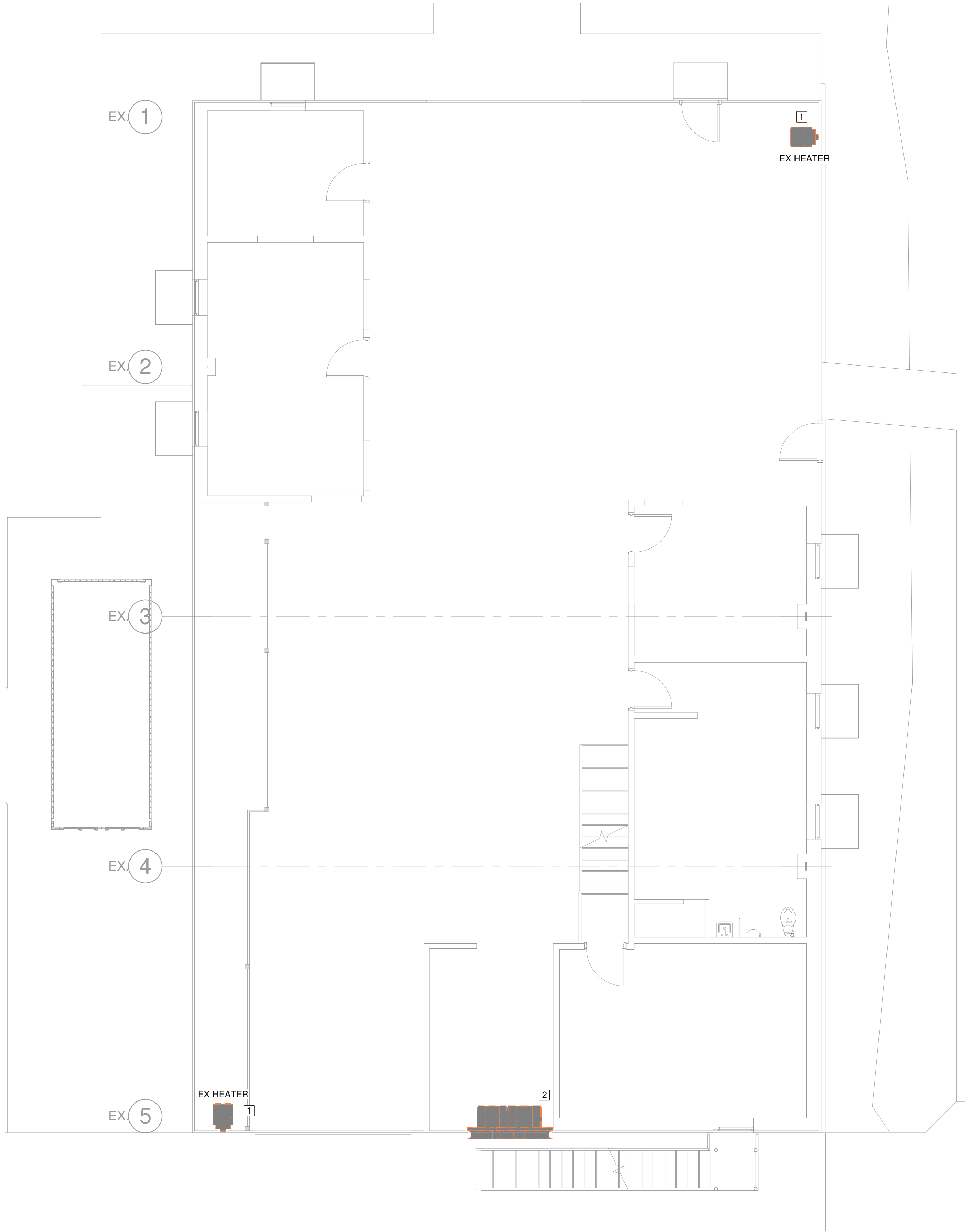


LEGEND (ALL MAY NOT APPLY)					
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SAIRA TAKE-OFF WITH RIGID DUCT TAKE-OFF W/ DAMPER		DEMOLITION KEYNOTE		MOTORIZED CONTROL VALVE
	SAIRA TAKE-OFF WITH FLEX TAKE-OFF W/ DAMPER		KEYNOTE		BALANCING VALVE
	BACKDRAFT DAMPER		AIR HANDLING UNIT (VERTICAL/HORIZONTAL)		SHUT-OFF/ISOLATION VALVE
	DUCT MOUNTED BAROMETRIC DAMPER		CEILING RECESSED AIR HANDLER		CHECK VALVE
	DUCT MOUNTED TEMPERATURE SENSOR		WALL MOUNT AIR HANDLER		STRAINER
	DUCT MOUNTED SMOKE DAMPER		1 OR 4-WAY CEILING MOUNT CASSETTE AIR HANDLER		PUMP
	DUCT MOUNTED MOTORIZED DAMPER		BC CONTROLLER		TEMPERATURE SENSOR
	DUCT MOUNTED HUMIDITY SENSOR		CONDENSING UNIT HEAT PUMP		

CODE REFERENCE		GENERAL NOTES	
ALL MAY NOT APPLY		ALL MAY NOT APPLY	
THE LATEST EDITIONS OF THE ESTABLISHED STANDARDS OF THE FOLLOWING ORGANIZATIONS, AND INDIVIDUAL STANDARDS NAMED SHALL BE FOLLOWED THE SAME AS IF THEY WERE FULLY WRITTEN HEREIN AND CONSTITUTE A PART OF THE SPECIFICATION REQUIREMENTS EXCEPT WHERE OTHERWISE SPECIFIED:		1. THE ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR ANY MISUSE AND/OR MISREPRESENTATION OF THIS SET OF DOCUMENTS.	
FBC, BUILDING	FLORIDA BUILDING CODE 8TH EDITION	2. THE CONTRACTOR ASSUMES RESPONSIBILITY FOR THE USE OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL MAKE THEMSELVES AWARE OF PROJECT CONDITIONS AND OWNER REQUIREMENTS PRIOR TO PROCUREMENT OF EQUIPMENT AND SERVICES. CHANGES IN PROJECT COST WILL NOT BE GRANTED DUE TO FIELD CONFLICTS AND/OR PROJECT CONDITIONS.	
FBC, MECHANICAL	FLORIDA BUILDING CODE 8TH EDITION	3. THIS SET OF DRAWINGS AND SPECIFICATIONS SHALL NOT BE CONSIDERED A SET OF CONSTRUCTION DOCUMENTS UNLESS A SIGNATURE AND DATE ARE AFFIXED TO THE DRAWINGS AND SPECIFICATIONS BY THE ENGINEER OF RESPONSIBLE CHARGE OF THE GIVEN DISCIPLINE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED UNLESS EMBOSSED AND THE SHA AUTHENTICATION CODE MUST BE VERIFIED ON ELECTRONIC COPIES.	
FBC, EXISTING	FLORIDA BUILDING CODE 8TH EDITION	4. CONFLICTS BETWEEN THIS SET OF DRAWINGS AND THE CONTRACT SPECIFICATIONS SHALL BE RESOLVED BY THE ENGINEER OF RECORD. THE CONTRACTOR DOES NOT HAVE THE AUTHORITY TO INTERPRET CONFLICTS AND RESOLVE ISSUES WITHOUT WRITTEN DIRECTION FROM THE ENGINEER OF RECORD.	
FBC, FUEL GAS	FLORIDA BUILDING CODE 8TH EDITION	5. ANY CONFLICTS IN THE FIELD OR WITHIN THESE DOCUMENTS SHALL BE RECORDED AND PROVIDED TO THE ENGINEER OF RECORD ON THE CONTRACTOR'S STANDARD LETTERHEAD. WRITTEN DIRECTION RESOLVING CONFLICT WILL BE ISSUED BY THE ENGINEER OF RECORD.	
FBC, ENERGY CONSERVATION	FLORIDA BUILDING CODE 8TH EDITION	6. PRIOR TO INSTALLATION, COORDINATE AND ADJUST THE FINAL LOCATION OF ALL WALL MOUNTED DEVICES AND EQUIPMENT WITH ALL CASEWORK, SHELVING OR OTHER WALL MOUNTED FURNISHINGS.	
FFPC	FLORIDA FIRE PREVENTION CODE, 2023 8TH EDITION	7. PLANS ARE DIAGRAMMATIC IN NATURE AND INTENDED TO SHOW THE GENERAL SCOPE OF THE WORK TO BE PERFORMED. REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ALL DIMENSIONS.	
NFPA 54	NATIONAL FUEL GAS CODE	8. DUE TO THE SMALL SCALE OF THE DRAWINGS, AND TO UNFORESEEN JOB CONDITIONS, ALL REQUIRED OFFSETS, TRANSITIONS AND FITTINGS MAY NOT BE SHOWN BUT SHALL BE PROVIDED AT NO ADDITIONAL COST.	
NFPA 101	LIFE SAFETY CODE	9. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND EXISTING EQUIPMENT TO ENSURE THE EQUIPMENT SPECIFIED WILL WORK FOR THE SPACES PROVIDED. FINAL DIMENSIONS OF SYSTEMS SHOWN ON THESE PLANS SHALL BE COORDINATED IN THE FIELD. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR PROVIDING OFFSETS AND TRANSITIONS TO FIT IN SPACES PROVIDED AND AT NO COST TO THE OWNER.	
NFPA 101A	GUIDE ON ALTERNATIVE APPROACHES TO LIFE SAFETY	10. THE CONTRACTOR IS RESPONSIBLE FOR ANY SPECIAL REQUIREMENTS INVOLVED IN INSTALLING EQUIPMENT IN THE BUILDING. DISMANTLING AND REASSEMBLING OF ANY EQUIPMENT SHALL BE DONE AS REQUIRED TO BRING INTO THE BUILDING AND EQUIPMENT ROOMS.	
NFPA 101B	CODE FOR MEANS OF EGRESS FOR BUILDINGS AND STRUCTURES	11. ALL WORK PERFORMED AS PART OF THIS PROJECT SHALL BE PERFORMED BY EXPERIENCED TRADESMEN WHO ARE TRAINED, EXPERIENCED, AND SKILLED IN THE TASKS INCIDENTAL TO THE PROJECT.	
NFPA 900	BUILDING ENERGY CODE	12. ENSURE ALL EQUIPMENT HAS BEEN CLEANED AT THE END OF THE PROJECT.	
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	13. DO NOT LOCATE AIR INTAKES CLOSER THAN 10 FEET FROM ANY VENT OR EXHAUST OUTLETS. ROUTE TOILET EXHAUST TO LOCATION SHOWN ON PLANS. WALL CAPS SHALL BE ALUMINUM CONSTRUCTION WITH BACKDRAFT DAMPER, AS PER FBC M504.2	
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	14. PROVIDE FIRE DAMPER IF SHOWN ON PLANS, WHERE DUCT PENETRATES FIRE-RATED CONSTRUCTION. ATTACH 1/2" OR LARGER TEXT LABELING THE DAMPER ACCESS LOCATION(S). EQUIVALENT APPLIES FOR SMOKE DAMPER AND FIRE/SMOKE DAMPER.	
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS	15. INSTALL DUCT MOUNTED SMOKE DETECTOR (FURNISHED BY DIVISION 26) IN SUPPLY AIR DUCT BEFORE ANY TAKE OFFS FOR AIR HANDLING UNITS WITH SUPPLY AIR CAPACITY OF 2000 CFM OR GREATER.	
ADA	AMERICANS WITH DISABILITIES ACT	16. WHERE FIRE, SMOKE, COMBINATION FIRE SMOKE DAMPERS CONTROL DAMPERS, VALVES, COILS OR OTHER DEVICE NEEDING ACCESS ARE INSTALLED, PROVIDE DUCT ACCESS DOORS. WHERE INSTALLED IN INACCESSIBLE LOCATIONS, PROVIDE CEILING/WALL ACCESS PANELS. PANELS LOCATED IN RATED ASSEMBLIES SHALL BEAR A UL RATING. COORDINATE LOCATION OF SUCH ACCESS WITH ARCHITECT PRIOR TO INSTALLATION.	
UL	UNDERWRITERS LABORATORIES	17. PROVIDE MEANS OF TEST AND BALANCE IN ALL TAKE OFF FITTINGS OF SUPPLY EXHAUST, RETURN SYSTEMS AND AT EACH POINT WHERE A BRANCH SERVES TWO OR MORE GRILLES, WHETHER SHOWN ON THE PLANS OR NOT.	
THESE CODE AND STANDARDS SHALL BE CONSIDERED A MINIMUM REQUIREMENT. THE CONTRACTOR SHALL NOT RELIEVED FROM PROVIDING HIGHER GRADE MATERIALS, PRODUCTS AND WORKMANSHIP WHICH MAY BE SPECIFIED WITHIN THESE DOCUMENTS.		18. WHERE CONFLICTS BETWEEN LIGHT SWITCHES AND THERMOSTAT/HUMIDISTAT LOCATIONS, THE LIGHT SWITCH TAKES PRECEDENCE. CONTROLLERS SHALL BE MOUNTED ADJACENT AND WITHIN 48" AFF.	
CONDENSATE PIPING		19. LOCATE WIRED THERMOSTAT ADJACENT TO SWITCH, WHERE POSSIBLE. INSTALL CONTROLS INTERFACE WITHIN 48" AFF.	
1. CONDENSATE DRAIN PIPING SHALL BE SCHEDULE 40 PVC WITH SOLVENT WELD FITTINGS.		20. THE GENERAL CONTRACTOR SHALL PROVIDE NOTICE TO THE ARCHITECT/ENGINEER THAT THERE HAS BEEN A FACE-TO-FACE MEETING WITH THE MECHANICAL, PLUMBING, FIRE PROTECTION, AND ELECTRICAL CONTRACTORS TO COORDINATE THEIR WORK. THIS MUST BE DONE PRIOR TO THE ORDERING OF ANY EQUIPMENT AND SHALL SERVE TO MATCH THE VOLTAGE, PHASE, AMPS, MCA, AND MCOF OF THE EQUIPMENT WITH THE DESIGNED ELECTRICAL CHARACTERISTICS.	
2. ALL CONDENSATE DRAIN PIPE SYSTEMS SHALL HAVE A BUILT TRAP AT EACH PIECE OF EQUIPMENT PER DETAILS.		21. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL DRAWINGS PRIOR TO PROVIDING SUBMITTALS OR PURCHASING EQUIPMENT.	
3. ALL LINES SHALL BE INSULATED WITH 1/2" ARMAFLEX FROM EQUIPMENT TO APPROVED DISPOSAL POINT OR OUTSIDE AT GRADE IN COMPLIANCE WITH FBC-M 307.2.1. OUTSIDE DISPOSAL AT EARTH SHALL BE MINIMUM 1 FOOT AWAY FROM BUILDING STRUCTURE AND FOUNDATION.		22. PRODUCE MANUFACTURER'S INSTALLATION INSTRUCTION AT INSPECTION PER FBC-M304.1: A. AIR DISTRIBUTION: PRICE, METALAIRE, TITUS B. FANS: PENNBERY, GREENHECK, BROAN, PANASONIC, COOK C. LOUVERS: GREENHECK, RUSKIN, POTTOFF D. SPLIT A/C EQUIPMENT: LENNOX, TRANE, CARRIER, DAIKIN, LG E. ROOFTOP A/C EQUIPMENT: LENNOX, TRANE, CARRIER, YORK, DAIKIN	
4. TRAP AIR CONDITIONING CONDENSATE AND RUN TO LOCATION SHOWN ON PLANS. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE FIRST 12" OF CONDENSATE PIPE, INCLUDING TRAP. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONDENSATE PIPE AFTER 12" OF PIPE FROM THE UNIT, UP TO AND INCLUDING CONDENSATE TERMINATION.		23. CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF ALL PARTITIONS LABELED WITH A SPECIAL LISTING ON THE ARCHITECTURAL PLANS. THIS INCLUDES FIRE, SMOKE ACOUSTICAL AND OTHER UL WALL OR CEILING ASSEMBLIES.	
5. IF OTHERWISE UNSPECIFIED, TERMINATE CONDENSATE INTO STORM CONNECTION, OR ARCHITECT-APPROVED GRAVEL PATCH OR DRYWELL AT LEAST 12" AWAY FROM BUILDING.		24. STRUCTURAL PENETRATIONS INCLUDING BUT NOT LIMITED TO WALL, FLOOR, OR BEAM SHALL BE APPROVED BY THE STRUCTURAL ENGINEER. ALL BEAM SLEEVES AND REINFORCING APPROVED BY STRUCTURAL ENGINEER SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.	
6. PROVIDE CONDENSATE SAFETY SWITCH AND UNIT SHUTOFF SEQUENCE IN THE EVENT OF CONDENSATE OVERFLOW OR BACKUP.		25. CONTRACTOR SHALL GUARANTEE THE WORK AND MATERIALS FOR PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE. THIS GUARANTEE SHALL BE IN ADDITION TO THE WARRANTIES PROVIDED BY THE MATERIAL SUPPLIES AND MANUFACTURERS.	
7. CONDENSATE DRAIN SIZING (PER FBC-M TABLE 307.2.2)		26. VALUE ENGINEERING OR CHANGES TO PLANS MUST BE APPROVED BY THE ENGINEER OF RECORD AND RESUBMITTED THROUGH THE BUILDING DEPARTMENT PRIOR TO BEING INSTALLED.	
UP TO 20 TONS 3/4" DIAMETER			
21 TO 40 TONS 1" DIAMETER			
41 TO 80 TONS 1 1/4" DIAMETER			
81 TO 125 TONS 1 1/2" DIAMETER			
126 TO 250 TONS 2" DIAMETER			
251 AND ABOVE SIZED BASED ON ACTUAL FLOW			
REFRIGERANT PIPING			
1. BELOW FINISHED FLOOR: COPPER TUBING - TYPE "K" SOFT ANNEALED TEMPER, NO JOINTS BELOW GRADE.			
2. ABOVE FINISHED FLOOR: COPPER TUBING - TYPE "L" HARD DRAWN TEMPER WITH WROUGHT COPPER FITTINGS AND BRAZED JOINTS AT 1100 DEG F; FLUX MATERIAL NOT ALLOWED.			
3. SUCTION LINES SHALL BE INSULATED WITH MINIMUM 3/4" ARMAFLEX INSULATION WITH TAPED JOINTS. INSULATION SHALL ALWAYS COMPLY WITH FBC-EC 403.2.10. HANGERS STRAPS OR SADDLES SHALL NOT COMPRESS INSULATION BELOW REQUIRED SIZE.			
4. EXTERIOR PIPING INSULATION SHALL BE PROTECTED FROM UV RADIATION. COVER ALL EXTERIOR REFRIGERANT LINES WITH ALUMINUM JACKET, INSTALLED TO SHED WATER AND SECURED WITH STAINLESS STEEL BANDS 12" O.C.			
5. SYSTEMS SHALL BE PLACED UNDER A VACUUM FOR REMOVAL OF NON-CONDENSABLES PRIOR TO BEING PUT INTO SERVICE.			
6. SYSTEMS SHALL BE VACUUM TESTED AND PRESSURE TESTED USING NITROGEN PRIOR TO BEING PUT INTO SERVICE.			
7. PIPES SHALL BE SIZED BY THE EQUIPMENT MFG.			
8. ALL A2L REFRIGERANT LINES CONCEALED WITHIN BUILDING ELEMENTS OR CONCEALED BETWEEN STRUCTURAL ELEMENTS SHALL BE PROTECTED WITH STEEL PLATES, EXTENDING 2" BEYOND THE REFRIGERANT LINE OUTER EDGES. INSTALL ALL A2L REFRIGERANT LINES AT LEAST 1-1/2" FROM ANY FRAMING, SHEATHING, CEILING ELEMENT, OR EXTERIOR SURFACE. A2L IS CLASSIFIED AS LOW-TOXICITY AND MILD FLAMABILITY. IDENTIFY AND PROTECT FROM ACCIDENTAL PUNCTURES. ROUTE ACCORDING TO SAFETY INSTRUCTIONS. SEE DISPERSION CALCULATION TABLE.			

MECHANICAL GENERAL NOTES		DUCTWORK SPECIFICATIONS	
ALL MAY NOT APPLY		1. SHEET METAL DUCTWORK	
1. ONLY NEW EQUIPMENT SHALL BE PROVIDED UNLESS INDICATED AS EXISTING TO REMAIN.		1.1. DUCT MATERIAL CLASS "A" GALVANIZED STEEL OR ROLLED STEEL IN COMPLIANCE WITH SMACNA 205-3RD EDITION LOW/MEDIUM PRESSURE DUCT STANDARDS TABLE 1-1. DUCTS SHALL BE TESTED, VERIFIED AND RECORDED IN ACCORDANCE WITH ASHRAE 90.1-2013 REQUIREMENT BASED ON LEAKAGE RATE LESS THAN 4% PER 100SF OF DUCT.	
2. ALL CONNECTIONS TO EQUIPMENT SHALL BE MADE WITH FLEXIBLE REGIONS FOR VIBRATION ISOLATION.		1.2. SEALER: LOW VOC MASTIC PAINT.	
3. ALL EQUIPMENT SHALL BE LABELED SO THAT USERS CAN IDENTIFY EACH PIECE OF EQUIPMENT. LABELS SHALL BE CONSISTENT WITH EQUIPMENT TAGS THAT ARE LISTED IN THE SCHEDULES WITHIN THESE DOCUMENTS. ANY ABOVE CEILING EQUIPMENT SHALL HAVE A LABEL PROVIDED ON THE CEILING BELOW THE UNIT FOR EASE OF LOCATING BY MAINTENANCE PERSONNEL.		2. GENERAL:	
4. ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS WRITTEN INSTRUCTIONS AND RECOMMENDATIONS.		2.1. LINES SHALL BE RUN STRAIGHT, LEVEL, PLUMB, AND ROUTED AS INDICATED IN THESE DRAWINGS. ALL LABELED DUCT DIMENSIONS ARE INTERNAL SIZES AND INDICATE FULL INSIDE CLEAR FREE AREA.	
5. INSTALL DUCTWORK AND PIPING AS HIGH AS POSSIBLE ABOVE CEILING.		2.2. MINOR MODIFICATIONS TO DUCT ROUTING DUE TO OBSTRUCTIONS OR COORDINATION WITH OTHER TRADES WILL BE FURNISHED WITHOUT ADDITIONAL COST TO THE OWNER. ANY CHANGES IN SIZE TO DUCTWORK MUST BE APPROVED BY THE ENGINEER PRIOR TO FABRICATION AND INSTALLATION.	
6. COORDINATE THE INSTALLATION OF DUCTWORK AND PIPING WITH ELECTRICAL EQUIPMENT SO THAT THE REQUIRED CODE CLEARANCES TO ELECTRICAL EQUIPMENT IS MAINTAINED.		2.3. ALL MITERED RECTANGULAR DUCT 90 DEGREE ELBOWS SHALL BE PROVIDED WITH TURNING VANES.	
7. DUCTWORK AND PIPING INSTALLATIONS SHALL ALLOW FOR EQUIPMENT RECOMMENDED MAINTENANCE CLEARANCES. CONVENIENT ACCESS FOR REMOVAL OF FILTERS SHALL BE MAINTAINED.		2.4. ALL SUPPLY, RETURN AND EXHAUST DUCTS SHALL BE EXTERNALLY INSULATED UNLESS OTHERWISE NOTED. INSULATION SHALL BE EQUAL TO JOHNS MANVILLE MICROLIGHT XL 2" THICK 0.75 PCF R6.0 OUT OF THE BOX WITH FSK VAPOR BARRIER. SEAL WITH FIRE RATED MASTIC SEAL PER UL-181A-M AT ALL JOINTS AND SEAMS; OR APPROVED ACRYLIC FOIL. PRESSURE SENSITIVE TAPE PER UL-181A-P APPLIED USING SQUEEGEE. APPROVED METHOD AT JOINTS AND SEAMS. RUBBER BASE TAPES ARE NOT ALLOWED.	
8. MATERIALS INSTALLED WITHIN A RETURN AIR PLENUM SHALL BE NONCOMBUSTIBLE AND PLENUM RATED OR WRAPPED, FIRE25/SMOKE50.		2.5. DUCTBOARD IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD.	
9. COORDINATE THE PLACEMENT AIR DISTRIBUTION EQUIPMENT WITH THE CEILING AND LIGHTING LAYOUT.		2.6. DUCTS SHALL HAVE MINIMUM INSULATION VALUES AS LISTED IN FBC-EC 403.2.9.1.	
10. THE CEILING DIFFUSERS SHALL BE 4-WAY THROW UNLESS OTHERWISE NOTED.		3. FLEXIBLE DUCTS:	
11. AT THE ONSET OF TEST AND BALANCE ACTIVITIES PROVIDE NEW FILTERS TO ALL UNITS. DO NOT OPERATE UNITS WITHOUT FILTERS DURING CONSTRUCTION. SEAL ALL OPEN ENDED DUCTS DURING CONSTRUCTION.		3.1. DUCT TO AIR TERMINALS SHALL BE LIMITED IN LENGTH AS SHOWN IN DETAILS.	
12. ENSURE ALL EQUIPMENT HAS BEEN CLEANED AT THE END OF THE PROJECT.		3.2. SHALL BE UL LISTED AS A CLASS 1 AIR DUCT COMPLYING WITH UL STANDARD 181. NFPA 90A & 90B AND HAVE A FLAME SPREAD RATING OF NOT OVER 25 AND A SMOKE DEVELOPMENT RATING NOT OVER 50.	
13. DO NOT LOCATE AIR INTAKES CLOSER THAN 10 FEET FROM ANY VENT OR EXHAUST OUTLETS. ROUTE TOILET EXHAUST TO LOCATION SHOWN ON PLANS. WALL CAPS SHALL BE ALUMINUM CONSTRUCTION WITH BACKDRAFT DAMPER, AS PER FBC M504.2		3.3. SHALL HAVE A POSITIVE OPERATING PRESSURE OF 10" MINIMUM. FLEXIBLE DUCT SHALL HAVE BEEN TESTED FOR A MAXIMUM INTERNAL OPERATING TEMPERATURE OF 200°F UNDER CONTINUOUS OPERATION.	
14. PROVIDE FIRE DAMPER IF SHOWN ON PLANS, WHERE DUCT PENETRATES FIRE-RATED CONSTRUCTION. ATTACH 1/2" OR LARGER TEXT LABELING THE DAMPER ACCESS LOCATION(S). EQUIVALENT APPLIES FOR SMOKE DAMPER AND FIRE/SMOKE DAMPER.		3.4. SHALL BE RATED FOR A MINIMUM AIR VELOCITY OF 5000 FPM.	
15. INSTALL DUCT MOUNTED SMOKE DETECTOR (FURNISHED BY DIVISION 26) IN SUPPLY AIR DUCT BEFORE ANY TAKE OFFS FOR AIR HANDLING UNITS WITH SUPPLY AIR CAPACITY OF 2000 CFM OR GREATER.		3.5. INSULATION SHALL BE A MINIMUM OF 2" THICK 3/4 PCF DENSITY FIBERGLASS. SUPPLY DUCTS SHALL HAVE INSULATION WITH A MINIMUM R-VALUE OF 4.2, BUT R-6 FOR SUPPLY DUCT IN ATTIC AND OUTDOOR SPACES. OUTER LINER SHALL BE A BI-DIRECTIONAL FIBERGLASS REINFORCED METALIZED VAPOR BARRIER. FLEXIBLE DUCTWORK SHALL BE INSTALLED AS STRAIGHT AS POSSIBLE, AND SHALL BE ROUTED AND SUPPORTED WITHOUT FORMING CRIMPS OR OTHER AIR FLOW RESTRICTIONS.	
16. WHERE FIRE, SMOKE, COMBINATION FIRE SMOKE DAMPERS CONTROL DAMPERS, VALVES, COILS OR OTHER DEVICE NEEDING ACCESS ARE INSTALLED, PROVIDE DUCT ACCESS DOORS. WHERE INSTALLED IN INACCESSIBLE LOCATIONS, PROVIDE CEILING/WALL ACCESS PANELS. PANELS LOCATED IN RATED ASSEMBLIES SHALL BEAR A UL RATING. COORDINATE LOCATION OF SUCH ACCESS WITH ARCHITECT PRIOR TO INSTALLATION.		3.6. PROVIDE SQUARE TO ROUND ADAPTERS OR BOOTS TO CONNECT TO AIR DEVICE NECK WHERE REQUIRED. FLEXIBLE DUCT SHALL HAVE A FULL 10-YEAR WARRANTY.	
17. PROVIDE MEANS OF TEST AND BALANCE IN ALL TAKE OFF FITTINGS OF SUPPLY EXHAUST, RETURN SYSTEMS AND AT EACH POINT WHERE A BRANCH SERVES TWO OR MORE GRILLES, WHETHER SHOWN ON THE PLANS OR NOT.		3.7. INNER LINER SHALL CONSIST OF A CPE CORE PERMANENTLY BONDED TO A COATED SPRING STEEL WIRE HELIX (MIN. 041" THICK).	
18. WHERE CONFLICTS BETWEEN LIGHT SWITCHES AND THERMOSTAT/HUMIDISTAT LOCATIONS, THE LIGHT SWITCH TAKES PRECEDENCE. CONTROLLERS SHALL BE MOUNTED ADJACENT AND WITHIN 48" AFF.		3.8. SHALL BE THERMAFLEX TYPE M-K-E, FLEXMASTER TYPE 8M OR EQUAL.	
19. LOCATE WIRED THERMOSTAT ADJACENT TO SWITCH, WHERE POSSIBLE. INSTALL CONTROLS INTERFACE WITHIN 48" AFF.		3.9. SHALL BE SUPPORTED SO THAT HORIZONTAL RUNS ARE STRAIGHT AND WITHOUT SAGS OR BENDS. SHEET METAL SADDLES SHALL BE PROVIDED AT ALL HANGERS FOR FLEX DUCTS TO PREVENT KINKING OF THE DUCTS AND EXCESSIVE COMPRESSION OF THE INSULATION.	
20. THE GENERAL CONTRACTOR SHALL PROVIDE NOTICE TO THE ARCHITECT/ENGINEER THAT THERE HAS BEEN A FACE-TO-FACE MEETING WITH THE MECHANICAL, PLUMBING, FIRE PROTECTION, AND ELECTRICAL CONTRACTORS TO COORDINATE THEIR WORK. THIS MUST BE DONE PRIOR TO THE ORDERING OF ANY EQUIPMENT AND SHALL SERVE TO MATCH THE VOLTAGE, PHASE, AMPS, MCA, AND MCOF OF THE EQUIPMENT WITH THE DESIGNED ELECTRICAL CHARACTERISTICS.		ENERGY SYSTEMS - THERMOSTATS	
21. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL DRAWINGS PRIOR TO PROVIDING SUBMITTALS OR PURCHASING EQUIPMENT.		1. HEATING AND COOLING TO EACH ZONE MUST BE CONTROLLED INDIVIDUALLY BY A THERMOSTAT CONTROL. AT LEAST ONE HUMIDITY CONTROL DEVICE SHALL ALSO BE PROVIDED FOR EACH HUMIDITY CONTROL SYSTEM.	
22. PRODUCE MANUFACTURER'S INSTALLATION INSTRUCTION AT INSPECTION PER FBC-M304.1: A. AIR DISTRIBUTION: PRICE, METALAIRE, TITUS B. FANS: PENNBERY, GREENHECK, BROAN, PANASONIC, COOK C. LOUVERS: GREENHECK, RUSKIN, POTTOFF D. SPLIT A/C EQUIPMENT: LENNOX, TRANE, CARRIER, DAIKIN, LG E. ROOFTOP A/C EQUIPMENT: LENNOX, TRANE, CARRIER, YORK, DAIKIN		2. THERMOSTATIC CONTROLS THAT CONTROL BOTH HEATING AND COOLING SHALL HAVE A DEADBAND OF 5°F MINIMUM WHERE WHICH THE SUPPLY OF HEATING AND COOLING ENERGY TO THE ZONE IS CAPABLE OF BEING SHUT OFF OR REDUCED TO A MINIMUM.	
		3. ZONES NOT CONTINUOUSLY OPERATED OR WITH FULL HVAC LOAD DEMAND EXCEEDING 6800 BTU/Hr (2 KW) SHALL BE PROVIDED WITH THERMOSTATIC SETBACK CONTROLS THAT ARE CONTROLLED BY EITHER AUTOMATIC TIME CLOCK OR PROGRAMMABLE CONTROL SYSTEM. THE SETBACK CONTROLS SHALL BE IN ACCORDANCE WITH FBC CHAPTER 4, C403.2.4.2.	
		4. INSTALL THERMOSTAT WITHIN 48" A.F.F., AND ADJACENT TO LIGHT SWITCHES WHERE POSSIBLE.	
		DESIGN CRITERIA	
		BUILDING TYPE: GROUP B, BUSINESS	
		CLIMATE ZONE: 2A, LEON COUNTY, FLORIDA	
		OUTDOOR DESIGN CONDITIONS: SUMMER 95 DEG Fdb, 77 DEG Fwb WINTER 20 DEG Fb	
		INDOOR DESIGN CONDITIONS: COOLING 75 DEG F, 50% RH HEATING 72 DEG F	
		DESIGN WIND LOAD: 120 MPH	

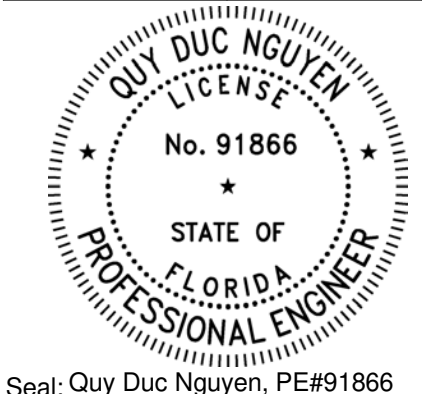
MECHANICAL SHEET INDEX	
SHEET NUMBER	SHEET NAME
M6.01	MECHANICAL NOTES & LEGENDS
M6.02	MECHANICAL DEMOLITION FLOOR PLAN
M6.1	HVAC RENOVATION FLOOR PLAN
M6.1	HVAC DETAILS & SCHEDULES



1 DEMOLITION PLAN - HVAC
M1.0D Scale: 3/16" = 1'-0"

MECHANICAL DEMOLITION GENERAL NOTES	
1. SALVAGE AND RECYCLE AS MUCH DEMOLITION MATERIAL AS PRACTICAL, UNLESS NOTED OTHERWISE.	
X KEYED NOTES	
1	DEMOLISH SUSPENDED HEATER, ASSOCIATED GAS PIPING BACK TO METER OR TANK SHUT-OFF VALVE, AND SEAL WALL VENT PENETRATION.
2	DEMOLISH WALL MOUNTED PROPELLER FAN, SEAL WALL PENETRATION.

THESE DRAWINGS AND ENCLOSURES ARE INSTRUMENTS OF SERVICE. THE DRAWINGS AND ASSOCIATED COPIES THEREOF ARE THE PROPERTY OF ALW. NO PARTS MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF ALW. ANY REUSE, REPRODUCTION OR REPRODUCTION OF THESE DRAWINGS WITHOUT THE WRITTEN PERMISSION OF ALW IS PROHIBITED. THIS COPYRIGHT NOTIFICATION SHALL REMAIN ON ALL REPRODUCTIONS OF THESE DRAWINGS. EXHIBIT OR INCORPORATION IN ANY OTHER DOCUMENT SHALL BE REMOVED FROM THESE DOCUMENTS.	ID:	REVISION:	DRAWN:	REVIEWED:	DATE:					
Client: Florida State University	PHASE: SCHEMATIC DESIGN 50% SUBMITTAL 100% CDS	DRAWN: ES ES ES	ON ON ON	05/15/26 05/27/26 06/24/26	Job Title: Haskin Circus Complex 0117 - Install HVAC System Tallahassee, Florida					
Consultant: Project #: 19370.76 Phase: 100% Construction Documents	Seal: Quy Duc Nguyen, PE#91866									



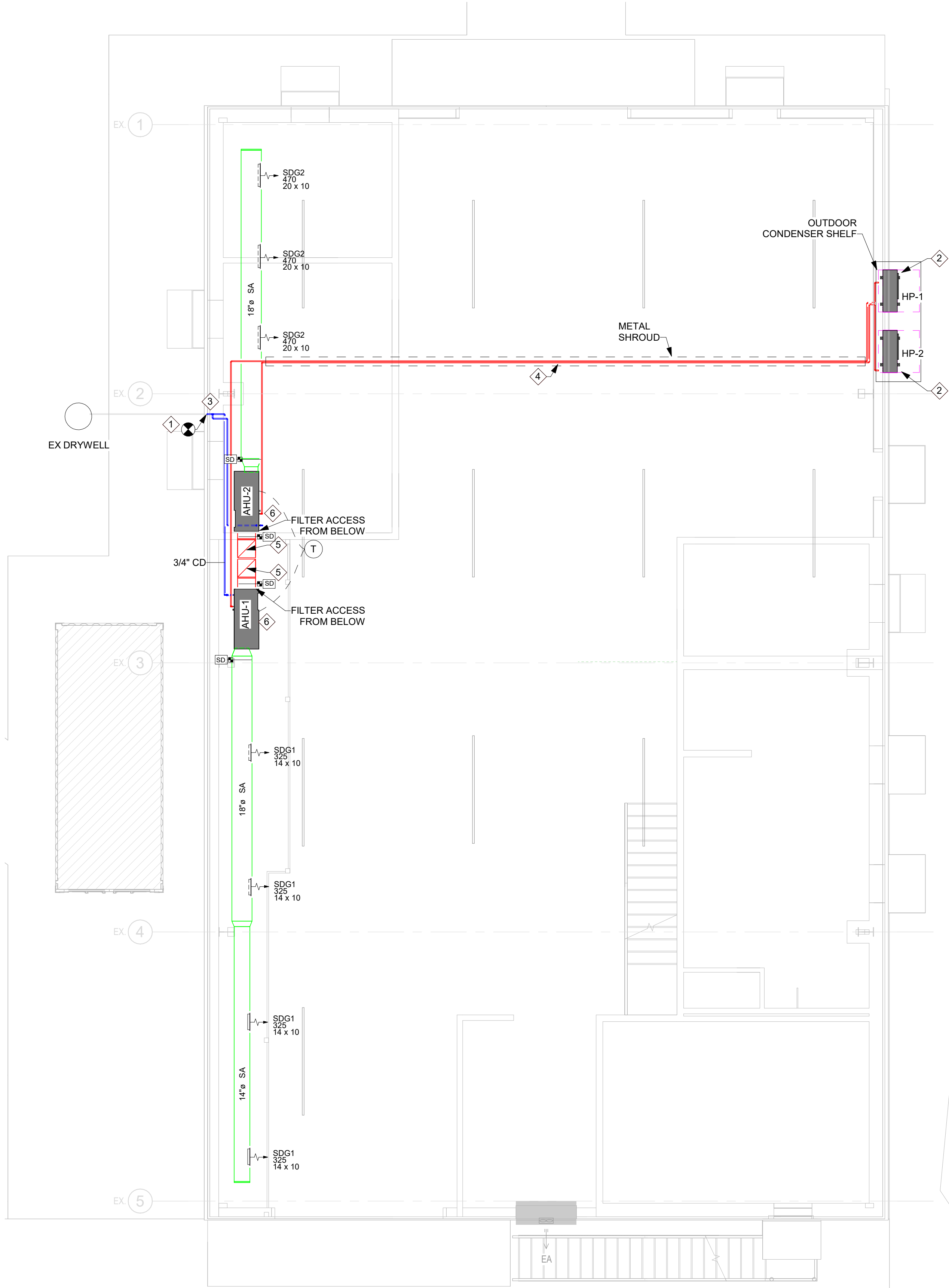
Seal: Quy Duc Nguyen, PE#91866



Architects Lewis + Whitlock
206 West Virginia St.
Tallahassee, Florida 32301
850.942.1718
www.think3d.net

Description:
MECHANICAL
DEMOLITION FLOOR
PLAN

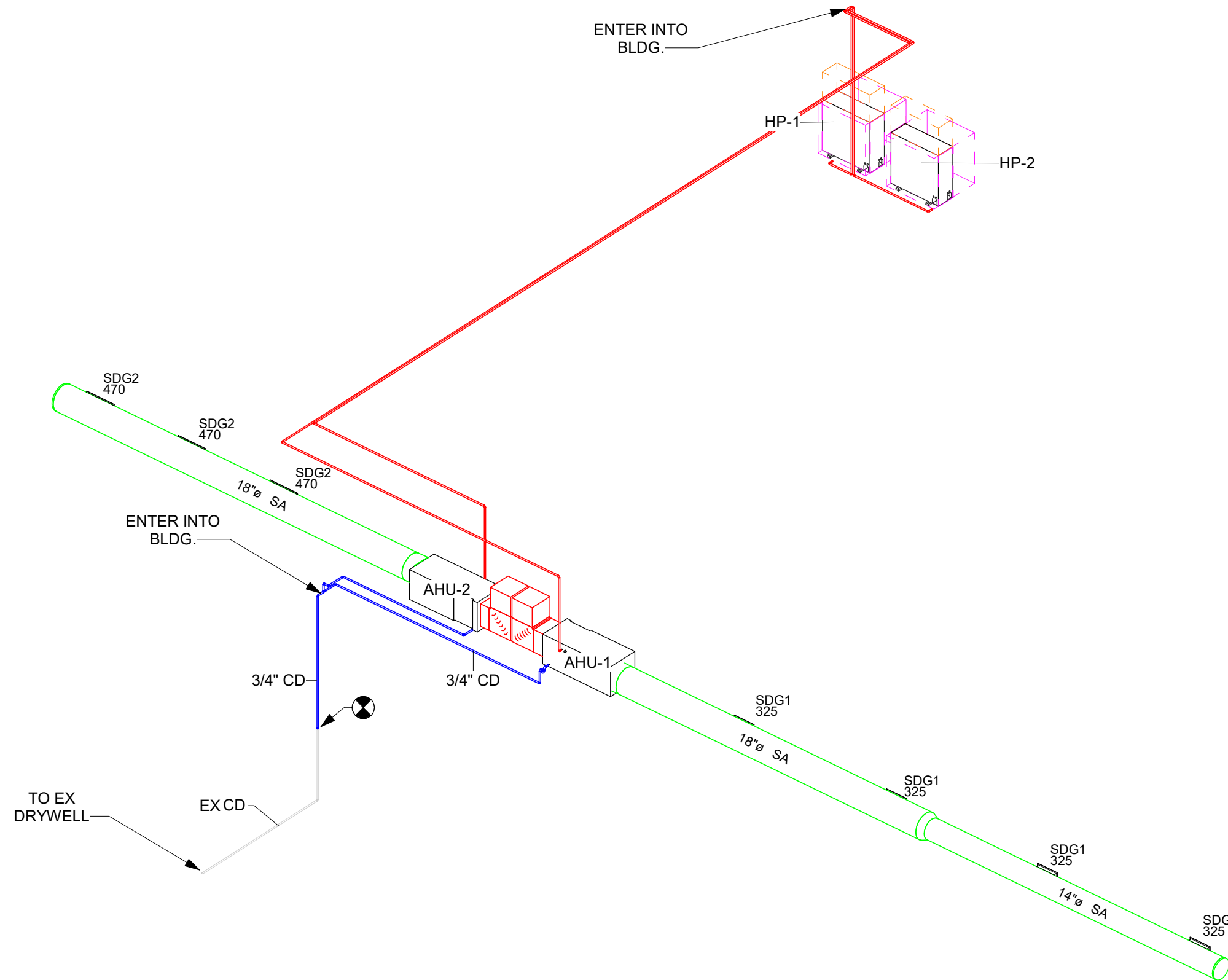
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M1.0D



1 RENOVATION PLAN - HVAC
Scale: 3/16" = 1'-0"



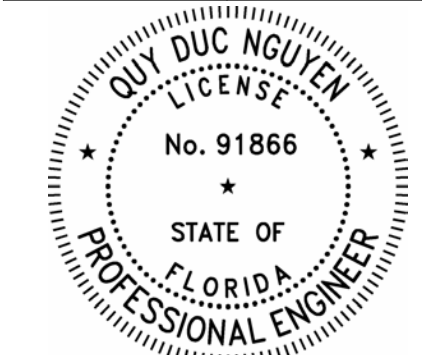
2 CONDENSATE RISER
M1.1 No Scale



3 MECHANICAL RISER
M1.1 Scale:

KEYED NOTES	
1	CONNECT NEW CONDENSATE RISER TO EX CONDENSATE ROUTED TO EXISTING DRYWELL. INSULATE AND PAINT CONDENSATE LINES TO MATCH ADJACENT. CLEAN OUT DIRT AND LEAVES FROM EX CONDENSATE PIPING AND EXISTING DRYWELL.
2	OUTDOOR CONDENSERS TO BE MOUNTED WITH SHELF ON EXTERIOR WALL AT LEAST 12" ABOVE GRADE. REFER TO STRUCTURAL PLANS. SHIFT AND ADJUST LOCATION TO AVOID CONFLICTS WITH EQUIPMENT CLEARANCES, WINDOWS, DOORS, LIGHTING AND OTHER WALL MOUNTED ITEMS.
3	COMBINE CONDENSATE IN NEW VERTICAL RISER. ROUTE DOWN AND EXIT THROUGH EXTERIOR WALL PRIOR TO ENTERING OFFICE SPACE BELOW. CONNECT TO EXISTING CONDENSATE RISER. SEE DETAIL.
4	ROUTE REFRIGERANT LINE ALONG ROOF STRUCTURE. PROVIDE WITH METAL SHROUD. COORDINATE WITH USER/OWNER TO AVOID CONFLICTIONS WITH EXISTING OR FUTURE APPARATUS MOUNTING.
5	ROUTE RETURN UP. TERMINATE WITH 1/4" EQUIPMENT MESH ON RETURN INLET.
6	MOUNT AHU AS HIGH IN CEILING SPACE AS POSSIBLE, BUT LESS THAN 16" ABOVE PLATFORM. SUSPENDED FROM STRUCTURE. AVOID CONFLICTION OF DUCTWORK WITH STRUCTURE. COORDINATE WITH USER/OWNER TO AVOID CONFLICTIONS WITH EXISTING OR FUTURE APPARATUS MOUNTING.

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Client:	Florida State University
Job Title:	Haskin Circus Complex 0117 - Install HVAC System Tallahassee, Florida
Project #:	19370.76
Phase:	100% Construction Documents
Consultant:	
Drawn:	ES
Reviewed:	ES
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Seal: Quy Duc Nguyen, PE#91866



Architects Lewis + Whitlock
206 West Virginia St.
Tallahassee, Florida 32301
850.942.1718
www.think3d.net

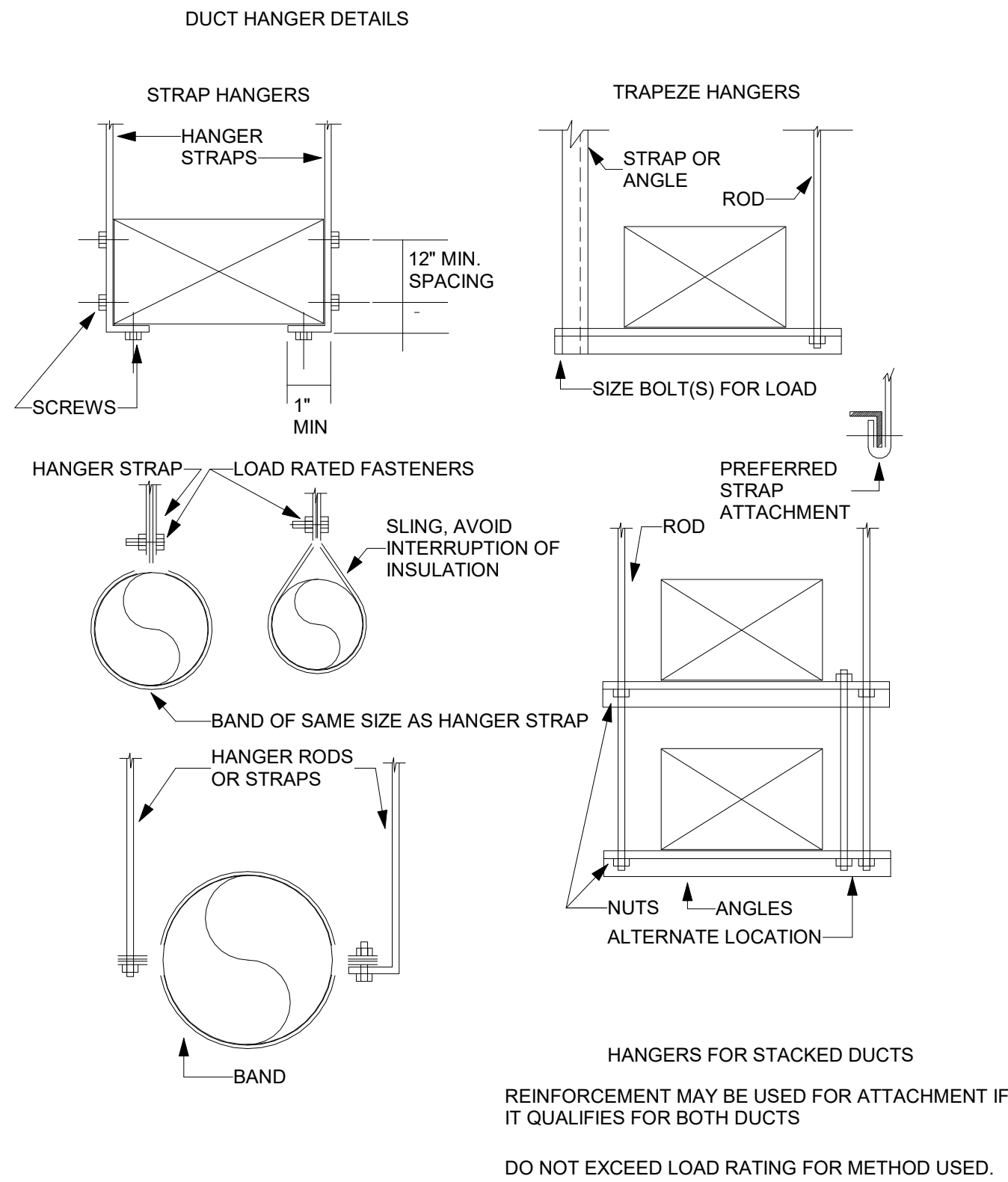
Description:
HVAC RENOVATION
FLOOR PLAN

Sheet No.:

M1.1

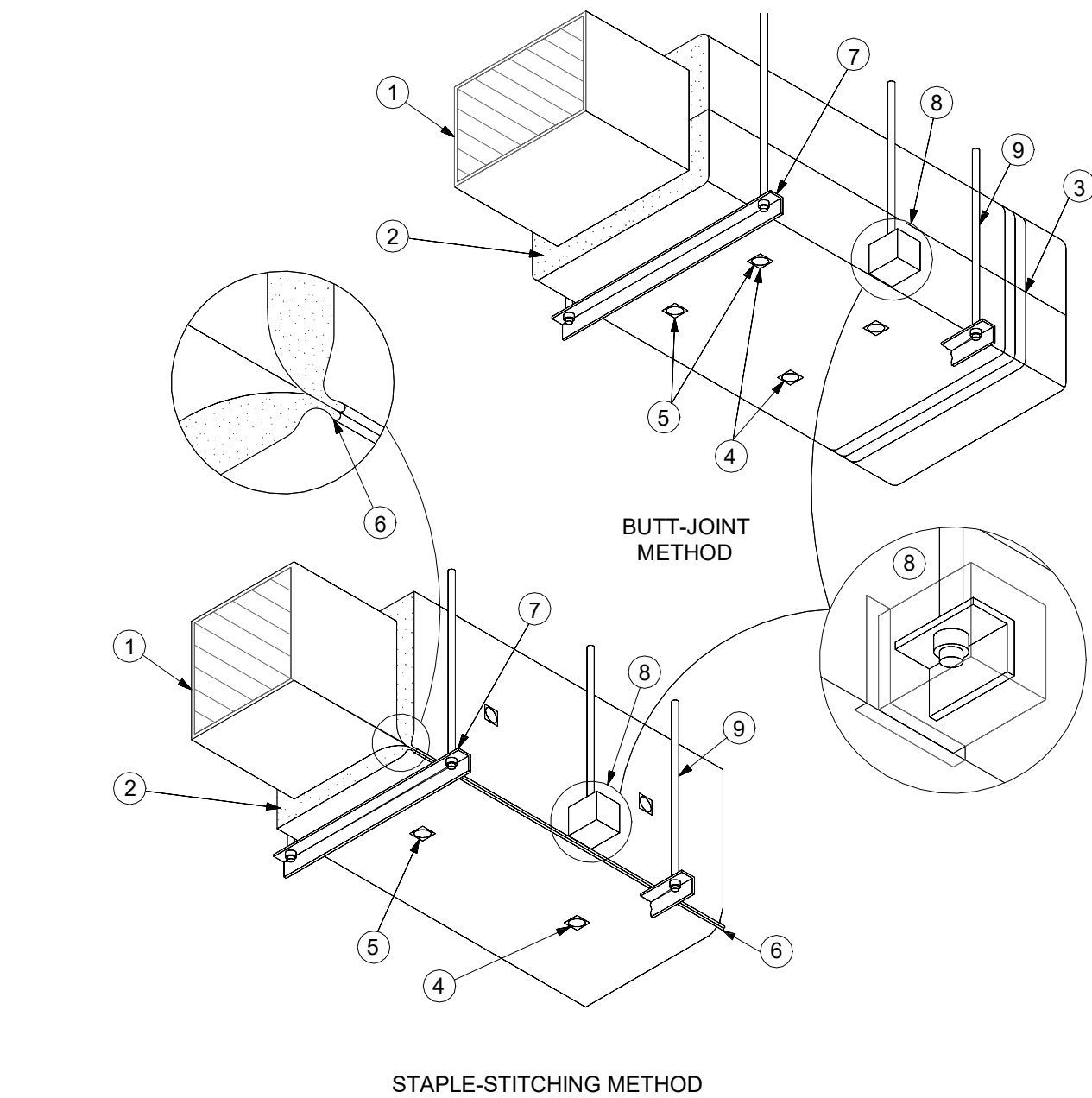
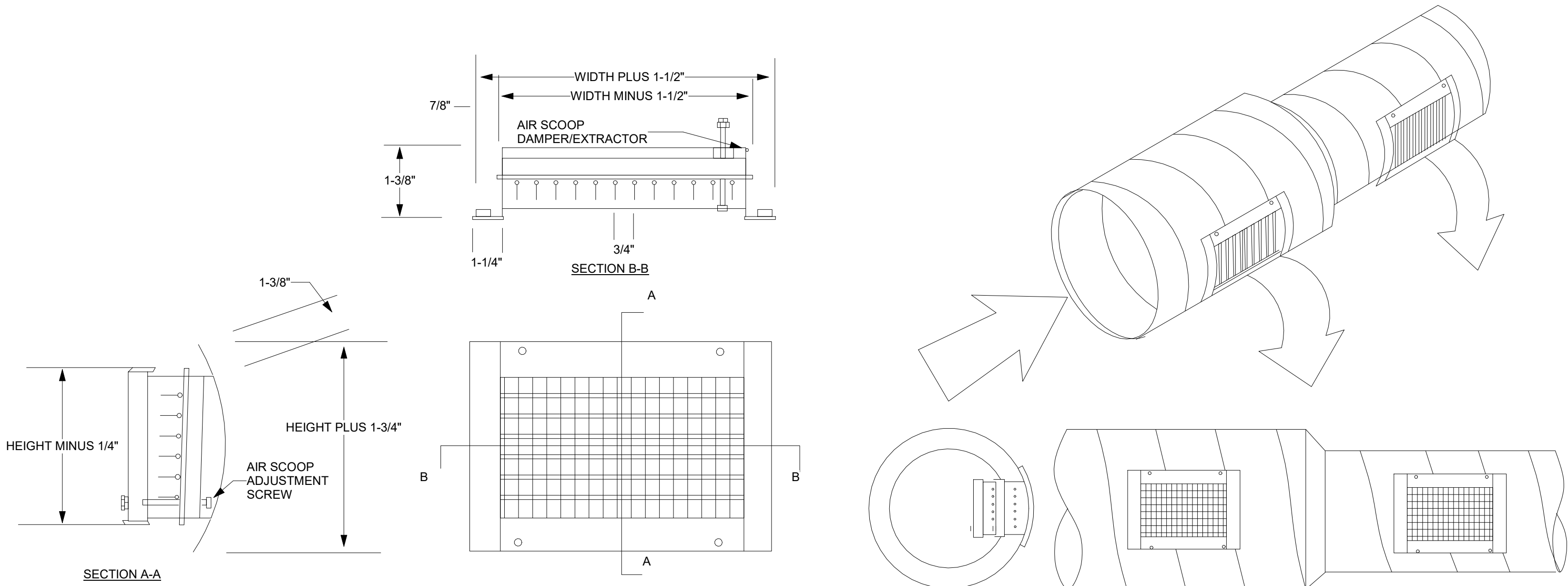
1 HANGER DETAILS

M6.1 No Scale



2 SPIRAL DUCT SIDE MOUNTED GRILLE DETAIL

M6.1 Scale: 12" = 1'-0"



- NOTES:
- 1 GALVANIZED METAL DUCT WITH SEALED SEAMS AND JOINTS USING PS-S POLY TYPE NO.P-301 PRODUCT.
 - 2 BLANKET INSULATION WITH FACTORY-APPLIED VAPOR-RETARDER JACKET, 2" THICK R-6, 3/4 LB. CU. FT. DENSITY.
 - 3 FACTORY LAP ALL SEALS (SEALED WITH ADHESIVE AND/OR STAPLES AND VAPOR-RETARDER TAPE). TAPE ALLOWS ALL JOINTS WITH FASON (SMANCA) ALUMINUM REINFORCED PRESSURE SENSITIVE TAPE; COAT EDGES, SEAMS, AND JOINTS WITH INSUL-COUSTIC PRODUCT BY "SURE-COAT M1-110" PRODUCT FIRE RESISTANT MASTIC.
 - 4 MECHANICAL FASTENERS SUPPORTING INSULATION ON UNDERSIDE OF DUCTS OVER 24" WIDE (SPACE 3" MAXIMUM FROM THE BUTT JOINT).
 - 5 VAPOR-RETARDER TAPE OVER TEARS AND PENETRATIONS OF THE VAPOR-RETARDER JACKET TO KEEP AIR TIGHT CONDITION.
 - 6 ALTERNATE METHOD OF LAP SEAL - LONGITUDINAL JOINT LAPPED AND FOLDED, THEN STAPLED SECURELY IN PLACE.
 - 7 HANGER ON EXTERIOR OF INSULATION. ENCAPSULATE EXPOSED END OF ANGLE. SEAL WITH ADHESIVE OR VAPOR-RETARDER TAPE.
 - 8 HANGER EMBEDDED IN INSULATION. ENCAPSULATE EXPOSED END OF ANGLE. SEAL WITH ADHESIVE OR VAPOR RETARDER TAPE.
 - 9 COMPLETELY ENCAPSULATE HANGER ROD AND ANGLE. SEAL TOP PENETRATION. ENCAPSULATE AND SEAL STRAP HANGERS IN A SIMILAR MANNER.

3 BLANKET FIBERGLASS INSULATION DETAIL

M6.1 No Scale

AIR HANDLER REMARKS

- 1.INSTALL WITH MERV13 FILTER. PROVIDE WITH EXTERNAL RACK AS NECESSARY.
- 2.PROVIDE WITH MANUFACTURERS WIRED THERMOSTAT.
- 3.DRAIN PAN OVERFLOW SWITCH.
- 4.PROVIDE SINGLE POINT POWER CONNECTION WITH INTEGRAL DISCONNECT.
- 5.INCLUDE ELECTRIC HEAT KIT.
- 6.UNOCCUPIED SETBACK AND OPTIMAL START SEQUENCES.
- 7.MECHANICAL CONTRACTOR TO PROVIDE CONDENSATE PUMP.

AIR HANDLER SCHEDULE

MARK	MANUFACTURER	MODEL	MATCHING UNIT	TONS	TOTAL CFM	EXT. SP (IN WG)	EAT DB	EAT WB	LAT DB	LAT WB	INDOOR HP	INDOOR MCA	INDOOR MOCP	KW HEATER	PHASE	VOLTAGE	REFRIGERANT TYPE	INDOOR UNIT WEIGHT	REMARKS
AHU-1	DAIKIN	FTA48AVJU	HP-1	4	1300	0.5 in-wg	80 °F	67 °F	55 °F	55 °F	0.75	32	35	5	1	208	R32	143	1-7
AHU-2	DAIKIN	FTA48AVJU	HP-2	4	1410	0.5 in-wg	80 °F	67 °F	55 °F	55 °F	0.75	32	35	5	1	208	R32	143	1-7

HEAT PUMP UNIT REMARKS

- 1.SINGLE-POINT POWER.
- 2.INTEGRAL DISCONNECT.
- 3.FOLLOW EQUIPMENT MANUFACTURER'S GUIDELINES FOR UNIT CLEARANCE AND REFRIGERANT LINE SIZING.
- 4.COMPRESSOR SOUND BLANKET, CRANKCASE HEATER.
- 5.SECURED FOR LOCAL WIND RATING, SEE FRONT PAGE NOTE DESIGN CRITERIA.

HEAT PUMP UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	MATCHING UNIT	TONS	TOTAL BTUH	COOLING BTUH	HEATING BTUH	REFRIGERANT TYPE	SEER2	HSPF2	VOLTS	WEIGHT (LBS)	MCA	MOCP	REMARKS
HP-1	DAIKIN	RZA48-AAVJU	FTA48AAVJUD	4	47000	47000	55000	R32	15	9	208 V	234	35 A	35 A	1-5
HP-2	DAIKIN	RZA48-AAVJU	FTA48AAVJUD	4	47000	47000	55000	R32	15	9	208 V	234	35 A	35 A	1-5

AIR DISTRIBUTION DEVICE REMARKS

1. PROVIDE MEANS OF THROUGH-FACE BALANCING WHERE MANUAL DAMPER WOULD OTHERWISE BE INACCESSIBLE, VCR9 OR EQUIVALENT.

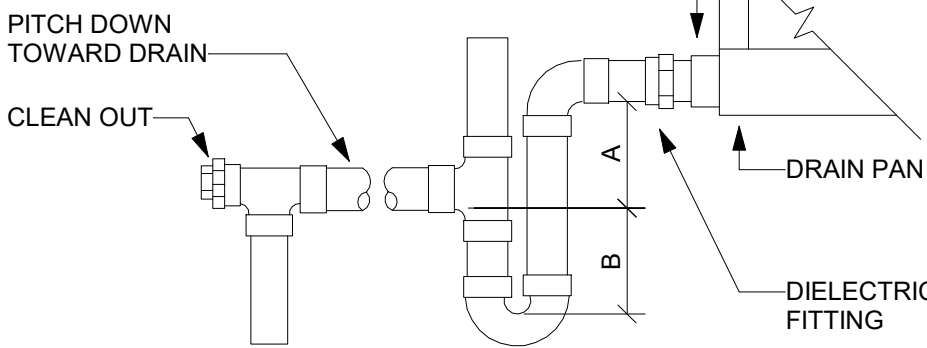
AIR DISTRIBUTION DEVICE SCHEDULE

MARK	SERVICE	MFG	MODEL	CFM RANGE	NECK SIZE	DETAILS	IMAGE
SDG1	SUPPLY	PRICE	SDGE	325	14"x10"	SPIRAL DUCT CURVED GRILLE SUPPLY; ALUMINUM; 0 DEGREE BLADE TILT; SDGE; WITH AIR SCOOP FOR BALANCING.	
SDG2	SUPPLY	PRICE	SDGE	470	20"x10"	SPIRAL DUCT CURVED GRILLE SUPPLY; ALUMINUM; 0 DEGREE BLADE TILT; SDGE; WITH AIR SCOOP FOR BALANCING.	

NATURAL VENTILATION REQUIREMENT SCHEDULE	
Occupied Space Name	Surface Area (ft²)
Open Space	2831
Total	2831
4% Minimum Openable Area (FBC Mech 402.2)	114

NATURAL VENTILATION FULFILLMENT SCHEDULE	
Direct Outdoor Openings	Open Area (ft²)
Garage Door	120
Doors	48
Total Openable Area	168

DRAIN LINE SHALL BE AT LEAST THE SAME SIZE AS THE NIPPLE ON THE DRAIN PAN. PIPING SHALL BE RIGID COPPER TYPE L O TYPE M UNLESS NOTE BELOW IS MET



- NOTE:
- 1.CPVC PIPE MAY BE USED ONLY IF APPROVED BY LOCAL VA AND IS INDOORS AND DOES NOT PASS THROUGH RATED BARRIERS.
 - 2.DIELECTRIC FITTING TO BE USED WHEN TWO DISSIMILAR METALS ARE TO BE CONNECTED.
 - 3.TERMINATE AT CODE ALLOWED GREEN SPACE INTO GRAVEL PIT MINIMUM 12" FROM BUILDING.

UNIT TYPE	A	B
DRAW THRU	2" PLUS X	X
BLOW THRU	1" MINIMUM	2X

WHERE X = STATIC PRESSURE IN PAN

4 AHU DRAIN TRAP

M6.1 No Scale

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ES	ON	05/15/26		
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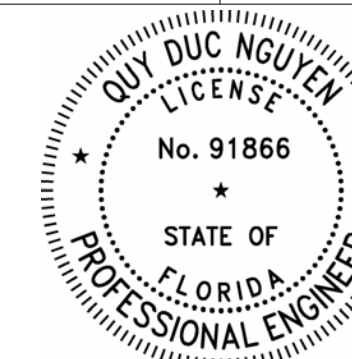
PHASE: SCHEMATIC DESIGN 50% SUBMITTAL 100% CDS

Client: Florida State University

Job Title: Haskin Circus Complex 0117 - Install HVAC System Tallahassee, Florida

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Architects Lewis & Whitlock
206 West Virginia St.
Tallahassee, Florida 32301
850.942.1718
www.think3d.net

Description:
HVAC DETAILS & SCHEDULES

Sheet No.:

M6.1