MECHANICAL ABBREVIATIONS

A/C AIR CONDITIONING AC AIR CURTAIN ACU AIR CONDITIONING UNIT AD DUCT/PLENUM ACCESS DOOR AE ACOUSTICAL ELBOW (REFER TO DETAIL THIS SHEET) AFF ABOVE FINISHED FLOOR	ID INSIDE DIAMETER (IN INCHES, UNLES IH INTAKE HOOD IN WC IN INCHES OF WATER COLUMN INSUL INSULATION/INSULATE INV INVERT
AFMS AIR FLOW MONITOR/MEASURING STATION AFP AIR FLOW MEASUREMENT PROBE AFT AIR FLOW TRANSDUCER/TEMPERATURE MONITOR AHU AIR HANDLING UNIT (W/ INTEGRAL DEVICES FOR COOLING, HEATING, CLEANING AND/OR FILTRATION OF THE CIRCULATED AIR). TERM MAY BE USED INTERCHANGEABLY WITH ADU'S AND ARU'S.	KH KITCHEN HOOD KW KILOWATTS LAT LEAVING AIR TEMPERATURE (IN °F, UI
ADU AIR HANDLING UNIT, W/ INTEGRAL DEVICES FOR INCREASED DEHUMIDIFICATION ARU AIR HANDLING UNIT, W/ INTEGRAL DEVICES FOR ENERGY RECOVERY AL ALUMINUM ALT ALTERNATE, ALTERNATIVE AMB AMBIENT AP ACCESS PANEL	LF LINEAR FEET LLS LOW LIMIT SWITCH LP LIQUID PETROLEUM LPS LOW PRESSURE STEAM SUPPLY LVR LOUVER LWT LEAVING WATER TEMPERATURE (IN °F,
 APD AIR PRESSURE DROP (IN INCHES OF WATER COLUMN) AS AIR SEPARATOR AR ACID RESISTANT ARV AIR RELIEF VALVE, MANUAL AIR VENT AT AIR TRANSFER ATD AIR TEMPERATURE DROP (IN °F, UNLESS OTHERWISE NOTED) ATR AIR TEMPERATURE RISE (IN °F, UNLESS OTHERWISE NOTED) ATV AIR TURNING VANES AUTO AUTOMATIC AVE AIR VOLUME EXTRACTOR 	M MOTOR MAT MIXED AIR TEMPERATURE (IN °F, UNL MAX MAXIMUM MBH EQUIVALENT TO 1,000 BTUH MECH MECHANICAL MFR MANUFACTURER MH MANHOLE MIN MINIMUM
BCP BOILER CIRCULATION PUMP BD BAROMETRIC DAMPER OR BAROMETRIC, COUNTER BALANCED GRAVITY OPERATED DAMPER BDD BACKDRAFT DAMPER BHP BREAK HORSPOWER.(IN HORSEPOWER) BLDG BUILDING	MISC MISCELLANEOUS MOD MOTORIZED OPERATED DAMPER MPS MEDIUM PRESSURE STEAM SUPPLY MTD MOUNTED MUA MAKE-UP AIR HANDLING UNIT
BLR BOILER BMS BUILDING MANAGEMENT SYSTEM BOD BOTTOM OF DUCT/DEVICE (IN UNITS NOTED) BP BAROMETRIC PRESSURE (IN INCHES OF MERCURY, UNLESS OTHERWISE NOTED) BTU BRITISH THERMAL UNITS BTUH BRITISH THERMAL UNITS PER HOUR	NIC NOT IN CONTRACT No. / # NUMBER NOM NOMINAL NTS NOT TO SCALE NG NATURAL GAS NP NON-POTABLE WATER
CAU COMBUSTION AIR UNIT CBA CHILLED BEAM, ACTIVE CBD CHILLED BEAM, ACTIVE DISPLACEMENT AIR UNIT CBP CHILLED BEAM, PASSIVE CC COOLING COIL CCP COIL CIRCULATION PUMP	OA OUTDOOR AIR OAT OUTDOOR AIR TEMPERATURE (IN °F, OC ON CENTER OD OUTDOOR DIAMETER (IN INCHES, UNI OR OIL RETURN OS OIL SUPPLY
CD CONTROL DAMPER CF CARTRIDGE FILTER CFH CUBIC FEET PER HOUR (GAS UNIT OF MEASURE) CFM AIR/GAS FLOW RATE (IN CUBIC FEET PER MINUTE) CSF CHEMICAL SHOT FEEDER CHLR CHILLER CHP CHILLED WATER PUMP	P/E PNEUMATIC/ELECTRIC P/T PRESSURE/TEMPERATURE PORT, PETE P PUMP PC PUMPED CONDENSATE PHC PREHEAT COIL
CHR CHILLED WATER RETURN CHS CHILLED WATER SUPPLY CL CENTER LINE CLG CEILING COMP COMPRESSOR CO CLEAN OUT COL COLUMN	PREFAB PREFABRICATED PRES PRESSURE PRV PRESSURE REDUCING VALVE PSF POUNDS PER SQUARE FOOT PSI POUNDS PER SQUARE INCH PTAC PACKAGE TERMINAL AIR CONDITIONING PUH PROPELLER UNIT HEATER
COND CONDENSER CP CONDENSATE PUMP CRU COMPUTER ROOM UNIT CSR CURRENT SENSING RELAY CT COOLING TOWER CU CONDENSING UNIT CUH CABINET UNIT HEATER CV CONVECTOR CWP CONDENSER WATER PUMP CWR CONDENSER WATER RETURN CWS CONDENSER WATER SUPPLY	PVC POLYVINYL CHLORIDE R RADIANT RAD RADIUS RA RETURN AIR RCP RADIANT CEILING PANEL REQ'D REQUIRED RFM REFRIGERANT MONITOR RG RETURN AIR GRILLE RH RELIEF HOOD
DB DRY BULB TEMPERATURE (IN °F, UNLESS OTHERWISE NOTED) DC DUST COLLECTOR DCW DOMESTIC COLD WATER DELTA T TEMPERATURE DIFFERENCE DHW DOMESTIC HOT WATER DIA / Ø DIAMETER (IN INCHES, UNLESS OTHERWISE NOTED) DOAS DEDICATED OUTDOOR AIR SYSTEM DP DIFFERENTIAL PRESSURE (IN FEET OF HEAD, UNLESS OTHERWISE NOTED)	RHC REHEAT COIL RL REFRIGERANT LIQUID RM ROOM RPM REVOLUTIONS PER MINUTE RS REFRIGERANT SUCTION RTU ROOF TOP AIR HANDLING UNIT RV ROOF MOUNTED VENTILATOR RWO RETURN AIR WALL OPENING (ABOVE
DPS DIFFERENTIAL PRESSURE (IN FEEL OF HEAD, ONLESS OFHERMISE NOTED) DPS DIFFERENTIAL PRESSURE TRANSMITTER DS DUCT SILENCER DT DIFFERENTIAL TEMPERATURE (IN °F, UNLESS OTHERWISE NOTED) DU DEHUMIDIFICATION UNIT DUC DOOR UNDER CUT (IN INCHES, UNLESS OTHERWISE NOTED) DWG DRAWING	S SENSOR SA SUPPLY AIR (WITH A UNIT MEASUREM SAG SUPPLY AIR GRILLE SC STEAM CONDENSATE SC HED SCHEDULE SD SMOKE DAMPER SF SUPPLY FAN SHT SHEET
E/P ELECTRICAL/PNEUMATIC EAT ENTERING AIR TEMPERATURE (IN °F, UNLESS OTHERWISE NOTED) ECON ECONOMIZER EF EXHAUST FAN EFF EFFICIENCY EG EXHAUST GRILLE	SHI SHELT SIM SIMILAR SL LINEAR SLOT DIFFUSER SP STATIC PRESSURE (IN INCHES OF W. SPEC SPECIFICATION(S) STD STANDARD SF SHOT FEEDER
EH EXHAUST HOOD ELEV ELEVATION ELEC ELECTRIC, ELECTRICAL EM EXPANDED METAL (MINIMUM OF 70% FREE AREA, UNLESS OTHERWISE NOTED) EMER EMERGENCY EQUIP EQUIPMENT ERC ENERGY RECOVERY CHILLER ERW ENERGY RECOVERY WHEEL, ALSO REFERRED TO AS A HEAT WHEEL ERV ENERGY RECOVERY VENTILATOR ET EXPANSION TANK EWT ENTERING WATER TEMPERATURE (IN °F, UNLESS OTHERWISE NOTED) EX EXISTING EXH EXHAUST	T TEMPERATURE (IN °F, UNLESS OTHER TA TRANSFER AIR TC TEMPERATURE CONTROL TCC TEMPERATURE CONTROL CONTRACTOF TCP TEMPERATURE CONTROL SYSTEM CON TCS TEMPERATURE CONTROL SYSTEM. TD TEMPERATURE DROP (IN °F, UNLESS TEMP TEMPERATURE (IN °F, UNLESS OTHER TOD TOP OF DUCT/DEVICE (IN UNITS NO TR TEMPERATURE RISE (IN °F, UNLESS OT TXV THERMAL EXPANSION VALVE TYP TYPICAL
EXP EXPANSION EXT EXTERIOR F&T FLOAT AND THERMOSTATIC TRAP	UH UNIT HEATER UV UNIT VENTILATOR
F/SD COMBINATION FIRE/SMOKE DAMPER FC FAN COIL UNIT FCV FAN COIL UNIT, FOR VRF SYSTEMS FD FIRE DAMPER FOR FUEL OIL RETURN FOS FUEL OIL SUPPLY FOV FUEL OIL SUPPLY FOV FUEL OIL VENT FP FIRE PROTECTION FPM FEET PER MINUTE FR FILTER RACK FT FEET FT HD FEET OF HEAD FTR FIN TUBE RADIATION	V VENT VAC VACUUM VAV VARIABLE AIR VOLUME VD VOLUME DAMPER VEL VELOCITY (IN FEET PER MINUTE UNL VF VENTILATION FAN VFC VARIABLE FREQUENCY CONTROLLER (VHP VARIABLE REFRIGERANT VOLUME HEAT VIF VERIFY IN FIELD VRC REFRIGERANT SYSTEM CONTROLLER, I VRF VARIABLE REFRIGERANT FLOW VVD DUAL INLET VARIABLE PRIMARY AIR V VVR VARIABLE PRIMARY AIR VOLUME TERM VVF FAN POWERED VARIABLE PRIMARY AIF
G GAS GA GAUGE GAL GALLONS GALV GALVANIZED GC CONDENSATE PIPING – GRAVITY DRAINAGE GF GLYCOL FEEDER GLR GROUND/GEOTHERMAL LOOP RETURN GLS GROUND/GEOTHERMAL LOOP SUPPLY GPM GALLONS PER MINUTE	W WATTS W/ WITH W/O WITHOUT WB WET BULB TEMPERATURE (IN °F, UNI WPD WATER PRESSURE DROP (IN FEET OF WR WALL REGISTER
HC HEATING COIL HDG HEAVY DUTY GRILLE HG REFRIGERANT HOT GAS HHR HEATING HOT WATER RETURN HHS HEATING HOT WATER SUPPLY HLS HIGH LIMIT SWITCH HP HORSEPOWER HPR HEAT PUMP LOOP RETURN HPS HEAT PUMP LOOP RETURN HPS HEAT PUMP LOOP SUPPLY HPU HEAT PUMP AIR HANDLING UNIT, AIR OR WATER SOURCE HPW WATER TO WATER HEAT PUMP UNIT HVAC HEATING/VENTILATING/AIR CONDITIONING HWP HEATING HOT WATER PUMP	

INLESS OTHERWISE NOTED)	$\subset \longrightarrow$	PIPE ELBOW DOWN
	$\bigcirc \longrightarrow$	PIPE ELBOW UP
	$\tilde{\boldsymbol{\zeta}}$	PIPE TEE BELOW WITH
	Ţ (j);	PIPE TEE ABOVE BRA
°F, UNLESS OTHERWISE NOTED)	بر بر	INDICATES DIRECTION
	24/48	PIPE EXPANSION U-LI
IN °F, UNLESS OTHERWISE NOTED)	EXP 24	PIPE EXPANSION Z-L(
, UNLESS OTHERWISE NOTED)	EXP EXP	PIPE EXPANSION L-LO
	ل بــــــــــــــــــــــــــــــــــــ	PIPE ANCHOR
		PIPE ALIGNMENT GUID
PLY		
	·	
		STRAINER
	,ĨsD.	STRAINER, BLOW-OFF
°F, UNLESS OTHERWISE NOTED)		SUCTION DIFFUSER, W
, UNLESS OTHERWISE NOTED)		SUCTION DIFFUSER, W
	·	UNION
PETE'S PLUG		valve (refer to sec
		CHECK VALVE — ARROW SHOWS [
		SPRING LOADED CHEC – ARROW SHOWS I
ioning unit		MANUAL BALANCING V
		MULTIPURPOSE VALVE
		AUTOMATIC FLOW CON
	, ► S	PNEUMATIC – OPERATED
		SOLENOID-OPERATED
		MOTOR OPERATED 2-
OVE CEILING, UNLESS OTHERWISE NOTED)		MOTOR OPERATED 3-
SUREMENT OF CFM)		MANUAL AIR RELIEF VI – PIPE TO NEARES
	$\begin{array}{c} A \\ \neg \\ \neg \\ \downarrow \\ \downarrow$	AUTOMATIC AIR RELIEF – PIPE TO NEARES
		FLEXIBLE CONNECTION
OF WATER COLUMN FOR AIR/GAS SYSTEMS)	;[XXX];	FLEXIBLE CONNECTION
		A.S.M.E. PRESSURE RI – PRESSURE RATIN
THERWISE NOTED)	~ F	FLOW SWITCH
ACTOR I CONTROL PANEL		THERMOMETER, MOUNT
LESS OTHERWISE STATED) DTHERWISE STATED)		PRESSURE GAUGE, WI
S NOTED) ESS OTHERWISE STATED)	, , , , , , , , , , , , , , , , , , , 	PRESSURE SENSOR, V
	, , , , , , , , , , , , , , , , , , , 	TEMPERATURE SENSOF
		FLOW METER (RETRAC
		WATER METER, IN UNI
UNLESS OTHERWISE NOTED)		, DIFFERENTIAL PRESSU
LER (OR VFD) HEAT PUMP UNIT, FOR VRF SYSTEMS	Ĩ	LIQUID LOW LIMIT SWI"
ler, for vrf systems Air volume terminal unit		
TERMINAL UNIT Ry Air volume terminal unit		KEY NOTE
		EQUIPMENT SCHEDULE EQUIPMENT NOTE
, UNLESS OTHERWISE STATED) ET OF HEAD, UNLESS OTHERWISE NOTED)	24x24*	<u># – AIR DEVICE TAG</u>
	35°*	<u>* – DESIGNATIONS / I</u> (C A
		– A TWO DIMENSIO THE AIR DEVICE – A SINGLE DIMEN – A UNIT LESS NU ° – A DEGREE SYMB
		CONNECT NEW TO EX
	NUM SHEET	DETAIL REFERENCE B
	SECT	SECTION REFERENCE
	***	<u>* –</u> <u>SENSOR DESIGN</u> C – CARBON DIOXIE H – HUMIDITY SENS P – STATIC PRESSU S – TEMPERATURE S T – TEMPERATURE
	*	SENSOR WITH PROTEC * APPROPRIATE SET

	ELBOW DOWN
PIPE E	ELBOW UP
PIPE T	TEE BELOW WITH BRANCH ELBOW AT DOWN
PIPE T	TEE ABOVE BRANCH PIPE BELOW
INDICA	TES DIRECTION OF DOWNWARD PITCH
PIPE E	EXPANSION U-LOOP (DIMENSIONS SHOWN AS 24"x48")
PIPE E	EXPANSION Z-LOOP (Z DIMENSION SHOWN AS 24")
PIPE E	EXPANSION L-LOOP (L DIMENSION NOT SHOWN)
PIPE A	ANC HOR
PIPE A	ALIGNMENT GUIDE
PIPE E	EXPANSION/COMPRESSION JOINT
STRAIN	IER
STRAIN	IER, BLOW-OFF VALVE
SUCTIO	DN DIFFUSER, WITH STRAINER AND DRAIN
SUCTIO	DN DIFFUSER, WITH DRAIN AND NO STRAINER
UNION	
VALVE	(REFER TO SECTION 230523 FOR APPROPRIATE TYPE)
	< VALVE
- A	RROW SHOWS DIRECTION OF FLOW
- A	ARROW SHOWS DIRECTION OF FLOW
	PURPOSE VALVE (TRIPLE DUTY VALVE)
	ATIC FLOW CONTROL BALANCING VALVE
	IATIC - OPERATED VALVE
	OID-OPERATED VALVE
MOTOR	COPERATED 2-WAY CONTROL VALVE
MOTOR	COPERATED 3-WAY CONTROL VALVE
	AL AIR RELIEF VENT PIPE TO NEAREST DRAIN
	ATIC AIR RELIEF VENT PIPE TO NEAREST DRAIN
FLEXIB	LE CONNECTION, RUBBER
FLEXIB	LE CONNECTION, BRAIDED
	E. PRESSURE RELIEF VALVE PRESSURE RATING INDICATED IN PSI
FLOW	SWITCH
THERM	OMETER, MOUNTED IN THERMOWELL
PRESS	URE GAUGE, WITH SHUTOFF VALVE
PRESS	URE SENSOR, WITH SHUTOFF VALVE
TEMPE	RATURE SENSOR, MOUNTED IN THERMOWELL
FLOW	METER (RETRACTABLE), WITH SHUTOFF VALVE
WATER	METER, IN UNITS OF GALLONS PER MINUTE (GPM)
DIFFER	RENTIAL PRESSURE TRANSMITTER
liquid	LOW LIMIT SWITCH
key n	OTE
	MENT SCHEDULE TAG
EQUIPN	MENT NOTE
	NR DEVICE TAG (REFER TO DEVICE SCHEDULE)
— А Т — А — А	DESIGNATIONS (DEVICE DESIGNATIONS SHALL BE USED FOR (CLARIFICATION PURPOSE IN ANY CONFIGURATION AND MAY NOT BE USED ON EVERY DEVICE. A TWO DIMENSIONAL NOTE SEPARATED BY A "x" INDICATES THE AIR DEVICE SIZE IN INCHES, 24x24. A SINGLE DIMENSION NOTE INDICATES BOD ELEVATION, 10'8". A UNIT LESS NUMBER NOTE INDICATES AIR FLOW IN CFM, 400. A DECODE SYNCHES VANE DEFINICION. 75
	A DEGREE SYMBOL INDICATES VANE DEFLECTION, 35°. ECT NEW TO EXISTING, FIELD VERIFY EXISTING CONDITIONS
DFTAII	REFERENCE BUBBLE
JETAIL	NEIENENVE DUDDLE
SECTIC	ON REFERENCE BUBBLE
	SENSOR DESIGNATION** -OTHER INDICATIONCARBON DIOXIDE SENSORE -ELECTRIC

MECHANICAL SYMBOLS

<u> </u>	PRESSURE/TEMPERATURE PORT, (P/T PORT)
\sim	
$\overleftarrow{\bigcirc}$	WATER PRESSURE REDUCING/REGULATING VALVE (PLAN VIEW)
<i>;</i> €	water pressure relief valve (plan view)
-	
·{	GAS SHUTOFF COCK
,	LUBRICATED PLUG VALVE
¶	
	STEAM PRESSURE REDUCING VALVE
	GAS PRESSURE REDUCING/REGULATING VALVE
	,
	DOUBLE CHECK VALVE, BACKFLOW ASSEMBLY
	DOUBLE CHECK VALVE, PRESSURE REDUCING BACKFLOW ASSEMBLY
$\overline{\Box}$	
	ATMOSPHERIC VACUUM BREAKER
Ĭ	PRESSURE VACUUM BREAKER
<u>بــــــــــــــــــــــــــــــــــــ</u>	
$\overbrace{\hspace{1.5cm}}^{\hspace{1.5cm}} \bigotimes \hspace{1.5cm} \overbrace{\hspace{1.5cm}}^{\hspace{1.5cm}} i$	STEAM TRAP
	BLIND FLANGE
——————————————————————————————————————	HEATING HOT WATER SUPPLY
——————————————————————————————————————	HEATING HOT WATER RETURN
CHS	CHILLED WATER SUPPLY
C HR	CHILLED WATER RETURN
NP	NON-POTABLE WATER
GLS	GROUND/GEOTHERMAL LOOP SUPPLY
GLS	GROUND/GEOTHERMAL LOOP RETURN
——————————————————————————————————————	HEAT PUMP LOOP SUPPLY
——————————————————————————————————————	HEAT PUMP LOOP RETURN
MPS	MEDIUM PRESSURE STEAM SUPPLY
LPS	LOW PRESSURE STEAM SUPPLY
SC	STEAM CONDENSATE
R	IN-FLOOR RADIANT PIPING
\times \times \times	PIPE WITH HEAT TRACING
C S	CONDENSER WATER SUPPLY
C R	CONDENSER WATER RETURN
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
RG	REFRIGERANT HOT GAS
ILS	ICE LOOP WATER SUPPLY
ILR	ICE LOOP WATER RETURN
PC	PUMPED CONDENSATE
GC	GRAVITY CONDENSATE DRAIN
AV	ATMOSPHERIC VENT
	METAL DUCT
	<u>METAL DUCT</u> REFER TO PROJECT SPECIFICATIONS FOR DUCT INSTALLATION REQUIREMENTS. DIMENSIONS SHOWN INDICATE
24x24	FREE AREA, INSIDE DUCT MEASUREMENTS. DUCT SIZE INDICATED IN INCHES WITH SHOWN DIMENSION INDICATED
	FIRST. <u>ACOUSTICALLY LINED DUCT</u>
24×24	REFER TO PROJECT SPECIFICATIONS FOR DUCT INSTALLATION REQUIREMENTS. DIMENSIONS SHOWN
	INDICATE FREE AREA, INSIDE DUCT MEASUREMENTS. ACOUSTICAL DOUBLE WALL DUCT
24×24	REFER TO PROJECT SPECIFICATIONS FOR DUCT INSTALLATION REQUIREMENTS. DIMENSIONS SHOWN
	INDICATE FREE AREA, INSIDE DUCT MEASUREMENTS.
"OR"	DUCT MOUNTED AIR VOLUME BALANCING DAMPER REFER TO PROJECT SPECIFICATIONS FOR CONSTRUCTION
"OR"	AND INSTALLATION DETAILS. AS SYMBOLIZED WITH OR WITHOUT NOTATION.
BDD BDD	DUCT MOUNTED COUNTER WEIGHTED BACK DRAFT DAMPER
	REFER TO PROJECT SPECIFICATIONS FOR CONSTRUCTION AND INSTALLATION DETAILS.
"OR"	FIRE DAMPER
FD FD-2B	FD INDICATES FIRE DAMPER; ADDITIONAL DESIGNATIONS MAY ALSO BE USED, SUCH AS A NUMBER TO INDICATE THE RATING OF THE FIRE DAMPER, FOR 2 OR 3 HOUR
	DAMPERS, AND/OR THE LETTER INDICATING THE TYPEOR STYLE OF A FIRE DAMPER, OF TYPES A, B, OR C.
"OR" SD SD	WALL MOUNTED SMOKE DAMPER
	REFER TO PROJECT SPECIFICATIONS FOR CONSTRUCTION AND INSTALLATION DETAILS.
"OR" F <u>/</u> SD F/SD	
	<u>WALL MOUNTED COMBINATION FIRE/SMOKE DAMPER</u> REFER TO PROJECT SPECIFICATIONS FOR CONSTRUCTION
"OR"	AND INSTALLATION DETAILS.
MOD	<u>MOTOR OPERATED DAMPER</u> REFER TO SPECIFICATION SECTION 230900 FOR INSTALLATION REQUIREMENTS. DAMPERS TO BE SIZED TO
	INSTALLATION REQUIREMENTS. DAMPERS TO BE SIZED TO INSIDE DUCT DIMENSIONS. DAMPER SHALL BE OPPOSED BLADE UNLESS OTHERWISE NOTED.
T	S.L. MOLED.
	DUCT OR EQUIPMENT MOUNTED TEMPERATURE SENSOR
H	
	DUCT OR EQUIPMENT MOUNTED HUMIDITY SENSOR
	DUCT OR EQUIPMENT MOUNTED CARBON DIOXIDE SENSOR
P	DUCT OR EQUIPMENT MOUNTED DIFFERENTIAL PRESSURE
	SENSOR AS COMPARED WITH ATMOSPHERIC CONDITIONS
_ P L_	

36x24	RECTANGULAR DUCT SUPPLY AIR ELBOW UP
36x24	RECTANGULAR DUCT SUPPLY AIR ELBOW DOWN
36x24	RECTANGULAR DUCT RETURN/EXHAUST AIR ELBOW UP
36x24	RECTANGULAR DUCT RETURN/EXHAUST AIR ELBOW DOWN
36x24	<u>Rectangular mitered elbow; radius (R) = 0</u> " All mitered elbows are to contain turning vanes unless otherwise noted. Refer to project specifications for construction details.
36x24	90° RECTANGULAR DUCT ELEVATION TRANSITION
36x24	RECTANGULAR DUCT ELEVATION TRANSITION. APPROPRIATE ANGULAR DIMENSIONS TO BE COORDINATED BY THE CONTRACTOR.
36x12 36x24	RECTANGULAR DUCT TOP OR BOTTOM TRANSITION
24x24 36x24	<u>RECTANGULAR DUCT MULTI SIDED TRANSITION</u> MINIMUM SLOPE = 15° MAXIMUM SLOPE = 45° SIDE WITH MAXIMUM SLOPE DETERMINES FITTING LENGTH. REFER TO PROJECT SPECIFICATIONS FOR CONSTRUCTION DETAILS.
24x24 36x24	RECTANGULAR DUCT SINGLE SIDED TRANSITION MINIMUM SLOPE = 15° MAXIMUM SLOPE = 45° REFER TO PROJECT SPECIFICATIONS FOR CONSTRUCTION DETAILS.
36x24 24"ø	<u>RECTANGULAR TO SPIRAL DUCT TRANSITION</u> REFER TO SPECIFICATION SECTIONS FOR CONSTRUCTION DETAILS.
36x24 F0 24"ø	<u>OVAL TO SPIRAL DUCT DIMENSION DESCRIPTION</u> OVAL TO SPIRAL DUCT TRANSITION SHOWN. ALL SIZES SHOWN IN INCHES, UNLESS OTHERWISE NOTED. 24/16ø = FLAT OVAL DUCT 24"WIDE WITH 16"DIAMETER SIDES
24"ø	SPIRAL DUCT ELBOW UP
24"ø	SPIRAL DUCT ELBOW DOWN
24"ø () 24"ø	SPIRAL DUCT ELEVATION TRANSITION. APPROPRIATE ANGULAR DIMENSIONS TO BE COORDINATED BY THE CONTRACTOR.
R (RADIUS)	STANDARD RECTANGULAR ELBOW; RADIUS $(R) = DUCT DIAMETER$ REFER TO PROJECT SPECIFICATIONS FOR CONSTRUCTION DETAILS.
R (RADIUS)	STANDARD SPIRAL ELBOW; RADIUS $(R) = 1.5 \times DUCT DIAMETER$ REFER TO PROJECT SPECIFICATIONS FOR CONSTRUCTION DETAILS.
24"ø	<u>SPIRAL MITERED ELBOW; RADIUS (R) = 0"</u> ALL MITERED ELBOWS ARE TO CONTAIN TURNING VANES UNLESS OTHERWISE NOTED. REFER TO PROJECT SPECIFICATIONS FOR CONSTRUCTION DETAILS.
PLAIN PLAIN BEVELED TAP TAP TAP TAP TAP TAP TAP TAP TAP TAP TAP TAP TAP TAP	MAIN TO BRANCH TAKEOFFS FOR DUCT INSTALLATIONS SERVING MULTIPLE AIR DEVICES, INSTALL BALANCING DAMPERS AFTER THE BRANCH TAKEOFFS SERVING SINGLE AIR DEVICES. SEVERAL TYPES OF TAKEOFFS ARE AVAILABLE, SELECT THE TAKEOFF AS INDICATED ON THE PLAN DRAWINGS. * TAPS MAY BE UTILIZED WITH VARIOUS TAKEOFF ANGLES OTHER THAN 90° FROM THE MAIN. REFER TO PLANS FOR INDICATION.
WxH W+2 W+2 BOTH DIMENSIONS 1" DUCT LINER	ACOUSTICAL ELBOW (AE); FOR AIR TRANSFER PURPOSES ACOUSTICAL BOOTS NOT ATTACHED TO EQUIPMENT, AIR DEVICES, OR OTHERWISE INDICATED ON THE CONSTRUCTION DRAWINGS SHALL BE INSTALLED AS HIGH AS POSSIBLE TO MINIMIZED NOISE TRANSFERRED BETWEEN SPACES. IN MOST CASES, ACOUSTICAL ELBOWS WILL NOT BE TAGGED OR LABELED AS AND ACOUSTICAL ELBOW (AE), BUT THEIR INTENDED USE SHALL INFER THE APPROPRIATE CONSTRUCTION DIMENSION.

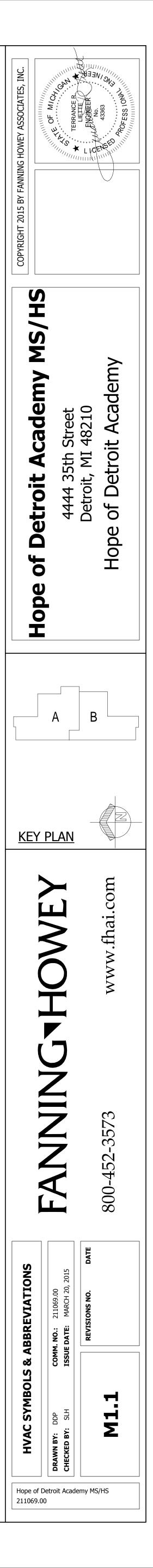
GENERAL NOTES

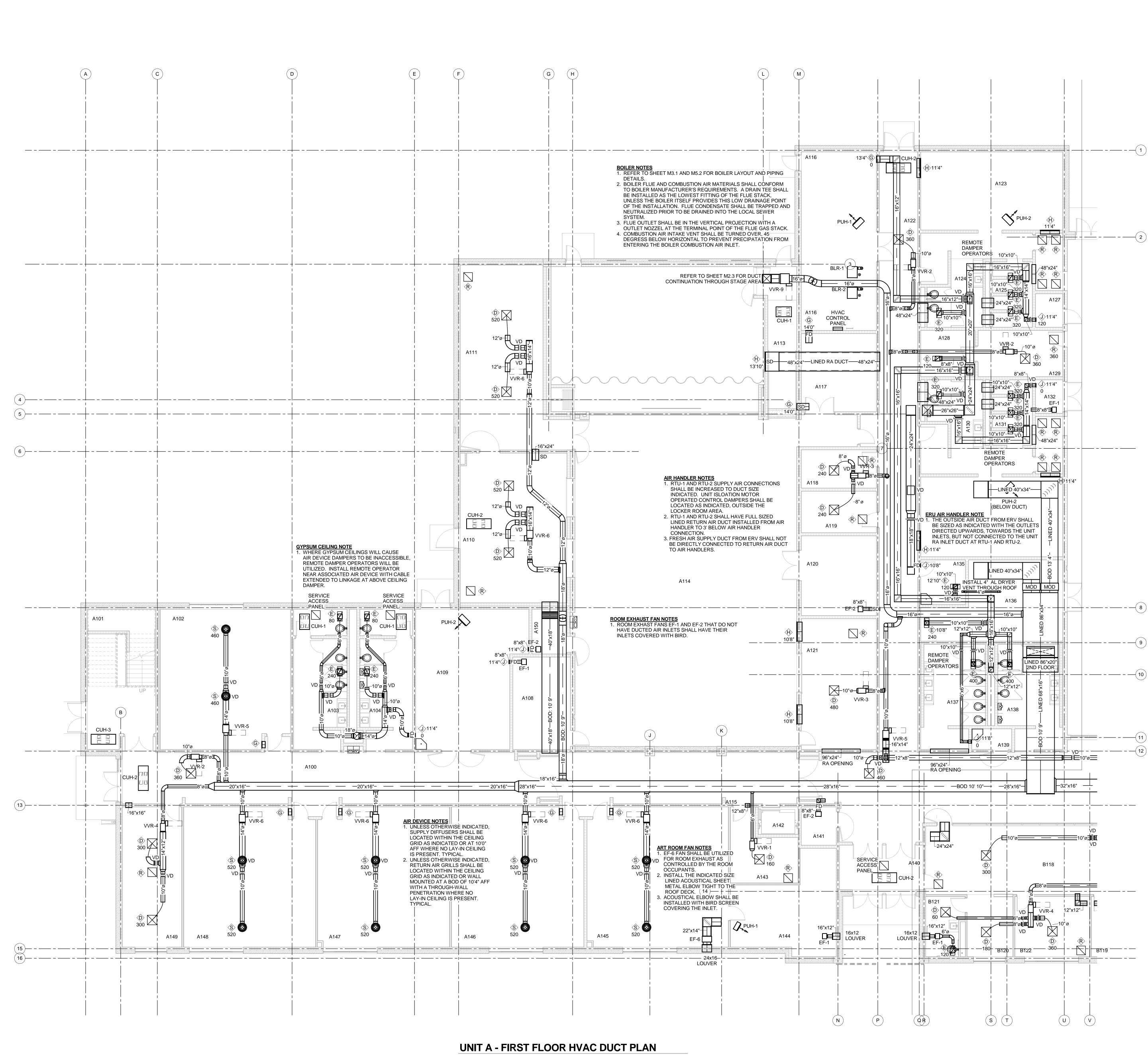
- 1. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF THE WORK WITH OTHER TRADES DURING CONSTRUCTION. REFER TO SPECIFICATION SECTION 9052 AND 9053 FOR LISTED CONSTRUCTION FINISHES OF EXPOSED EQUIPMENT, DUCT, PIPE, ETC. UNLISTED ITEMS SHALL BE SUBMITTED TO THE PROJECT ARCHITECT FOR CLARIFICATION. ANY DUCT, PIPE, EQUIPMENT, OR ETC. INSTALLED IN A FINISHED EXPOSED SPACE SHALL BE ASSUMED TO BE PAINTED AND SHALL THEREFORE BE THOROUGHLY CLEANED AND PREPARED UNLESS OTHERWISE NOTED.
- 2. CONTRACTOR SHALL COORDINATE AIR DEVICE LOCATIONS WITH REFLECTED CEILING, INTERIOR AND EXTERIOR ELEVATION PLANS.
- 3. CONTRACTOR SHALL REFER TO EQUIPMENT SCHEDULE SHEETS FOR TAGGED EQUIPMENT PERFORMANCE REQUIREMENTS AND CONSTRUCTION DOCUMENTS FOR MINIMUM INSTALLATION REQUIREMENTS.
- 4. CONTRACTOR IS RESPONSIBLE TO INSTALL DUCT AND PIPE TRANSITIONS FOR THE SELECTED EQUIPMENT AS NECESSARY FOR CONNECTION OF THE INDICATED DUCT AND PIPE SIZES.
- 5. UNLESS OTHERWISE INDICATED, ALL ABOVE CEILING SPACE(S) SHALL BE CONSIDERED PART OF THE RETURN AIR PLENUM. THEREFORE ALL PIPE, DUCT, CONTROL DEVICES, WIRING, AND EQUIPMENT SHALL BE RATED AND ACCEPTABLE FOR INSTALLATION IN A PLENUM SPACE.
- 6. WHENEVER POSSIBLE, DUCT, PIPING, CONTROL DEVICES, AND EQUIPMENT SHALL BE INSTALLED A MINIMUM OF 8" ABOVE THE FINISHED CEILING ELEVATION TO AVOID INSTALLATION CONFLICTS WITH CEILING MOUNTED DEVICES AND UNLESS OTHERWISE NOTED, THE BOTTOM OF HVAC EQUIPMENT SHALL BE A MAXIMUM OF 24" ABOVE CEILING ELEVATIONS AND UNOBSTRUCTED BY DUCT, PIPING, EQUIPMENT AND ETC. FOR SERVICE AND MAINTENANCE PURPOSES.
- 7. INSTALL METAL SLEEVES THROUGH WALL PENETRATION CONSISTING OF UNUNIFORM CONSTRUCTION MATERIALS. INSTALL FIRE CAULKING AS NECESSARY, REFER TO THE ARCHITECTURAL SHEETS FOR DESIGNATION OF FIRE AND SMOKE RATED WALL ASSEMBLIES. REFER TO SPECIFICATION 7840 FOR FIRE STOPPING MATERIAL DETAILS.
- 8. WHEN UTILIZING STRUCTURAL STEEL FOR SUPPORT OF DUCT, PIPE AND EQUIPMENT HANGERS, ATTACHMENT TO THE STRUCTURAL STEEL SHALL OCCUR AT THE TOP OR BOTTOM FLANGE OF THE STRUCTURAL ELEMENT.
- 9. SYMBOLS AND ABBREVIATIONS ON THIS SHEET MAY NOT ALL BE USED WITHIN THIS SET OF PROJECT DOCUMENTS.

DUCT OR EQUIPMENT MOUNTED LOW TEMPERATURE SENSOR

DUCT OR EQUIPMENT MOUNTED DIFFERENTIAL PRESSURE SENSOR MONITORING INTERNAL SYSTEM LOSS

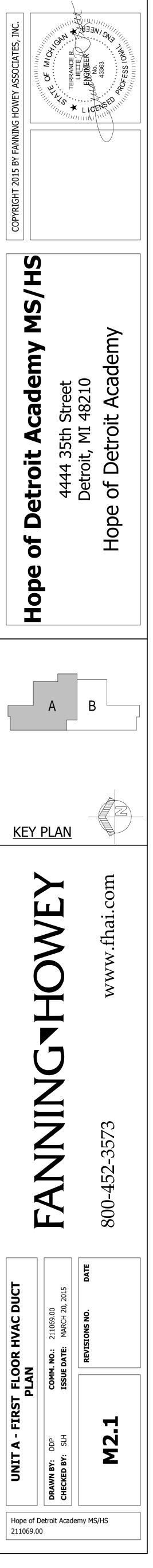
DUCT OR EQUIPMENT MOUNTED HIGH TEMPERATURE SENSOR

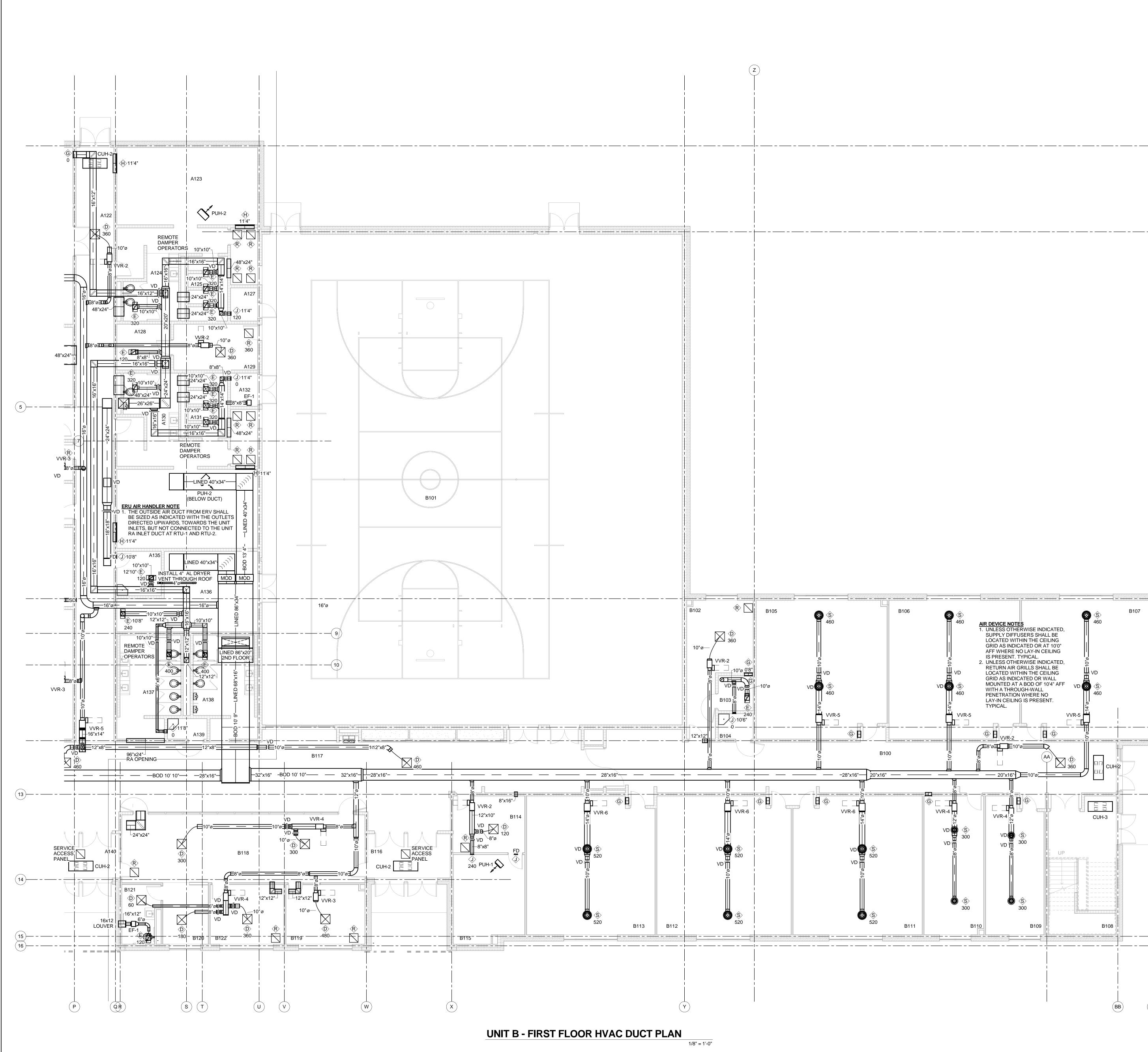




1/8" = 1'-0"

Number	Name	Area
A100	INTERVENING ROOM	996 SF
A101	STAIR	383 SF
A102	CLASSROOM	779 SF
A103	RESTROOM	251 SF
A104	RESTROOM	248 SF
A108	GENERAL STORAGE	233 SF
A109	RECEIVING	615 SF
A110	SERVING KITCHEN	696 SF
A111	TABLE STORAGE	703 SF
A112	PLATFORM	1333 SF
A113	CORRIDOR	201 SF
A114	COMMONS	3271 SF
A115	CORRIDOR	589 SF
A116	MECHANICAL ROOM	587 SF
A116	MECHANICAL ROOM	Redundan
		Space
A117	STORAGE	257 SF
A118	DRESS RM	126 SF
A119	DRESS RM	137 SF
A120	TABLE STORAGE	262 SF
A121	STAFF DINING	430 SF
A122	CORRIDOR	1032 SF
A123	GIRLS LOCKER RM	644 SF
A124	RESTROOM	137 SF
A125	SHOWERS	111 SF
A123 A127	J.C.	40 SF
A127 A128	STORAGE RM	110 SF
A120 A129	OFFICE	172 SF
A129 A130	RESTROOM	172 SF 138 SF
A130 A131	SHOWERS	138 SF
-	SOUND	
A132		40 SF
A133	BOYS LOCKER ROOM	652 SF
A135		88 SF
A136	GYM STORAGE	406 SF
A137	RESTROOM	267 SF
A138	RESTROOM	268 SF
A139	J.C.	36 SF
A140	VESTIBULE	165 SF
A141	MACHINE RM	59 SF
A142	ELEV	48 SF
A143	OFFICE	168 SF
A144	ART STORAGE	365 SF
A145	ART	852 SF
A146	CLASSROOM	799 SF
A147	CLASSROOM	794 SF
A148	CLASSROOM	794 SF
A149	MS ASSISTANT	365 SF
	PRINCIPAL OFFICE	
A150	TECH ROOM	69 SF



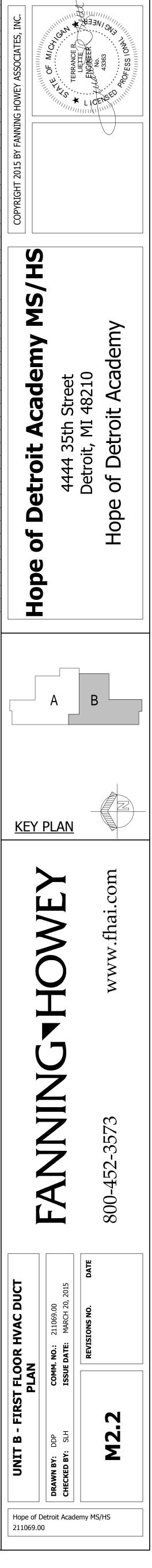


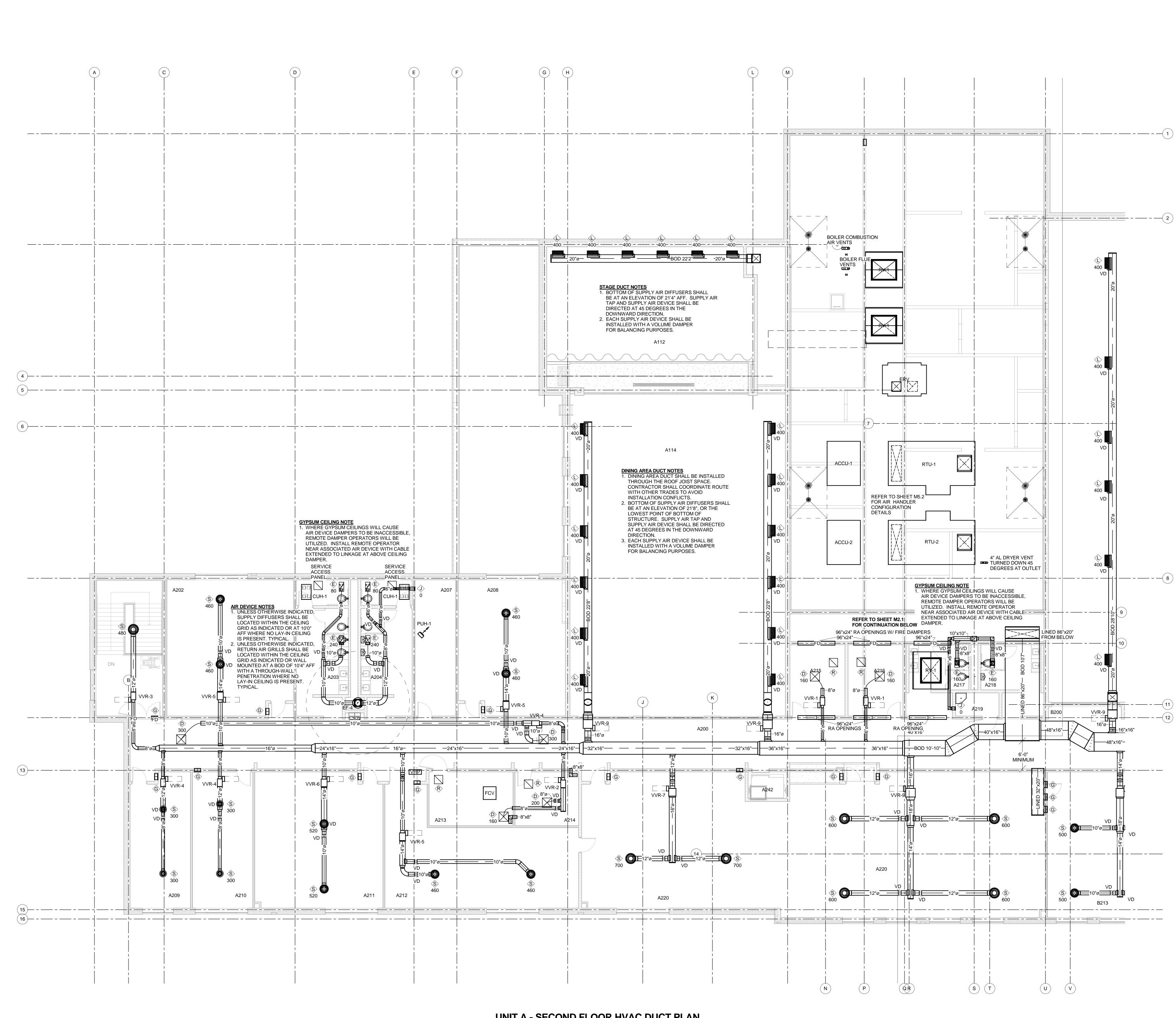
		Numbe	ROOM LEGEND - UNIT er Name
		A200 A202 A203 A204 A207	CORRIDOR CLASSROOM RESTROOM RESTROOM STORAGE
		A208 A209 A210 A211 A212	WORKROOM RESOURCE RM RESOURCE RM CLASSROOM BOOKSTORE/WOR
		A213 A214 A215	K RM HEAD END ITINERANT OFFICE MS COUN OFFICE
	1	A216 A217 A218 A219 A220	HS COUN OFFICE RESTROOM RESTROOM J.C. MEDIA CENTER
	2	A220 A242 B100 B101 B102	MEDIA CENTER ELEV. CORRIDOR GYMNASIUM CONFERENCE RM
		B103 B104 B105 B106 B107 B108	TECH ROOM J.C. CLASSROOM CLASSROOM CLASSROOM STAIR
		B109 B110 B111 B112 B113	RESOURCE RM RESOURCE RM CLASSROOM CLASSROOM CLASSROOM
		B114 B115 B116 B117 B118 B119	SECURITY OFFICE RECORDS VESTIBULE CORRIDOR RECEPTION CONFERENCE
		B120 B121 B122	CLINIC TOILET RM PRINCIPAL OFFICE
B106 B106 B106 B107	8		
VD S WITH A THROUGH-WALL VD S VD			
Image: Strate of the object	(11) (12)		
S 300 B111 B110 B109 B108 I			

(BB)

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Area
1912 SF
779 SF
320 SF
316 SF
255 SF
650 SF
366 SF
382 SF
793 SF
808 SF
210 SF
159 SF
182 SF
123 SF
180 SF
176 SF
47 SF
2938 SF
Redundant
Space
48 SF
1324 SF
1324 SF 9340 SF
1324 SF 9340 SF 298 SF
1324 SF 9340 SF 298 SF 54 SF
1324 SF 9340 SF 298 SF 54 SF 40 SF
1324 SF 9340 SF 298 SF 54 SF 40 SF 788 SF
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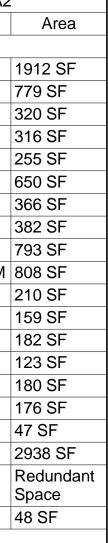


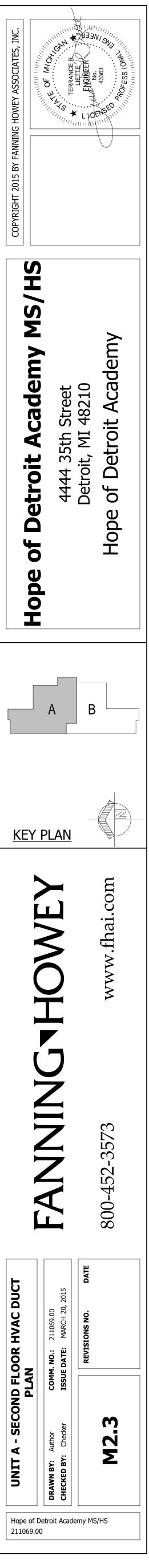


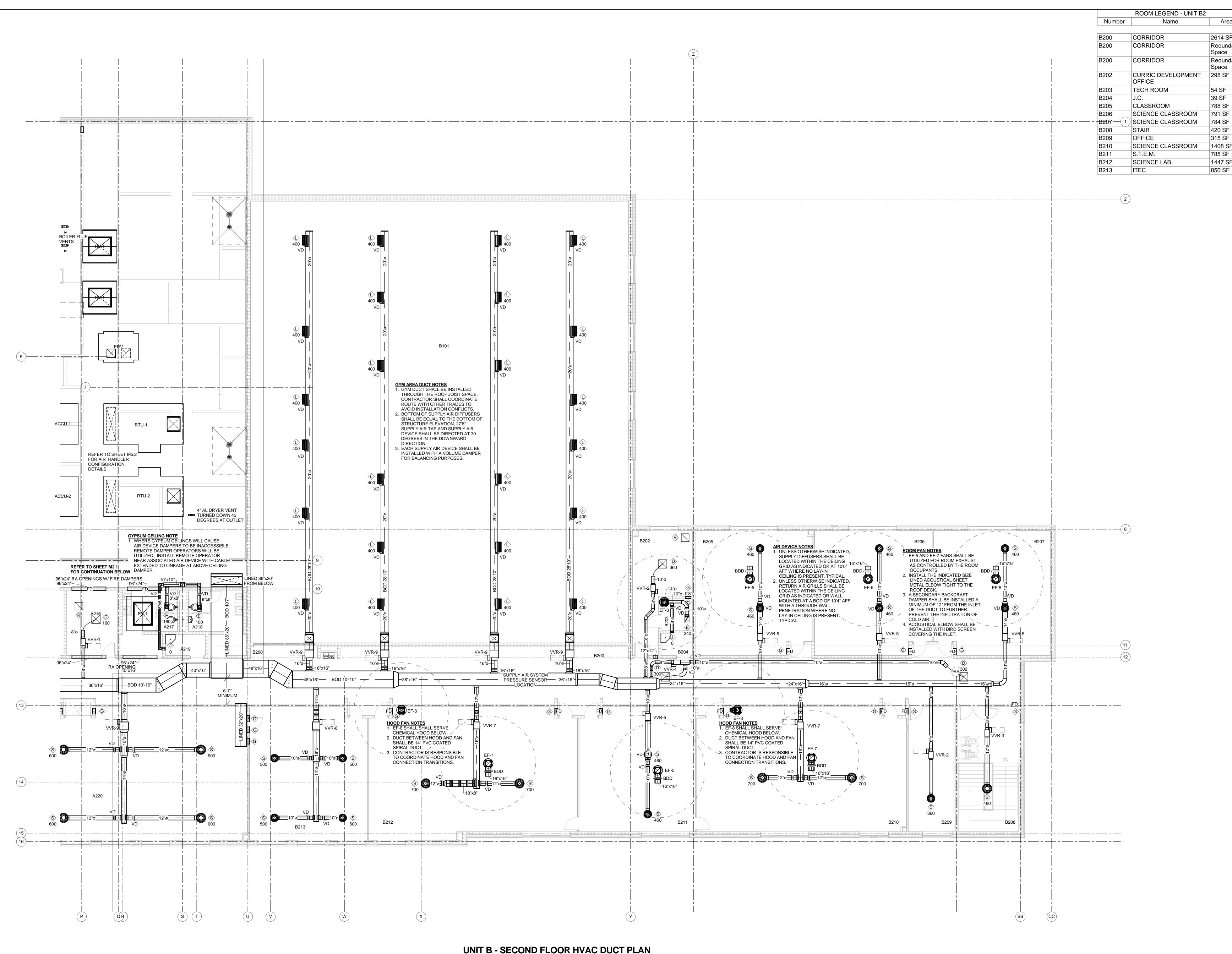
UNIT A - SECOND FLOOR HVAC DUCT PLAN

1/8" = 1'-0"

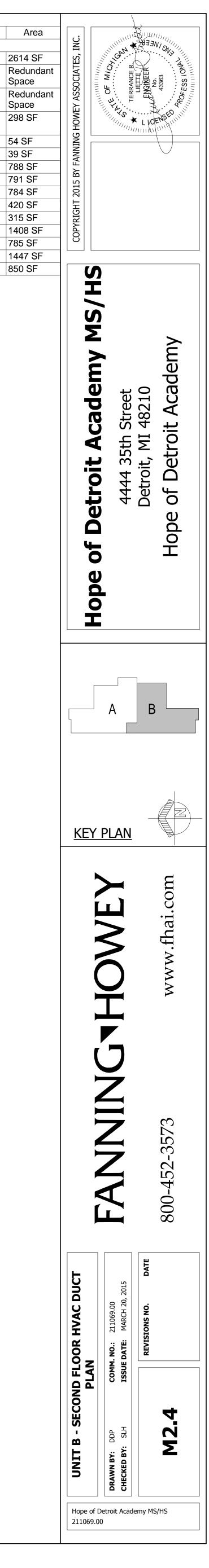
	ROOM LEGEND - UNIT A2
Number	Name
1000	
A200	CORRIDOR
A202	CLASSROOM
A203	RESTROOM
A204	RESTROOM
A207	STORAGE
A208	WORKROOM
A209	RESOURCE RM
A210	RESOURCE RM
A211	CLASSROOM
A212	BOOKSTORE/WORK RM
A213	HEAD END
A214	ITINERANT OFFICE
A215	MS COUN OFFICE
A216	HS COUN OFFICE
A217	RESTROOM
A218	RESTROOM
A219	J.C.
A220	MEDIA CENTER
A220	MEDIA CENTER
A242	ELEV.

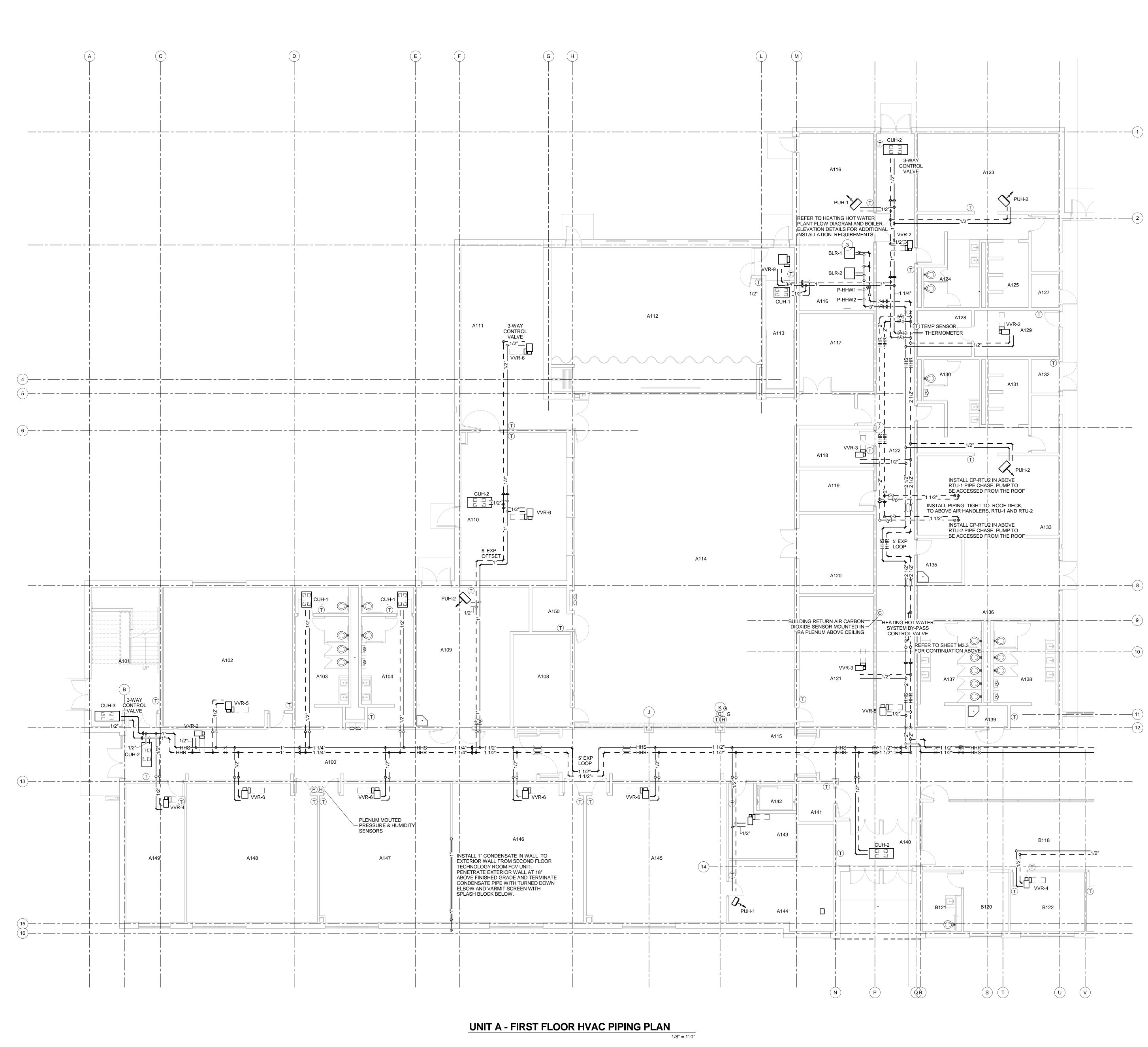




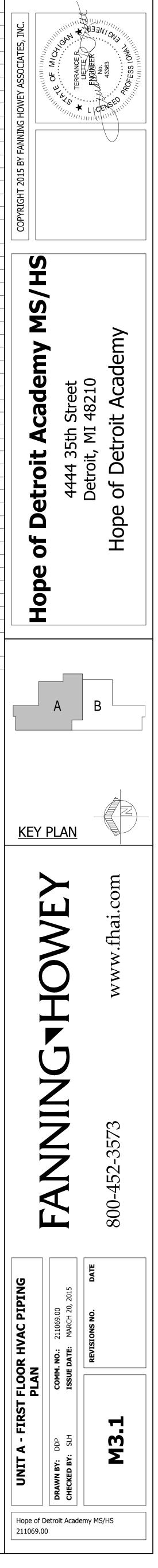


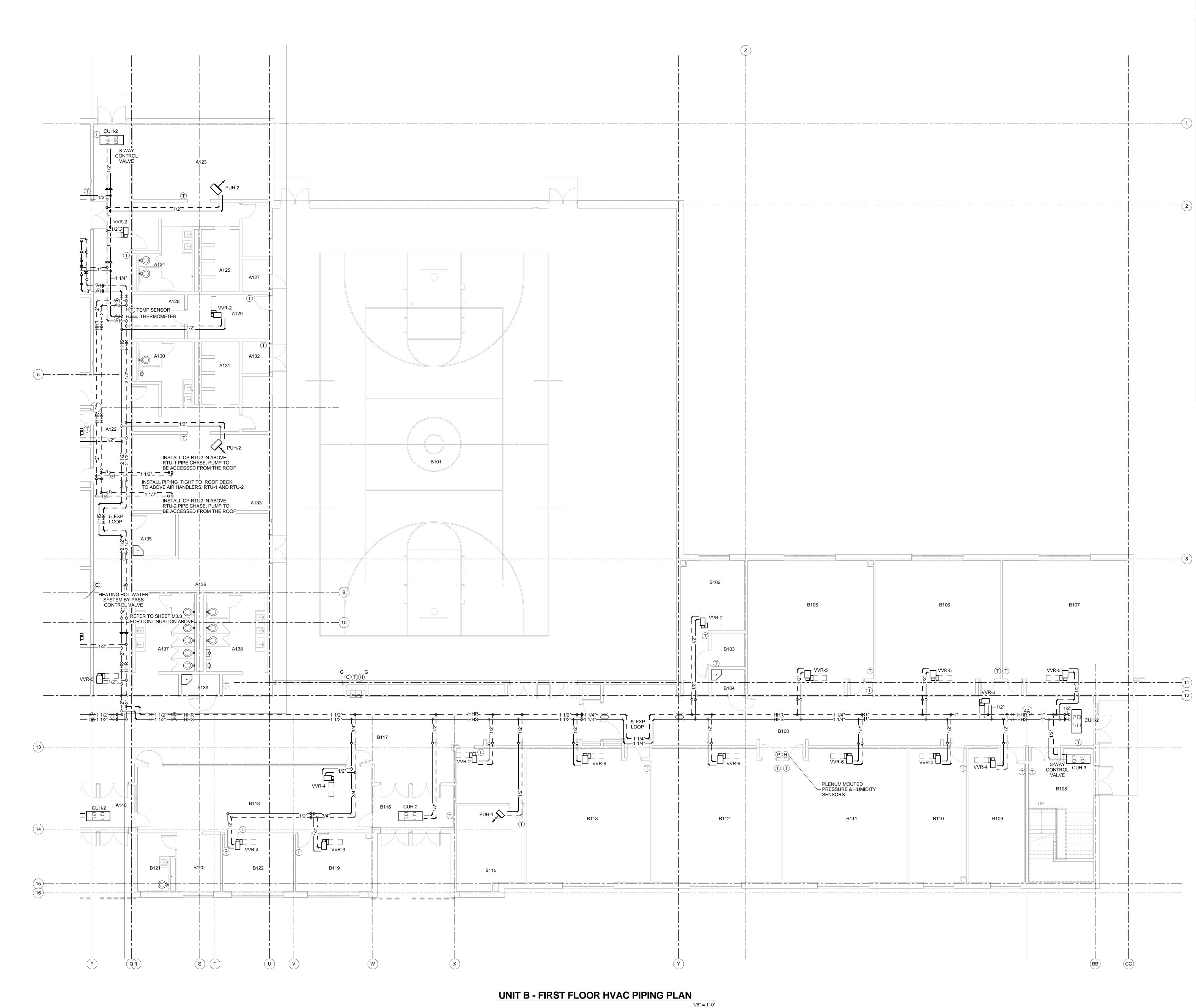
UNIT B - SECOND FLOOR HVAC DUCT PLAN 1/8" = 1'-0"





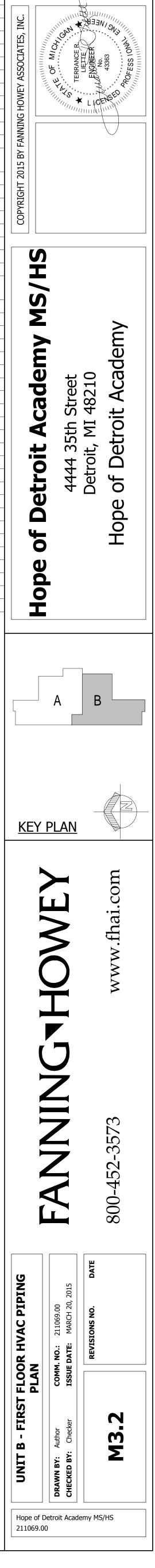
	ROOM LEGEND - UNIT A	1
Number	Name	Area
A100	INTERVENING ROOM	996 SF
A101	STAIR	383 SF
A102	CLASSROOM	779 SF
A103	RESTROOM	251 SF
A104	RESTROOM	248 SF
A108	GENERAL STORAGE	233 SF
A109	RECEIVING	615 SF
A110	SERVING KITCHEN	696 SF
A111	TABLE STORAGE	703 SF
A112	PLATFORM	1333 SF
A112 A113	CORRIDOR	201 SF
A113 A114	COMMONS	3271 SF
A114 A115	CORRIDOR	589 SF
A116	MECHANICAL ROOM	587 SF
A116	MECHANICAL ROOM	Redundant Space
A117	STORAGE	257 SF
A117 A118	DRESS RM	
		126 SF
A119	DRESS RM	137 SF
A120	TABLE STORAGE	262 SF
A121	STAFF DINING	430 SF
A122	CORRIDOR	1032 SF
A123	GIRLS LOCKER RM	644 SF
A124	RESTROOM	137 SF
A125	SHOWERS	111 SF
A127	J.C.	40 SF
A128	STORAGE RM	110 SF
A129	OFFICE	172 SF
A130	RESTROOM	138 SF
A131	SHOWERS	110 SF
A132	SOUND	40 SF
A133	BOYS LOCKER ROOM	652 SF
A135	LAUNDRY	88 SF
A136	GYM STORAGE	406 SF
A137	RESTROOM	267 SF
A138	RESTROOM	268 SF
A139	J.C.	36 SF
A140	VESTIBULE	165 SF
A141	MACHINE RM	59 SF
A142	ELEV	48 SF
A143	OFFICE	168 SF
A144	ART STORAGE	365 SF
A145	ART	852 SF
A146	CLASSROOM	799 SF
A147	CLASSROOM	794 SF
A148	CLASSROOM	794 SF
A149	MS ASSISTANT	365 SF
	PRINCIPAL OFFICE	
A150	TECH ROOM	69 SF

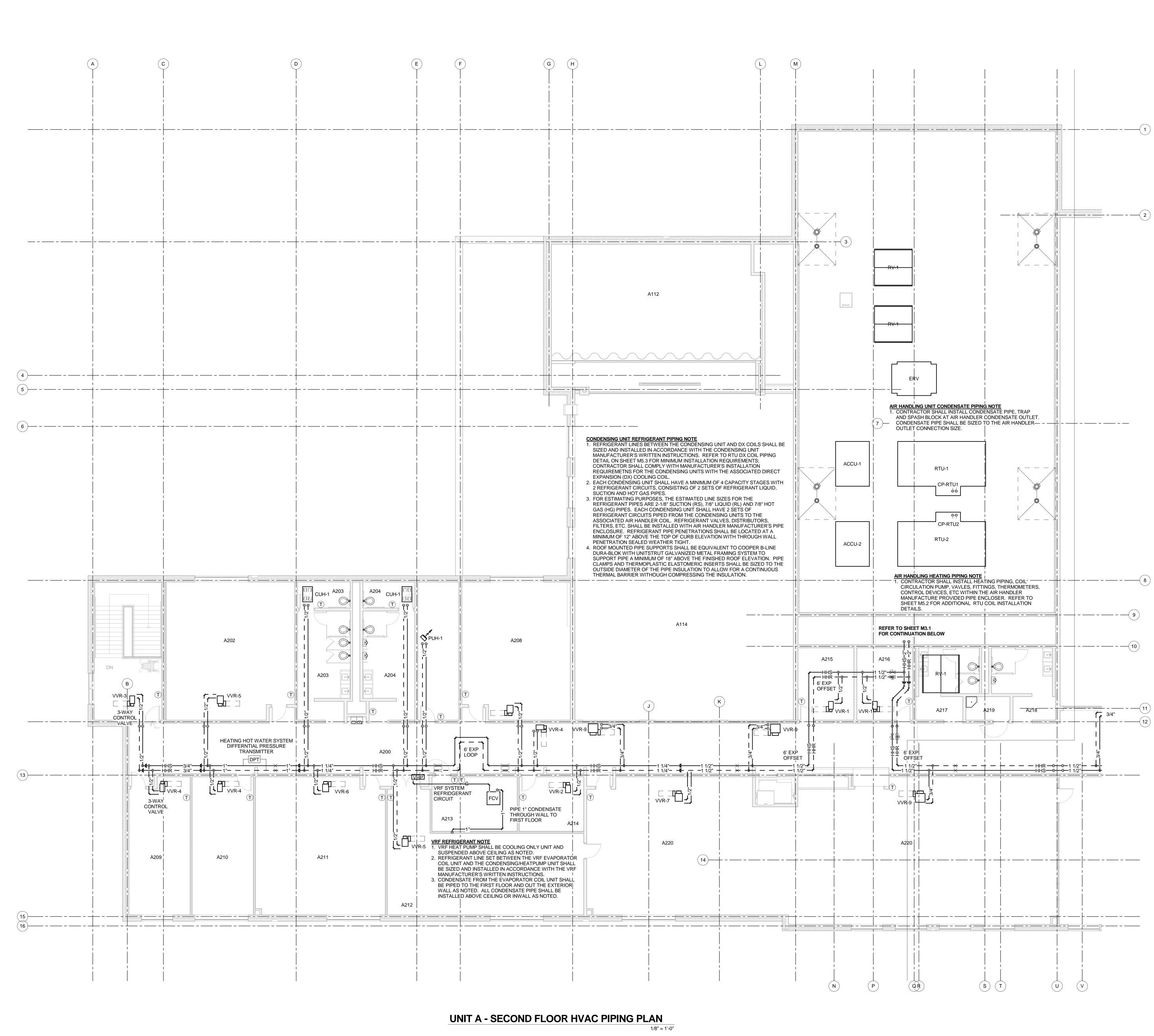




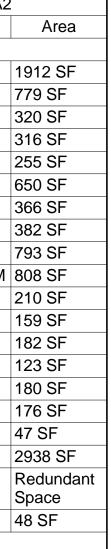
ROOM LEGEND - UNIT r Name Image: CORRIDOR CLASSROOM CLASSROOM RESTROOM Image: RESTROOM STORAGE Image: WORKROOM STORAGE Image: RESOURCE RM RESOURCE RM Image: RESOURCE RM RESOURCE RM Image: RESOURCE RM BOOKSTORE/WOR Image: RESTROOM Image: RESTROCM Image: RESTROOM Image: RESTROCM Image: RESTROOM RESTROCM
CORRIDOR CLASSROOM RESTROOM RESTROOM STORAGE WORKROOM RESOURCE RM RESOURCE RM CLASSROOM BOOKSTORE/WOR K RM HEAD END ITINERANT OFFICE MS COUN OFFICE
CLASSROOM RESTROOM RESTROOM STORAGE WORKROOM RESOURCE RM RESOURCE RM CLASSROOM BOOKSTORE/WOR K RM HEAD END ITINERANT OFFICE MS COUN OFFICE
RESTROOM RESTROOM STORAGE WORKROOM RESOURCE RM RESOURCE RM CLASSROOM BOOKSTORE/WOR K RM HEAD END ITINERANT OFFICE MS COUN OFFICE HS COUN OFFICE
RESTROOM STORAGE WORKROOM RESOURCE RM CLASSROOM BOOKSTORE/WOR K RM HEAD END ITINERANT OFFICE MS COUN OFFICE HS COUN OFFICE
STORAGE WORKROOM RESOURCE RM RESOURCE RM CLASSROOM BOOKSTORE/WOR K RM HEAD END ITINERANT OFFICE MS COUN OFFICE HS COUN OFFICE
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ITINERANT OFFICE MS COUN OFFICE HS COUN OFFICE
MS COUN OFFICE HS COUN OFFICE
HS COUN OFFICE
RESTROOM
RESTROOM
J.C.
MEDIA CENTER
MEDIA CENTER
ELEV.
CORRIDOR
GYMNASIUM
CONFERENCE RM
TECH ROOM
J.C.
CLASSROOM
CLASSROOM
CLASSROOM
STAIR
RESOURCE RM
RESOURCE RM
CLASSROOM
CLASSROOM
CLASSROOM
SECURITY OFFICE
RECORDS
VESTIBULE
CORRIDOR
RECEPTION
CONFERENCE
CLINIC
TOILET RM
PRINCIPAL OFFICE

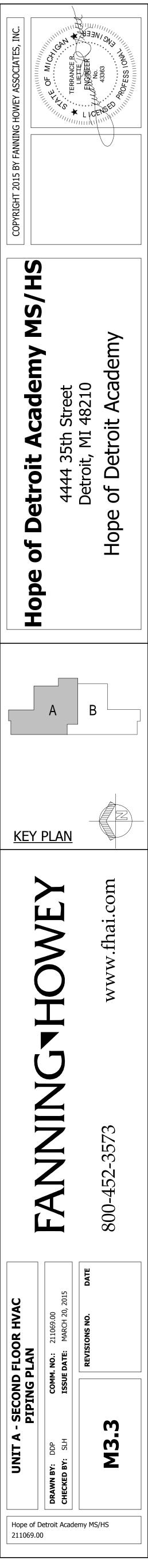
Area
1912 SF
779 SF
320 SF
316 SF
255 SF
650 SF
366 SF
382 SF
793 SF
808 SF
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210 SF
159 SF
182 SF
102 OF
123 ST 180 SF
176 SF
47 SF
2938 SF
Redundant Space
48 SF
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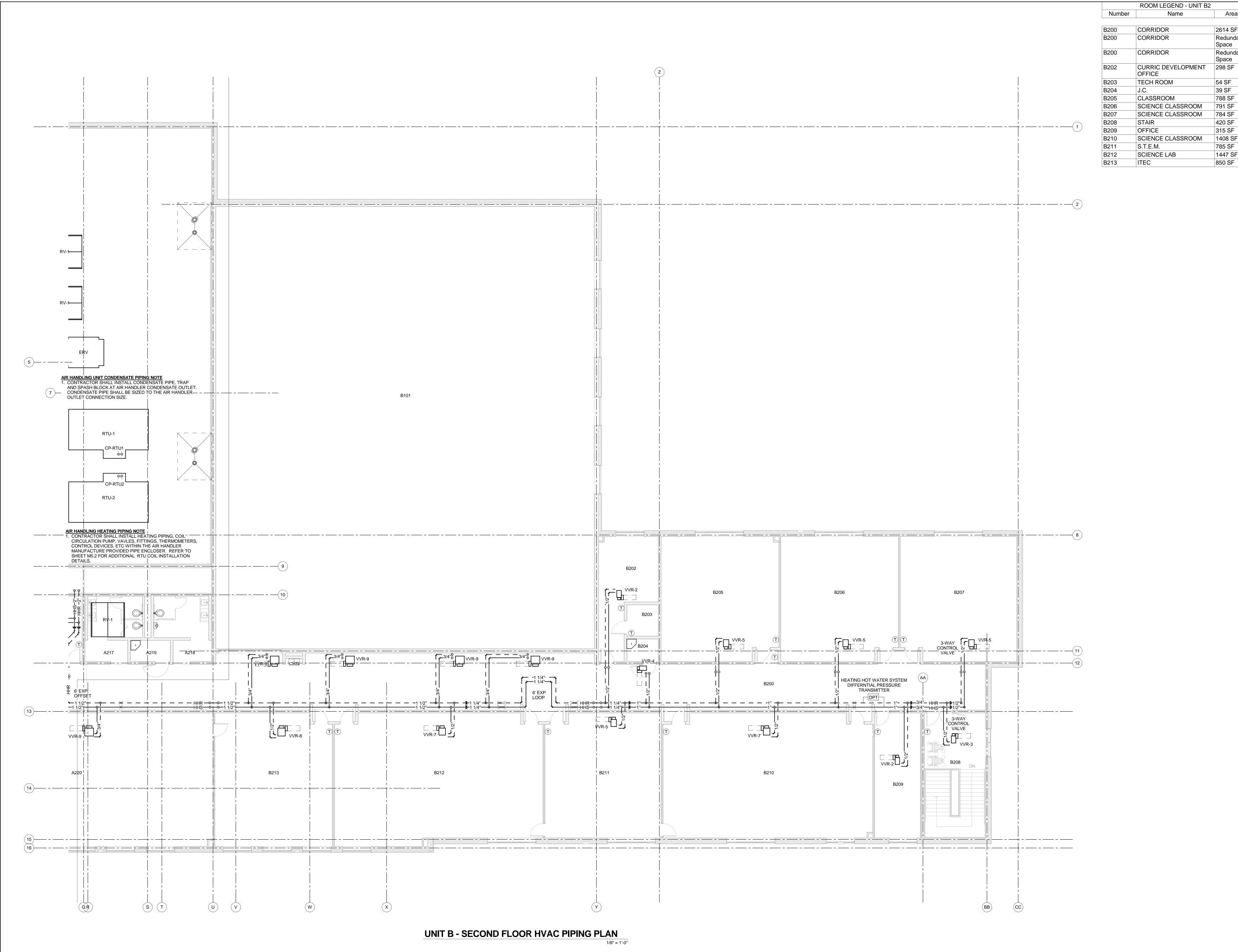


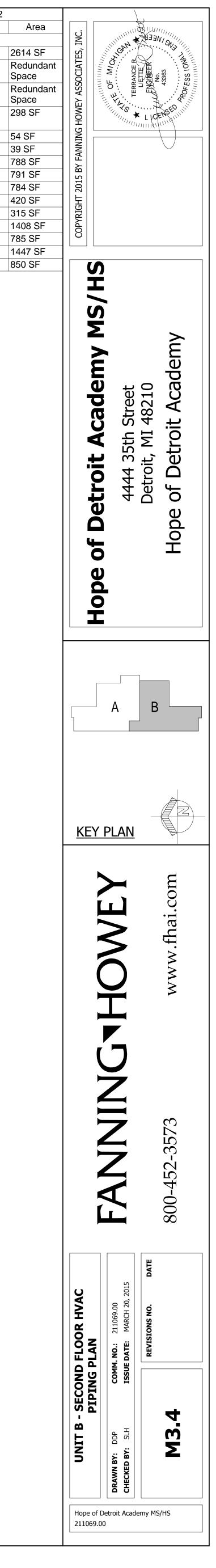


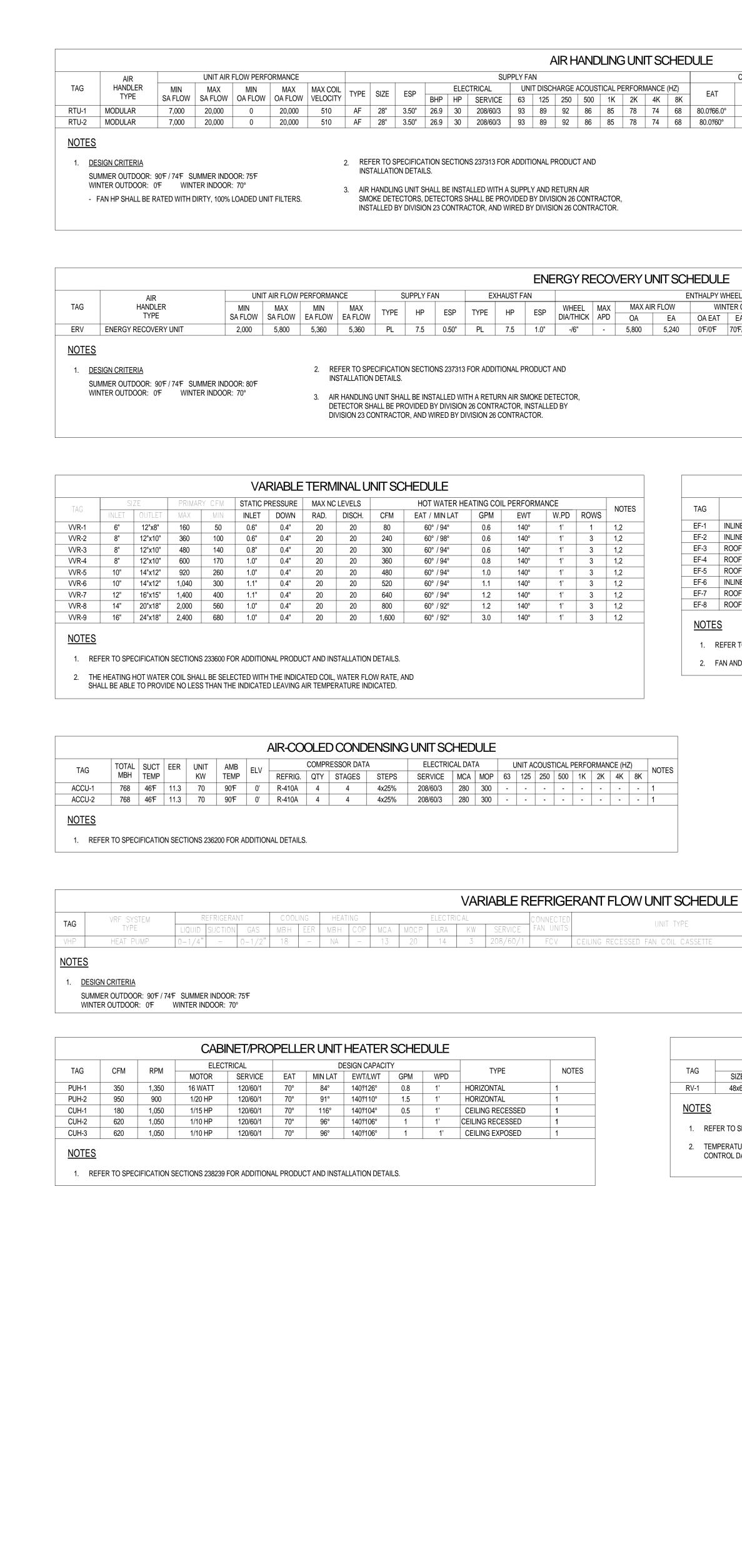
	ROOM LEGEND - UNIT A2
Number	Name
A200	CORRIDOR
A202	CLASSROOM
A203	RESTROOM
A204	RESTROOM
A207	STORAGE
A208	WORKROOM
A209	RESOURCE RM
A210	RESOURCE RM
A211	CLASSROOM
A212	BOOKSTORE/WORK RM
A213	HEAD END
A214	ITINERANT OFFICE
A215	MS COUN OFFICE
A216	HS COUN OFFICE
A217	RESTROOM
A218	RESTROOM
A219	J.C.
A220	MEDIA CENTER
A220	MEDIA CENTER
A242	ELEV.











					COOLING CO	IL PERFO	RMANCE			F	EATING COI	L PERFO	RMANCE					
CAL PE	AL PERFORMANCE (HZ)			EAT LAT		SUCTION	ROWS	FPI	EAT	LAT	GPM	EWT/LWT	WPD	ROWS	FPI	FILTER ASSEMBLY	NOTES	
1K	2K	4K	8K	LAI		MBH	TEMP	INOWS	IFI	LAI	LAI	GEIM		VVFD	NOW5	IFI		
85	78	74	68	80.0%66.0°	52.0%52°	835	46°	6	10	28°	60°	26	100%46°	2'	4	9	BAG FILTERS; 18"-MERV 12	1,2,3
85 78 74 68		80.0%60°	52.0%52°	835	46°	6	10	28°	60°	26	100%46°	2'	4	9	BAG FILTERS; 18"-MERV 12	1,2,3		

O\	OVERY UNIT SCHEDULE															
ENTHALPY WHEEL PERFORMANCE									MIN			CTRICAL IN		FILTER ASSEMBLY	NOTES	
								EFFECT	FLA	MCA	MOP	SERVICE	ASSEIVIDET			
	5,800	5,240	0F/0F	70F/55F	49 F /42F	78%	90 F/74 F	80F/69F	83 F/71 F	78%	35	45	55	208/60/3	2"-MERV 8	1,2,3

		FAN SCHEDULE										
NOTES	ТА	G	FAN TYPE	CFM	RPM	ESP	MAX	DRIVE	ELE	CTRICAL	CONTROL	NOTES
NOTES	IA	NG	FANTIPE	CFINI	REIVI	EOP	SONES	DRIVE	MOTOR	SERVICE	CONTROL	NUTES
1,2	EF	-1	INLINE CABINET FAN	80	795	3/8"	2	DIRECT	80 W	120/60/1	A	1
1,2	EF	-2	INLINE CABINET FAN	240	1,029	3/8"	3	DIRECT	180 W	120/60/1	A & D	1
1,2	EF	-3	ROOF MTD DOWNBLAST	640	1,550	1/2"	9	DIRECT	1/8 HP	120/60/1	A & D	1
1,2	EF	-4	ROOF MTD DOWNBLAST	1,600	1,123	1/2"	9	DIRECT	1/4 HP	120/60/1	A	1
1,2	EF	-5	ROOF MTD DOWNBLAST	1,200	1,137	3/8"	9	DIRECT	1/6 HP	120/60/1	С	1
1,2	EF	-6	INLINE CABINET FAN	1,200	1,252	3/8"	2	DIRECT	850 W	120/60/1	С	1
1,2	EF	-7	ROOF MTD DOWNBLAST	1.600	1,060	3/8"	9	DIRECT	1/4 HP	120/60/1	С	1
1,2	EF	-8	ROOF MTD DOWNBLAST	1.000	1,058	3/4"	10	DIRECT	1/3 HP	120/60/1	С	1,2
1,2	N		S EFER TO SPECIFICATION SECTION									

2. FAN AND MOTOR SHALL BE RATED FOR EXPLOSION PROOF OPERATION.

E (HZ	<u>Z)</u>	NOTES
4K	8K	NOTES
-	-	1
-	-	1

UNIT TYPE	REFRI	GERANT	AIR FLOW					EL	ECTRICAL	NOTES
UNIT TIFL	RL	RG	(CFM)	(MBH)			MCA	KW	SERVIC E	NOTES
ECESSED FAN COIL CASSETTE	1/4"	1/2"	600	18	_	32	1	0.05	208/60/1	1

ROOF VENT SCHEDULE										
TAG										
TAG	SIZE	AREA	VELOCITY	APD	- NOTES					
RV-1 48x60 24 SQFT 660 0.11" WC										
<u>NOTES</u>										
1. RE	FER TO SPECIFI	CATION SECTIONS	233723 FOR ADI	DITIONAL DETAILS						
		NTROL CONTRACT								

AIR DEVICE SCHEDULE

- AIR DEVICE TAG (REFER TO DEVICE SCHEDULE)

	400*	<u>* NO</u>	tation – e)ENOTES EX	PECTED	BALANCED	AIR FLOW.					
		PHYSIC	CAL PARAME	eters		PERFORMANCE PARAMETERS						
TAG	LENGTH (inches)	WIDTH (inches)	HEIGHT (inches)	AREA (SQ.FT.)	SLOTS	NEC K (INCHES)	AIR FLOW (CFM)	NC VALUE	NOTES			
D	24	24	_	4.0	_	6 DIA	180	20	1,2,3			
	24	24	_	4.0	_	8 DIA	280	20	1,2,3			
	24	24	_	4.0	_	10 DIA	400	20	1,2,3			
	24	24	_	4.0	_	12 DIA	540	20	1,2,3			
E	24	12	_	2.0	_	22x10	1,320	20	1,2,3			
G	_	18	22	2.7	_	16x20	1,220	20	1,2,3			
Н	—	50	26	8.0	_	48x24	3,000	20	1,2,3			
J	—	10	10	0.4	_	8x8	340	20	1,2,3			
L	—	26	8	1.0	_	6x24	480	20	1,2,3			
R	24	24	_	4.0	_	22x22	1,800	20	1,2,3			
S	_	22.5 DIA	_	2.8	_	10 DIA	500	20	1,2,3			
	_	27 DIA	_	4.0	_	12 DIA	570	20	1,2,3			
				1.0			070	20	1,2,0			

<u>NOTES:</u>

 $\langle \# \rangle$

1. REFER TO SPECIFICATION SECTIONS 233713 FOR ADDITIONAL DETAILS.

2. AIR DEVICE NECK SIZE SHALL BE EQUAL TO DUCT SIZE INDICATED ON CONSTRUCTION DRAWINGS. PROVIDE AIR DEVICE SQUARE TO ROUND TRANSITIONS AS NECESSARY.

REFER TO CONSTRUCTION DRAWINGS FOR SPECIFIC AIR DEVICE FLOW RATES.

					BOI	LER S	CHEDULE					
TAG	NOMINAL	DESIGN CONDITIONS (HIGH FIRE)					FUEL	MIN FUEL	FUEL	ELE	ECTRICAL	
IAG	CAPACITY	FLUID	FLOW	EWT	LWT	LOSS		PRESSURE	TURNDOWN	FLA	SERVICE	
BLR-1	1,000 MBH	WATER	40	80°	140°	2'	NAT. GAS	4" W.C.	20:1	13	120/60/1	1
BLR-2	1,000 MBH	WATER	40	80°	140°	2'	NAT. GAS	4" W.C.	20:1	13	120/60/1	1
NOTES			·									

1. REFER TO SPECIFICATION SECTIONS 235216 FOR ADDITIONAL DETAILS.

PUMP SCHEDULE

ELECTRICAL TAG NOTES TYPE SIZE GPM HEAD RPM EFF. BHP HP SERVICE 1.5" x 1.5" 208/60/3 P-HHW11 INLINE CIRCULATOR 80/2 48' 3,450 50% 0.80 2.0 1.2 80/2 48' 3,450 50% 0.80 2.0 208/60/3 P-HHW2 INLINE CIRCULATOR 1.5" x 1.5" 1,2 1.5" x 1.5" 26 20' 3,250 0.40 120/60/1 CP-RTU1 INLINE CIRCULATOR (DRY ROTOR) CP-RTU2 INLINE CIRCULATOR (DRY ROTOR) 1.5" x 1.5" 26 20' 3,250 - 0.40 120/60/1

<u>NOTES</u>

1. REFER TO SPECIFICATION SECTIONS 232123 FOR ADDITIONAL DETAILS.

2. PUMPS SHALL OPERATE IN PARALLEL DURING PEAK HEATING CONDITIONS.

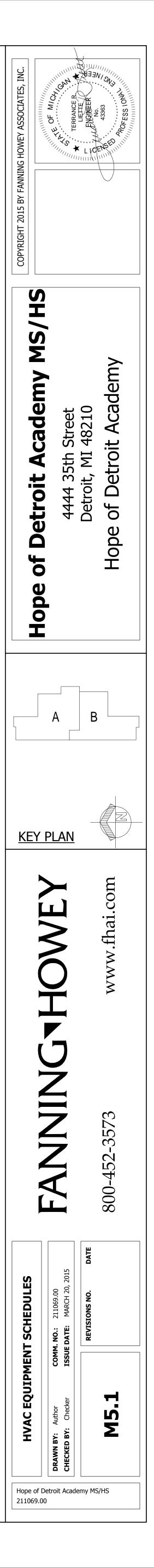
	AIR/DIRT SEPARATOR SCHEDULE											
TAG	SIZE (GPM) (F1)											
ADS-HHW	3"	80	1.0'	COALESCING MEDIA	AIR/DIRT	1						
NOTES												
1. RE	1. REFER TO SPECIFICATION SECTIONS 232113 FOR ADDITIONAL DETAILS.											

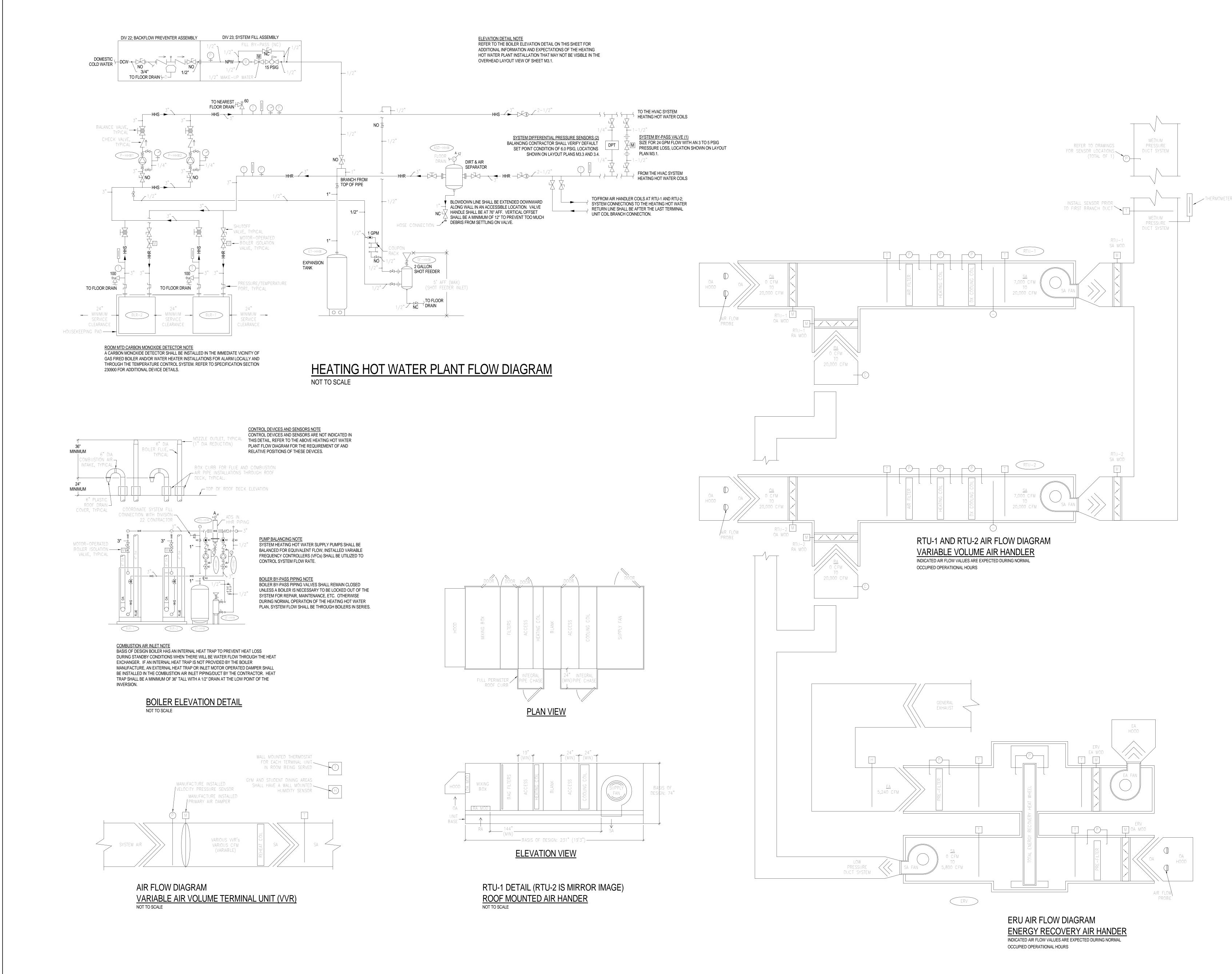
EXPANSION TANK SCHEDULE											
TAG TANK VOLUME (GALLONS) ACCEPTANCE (GALLONS) FACTORY CHARGE TYPE NOTES											
ET-HHW	77	34	15	DIAPHRAM	1						
<u>NOTES</u>											

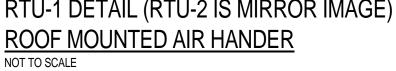
1. REFER TO SPECIFICATION SECTIONS 232113 FOR ADDITIONAL DETAILS.

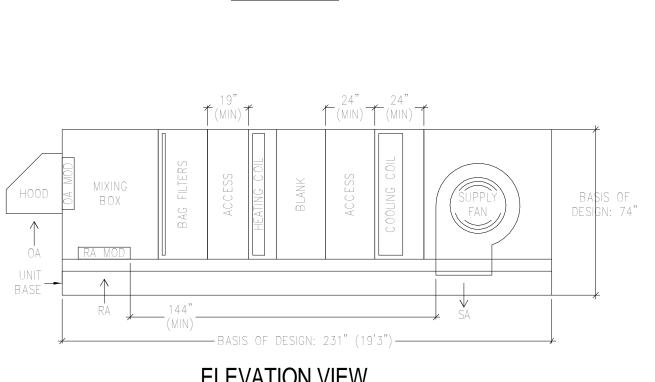
VFC SCHEDULE			
		NOTES	
30	208/60/3	1	
30	208/60/3	1	
2	208/60/3	1	
2	208/60/3	1	
	τιονίαι		
	ELE HP 30 30 2 2 2	ELECTRICAL HP SERVICE 30 208/60/3 30 208/60/3 2 208/60/3	

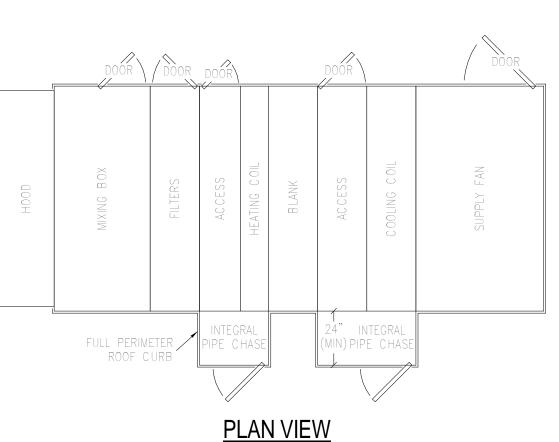
PRODUCT DETAILS.

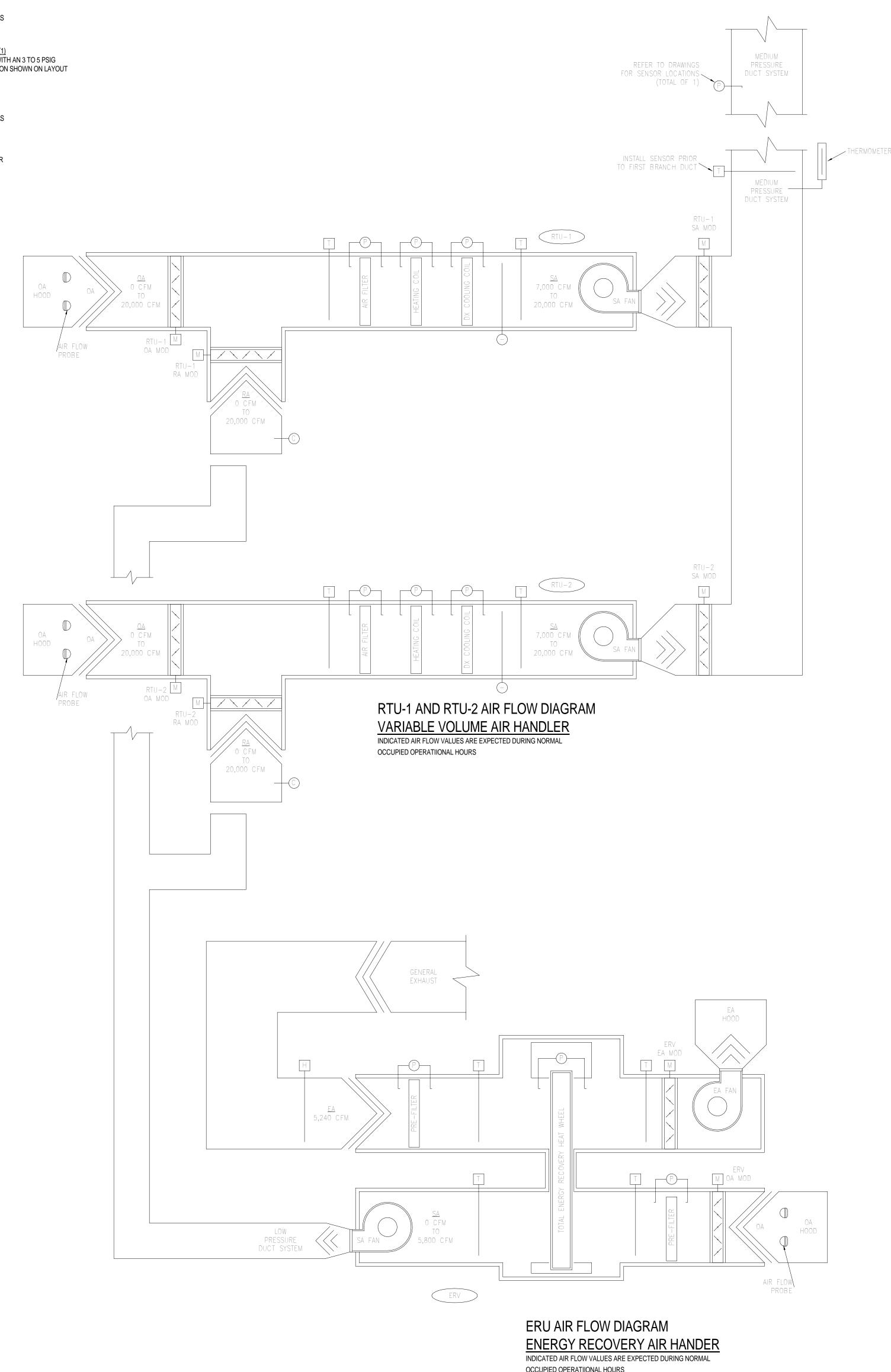


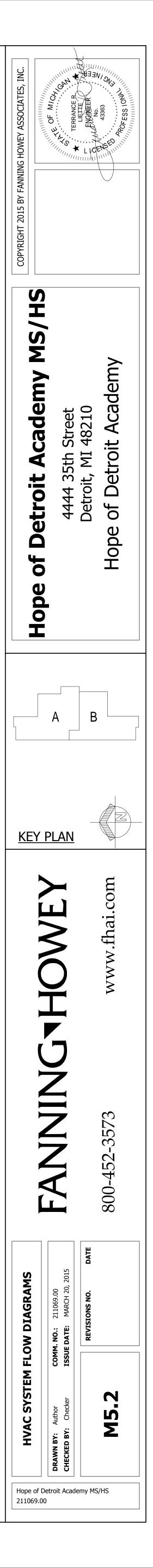


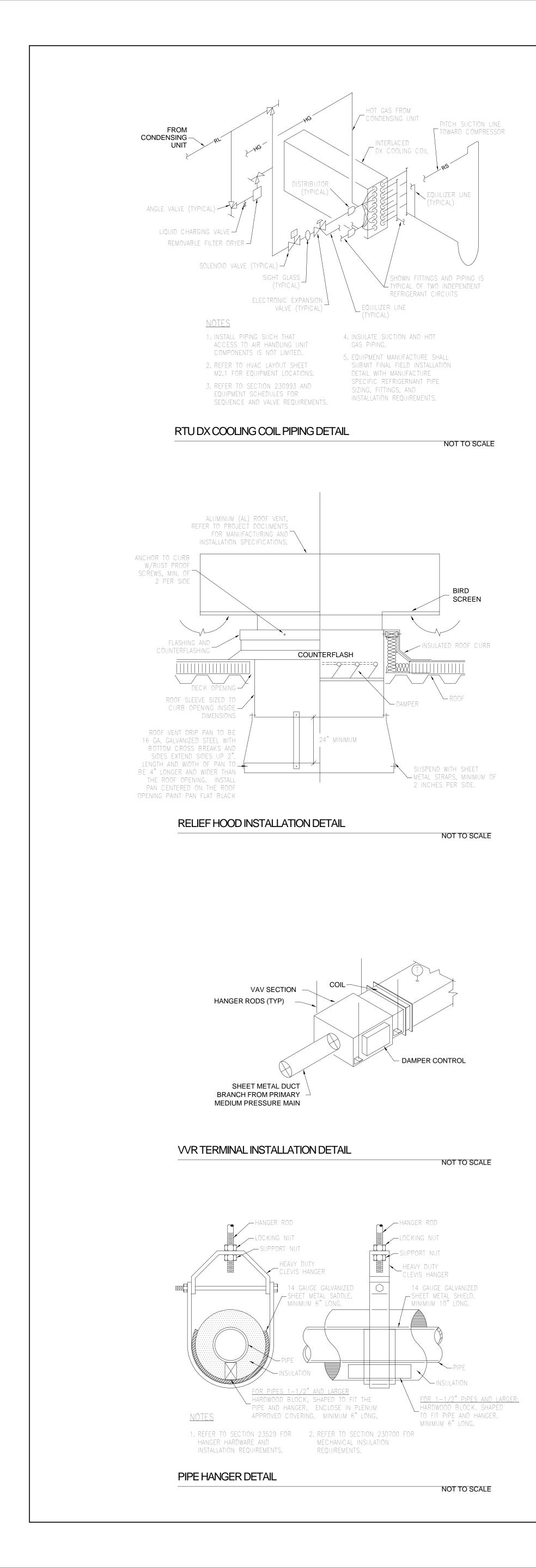


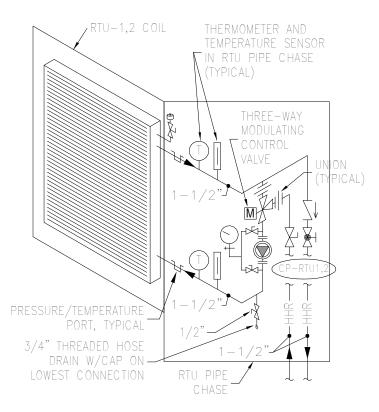








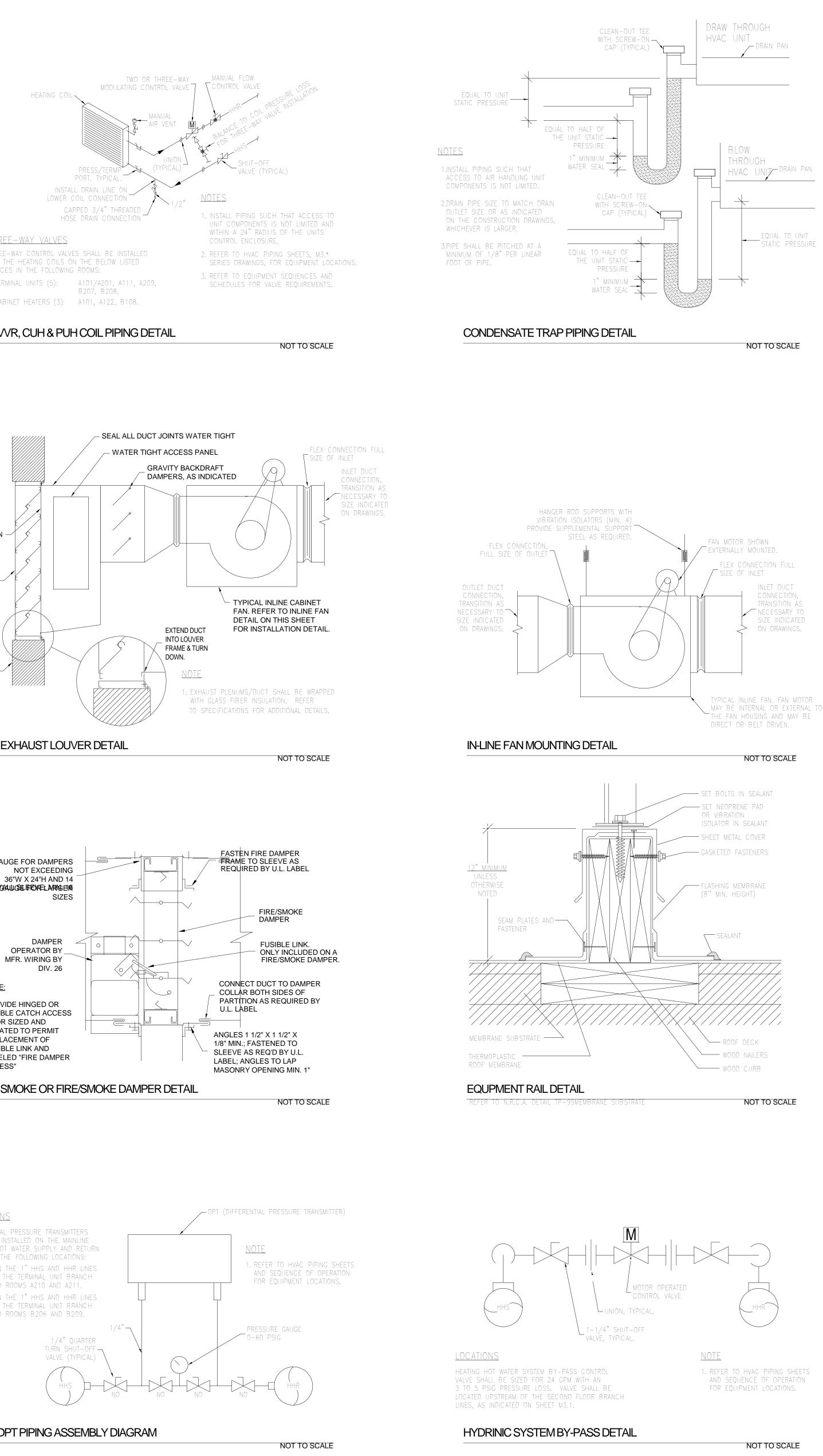




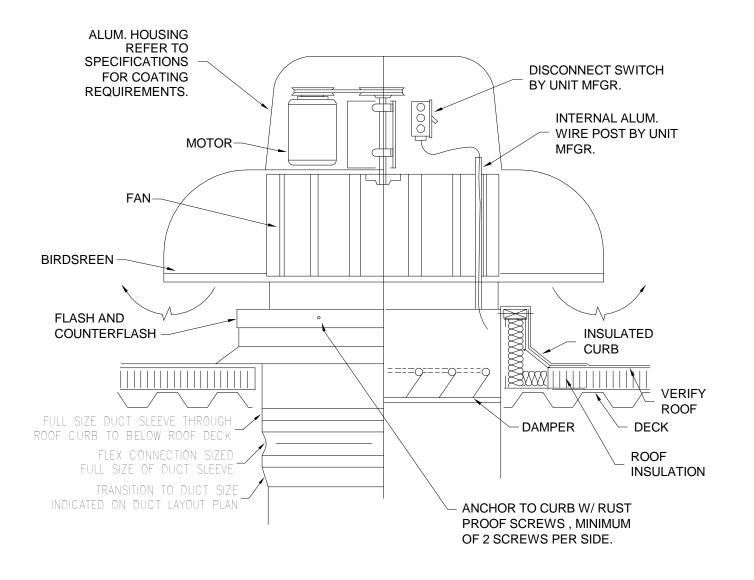
RTU HEATING COIL PIPING DETAIL

<u>NOTES</u>

- 1. INSTALL PIPING SUCH THAT ACCESS TO AIR HANDLING UNIT 2. REFER TO HVAC PIPING SHEETS,
- M2.* SERIES DRAWINGS FOR EQUIPMENT LOCATIONS. 3. REFER TO EQUIPMENT SEQUENCES AND
- EQUIPMENT SCHEDULES FOR VALVE REQUIREMENTS. 4. BASIS OF DESIGN UNITS HAVE ONE COIL
- PER AIR HANDLING UNIT, REQUIRING THE ARRANGEMENT AS SHOWN. IF THE SELECTED MANUFACTURE HAS MULTIPLE STACKED COILS IN THE AIR HANDLING UNIT, EACH COIL SHALL REQUIRE A BALANCING VALVE, DRAIN VALVE AND AIR VENT. THESE ITEMS SHALL BE INCLUDED IN THE CONTRACTORS BASE BID SCOPE OF WORK.

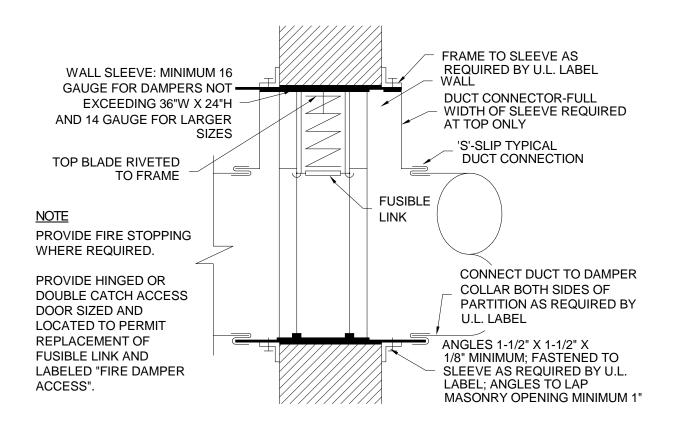


NOT TO SCALE



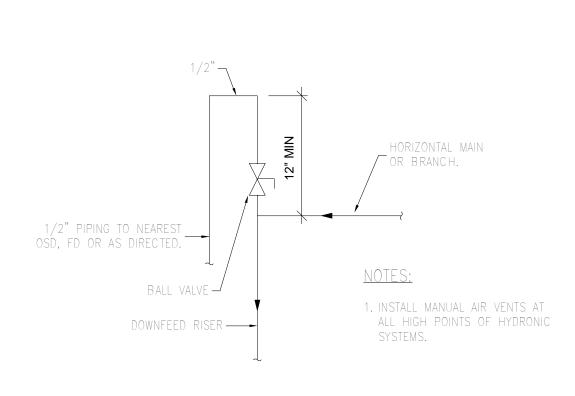
DOWNBLAST CENTRIFUGAL FAN DETAIL

NOT TO SCALE



FIRE DAMPER INSTALLATION DETAIL

NOT TO SCALE



MANUAL AIR VENT DETAIL



