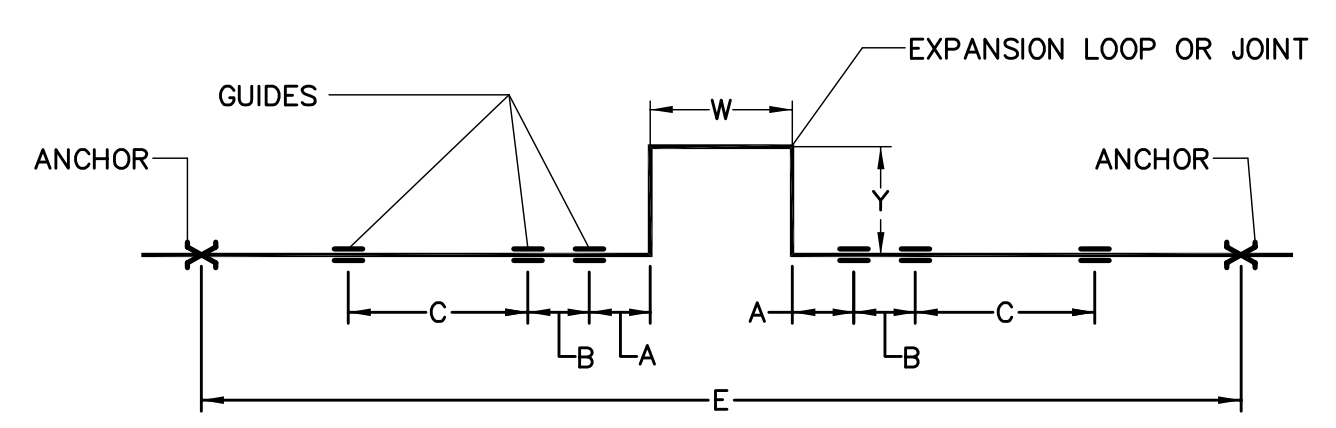


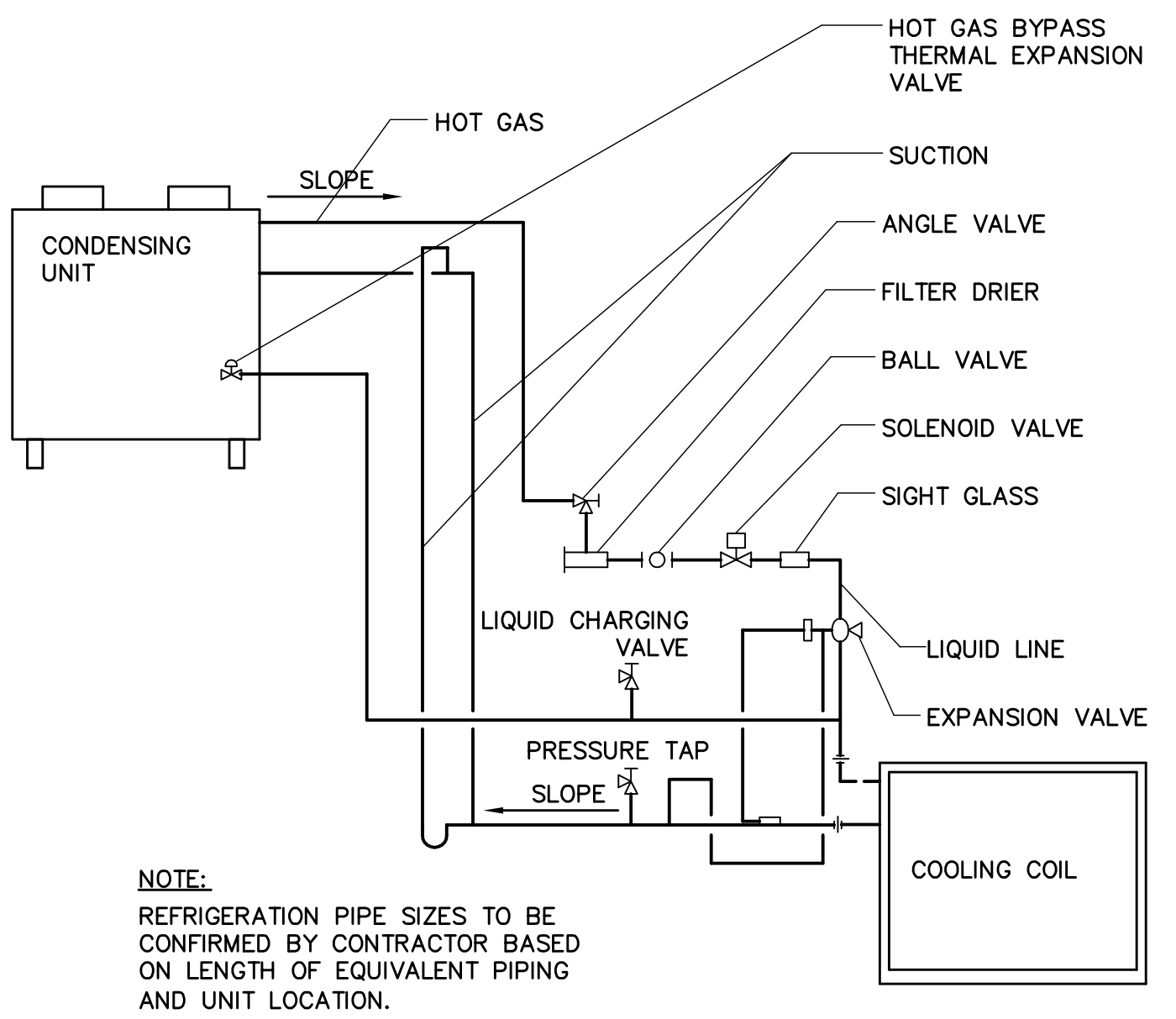
LOOP SIZING DATA

- USE THESE FORMULAS FOR TEMPERATURE DIFFERENCES NOT EXCEEDING 110°C. FOR OTHER CONDITIONS USE THE ASHRAE GUIDE DATA BOOK.
- LENGTH OF PIPE IN LOOP 'L' mm = 2Y+W
- FOR LENGTH "L" USE FOLLOWING FORMULAS:
 (A) STEEL PIPE $L=2.67 \sqrt{D \times E}$
 (B) COPPER PIPE $L=3.15 \sqrt{D \times E}$
- D=DIAMETER IN mm
- E=DISTANCE BETWEEN ANCHORS IN mm
- W=0.25 OF L



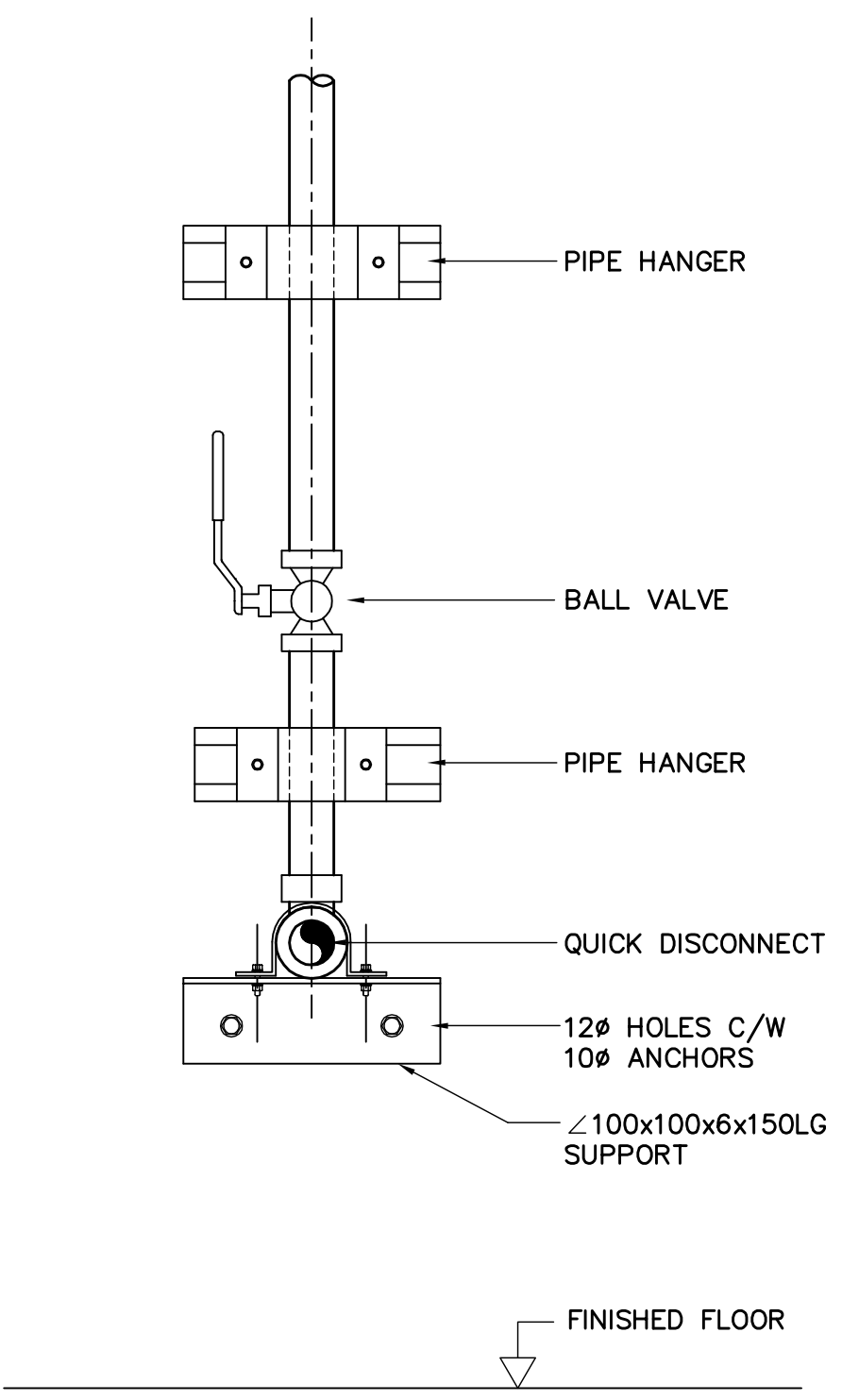
ACTUAL DIA. mm D	PIPE SIZE mm NOMINAL	MAXIMUM DISTANCE mm		MAX. SPACING BETWEEN GUIDES C
		A	B	
33	25	200	600	3000
42	30	200	600	3000
48	40	200	900	4500
60	50	200	900	4500
73	65	250	1200	6000
89	80	300	1200	6000
114	100	400	1500	9000
168	150	600	3000	10500
219	200	750	3000	13500
273	250	1000	3600	18000
324	300	1200	3600	21000
356	350	1400	3600	21000
406	400	1600	4500	24000
457	450	1800	4500	25500
508	500	2000	6000	27000
610	600	2400	6000	31500

1 EXPANSION COMPENSATION DETAIL
- N.T.S.

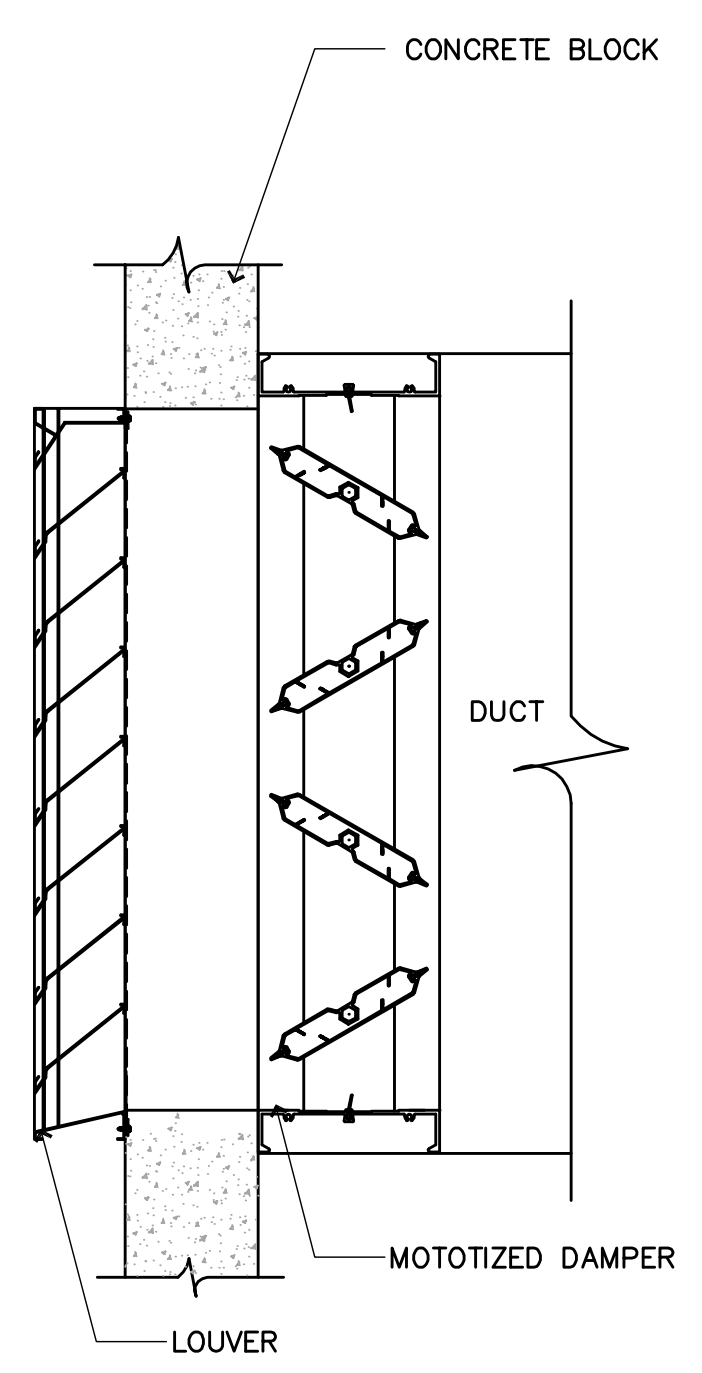


NOTE:
REFRIGERATION PIPE SIZES TO BE CONFIRMED BY CONTRACTOR BASED ON LENGTH OF EQUIVALENT PIPING AND UNIT LOCATION.

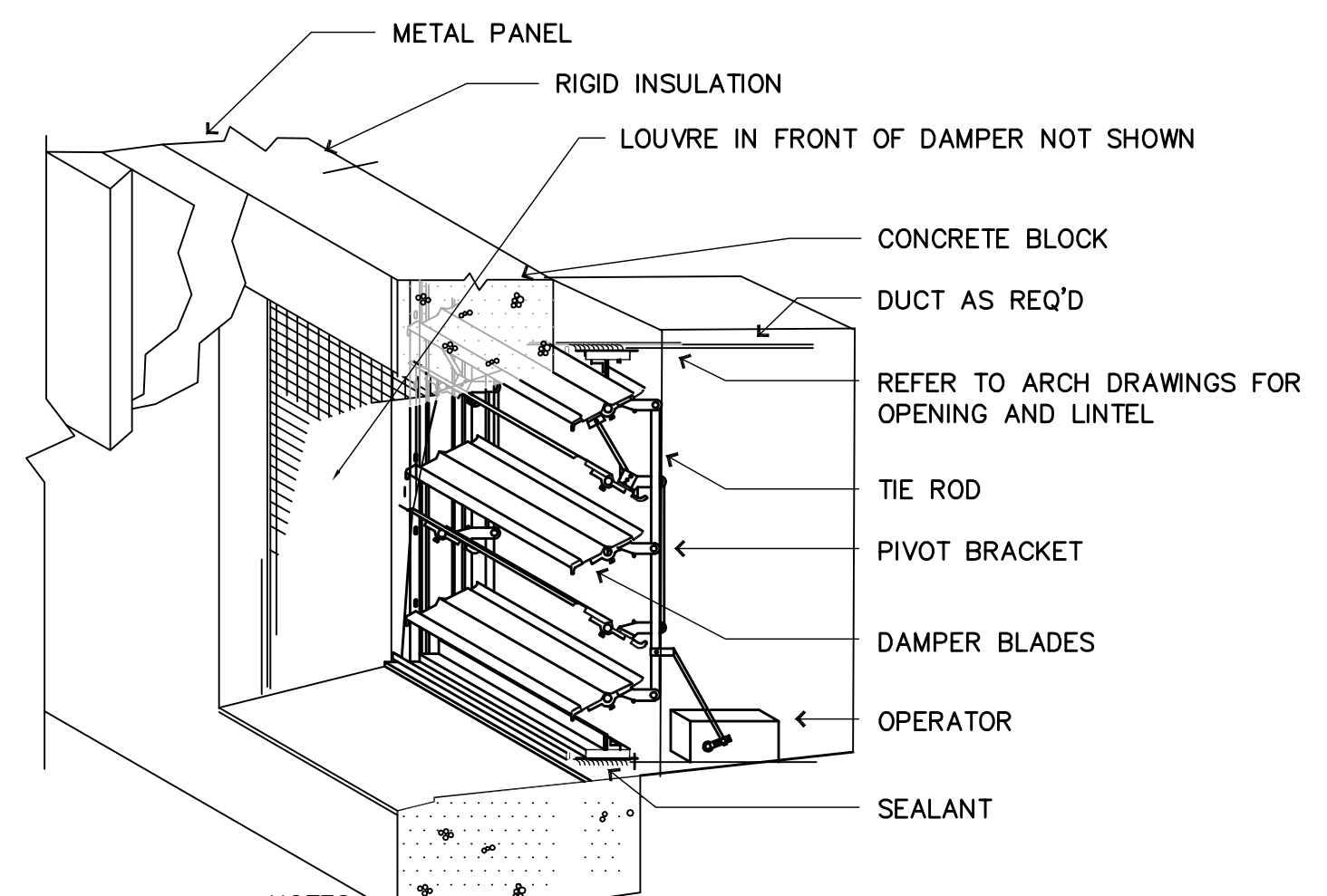
4 REFRIGERANT PIPING DETAIL
- N.T.S.



2 SERVICE AIR CONNECTION
- N.T.S.

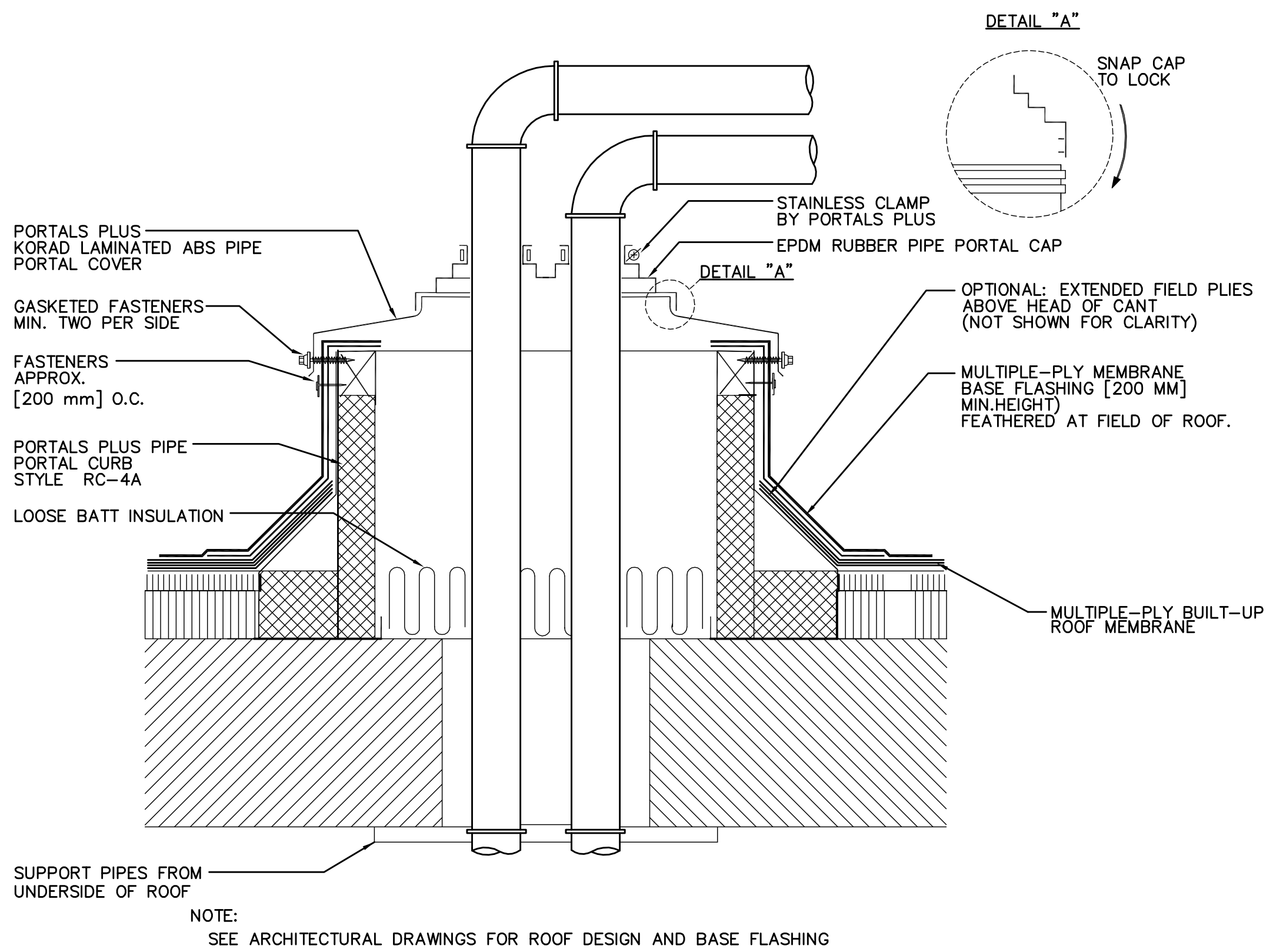


3 LOUVER AND DAMPER IN MASONARY WALL
- N.T.S.



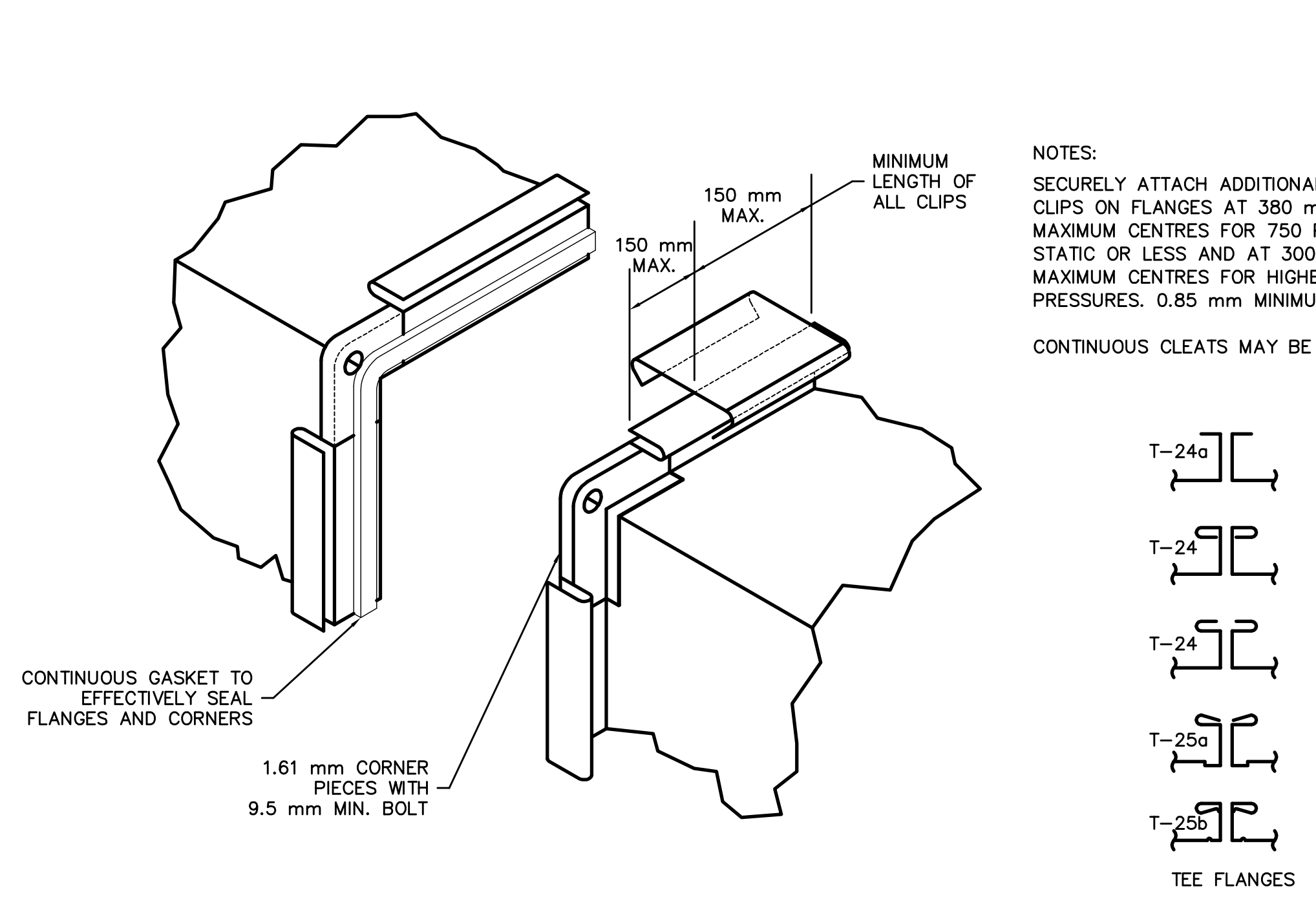
NOTES:

- OVERALL SIZE OF OPENING SHOULD BE 6mm AND 15mm GREATER IN BOTH DIRECTIONS THAN EXTERNAL DIMENSIONS OF LOUVER FOR SIZES ≤ 1200mm OR > 1200mm, RESPECTIVELY
- MAXIMUM DAMPER WIDTH ≤ 5FT, USE MULLION CONNECTED SECTIONS FOR GREATER WIDTHS
- GAULK AND SEAL AROUND PERIMETER OF DAMPER SECTION AT WALL
- PROVIDE ALUMINUM OR GALV EXPANDED BIRD EXCLUSION SCREEN ON OUTSIDE OF DAMPER. (MIN FREE AREA 80% OF GROSS AREA)



NOTE:
SEE ARCHITECTURAL DRAWINGS FOR ROOF DESIGN AND BASE FLASHING

5 MULTIPLE PIPE AND CABLE THROUGH ROOF DETAIL
- N.T.S.



NOTES:
SECURELY ATTACH ADDITIONAL METAL CLIPS ON FLANGES AT 380 mm MAXIMUM CENTRES FOR 750 Pa STATIC OR LESS AND AT 300 mm MAXIMUM CENTRES FOR HIGHER PRESSURES. 0.85 mm MINIMUM.
CONTINUOUS CLEATS MAY BE USED.

6 SQUARE/RECTANGULAR DUCTWORK CONSTRUCTION DETAIL
- N.T.S.

 Certificate of Authorization Earth Tech Canada Inc. No. 730 Expiry: April 30, 2007	B.M. ELEV.	 Frederickson Cooper ARCHITECTS	 A Tyco International Ltd. Company	ENGINEER'S SEAL	 THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT ENGINEERING DIVISION		
				DESIGNED BY		CHECKED BY PVL/AMA	ORIGINAL SIGNED BY A. M. AFTANAS
				DRAWN BY LJW		APPROVED BY AHL	2007/01/31
				SCALE: N.T.S.		RELEASED FOR CONSTRUCTION BY: R. SOROKOWSKI	CONSULTANT DRAWING NO. WS-H0404
	00 ISSUED FOR TENDER 007/01/31 LJW	DATE 06/10/25	DATE 2007/01/31		WATER TREATMENT PLANT BULK CHEMICAL STORAGE SODIUM HYPOCHLORITE AND CHEMICAL STORAGE BUILDING		
	NO. REVISIONS				MECHANICAL STANDARD DETAILS		
					CITY FILE NUMBER SHEET OF CITY DRAWING NUMBER 1-0601S-D-H0404-001-00D		