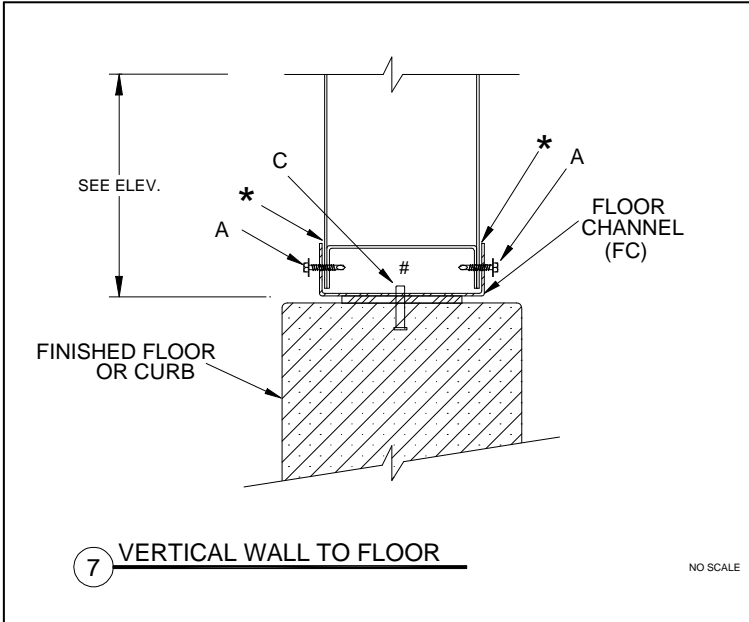
5 **TRIMMING / FRAMING**
OPENINGS

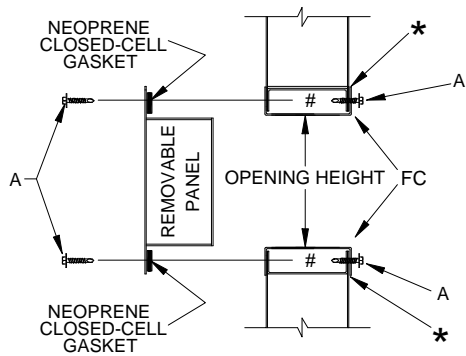
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6 **ANGLED WALL TRIM**

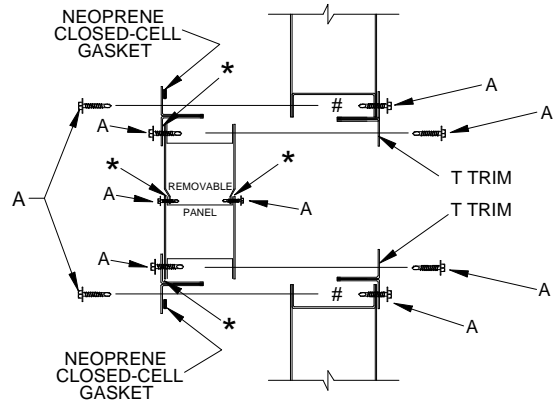
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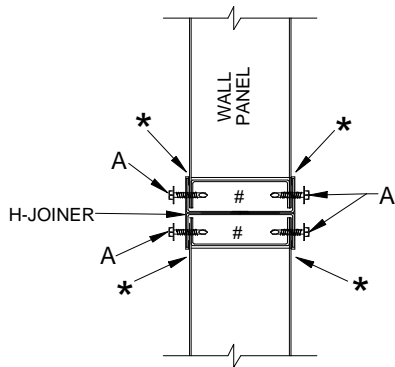
11 REMOVABLE PANEL

NO SCALE



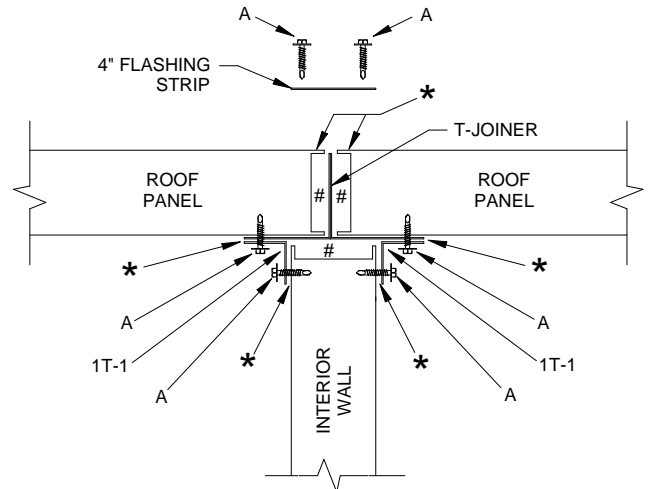
12 REMOVABLE PANEL
(FOR OVERALL WIDTH LARGER THAN 46")

NO SCALE



13 H-JOINER/ SIDE VIEW

NO SCALE



14 T-JOINER, ROOF JOINT
ATOP INTERIOR WALL

NO SCALE

