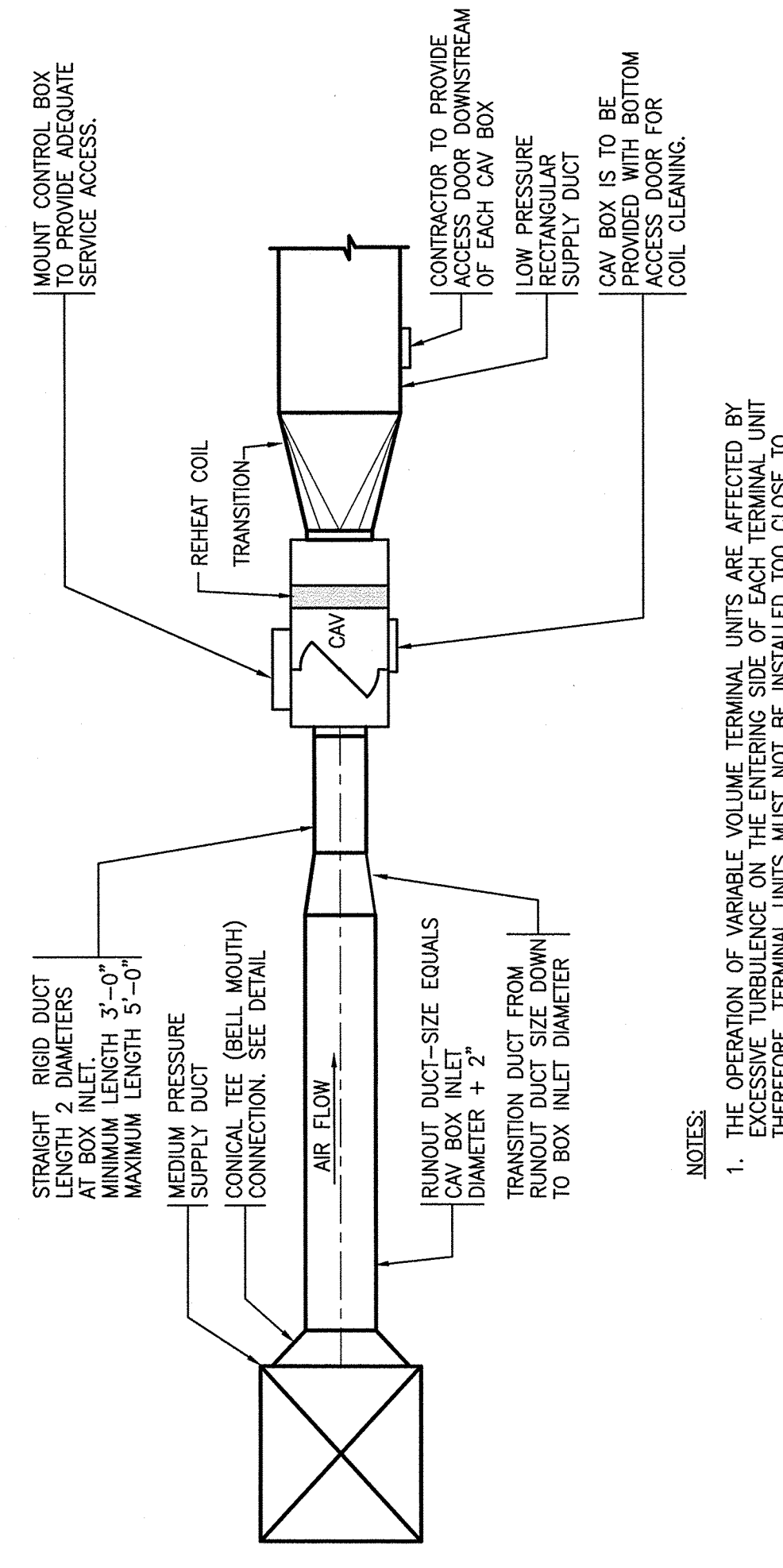


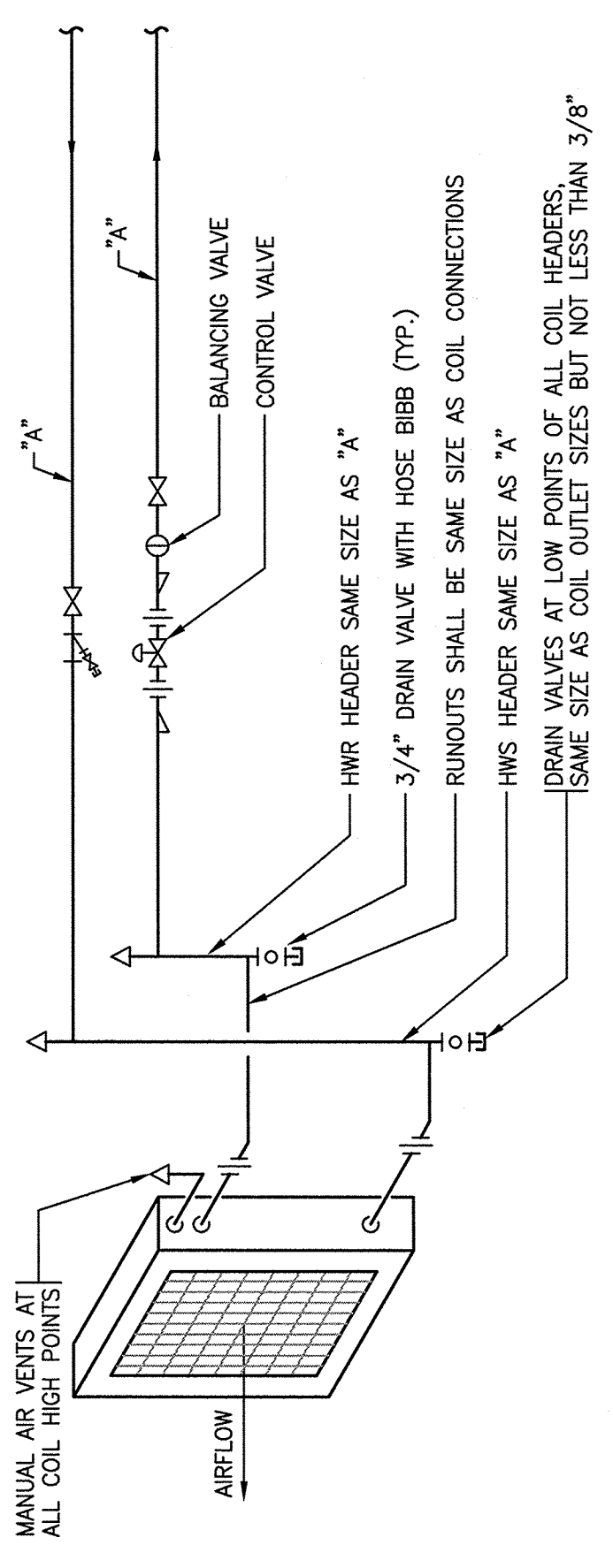
NO.	ISSUED FOR PERMIT	DATE
1	ISSUED FOR PERMIT	08.11.14
1	ADDENDUM #1	07.28.14
1	ISSUE FOR BID	07.11.14
NO.	ISSUE	DATE

Date	Job #	Sheet Information
JULY 11, 2014	182768.010	
Drawn	TU	
Checked	DPK	
Approved	DPK	
		Title



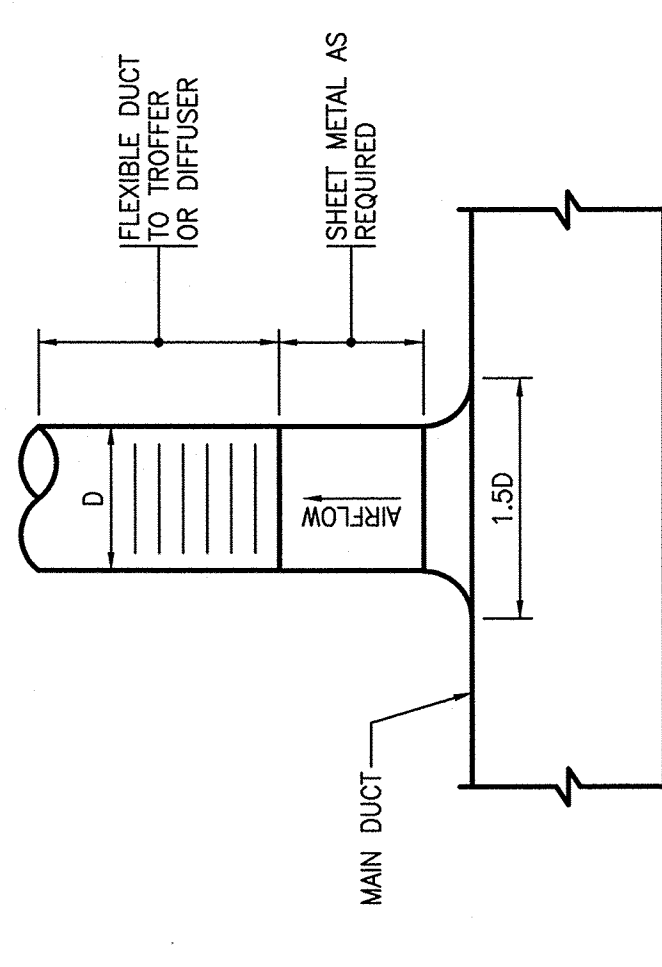
- NOTES:**
1. THE OPERATION OF VARIABLE VOLUME TERMINAL UNITS ARE AFFECTED BY EXCESSIVE TURBULENCE ON THE ENTERING SIDE OF EACH TERMINAL UNIT. EXCESSIVE TURBULENCE SHOULD NOT BE INSTALLED TOO CLOSE TO MAIN DUCTS, ELBOWS AND FITTINGS.
 2. WHEN MAINSTREAM STRAIGHT DUCT CONNECTIONS TO TERMINALS AS INDICATED ABOVE CANNOT BE MAINTAINED, PROVIDE ORifice PLATE, STRAIGHTENING VANES OR OTHER DEVICE AS RECOMMENDED BY TERMINAL UNIT MANUFACTURER AND SUBMIT TO ENGINEER FOR REVIEW PRIOR TO INSTALLATION.
 3. MANUFACTURER OF TERMINAL UNIT SHALL PROVIDE CONTROLS ON LEFT OR RIGHT SIDE AS REQUIRED BY FIELD CONDITIONS.
 4. ARRANGE ACCESS TO PERMIT EASY FIELD BALANCE AND MAINTENANCE OF TERMINAL UNIT.

**3 TERMINAL REHEAT BOX CONNECTIONS
(CAV OR VAV)**
M400

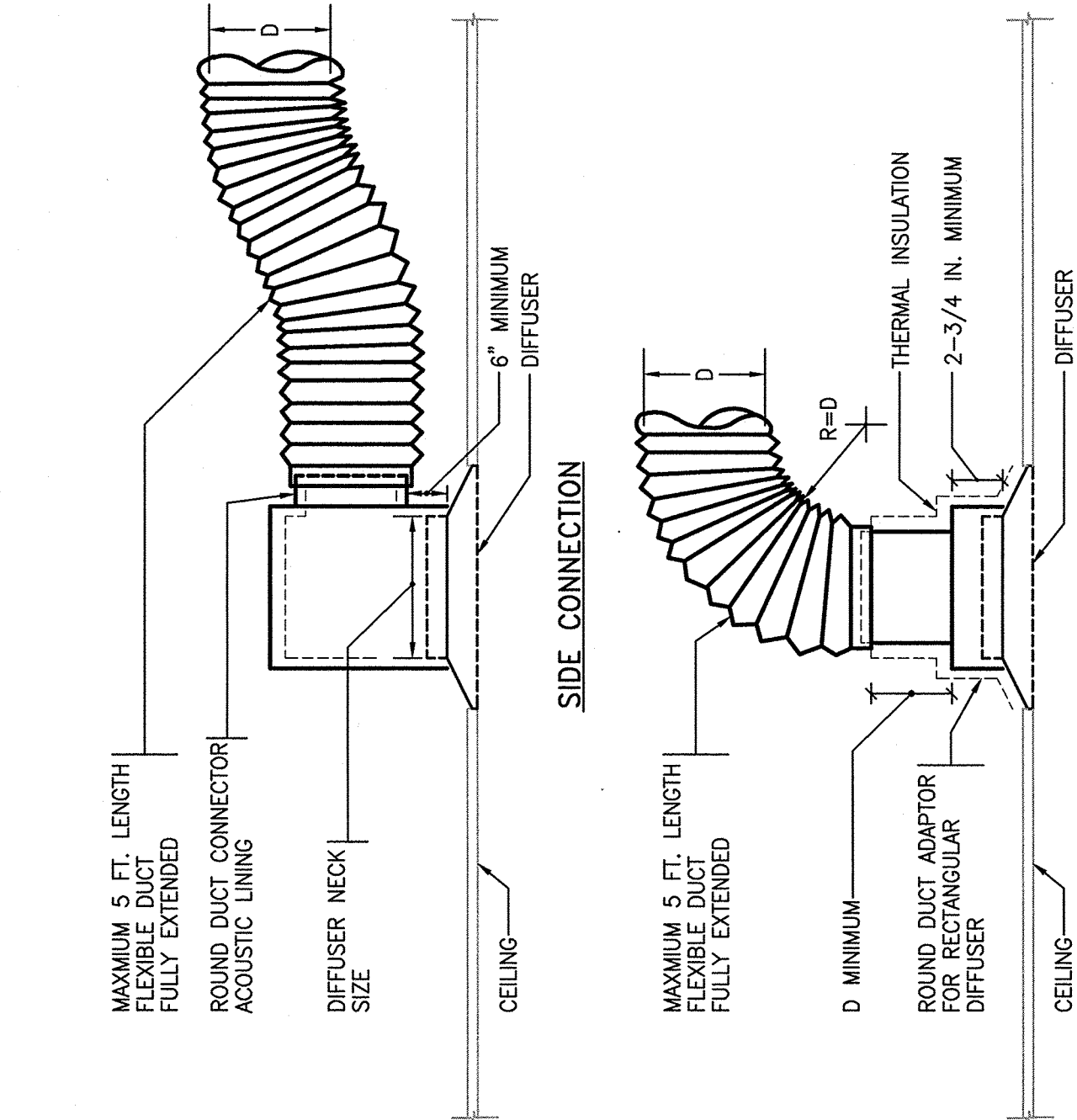


- NOTES:**
1. LOCATE PIPE UNIONS AND ARRANGE PIPING TO FACILITATE COIL REMOVAL.
 2. FOR SIZES "A" - SEE PLANS AND FLOW DIAGRAMS.
 3. PROVIDE NIPPLE WITH 3/8" BALL VALVE AND PLUG FOR ALL MANUAL AIR VALVES.

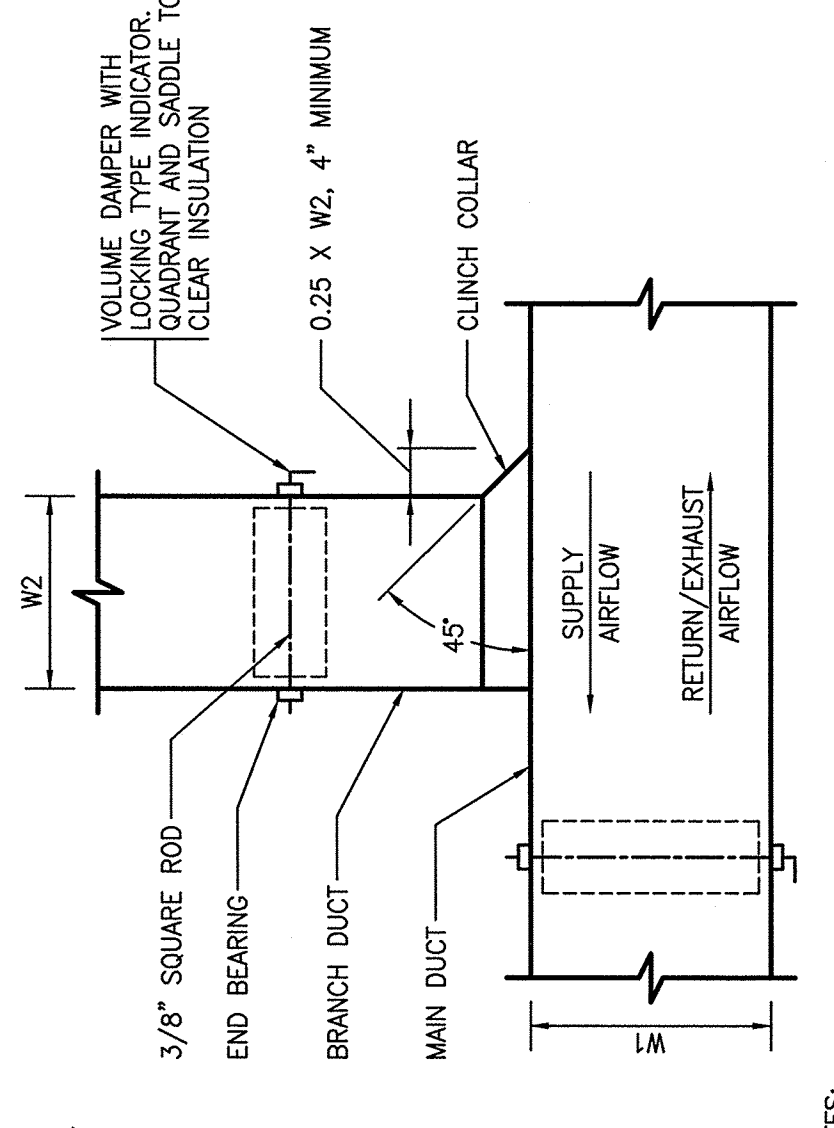
**6 HOT WATER REHEAT COIL CONNECTIONS
ONE HIGH**
M400



**9 CIRCULAR BRANCH CONNECTION
TO SINGLE OUTLET**
M400

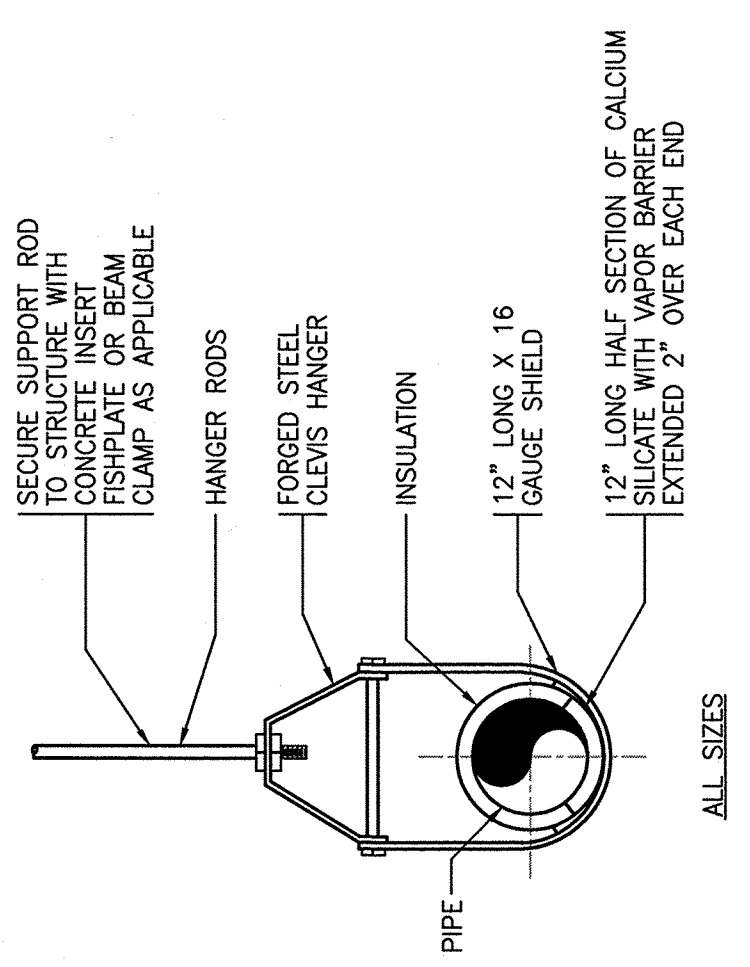


2 DIFFUSER CONNECTION DETAIL
M400



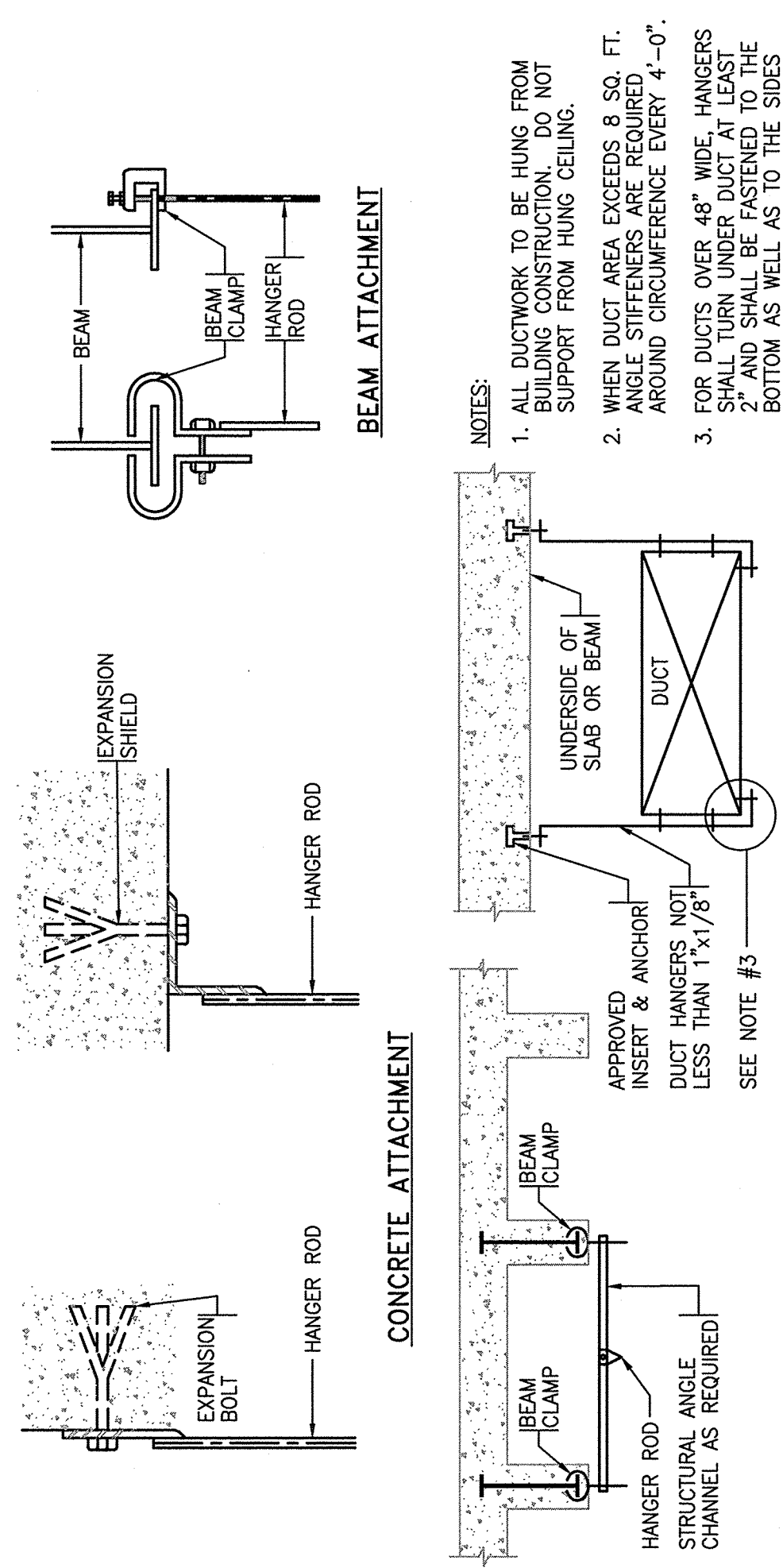
- NOTES:**
1. FURNISH THIS TYPE CONNECTION WHEN SINGLE LINE DUCTWORK IS INDICATED AS THIS FOR LOW PRESSURE BRANCHES WITH LESS THAN 700 CFM AND MEDIUM PRESSURE BRANCHES WITH LESS THAN 1,000 CFM.
 2. NOT TO BE USED AS A SUBSTITUTE FOR AN ELBOW.

**5 RECTANGULAR DUCT ANGULAR TAP
WITH VOLUME DAMPER**
M400



- WHERE STRUCTURAL SLABS ARE NOT PERMIT INSERTS SUPPORT PIPING FROM STRUCTURE WITH AUXILIARY STEEL IF REQUIRED.**

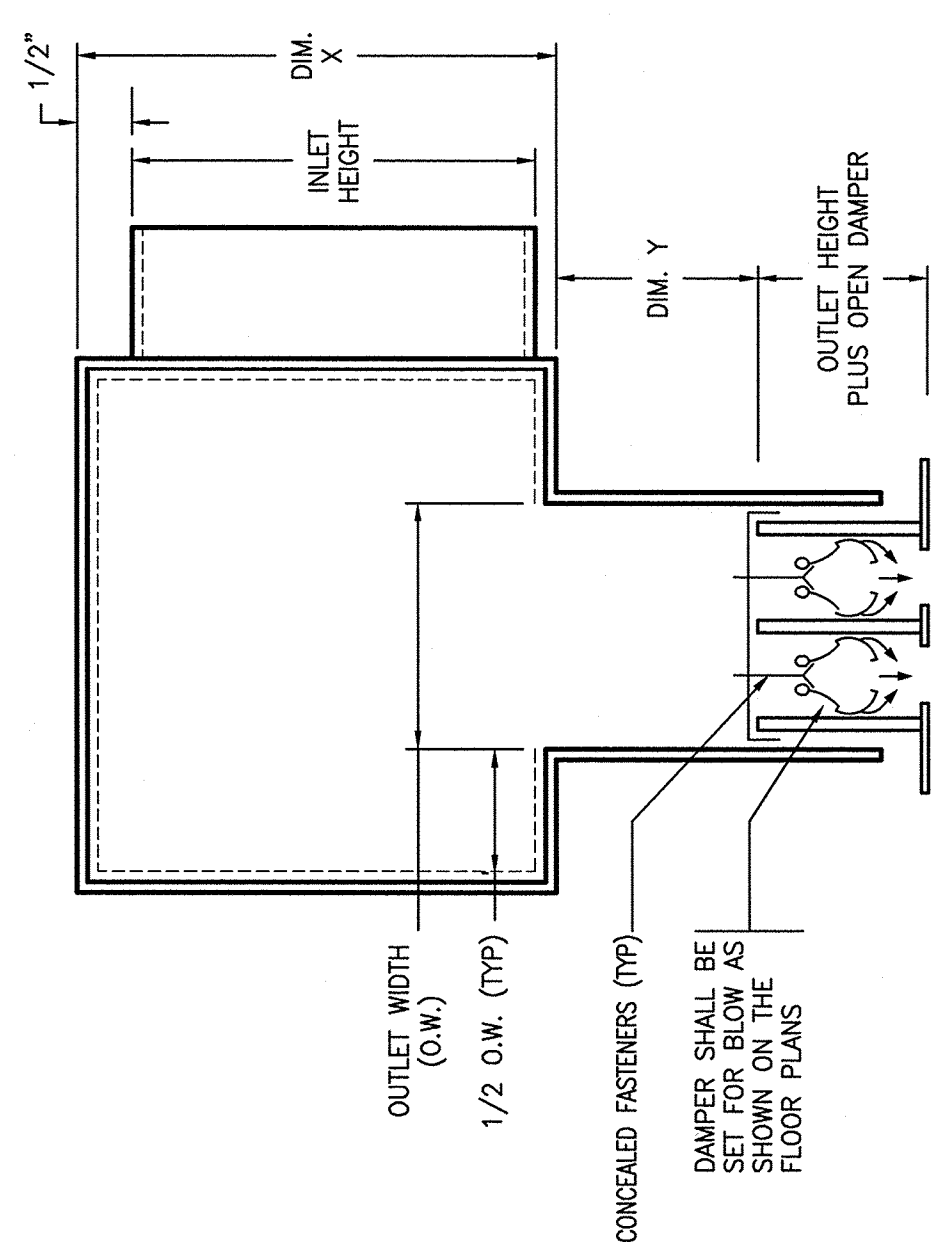
8 WATER PIPING HANGER DETAIL
M400



LONGEST HANGERS OF DUCT	ROUND HANGERS	MAXIMUM HANGERS NOTE #4	TRAPEZOIDAL HANGERS
UP TO 18"	8 GA WIRE	8-0"	1" x 1/8"
19" TO 30"	1/4" ROD	8-0"	1" x 1/8"
31" TO 42"	3/8" ROD	4-0"	1" x 1/8"
43" TO 60"	3/8" ROD	4-0"	1" x 1/8"
61" TO 84"	3/8" ROD	4-0"	2" x 1/8"
85" TO 96"	3/8" ROD	4-0"	2" x 1/8"
OVER 97"	3/8" ROD	4-0"	2" x 1/4"

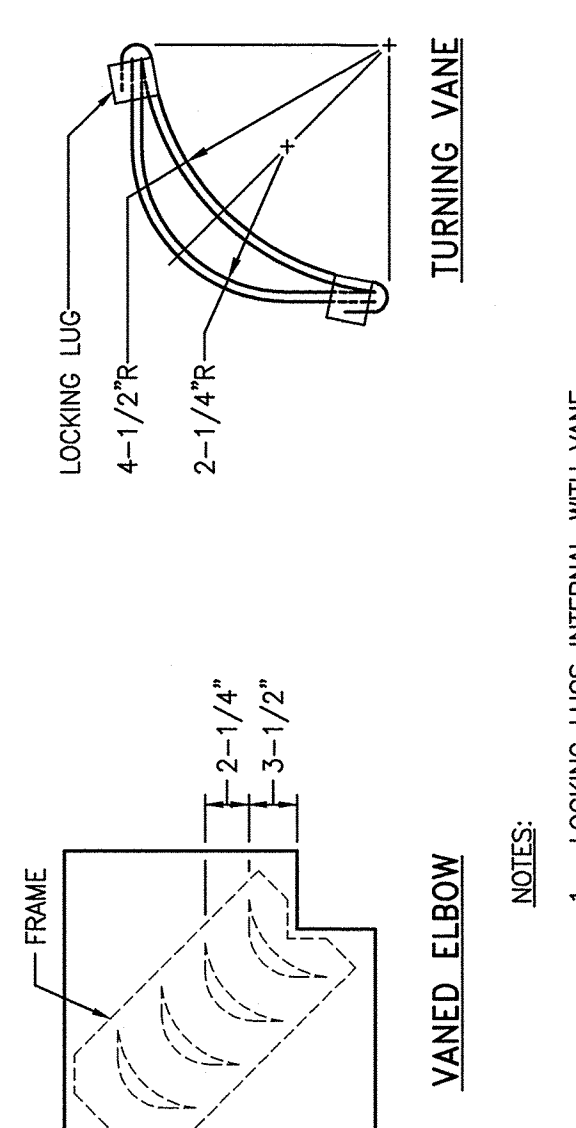
- NOTES:**
1. ALL DUCTWORK TO BE HUNG FROM BUILDING CONSTRUCTION. DO NOT SUPPORT FROM HUNG CEILING.
 2. WHEN DUCT AREA EXCEEDS 8 SQ. FT. DUCT HANGERS MUST BE SPACED AROUND CIRCUMFERENCE EVERY 4'-0".
 3. FOR DUCTS OVER 48" WIDE, HANGERS SHALL TURN UNDER DUCT AT LEAST 90 DEGREES AND SHALL BE FASTENED TO THE BUILDING CONSTRUCTION AS TO THE SIDES OF THE DUCT.
 4. FOR DUCTS WITH A CROSS SECTIONAL AREA OF 4 SQ. FT. OR LESS, HANGERS SHALL BE SPACED AT 4'-0" ON CENTER. FOR DUCTS WITH A CROSS SECTIONAL AREA MORE THAN 4 SQ. FT. HANGERS SHALL BE SPACED AT 6 FT. MAXIMUM. FOR DUCTS WITH A CROSS SECTIONAL AREA MORE THAN 8 SQ. FT. HANGERS SHALL BE SPACED AT 8 FT. MAXIMUM. THE DISTANCES BETWEEN HANGERS SHALL BE MEASURED LINEARLY ALONG THE DUCT.

1 DUCT SUPPORT DETAIL
M400



- FOR OUTLET WIDTHS UP TO 6\"**
DIMENSION X=INLET HEIGHT + 1"
DIMENSION Y=1"
- FOR OUTLET WIDTHS UP TO 6.1/2\"**
DIMENSION X=INLET HEIGHT + 3"
DIMENSION Y=2"

4 LINEAR DIFFUSER PLENUM DETAIL
M400



- NOTES:**
1. LOCKING LUGS INTERNAL WITH VANE
 2. MAXIMUM UNSUPPORTED VANE LENGTH 48"
 3. FRAMES - BOLTED OR RIVETED TO ELBOW
 4. VANES AND FRAMES - SAME GAUGE AS ELBOW

**7 DOUBLE THICKNESS TURNING VANES
FOR SQUARE ELBOWS**
M400

TERMINAL BOX SCHEDULE

DESIGNATION	SERVICE	CFM RANGE	MAX NC	TYPE	NECK SIZE (IN.) / SIZE & NO. OF SLOTS	NOMINAL OVERALL DIMENSION W/L (IN.)	MANUF. MODEL	REMARKS	WATER (HOT WATER)																		
									REHEAT COIL (HOT WATER)	AIR	WATER																
									MIN. PRE-STATE ASPS (IN W.G.)	MAX. PD (ET.)	LWT (CF)	EMT (CF)	ROWS	CPM	PLATE	180	VARIABLES	1	0.27	24	28	28	TYPE OF CONTROLS	MANUF. MODEL	REMARKS		
CD-A	SUPPLY	0-280	23	LAY-IN	9x9	24x24	TUTTLE & BAILEY-RC	SEE NOTES 1 & 2																			
CD-B	SUPPLY	281-500	24	LAY-IN	12x12	24x24	TUTTLE & BAILEY-RC	SEE NOTES 1 & 2																			
RR-A	RETURN	0-440	11	LAY-IN	12x12	24x24	TUTTLE & BAILEY T700	-																			
RR-B	RETURN	441-1,570	17	LAY-IN	21x21	24x24	TUTTLE & BAILEY T700	-																			

- NOTES:**
1. PROVIDE (1) ROW COIL FOR ALL VARIABLE VOLUME UNITS AND (2) ROW COILS FOR ALL CONSTANT VOLUME UNITS UNLESS OTHERWISE NOTED.

DIFFUSER SCHEDULE

DESIGNATION	SERVICE	CFM RANGE	MAX NC	TYPE	NECK SIZE (IN.) / SIZE & NO. OF SLOTS	NOMINAL OVERALL DIMENSION W/L (IN.)	MANUF. MODEL	REMARKS
CD-A	SUPPLY	0-280	23	LAY-IN	9x9	24x24	TUTTLE & BAILEY-RC	SEE NOTES 1 & 2
CD-B	SUPPLY	281-500	24	LAY-IN	12x12	24x24	TUTTLE & BAILEY-RC	SEE NOTES 1 & 2
RR-A	RETURN	0-440	11	LAY-IN	12x12	24x24	TUTTLE & BAILEY T700	-
RR-B	RETURN	441-1,570	17	LAY-IN	21x21	24x24	TUTTLE & BAILEY T700	-

- NOTES:**
1. SEE PLANS FOR ADOPTED PATTERNS
 2. PROVIDE WITH FACTORY ATTACHED 3" HIGH SQUARE-TO-ROUND ADAPTER. ADAPTERS TO FIT INSIDE DIFFUSER NECK.