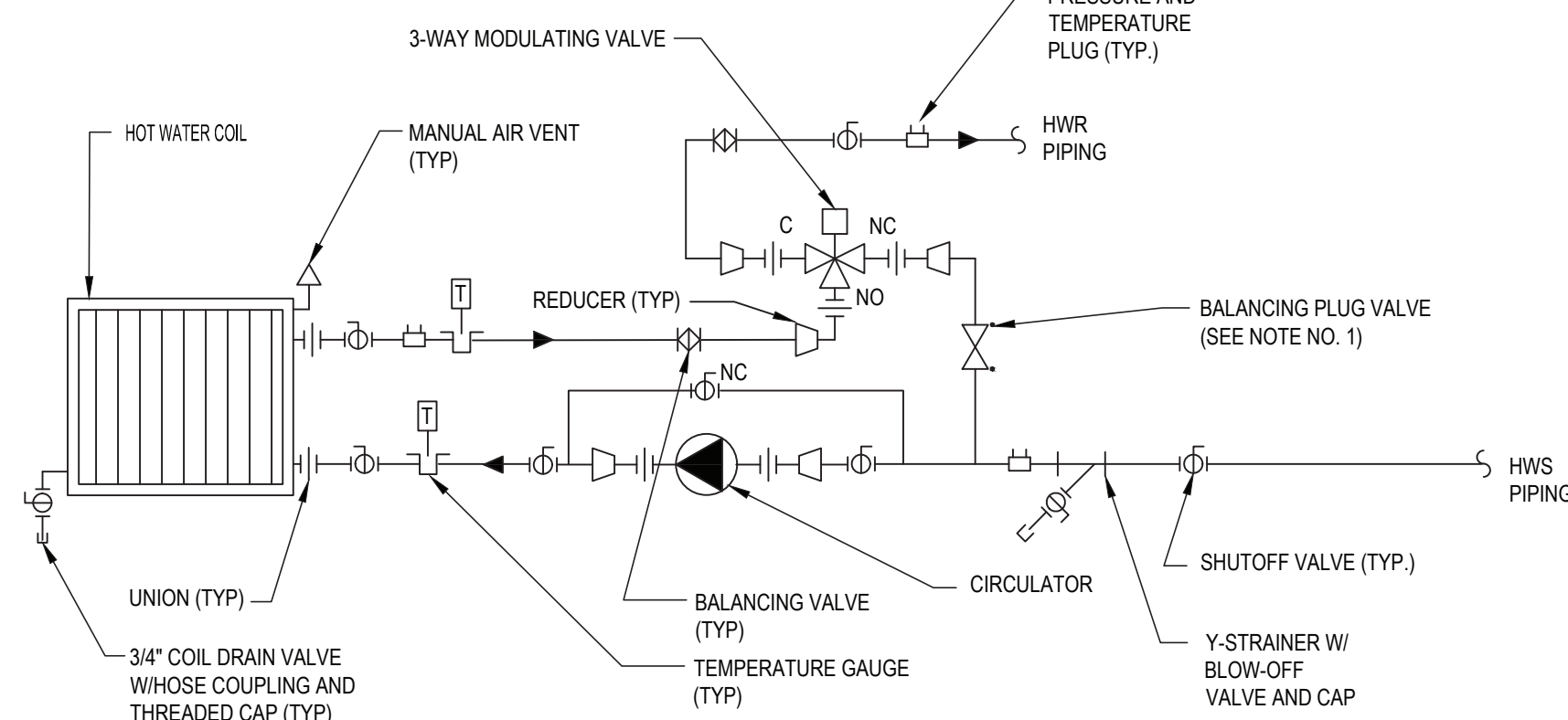


3 ROOF PIPING PENETRATION DETAIL

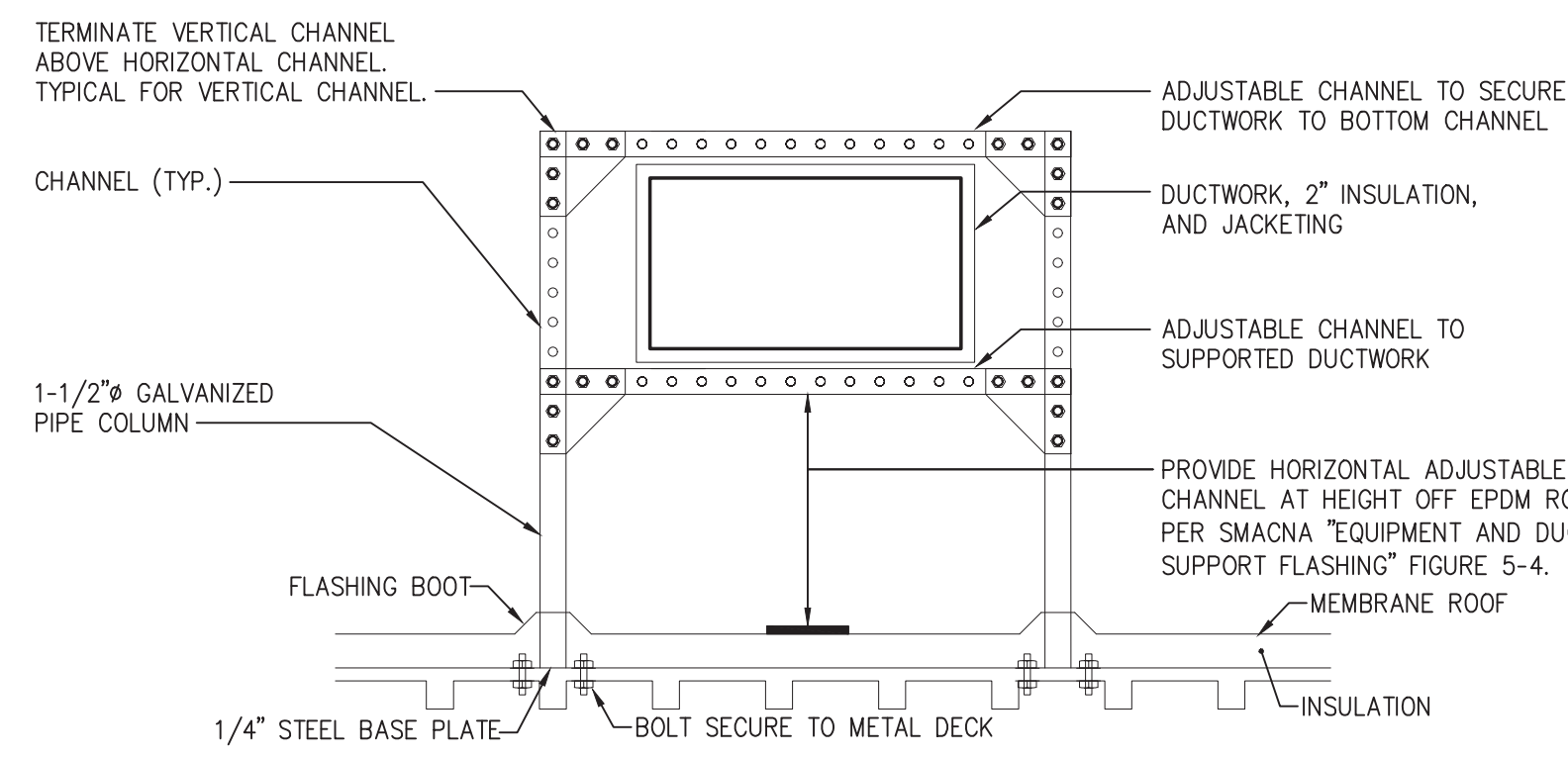


SEQUENCE OF OPERATION

1. PUMP STARTS ON CALL FOR HEAT AND 3-WAY VALVE SHALL MODULATE TO MAINTAIN SPACE TEMPERATURE WITHOUT CYCLING.
2. FREEZE PROTECTION OVERRIDE, OF OA. TEMPERATURE <35° PUMP IS ON 3-WAY OPENS TO BYPASS IF NOT HEATING.

NOTE

1. SET BALANCING VALVES TO EQUAL THE PRESSURE DROP ACROSS THE HYDRONIC COIL



NOTE: SEE SPECIFICATION 23 05 40 "HANGER & SUPPORTS"

NOTE: ADD WIND RESTRAINTS AS NEEDED.

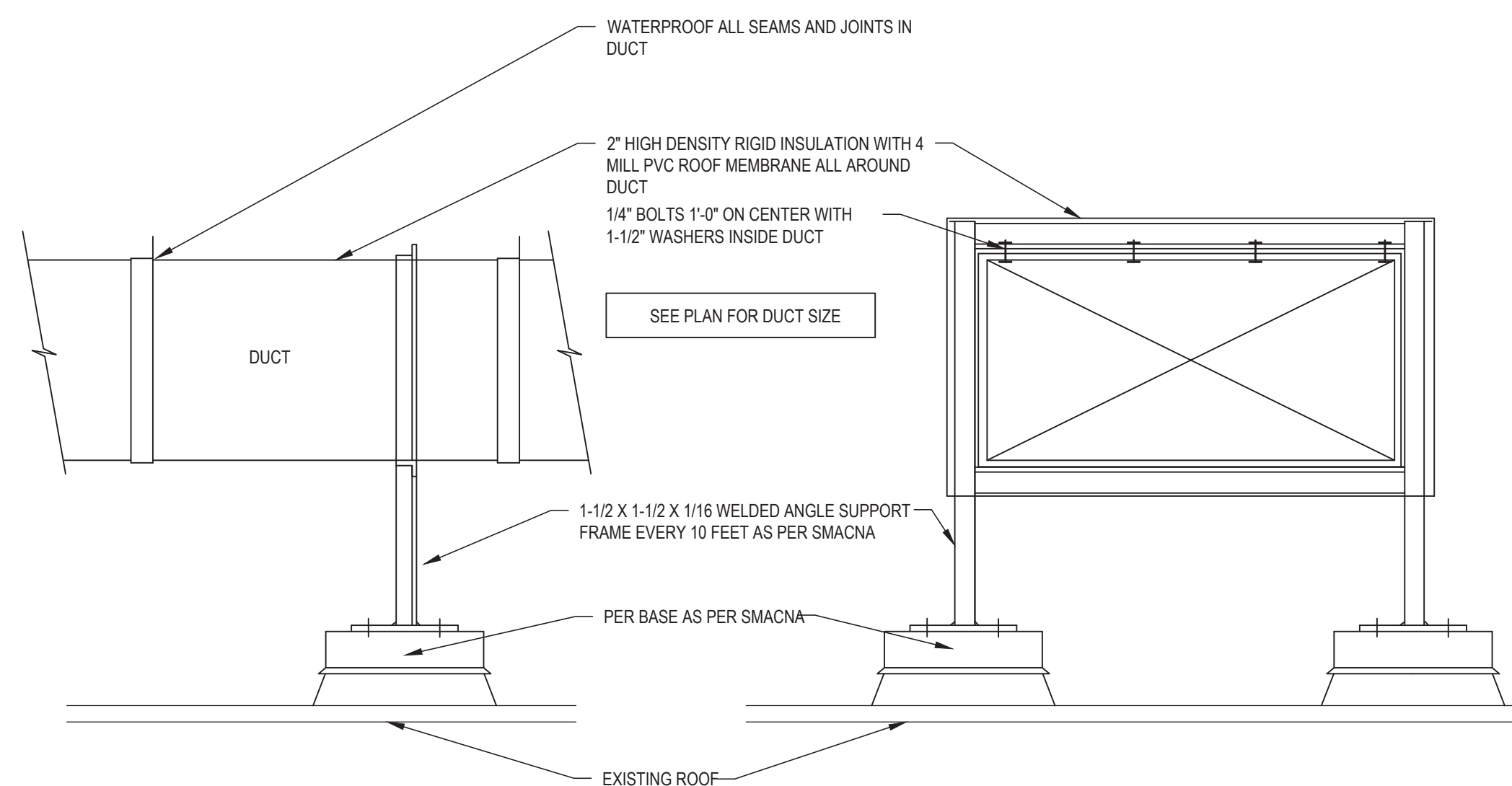
NOTE: SUPPORT DUCTWORK EVERY 10 FT. EVERY OTHER DUCT SUPPORT MAY BE MOUNTED ON FEET DIRECTLY ON ROOF MEMBRANE INSTEAD OF BEING ANCHORED TO THE ROOF DECK.

NOTE: REFER TO 6/MS-H501

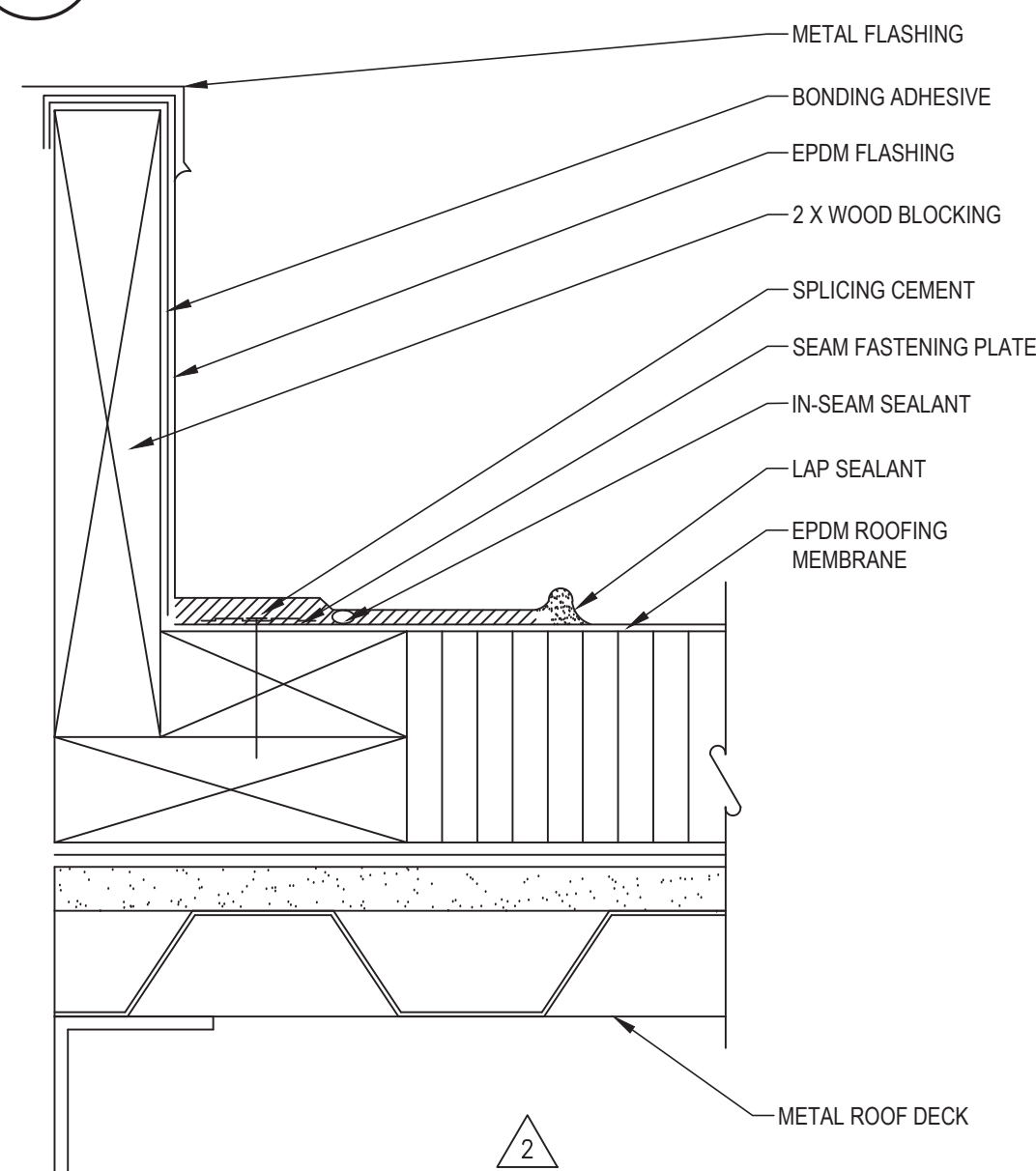
NOTE: REFER TO 6/MS-H501

1 DUCTWORK ROOF SUPPORT DETAIL 1 (ANCHORED)

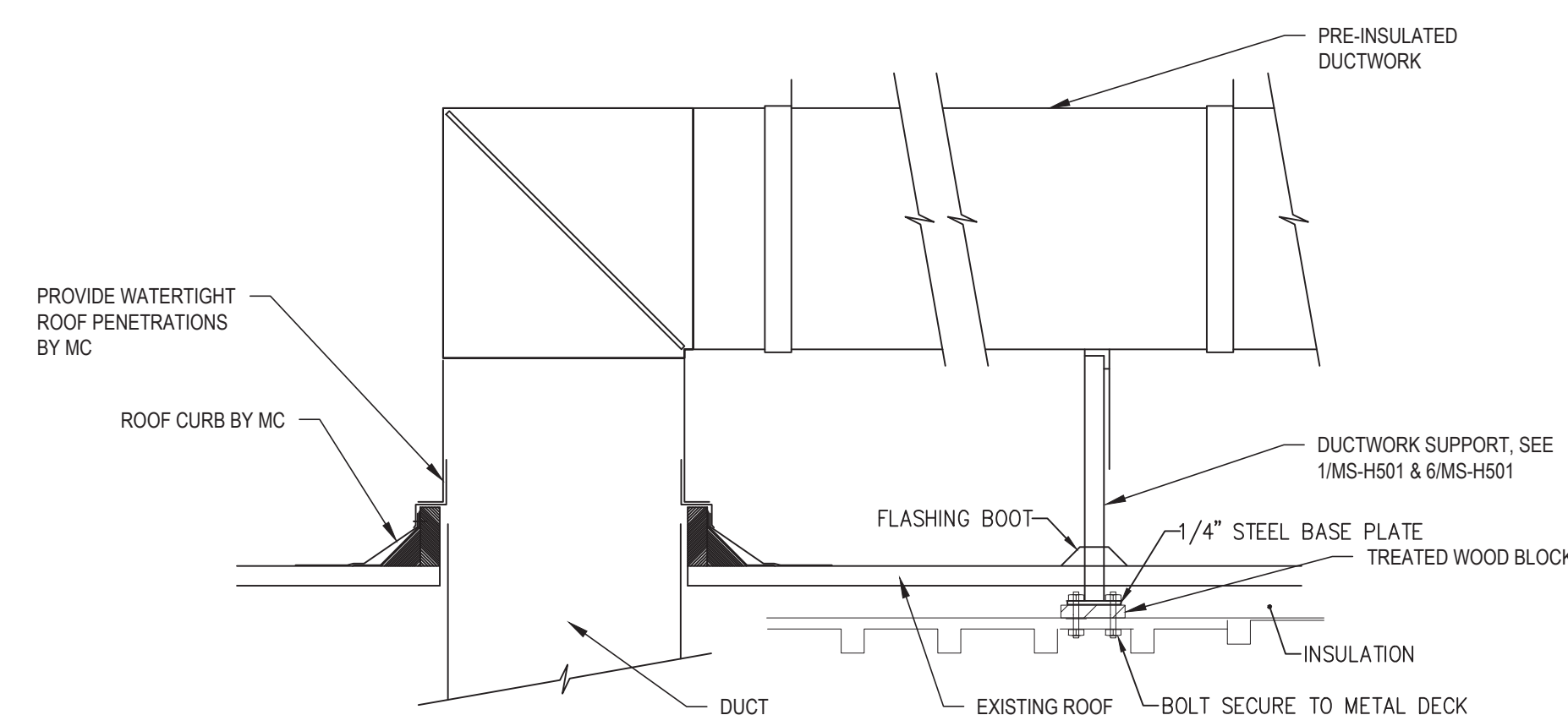
MS-H501 SCALE: NOT TO SCALE



6 DUCTWORK ROOF SUPPORT DETAIL 2 (UN-ANCHORED)
MS-H501 SCALE: NOT TO SCALE



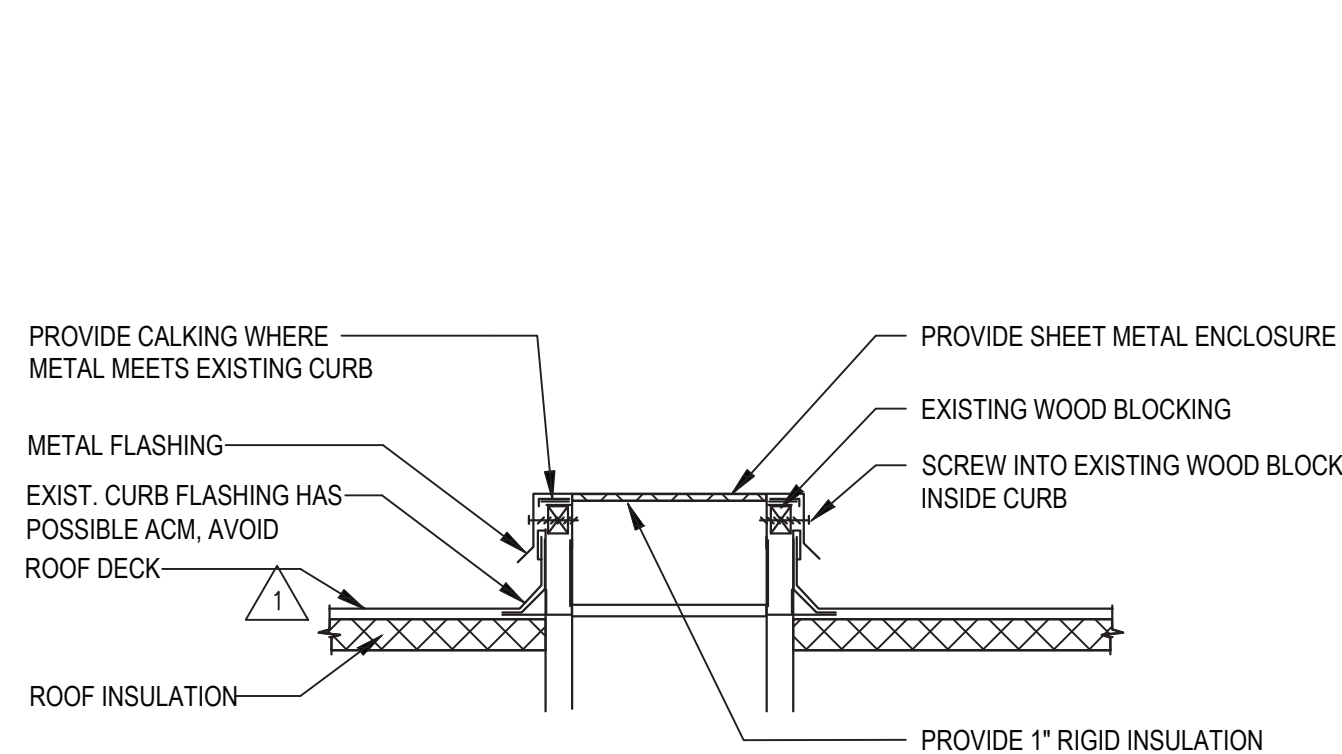
5 RTU ROOF CURB DETAIL
MS-H501 SCALE: NOT TO SCALE



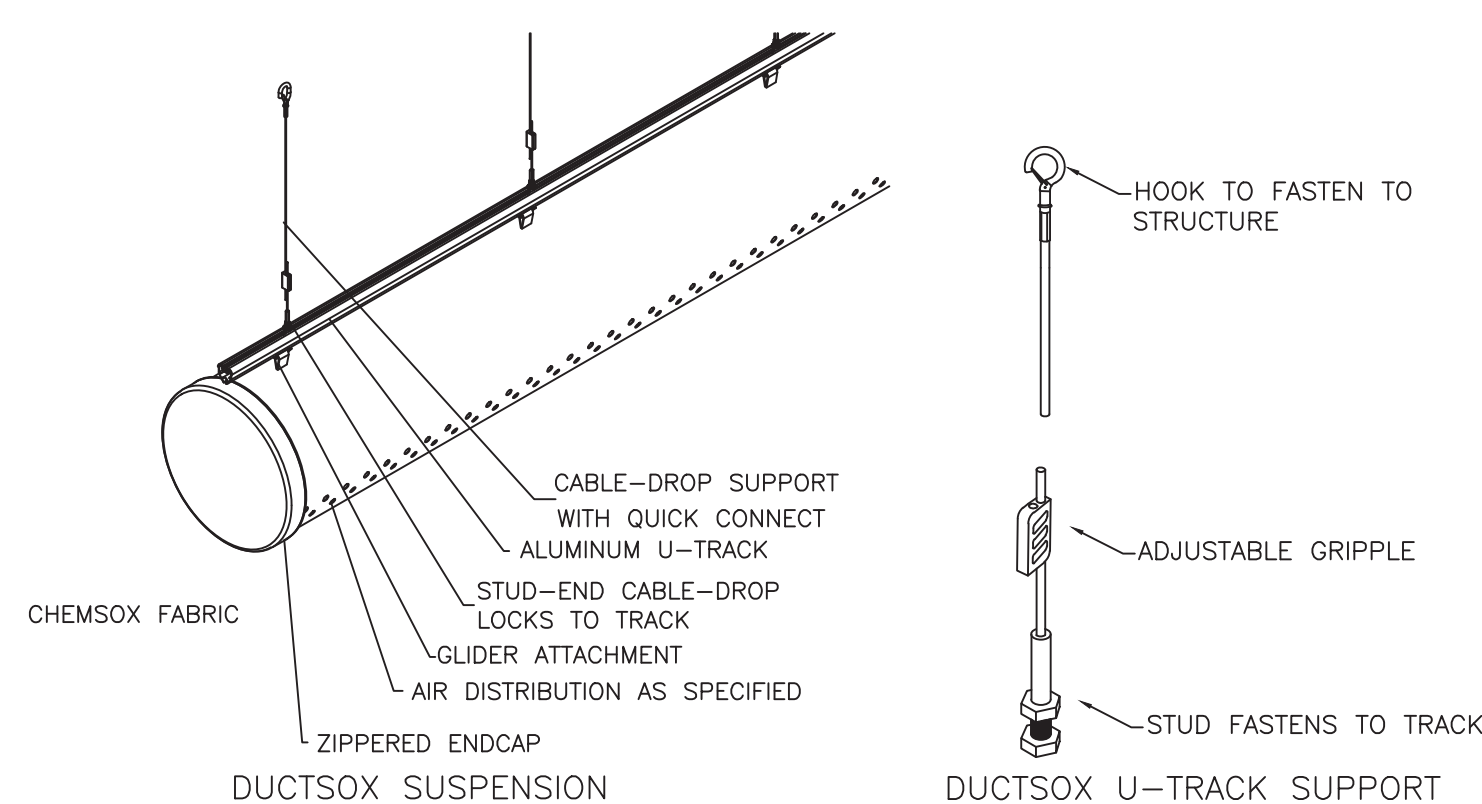
NOTE: MC TO REMOVE ROOFING AND INSULATION AS REQUIRED AND ROOFING CONTRACTOR TO REPAIR ROOFING AND INSULATION PER ROOFING MANUFACTURER'S REQUIREMENTS.

4 DUCTWORK ROOF PENETRATION AND SUPPORT DETAIL

MS-H501 SCALE: NOT TO SCALE



8 ROOF CURB CAP DETAIL
MS-H501 SCALE: NOT TO SCALE



7 DUCTSOX SUSPENSION DETAIL
MS-H501 SCALE: NOT TO SCALE

Space Designation	Area SF	Occupants		Ventilation Required		Uncorrected Ventilation	Efficiency Factor	Corrected CFM
		/1000 SF	Total	Per Occup.	Per SF			
MS Gym	6,100	7	43	20.00	0.18	1,950	80%	2,440
Total	6,100		43			1,950	80%	2,440

PUMP SCHEDULE													1
TAG	SERVICE	TYPE	FLUID	GPM	HEAD	RPM	ELECTRICAL		DISCONNECT			BASIS OF DESIGN	MODEL
							HP	VOLTS/PH/HZ	TYPE	FURNISHED BY	INSTALLED BY		
P-4	RTU-4	IN-LINE CIRC.	HW	15	23	1725	3/4	120/1/60	SWITCH	EC	EC	TACO	1611
P-5	RTU-5	IN-LINE CIRC.	HW	15	23	1725	3/4	120/1/60	SWITCH	EC	EC		

ROOFTOP AIR-CONDITIONING UNIT SCHEDULE																																
TAG	SERVICE	TYPE	AIRFLOW (CFM)	OUTSIDE AIR (CFM)	SUPPLY FAN				EXHAUST FAN				DX COOLING								HEATING										BASIS OF DESIGN	
					ESP (IN. WG)	TOTAL SP (IN. WG)	FAN TYPE	HP	ESP (IN. WG)	TOTAL SP (IN. WG)	FAN TYPE	HP	CAPACITY					ENTERING AIR (MIXED)		LEAVING AIR		ENTERING WATER (°F)	LEAVING WATER (°F)	ENTERING AIR DRY BULB (°F)	LEAVING AIR DRY BULB (°F)	GPM	WATER PD (FT)	AIR PD (IN)	OUTPUT MBH	MEDIUM		NOTES
													IEER	NOMINAL TONNAGE	TOTAL (MBH)	SENS. (MBH)	LATENT (MBH)	DRY BULB (°F)	WET BULB (°F)	DRY BULB (°F)	WET BULB (°F)											
RTU-4	GYMNASIUM	RTU	6250	1300	1.5	3	PLENUM	7.5	.75		PLENUM	5	14.2	16	200.18	166.83	33	79	64.76	53.8	53.64	180	150	59.4	99	15	1.1	0.5	276	HW	1,2,3,4,5,6	AAON
RTU-5	GYMNASIUM	RTU	6250	1300	1.5	3	PLENUM	7.5	.75		PLENUM	5	14.2	16	200.18	166.83	33	79	64.76	53.8	53.64	180	150	59.4	99	15	1.1	0.5	276	HW	1,2,3,4,5,6	AAON
<div>1. COORDINATE SIZE AND LOCATION OF UNIT WITH EXISTING FRAMING, MOUNT/SECURE/ANCHOR UNIT ON DUNNAGE PROVIDED BY GC. 2. COORDINATE SIZE AND LOCATION OF ROOF PENETRATIONS WITH GC FOR SUPPLY AND RETURN DUCT. 3. ALL W/TS BY MC (ABATEMENT, STEEL, CURBS, ROOF FLASHING, ETC.). ONLY ITEM EXCLUDED IS ELECTRICAL BY EC. 4. PROVIDE SMOKE DETECTOR IN RETURN AIR STREAM 5. PROVIDE 2 STAGE FILTER; 2" MERV-8 & 4" MERV-14 6. RTU SHALL HAVE A FRONT, HORIZONTAL DISCHARGE AND BOTTOM, VERTICAL RETURN</div>																																

1. COORDINATE SIZE AND LOCATION OF UNIT WITH EXISTING FRAMING. MOUNT/SECURE/ANCHOR UNIT ON DUNNAGE PROVIDED BY GC.
2. COORDINATE SIZE AND LOCATION OF ROOF PENETRATIONS WITH GC FOR SUPPLY AND RETURN DUCT.
3. ALL WORK IS BY MC (ABATEMENT, STEEL, CURBS, ROOF FLASHING, ETC.). ONLY ITEM EXCLUDED IS ELECTRICAL BY EC.

4. PROVIDE SMOKE DETECTOR IN RETURN AIR STREAM
5. PROVIDE 2 STAGE FILTER; 2" MERV-8 & 4" MERV-14
6. RTU SHALL HAVE A FRONT, HORIZONTAL DISCHARGE AND BOTTOM, VERTICAL RETURN