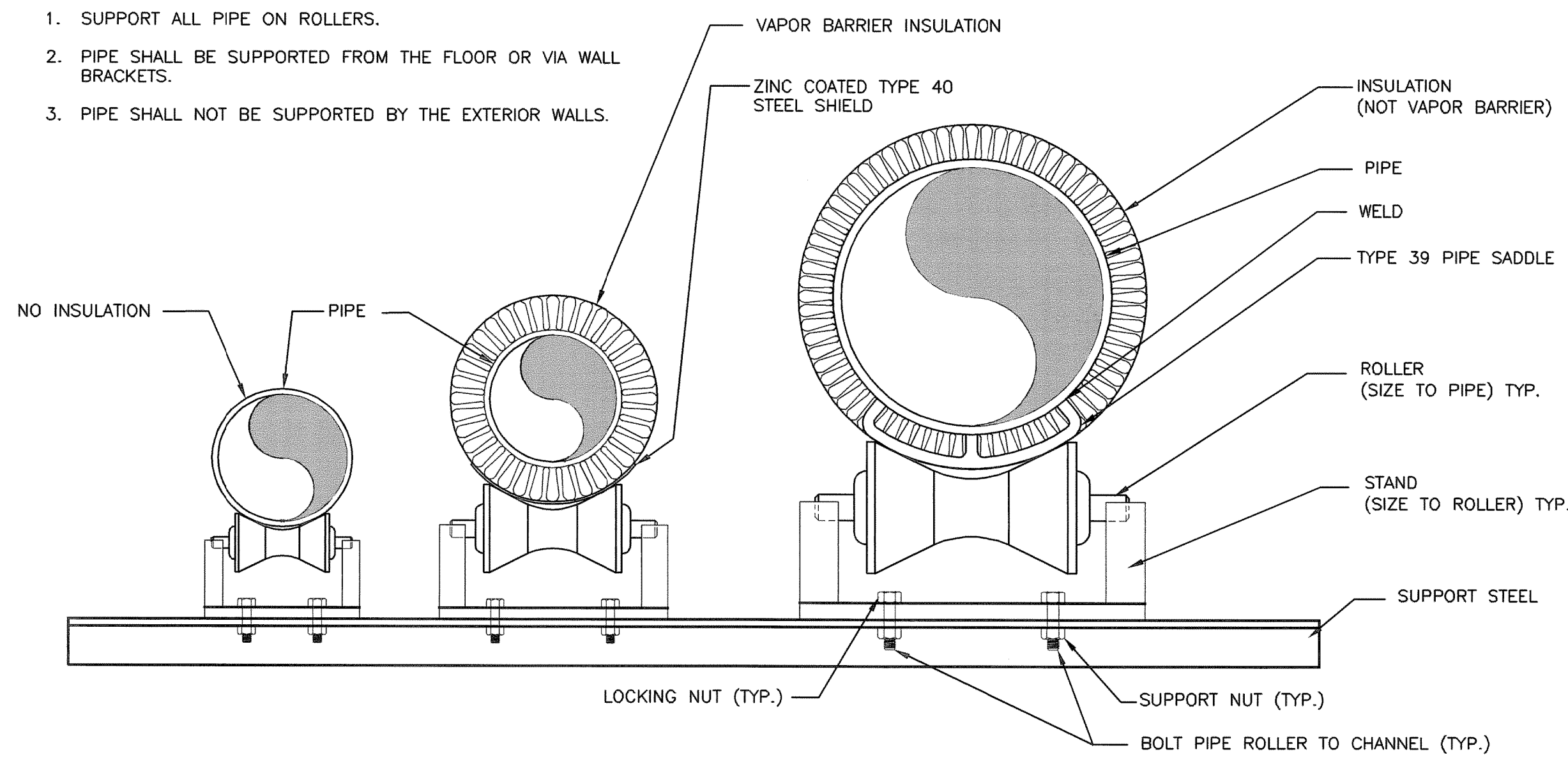


NOTES:

1. SUPPORT ALL PIPE ON ROLLERS.
2. PIPE SHALL BE SUPPORTED FROM THE FLOOR OR VIA WALL BRACKETS.
3. PIPE SHALL NOT BE SUPPORTED BY THE EXTERIOR WALLS.

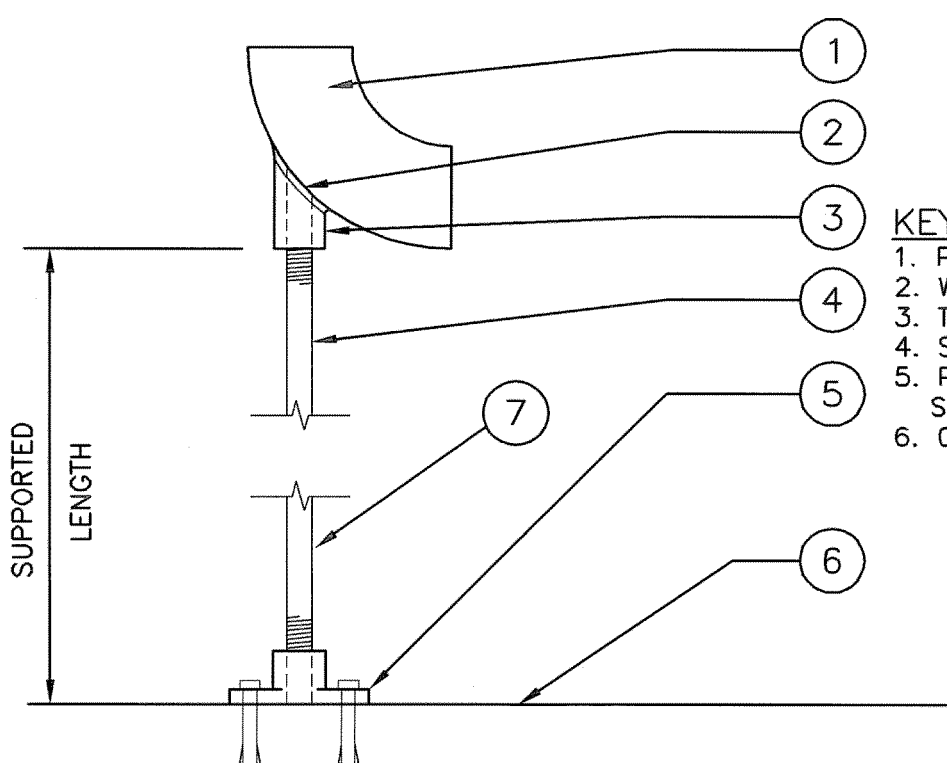


NOTE

SEE STRUCTURAL DRAWINGS FOR MAXIMUM PIPING/TUBE SUPPORT SPACING.

C1 PIPE HANGERS, DETAILS OF PIPE SUPPORTS, USE OF APPLICABLE TYPE

SCALE: NONE

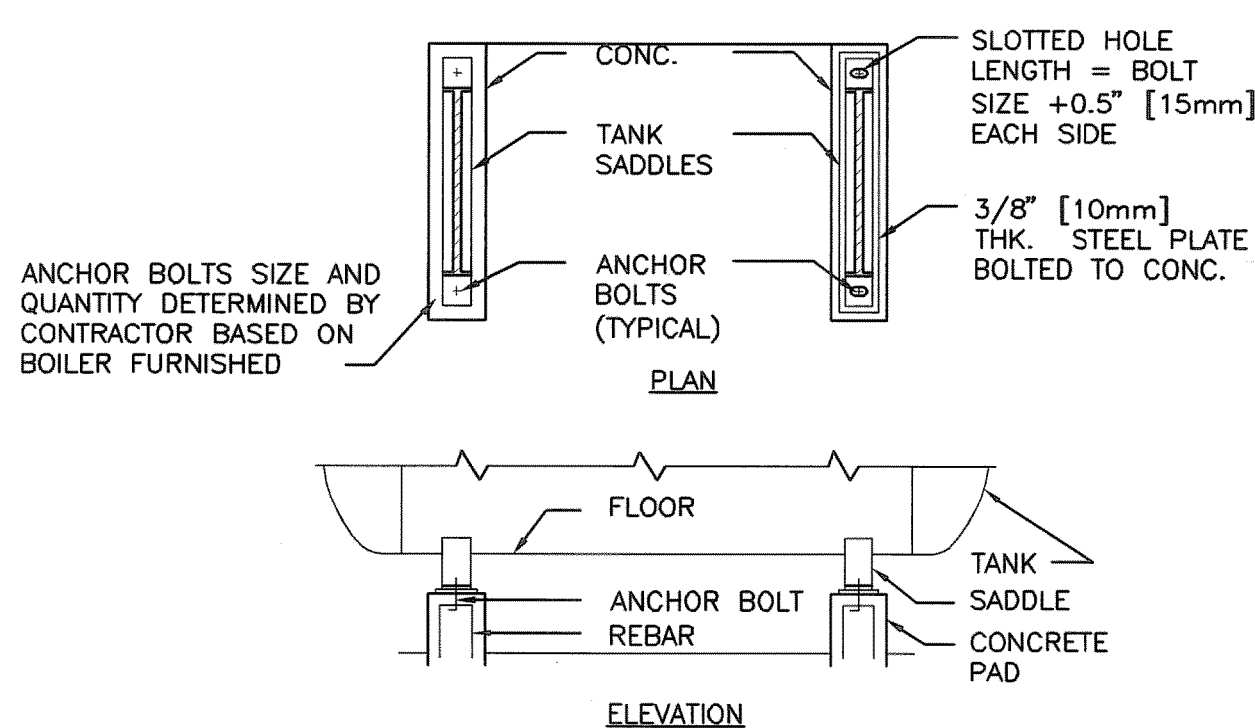


STANCHION SCHEDULE		
PIPE	SUPPORTED LENGTH	
	1'-0" TO 3'-0"	3'-1" TO 6'-0"
4" & BELOW	1"	2"
5" & ABOVE	2"	4"

C4 TYPICAL STANCHION PIPE SUPPORT DETAIL

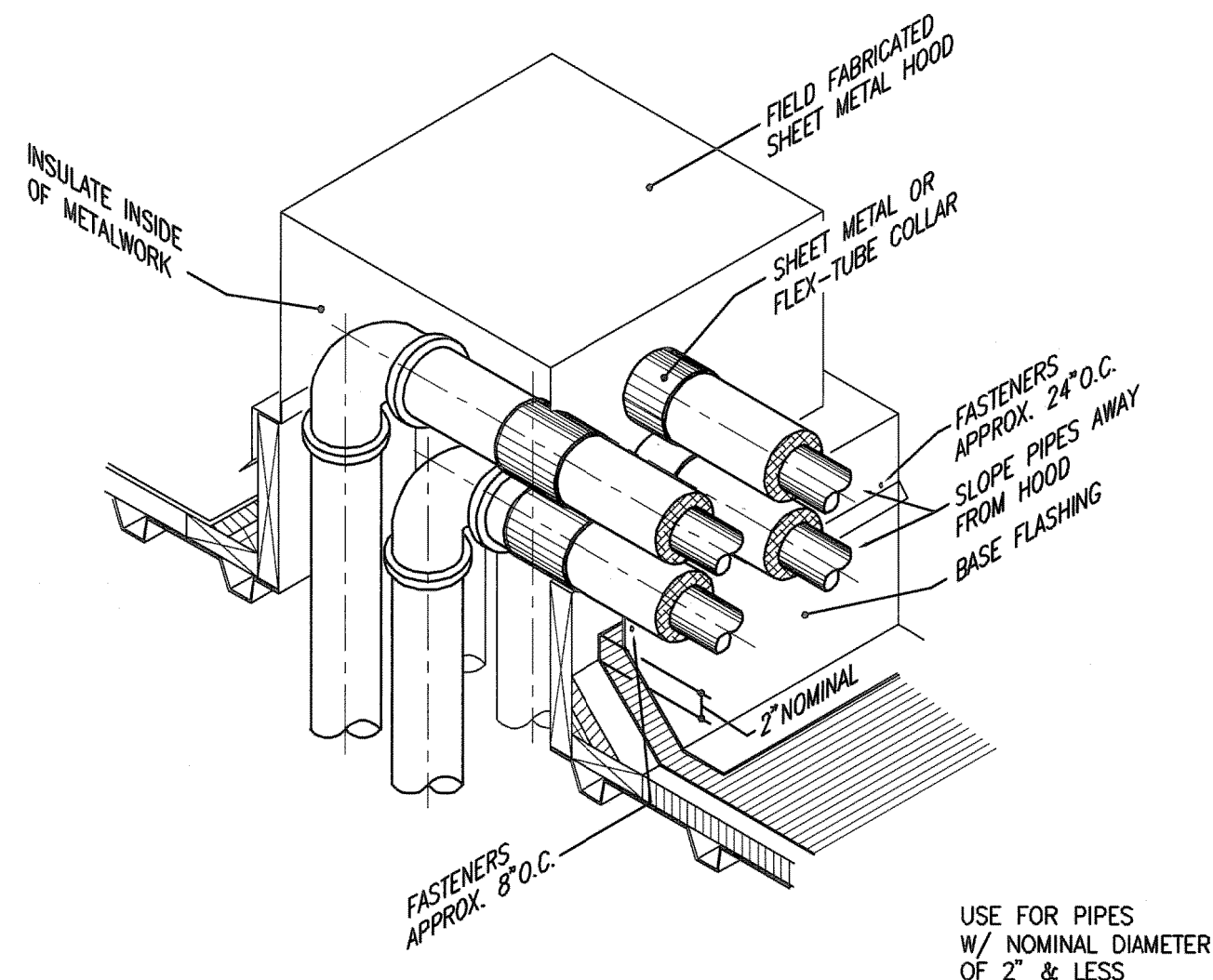
SCALE: NONE

- NOTES:
1. REFER TO SYMBOL AND SCHEDULE SHEETS FOR SEISMIC FORCE DESIGN INFORMATION
 2. PROVIDE SLOTTED HOLES IN PLATES TO ALLOW THERMAL EXPANSION IF RECOMMENDED BY BOILER MANUFACTURER



E1 EQUIPMENT ANCHOR TO CONCRETE PAD

SCALE: NONE

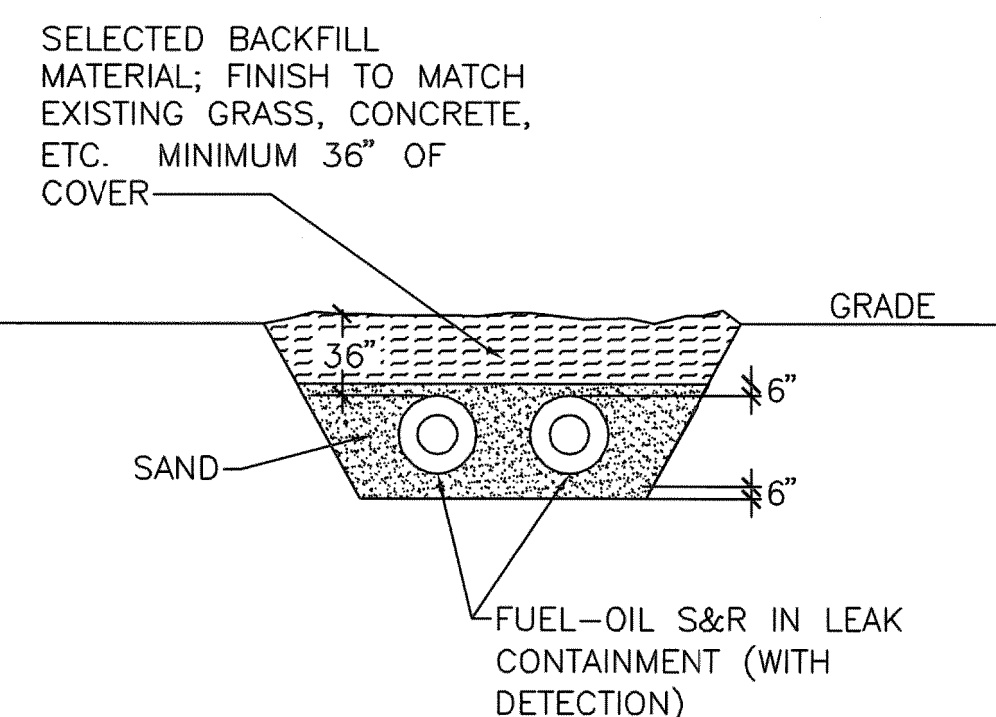


E3 SMALL PIPING PENETRATION AT ROOF

SCALE: NONE

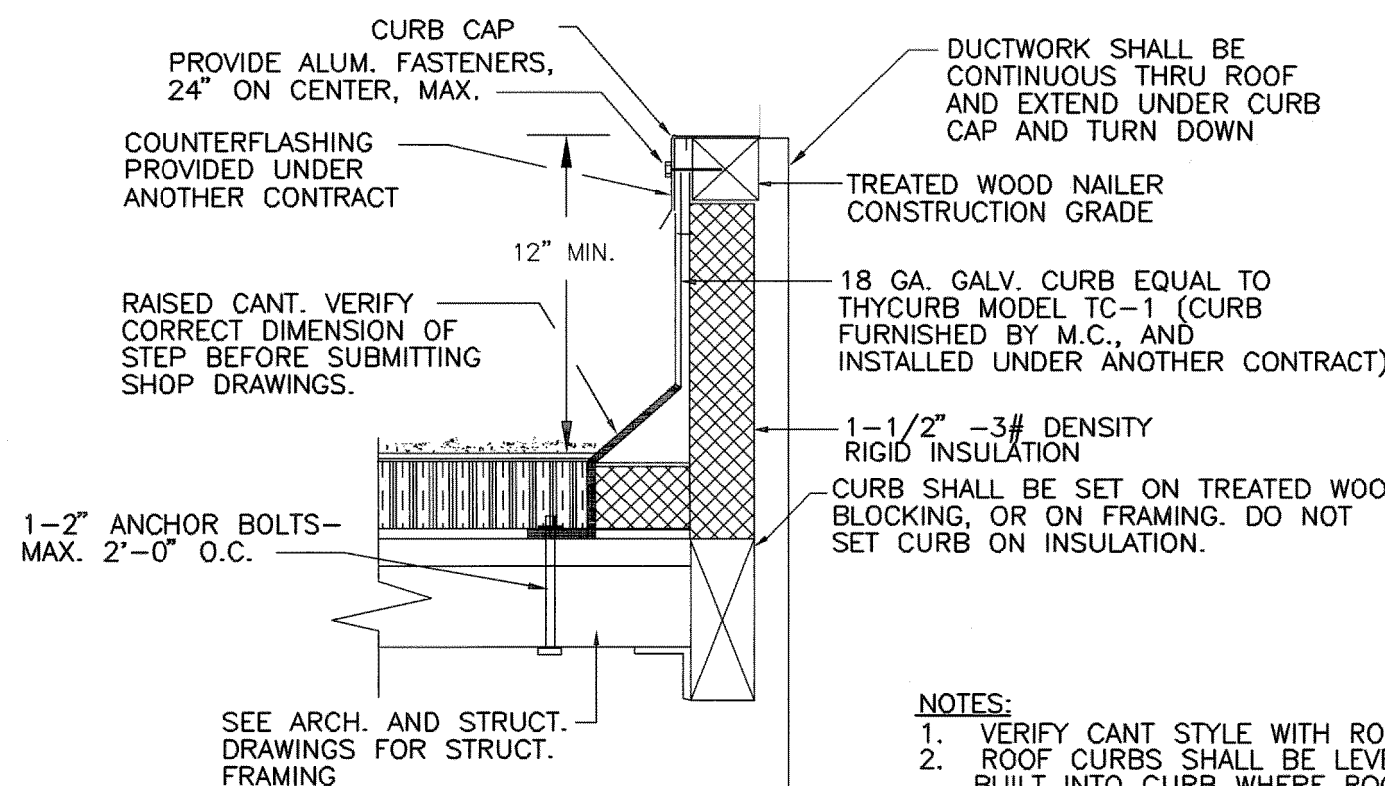
E5 FLASH TANK

SCALE: NONE



B7 FUEL-OIL LEAK DETECTION

SCALE: NONE

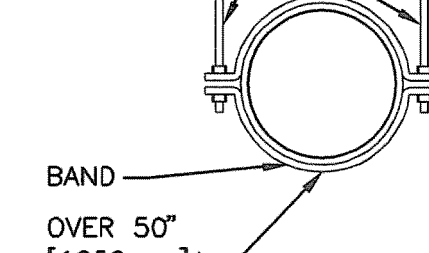


B8 ROOF CURB

SCALE: NONE

- NOTES:
1. VERIFY CANT STYLE WITH ROOFING CONTRACTOR
 2. ROOF CURBS SHALL BE LEVEL PITCH SHALL BE BUILT INTO CURB WHERE ROOF SLOPES 3/8" / FT OR MORE. OTHERWISE, M.C. TO SHIM AS REQUIRED.

HANGER STRAPS OR RODS				
MAX. DUCT Ø IN. [mm]	QUANTITY/SIZE IN. [mm]	MAX. LOAD LBS. [kg]	MAX. SPACING IN. [mm]	
26 [650]	ONE 1 [25] x 22 GA STRAP	260 [119]	144 [3600]	
36 [900]	ONE 1 [25] x 18 GA STRAP	420 [190]	144 [3600]	
50 [1250]	ONE 1 [25] x 16 GA STRAP	700 [317]	144 [3600]	
60 [1500]	TWO 3/8 [10] RODS	1320 [598]	144 [3600]	
84 [2100]	TWO 1/2 [13] RODS	2500 [1133]	144 [3600]	

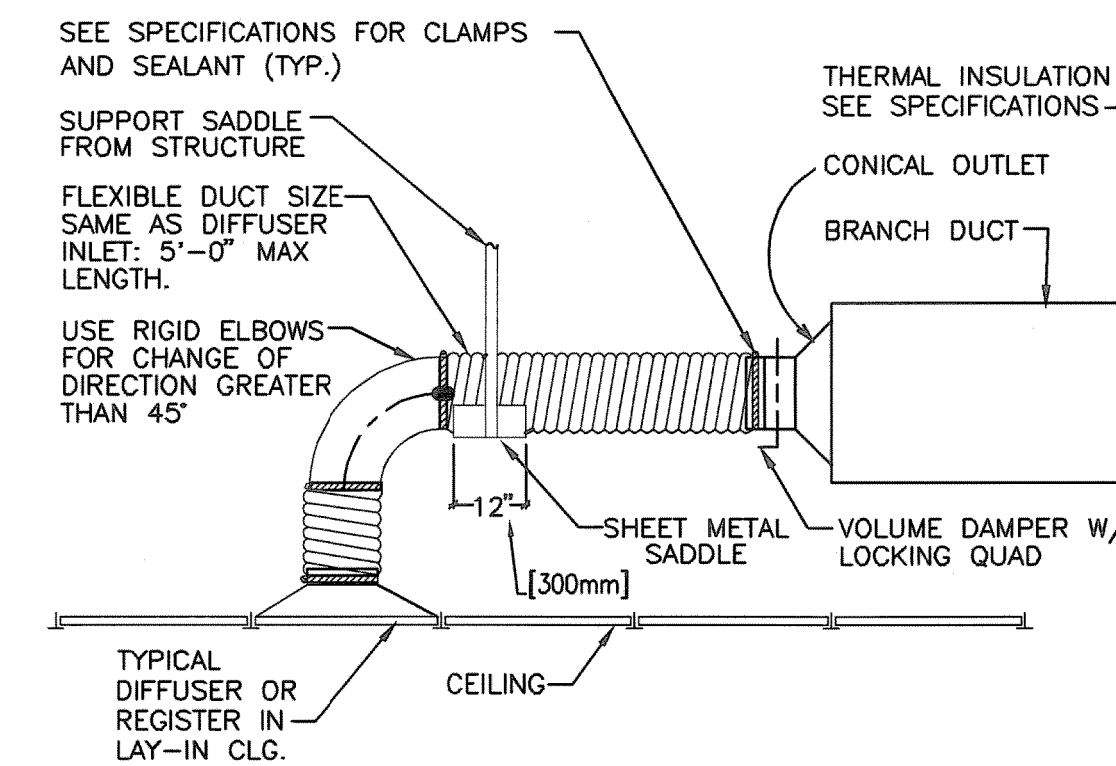


NOTE: TABULATED DATA FROM SMACNA ALLOWS FOR DUCT REINFORCING AND INSULATION, BUT NO EXTERNAL LOAD.

NOTE: FOR SUPPLY AND RETURN AIR DUCTS, INSULATE OVER BANDS AND INSULATE 12" UP HANGER RODS.

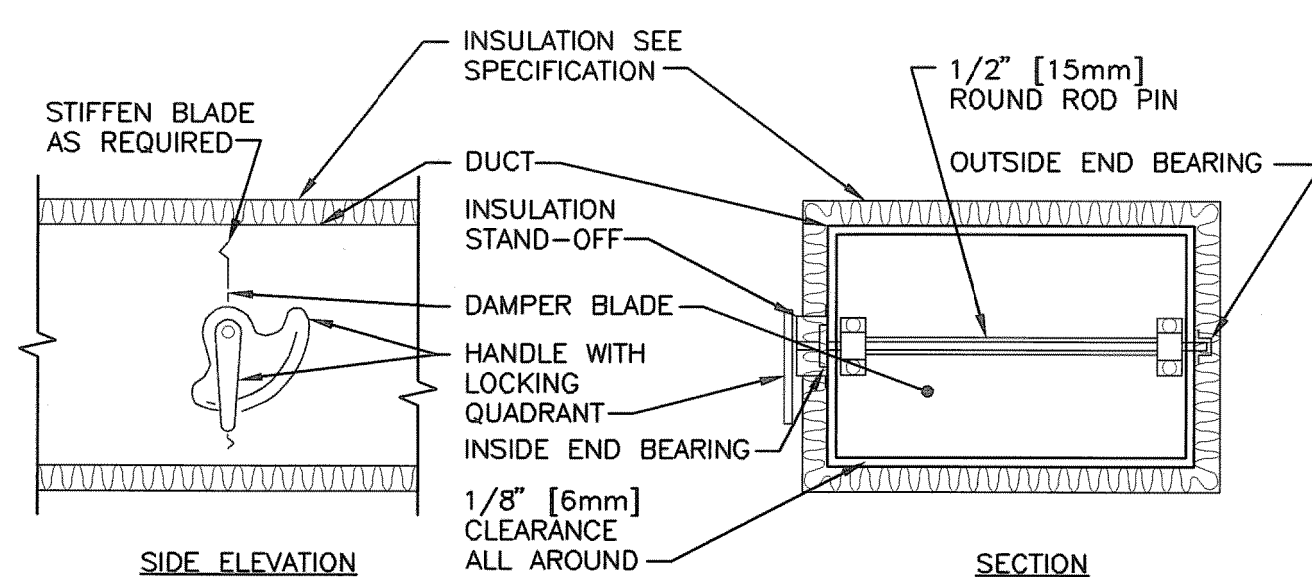
E7 ROUND DUCT HANGERS

SCALE: NONE VA CAD DETAIL #: SD233100-14.DWG



E9 FLEXIBLE AIR DUCT CONNECTOR

SCALE: NONE VA CAD DETAIL #: SD233100-24.DWG

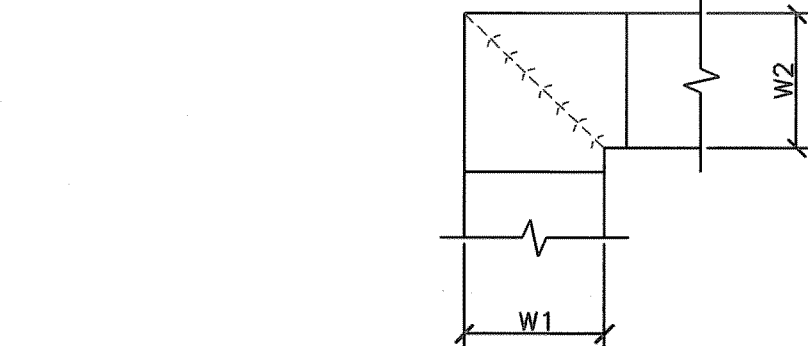


NOTE:

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

F1 VOLUME DAMPER DETAIL

SCALE: NONE VA CAD DETAIL #: SD233100-08.DWG

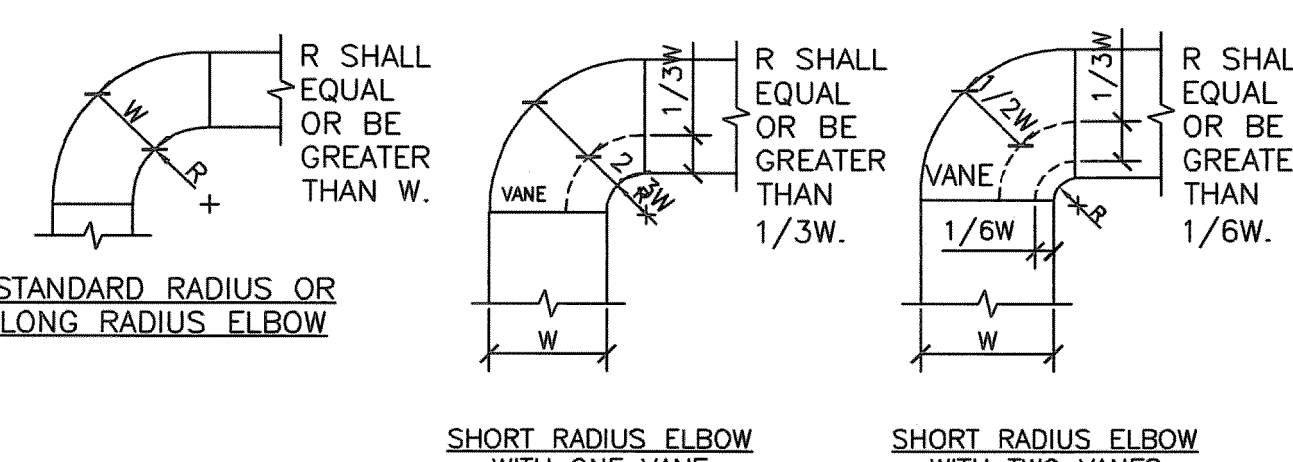


NOTE:

1. ALL VANE ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY SMACNA.
2. WHEN W1 DOES NOT EQUAL W2, VANE SHALL BE SINGLE THICKNESS VANE TYPE REGARDLESS OF W DIMENSION.
3. ALL SINGLE THICKNESS VANES SHALL HAVE A 2" [50mm] RADIUS, 1 1/2" [40mm] MAXIMUM SPACE BETWEEN VANES AND A 3/4" [20mm] TRAILING EDGE.
4. WHEN W EQUALS W2 AND W1 IS GREATER THAN 20" [500mm] VANES SHALL BE DOUBLE VANE TYPE.

F3 DUCTWORK SQUARE VANE ELBOWS

SCALE: NONE VA CAD DETAIL #: SD233100-01.DWG

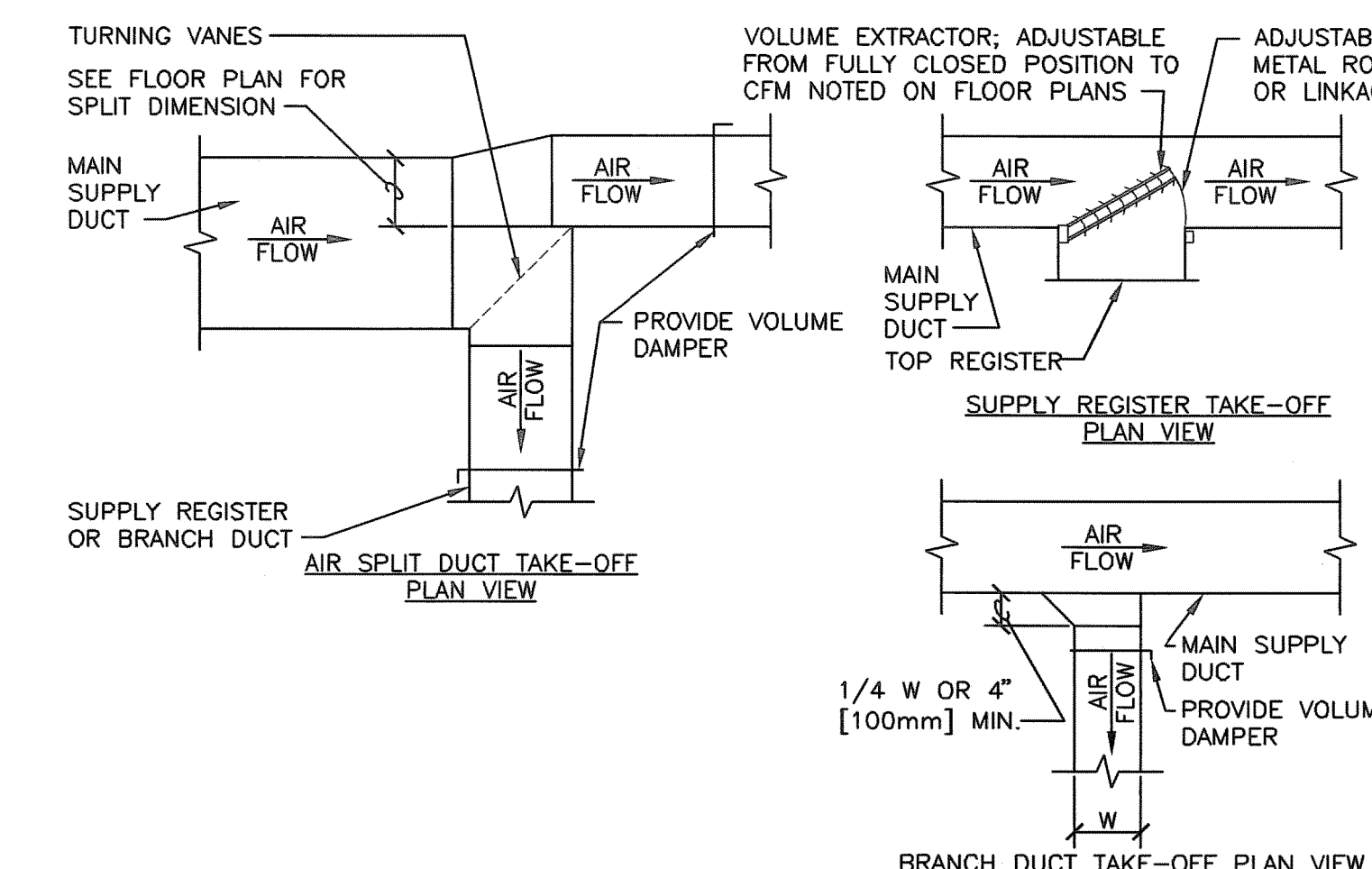


NOTE:

1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND.
2. ALL STANDARD RADIUS ELBOWS CAN BE SUBSTITUTED WITH SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA.

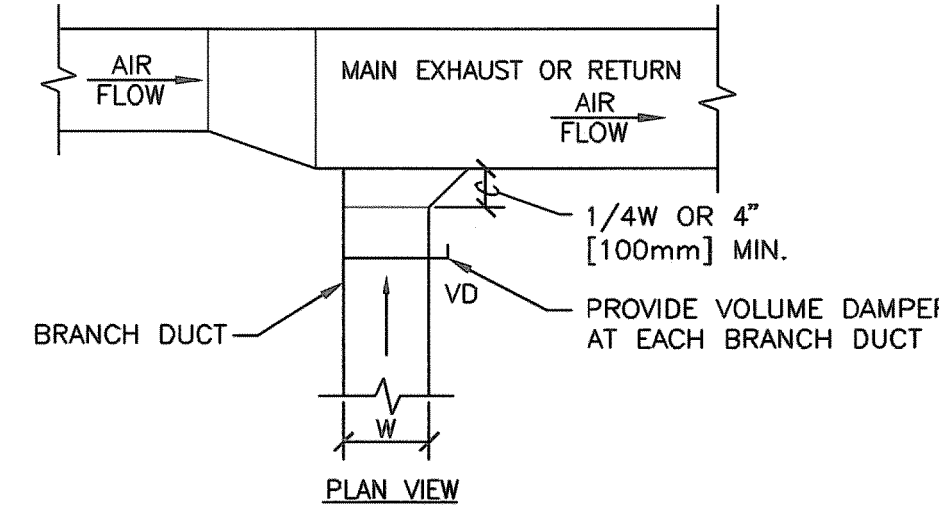
F5 DUCTWORK RADIUS ELBOWS

SCALE: NONE VA CAD DETAIL #: SD233100-02.DWG



F7 SUPPLY DUCTWORK TAKE-OFFS

SCALE: NONE VA CAD DETAIL #: SD230541-05.DWG



F9 EXHAUST OR RETURN BRANCH DUCTWORK

SCALE: NONE VA CAD DETAIL #: SD233100-07.DWG

100% CONSTRUCTION DOCUMENTS

REVISION NO. REVISION DESCRIPTION		Department of Veterans Affairs William Jennings Bryan Dorn VA Medical Center 6439 Garners Ferry Road Columbia, SC 29209		Architect/Engineer Address Harrell, Saltrick & Hopper Design & Management Solutions for the Built Environment 8016 TOWER POINT DRIVE P 704.814.1320 CHARLOTTE, NC 28227 F 704.321.0833 WWW.HSHPC.COM COPYRIGHT © 2011 HARRELL, SALTROCK & HOPPER, PC HSH PROJECT # 11015		Recommended Approvals:		Drawing Title MECHANICAL DETAILS		Project Title REPLACE BOILER PLANT/ COGEN/CHP		Date APRIL 10, 2012		Veterans Affairs	
Revisions		By/Date		SEAL		1. MEDICAL DIRECTOR 2. ASSOCIATE DIRECTOR 3. CHIEF OF STAFF 4. ASSOC. DIRECTOR 5. SERVICE LINE MGRS.		6. OPERATIONS SERVICE LINE MANAGER 7. INFECTION CONTROL MANAGER 8. SAFETY MANAGER 9. GENERAL ENGINEER 10. COTR		*BUILDING IS FULLY SPRINKLERED*		Drawn DWS Building Number 21 AutoCAD File Name Const. Contract No.		Project Number 544-11-101 DRAWING No. MP503	