

MECHANICAL LEGEND (not all may apply)

GENERAL ABBREVIATIONS

AAD	AUTOMATIC AIR DAMPER	DET	DETAIL	HX	HEAT EXCHANGER	REQD	REQUIRED
AAV	AUTOMATIC AIR VENT	DIA	DIAMETER	IA	INSTRUMENT AIR	REV	REVISED
AB	AIR BLENDER	DN	DOWN	IE	INVERT ELEVATION	RG	RETURN GRILLE
AC*	AIR CONDITIONING UNIT	DPR	DAMPER	IN	INCH	RH	RELATIVE HUMIDITY/ROOF
ACC	AIR COOLED CONDENSER	DPT	DEW POINT TEMPERATURE	INV	INVERT	RV	RELIEF VENT
ACCU	AIR COOLED CONDENSING UNIT	DR	DRAIN	KEC	KITCHEN EQUIPMENT CONTRACTOR	RM	ROOM
AD	ACCESS DOOR	DTS	DUAL TEMPERATURE SUPPLY	KH	KITCHEN HOOD	RPM	REVOLUTIONS PER MINUTE
ADDL	ADDITIONAL	DTR	DUAL TEMPERATURE RETURN	KV	KITCHEN VENT	RR	RETURN REGISTER
ADJ	ADJUSTABLE	DWG	DRAWING	LAT	LEAVING AIR TEMPERATURE	SA	SUPPLY AIR
AF	AFTER FILTER	EA	EACH / EXHAUST AIR	LB	POUND	SCHED	SCHEDULE
AFB	ABOVE FINISHED FLOOR	EAH	EXHAUST AIR HOOD	LD	LINEAR DIFFUSER	SCHWP	SECONDARY CHILLED WATER PUMP
ALT	ALTERNATE	EAL	EXHAUST AIR LOUVER	LWT	LEAVING WATER TEMPERATURE	SD	SUCTION DIFFUSER
ALUM	ALUMINUM	EAT	ENTERING AIR TEMPERATURE	MATL	MATERIAL	SECT	SECTION
AP	ACCESS PANEL	ECC	ELECTRICAL CONTRACTOR	MAV	MANUAL AIR VENT	SG	SUPPLY GRILLE
APPROX	APPROXIMATE	EF	EXHAUST FAN	MAX	MAXIMUM	SHWP	SECONDARY HOT WATER PUMP
ARCH	ARCHITECTURAL	EG	EXHAUST GRILLE	MBH	BTUS PER HOUR, THOUSAND	SHT	SHEET
AUTO	AUTOMATIC	EL	ELEVATION	MC	MECHANICAL CONTRACTOR	SL	SOUND LINING
AVG	AVERAGE	ELEC	ELECTRICAL/ELECTRICAL	MCW	MECHANICAL CITY WATER	SM	SURFACE MOUNT
BAS	BUILDING AUTOMATION SYSTEM	EQ	EQUAL	MECH	MECHANICAL	SPEC	SPECIFICATIONS
BBD	BALANCED BACKDRAFT DAMPER	EQUIP	EQUIPMENT	MFG/MFR	MANUFACTURER	SPT	STATIC PRESSURE TRANSMITTER
BE	BOTTOM ELEVATION	EQUIV	EQUIVALENT	MIN	MINIMUM	SQ	SQUARE
BF	BUTTERFLY	ER	EXHAUST REGISTER	MISC	MISCELLANEOUS	SQ FT/SF	SQUARE FOOT (FEET)
BFP	BACKFLOW PREVENTER	ESP	EXTERNAL STATIC PRESSURE	MSW	MECHANICAL SOFT WATER	SQ IN	SQUARE INCHES
BLDG	BUILDING	ET	EXPANSION TANK	NA	NOT APPLICABLE	SR	SUPPLY REGISTER
BLR	BOILER	EUH	ELECTRIC UNIT HEATER	NC	NORMALLY CLOSED/NOISE CRITERIA	SS	STAINLESS STEEL
BOD	BOTTOM OF DUCT	EW	ELECTRIC WATER HEATER	NG	NATURAL GAS	STD	STANDARD
BOP	BOTTOM OF PIPE	EWT	ENTERING WATER TEMPERATURE	NIC	NOT IN CONTRACT	STL	STEEL
BOT	BOTTOM	EXCL	EXCLUDING	NO	NORMALLY OPEN	STRUCT	STRUCTURAL
BP	BOOSTER PUMP	EXIST	EXISTING	NOM	NOMINAL	TCC	TEMPERATURE CONTROL CONTRACTOR
BTU	BRITISH THERMAL UNIT	EXP	EXPANSION	NTS	NOT TO SCALE	TCV	TEMPERATURE CONTROL VALVE
BTUH	BTUS PER HOUR	*F	DEGREE FAHRENHEIT	OA	OUTSIDE AIR	TE	TOP ELEVATION
BV	BALL VALVE	FL	FLOOR	OH	OUTSIDE AIR HOOD	TI	TEMPERATURE INDICATOR
CA	COMPRESSED AIR	FF	FINISHED FLOOR	OAL	OUTSIDE AIR LOUVER	TMV	THERMOSTATIC MIXING VALVE
CAF	COMBUSTION AIR FAN	FH	FIRE HYDRANT	OC	ON CENTER	TSP	TOTAL STATIC PRESSURE
CCW	COUNTER CLOCKWISE	FL	FLOOR	OC	OCCUPANCY SENSOR	TSTAT	THERMOSTAT
CO	CEILING DIFFUSER	FOB	FLOOR ON BOTTOM	OPG	OPENING	TVV	THERMAL EXPANSION VALVE
CFM	CUBIC FEET PER MINUTE	FOR	FUEL OIL RETURN	OS&Y	OUTSIDE SCREW AND YOKE	TYP	TYPICAL
CHV	CHECK VALVE	FOS	FUEL OIL SUPPLY	OZ	OUNCE	TW	TEMPERED WATER
CH	CHILLER	FOT	FLOOR ON TOP	PC	PLUMBING CONTRACTOR	UG	UNDERGROUND
CHWP	CHILLED WATER PUMP	FPC	FIRE PROTECTION CONTRACTOR	PCHWP	PRIMARY CHILLED WATER PUMP	UH	UNIT HEATER
CHWR	CHILLED WATER RETURN	FFM	FEET PER MINUTE	PERM	PERIMETER	UCN	UNLESS OTHERWISE NOTED
CHWS	CHILLED WATER SUPPLY	FPVAV	FAN POWERED VAV	PH	PHASE	UF	UNLESS NOTED OTHERWISE
CI	CAST IRON	FS	FLOOR SINK	PHWP	PRIMARY HOT WATER PUMP	VAC	VACUUM
COL	COLUMN	GA	GAUGE	PI	PRESSURE INDICATOR	VA	VALVE
CONN	CONNECTION	GALV	GALVANIZED	PL	PLUMBING	VAV	VARIABLE AIR VOLUME
CT	COOLING TOWER	GC	GENERAL CONTRACTOR	PLBG	PLUMBING	VD	VOLUME DAMPER
CU	CONDENSING UNIT	GPH	GALLONS PER HOUR	PRESS	PRESSURE	VERT	VERTICAL
CUH	CABINET UNIT HEATER	GPM	GALLONS PER MINUTE	PRV	PRESSURE REDUCING VALVE	VFD	VARIABLE FREQUENCY DRIVE
CU FT	CUBIC FEET	HEX	HEAT EXCHANGER	PS	PRESSURE SWITCH	VOL	VOLUME
CU IN	CUBIC INCH	HORIZ	HORIZONTAL	PSD	PLENUM SLOT DIFFUSER	W	WITH
CV	CLOCKWISE	HR	HOUR	PSI	POUND PER SQUARE INCH	W/O	WITHOUT
CWP	CONDENSING WATER PUMP	HT	HEAT TRACE	PSIA	POUND PER SQUARE INCH ABSOLUTE	WB	WET BULB TEMPERATURE
CWS	CONDENSING WATER SUPPLY	HVAC	HEATING, VENTILATING AND AIR CONDITIONING	PSIG	POUND PER SQUARE INCH GAUGE	WG	WATER GAUGE
CWR	CONDENSING WATER RETURN	CWP	CHEMICAL WATER PUMP	PVC	POLYVINYL CHLORIDE	WP	WEATHER PROOF
DB	DRY BULB TEMPERATURE	HWR	HOT WATER RETURN	RCP	RECIRCULATION PUMP	XP	EXPLOSION PROOF
DDC	DIRECT DIGITAL CONTROL	HWS	HOT WATER SUPPLY	REF	REFERENCE		

MECHANICAL SYMBOLS

	BALANCING VALVE		WATER FLOW TRANSMITTER		FLEXIBLE CONNECTION		DIFFUSER (24X24" CEILING MOUNTED UNO BELOW)
	A-AUTOMATIC M-MANUAL CALIBRATED		SUPPLY DIFFUSER		FLEXIBLE CONNECTION		S-SUPPLY, R-RETURN, E-EXHAUST, OA-OUTSIDE AIR
	CIRCUIT SENSOR (VENTURI)		RETURN DIFFUSER		POINT OF CONNECTION / EXTENT OF REMOVAL		NECK SIZE - 6", 8", 10", 12", 14", 15"
	GATE VALVE		EXHAUST DIFFUSER		DUCT SMOKE DETECTOR		A-LAY-IN ACOUSTICAL CEILING, D-DRYWALL CEILING
	BUTTERFLY VALVE		PLENUM SLOT DIFFUSER		STATIC PRESSURE TRANSMITTER		L-LINEAR, N-SIDEWALL ROUND NOZZLE, X-12"X12" DIFFUSER
	GLOBE VALVE		DUCT TAP LEFT		SQUARE ELBOW WITH TURNING VANES		NUMBER OF SLOTS (LINEAR DIFFUSERS)
	BALL VALVE		DUCT TAP RIGHT		SUPPLY AIR (RECTANGULAR DUCT)		FD-INTEGRAL FIRE DAMPER
	CHECK VALVE		AIR FLOW DIRECTION		SUPPLY AIR (ROUND DUCT)		A-1/2" SLOTS, B-3/4" SLOTS, C-1" SLOTS, D-1-1/2" SLOTS (LINEAR DIFFUSERS)
	GAS COOK		OPPOSED BLADE DAMPER		R-RETURN, E-EXHAUST, OA-OUTSIDE AIR		G-GRILLE
	TEMPERATURE REGULATING VALVE		PARALLEL BLADE DAMPER		R-RETURN, E-EXHAUST, OA-OUTSIDE AIR		CFM
	PRESSURE RELIEF VALVE		FIRE DAMPER (HORIZONTAL OR VERTICAL)		CHILLED WATER SUPPLY		E-EGGCRATE
	RELIEF VALVE		SMOKE DAMPER (HORIZONTAL OR VERTICAL)		CHILLED WATER RETURN		HEIGHT
	STRAINER		COMBINATION SMOKE FIRE DAMPER		CONDENSING WATER SUPPLY		WIDTH
	3-WAY VALVE		BALANCED BACKDRAFT DAMPER		CONDENSING WATER RETURN		DUCT RISE IN DIRECTION OF AIR FLOW
	VALVE AND END CAP		AUTOMATIC AIR DAMPER		HOT WATER SUPPLY		DUCT DROP IN DIRECTION OF AIR FLOW
	UNION		MANUAL DAMPER		HOT WATER RETURN		RECTANGULAR DUCT TO ROUND DUCT TRANSITION
	FLANGED CONNECTION		EQUIP. # T THERMOMETER		DUCT TURN DOWN		DUCT TURN UP
	REDUCER		EQUIP. # P PRESSURE SENSOR		INTERNALLY LINED DUCTWORK (DIMENSIONS INDICATED ARE INSIDE CLEAR DIMENSIONS)		MANUFACTURED DOUBLE WALL DUCTWORK (DIMENSIONS INDICATED ARE INSIDE SHEET METAL DIMENSIONS)
	ELBOW UP		EQUIP. # H HUMIDITY TRANSMITTER		NEW DUCT OR PIPING		INSERTION TYPE FLOW METER
	PIPE TEE DOWN		EQUIP. # CO CARBON MONOXIDE SENSOR		EXISTING DUCT OR PIPING		STRAP-ON TYPE FLOW METER
	ELBOW DOWN		EQUIP. # CO2 CARBON DIOXIDE SENSOR		EXISTING DUCT OR PIPING TO BE REMOVED		
	TEMPERATURE TRANSMITTER						
	PRESSURE TRANSMITTER						
	TEST STATION (PTTS)						
	THERMOMETER						
	MANUAL AIR VENT (A-AUTOMATIC)						

CONTROL SYMBOL LEGEND

	AI ANALOG INPUT SIGNAL		TT TEMPERATURE TRANSMITTER
	AO ANALOG OUTPUT SIGNAL		T ROOM TEMPERATURE SENSOR
	DI DIGITAL INPUT SIGNAL		H RELATIVE HUMIDITY SENSOR
	DO DIGITAL OUTPUT SIGNAL		S CARBON DIOXIDE SENSOR
	ES END SWITCH		DPS DIFFERENTIAL PRESSURE SWITCH
	DPT DIFFERENTIAL PRESSURE TRANSMITTER		HT HUMIDITY TRANSMITTER
	SPT STATIC PRESSURE TRANSMITTER		SD DUCT MOUNTED SMOKE DETECTOR
	LTS LOW TEMPERATURE SWITCH		CTS CURRENT TRANSFORMER SWITCH
	AFT AIR FLOW TRANSMITTER		
	ES END SWITCH		
	NO NORMALLY OPEN		
	NC NORMALLY CLOSED		

GENERAL NOTES (NEW):

- A. UNLESS OTHERWISE NOTED, ALL DUCTWORK AND PIPING SHOWN DARK IS NEW.
- B. ALL WORK SHALL BE INSTALLED PER THE 2024 OHIO BUILDING CODE, 2024 OHIO MECHANICAL CODE AND ALL LOCAL APPLICABLE CODES.
- C. VERIFY CONDITIONS IN THE FIELD PRIOR TO BID AND CONSTRUCTION.
- D. WHERE CONFLICTS EXIST AMONG DRAWINGS, SPECIFICATIONS AND EQUIPMENT SCHEDULES, THE MORE STRINGENT SHALL APPLY.
- E. REFER TO **M310 AND M310S** SERIES DRAWINGS FOR MECHANICAL SCHEDULES, DETAILS, AND DIAGRAMS.
- F. CONTRACTOR SHALL CAREFULLY COORDINATE DUCTWORK AND PIPING PATHWAY LOCATIONS WITH OTHER TRADES AND EXISTING CONDITIONS. ALL DUCTWORK AND PIPING SHALL BE INSTALLED AS TIGHT TO THE STRUCTURE AS POSSIBLE. CONNECTIONS TO THE SUPPLY AIR DEVICES MAY BE MADE WITH FLEXIBLE DUCTWORK. REFER TO THE DETAIL ON DRAWING **M310** FOR FLEXIBLE DUCT CONNECTIONS. ALL CONDITIONS SHALL BE FIELD VERIFIED BEFORE ORDERING EQUIPMENT OR FABRICATED MATERIAL.
- G. CONTRACTOR SHALL PROVIDE ALL ROOF OR WALL NON-COMBUSTIBLE FRAMING AS REQUIRED TO INSTALL EQUIPMENT, DUCTWORK, AND PIPING. COORDINATE NEW WORK WITH OTHER TRADES PRIOR TO BEGINNING CONSTRUCTION. NO WORK IS TO BE INSTALLED OR FABRICATED UNTIL AFTER THE PROJECT COORDINATION HAS BEEN APPROVED BY THE OWNER'S REPRESENTATIVE.
- H. INSTALL A MANUAL BALANCE DAMPER IN ALL BRANCH DUCTS, INCLUDING ALL SUPPLY, RETURN, AND EXHAUST GRILLES.
- I. INSTALL A SHUT-OFF VALVE IN ALL PIPING BRANCHES.
- J. ALL SQUARE THROATED ELBOWS SHALL HAVE AIRFOIL TURNING VANES AND SHALL ONLY BE USED WHEN RADIUS ELBOWS WILL NOT FIT.
- K. ALL ROUND BRANCH DUCT CONNECTIONS SHALL BE MADE WITH BELLMOUTH FITTINGS OR ANGLED TEES. STRAIGHT SPIN-IN TAP COLLARS SHALL NOT BE ACCEPTABLE.
- L. ALL DAMPERS, VALVES, AND CONTROL COMPONENTS THAT ARE LOCATED ABOVE CEILING SHALL BE INSTALLED WHERE COMPLETELY ACCESSIBLE. CONTRACTOR SHALL PROVIDE ACCESS PANELS AS REQUIRED.
- M. ALL NEW VARIABLE AIR VOLUME TERMINAL UNITS ARE TO BE INSTALLED WHERE COMPONENTS ARE COMPLETELY ACCESSIBLE. CONTRACTOR SHALL COORDINATE TO PROVIDE THE VAV UNIT WITH A CONTROL ENCLOSURE AND PIPE CONNECTIONS ON THE MOST ACCESSIBLE SIDE OF THE UNIT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE CORRECT LEFT OR RIGHT HAND CONFIGURATION. REFER TO THE APPLICABLE DETAIL ON DRAWING **M310** FOR ADDITIONAL REQUIREMENTS.
- N. DUCTWORK CONNECTION TO DIFFUSER / VAV TO BE THE SAME SIZE AS THE NECK SIZE UNLESS OTHERWISE NOTED.
- O. UNLESS OTHERWISE NOTED, ALL DUCTWORK SHALL BE FABRICATED FROM GALVANIZED STEEL METAL. INSTALLED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS FOR GAUGE, REINFORCEMENT, AND SUPPORT. 2" W.G. PRESSURE CLASS FOR ALL DUCTWORK, UNLESS NOTED OTHERWISE. ALL JOINTS AND SEAMS SHALL BE SEALED AND FASTENED AND MADE AIRTIGHT IN ACCORDANCE OF CHAPTER 13 OF THE OBC.
- P. UL LISTED FIRESTOPPING SHALL BE USED AT ANY PENETRATION THROUGH A FIRE RATED ASSEMBLY. REFER TO ARCHITECTURAL CONSTRUCTION DOCUMENTS FOR LOCATIONS OR RATED ASSEMBLIES. CONTRACTOR SHALL USE UL LISTED FIRESTOP SYSTEM METHODS FOR THROUGH-PENETRATION ASSEMBLIES - TYPICAL OF ALL FIRE RATED WALLS.
- Q. DUCTWORK AND PIPING SHALL BE SUPPORTED INDEPENDENT OF CEILING, CONDUIT, OTHER DUCTWORK, OTHER PIPING, ETC.
- R. CONTRACTOR SHALL COORDINATE ALL REQUIRED WALL PENETRATIONS FOR DUCT OR PIPING WITH GENERAL CONTRACTOR PRIOR TO CONSTRUCTION OF NEW WALLS. ALL DUCT PENETRATIONS SHALL BE IN COMPLIANCE WITH THE PROJECT SPECIFICATIONS. CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING REQUIRED FOR DUCT PENETRATIONS THROUGH WALLS.
- S. CONTRACTOR SHALL COORDINATE ALL REQUIRED ROOF OPENINGS FOR DUCTWORK WITH THE GENERAL CONTRACTOR.
- T. CONTRACTOR SHALL PROVIDE ALL ADDITIONAL STEEL FRAMING AS REQUIRED TO INSTALL ROOF MOUNTED EQUIPMENT CURBS.
- U. CONTRACTOR SHALL INSTALL ALL EQUIPMENT, DUCTWORK, PIPING, VALVES, INSULATION, SUPPORTS ETC. AS INDICATED OR AS REQUIRED TO ALLOW OPERATION AND USE OF ALL AREAS AND ALL SYSTEMS REQUIRED FOR OCCUPIED USE DURING CONSTRUCTION.
- V. CONTRACTOR TO VERIFY EXISTING DUCTWORK / PIPING SUPPLY AND RETURN SYSTEM, SIZE, AND TYPE PRIOR TO MAKING CONNECTIONS.



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NO.	DATE	ISSUED / REVISION
B	04-17-2025	CD/PERMIT SET
D	07-03-2025	FOR CONSTRUCTION

DRAWN BY: **JDH** CHECKED BY: **BKG**

PROJECT NO. **2024.01.026**

DRAWING TITLE:
**MECHANICAL
GENERAL
INFORMATION**



OUTDOOR AIR VENTILATION SCHEDULE: RTU-1

ROOM NAME	ROOM NUMBER	GROSS FL AREA (SQ. FT.)	NET AREA (MULT.)	NET FL AREA (SQ. FT.)	BREATHING ZONE (FEET)	OCCUPANCY CATEGORY	MAX. NO. OF OCCUPANTS (PER 1000 SF)	OUTSIDE AIR PER OCC. CFM	OUTSIDE AIR PER FL AREA CFM/SQ.FT.	DESIGN NUMBER OF PEOPLE	SHORT TERM OCCUPANT DIVERSITY	ACTUAL NUMBER OF PEOPLE	AIR SYSTEM EFFECTIVENESS	INITIAL ZONE OUTSIDE AIR CFM	SYSTEM OCCUPANT DIVERSITY	UNCORRECTED OUTSIDE AIR CFM	DESIGN SUPPLY AIR CFM	MIN DESIGN SUPPLY AIR CFM	OUTSIDE AIR PRIMARY AIR RATIO (Z p)	ACTUAL OA CFM	ACTUAL OUTDOOR AIR %	EXHAUST REQUIREMENTS				ACTUAL EXHAUST		
																						NO. OF FIXTURES	CFM PER FIXTURE	CFM PER SQ. FT.	REQUIRED CFM	CONTINUOUS CFM	INTERMITTENT CFM	
CORRIDOR	A201	940	1	940	6.0	CORRIDORS	0	0	0.0	0	100%	0	80%	71	100%	56	1055	300	0.24	804	60.0%							
CORRIDOR	A201.1	80	1	80	6.0	OFFICE SPACE	5	5	0.06	1	100%	1	80%	12	100%	10	75	30	0.25	57	60.0%							
OPEN OFFICE	A202	859	1	859	6.0	OFFICE SPACE	5	5	0.06	5	100%	5	80%	92	100%	74	800	400	0.23	610	60.0%							
RECEPTION	A204	118	1	118	6.0	RECEPTION AREA FOR OFFICES	30	5	0.06	4	100%	4	80%	27	100%	27	150	100	0.34	114	60.0%							
OFFICE	A205	118	1	118	6.0	OFFICE SPACE	5	5	0.06	1	100%	1	80%	15	100%	12	150	75	0.20	114	60.0%							
OFFICE	A206	134	1	134	6.0	OFFICE SPACE	5	5	0.06	1	100%	1	80%	16	100%	13	150	75	0.22	114	60.0%							
OFFICE	A207	132	1	132	6.0	OFFICE SPACE	5	5	0.06	1	100%	1	80%	16	100%	13	150	75	0.22	114	60.0%							
LOCKERS	A208	127	1	127	6.0	LOCKER ROOMS	0	0	0	0	100%	0	80%	0	100%	0	150	100	0.00	114	60.0%	1	100	0.25	132	150		
UNISEX	A209	57	1	57	6.0	TOILET ROOM	0	0	0	0	100%	0	80%	0	100%	0	0	0	0.00	0	60.0%	1	70	0	70	75		
UNISEX	A210	57	1	57	6.0	TOILET ROOM	0	0	0	0	100%	0	80%	0	100%	0	0	0	0.00	0	60.0%	1	70	0	70	75		
JANITOR	A211	34	1	34	6.0	JANITOR CLOSET	0	0	0	0	100%	0	80%	0	100%	0	0	0	0.00	0	60.0%			1	34	50		
CLASSROOM	A212	1555	1	1,555	6.0	CLASSROOMS (AGES 9 PLUS)	35	10	0.12	55	100%	55	80%	921	100%	737	2400	1600	0.58	1829	60.0%							
STORAGE	A213	80	1	80	6.0	OFFICE SPACE	5	5	0.06	1	100%	1	80%	12	100%	10	50	50	0.25	38	60.0%							
CORRIDOR	A301	782	1	782	6.0	CORRIDORS	0	0	0.06	0	100%	0	80%	57	100%	46	600	200	0.29	457	60.0%							
SUITE	A302	372	1	372	6.0	CONFERENCE/MEETING	50	5	0.06	19	100%	19	80%	147	100%	117	600	250	0.59	457	60.0%							
MEBA	A305	94	1	94	6.0	OFFICE SPACE	5	5	0.06	1	100%	1	80%	13	100%	11	200	75	0.18	152	60.0%							
VISITOR	A306	110	1	110	6.0	CONFERENCE/MEETING	50	5	0.06	3	100%	3	80%	27	100%	22	175	75	0.38	133	60.0%							
OPERATION	A308	195	1	195	6.0	CONFERENCE/MEETING	50	5	0.06	10	100%	10	80%	33	100%	27	300	100	0.33	229	60.0%							
OPERATION	A309	162	1	162	6.0	CONFERENCE/MEETING	50	5	0.06	9	100%	9	80%	31	100%	25	250	100	0.31	190	60.0%							
HOME	A310	179	1	179	6.0	CONFERENCE/MEETING	50	5	0.06	9	100%	9	80%	32	100%	25	250	100	0.32	190	60.0%							
HOME	A311	179	1	179	6.0	CONFERENCE/MEETING	50	5	0.06	9	100%	9	80%	38	100%	31	275	100	0.38	210	60.0%							
SUITE	A313	492	1	492	6.0	CONFERENCE/MEETING	50	5	0.06	25	100%	25	80%	62	100%	50	750	150	0.41	571	60.0%							
TOTALS		4,721		4,721						146		98		1406		1125	6300	3050	98.7%	4800								

NOTE: 1. The design number of people shown for each room is the estimated maximum for each room per ASHRAE 62.1 in accordance to IMC Section 403.2. The actual number of people is based on either the estimated actual occupancy or the short term occupancy.
2. The ventilation calculations for this schedule are based on ASHRAE Standard 62 in accordance to IMC Section 403.2.

Sum of Room Peak Occupancies = 98
Peak System Occupancy = 98
Occupant Diversity Factor (D) = 100%

Sum of Room Supply Air Quantities = 6300
Supply Fan Diversity Factor = 91%
Actual Total System Supply Air Flow = 8000

Uncorrected Outdoor Air Flow Ventilation Efficiency Required OA Flow Actual Final Outdoor Air Flow

V_{out} = 1.25 CFM
E_v = 0.96 (Per ASHRAE 62.1-2007, Table 6-3)
V_{ot} = 1997 CFM
4800 CFM

DOAS/RTU FAN SCHEDULE

DESIGNATION	AREA SERVED	UNIT LBS	FAN DATA				ELECTRICAL				COOLING INFORMATION						REHEAT INFORMATION				GAS HEAT INFORMATION				MANUFACTURER	MODEL	NOTES											
			RETURN AIR CFM	MAX OUTSIDE AIR CFM	TOTAL CFM	ESP IN. WG	HP	PHASE	VOLT	MCA (AMPS)	MOCP (AMPS)	OUTSIDE AIR		MIXED AIR		LEAVING AIR TEMP		CAPACITY		DISCHARGE		CAPACITY		MOISTURE REMOVAL LBS/HR				GAS TYPE		INPUT BTUH		OUTPUT BTUH		TEMP. RISE DEG. F		REQUIRED GAS PRESSURE IN. WC		
												DB DEG. F	WB DEG. F	DB DEG. F	WB DEG. F	DB DEG. F	WB DEG. F	DP DEG. F	TOTAL MBH	SENSIBLE MBH	IEER	DB DEG. F	WB DEG. F	DESIRED MBH				MAX MBH	DB DEG. F	WB DEG. F	DB DEG. F	WB DEG. F	DB DEG. F	WB DEG. F	DB DEG. F	WB DEG. F	DB DEG. F	WB DEG. F
ERV-1	FIRST FLOOR WEST	6.617	0.5000	5.0000	5.0000	1.5	10	3	460	58.1	60	88.6	77.7	79.0	67.6	52.0	52.0	52.1	229.3	141.5	18.1	70.0	59.2	99.1	260	80.5	NATURAL	366,489	286,856	50	10-14	VENTILATION DIRECT	VXRTU4-1500-24-Z2T-ERV	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,18				
ERV-2	FIRST FLOOR EAST	6.617	0.5000	5.0000	5.0000	1.5	10	3	460	58.1	60	88.6	77.7	79.0	67.6	52.0	52.0	52.1	229.3	141.5	18.1	70.0	59.2	99.1	260	80.5	NATURAL	366,489	286,856	50	10-14	VENTILATION DIRECT	VXRTU4-1500-24-Z2T-ERV	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,18				

- NOTES:
- INVERTER SCROLL COMPRESSOR WITH INTEGRATED OIL SENSOR, DIGITAL OR STAGED SCROLL NOT AN APPROVED EQUAL.
 - DIRECT DRIVE PLENUM BLOWER, BELT DRIVE BLOWERS ARE NOT ACCEPTABLE
 - INTEGRATED MONITORING VIA CELLULAR CONNECTION BY MANUFACTURER
 - REFRIGERATION PRESSURE MONITORING ON HIGH AND LOW PRESSURE SIDE OF SYSTEM INCLUDED THROUGH DIGITAL INTERFACE.
 - EC MOTOR CONDENSING FANS
 - ELECTRONIC EXPANSION VALVE, TXV NOT ACCEPTABLE.
 - SUCTION LINE ACCUMULATOR
 - FACTORY COMMISSIONING WITH 5 YEAR PARTS WARRANTY ON STAINLESS STEEL HEAT EXCHANGER.
 - AVERAGING INTAKE, EVAP AND DISCHARGE AIR TEMPERATURE SENSORS (DISCHARGE TEMP SENSOR TO BE MOUNTED IN UNIT)
 - 2" EXTERNAL DUAL-WALL CONSTRUCTION W/13 INSULATION MINIMUM 20GA EXTERIOR W/ 14 GA BASE.
 - TOTAL ENERGY RECOVERY WHEEL WITH SPEED CONTROLS FOR FROST PROTECTION AND MODULATION TO CAPACITY, INCLUDES SUPPLY AND EXHAUST FILTER & WHEEL MONITORING.
 - 81% EFFICIENT FURNACE, WITH MODULATING INDUCER TO MAINTAIN CONSTANT COMBUSTION EFFICIENCY ACROSS FIRING RANGE, 6:1 TURNDOWN WITH NAT. GAS.
 - EXHAUST CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE.
 - FILTERED SUPPLY AND EXHAUST AIR STREAMS WITHIN ENERGY RECOVERY VENTILATOR MODULE.
 - SUPPLY CFM MONITORING INTEGRAL TO UNIT WITH CFM MEASUREMENT INCLUDED THROUGH DIGITAL INTERFACE.
 - FULLY MODULATING HOT GAS REHEAT.
 - BAROMETRIC RELIEF DAMPER
 - STATIC PRESSURE CONTROLLED BLOWER

DOAS/RTU ERV SCHEDULE

DESIGNATION	AREA SERVED	EXHAUST AIR FAN				SUPPLY AIR SUMMER								SUPPLY AIR WINTER									
		CFM	ESP IN. WC	MOTOR HP	VPHZ	ENTERING AIR		LEAVING AIR		RETURN AIR TEMP		CAPACITY		ENTERING AIR		LEAVING AIR		RETURN AIR TEMP		CAPACITY			
						DB DEG. F	WB DEG. F	DB DEG. F	WB DEG. F	DB DEG. F	WB DEG. F	TOTAL MBH	SENSIBLE MBH	LATENT MBH	DB DEG. F	WB DEG. F	DB DEG. F	WB DEG. F	DB DEG. F	WB DEG. F	TOTAL MBH	SENSIBLE MBH	LATENT MBH
ERV-1	FIRST FLOOR WEST	5,000	0.5	4.8	460/360	88.6	77.7	79.0	67.6	75.0	62.0	194	48.8	145.3	10.0	7.5	50.3	42.7	69.0	55.0	303.3	216.2	87.1
ERV-2	FIRST FLOOR EAST	5,000	0.5	4.8	460/360	88.6	77.7	79.0	67.6	75.0	62.0	194	48.8	145.3	10.0	7.5	50.3	42.7	69.0	55.0	303.3	216.2	87.1

ROOFTOP UNIT SCHEDULE

TAG	AREA SERVED	Weight(lbs)	Qty	Model	Energy Recovery										Cooling										Gas Heating																			
					Electrical		Efficiency		Supply Fan		Exhaust Fan		Filters		Recovered Capacity		Mixed Air LAT		Effectiveness		EAT		LAT		Total Capacity		Sensible Capacity		Ambient		Compressor		Type		Size		Stages		Total Capacity (Btu/hr)		EDB (°F)		LDB (°F)	
					Voltage	MCA (A)	MROPD (A)	EER	SEER2 / IEER	Airflow (CFM)	ESP (inH2O)	TSP (inH2O)	Motor Size (HP)	Airflow (CFM)	ESP (inH2O)	Face Area (ft²)	Efficiency	Cooling (Btu/hr)	Heating (Btu/hr)	Cooling (°F)	Heating (°F)	APD (inH2O)	Total Cooling	Sensible Cooling	Total Heating	Sensible Heating	EDB (°F)	WB (°F)	LDB (°F)	LWB (°F)	Total Capacity	Sensible Capacity	DB (°F)	Stages	Qty	Compressor Power (kW)	Refrigerant	Type	Size	Stages	Total Capacity	EDB (°F)	LDB (°F)	
RTU-1	SECOND & THIRD FLOORS	4859	1	DPS228B	460/603	76.9	90	10.7	20.3	8000	3	6.71	15	8000	1	27	COMBO RACK-2' MERV8 & 4' MERV14 from factory	115931	202620	80.4	51.6	1.06	0.52	0.54	0.52	0.53	80.4	66.1	53.7	53.7	286124	222299	95	Modulating Control with Inverter Compressors	2	20.1	R32	Gas	450 MBH	Modulating 12:1 Turndown	364500	51.6	83.6	

EXHAUST FAN SCHEDULE

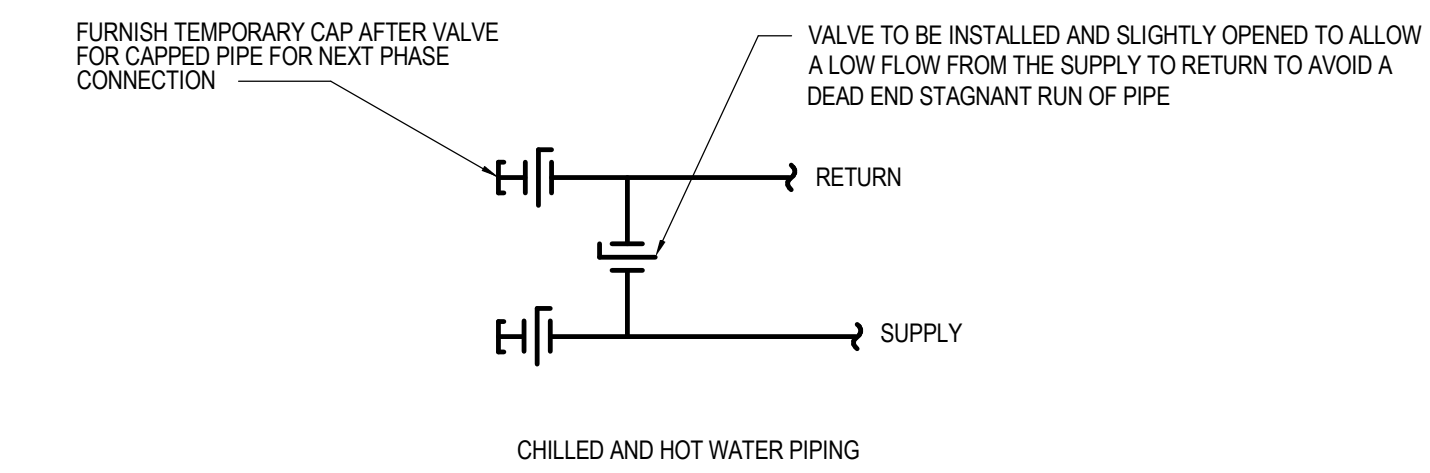
DESIGNATION	SERVES	FAN TYPE	AIR FLOW CFM	IN. WG.	WEIGHT LBS	DRIVE TYPE	RPM	BHP	SONES	ELECTRICAL DATA		MOTOR EFFICIENCY	VARIABLE SPEED DRIVE	INTEGRAL DISCONNECT	DDC OUTPUT CONTACT	CONTROL METHOD	BASIS OF DESIGN		COMMENTS
										VOLTS/PH/Hz	MOTOR HP						MANUFACTURER	MODEL NO.	
										WATER	WATER						MANUFACTURER	MODEL NO.	
KEF-1	CONCESSION A101	ROOF MOUNTED CENTRIFUGAL - UP BLAST	2625	1.0	112	DIRECT	1,286	0.79	N/A	208 / 3 / 60	2	STANDARD	NO	YES	YES	ACCUREX	XCLE-160A	ROOF CURB & BACKDRAFT DAMPER	
EF-3	SECOND FLOOR RESTROOM AND LOCKER EXHAUST	ROOF MOUNTED CENTRIFUGAL - DOWN BLAST	300	5	40	DIRECT	1,675	0.07	8.3	115 / 1 / 60	1/10	STANDARD	ECM	YES	YES	GREENHECK	G-380-VG	ROOF CURB & BACKDRAFT DAMPER	
EF-4	THIRD FLOOR RESTROOM EXHAUST	ROOF MOUNTED CENTRIFUGAL - DOWN BLAST	220	5	40	DIRECT	1,675	0.07	8.3	115 / 1 / 60	1/10	STANDARD	ECM	YES	YES	GREENHECK	G-380-VG	ROOF CURB & BACKDRAFT DAMPER	
EF-5	LOCKER ROOM D100	INLINE CABINET FAN	1000	825	55	DIRECT	1,556	0.19	9.1	115 / 1 / 60	1/4	STANDARD	ECM	YES	YES	GREENHECK	SG-100-VG	VIBRATION ISOLATION HANGERS	
EF-6	RESTROOM D100A & JANITORS CLOSET D101	INLINE CABINET FAN	200	5	34	DIRECT	1,545	0.12	8.4	115 / 1 / 60	1/8	STANDARD	ECM	YES	YES	GREENHECK	SG-80-VG	VIBRATION ISOLATION HANGERS	
MMF-1	LOCKER ROOM D100	INLINE CABINET FAN	1000																

UNIT DESIGNATION	SERVES ROOM #	UNIT TYPE	SIZE L x W x D (IN)	AIR FLOW CONFIGURATION				FLOW				ELECTRICAL REQUIREMENTS			BASIS OF DESIGN		ACCESSORIES				
				RETURN AIR	SUPPLY AIR	NOMINAL CFM	CAPACITY BTU/HR	CFM (HIGH/LOW)	WPD (FT. WG.)	EWT (DEG. F)	EAT (DEG. F)	LWT (DEG. F)	LAT (DEG. F)	HP	AMPS	VPHHZ		ELEC. DISC.	MANUFACTURER	MODEL	
CUH-1	CONCESSION A107	HORIZONTAL	14.625 x 7.3125 x 9.375	REAR	INTEGRAL GRILLE - FRONT	450	17,400	450	1.8	0.014	180	60	180.0	96.2	16 WATTS	0.8	115/180	YES	STERLING	HS-0248	REMOTE 24V WALL MOUNTED THERMOSTAT
CUH-2	CONCESSION A107	HORIZONTAL	14.625 x 7.3125 x 9.375	REAR	INTEGRAL GRILLE - FRONT	450	17,400	450	1.8	0.014	180	60	180.0	96.2	16 WATTS	0.8	115/180	YES	STERLING	HS-0248	REMOTE 24V WALL MOUNTED THERMOSTAT 3 WAY TCV
CUH-3	MECHANICAL A108	HORIZONTAL	15 x 18 x 9.5	REAR	INTEGRAL GRILLE - FRONT	245	8,000	245	0.8	0.8	180	60	180.0	96.2	16 WATTS	0.8	115/180	YES	STERLING	HS-0248	REMOTE 24V WALL MOUNTED THERMOSTAT
CUH-4	RESTROOM A107	CEILING	35 x 18.25 x 9.5	INTEGRAL GRILLE - BOTTOM	INTEGRAL GRILLE - BOTTOM	230	16,200	230 / 185	1.5	0.02	180	60	184.4	96.5	16 WATTS	0.8	115/180	YES	STERLING	C-1170-02	REMOTE 24V WALL MOUNTED THERMOSTAT
CUH-5	RESTROOM A108	CEILING	35 x 18.25 x 9.5	INTEGRAL GRILLE - BOTTOM	INTEGRAL GRILLE - BOTTOM	230	16,200	230 / 185	1.5	0.02	180	60	184.4	96.5	16 WATTS	0.8	115/180	YES	STERLING	C-1170-02	REMOTE 24V WALL MOUNTED THERMOSTAT
CUH-6	WOMEN A109	CEILING	35 x 18.25 x 9.5	INTEGRAL GRILLE - BOTTOM	INTEGRAL GRILLE - BOTTOM	230	16,200	230 / 185	1.5	0.02	180	60	184.4	96.5	16 WATTS	0.8	115/180	YES	STERLING	C-1170-02	REMOTE 24V WALL MOUNTED THERMOSTAT
CUH-7	LOBBY A110	SURFACE FLOOR MOUNTED	35 x 28.5 x 9.5	INTEGRAL GRILLE - BOTTOM	INTEGRAL GRILLE - TOP	230	16,200	230 / 185	1.5	0.02	180	60	184.4	96.5	16 WATTS	0.8	115/180	YES	STERLING	FS-1005-02	STANDARD CAPACITY COOL EXTRA FILTER & INTEGRAL THERMOSTAT
CUH-8	STAR AS-2	SURFACE FLOOR MOUNTED	35 x 28.5 x 9.5	INTEGRAL GRILLE - BOTTOM	INTEGRAL GRILLE - TOP	230	16,200	230 / 185	1.5	0.02	180	60	184.4	96.5	16 WATTS	0.8	115/180	YES	STERLING	FS-1005-02	STANDARD CAPACITY COOL EXTRA FILTER & INTEGRAL THERMOSTAT
CUH-9	STAR AS-1	SURFACE FLOOR MOUNTED	35 x 28.5 x 9.5	INTEGRAL GRILLE - BOTTOM	INTEGRAL GRILLE - TOP	230	16,200	230 / 185	1.5	0.02	180	60	184.4	96.5	16 WATTS	0.8	115/180	YES	STERLING	FS-1005-02	STANDARD CAPACITY COOL EXTRA FILTER & INTEGRAL THERMOSTAT
CUH-10	MEN A118	CEILING	35 x 18.25 x 9.5	INTEGRAL GRILLE - BOTTOM	INTEGRAL GRILLE - BOTTOM	230	16,200	230 / 185	1.5	0.02	180	60	184.4	96.5	16 WATTS	0.8	115/180	YES	STERLING	C-1170-02	REMOTE 24V WALL MOUNTED THERMOSTAT
CUH-11	RESTROOM A117B	CEILING	35 x 18.25 x 9.5	INTEGRAL GRILLE - BOTTOM	INTEGRAL GRILLE - BOTTOM	230	16,200	230 / 185	1.5	0.02	180	60	184.4	96.5	16 WATTS	0.8	115/180	YES	STERLING	C-1170-02	REMOTE 24V WALL MOUNTED THERMOSTAT
CUH-12	EQUIPMENT ROOM A119	HORIZONTAL	14.625 x 7.3125 x 9.375	REAR	INTEGRAL GRILLE - FRONT	450	17,400	450	1.8	0.014	180	60	180.0	96.2	16 WATTS	0.8	115/180	YES	STERLING	HS-0248	REMOTE 24V WALL MOUNTED THERMOSTAT 3 WAY TCV
CUH-13	TRAINER 105	CEILING	35 x 18.25 x 9.5	INTEGRAL GRILLE - BOTTOM	INTEGRAL GRILLE - BOTTOM	230	16,200	230 / 185	1.5	0.02	180	60	184.4	96.5	16 WATTS	0.8	115/180	YES	STERLING	RC-1200-02	REMOTE 24V WALL MOUNTED THERMOSTAT

DESIGNATION (FLOOR-ZONE)	AREA SERVED ROOM NUMBER(S)	AREA SERVED ROOM NAME(S)	INLET SIZE	MAX COOL CFM	MIN COOL CFM	HEATING CFM	CAPACITY BTU/HR	COIL TYPE	HEATING FLUID	FLOW GPM	MAX. AIR PRESS DROP (IN. WG.)	NO. OF ROWS	MAX WPD (FT. WG.)	EAT (Deg. F)	LAT (Deg. F)	EWT (Deg. F)	LWT (Deg. F)	TCV TYPE	BASIS OF DESIGN	
																			MFR	MODEL NO.
VAV-2-1	A201	CORRIDOR	10	660	300	400	17300	STANDARD	WATER	1.74	0.50	2	7.0	55	95.0	180	180.0	2 WAY	PRICE	DESV-14
VAV-2-2	A201	CORRIDOR	10	660	300	400	17300	STANDARD	WATER	1.41	0.50	2	7.0	55	95.0	180	180.0	2 WAY	PRICE	DESV-16
VAV-2-3	A203	OPEN OFFICE	10	800	400	800	26000	STANDARD	WATER	2.80	0.50	2	7.0	55	95.0	180	180.0	2 WAY	PRICE	DESV-14
VAV-2-4	A204	RECEPTION	8	150	75	100	4425	STANDARD	WATER	0.34	0.50	2	7.0	55	95.0	180	180.0	2 WAY	PRICE	DESV-8
VAV-2-5	A205	OFFICE	6	150	75	100	4340	STANDARD	WATER	0.43	0.50	2	7.0	55	95.0	180	180.0	2 WAY	PRICE	DESV-6
VAV-2-6	A206	OFFICE	6	150	75	100	4340	STANDARD	WATER	0.43	0.50	2	7.0	55	95.0	180	180.0	2 WAY	PRICE	DESV-6
VAV-2-7	A207	OFFICE	6	150	75	100	4340	STANDARD	WATER	0.43	0.50	2	7.0	55	95.0	180	180.0	2 WAY	PRICE	DESV-6
VAV-2-8	A208	LOCKERS	6	150	75	100	4340	STANDARD	WATER	0.43	0.50	2	7.0	55	95.0	180	180.0	2 WAY	PRICE	DESV-6
VAV-2-9	A212	CLASSROOM	16	150	75	100	4340	STANDARD	WATER	0.43	0.50	2	7.0	55	95.0	180	180.0	2 WAY	PRICE	DESV-6
VAV-2-10	A201	CORRIDOR	10	660	300	400	17300	STANDARD	WATER	1.83	0.50	2	7.0	55	95.0	180	180.0	2 WAY	PRICE	DESV-10
VAV-3-1	A302	SUITE	8	600	300	400	17300	STANDARD	WATER	1.74	0.50	2	7.0	55	95.0	180	180.0	3 WAY	PRICE	DESV-10
VAV-3-3	A305	MEDIA	8	200	75	150	6510	STANDARD	WATER	0.66	0.50	2	7.0	55	95.0	180	180.0	2 WAY	PRICE	DESV-8
VAV-3-4	A306	VISITOR	6	175	75	150	6510	STANDARD	WATER	0.66	0.50	2	7.0	55	95.0	180	180.0	2 WAY	PRICE	DESV-8
VAV-3-5	A308	OPERATION	8	300	100	200	8880	STANDARD	WATER	0.87	0.50	2	7.0	55	95.0	180	180.0	2 WAY	PRICE	DESV-8
VAV-3-6	A309	OPERATION	8	250	100	175	7595	STANDARD	WATER	0.76	0.50	2	7.0	55	95.0	180	180.0	2 WAY	PRICE	DESV-8
VAV-3-7	A310	HOME	8	250	100	175	7595	STANDARD	WATER	0.76	0.50	2	7.0	55	95.0	180	180.0	2 WAY	PRICE	DESV-8
VAV-3-8	A311	HOME	8	275	100	175	7985	STANDARD	WATER	0.76	0.50	2	7.0	55	95.0	180	180.0	2 WAY	PRICE	DESV-8
VAV-3-9	A314	SUITE	10	750	300	500	21700	STANDARD	WATER	2.17	0.50	2	7.0	55	95.0	180	180.0	3 WAY	PRICE	DESV-10

SCHEDULE OF CONVECTORS									
DESIGNATION ON PLAN	AREA SERVED	MOUNTING	TYPE	SIZE W X H X D	HEAT OUTPUT @ 180 DEG F (BTUH)	WATER TEMP (DEG F)	FLOW RATE (GPM)	MANUFACTURER	MODEL
CONV-1	RESTROOM A105A	SURFACE WALL HUNG	SW-A	36" X 32" X 4"	4,100	180	0.41	STERLING	432-36
CONV-2	CORRIDOR A103	SURFACE WALL HUNG	SW-A	36" X 32" X 4"	4,100	180	0.41	STERLING	432-36
CONV-3	VESTIBULE A107A	SURFACE WALL HUNG	SW-A	36" X 32" X 4"	4,100	180	0.41	STERLING	432-36
CONV-4	VESTIBULE A108A	SURFACE WALL HUNG	SW-A	36" X 32" X 4"	4,100	180	0.41	STERLING	432-36
CONV-5	FAMILY A115	SURFACE WALL HUNG	SW-A	36" X 32" X 4"	4,100	180	0.41	STERLING	432-36
CONV-6	JANITOR A111	SURFACE WALL HUNG	SW-A	36" X 32" X 4"	4,100	180	0.41	STERLING	432-36
CONV-7	VESTIBULE A117A	SURFACE WALL HUNG	SW-A	36" X 32" X 4"	4,100	180	0.41	STERLING	432-36
CONV-8	VESTIBULE A117C	SURFACE WALL HUNG	SW-A	36" X 32" X 4"	4,100	180	0.41	STERLING	432-36
CONV-9	RESTROOM A120A	SURFACE WALL HUNG	SW-A	36" X 32" X 4"	4,100	180	0.41	STERLING	432-36
CONV-10	RESTROOM A107B	SURFACE WALL HUNG	SW-A	36" X 32" X 6"	7,700	180	0.77	STERLING	632-36
CONV-11	UNISEX 210	SURFACE WALL HUNG	SW-A	36" X 32" X 4"	4,100	180	0.41	STERLING	432-36
CONV-12	RESTROOM A108B	SURFACE WALL HUNG	SW-A	36" X 32" X 4"	4,100	180	0.41	STERLING	432-36

OUTDOOR AIR VENTILATION SCHEDULE: ERV-1&2 (100% OUTSIDE AIR)																						
ROOM NAME	ROOM NUMBER	GROSS FL AREA (SQ. FT.)	NET AREA MULTI	NET FL AREA (SQ. FT.)	BREATHING ZONE (FEET)	OCCUPANCY CATEGORY	MAX NO. OF OCCUPANTS (PER 1000 SF)	OUTSIDE AIR PER OCC (CFM)	OUTSIDE AIR PER FL AREA (CFM/SQ. FT.)	DESIGN NUMBER OF PEOPLE	SHORT TERM OCCUPANT DIVERSITY	ACTUAL NUMBER OF PEOPLE	AIR SYSTEM EFFECTIVENESS	INITIAL ZONE OUTSIDE AIR CFM	SYSTEM OCCUPANT DIVERSITY	ACTUAL OA CFM	NO. OF FIXTURES	EXHAUST REQUIREMENTS CFM PER FIXTURE	REQUIRED CFM	CONTINUOUS CFM	INTERMITTENT CFM	
CONCESSION	A101	874	1	874	6.0	KITCHEN - COMMERCIAL COOKING	20	7.5	0.12	20	100%	20	100%	267	100%	267		0.7	862	700	700	
CONCESSION STORAGE	A102	180	1	180	6.0	STORAGE ROOMS	0	0	0.12	0	100%	0	100%	27	100%	27		0	0	0	100	
UNISEX	A105A	54	1	54	6.0	TOILET ROOM	0	0	0	0	100%	0	100%	75	100%	75	1	50	0	50	75	
TRAINER	A105	421	1	421	6.0	OFFICE SPACE	5	5	0.08	3	100%	3	100%	40	100%	40		0	0	0	425	
FLEX LOCKER	A107	681	1	681	6.0	LOCKER ROOM - SPORTS	0	0	0	0	100%	0	100%	0	100%	0		0	0	341	700	
VESTIBULE	A107A	39	1	39	6.0	CORRIDORS	0	0	0.06	0	100%	0	100%	2	100%	2		0	0	0	700	
RESTROOM	A107B	272	1	272	6.0	TOILET ROOM	0	0	0	0	100%	0	100%	0	100%	0	4	50	0	200	275	
FLEX LOCKER	A108	706	1	706	6.0	LOCKER ROOM - SPORTS	0	0	0	20	100%	20	100%	700	100%	700		0.5	353	700	700	
VESTIBULE	A108A	38	1	38	6.0	CORRIDORS	0	0	0.06	0	100%	0	100%	2	100%	2		0	0	0	700	
RESTROOM	A108B	205	1	205	6.0	TOILET ROOM	0	0	0	0	100%	0	100%	0	100%	0	3	50	0	150	200	
WOMEN	A109	915	1	915	6.0	TOILET ROOM	0	0	0	0	100%	0	100%	0	100%	0	200	20	50	0	1000	1000
LOBBY	A110	425	1	425	6.0	LOBBIES/RECEPTION	30	7.5	0.08	13	100%	13	100%	123	100%	123		0	0	0	425	
JANITOR	A111	75	1	75	6.0	JANITOR CLOSET	0	0	0	0	100%	0	100%	0	100%	0		0	0	0	40	
OFFICE	A114	137	1	137	6.0	OFFICE SPACE	5	5	0.08	1	100%	1	100%	13	100%	13		0	0	0	150	
FAMILY	A115	115	1	115	6.0	TOILET ROOM	0	0	0	0	100%	0	100%	0	100%	0	1	50	0	50	120	
MEN	A116	470	1	470	6.0	TOILET ROOM																

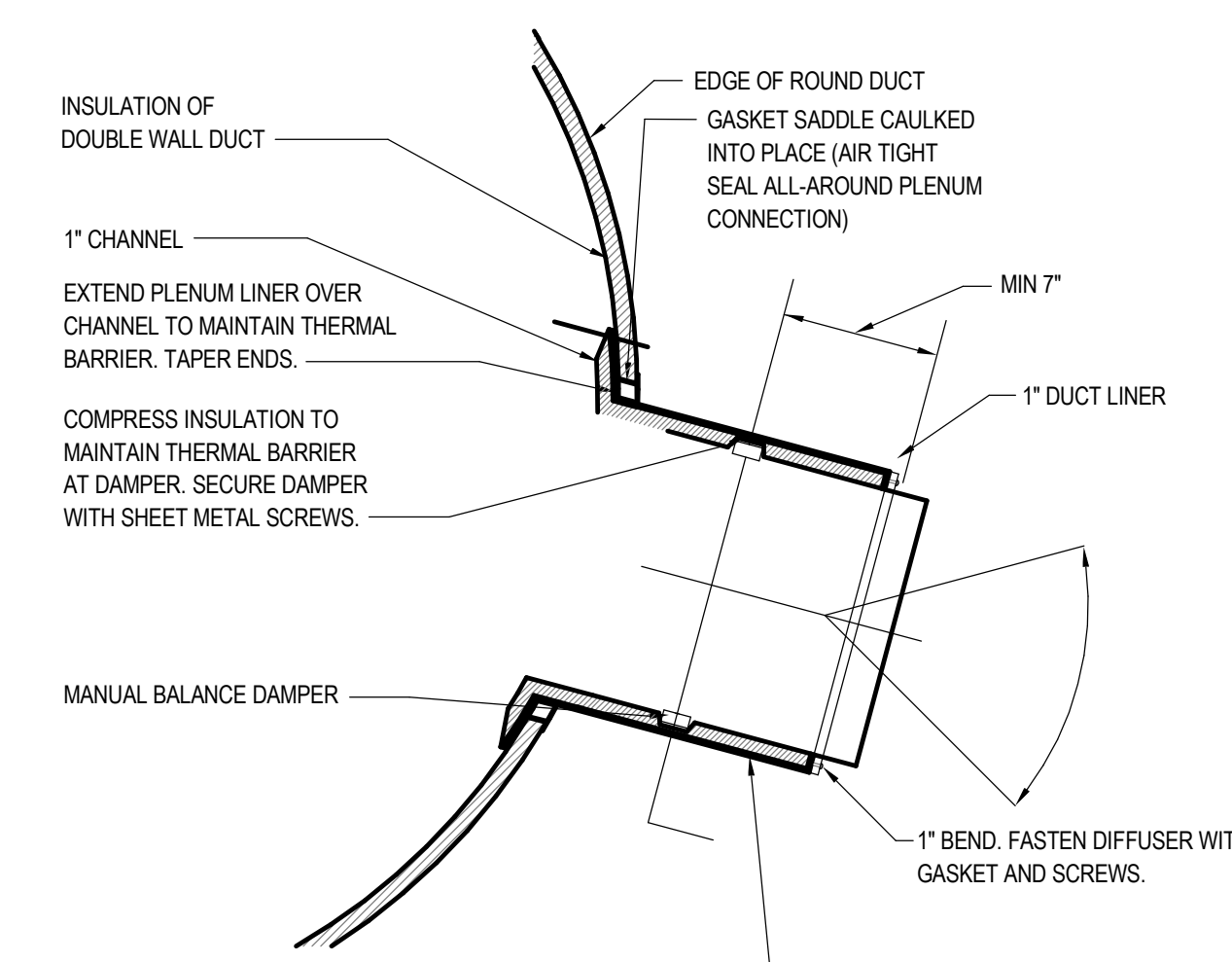


END OF PIPE RUN DETAIL

SCALE: N.T.S.

12

M5.00

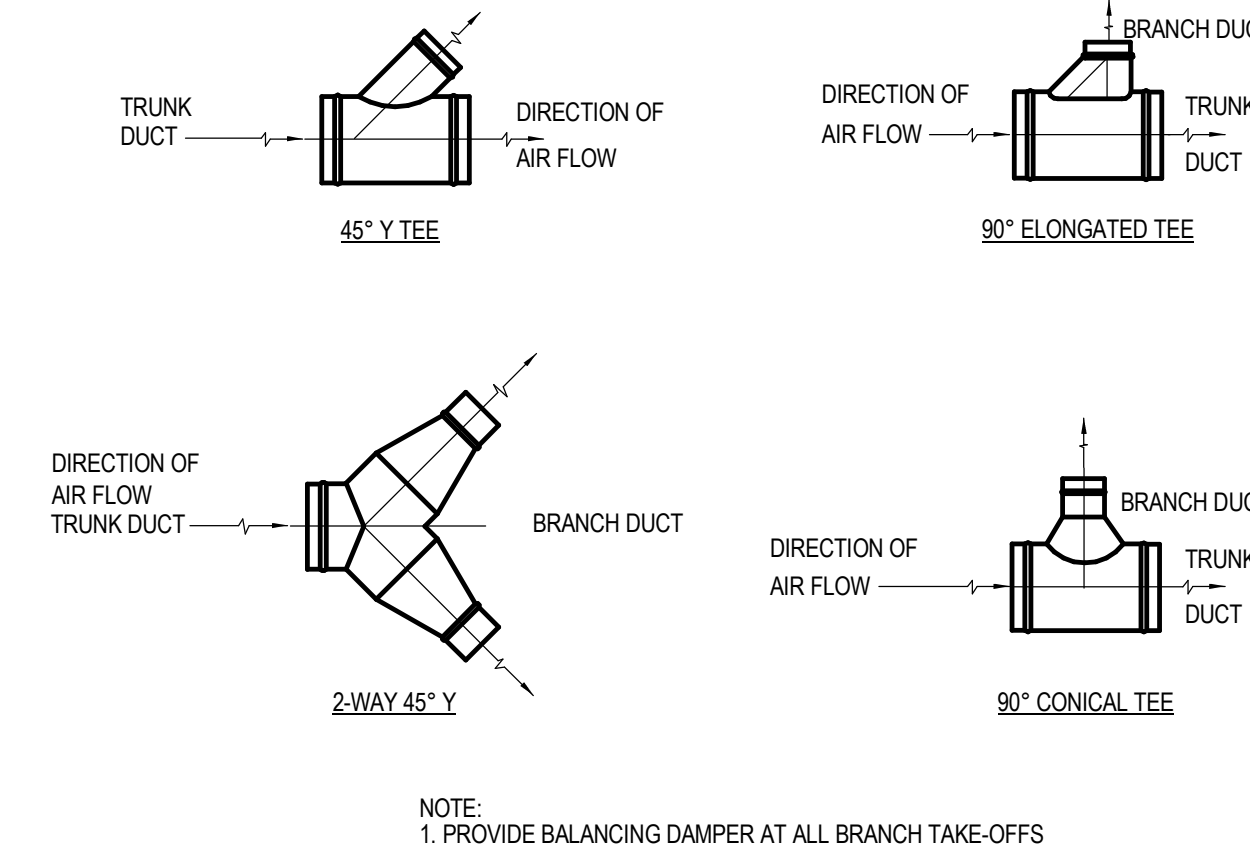


ENLARGED DIFFUSER SECTION

SCALE: N.T.S.

11

M5.00

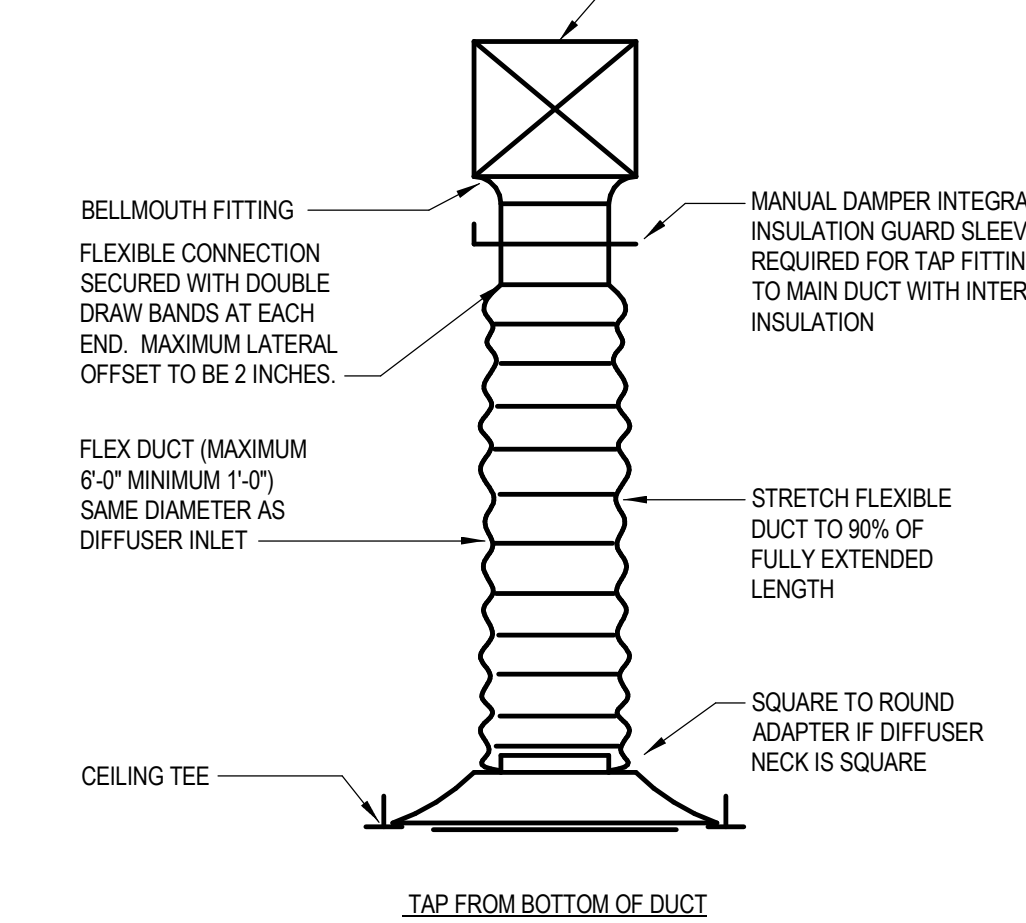


ROUND DUCT BRANCH TAKE-OFF DETAILS

SCALE: N.T.S.

10

M5.00

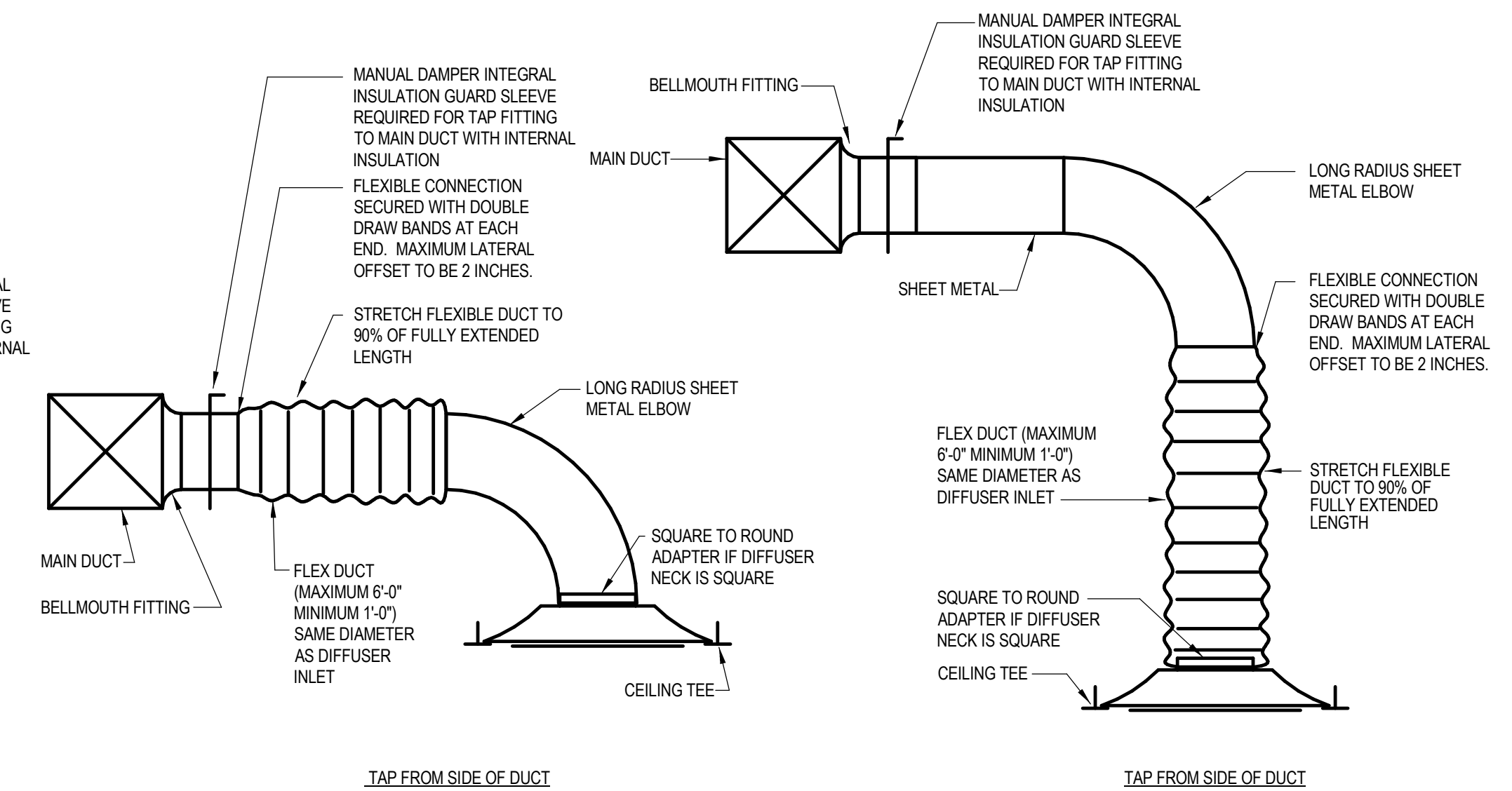


CEILING DIFFUSER CONNECTION DETAILS

SCALE: N.T.S.

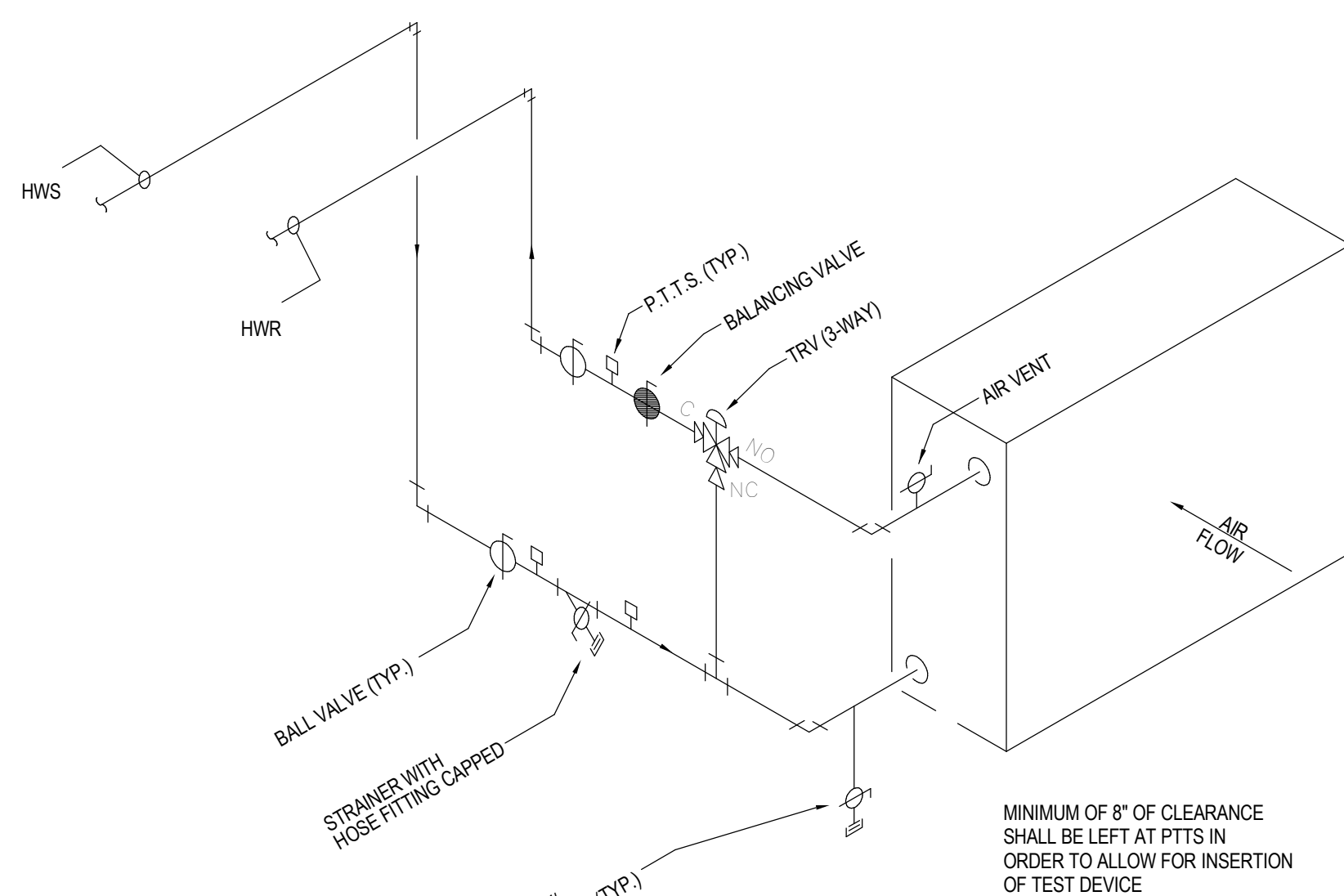
9

M5.00



CEILING DIFFUSER CONNECTION DETAILS

SCALE: N.T.S.

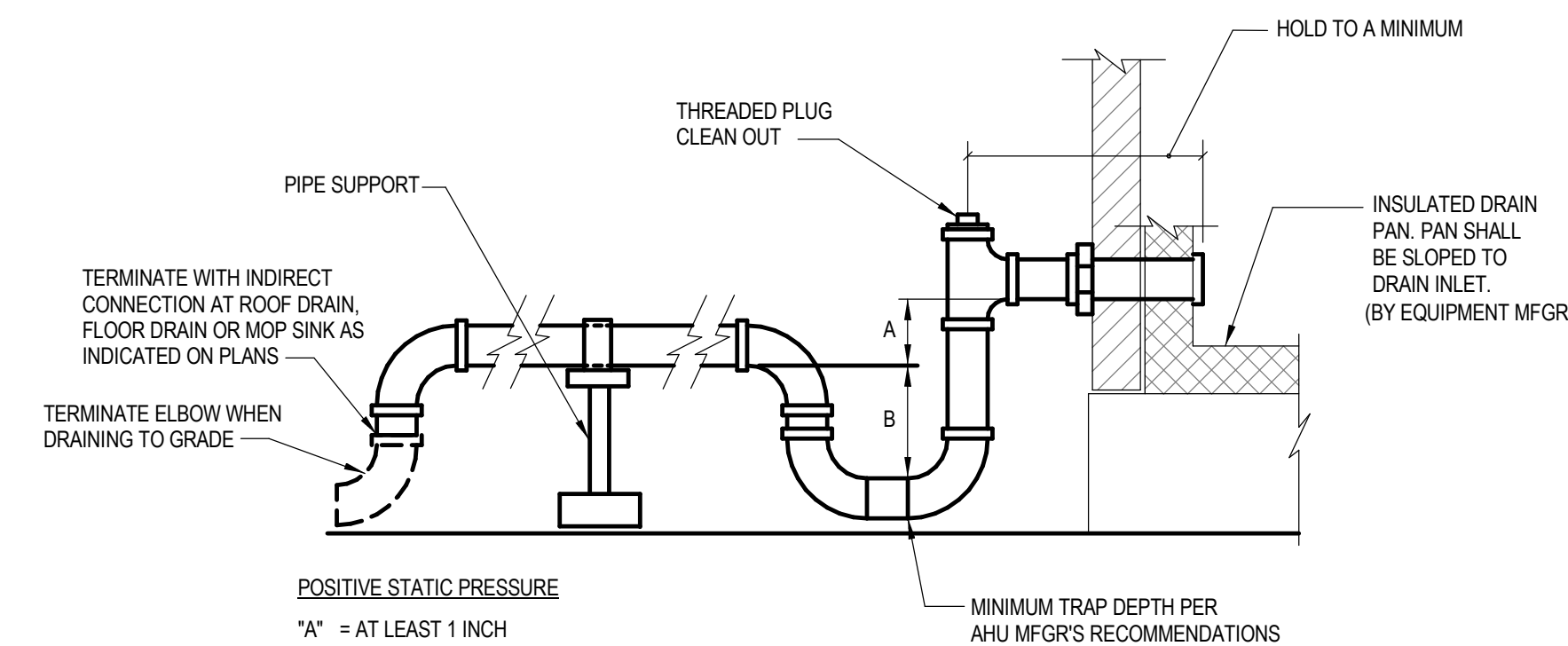


PIPING DIAGRAM - HOT WATER COIL

SCALE: N.T.S.

8

M5.00

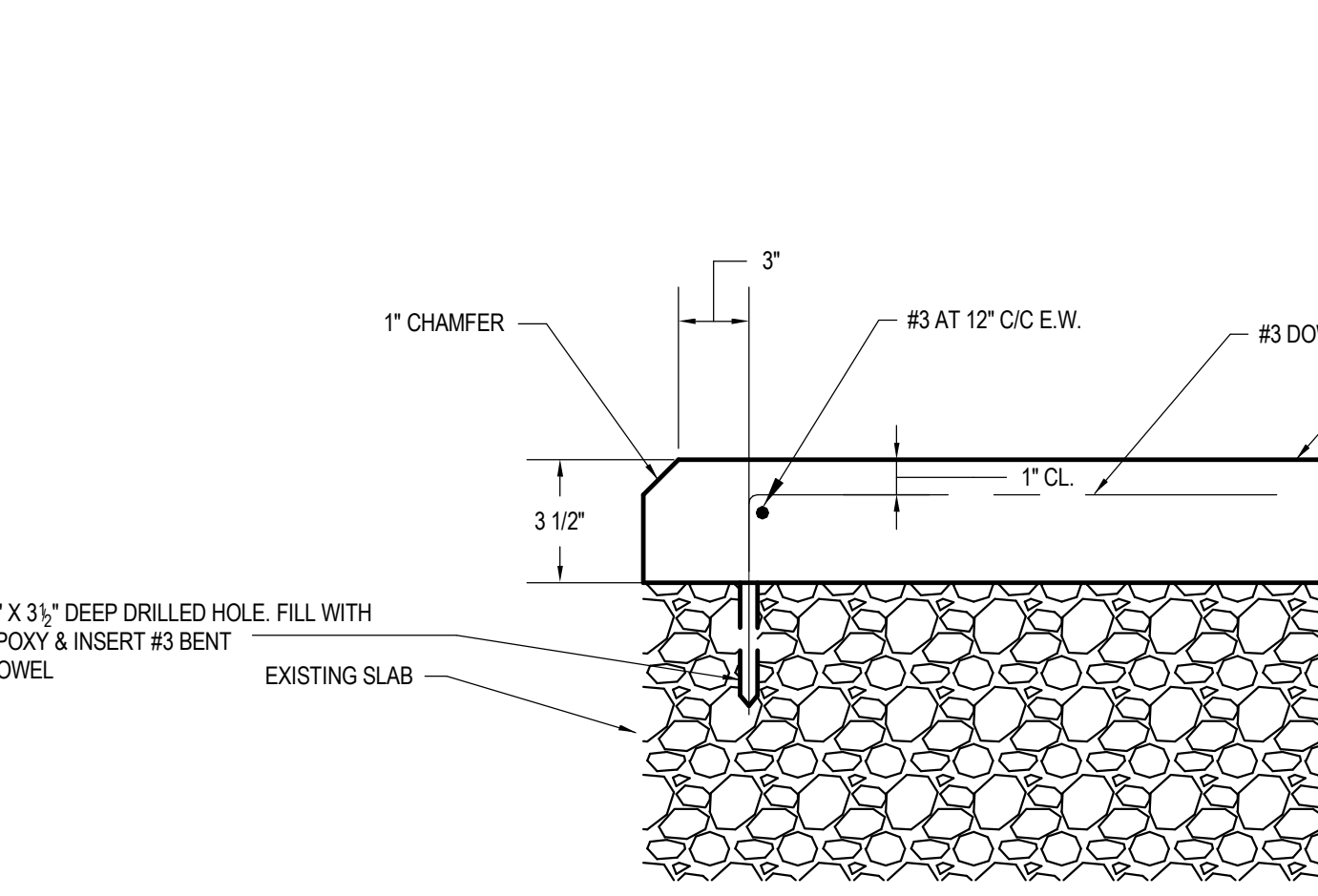


CONDENSATION DRAIN DETAIL

SCALE: N.T.S.

7

M5.00

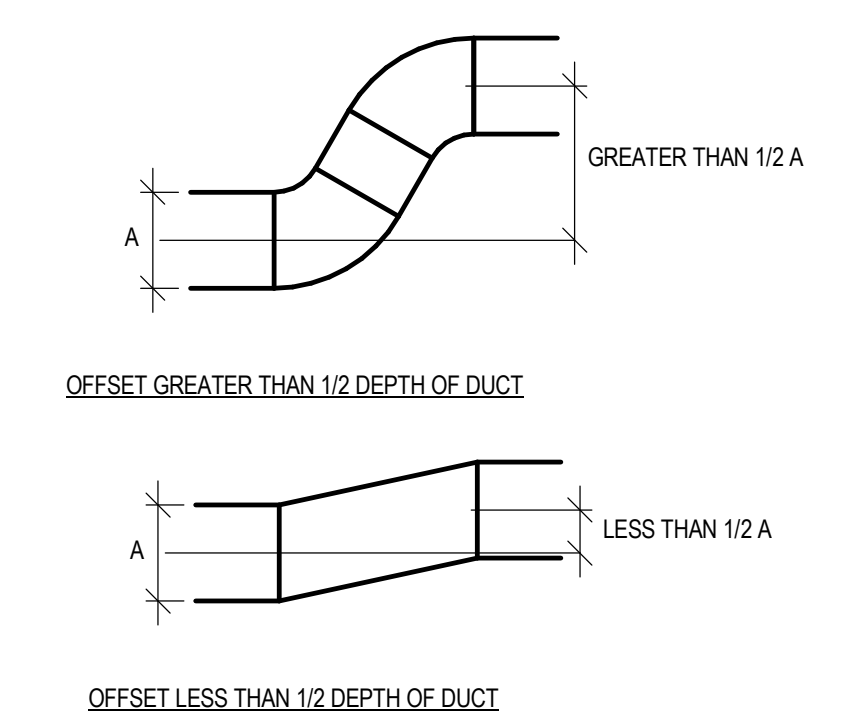


SECTION THROUGH TYPICAL HOUSEKEEPING PAD

SCALE: N.T.S.

6

M5.00

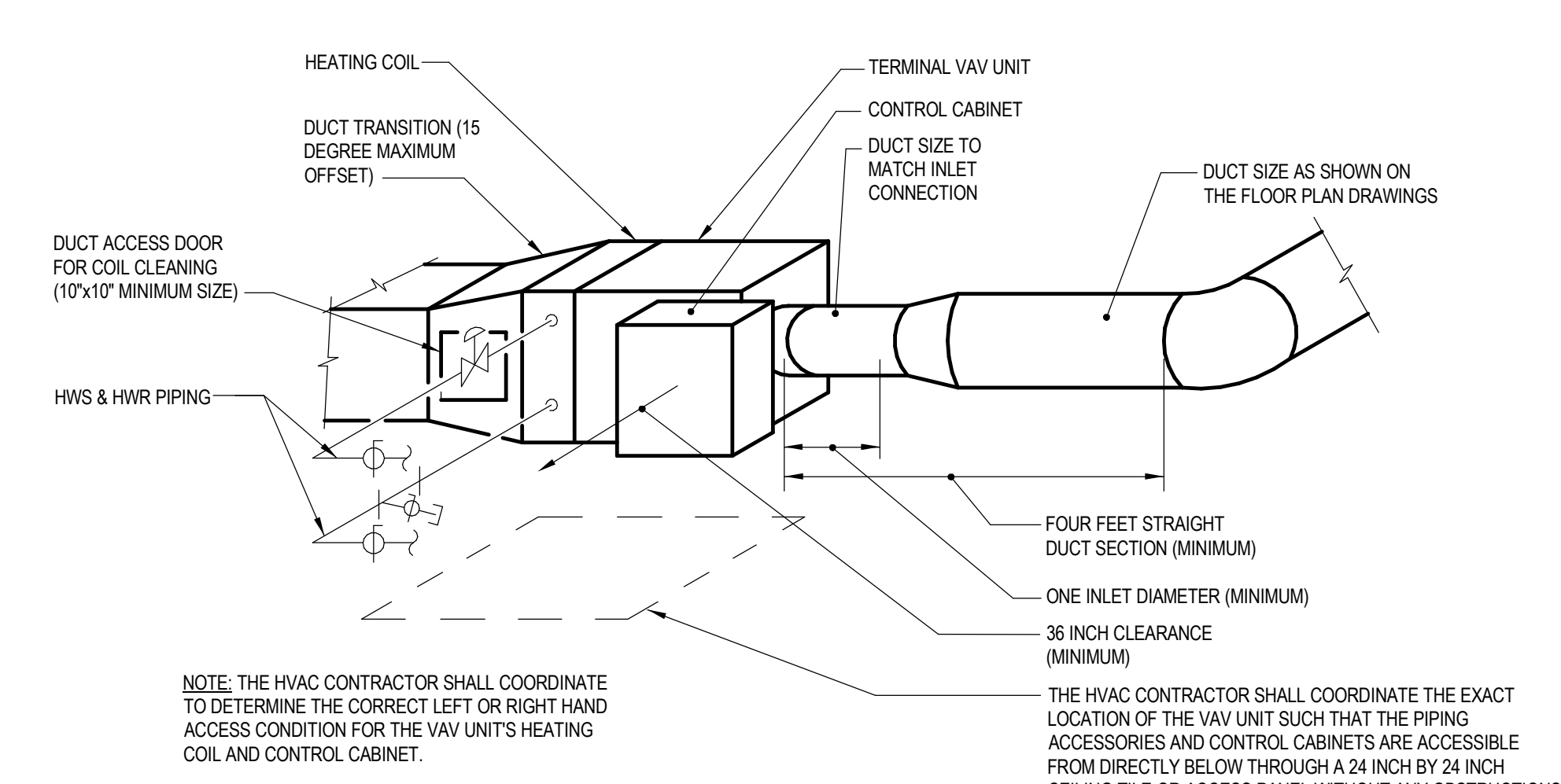


DUCT OFFSET DETAIL

SCALE: N.T.S.

5

M5.00

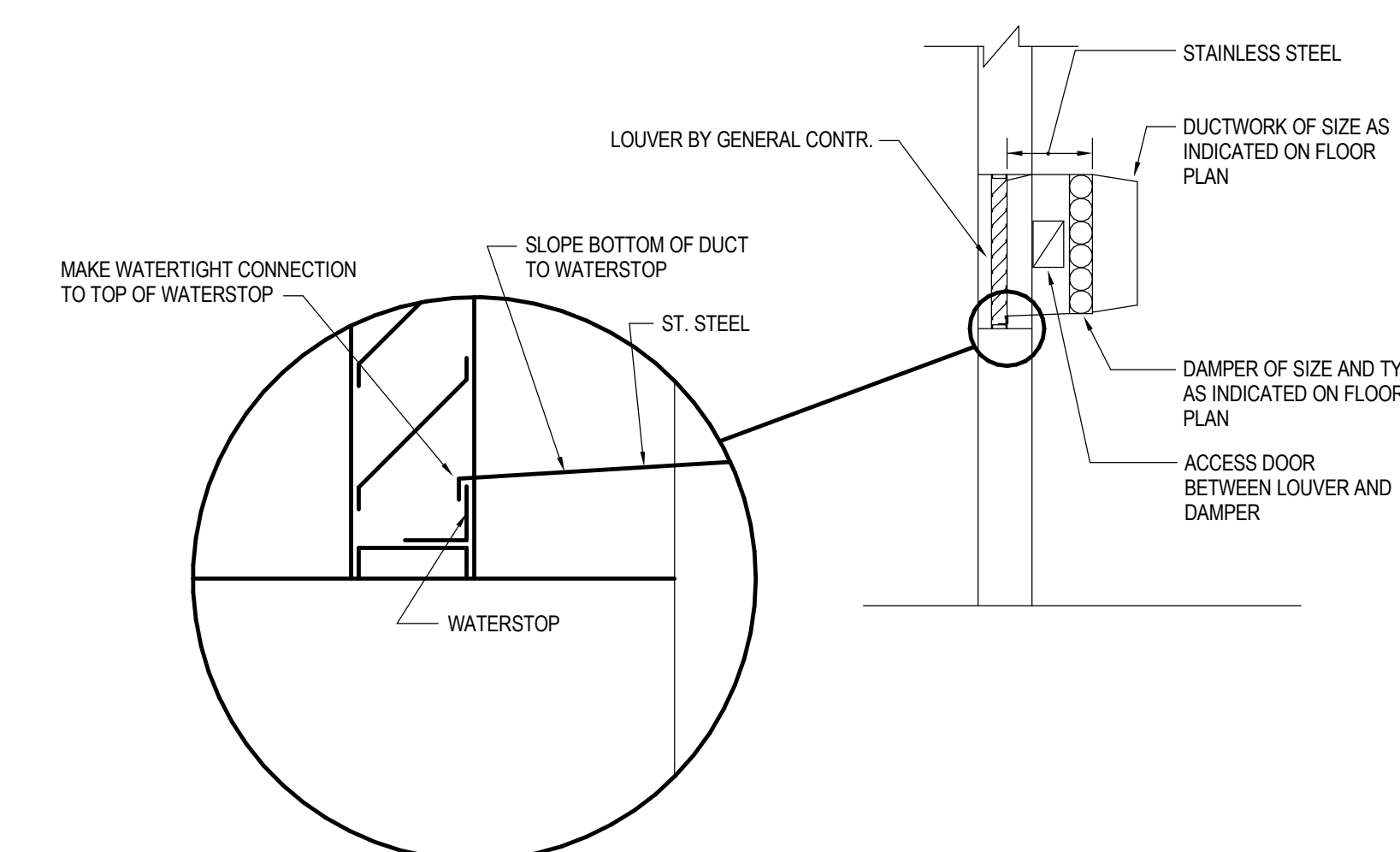


VAV UNIT INSTALLATION DETAIL

SCALE: N.T.S.

4

M5.00

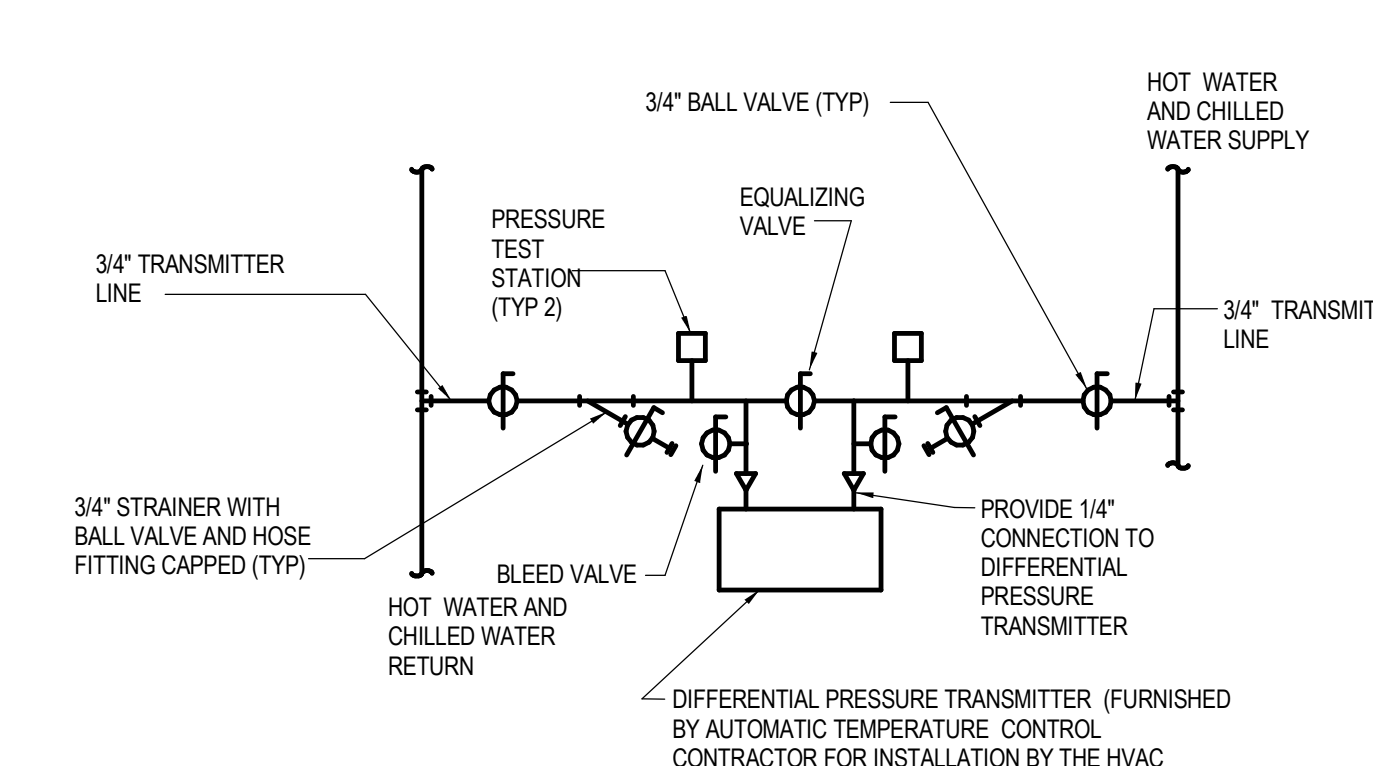


LOUVER CONNECTION DETAIL

SCALE: N.T.S.

3

M5.00

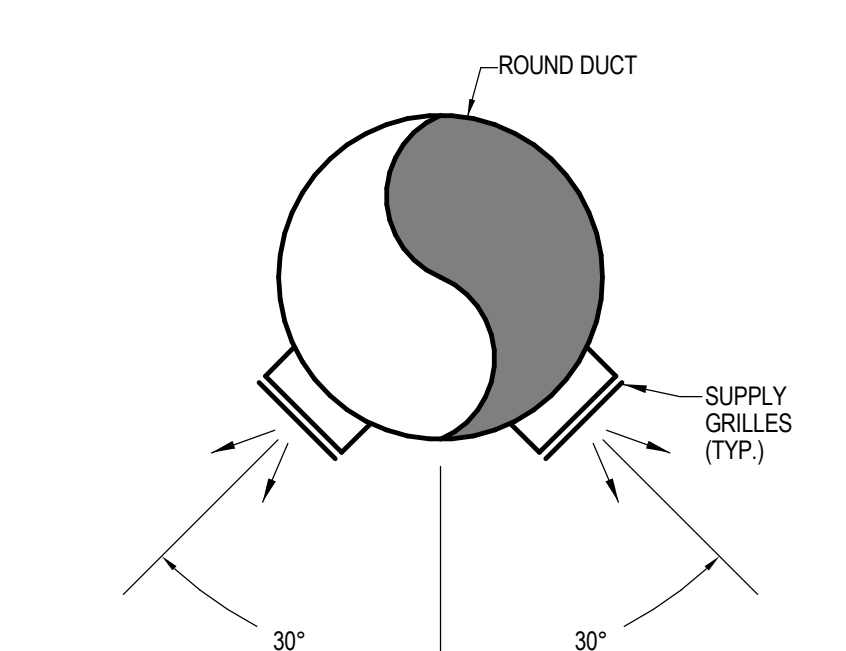


DIFFERENTIAL PRESSURE TRANSMITTER - DIAGRAM

SCALE: N.T.S.

2

M5.00



SUPPLY GRILL DETAIL

SCALE: N.T.S.

1

M5.00

NO.	DATE	ISSUED / REVISION
B	04-11-2025	CONFERMIT SET
D	07-05-2025	FOR CONSTRUCTION

DRAWN BY: JDN CHECKED BY: BKG

PROJECT NO. 2024.01.026

DRAWING TITLE:

MECHANICAL

DETAILS

DRAWN BY: JDN CHECKED BY: BKG

PROJECT NO. 2024.01.026

DRAWING TITLE:

MECHANICAL

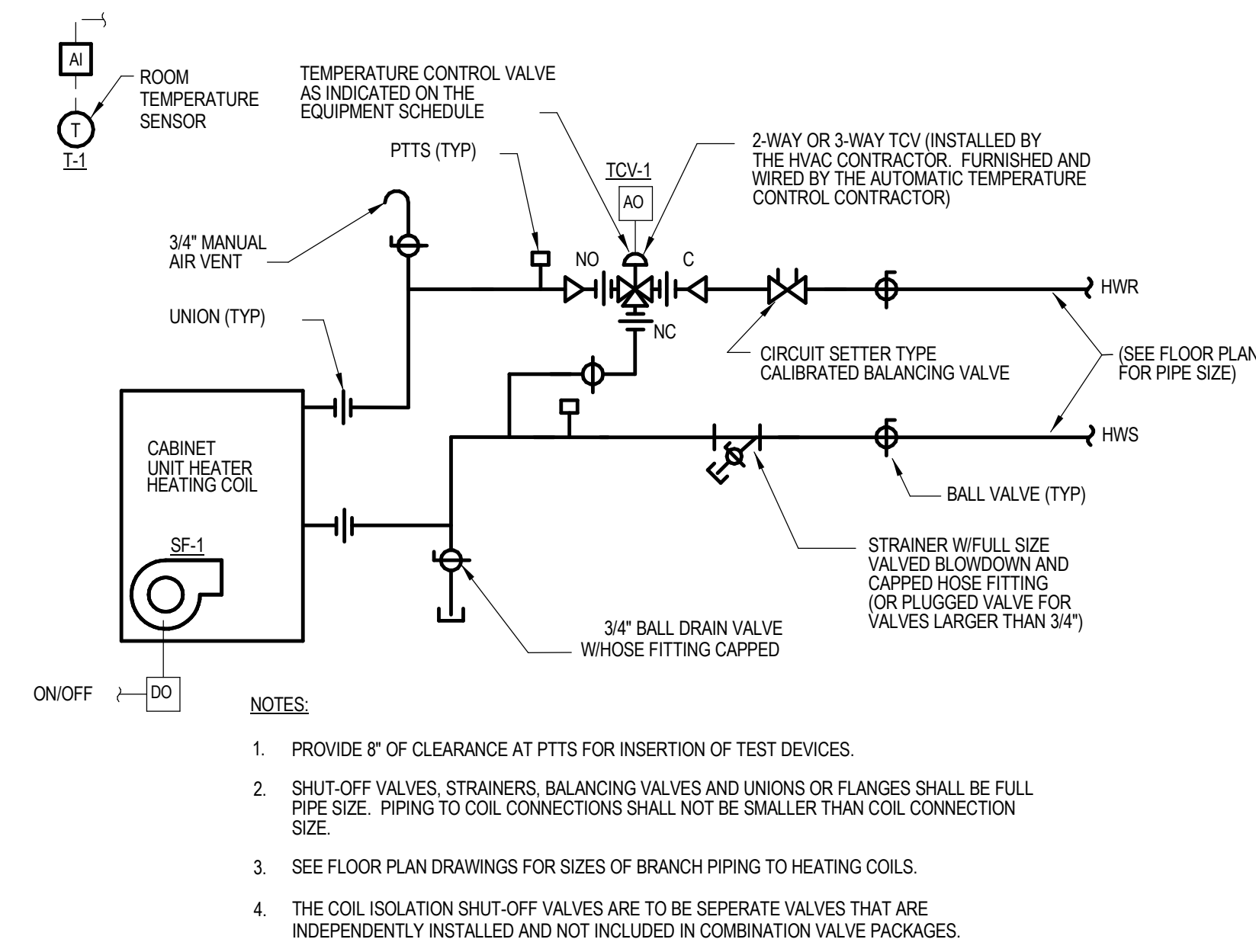
DETAILS



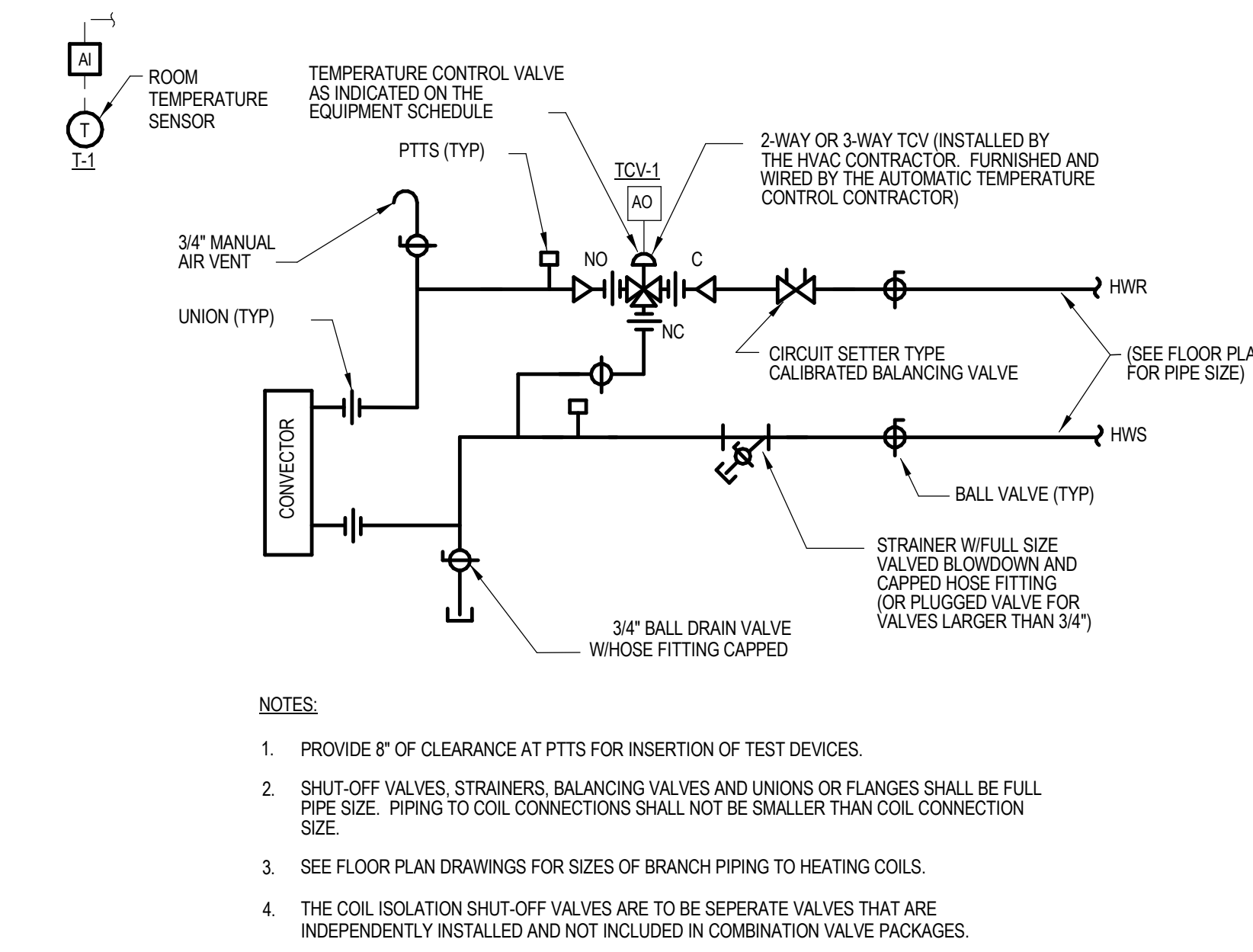
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CONTROL SYMBOL LEGEND

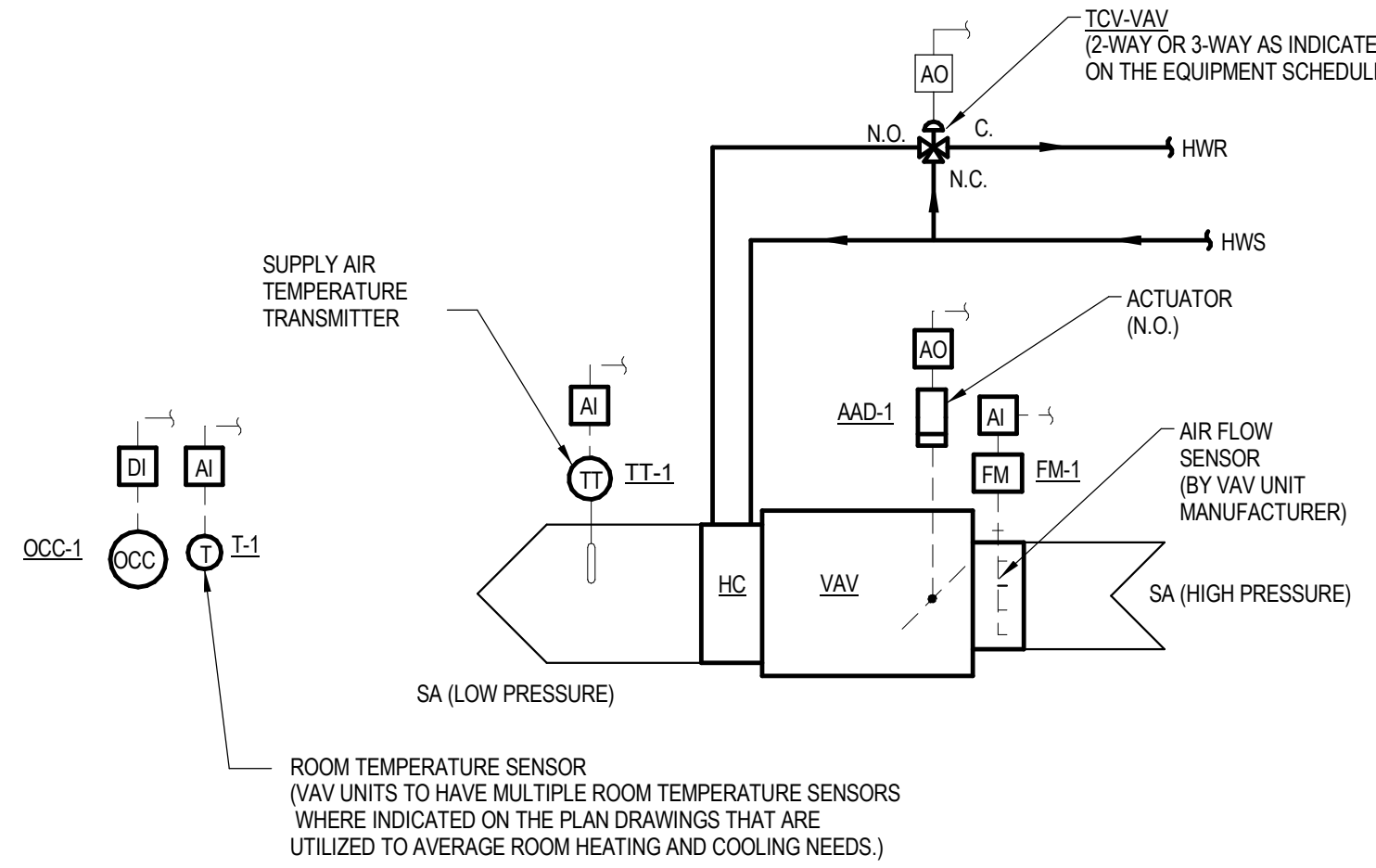
AI	ANALOG INPUT SIGNAL
AO	ANALOG OUTPUT SIGNAL
DI	DIGITAL INPUT SIGNAL
DO	DIGITAL OUTPUT SIGNAL
ES	END SWITCH
M	MOTOR
DPS	DIFFERENTIAL PRESSURE SWITCH
DPT	DIFFERENTIAL PRESSURE TRANSMITTER
SP1	STATIC PRESSURE TRANSMITTER
LTS	LOW TEMPERATURE SWITCH
AFT	AIR FLOW TRANSMITTER
VFD	VARIABLE FREQUENCY DRIVE
AAD-XX	ACTUATED DAMPER
FT	FLOW TRANSFER
FM	FLOW METER
FS	FLOW SWITCH
HT	HUMIDITY TRANSMITTER
ES	END SWITCH
N.O.	NORMALLY OPEN
N.C.	NORMALLY CLOSED
OC	ROOM OCCUPANCY SENSOR
X	REFRIGERATION MONITOR
CT	CONTACT
TT	TEMPERATURE TRANSMITTER
T	ROOM TEMPERATURE SENSOR
H	RELATIVE HUMIDITY SENSOR
PI	PRESSURE INDICATOR
I	TEMPERATURE
CO2	CARBON DIOXIDE SENSOR
◇	DUCT MOUNTED SMOKE DETECTOR



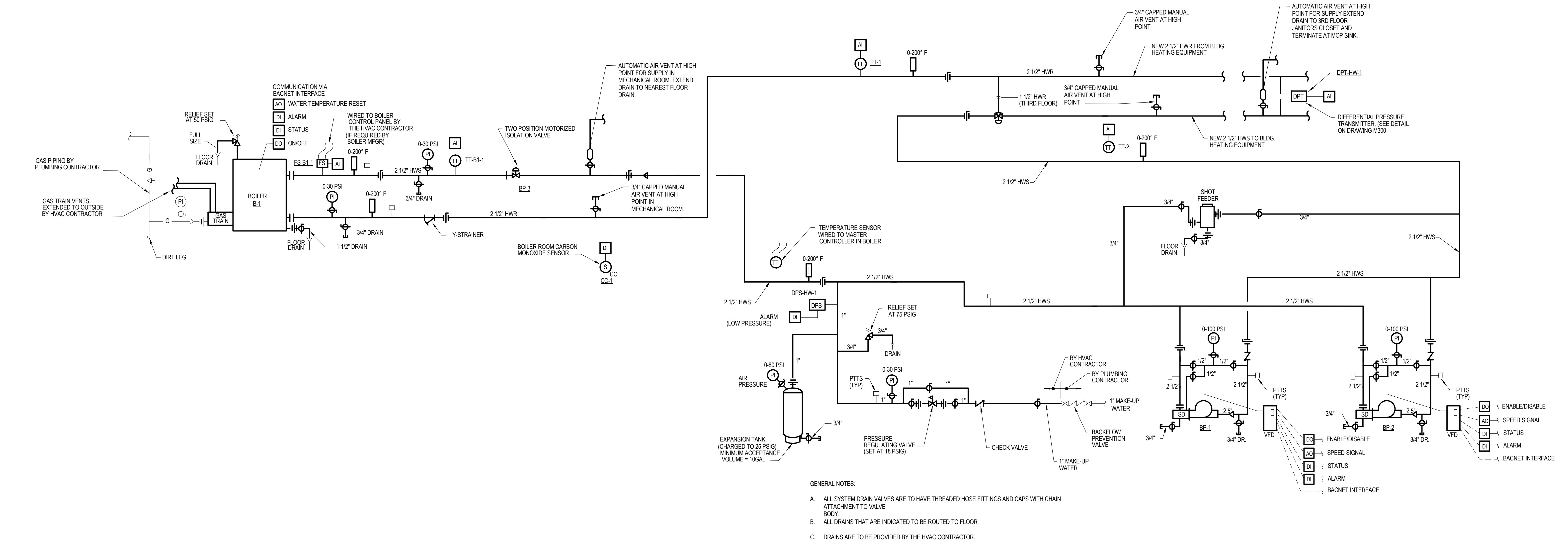
CONTROL DIAGRAM - HOT WATER CABINET UNIT HEATER
SCALE: N.T.S.



CONTROL DIAGRAM - HOT WATER CONVECTOR
SCALE: N.T.S.



CONTROL DIAGRAM - VAV UNITS
HOT WATER HEAT
SCALE: N.T.S.



CENTRAL HEATING HOT WATER CONTROL DIAGRAM
SCALE: N.T.S.

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NO.	DATE	ISSUED / REVISION
B	04-11-2025	CONPERMIT SET
D	01-05-2025	FOR CONSTRUCTION

AI	ENABLE/DISABLE
AO	SPEED SIGNAL
DI	STATUS
DO	ALARM
OC	BACNET INTERFACE

DRAWN BY: JDN CHECKED BY: BKG
PROJECT NO. 2024.01.026
DRAWING TITLE:
MECHANICAL
DIAGRAMS

M7.00

DRAWING NOTES:

A REFER TO SHEET M000 FOR GENERAL NOTES, LEGENDS, AND ABBREVIATIONS.

KEYNOTES:

1. EXISTING VENTILATION TO REMAIN UNCHANGED.
2. REMOVE EXISTING UNIT HEATER.

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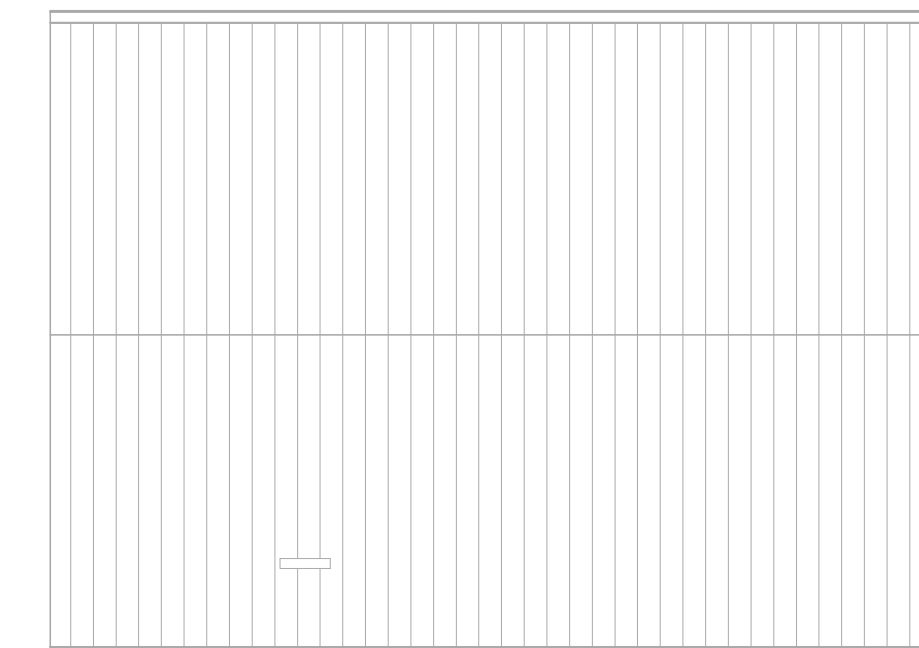
NO.	DATE	ISSUED / REVISION
D	05-12-2025	ADDENDUM 03
O	07-03-2025	FOR CONSTRUCTION

DRAWN BY: JDM CHECKED BY: BKG
PROJECT NO. 2024.01.026

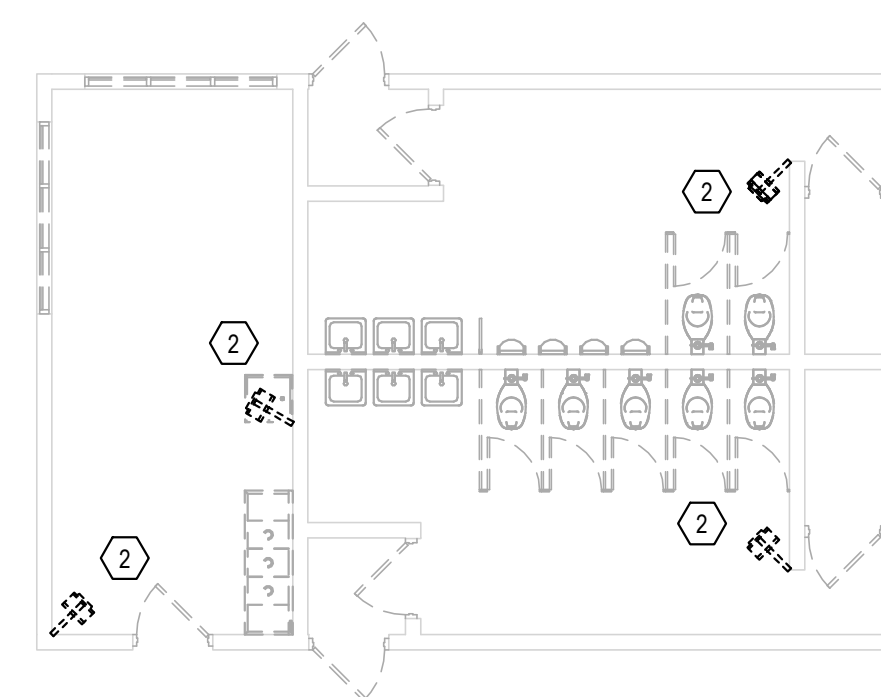
DRAWING TITLE:
**BUILDING C
MECHANICAL PLANS**



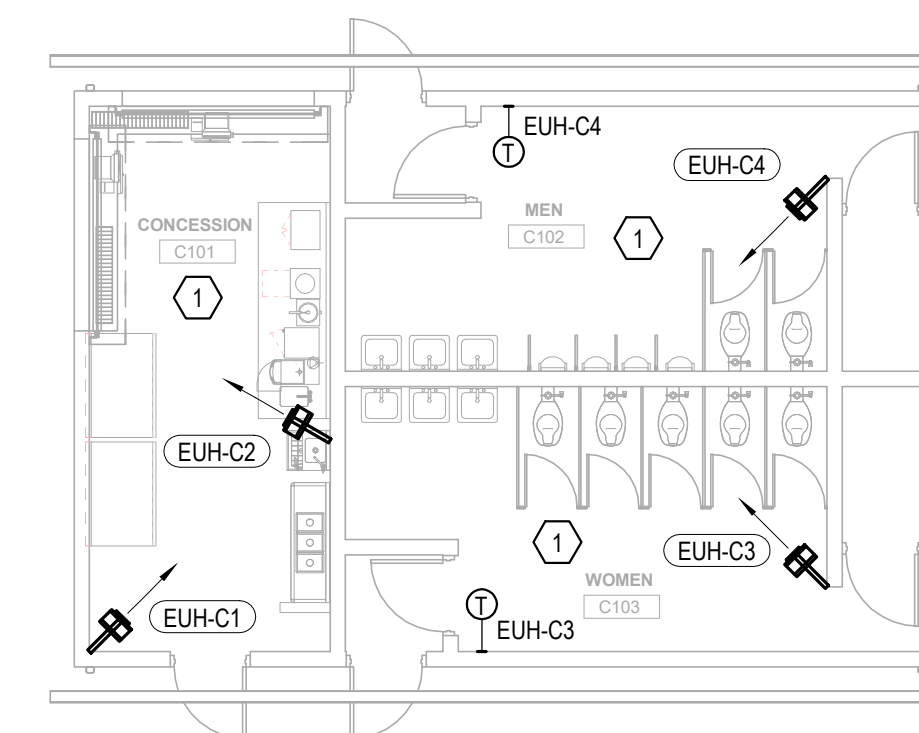
4 VISITOR BUILDING C - ROOF MECHANICAL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



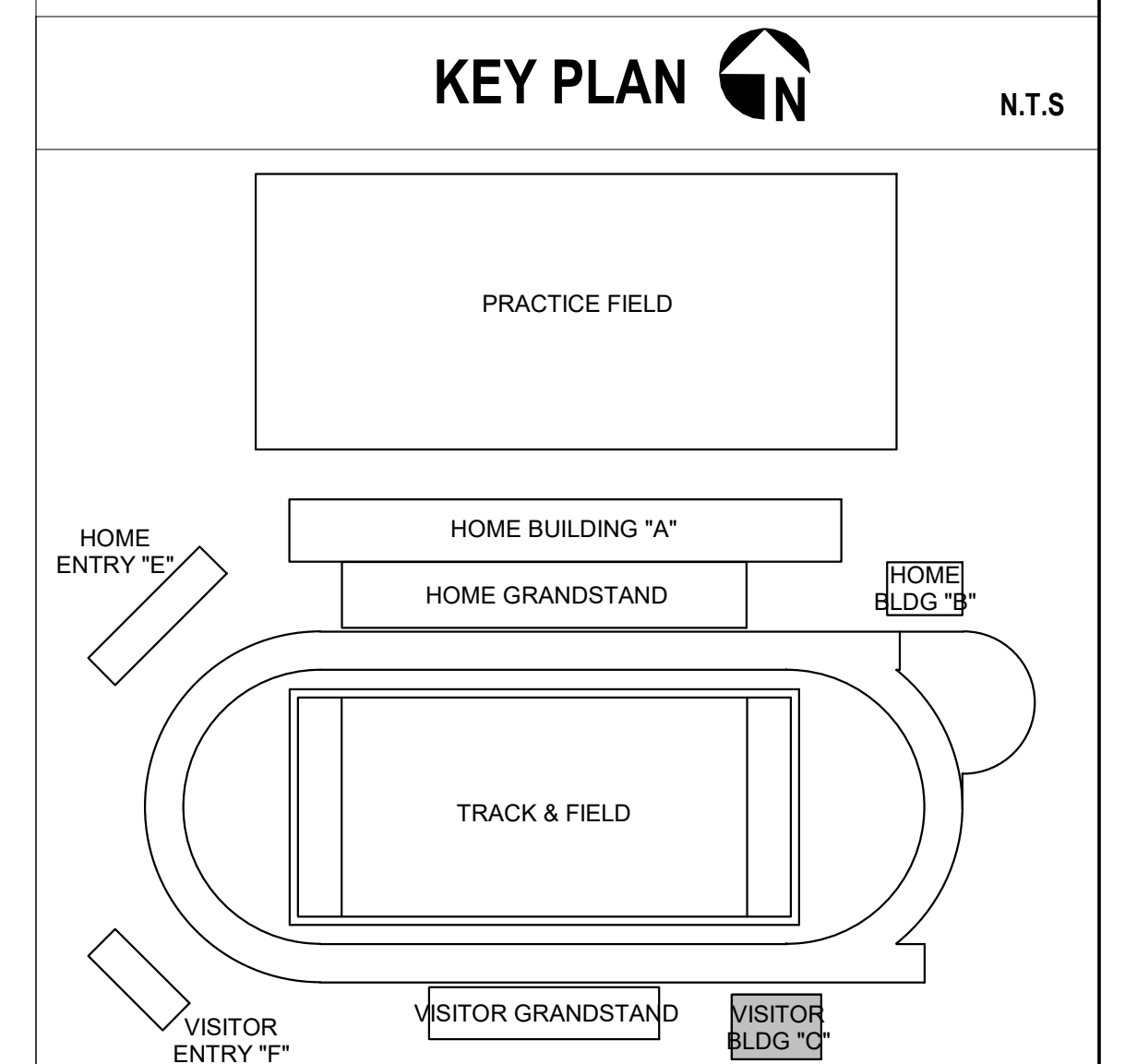
2 VISITOR BUILDING C - ROOF MECHANICAL PLAN
SCALE: 1/8" = 1'-0"



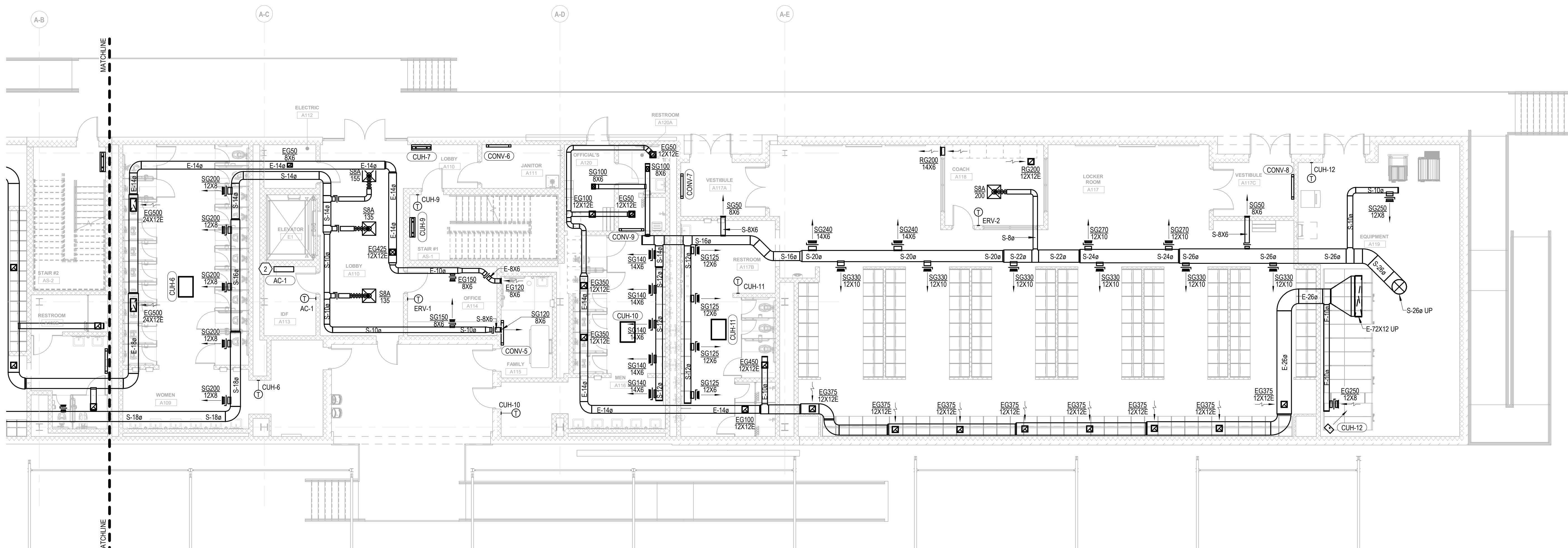
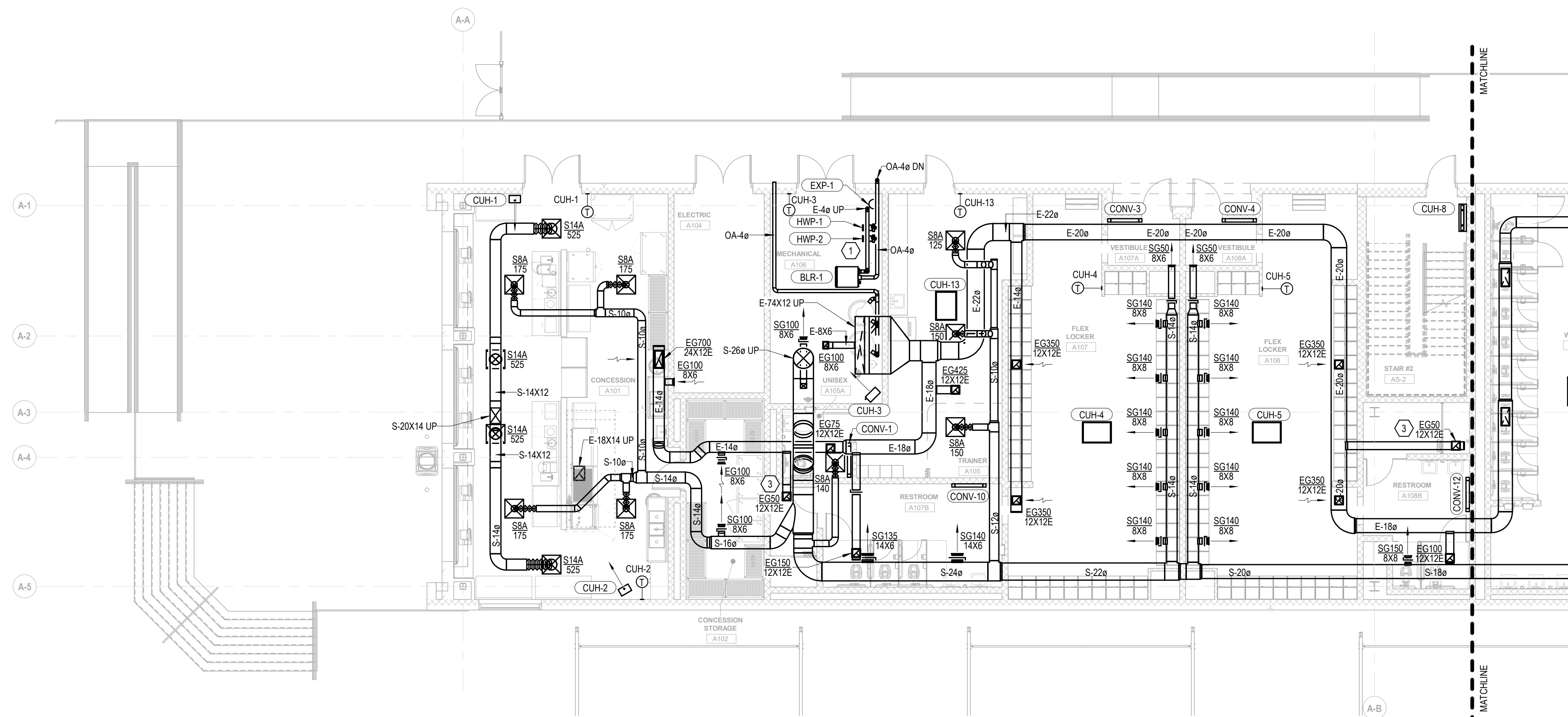
3 VISITOR BUILDING C - FIRST FLOOR MECHANICAL DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



1 VISITOR BUILDINGS C & D - FIRST FLOOR MECHANICAL PLAN
SCALE: 1/8" = 1'-0"



KEY PLAN N.T.S.



- DRAWING NOTES:**
- REFER TO SHEET M000 FOR GENERAL NOTES, LEGENDS, AND ABBREVIATIONS.
 - ALL EXPOSED SUPPLY DUCT TO BE DOUBLE WALL INSULATED.
- KEYNOTES:**
- INSTALL FLUE AND COMBUSTION AIR PER MANUFACTURERS RECOMMENDATIONS.
 - WALL CASSETTE, EXTEND REFRIGERANT PIPING TO CONDENSING UNIT ON ROOF PER MANUFACTURERS RECOMMENDATIONS.
 - EXHAUST DUCT IN SHOWER AREA TO BE OF ALUMINUM CONSTRUCTION FOR A MINIMUM OF 10'-0" FROM GRILLE.

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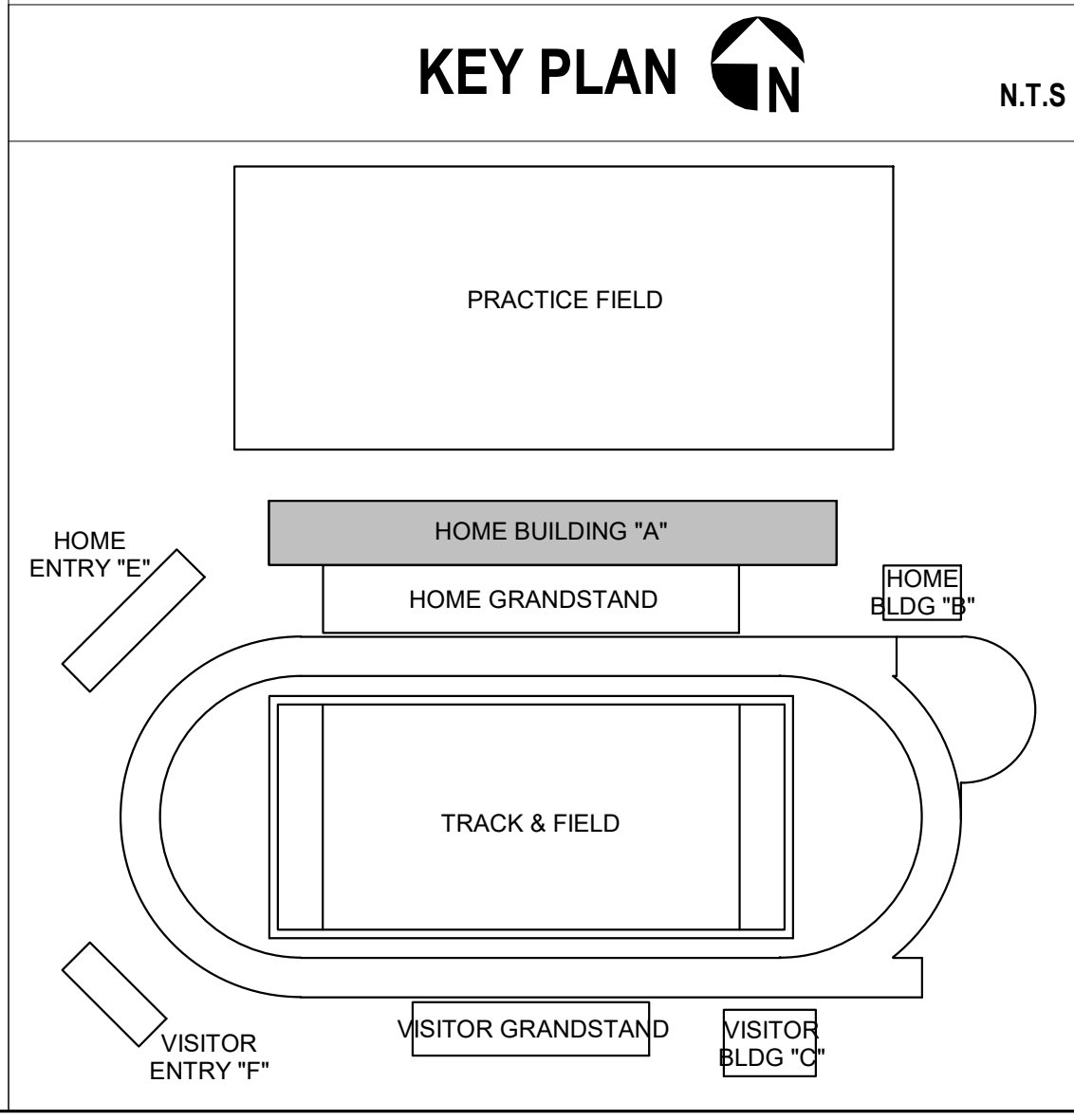
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NO.	DATE	ISSUED / REVISION
B	04-17-2025	CD PERMIT SET
C	05-02-2025	ADDENDUM 02
0	07-03-2025	FOR CONSTRUCTION

NO.	DATE	ISSUED / REVISION
B	04-17-2025	CD PERMIT SET
C	05-02-2025	ADDENDUM 02
0	07-03-2025	FOR CONSTRUCTION

DRAWN BY: JDM CHECKED BY: BKG
PROJECT NO. 2024.01.026
DRAWING TITLE:
HOME BUILDING A - FIRST FLOOR MECHANICAL PLAN



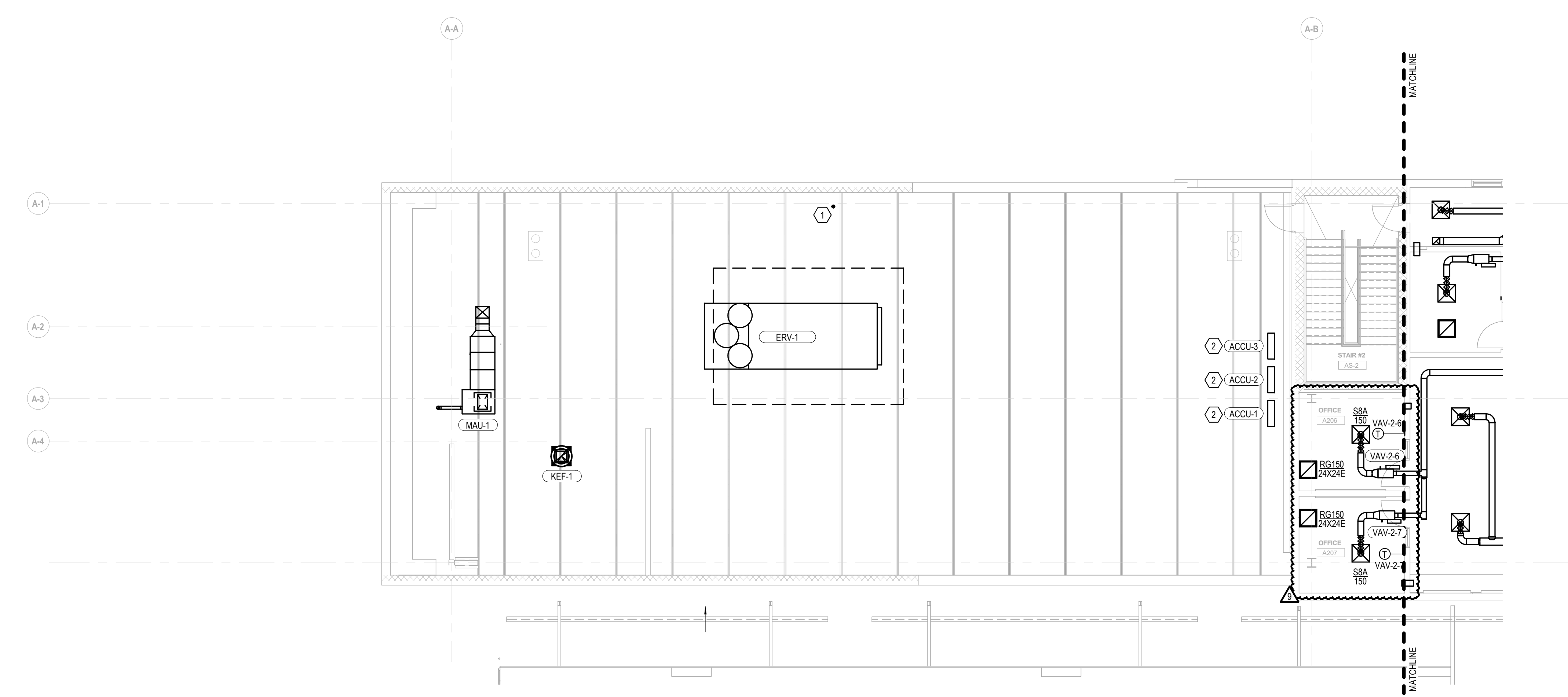
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DRAWING NOTES:
A REFER TO SHEET M000 FOR GENERAL NOTES, LEGENDS, AND ABBREVIATIONS.

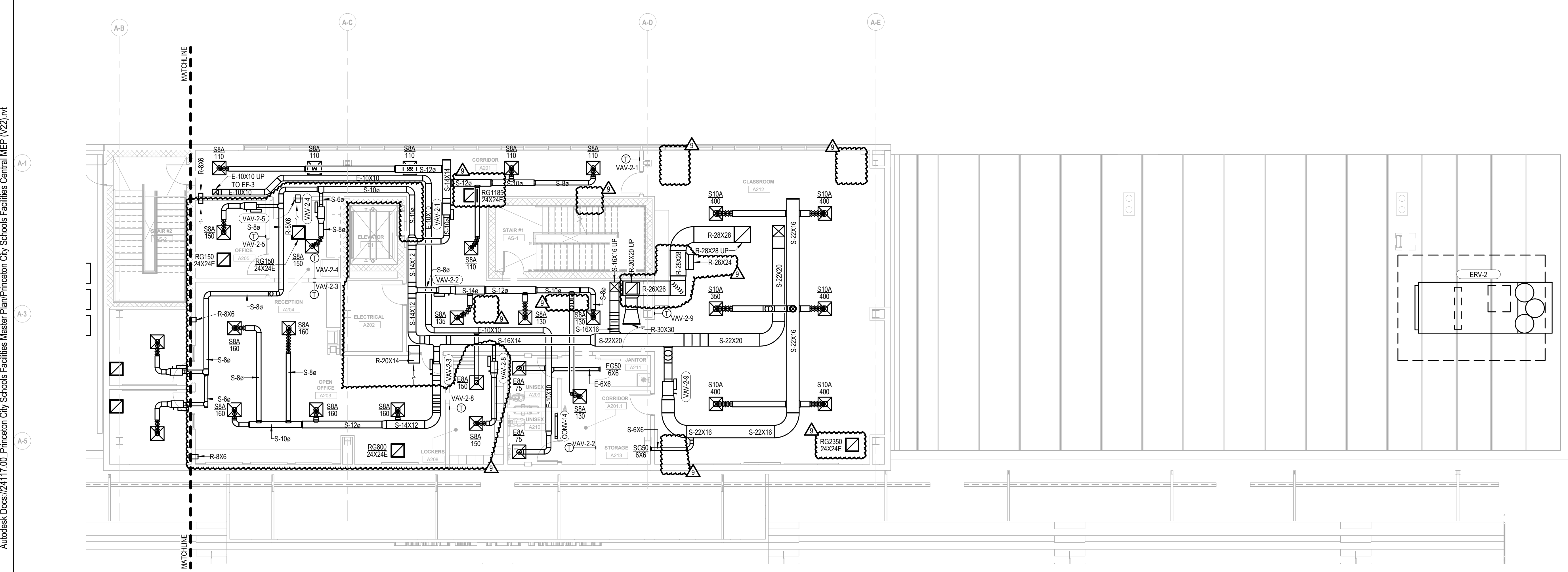
- KEYNOTES:
- INSTALL FLUE AND COMBUSTION AIR PER MANUFACTURERS RECOMMENDATIONS.
 - INSTALL PER MANUFACTURERS RECOMMENDATIONS.

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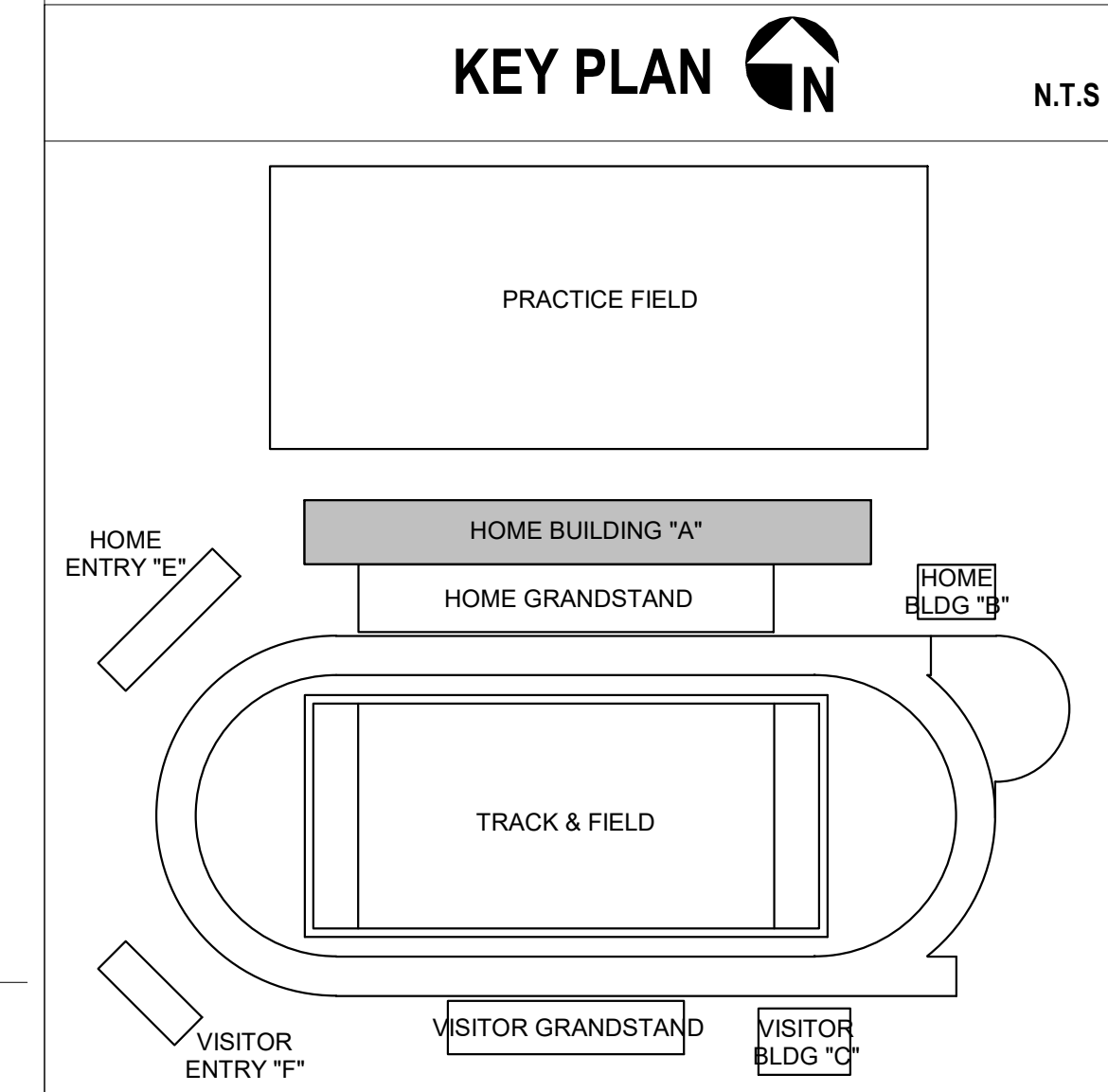
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1 HOME BUILDING A - SECOND FLOOR MECHANICAL PLAN - WEST
SCALE: 1/8" = 1'-0"



2 HOME BUILDING A - SECOND FLOOR MECHANICAL PLAN - EAST
SCALE: 1/8" = 1'-0"



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NO.	DATE	ISSUED / REVISION
B	04-17-2025	CD PERMIT SET
1	07-21-2025	ENGINEERING CHANGE
5	10-02-2025	CONST. BULLETIN 03
9	11-21-2025	CONST. BULLETIN 06

DRAWN BY: JDM CHECKED BY: BKG
PROJECT NO. 2024.01.026
DRAWING TITLE:
HOME BUILDING A -
SECOND FLOOR
MECHANICAL
PLAN
MS2.02

