

CODE REFERENCES	
FBC, BUILDING	FLORIDA BUILDING CODE, BUILDING, 2023 EIGHTH EDITION
FBC, EXISTING BUILDING	FLORIDA BUILDING CODE, EXISTING BUILDING, 2023 EIGHTH EDITION
FBC, MECHANICAL	FLORIDA BUILDING CODE, MECHANICAL, 2023 EIGHTH EDITION
FBC, EXISTING BUILDING	FLORIDA BUILDING CODE, 2023 EIGHTH EDITION
FBC, ENERGY	FLORIDA BUILDING CODE, 2023 EIGHTH EDITION
FFPC	FLORIDA FIRE PREVENTION CODE, 2023 EIGHTH EDITION
NFPA 51B	STANDARD FOR FIRE PREVENTION DURING WELDING, CUTTING, AND OTHER HOT WORK, 2019 EDITION
NFPA 70	NATIONAL ELECTRIC CODE, 2020 EDITION
NFPA 90A	STANDARD FOR THE INSTALLATION OF AIR CONDITIONING AND VENTILATING SYSTEMS, 2021 EDITION
NFPA 101	LIFE SAFETY CODE, 2021 EDITION
NFPA 101A	GUIDE ON ALTERNATIVE APPROACHES TO LIFE SAFETY, 2019 EDITION

DESIGN CRITERIA	
BUILDING TYPE	GROUP A-3, ASSEMBLY
CLIMATE ZONE	2A, LEON COUNTY, FLORIDA
OUTDOOR DESIGN CONDITIONS (SUMMER)	95°F DB, 78°F WB
OUTDOOR DESIGN CONDITIONS (WINTER)	25°F DB
INTERIOR DESIGN TEMPERATURES	72°F HEATING, 75°F COOLING
ENERGY COMPLIANCE METHOD	TOTAL BUILDING PERFORMANCE
COMMISSIONING	COMMISSIONING IS NOT REQUIRED FOR THIS PROJECT PER C408.2 EXCEPTION #1 IN THE FBC-EC.
SCOPE OF WORK	PROJECT CONSIST OF A NEW COMMUNITY HALL. THE COMMUNITY HALL WILL BE HEATED AND COOLED BY AN AIR HANDLING UNIT, HEAT PUMP, AND UNIT HEATERS. VENTILATION SHALL BE PROVIDED FROM TWO EXHAUST FANS AND ERV. OUTSIDE AIR WILL BE DUCTED TO THE INDOOR UNIT FROM ERV.

ABBREVIATIONS & SYMBOLS	
AC	AIR CONDITIONER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AFR	ABOVE FINISHED ROOF
AFD	ADJUSTABLE FREQ. DRIVE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
BHP	BRAKE HORSE POWER
CD	CONDENSATE
CFM	CUBIC FEET PER MINUTE
CU	CONDENSING UNIT
DDC	DIRECT DIGITAL CONTROLS
DN	DOWN
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EWI	ENTERING WATER TEMPERATURE
ESP	EXTERNAL STATIC PRESSURE
FLA	FULL LOAD AMPS
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GPM	GALLONS PER MINUTE
KW	KILLOWATT
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSANDS OF BTU'S PER HOUR
MCA	MINIMUM CIRCUIT AMPS
MOC	MAXIMUM OVER CURRENT PROTECTION
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OA	OUTDOOR AIR
PPM	PARTS PER MILLION
PSI	POUNDS PER SQUARE INCH
PSIG	PSI GAUGE
PVC	POLYVINYL CHLORIDE
RA	RETURN AIR
RG	RETURN GRILLE
RTU	ROOF TOP UNIT
SA	SUPPLY AIR
SG	SUPPLY GRILLE
TSP	TOTAL STATIC PRESSURE
UNO	UNLESS NOTED OTHERWISE
WP	WEATHER PROOF
ΔP	CHANGE IN PRESSURE
ΔT	CHANGE IN TEMPERATURE
SIM	SIMILAR
DIFFUSER TAG, NEW	

DUCT SYMBOLS	
SUPPLY AIR DUCTWORK DOWN	
SUPPLY AIR DUCTWORK UP	
OUTSIDE AIR DUCTWORK DOWN	
OUTSIDE AIR DUCTWORK UP	
FLEXIBLE CANVAS CONNECTION	
RETURN AIR DUCTWORK UP	
RETURN AIR DUCTWORK DOWN	
EXHAUST AIR DUCTWORK UP	
EXHAUST AIR DUCTWORK DOWN	
FIRE DAMPER EX - EXISTING	
MECHANICAL EQUIPMENT WITH MAINTENANCE CLEARANCE	
MANUAL BALANCE DAMPER	
MOTORIZED DAMPER, REFER TO SPECIFICATIONS FOR VOLTAGE REQUIREMENTS	
FLEXIBLE DUCTWORK	
SUPPLY AIR DIFFUSER	
RETURN AIR GRILLE	
EXHAUST AIR GRILLE	

PIPING SYMBOLS	
CHECK VALVE	
PIPING UP	
PIPING DOWN	
END CAP	
BUTTERFLY VALVE	
BALL VALVE	
DIRECTION OF FLOW	
CONDENSATE & PUMPED CONDENSATE	

GENERAL HVAC NOTES	
1	TOMAHAWK ENGINEERING AND CONSULTING, INC. SHALL NOT BE HELD RESPONSIBLE FOR ANY MISUSE AND/OR MISREPRESENTATION OF THIS SET OF DOCUMENTS.
2	THE CONTRACTOR ASSUMES RESPONSIBILITY FOR USE OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL MAKE HIMSELF 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.
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 IN RESPONSIBLE CHARGE FOR THE GIVEN DISCIPLINE.
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.
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.
6	WHERE THE CONTRACTOR DEVIATES FROM THIS SET OF CONSTRUCTION DOCUMENTS AND RESUBMISSION OF REVISED DRAWINGS IS REQUIRED BY THE PERMITTING OFFICE/OFFICIAL, A MINIMUM CHARGE OF \$750.00 PER AFFECTED DRAWING SHEET WILL BE BILLED TO THE CONTRACTOR. THE REVISED DRAWINGS WILL NOT BE PROVIDED AND/OR SUBMITTED TO THE PERMIT OFFICE UNTIL A PURCHASE ORDER OR SIGNED AGREEMENT IS ISSUED BY THE CONTRACTOR TO THE DESIGN PROFESSIONAL FOR WORK REQUIRED. THIS SHALL NOT APPLY TO UNFORESEEN CONDITIONS OR CHANGES REQUIRED FOR THE PROJECT THAT ARE NOT INITIATED BY THE CONTRACTOR.
7	DRAWINGS ARE SCHEMATIC IN NATURE. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND EXISTING EQUIPMENT (WHERE APPLICABLE) TO ENSURE EQUIPMENT FURNISHED WILL WORK FOR SPACES PROVIDED. FINAL DIMENSIONS OF DUCTWORK AND PIPING SHALL BE COORDINATED IN FIELD. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR PROVIDING OFFSETS AND TRANSITIONS IN DUCTWORK AND PIPING TO FIT IN SPACES PROVIDED AND THESE ADDITIONAL OFFSETS AND TRANSITIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
8	DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF SMACNA GUIDELINES AT TIME OF PROJECT PERMIT.
9	THERMOSTATS, HUMIDISTATS, TEMPERATURE SENSORS, HUMIDITY SENSORS, AND/OR OTHER DEVICES REQUIRING OCCUPANT ADJUSTMENT BUT LOCATED ON WALL SHALL BE MOUNTED 48" AFF, UNLESS NOTED OTHERWISE.
10	WHERE APPLICABLE AND AVAILABLE, ACTUAL EQUIPMENT DRAWINGS ARE USED FOR SYMBOLS ON PLAN VIEWS AND IN DETAILS. HOWEVER, SIMPLE BLOCK DIAGRAMS WITH ESTIMATED DIMENSIONS ARE ALSO USED FOR PLAN VIEWS. WHERE EQUIPMENT OR DEVICES ARE NOT LABELED, INDUSTRY STANDARD TERMINOLOGY AND SYMBOLOGY SHALL APPLY.
11	THESE GENERAL NOTES WORK IN CONJUNCTION WITH NOTES SHOWN ON PLAN VIEWS. THESE NOTES DO NOT SUPERCEDE NOTES SHOWN ON PLAN VIEW DRAWINGS. CONVERSELY, NOTES SHOWN ON PLAN VIEW DRAWINGS DO NOT SUPERCEDE THESE GENERAL NOTES.
12	REFER TO EQUIPMENT SCHEDULES FOR AIR AND WATER PRESSURE DROPS ASSOCIATED WITH COOLING AND HEATING COILS.
13	PROVIDE ACCESS PANELS IN DUCTWORK AND/OR BUILDING CONSTRUCTION WHERE REQUIRED FOR EQUIPMENT ACCESS AND SERVICE. PANELS SHALL BE SIZED TO SUIT EQUIPMENT SERVICED. WHERE PANELS WILL BE LOCATED IN FIRE RATED WALLS AND/OR PARTITIONS, THE ACCESS PANEL SHALL MEET THE RATING OF THE WALL. REFER TO ARCHITECTURAL DRAWINGS FOR RATINGS OF WALLS AND PARTITIONS.
14	UNLESS NOTED OTHERWISE, DUCTWORK, PIPING, VALVES, DAMPERS, AND ALL ASSOCIATED ANCILLARY HVAC DEVICES SHALL BE CONSTRUCTED IN ACCORDANCE WITH MECHANICAL SPECIFICATIONS. ALL EQUIPMENT INSTALLED AS PART OF THIS PROJECT SHALL BE NEW, UNLESS NOTED OTHERWISE, NO EXCEPTIONS.
15	PAINT DUCTWORK AND DAMPERS VISIBLE THRU REGISTERS FLAT BLACK PRIOR TO OWNER OCCUPANCY.
16	HVAC EQUIPMENT PROVIDED FROM THIRD PARTY MANUFACTURER SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS. WHERE CONFLICTS BETWEEN CONTRACT DOCUMENTS AND MANUFACTURER'S INSTRUCTION ARISE, THE MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL PREVAIL.
17	THE CONTRACTOR SHALL MAKE HIS OR HERSELF AWARE OF THE OWNER'S SCHEDULE AND BE PREPARED TO WORK AT NIGHT OR ON WEEKENDS TO COMPLETE WORK SHOWN IN THESE DOCUMENTS. INTERRUPTIONS TO OWNER'S NORMAL WORK SCHEDULE SHALL NOT BE MADE WITHOUT WRITTEN INSTRUCTION TO DO SO FROM OWNER'S REPRESENTATIVE.
18	FOR EQUIPMENT DEMOLISHED UNDER THIS CONTRACT, THE CONTRACTOR SHALL ALLOW THE OWNER FIRST REFUSAL OF DEMOLISHED EQUIPMENT. IF EQUIPMENT IS REFUSED, THE CONTRACTOR SHALL DISPOSE OF DEMOLISHED EQUIPMENT IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION. IN ADDITION, FOR EQUIPMENT INDICATED TO BE DEMOLISHED, THE CONTRACTOR SHALL ASSUME THAT THIS ALSO REQUIRES DEMOLITION OF ALL ASSOCIATED APPURTENANCES INCLUDING ELECTRICAL CONNECTIONS, CONTROLS CONNECTIONS, ETC.
19	CONTROLS COMPONENTS INDICATED TO BE DEMOLISHED SHALL ALSO INCLUDE CONTROL WIRING AND CONDUITS, REGARDLESS OF VOLTAGE. WHERE CONTROLS WIRING IS 120V AND ABOVE, A LICENSED ELECTRICAL CONTRACTOR SHALL BE PROCURED BY THE CONTROLS VENDOR TO PERFORM WORK.
20	THE CONTROLS VENDOR IS RESPONSIBLE FOR PROVIDING AND INSTALLING ALL CONTROL WIRING AND CONDUIT ASSOCIATED WITH THIS PROJECT, REGARDLESS OF VOLTAGE. WHERE CONTROL VOLTAGE IS 110V AND ABOVE, THE CONTROLS VENDOR SHALL PROCURE THE SERVICES OF A FLORIDA LICENSED ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL WIRING AND CONDUITS IN ACCORDANCE WITH NEC AND THE LOCAL AUTHORITY HAVING JURISDICTION.
21	WHERE THERE ARE CONFLICTS BETWEEN LIGHT SWITCHES AND THERMOSTAT/HUMIDISTAT LOCATIONS, THE LIGHT SWITCHES SHALL PREVAIL. MOUNT THERMOSTAT/HUMIDISTATS ADJACENT TO LIGHT SWITCHES.
22	AS REQUIRED BY BUILDING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE TRANSITIONS AND EQUIVALENT SQUARE DUCT SIZES NEEDED TO FIT THRU JOISTS AND/OR WALL 2x4 SPACING WHERE ROUND IS SHOWN ON PLANS. THE CONTRACTOR SHALL PROVIDE THESE TRANSITIONS AND SQUARE DUCTS AT NO ADDITIONAL COST TO THE OWNER. COORDINATE WITH THE GC IN FIELD FOR JOIST AND WALL 2x4 REQUIREMENTS.
23	WHERE REQUIRED BY BUILDING CONSTRUCTION AND HEIGHT TO EQUIPMENT SERVED, THE CONTRACTOR SHALL PROVIDE HOISTING MECHANISMS AS WELL AS SCAFFOLDING WHERE REQUIRED TO INSTALL EQUIPMENT SHOWN WITHIN THESE CONTRACT DOCUMENTS. EQUIPMENT USED FOR THE INSTALLATION OF EQUIPMENT SHALL MEET ALL OSHA REQUIREMENTS.
24	PROVIDE MANUAL BALANCE DAMPERS FOR SUPPLY, RETURN, AND EXHAUST TAKE-OFFS TO REGISTERS WHETHER INDICATED OR NOT. WHERE DAMPERS WILL BE LOCATED ABOVE INACCESSIBLE CEILINGS, PROVIDE OPPOSED BLADE MANUAL BALANCE DAMPERS FROM REGISTER MANUFACTURER.

FAN SCHEDULE										
EQUIPMENT NO.	MODEL NO.	FAN TYPE	CFM	EXTERNAL STATIC	FAN RPM	DRIVE TYPE	SONES	MOTOR RPM	MOTOR HP	VOLTAGE/PHASE
EF-1	165SQN	INLINE	1850	0.65"	1114	DIRECT	12.2	1050	1/2	115/1Ø
EF-2	100SQN	INLINE	500	0.5"	1500	DIRECT	8.0	1200	1/6	115/1Ø

NOTES:

- BASIS OF DESIGN: COOK, OR EQUAL.
- PROVIDE EXHAUST FAN EF-1 WITH THE FOLLOWING: DISCONNECT SWITCH (REFER TO ELEC.), RESTRAINED SPRING VIBRATION ISOLATORS, BACKDRAFT DAMPER, FAN SPEED CONTROLLER, AND COMPANION FLANGES. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING CONTROL INTERLOCK REQUIREMENTS.
- PROVIDE EXHAUST FAN EF-2 WITH THE FOLLOWING: ELECTRICAL DISCONNECT (REFER TO ELECTRICAL PLANS), FAN SPEED CONTROLLER, BACKDRAFT DAMPER, COMPANION FLANGES, AND WALL MOUNTED ON/OFF SWITCH. FANS SHALL RUN CONTINUOUSLY, 24/7.

DIFFUSER SCHEDULE			
PLAN MARK	CFM	NECK SIZE	DESCRIPTION
A	0-100	6"Ø	MULTIPLE CONE, SQUARE, HIGH CAPACITY, ROUND INLET (OF SIZE INDICATED) POLYMER CONSTRUCTION WITH 4-WAY DISCHARGE PATTERN. UNITS SHALL BE EQUAL TO AMERICAN AIR LOUVER, MODEL STATUS, CONE PATTERN.
	101-245	8"Ø	
	246-350	10"Ø	
	351-500	12"Ø	
B	501-900	14"Ø	ALL ALUMINUM CONSTRUCTION RETURN AIR GRILLE, WITH LOUVERED FACE AND 3/4" BLADE SPACING ON 35° ANGLE. PROVIDE LAY-IN TYPE BORDER WHERE LOCATED IN LAY-IN TYPE CEILINGS. PROVIDE WITH SURFACE MOUNTED BORDER WHERE LOCATED IN GYPSUM CEILINGS OR ON WALLS.

NOTES:

- DIFFUSERS CONNECTED TO EXPOSED DUCTWORK IN DINING AREAS SHALL BE MILL FINISH. LAY-IN AND WALL MOUNTED DIFFUSERS AND GRILLES SHALL BE WHITE.
- WHERE REQUIRED BY GYPSUM CEILINGS, PROVIDE WITH PLASTER RINGS OR OTHER APPURTENANCES AS REQUIRED.
- INTERIORS OF DIFFUSERS AND GRILLES VISIBLE FROM THE FINISHED SPACE SHALL BE PAINTED FLAT BLACK.

UNIT HEATER SCHEDULE							
EQUIPMENT NO.	MODEL NO.	CFM	AIR THROW (FT)	DISCHARGE TYPE	RATING (KW)	AMPS	VOLTAGE/PHASE
UH-1	HF3384D	175	NA	VERTICAL	2	8.3	240V / 1Ø
UH-2	HF3384D	175	NA	VERTICAL	2	8.3	240V / 1Ø
UH-3	E3383D	175	NA	VERTICAL	1.5	12.5	120/1Ø
UH-4	HF3385D	175	NA	VERTICAL	3	12.5	240V / 1Ø

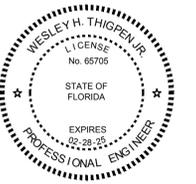
NOTES:

- BASIS OF DESIGN: TPI CORP/MARKEL 3380 SERIES, CEILING MOUNTED
- ENCLOSED 1-SPEED, 1-PHASE, PERMANENTLY LUBRICATED, THERMALLY PROTECTED MOTOR WITH UNIT BEARINGS
- PROVIDE UNIT HEATERS WITH THE FOLLOWING: MANUFACTURER'S RECESSED MOUNTING CEILING PACKAGE WITH WHITE STEEL GRILL, AND OPTIONAL LOW VOLTAGE, RECESS MOUNTED (WALL) THERMOSTAT WITH ADJUSTABLE TEMPERATURE RANGE OF 40°F TO 110°F. THERMOSTAT SHALL BE PROVIDED WITH A TAMPER PROOF ADJUSTMENT AND/OR A VENTED, LOCKABLE ENCLOSURE.



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LEON CO. NE PARK

19580 Drawn By: DMM
 Project Code Checked By: WHT

06 NOVEMBER, 2024
 Date
BID DOCUMENTS

- Revisions
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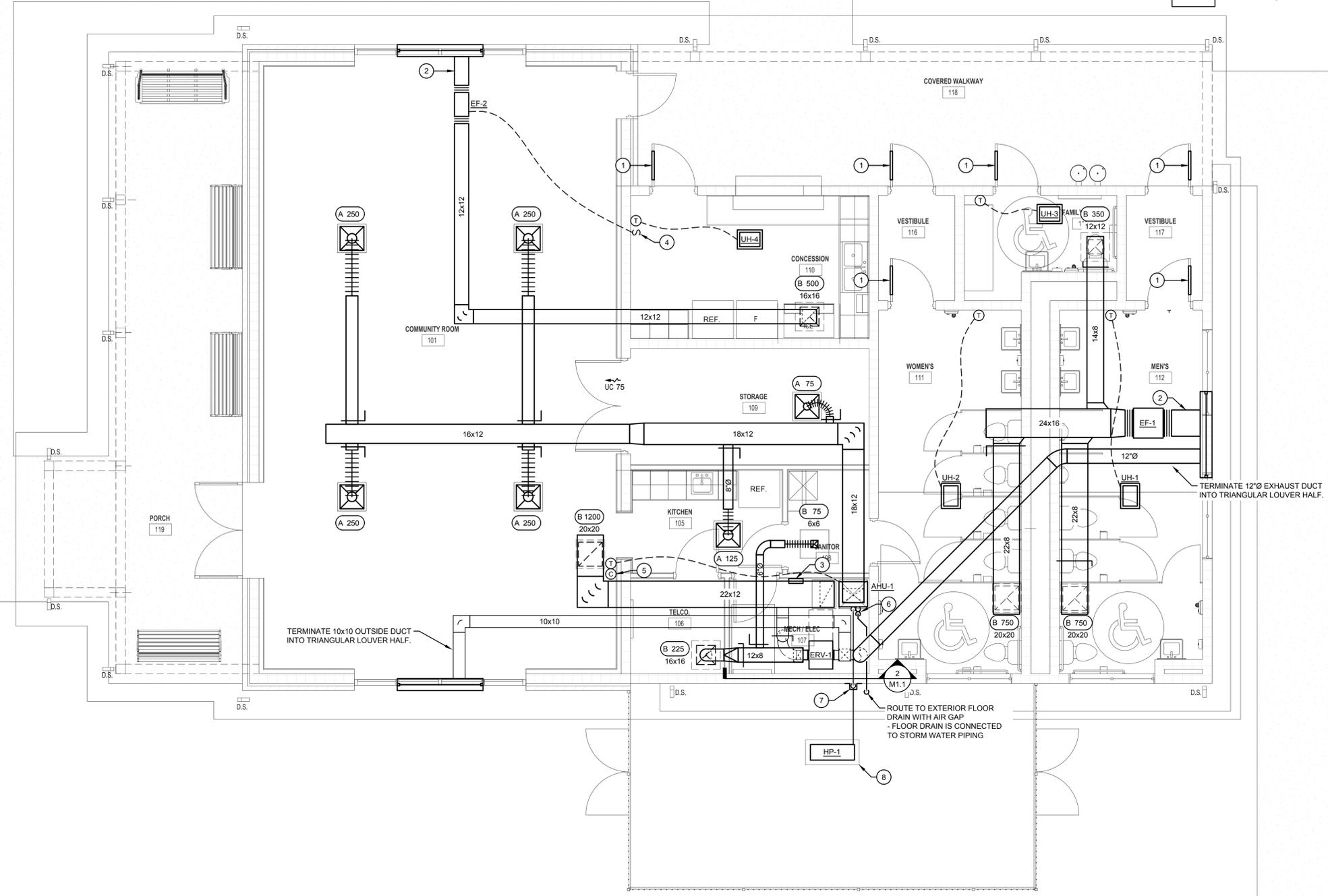
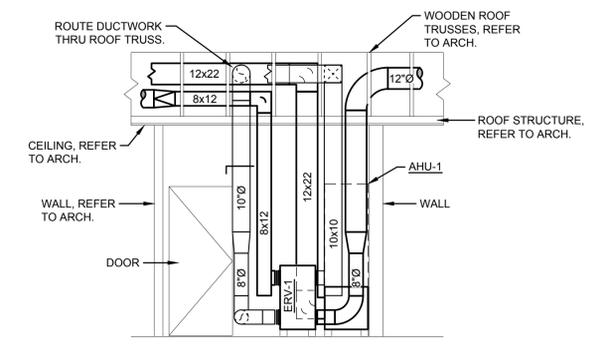
LEGEND & NOTES - MECHANICAL

Tallahassee Florida

M0.1

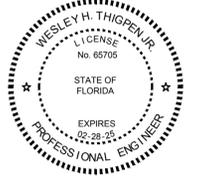
- SHEET KEY NOTES:**
- 1 PROVIDE A 24x24 PRICE MODEL ATGH, HEAVY DUTY DOOR GRILLE, OR EQUAL. DOOR GRILLE COLOR SHALL BE SELECTED BY ARCHITECT. WHERE NO DIRECTION IS PROVIDED BY ARCHITECT, PROVIDE MILL FINISH.
 - 2 ROUTE FULL SIZE DISCHARGE DUCT FROM FAN TO TRIANGULAR LOUVER HALF.
 - 3 WALL MOUNTED PROGRAMMABLE TIME CLOCK FOR ERV-1.
 - 4 EXHAUST FAN SWITCH. PROVIDE PLACARD ABOVE SWITCH THAT READS "TURN FAN ON WHEN OCCUPIED. TURN FAN OFF WHEN LEAVING."
 - 5 CO2 DETECTOR SET FOR 750PPM.
 - 6 PROVIDE FULL LINE SIZE CONDENSATE WITH P-TRAP. ROUTE THROUGH EXTERIOR WALL WITH PIPE SLEEVE TO EXTERIOR FLOOR DRAIN AND TERMINATE WITH AN ELBOW.
 - 7 PROVIDE NEW PAINTABLE PIPING SHROUD FOR REFRIGERANT PIPING. REFER TO DETAILS SHEET FOR FURTHER INFORMATION.
 - 8 PROVIDE A 6" TALL CONCRETE HOUSEKEEPING PAD, MINIMUM 6" LARGER THAN THE FOOTPRINT OF THE UNIT. ANCHOR UNIT TO CONCRETE HOUSEKEEPING PAD. REFER TO DETAILS FOR FURTHER INFORMATION.

2 ERV-1 ELEVATION
M1.1 1/4" = 1'-0"



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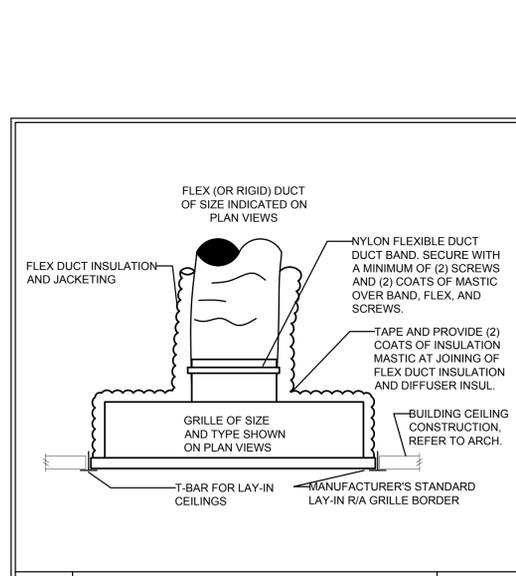
FLOOR PLAN - MECHANICAL

Tallahassee Florida

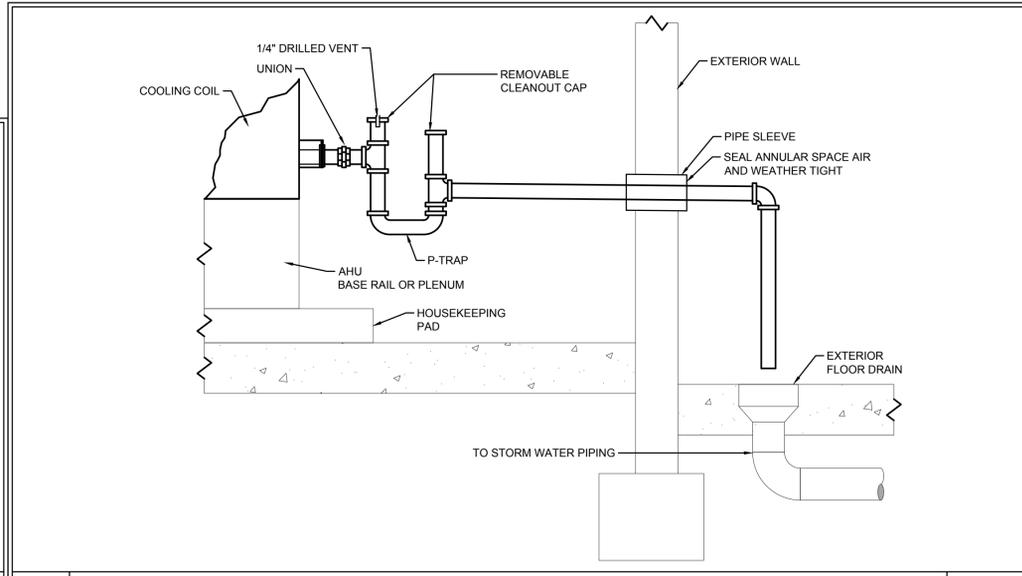
M1.1

1 FLOOR PLAN - MECHANICAL
M1.1 1/4" = 1'-0"

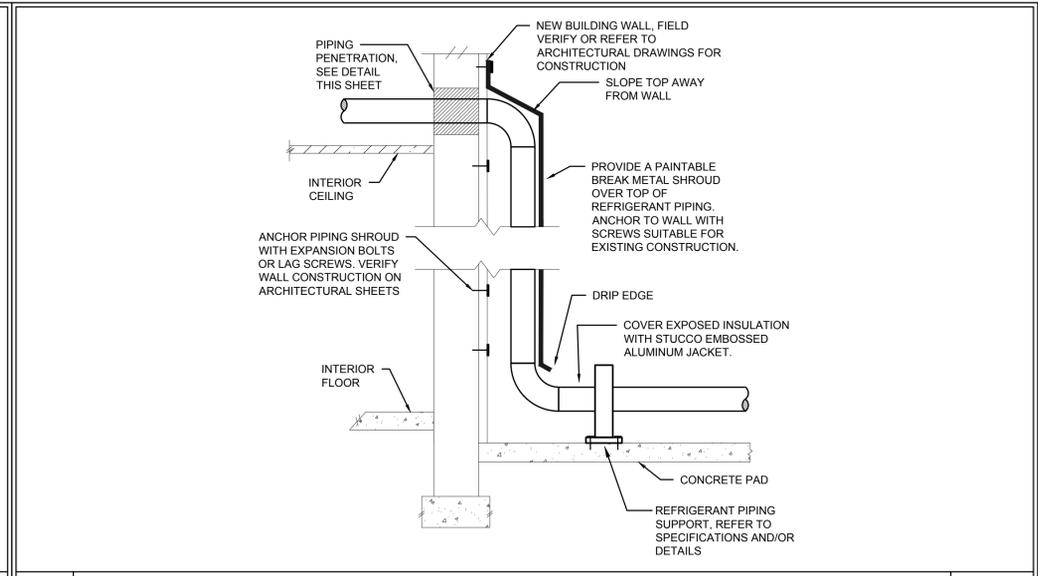




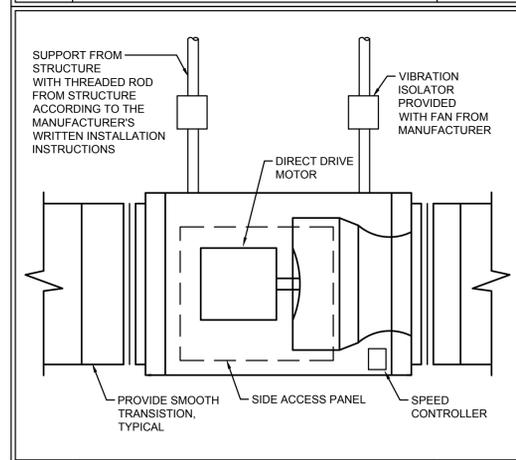
3 RETURN AIR GRILLE DETAIL SCALE: NONE



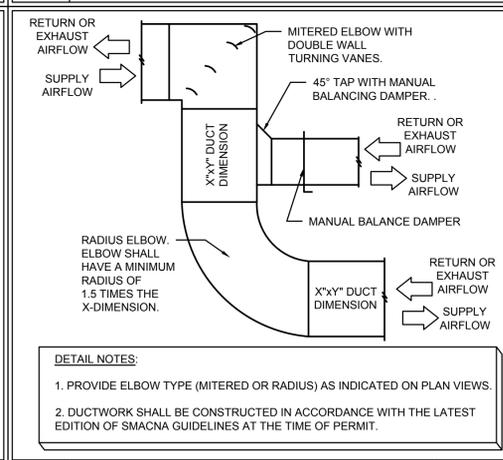
2 AHU CONDENSATE DRAIN SCALE: NONE



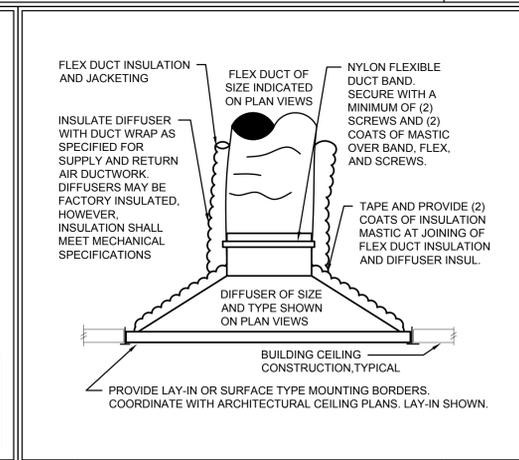
1 PIPING SHROUD DETAIL SCALE: NONE



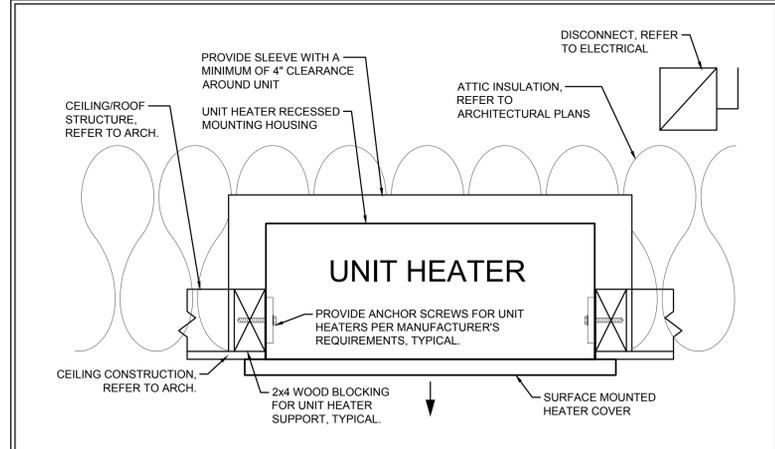
7 INLINE EXHAUST FAN DETAIL SCALE: NONE



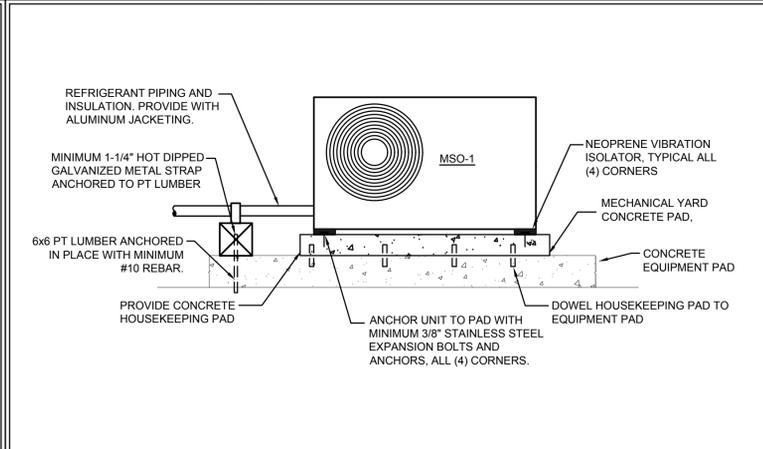
6 TYPICAL DUCTWORK DETAIL SCALE: NONE



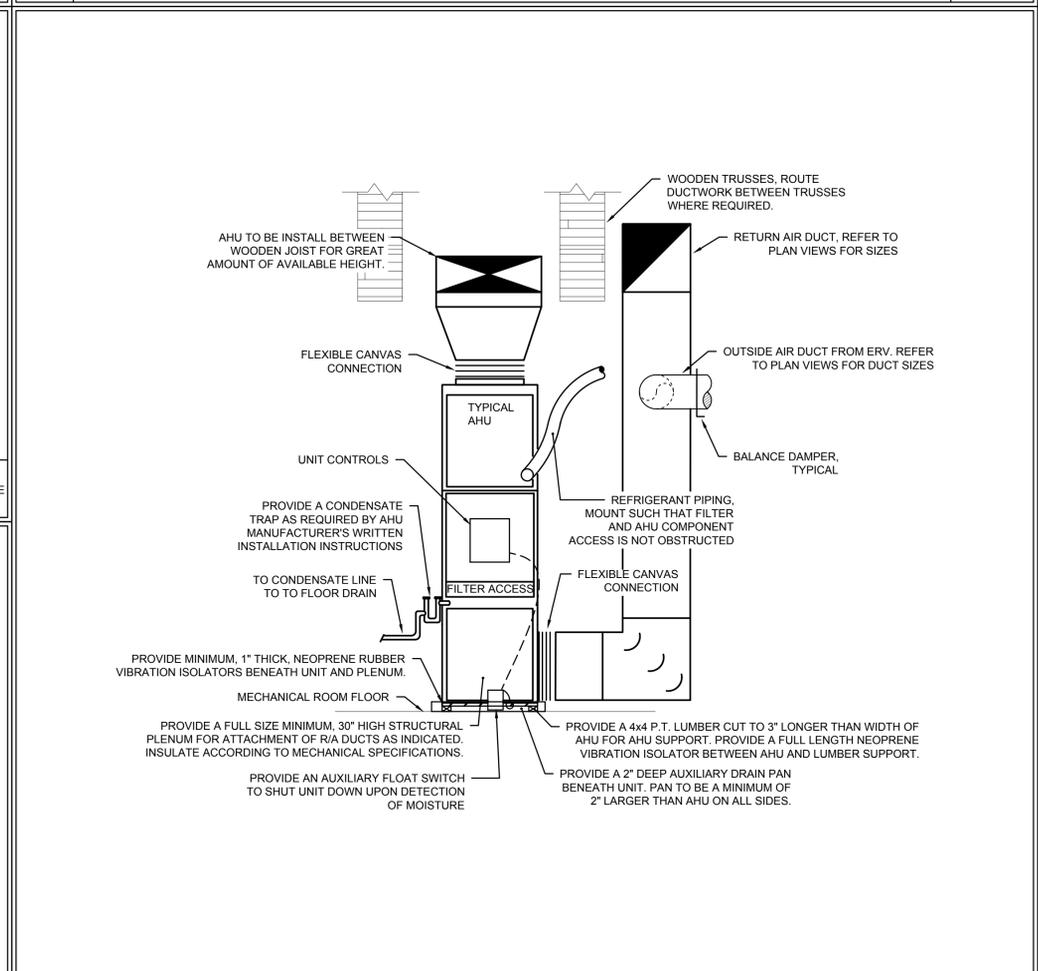
5 LAY IN DIFFUSER DETAIL SCALE: NONE



9 RECESSED CEILING MOUNTED UNIT HEATER SCALE: NONE



8 HEAT PUMP MOUNTING DETAIL SCALE: NONE

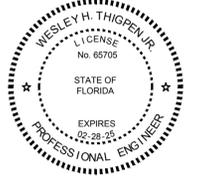


4 VERTICAL AHU MOUNTING DETAIL SCALE: NONE



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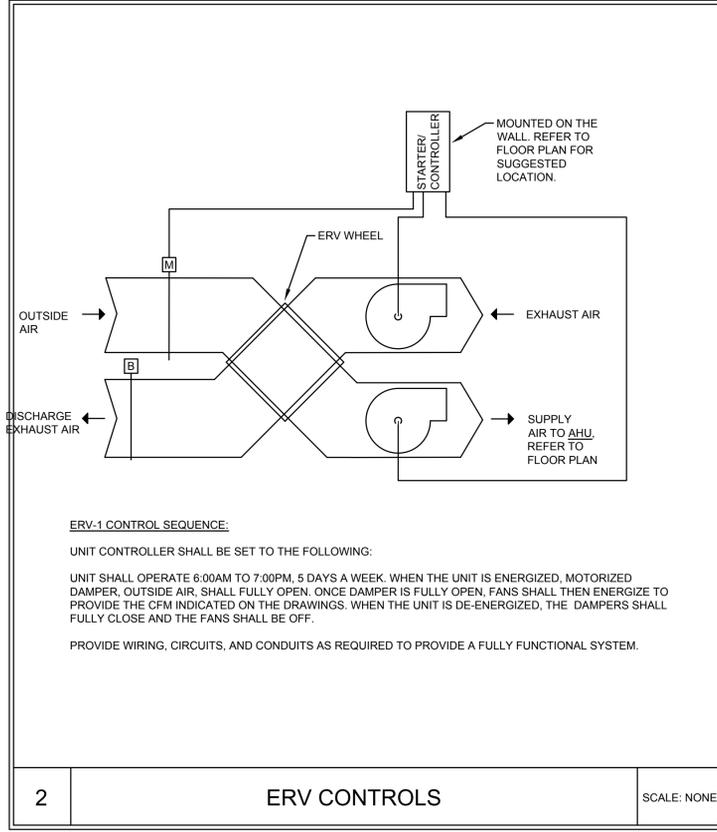
LEON CO. NE PARK

19580 Drawn By: DMM
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 BID DOCUMENTS

Revisions

DETAILS - MECHANICAL





SPLIT SYSTEM BASIC CONTROLS:

THERMOSTAT BRAND & MODEL:
 PROVIDE A THERMOSTAT FROM THE AHU MANUFACTURER.

THERMOSTAT INSTALLATION:
 THE CONTRACTOR SHALL INSTALL THERMOSTAT AND THERMOSTAT WIRING. WIRING AND THE INSTALLATION OF THE WIRING MUST MEET ALL CODES FOR EACH INSTALLATION. CONTRACTOR SHALL FURNISH WIRES, CABLES, RELAYS AND ANY OTHER MISCELLANEOUS HARDWARE NEEDED TO INSTALL THE THERMOSTATS AND CONNECT TO THE HVAC UNITS.
 REFER TO FLOOR PLAN FOR INSTALLATION LOCATION.

THERMOSTAT COMMON WIRE (C):
 THE THERMOSTAT COMMON WIRE MUST BE USED ON ALL THERMOSTATS. IF A SPARE WIRE IS NOT AVAILABLE, THE CONTRACTOR WILL INSTALL A NEW THERMOSTAT CABLE IN ORDER TO UTILIZE THE COMMON SIDE OF THE THERMOSTAT. FAILURE TO HOOK UP THE COMMON WIRE WILL RESULT IN HVAC FAILURE IF THE BATTERIES GO DEAD IN THE THERMOSTAT. BATTERIES WILL BE INSTALLED IN ALL THERMOSTATS WITH ALKALINE LONG LASTING BATTERIES.

THERMOSTAT SETUP & SECURITY:
 EVERY THERMOSTAT WILL USE THE THERMOSTAT CUSTOM SETUP MENU SETTINGS.
 ALL OTHER SETPOINTS WILL BE ADJUSTED TO MAKE THE THERMOSTAT CONTROL THE HVAC UNIT PROPERLY. TIME AND DATE WILL BE SET TO THE CORRECT TIME ZONE.

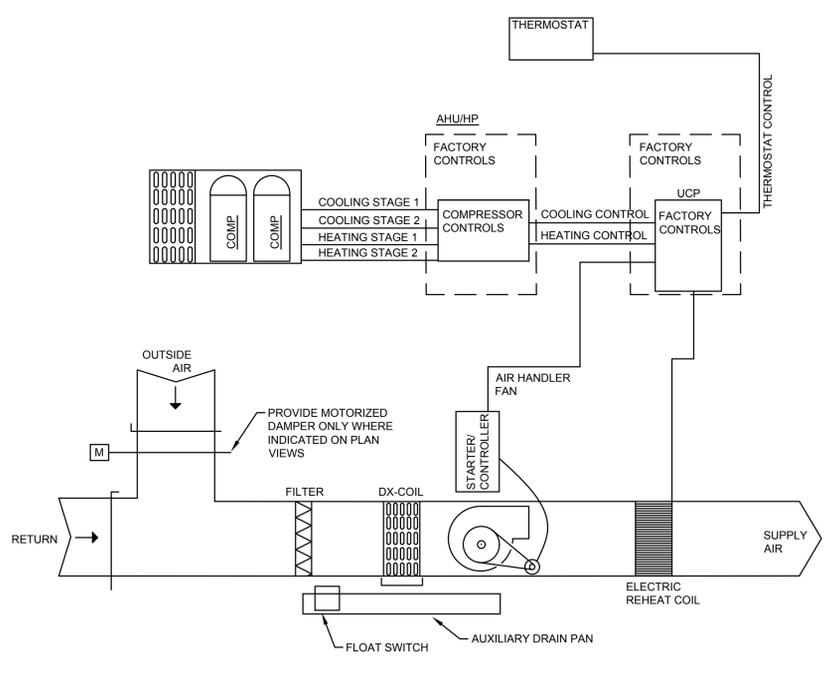
HVAC UNITS:
 ALL COMPRESSORS WITHOUT A FACTORY INSTALLED 5 MINUTE TIME DELAY OFF CYCLE TIMER SHALL HAVE A TIMER INSTALLED IN THE FIELD FOR EACH COMPRESSOR IN THE SYSTEM. EVEN IF THE THERMOSTAT HAS A DELAY OFF 5 MINUTE CYCLE TIMER IN SOFTWARE, THE COMPRESSOR CAN NOT BE PROTECTED IF IT IS CYCLING BECAUSE OF A SAFETY IN THE ELECTRICAL CIRCUIT.

LOW AMBIENT CONTROLS:
 PROVIDE HVAC UNITS WITH LOW AMBIENT CONTROLS FOR OPERATION IN LOW TEMPERATURES DOWN TO 0°F.

SAFETIES:
 ALL HVAC UNITS WILL HAVE LOW AND HIGH PRESSURE SWITCHES AND COMPRESSOR ANTI CYCLE TIMERS INSTALLED IF NOT FACTORY EQUIPPED.
 PROVIDE UNITS WITH FLOAT SWITCH. FLOAT SWITCH SHALL BE TIED TO THE SAFETY CIRCUIT OF THE AHU SUCH THAT WHEN THE SENSOR SENSES WATER, THE UNIT SHUTS DOWN UNTIL MANUALLY RESET.

ELECTRIC REHEAT COIL:
 THE ELECTRIC REHEAT COIL SHALL BE ENABLED WHEN THE AIR HANDLER THERMOSTAT IS IN EMERGENCY HEATING. WHEN THIS MODE IS ENGAGED, THE STRIP HEAT STAGE ON TO HEAT THE ASSOCIATED SPACES. DURING EMERGENCY HEATING, THE OUTDOOR HEAT PUMP SHALL BE LOCKED OUT.

MOTORIZED DAMPER:
 PROVIDE LOW VOLTAGE TRANSFORMER AND RELAYS AS REQUIRED TO CONNECT THE MOTORIZED FRESH AIR DAMPER TO THE AIR HANDLING UNIT CIRCUIT SUCH THAT WHEN THE COMPRESSOR IS ON, THE MOTORIZED DAMPER IS OPEN AND WHEN THE COMPRESSOR IS OFF, THE MOTORIZED DAMPER IS CLOSED. THE DAMPER SHALL BE POWERED BY THE TRANSFORMER AND CONTROLLED THRU THE CIRCUIT FROM THE AHU/HEAT PUMP. THE DAMPER SHALL BE NORMALLY CLOSED, POWERED OPEN, FAIL CLOSED.



2 ERV CONTROLS SCALE: NONE

1 AHU CONTROLS SCALE: NONE

3 STRUCTURE SUSPENDED ERV MOUNTING SCALE: NONE

ENERGY RECOVERY VENTILATOR SCHEDULE

EQUIPMENT NO.	MODEL NO.	OUTSIDE AIR (CFM)	OUTDOOR AIR TEMPERATURE (DB/WB) °F	EXHAUST AIR (CFM)	EXHAUST AIR TEMPERATURE (DB/WB) °F	EXHAUST SP (IN. W.G.)	SUPPLY SP (IN. W.G.)	SUMMER SUPPLY CONDITIONS	ERV EFF. SENSIBLE	ERV EFF. TOTAL	FLA (EA)	MCA	MOCP	OA MOTOR SIZE (HP)	EXH MOTOR SIZE (HP)	VOLTS/ PHASE
ERV-1	EV-X	345	96°F / 78°F	295	72.0°F / 62.5°F	0.50	0.50	80.9°F / 70.1°F	73.5%	50.5%	2.7	-	-	-	-	115V / 1Ø

NOTES:

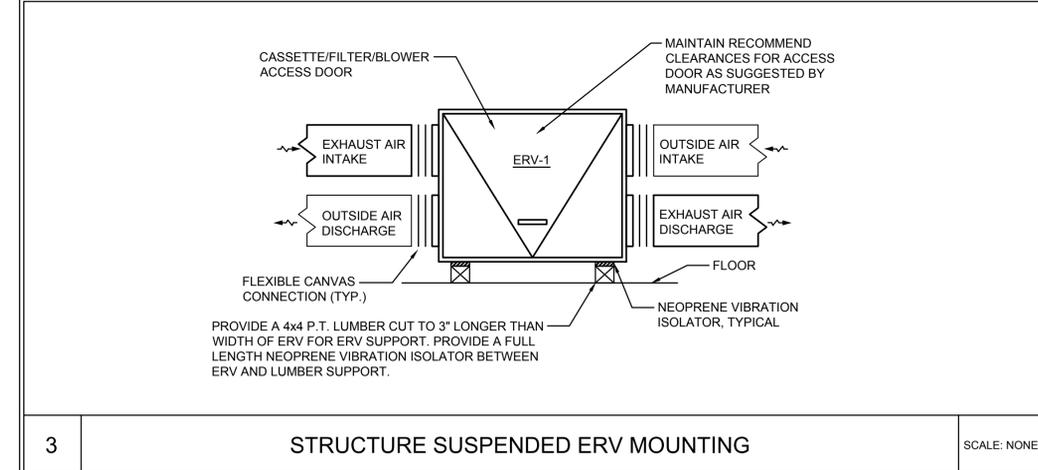
1. BASIS OF DESIGN: RENEWAIRE, OR EQUAL.
2. PROVIDE UNIT WITH SINGLE POINT ELECTRICAL CONNECTION.
3. PROVIDE UNIT WITH 30% EFF. MERV 8 FILTERS ON BOTH EXHAUST AND OUTSIDE AIR STREAMS.
4. PROVIDE DISCONNECT FOR EQUIPMENT AS REQUIRED BY EQUIPMENT MANUFACTURER.
5. PROVIDE UNIT WITH THE FOLLOWING: WALL MOUNTED DIGITAL TIME CLOCK, WALL MOUNTED CO2 SENSOR, MOTORIZED OUTSIDE AIR DAMPER, AND GRAVITY EXHAUST AIR BACK DRAFT DAMPER. PROVIDE INSTRUCTION ON ERV OPERATION AND MAINTENANCE TO OWNER. PROVIDE TIME SCHEDULE PER OWNER'S REQUIREMENTS.
6. PROVIDE UNIT WITH CO2 SENSOR. SENSOR TO BE LOCATED IN THE SANCTUARY SPACE, REFER TO FLOOR PLAN FOR LOCATION. SENSOR SHALL ENABLE UNIT WITH CO2 LEVELS ARE 500PPM OR GREATER. UNIT SHALL BE OFF WHEN CO2 LEVELS ARE 500PPM. UNIT SHALL RUN MINIMUM 15 MINUTES ONCE ENABLED.

SPLIT SYSTEM AIR HANDLING UNIT SCHEDULE

EQUIPMENT NO.	MODEL NO.	HP NO.	NOMINAL TONNAGE	TOTAL CFM	OUTSIDE AIR CFM	EXTERNAL STATIC	REFRIG. TYPE	COOLING COIL TOTAL COOLING	COOLING COIL SENS. COOLING	COOLING ENT. AIR DB/WB	COOLING LVG. AIR DB/WB	AUXILIARY ELECTRIC HEAT	BLOWER MOTOR HP	MCA	MOCP	VOLTAGE/ PHASE
AHU-1	DV36FEC	HP1-1	3.0	1200	345	1.0"	R-410A	33.0 MBH	26.7 MBH	74.5°F / 64.6°F	55°F / 54.9°F	NA	1/2	4.9	15	208/230/1Ø

NOTES:

1. BASIS OF DESIGN: DAIKIN, OR EQUAL.
2. PROVIDE UNIT WITH SINGLE POINT POWER CONNECTION, EXTERNALLY MOUNTED, FIELD PLACED DISCONNECT AND ALL CONTROLS REQUIRED FOR A FULLY FUNCTIONAL AIR CONDITIONING SYSTEM.
3. PROVIDE AIR HANDLERS WITH MERV-8 AIR FILTERS.
4. EVAPORATOR COIL SHALL HAVE A MINIMUM 5-YEAR WARRANTY FROM UNIT MANUFACTURER. ENTIRE UNIT INCLUDING ALL PARTS AND LABOR SHALL HAVE A MINIMUM 1-YEAR WARRANTY. EVAPORATOR SHALL BE DUAL CIRCUITED WITH INTERTWINED CIRCUITS TO COILS.
5. PROVIDE THERMOSTAT WITH 7-DAY PROGRAMMABLE THERMOSTAT. UNIT SHALL HAVE BOTH COOLING AND RELATIVE HUMIDITY SET POINT AND CONTROL. FOR INITIAL SETUP USE THE FOLLOWING VALUES: COOLING 75°F; HEATING 70°F; HUMIDITY 55% (MAX).
6. PROVIDE WITH THERMOSTATIC EXPANSION VALVES SET TO A MAXIMUM OF 40°F SUCTION TEMPERATURE.
7. PROVIDE UNITS WITH VARIABLE SPEED DIRECT DRIVE BLOWER MOTORS.



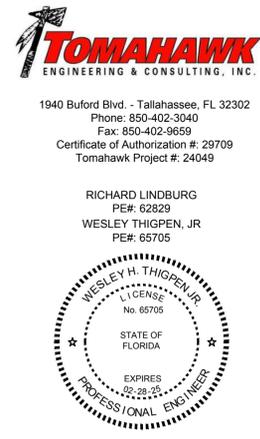
3 STRUCTURE SUSPENDED ERV MOUNTING SCALE: NONE

SPLIT SYSTEM HEAT PUMP SCHEDULE

EQUIPMENT NO.	MODEL NO.	AHU NO.	NOMINAL TONNAGE	REFRIG. TYPE	AMBIENT DESIGN TEMP.	SEERS	TOTAL COOLING (AHR)	TOTAL HEATING (AHR)	NO. OF COMP.	# OF REFRIG. CIRCUITS	MCA	MOCP	VOLTAGE/ PHASE
HP-1	DZ17VSA36	AHU-1	3.0	R-410A	95°F	17.0	34.2 MBH	34.2 MBH	1	1	22.7	25	208/230/1Ø

NOTES:

1. BASIS OF DESIGN: DAIKIN, OR EQUAL. PROVIDE HSPF2 OF 7.5, MINIMUM.
2. PROVIDE UNIT WITH WARRANTY AS INDICATED IN SPECIFICATIONS.
3. PROVIDE REFRIGERANT LINE SIZES AS DETERMINED BY EQUIPMENT MANUFACTURER. SIZES SHALL BE BASED ON LENGTHS OF RUN AND VERTICAL LIFT. PROVIDE WITH LONG RADIUS BENDS IN LIEU OF LONG AND SHORT RADIUS ELBOWS.
4. PROVIDE UNIT WITH SINGLE POINT POWER CONNECTION, EXTERNALLY MOUNTED, FIELD PLACED DISCONNECT IN NEMA 3R ENCLOSURE REFER TO ELECTRICAL DRAWINGS. PROVIDE ALL CONTROLS REQUIRED FOR A FULLY FUNCTIONAL AIR CONDITIONING SYSTEM.
5. PROVIDE HEAT PUMPS WITH MANUFACTURER'S STANDARD LOW AMBIENT HEAD PRESSURE CONTROLLER AND ASSOCIATED APPURTENANCES FOR COOLING DOWN TO 0°F.
6. PROVIDE UNITS WITH HIGH PRESSURE SWITCHES, LOW PRESSURE SWITCHES, ANTI SHORT CYCLE TIME DELAYS, AND HARD START KITS.



THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY THE ENGINEER INDICATED HEREIN WITH THE DATE AS INDICATED IN THE TIME STAMP USING AN S/M CODE.
 PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE S/M AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.



LEON CO. NE PARK

19580 Drawn By: DMM
 Project Code Checked By: WHT
 06 NOVEMBER, 2024
 Date
BID DOCUMENTS

Revisions
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**CONTROLS &
 SCHEDULES -
 MECHANICAL**