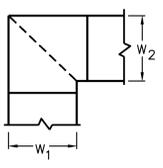
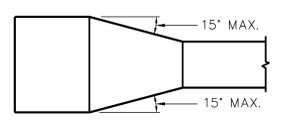


three inches = one foot
 one and one half inches = one foot
 one inch = one foot
 three quarters inch = one foot
 one half inch = one foot
 one quarter inch = one foot
 three eighths inch = one foot
 one eighth inch = one foot
 one eighth inch = one foot



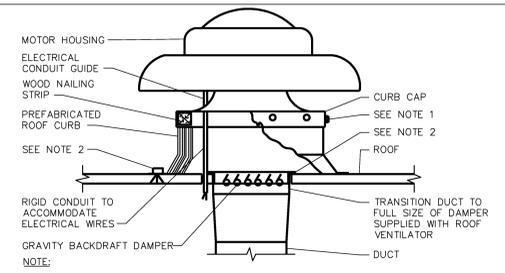
1 DUCTWORK SQUARE VANED ELBOWS
 NTS

- NOTES:**
1. ALL VANED ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY SMACNA.
 2. WHEN W_1 DOES NOT EQUAL W_2 VANE SHALL BE SINGLE VANE TYPE REGARDLESS OF W DIMENSION.
 3. ALL SINGLE VANES SHALL HAVE A 2" (50 MM) RADIUS, 1 1/2" (40 MM) MAXIMUM SPACE BETWEEN VANES AND A 3/4" (20 MM) TRAILING EDGE.
 4. WHEN W_1 EQUALS W_2 AND W_1 IS GREATER THAN 20" (500 MM) VANES SHALL BE DOUBLE VANE TYPE.



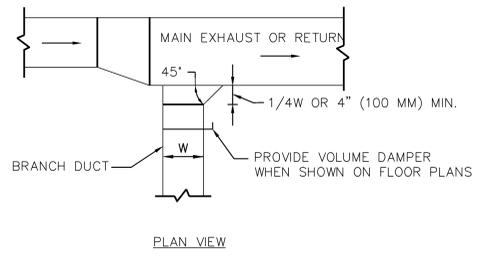
PLAN OR SIDE VIEW

2 TYPICAL DUCTWORK TRANSITION
 NTS



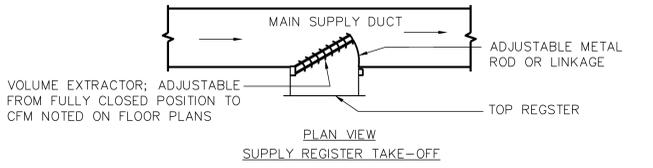
- NOTE:**
1. SECURE CURB CAP TO WOOD NAILING STRIP WITH 3/8" [10mm] CADMIUM PLATED LAG BOLTS NOT OVER 12" [305mm] ON CENTER.
 2. SECURE ROOF CURB, DUCTWORK AND DAMPER TO ROOF WITH EXPANSION BOLTS (CONCRETE ROOF) OR RUST RESISTANT BOLTS (METAL DECK AND BAR JOIST ROOF).
 3. SIZE OF DUCT THROUGH ROOF SHALL NOT BE LARGER THAN CURB SUPPLIED WITH ROOF VENTILATOR.
 4. RUN ELECTRICAL LINES THROUGH CLEARANCE HOLE PROVIDED IN GRAVITY DAMPER, THEN THROUGH VENTILATOR ELECTRICAL CONDUIT GUIDE.

3 TYPICAL POWER TYPE ROOF VENTILATOR
 NTS

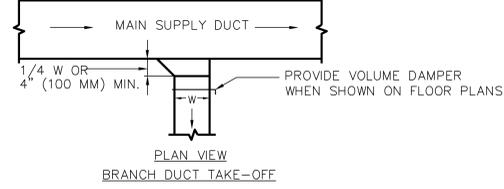


PLAN VIEW

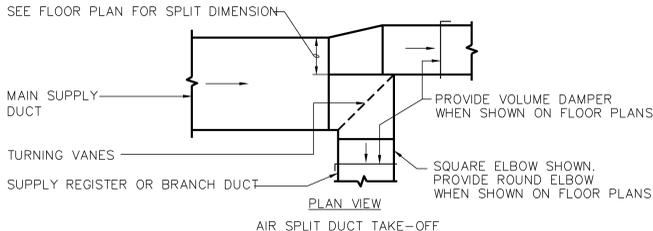
4 EXHAUST OR RETURN BRANCH DUCTWORK
 NTS



PLAN VIEW
 SUPPLY REGISTER TAKE-OFF

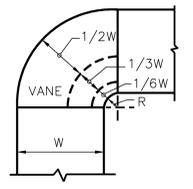


PLAN VIEW
 BRANCH DUCT TAKE-OFF

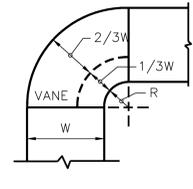


PLAN VIEW
 AIR SPLIT DUCT TAKE-OFF

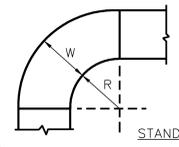
5 SUPPLY DUCTWORK TAKE-OFFS
 NTS



SHORT RADIUS ELBOW WITH TWO VANES



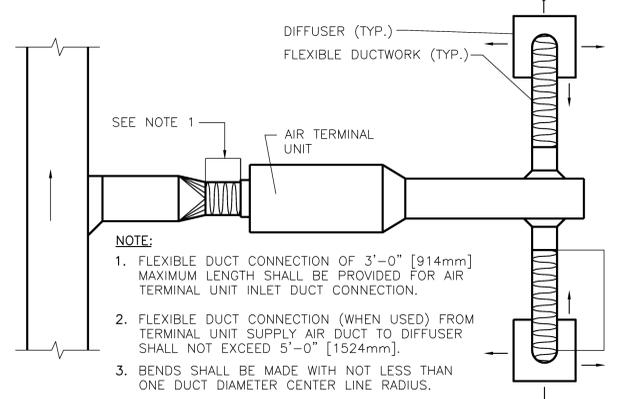
SHORT RADIUS ELBOW WITH ONE VANE



STANDARD RADIUS ELBOW

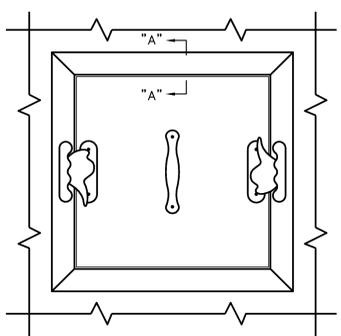
6 DUCTWORK RADIUS ELBOWS
 NTS

- NOTES:**
1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND.
 2. ALL STANDARD RADIUS ELBOWS SHOWN ON FLOOR PLANS MAY BE MADE SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

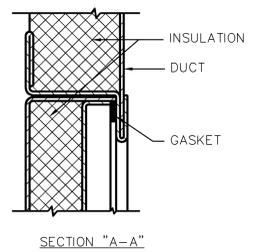


- NOTE:**
1. FLEXIBLE DUCT CONNECTION OF 3'-0" [914mm] MAXIMUM LENGTH SHALL BE PROVIDED FOR AIR TERMINAL UNIT INLET DUCT CONNECTION.
 2. FLEXIBLE DUCT CONNECTION (WHEN USED) FROM TERMINAL UNIT SUPPLY AIR DUCT TO DIFFUSER SHALL NOT EXCEED 5'-0" [1524mm].
 3. BENDS SHALL BE MADE WITH NOT LESS THAN ONE DUCT DIAMETER CENTER LINE RADIUS.

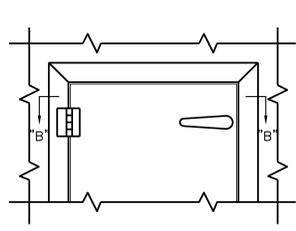
7 FLEXIBLE DUCT CONNECTION FOR AIR TERMINAL UNIT - TYPICAL
 NTS



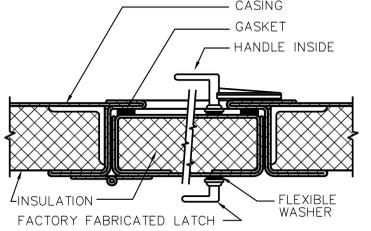
8 ACCESS PANEL
 NTS



SECTION "A-A"

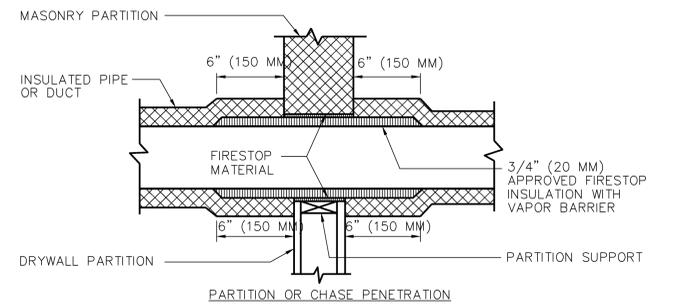


9 ACCESS DOOR
 NTS



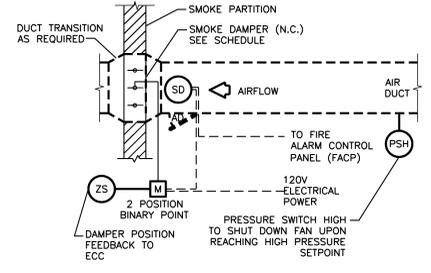
SECTION "B-B"

- NOTES:**
1. LATCHES SHALL BE OF THE WEDGE TYPE TO CLOSE DOORS TIGHTLY.
 2. HINGES ON THE ACCESS DOORS SHALL HAVE NON-CORROSIVE PINS.



10 PIPE/DUCT PENETRATION OF FIRE/SMOKE BARRIERS
 NTS

- NOTE:**
1. APPLICABLE TO PENETRATIONS OF ALL FIRE RATED MEMBRANES, IN ACCORDANCE WITH NFPA 101. REFER TO SPECIFICATIONS SECTION 07270, FIRE STOPPING SYSTEMS.



- NOTE:** UPON DETECTION OF SMOKE BY THE SMOKE DETECTOR, THE SMOKE DAMPER SHALL CLOSE & SEND AN ALARM TO THE ECC.

11 SMOKE DAMPER CONTROL DIAGRAM
 NTS

"ISSUED FOR BIDS" - FULLY SPRINKLERED

SCHEMATIC DESIGN SUBMISSION	08/02/10
DESIGN DEVELOPMENT SUBMISSION	09/03/10
CONSTRUCTION DOCUMENT SUBMISSION	11/22/10
ISSUE FOR BIDS	12/19/11
Revisions	Date

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MEP ENGINEERS
 STRUCTURAL ENGINEERS
 FIRE PROTECTION ENGINEERS
 CIVIL ENGINEERS

BURNS DeLATTE AND McCoy, INC.
 PINNACLE STRUCTURAL
 PROTECTION DEVELOPMENT INC.
 BREWER AND ESCALANTE

Drawing Title

MECHANICAL DETAILS

Approved Project Director

Project Title

BUILDING 11 ADDITION AND INTERIOR RENOVATIONS

Location

WACO, TEXAS

Date

19 DEC 2011

Checked

JDM

Drawn

PHJ

Project Number

674A4-CSI-516

Building Number

11

Drawing Number

11

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Office of Construction and Facilities Management

Department of Veterans Affairs