HVAC GENERAL NOTES

1. ALL WORK SHALL CONFORM WITH ALL LOCAL, STATE, FEDERAL ORDINANCES AND BUILDING CODES GOVERNING THE INSTALLATION OF THE MECHANICAL SYSTEM. IF WORK AS LAID OUT, INDICATED OR SPECIFIED IS CONTRARY TO OR CONFLICTS WITH FIELD CONDITIONS, LOCAL ORDINANCES, BUILDING CODES AND REGULATIONS, THE CONTRACTOR SHALL REPORT IN WRITING TO THE ARCHITECT/ENGINEER BEFORE SUBMITTING A BID OR PROCEEDING WITH WORK. THE ARCHITECT/ENGINEER WILL THEN ISSUE INSTRUCTIONS AS HOW TO PROCEED.

2. THE DRAWINGS ARE TO BE CONSIDERED DIAGRAMMATIC, NOT NECESSARILY SHOWING IN DETAIL OR TO SCALE ALL OF THE MINOR ITEMS. UNLESS SPECIFIC DIMENSIONS ARE SHOWN, THE STRUCTURAL, ARCHITECTURAL AND SITE CONDITIONS SHALL GOVERN THE EXACT LOCATIONS. CONTRACTOR SHALL FOLLOW DRAWINGS IN LAYING OUT WORK, CHECK DRAWINGS OF ALL TRADES TO VERIFY SPACES IN WHICH WORK WILL BE INSTALLED AND MAINTAIN MAXIMUM HEAD ROOM, AND SPACE CONDITIONS AT ALL POINTS. COORDINATE LOCATION OF DUCTWORK WITH OTHER TRADES, PARTICULARLY WHERE DUCTS RUN THROUGH STRUCTURAL ELEMENTS. PROVIDE ALL NECESSARY SLEEVES BEFORE CONCRETE IS POURED. WHERE HEAD ROOM, OR SPACE CONDITIONS APPEAR INADEQUATE, ARCHITECT/ ENGINEER SHALL BE NOTIFIED BEFORE PROCEEDING WITH INSTALLATION. THIS CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE FIELD MODIFICATION IN LAYOUT AS NEEDED TO PREVENT CONFLICT WITH WORK OF VARIOUS TRADES OR FOR PROPER EXECUTION OF THE WORK.

3. EXAMINE ALL DRAWINGS CAREFULLY PRIOR TO SUBMITTING A BID. CONTRACTOR WILL BE REQUIRED TO FURNISH, INSTALL AND/OR CONNECT WITH APPROPRIATE SERVICES ALL PLUMBING ITEMS SHOWN ON ANY OF THE ARCHITECTURAL, AIR CONDITIONING, ELECTRICAL AND SPRINKLER DRAWINGS WITHOUT ADDITIONAL EXPENSE TO THE OWNER. IF DISCREPANCIES, CONFLICTS, INTERFERENCE OR OMISSIONS OCCUR BETWEEN DRAWINGS, NOTIFY IN WRITING THE ARCHITECT/ENGINEER IN AMPLE TIME TO PERMIT REVISIONS BEFORE THE BIDS ARE SUBMITTED.

4. INSTALL MATERIALS AND EQUIPMENT IN A NEAT AND FIRST CLASS WORKMANLIKE MANNER. THE OWNER RESERVES THE RIGHT TO DIRECT REMOVAL AND REPLACEMENT OF ITEMS WHICH, IN HIS OPINION, DO NOT PRESENT A NEAT AND WORKMANLIKE APPEARANCE. REMOVAL AND REPLACEMENT IS TO BE DONE IMMEDIATELY WHEN DIRECTED BY THE OWNER IN WRITING, AT THE SOLE EXPENSE OF CONTRACTOR.

5. START OF WORK BY CONTRACTOR SHALL BE CONSIDERED AS ACCEPTANCE BY HIM OF ALL CLAIMS OR QUESTIONS AS TO SUITABILITY OF THE WORK OF OTHER. TRADES OR OTHER CONTRACTORS TO RECEIVE HIS WORK. THIS CONTRACTOR SHALL REMOVE AND REPLACE, AT HIS EXPENSE, ALL MECHANICAL WORK WHICH MAY HAVE TO BE REMOVED BECAUSE OF INTERFERENCE WITH OTHER TRADES.

6. THIS CONTRACTOR SHALL OBTAIN AND PAY ALL INSURANCE, FEES, PERMITS, ASSOCIATION DUES, ROYALTIES AND TAXES OF WHATEVER NATURE SHALL APPLY TO THIS WORK. HE SHALL ALSO PAID ALL THE INSPECTION FEES AS MAY BE REQUIRED BY LAW OR ORDINANCE AND SHALL KEEP THE OWNER HARMLESS FROM ANY DAMAGE AND EXPENSE ARISING FROM ANY VIOLATION OF LAWS, RULES OR ORDINANCES.

7. PROVIDE MEANS "FURNISH AND INSTALL".

8. DO A COMPLETE JOB, EVERYTHING CONNECTED, READY FOR USE.

9. SHOP DRAWINGS: CONTRACTOR SHALL FURNISH THE ENGINEER WITH SHOP DRAWINGS OF EQUIPMENT PRIOR TO PURCHASE FOR APPROVAL.

10. AT COMPLETION OF JOB THE MECHANICAL CONTRACTOR SHALL GIVE THE OWNER AN AS-BUILT SET OF REPRODUCIBLE DRAWINGS SHOWING THE EXACT LOCATION OF ALL INSTALLATIONS.

11. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL AND EQUIPMENT
FOR A COMPLETE H.V.A.C. SYSTEM IN ACCORDANCE WITH THESE DRAWINGS. THE FLORIDA BUILDING CODE AND THE LATEST EDITION OF THE FOLLOWING
PUBLICATIONS:
a) ANS B91. MECHANICAL REFRIGERATION
b) NFPA PAMPHLETS 90A & 91
c) SMACNA
d) ASHRAE

12. ALL SUPPLY AIR CONDITIONING DUCTWORK SHALL BE 1.5" STANDARD DUTY (R-6) FULL REINFORCED FIBERGLASS WITH MANUFACTURE LOGO PRINTED ON THE VAPOR BARRIER WHEN IN UNCONDITIONED SPACE, AND 3/4" STANDARD DUTY FOIL REINFORCED FIBERGLASS (R-4) WITH MANUFACTURE LOGO PRINTED ON THE VAPOR BARRIER IN CONDITIONED SPACE OR RETURN PLENUM SPACE. R-8 FLEXIBLE DUCTS ARE ACCEPTABLE AS SHOWN ON DRAWINGS.

13. ALL EXHAUST AIR DUCTWORK SHALL BE CODE GAGE GALVANIZED SHEET METAL.

14. DUCT SIZES SHOWN ARE NET FREE AREA.

15. ALL AIR DEVICES (DIFFUSERS, REGISTERS, AND GRILLES) SHALL BE ALL
ALUMINUM CONSTRUCTION, WITH EXPOSED SURFACE CHEMICALLY TREATED TO
RECEIVE PAINT TO MATCH COLOR OF AIRGUIDE OR APPROVED EQUAL.

16. PROVIDE TURNING VANES AT ALL ELBOWS. PROVIDE MULTIPLE VANE EXTRACTORS OR SPLITTERS WITH CONTROL RODS AT ALL OUTLETS CONNECTED CLOSER THAN TWO DUCT DIAMETERS TO MAIN SUPPLY DUCT AND WHERE SHOWN ON DRAWINGS. PROVIDE ALL NECESSARY ACCESS PANELS TO CONTROL VALVES, DAMPERS, ETC.

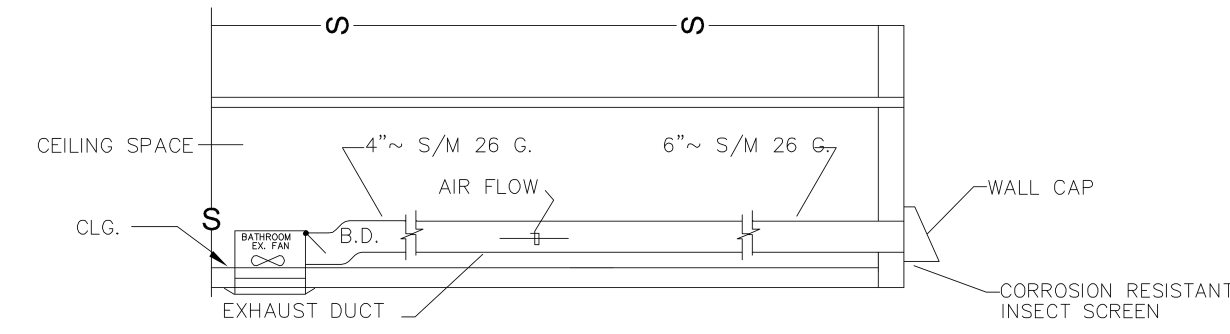
17. REFRIGERANT PIPING SHALL BE SEAMLESS COPPER TYPE "L" HARD OR SOFT DRAWN OR ACR COPPER TUBING WITH WROUGHT COPPER SOLDER JOINT FITTINGS. SOLDER SHALL BE 95/5, APPLIED WITH SUITABLE FLUX. INSULATE REFRIGERANT SUCTION PIPING WITH 3/4" FIRE RESISTANT FOAM PLASTIC OR CLOSED CELL POLYETHYLENE PRE-MOLDED PIPE INSULATION.

18. ALL CONTROL WIRING SHALL BE THE RESPONSIBILITY OF THE MECHANICAL SUB-CONTRACTOR. MECHANICAL SUB CONTRACTOR TO FURNISH ALL MOTORS, STARTERS, AND RELAYS, ETC.

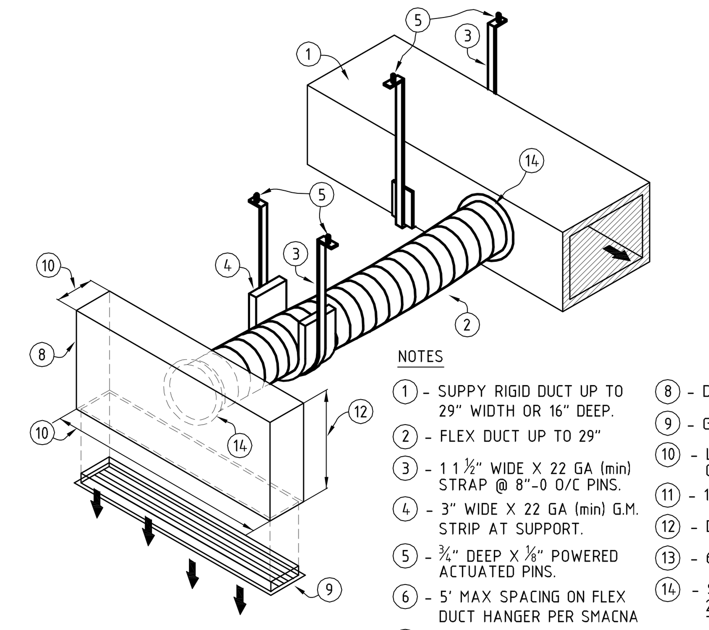
19. FOR INSTALLATION OF ANY ROOF OR WALL MOUNTED EQUIPMENT REFER TO ARCHITECTURAL STRUCTURAL ENGINEERING DRAWINGS.

DESIGN REQUIREMENTS

HVAC DESIGN REQUIRES:	YES	NO
DUCT SMOKE DETECTOR		X
FIRE DAMPER(S)		X
SMOKE DAMPER(S)		X
FIRE RATED ENCLOSURE		X
FIRE RATED ROOF/FLOOR CEILING ASSEMBLY		X
FIRE STOPPING		X
SMOKE CONTROL		X

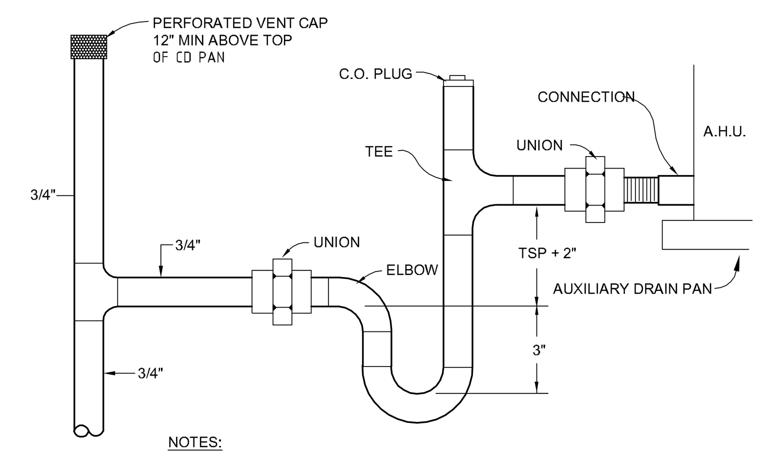


BATHROOM EXHAUST FAN & DUCT-DETAIL
N.T.S.



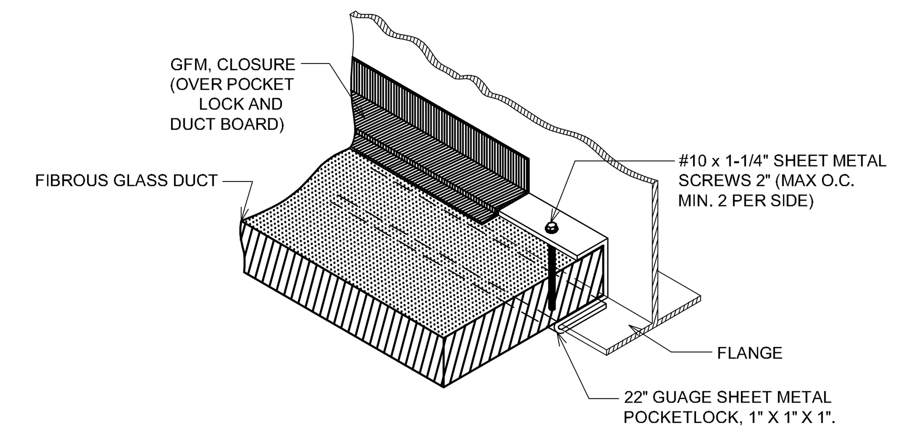
NOTES
1 - SUPPY RIGID DUCT UP TO 29" WIDTH OR 16" DEEP.
2 - FLEX DUCT UP TO 29"
3 - 1 1½" WIDE X 22 GA (min) STRAP @ 8"-0 O/C PINS.
4 - 3" WIDE X 22 GA (min) G.M. STRIP AT SUPPORT.
5 - ¾" DEEP X ⅛" POWERED ACTUATED PINS.
6 - 5' MAX SPACING ON FLEX DUCT HANGER PER SMACNA
7 - OPPOSED BLADE DAMPER
8 - DISCHARGE BOX
9 - GRILLE (SEE PLANS)
10 - LENGTH IS REQ. BY GRILLE SIZE
11 - 1" MINIMUM LENGTH
12 - DUCT HEIGHT + 4"
13 - 6" MINIMUM LENGTH
14 - STRAP AS PER SMACNA 2.12 PROVIDE ALUMINUM TAPE COVERING STRAP & JOINT (NOT SHOW FOR CLARITY)

DUCT HANGER & DISCHARGE BOX DETAIL
N.T.S.
(TYPICAL) (DISCHARGE BOX DETAIL PER SMACNA 2.16)

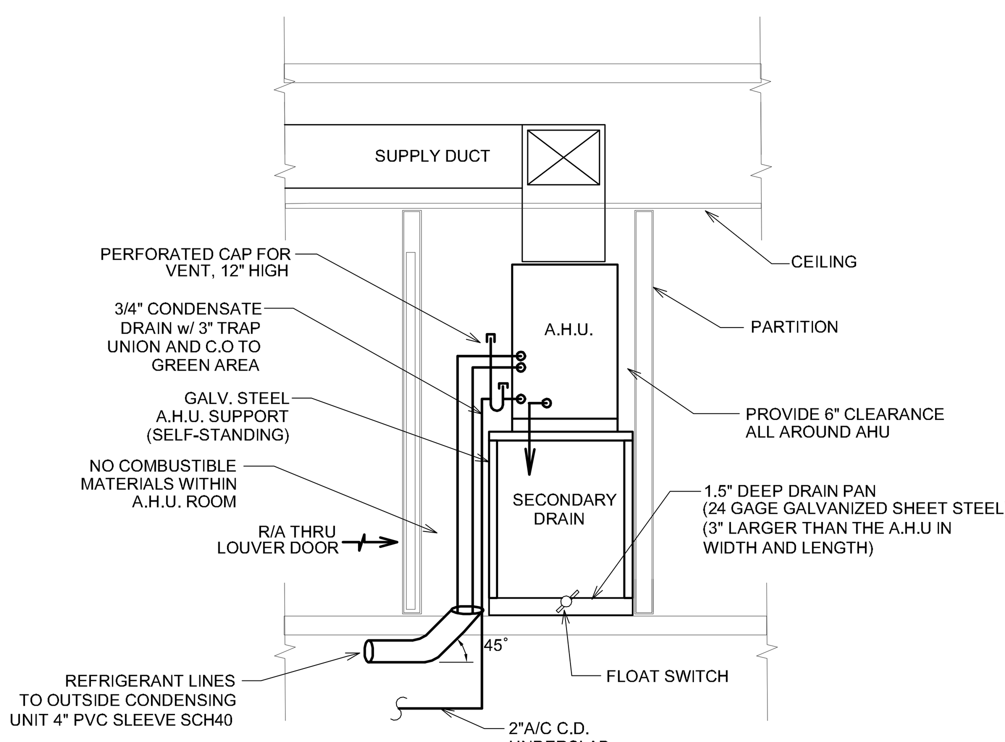


NOTES:
A. SLOPE DRAIN LINE TO CONDENSATE RECEPTOR (MIN. 1/8" PER FOOT)
B. DRAIN LINE SHALL BE COPPER TYPE "L" AND INSULATED
C. TSP = FAN TOTAL STATIC PRESSURE

A/C CONDENSATE P-TRAP DETAIL
N.T.S.

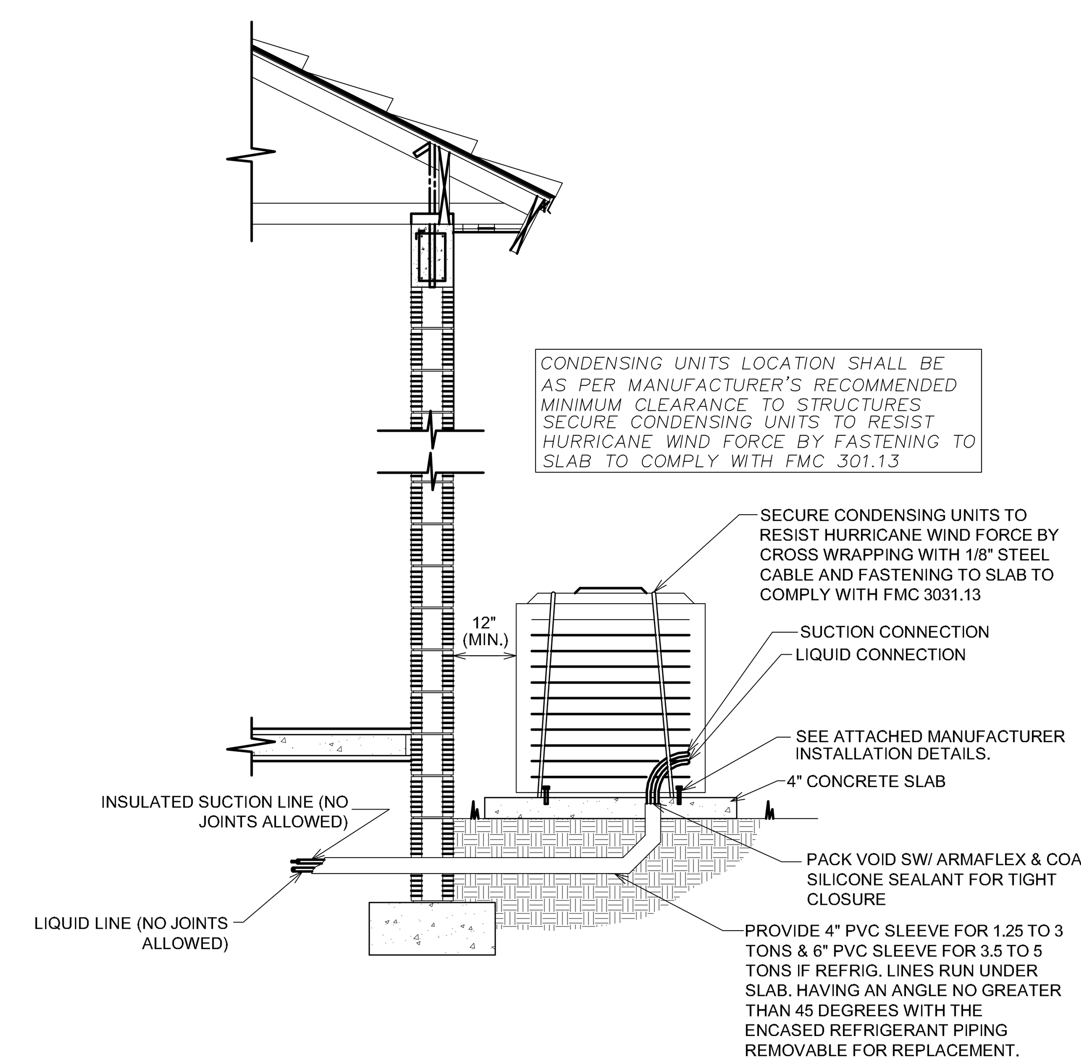


SHEET METAL AND EQUIPMENT CONNECTION DETAIL
N.T.S.



AIR HANDLER UNIT #3 INSTALLATION DETAIL
N.T.S

PIPING AND FITTINGS FOR REFRIGERANT VAPOR (SUCTION) LINES SHALL BE INSULATED WITH INSULATION HAVING A THERMAL RESISTIVITY OF AT LEAST R-4 AND HAVING EXTERNAL SURFACE PERMEANCE NOT EXCEEDING 0.05 PERM [2.87 NG/(S • M2 • PA)] WHEN TESTED IN ACCORDANCE WITH ASTM E 96.



CONDENSING UNIT INSTALLATION DETAIL
N.T.S

NOTES:
1. INSTALL CONDENSING UNIT EITHER ABOVE THE BASE FLOOD ELEVATION LEVEL OR PROTECTED SO AS TO PREVENT WATER FROM ENTERING OR ACCUMULATING WITHIN THE CONDENSING UNIT DURING FLOODS UP TO THE BASE FLOOD ELEVATION.
2. INSTALLATION MUST MEET MINIMUM OF 175 MPH WIND LOADING. MIN. REQUIREMENTS ARE HERBY INDICATED HOWEVER BASED ON ACTUAL EQUIPMENT INSTALLED EPA (EFFECTIVE PROJECTED AREA) ADDITIONAL SECURING SHALL BE PROVIDED PER FLORIDA BUILDING CODE (2017).
3. REFRIGERANT CIRCUIT ACCESS PORTS LOCATED OUTDOORS SHALL BE FITTED WITH LOCKING-TYPE TAMPER-RESISTANT CAPS OR SHALL BE OTHERWISE SECURED TO PREVENT UNAUTHORIZED ACCESS.
4. ALL EXPOSED ELASTOMERIC INSULATION TO BE JACKETED OR PAINTED WITH AV PROTECTIVE PAINT.

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Dylan & Jamie Roy

Interior Remodeling & Addition

6783 SW 104th St Pinecrest, Fl 33156

No.	Description	Date

Project number	24-011
Date	10-24-2024
Drawn by	O.G.
Checked by	E.R.

ERNESTO RODRIGUEZ LICENSE No. 58155 STATE OF FLORIDA PROFESSIONAL ENGINEER

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SHEET TITLE

MECHANICAL NOTES & DETAILS

SHEET No.

M100

A/C UNIT SCHEDULE

AIR HANDLING UNIT	DESIGNATION	AHU-3
	MANUFACTURER	RHEEM
	MODEL NO.	RH1PZ1817STAN
	TOTAL AIR (CFM)	650
	E.S.P. (IN OF W.G.)	0.4
	H.P. (F.L.A.)	1/3-1.7
	AVAILABLE SERVICE	240/1/60
	TOTAL COOLING CAPACITY - BTU/H (*)	17,100
	SENSIBLE COOLING CAPAC. - BTU/H (*)	13,100
	TOTAL HEATING - BTU/H	12,287
	ELECTRIC HEATER TOTAL KW	3.6
CONDENSING UNIT	DESIGNATION	CU-3
	MANUFACTURER	RHEMM
	MODEL NO.	RA14AZ18AJ1
	AVAILABLE SERVICE	240-1-60
	NUMBER OF COMPRESSORS	1
	COMPRESSORS RLA (EACH)	9.0
	FAN H.P./FLA EACH	1/8 / 0.7
	SEER2 W/MATCHED AHU (#)	15.2
	CONDENSING UNIT MCA (AMPS)	14
	CONDENSING UNIT MAX. FUSE OR CKT. BREAKER AMPS	20
	LIQUID LINE	3/8"
	SUCTION LINE	3/4"

REMARKS:

1. ALTERNATE MANUFACTURERS OF EQUAL QUALITY MAY BE SUBMITTED FOR APPROVAL (TRANE, RUUD, LENNOX, RHEEM, GOODMAN, OR YORK)
2. PROVIDE TIME GUARD II, START CAPACITOR AND RELAY, LIQUID LINE FILTER DRYER & SOLENOID VALVE, 24 V CONTROL TRANSFORMER & THERMOSTAT WITH SYSTEM "OFF-HEAT-AUTO-COOL" AND FAN "ON-AUTO" S/S

FAN SCHEDULE

FAN DESIGNATION	EF-1
AREA SERVED	MASTER BATHROOM
LOCATION	CEILING
MANUFACTURER	PANASONIC
MODEL NO.	FV11VH2
TOTAL AIR (CFM)	100
E.S.P. (INCHES OF WATER)	0.125
SONES	0.5
H.P. (A=AMP - W=WATTS)	0.13
VOLT-PH-HZ	120-1-60
DRIVE	DIRECT
BACKDRAFT DAMPER	YES
INTERLOCK	LIGHT SWITCH

REMARKS:

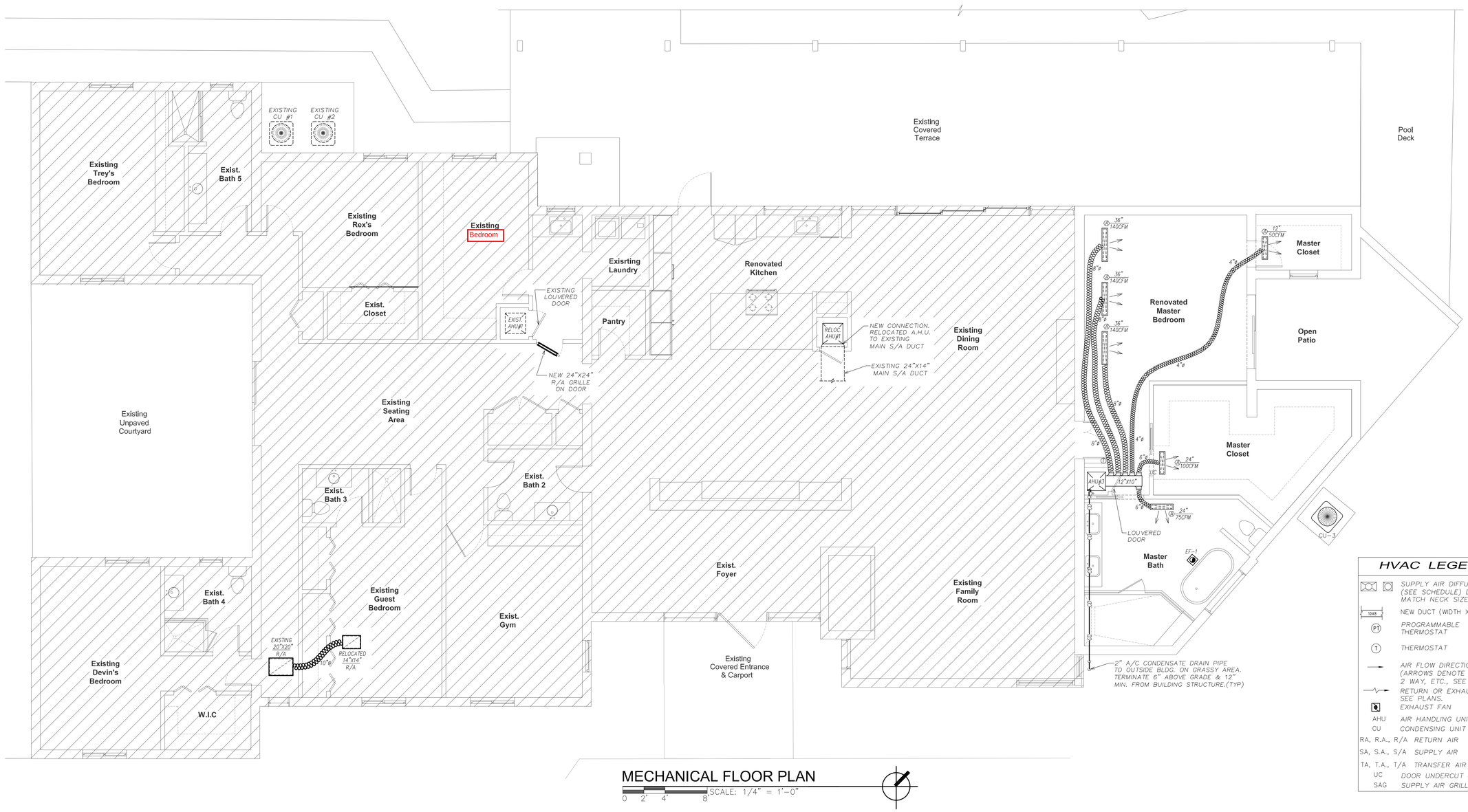
1. ALTERNATE MANUFACTURERS OF EQUAL OR BETTER QUALITY MAY BE SUBMITTED FOR APPROVAL.
2. UNLESS OTHERWISE NOTED ALL FANS SHALL BE EQUIPPED WITH SAFETY DISCONNECT SWITCH.

AIR DISTRIBUTION SCHEDULE

DESIGNATION	A
MANUFACTURER	TITUS
MODEL AND CATALOG NO.	FL-15-J/T 1 (1.5") SLOT BORDER TYPE 11
FRAME TYPE	SURFACE (CEILING/WALL)
FUNCTION	SUPPLY
PATTERN	SEE DRAWINGS
OPPOSED BLADE DAMPERS	SEE NOTE 4

REMARKS:

1. ALTERNATE MANUFACTURERS OF EQUAL QUALITY MAY BE SUBMITTED FOR APPROVAL.
2. ALL AIR DEVICES SHALL BE ALL ALUMINUM CONSTRUCTION AND FULLY GASKETTED.
3. ALL AIR DEVICES FINISHES SHALL BE PER ARCHITEC/OWNER REQUIREMENTS.
4. SUPPLY OUTLETS SHALL BE SUPPLIED WITH INTEGRAL O.B.D.



MECHANICAL FLOOR PLAN

SCALE: 1/4" = 1'-0"

0 2' 4' 8

HVAC LEGEND

	SUPPLY AIR DIFFUSERS (SEE SCHEDULE) DUCT TO MATCH NECK SIZE TYP.
10X8	NEW DUCT (WIDTH X DEPTH)
PT	PROGRAMMABLE THERMOSTAT
T	THERMOSTAT
	AIR FLOW DIRECTION (ARROWS DENOTE 1 WAY, 2 WAY, ETC., SEE PLANS)
	RETURN OR EXHAUST, SEE PLANS.
	EXHAUST FAN
AHU	AIR HANDLING UNIT
CU	CONDENSING UNIT
RA, R.A., R/A	RETURN AIR
SA, S.A., S/A	SUPPLY AIR
TA, T.A., T/A	TRANSFER AIR
UC	DOOR UNDERCUT (1" TYP.)
SAG	SUPPLY AIR GRILLE

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SHEET TITLE

MECHANICAL FLOOR PLAN

SHEET No.

M200