

A

B

C

D

E

F

A

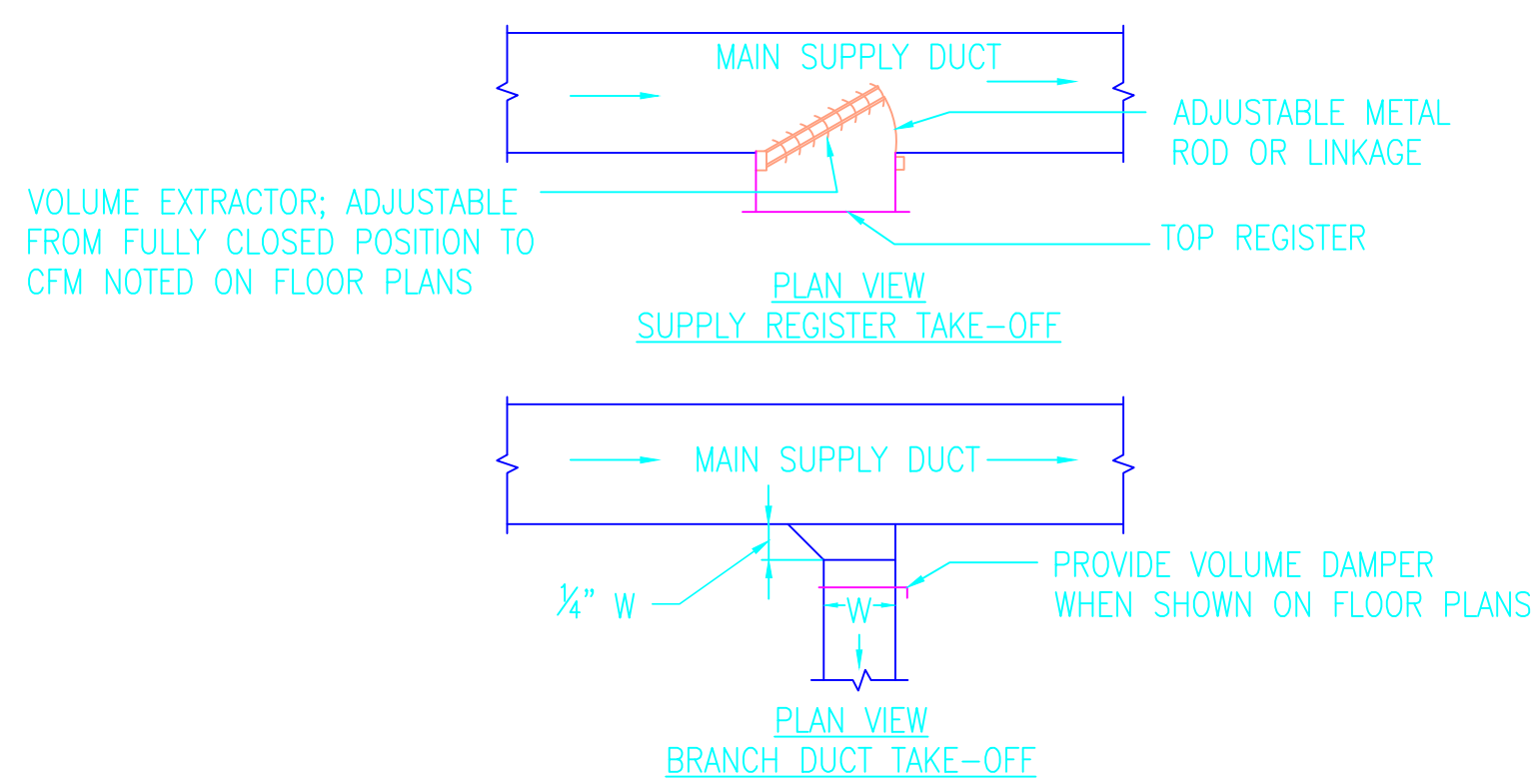
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C

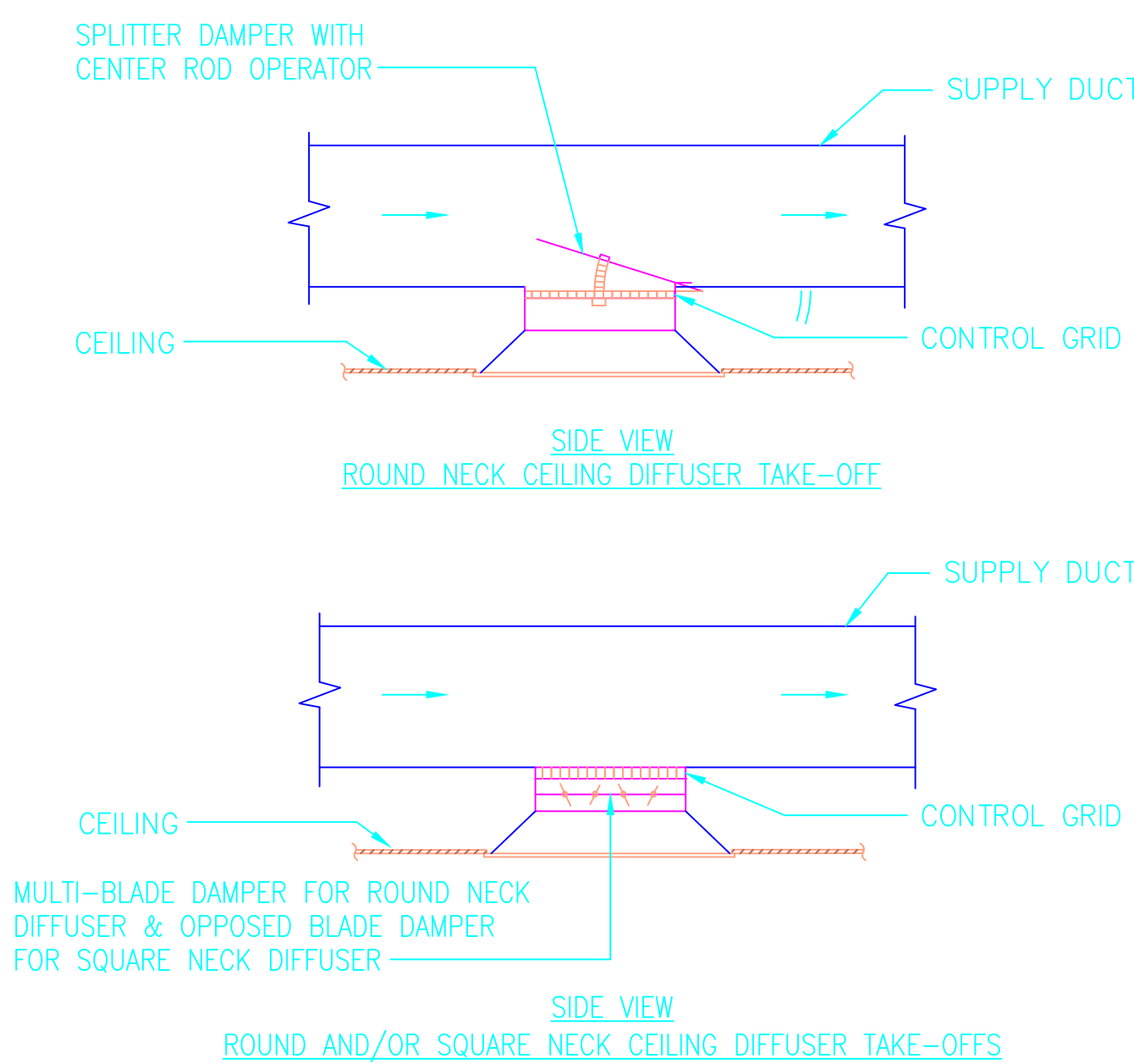
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E

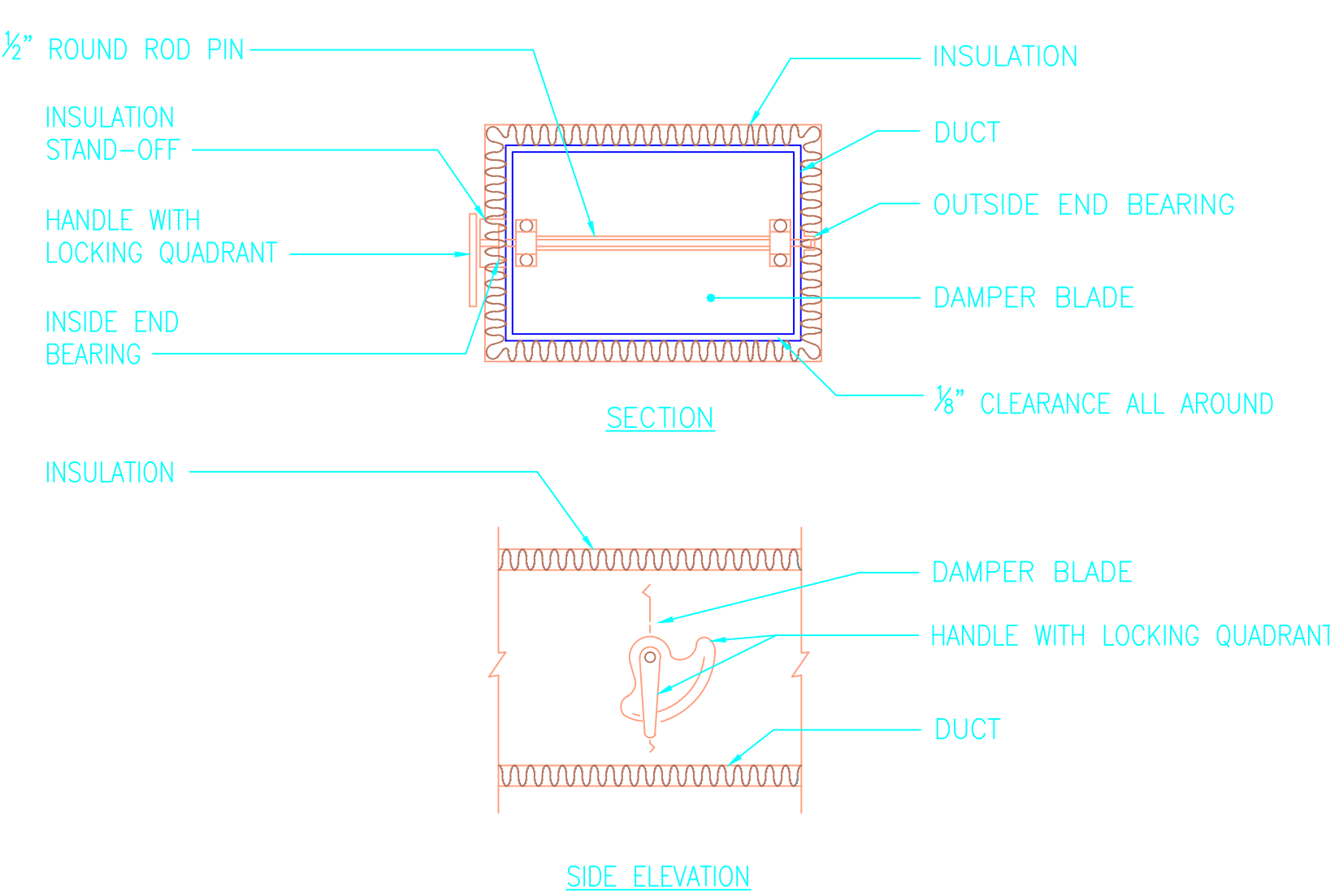
F



SUPPLY DUCTWORK TAKE-OFFS

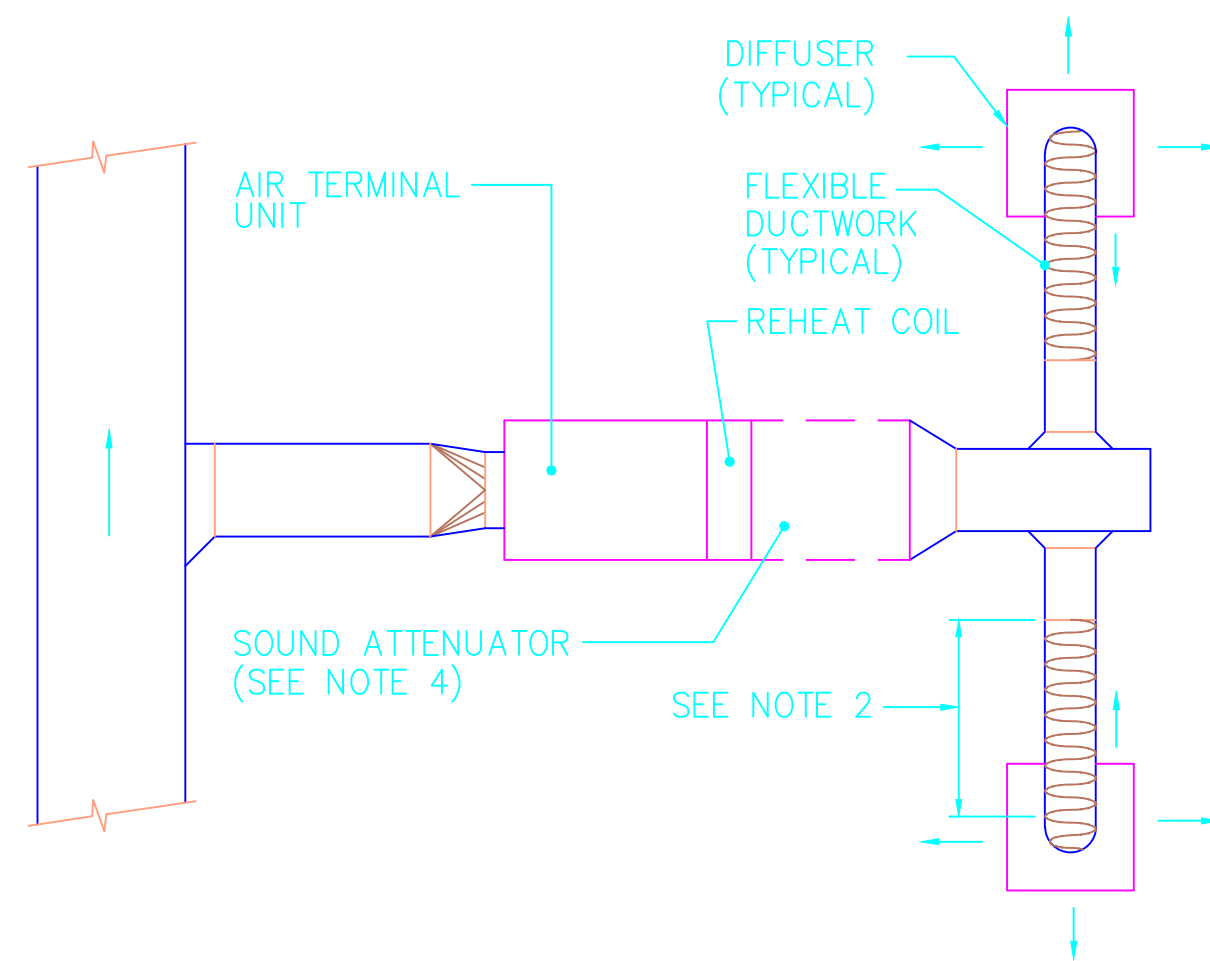


CEILING DIFFUSER TAKE-OFFS



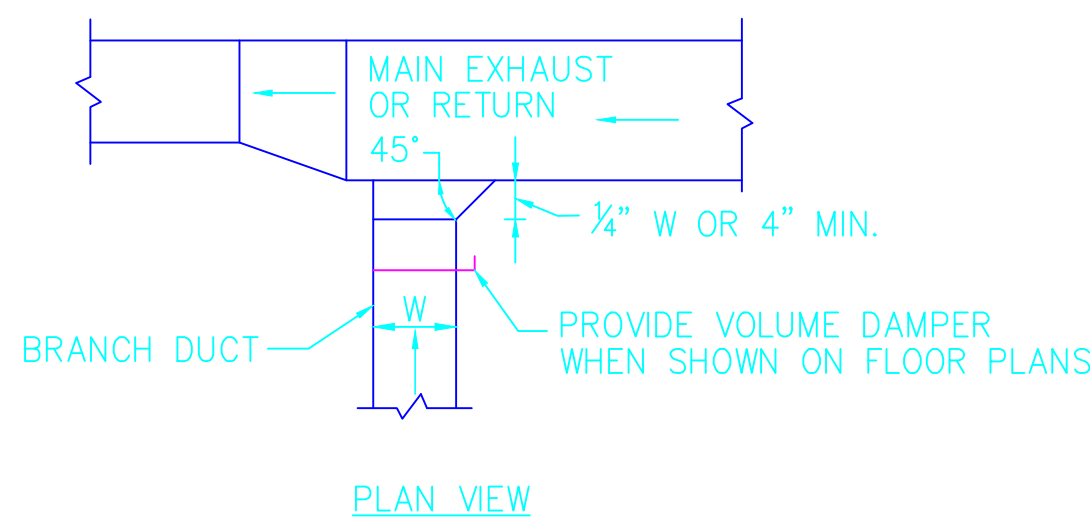
VOLUME DAMPER DETAIL

- NOTES:
- DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
  - DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

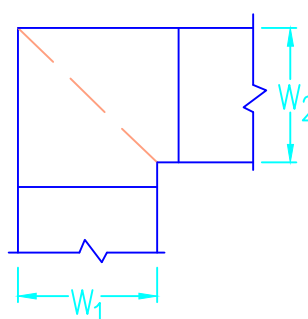


FLEXIBLE DUCT CONNECTION FOR AIR TERMINAL UNITS

- NOTES:
- FLEXIBLE DUCT CONNECTION OF 3'-0" MAXIMUM LENGTH SHALL BE PROVIDED FOR AIR TERMINAL UNIT INLET DUCT CONNECTION.
  - FLEXIBLE DUCT CONNECTION (WHEN USED) FROM TERMINAL UNIT SUPPLY AIR DUCT TO DIFFUSER SHALL NOT EXCEED 5'-0".
  - BENDS SHALL BE MADE WITH NOT LESS THAN ONE DUCT DIAMETER CENTER LINE RADIUS.
  - USE SOUND ATTENUATOR ONLY, IF REQUIRED, TO MEET DESIGN ROOM NC LEVEL.

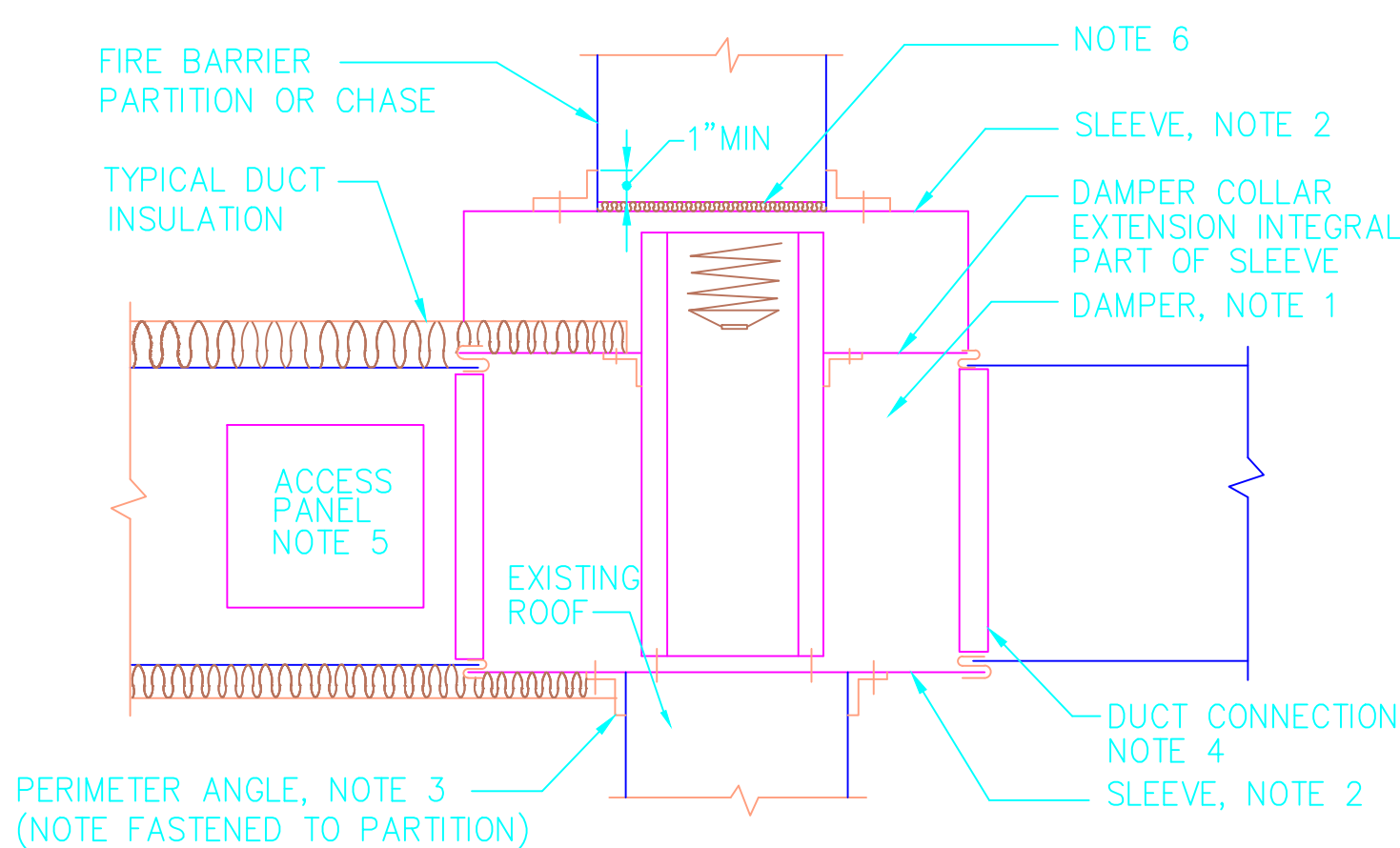


EXHAUST OR RETURN BRANCH DUCTWORK



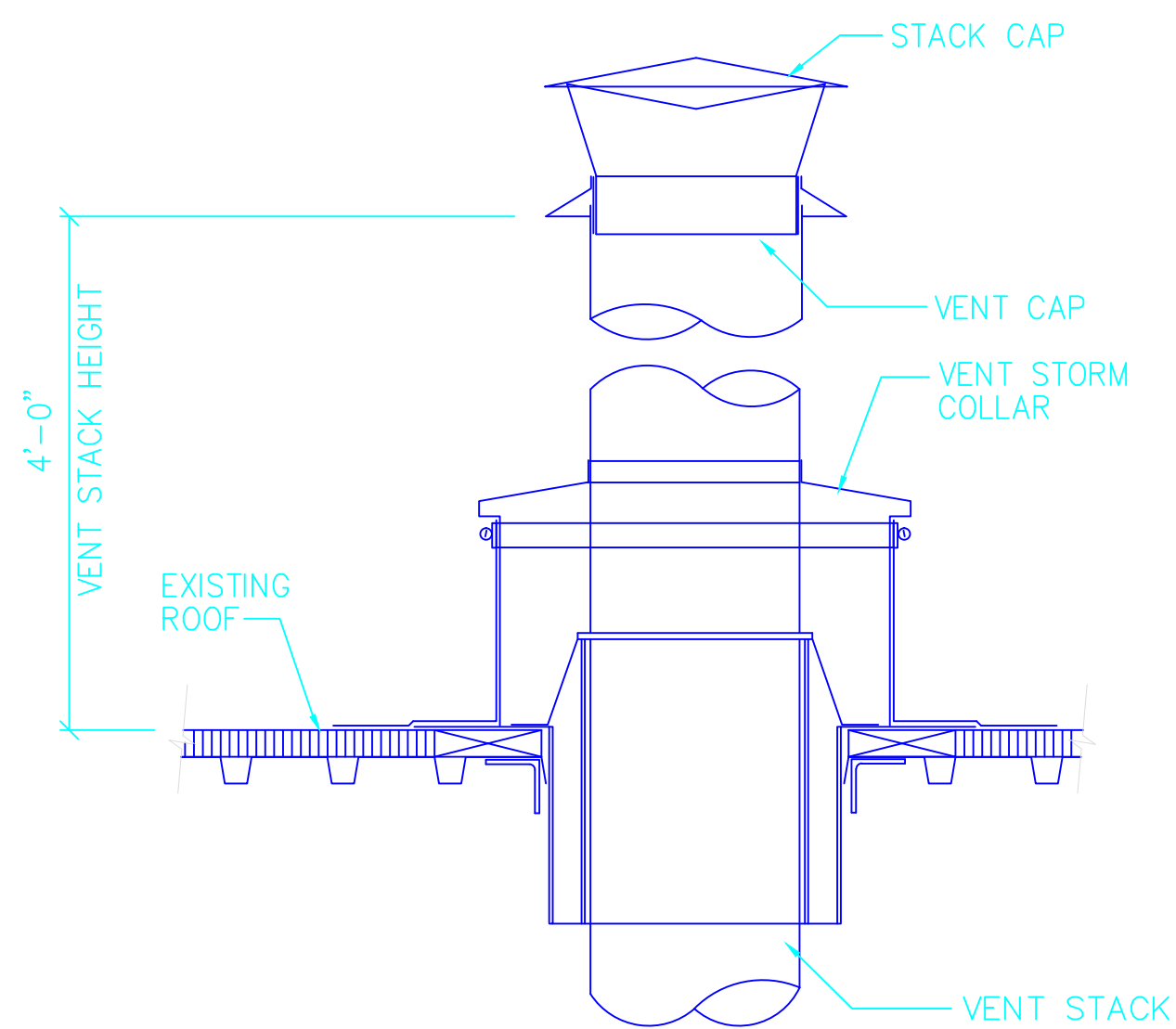
DUCTWORK SQUARE VANED ELBOWS

- NOTES:
- ALL VANED ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY SMACNA.
  - WHEN W<sub>1</sub> DOES NOT EQUAL W<sub>2</sub> VANE SHALL BE SINGLE VANE TYPE REGARDLESS OF W DIMENSION.
  - ALL SINGLE VANES SHALL HAVE A 2" RADIUS, 1 1/2" MAXIMUM SPACE BETWEEN VANES AND A 3/4" TRAILING EDGE.
  - WHEN W<sub>1</sub> EQUALS W<sub>2</sub> AND W<sub>1</sub> IS GREATER THAN 20" VANES SHALL BE DOUBLE VANE TYPE.

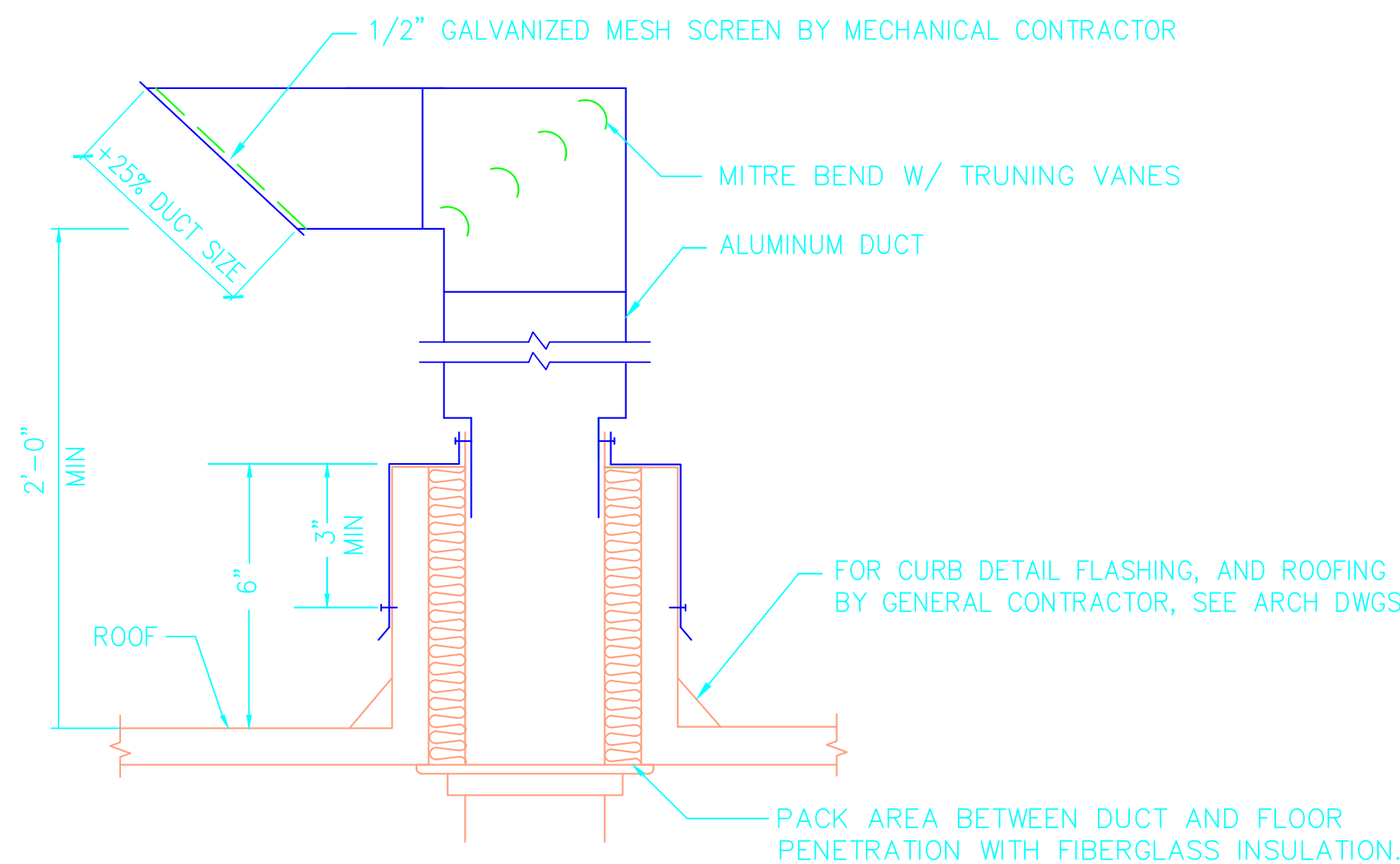


SECTION THROUGH TYPICAL FIRE DAMPER INSTALLATION

- NOTES:
- A VERTICAL DAMPER IS SHOWN. HORIZONTAL DAMPER INSTALLATION IS SIMILAR. FOLLOW DAMPER MANUFACTURER'S INSTRUCTIONS, INCLUDING FASTENER OPTIONS AND GAGES FOR SLEEVE AND PERIMETER ANGLES. FIRE DAMPERS MUST BE INSTALLED IN THE PARTITION OR FLOOR AND NOT OUTSIDE THE PENETRATION.
  - GALVANIZED SLEEVE: GAGE NOT LESS THAN CONNECTING DUCT. FASTEN SLEEVE TO DAMPER FRAME AND TO PERIMETER ANGLES.
  - PERIMETER ANGLES: GALVANIZED STEEL, NOT LESS THAN 1 1/2" x 1 1/2" (40 x 40 MM), 14 GAGE, TO PROVIDE 1" (25 MM) MINIMUM OVERLAP OF OPENING ON ALL 4 SIDES.
  - BREAKAWAY DUCT CONNECTION: CONTRACTOR'S OPTION OF TYPES SHOWN IN SMACNA LPDS, FIG. 2-13, SEAL JOINTS.
  - ACCESS PANELS: SIZE AND LOCATION TO PERMIT SERVICING THE FUSIBLE LINK OR LINKS.
  - PROVIDE 1/4" TO 1/2" CLEARANCE ON HEIGHT AND WIDTH. FILL OPEN SPACE WITH ROCK WOOL FIRESTOP FIBER.
  - ALL DUCT WORK RISERS WHICH ARE RUN EXPOSED, SUCH AS THRU ATTIC FLOORS AND MECHANICAL ROOM FLOORS, SHALL BE PROVIDED WITH 3 INCH HIGH CONCRETE CURB AROUND OPENING FOR DUCT.



VENT STACK DETAIL



ROOF PENETRATION

FULLY SPRINKLERED

85% SUBMITTAL	03.24.05
100% SUBMITTAL	05.03.05
FINAL SUBMITTAL	06.10.05
Revisions:	Date

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Drawing Title
<b>HVAC DETAILS</b>
Approved: Project Director

Project Title	Date
<b>Expand Community Based Outpatient Clinic</b>	<b>05.03.05</b>
Project Number	512.514
Location	Drawing Number
<b>V.A.M.C. LOCH RAVEN</b>	<b>M-6</b>
Building Number	Dwg. 49 of 74
6	
Checked	Drawn
<b>LJS</b>	<b>KDW</b>

**Loch Raven Outpatient Clinic**