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ARCHITECTURAL DESIGN & INTERIOR DESIGN

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MARRIOTT FAIRFIELD

290 POWER DRIVE,
BATESVILLE, MS 38606

SEAL

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ISSUES & REVISIONS

NO.	DATE	DESCRIPTION
1	01/19/2016	FOR CONSTRUCTION

PROJECT NAME:

PROJECT NUMBER:

DRAWING NAME:

NOTES & LEGEND -
MECHANICAL

DRAWN BY:
CHECKED BY:
DATE: 01-19-16
SCALE: AS NOTED

DRAWING NUMBER



M001

MFR	MANUFACTURER
DX	DIRECT EXPANSION
RV-1	RELIEF VENT
ESP	EXTERNAL STATIC PRESSURE
LAT	LEAVING AIR TEMPERATURE
EAT	ENTERING AIR TEMPERATURE
EF-1	EXHAUST FAN
DN	DOWN
OSA	OUTSIDE AIR
EAD	EXHAUST AIR DUCT
RA	RETURN AIR
RAD	RETURN AIR DUCT
SA	SUPPLY AIR
SAD	SUPPLY AIR DUCT
TAD	TRANSFER AIR DUCT
AFF	ABOVE FINISHED FLOOR
CFM	CUBIC FEET PER MINUTE
TYP	TYPICAL
8φ	ROUND DUCTWORK
PRV	PRESSURE REDUCING VALVE
10x6	RECTANGULAR DUCT (WIDTHxDEPTH)
MAU-1	MAKE-UP AIR UNIT
HPG	HIGH PRESSURE GAS (5 PSIG)
LPG	LOW PRESSURE GAS (0.5 PSIG)

1 ABBREVIATIONS - MECHANICAL NOT TO SCALE

	SEISMIC BRACING
	SUPPLY DUCT IN SECTION
	RETURN DUCT IN SECTION
	EXHAUST DUCT IN SECTION
	VOLUME DAMPER
	TURNING VANES
	FIRE DAMPER
	FIRE/SMOKE DAMPER
	SUPPLY DIFFUSER
	DIFFUSER CFM AND TYPE
	RETURN/EXHAUST AIR DEVICE
	AIRFLOW DIRECTION
	THERMOSTAT
	PRV

2 SYMBOLS - MECHANICAL NOT TO SCALE

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**FIRST & SECOND FLOOR -
MECHANICAL**

DRAWN BY:

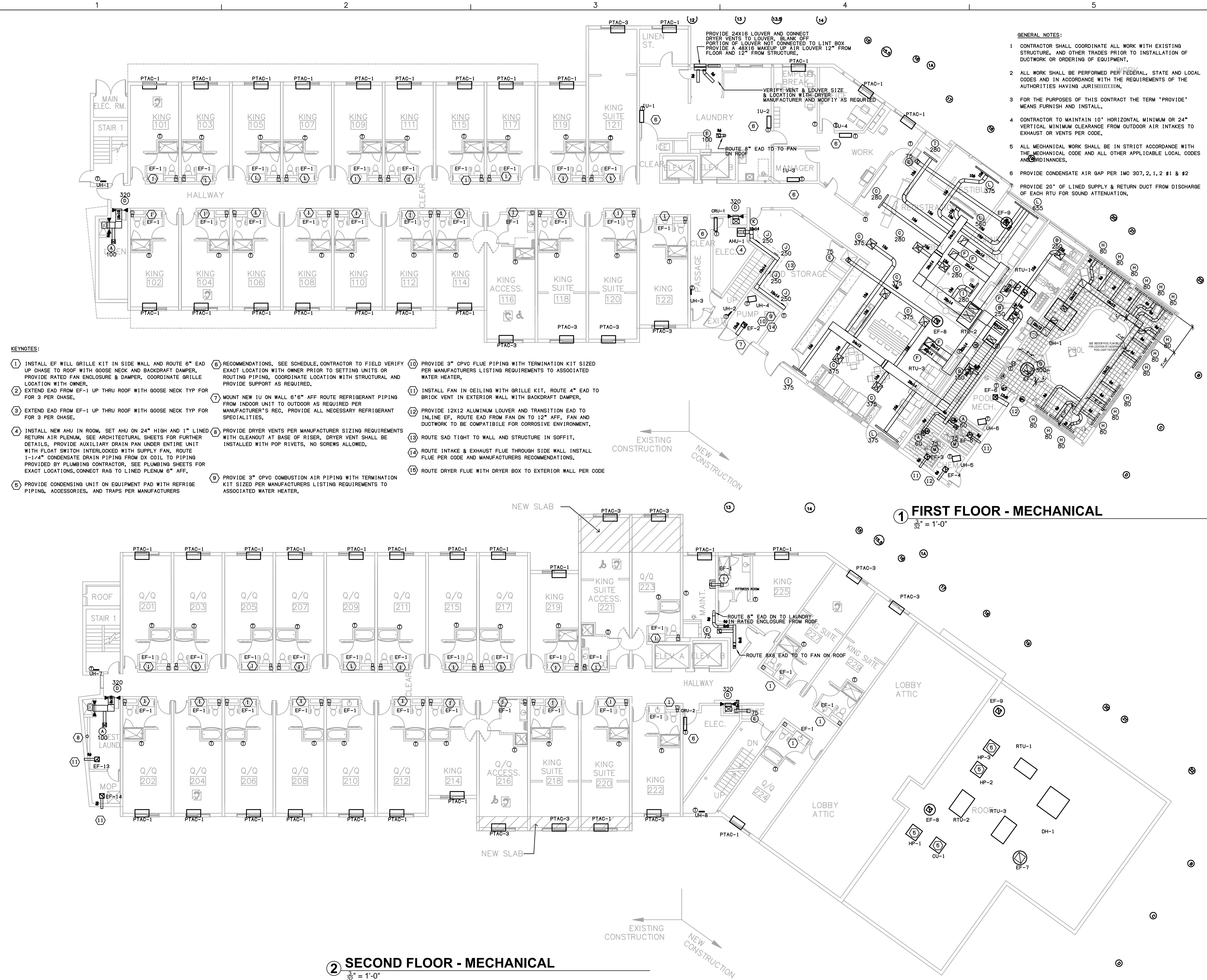
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M101



- KEYNOTES:**
1. INSTALL EF WALL GRILLE KIT IN SIDE WALL AND ROUTE 6" EAD UP CHASE TO ROOF WITH GOOSE NECK AND BACKDRAFT DAMPER. PROVIDE RATED FAN ENCLOSURE & DAMPER, COORDINATE GRILLE LOCATION WITH OWNER.
 2. EXTEND EAD FROM EF-1 UP THRU ROOF WITH GOOSE NECK TYP FOR 3 PER CHASE.
 3. EXTEND EAD FROM EF-1 UP THRU ROOF WITH GOOSE NECK TYP FOR 3 PER CHASE.
 4. INSTALL NEW AHU IN ROOM. SET AHU ON 24" HIGH AND 1" LINED RETURN AIR PLENUM. SEE ARCHITECTURAL SHEETS FOR FURTHER DETAILS. PROVIDE AUXILIARY DRAIN PAN UNDER ENTIRE UNIT WITH FLOAT SWITCH INTERLOCKED WITH SUPPLY FAN. ROUTE 1-1/4" CONDENSATE DRAIN PIPING FROM OX COIL TO PIPING PROVIDED BY PLUMBING CONTRACTOR. SEE PLUMBING SHEETS FOR EXACT LOCATIONS, CONNECT RAG TO LINED PLENUM 6" AFF.
 5. PROVIDE CONDENSING UNIT ON EQUIPMENT PAD WITH REFRIGE PIPING, ACCESSORIES, AND TRAPS PER MANUFACTURERS
 6. RECOMMENDATIONS. SEE SCHEDULE, CONTRACTOR TO FIELD VERIFY EXACT LOCATION WITH OWNER PRIOR TO SETTING UNITS OR ROUTING PIPING. COORDINATE LOCATION WITH STRUCTURAL AND PROVIDE SUPPORT AS REQUIRED.
 7. MOUNT NEW IU ON WALL 6" AFF ROOF REFRIGERANT PIPING FROM INDOOR UNIT TO OUTDOOR AS REQUIRED PER MANUFACTURER'S REC. PROVIDE ALL NECESSARY REFRIGERANT SPECIALTIES.
 8. PROVIDE DRYER VENTS PER MANUFACTURER SIZING REQUIREMENTS WITH CLEANOUT AT BASE OF RISER. DRYER VENT SHALL BE INSTALLED WITH POP RIVETS, NO SCREWS ALLOWED.
 9. PROVIDE 3" CPVC COMBUSTION AIR PIPING WITH TERMINATION KIT SIZED PER MANUFACTURERS LISTING REQUIREMENTS TO ASSOCIATED WATER HEATER.
 10. PROVIDE 3" CPVC FLUE PIPING WITH TERMINATION KIT SIZED PER MANUFACTURERS LISTING REQUIREMENTS TO ASSOCIATED WATER HEATER.
 11. INSTALL FAN IN CEILING WITH GRILLE KIT, ROUTE 4" EAD TO BRICK VENT IN EXTERIOR WALL WITH BACKDRAFT DAMPER.
 12. PROVIDE 12X12 ALUMINUM LOUVER AND TRANSITION EAD TO INLINE EF. ROUTE EAD FROM FAN DN TO 12" AFF. FAN AND DUCTWORK TO BE COMPATIBLE FOR CORROSIVE ENVIRONMENT.
 13. ROUTE SAD TIGHT TO WALL AND STRUCTURE IN SOFFIT.
 14. ROUTE INTAKE & EXHAUST FLUE THROUGH SIDE WALL INSTALL FLUE PER CODE AND MANUFACTURERS RECOMMENDATIONS.
 15. ROUTE DRYER FLUE WITH DRYER BOX TO EXTERIOR WALL PER CODE

1 FIRST FLOOR - MECHANICAL
3/32" = 1'-0"

2 SECOND FLOOR - MECHANICAL
3/32" = 1'-0"

EXHAUST FAN SCHEDULE									
GENERAL DATA							ELECTRICAL DATA		COMMENTS
MARK	MAX	MAX SONE	EST	DISCHARGE	TYPE	DRIVE	MOTOR	VOLTS/	
	CFM	RATING	S.P.W.G				WATTS/HP	PHASE	
EF-1	50	1	0.3	WALL	INLINE	DIRECT	25 watts	120/1	1
EF-2	200	5	0.3	WALL	INLINE	DIRECT	1/6	120/1	2
EF-3	75	2.7	0.3	WALL	INLINE	DIRECT	30 WATTS	120/1	3
EF-4	150	5	0.3	WALL	INLINE	DIRECT	80 WATTS	120/1	4
EF-5	75	2.7	0.3	WALL	INLINE	DIRECT	30 WATTS	120/1	3
EF-6	150	2.7	0.3	WALL	INLINE	DIRECT	80 WATTS	120/1	4
EF-7	300	5	0.5	ROOF	ROOF	DIRECT	1/6HP	120/1	5
EF-8	75	5	0.3	ROOF	ROOF	DIRECT	1/6HP	120/1	6
EF-9	75	5	0.3	ROOF	ROOF	DIRECT	1/6HP	120/1	6
EF-10	150	6	0.1	ROOF	ROOF	DIRECT	1/4 HP	120/1	7
EF-11	150	6	0.1	ROOF	ROOF	DIRECT	1/4 HP	120/1	7
EF-12	75	2.7	0.3	WALL	INLINE	DIRECT	80 WATTS	120/1	3
EF-13	75	2.7	0.3	WALL	INLINE	DIRECT	80 WATTS	120/1	3
EF-14	75	2.7	0.3	WALL	INLINE	DIRECT	80 WATTS	120/1	3
EF-15	75	2.7	0.3	WALL	INLINE	DIRECT	80 WATTS	120/1	3

- FAN TO BE CABINET WALL MOUNTED FAN WITH GRILLE KIT, DISCONNECT AND INTERLOCKED WITH WALL SWITCH. EQUAL TO GREENHECK SP-80
- FAN TO BE INLINE FAN WITH DISCONNECT INTERLOCKED WITH THERMOSTAT. EQUAL TO GREENHECK
- FAN TO BE CABINET CEILING MOUNTED FAN WITH GRILLE KIT, DISCONNECT AND INTERLOCKED WITH WALL SWITCH. EQUAL TO GREENHECK
- FAN TO BE INLINE FAN OF ALUMINUM CONSTRUCTION RATED FOR CHEMICAL EXHAUST WITH DISCONNECT AND SPEED CONTROLLER
- FAN TO BE ROOF MOUNTED FAN OF ALUMINUM CONSTRUCTION RATED FOR CHEMICAL EXHAUST WITH 14" ROOF CURB, MOTORIZED DAMPER INTERLOCKED WITH FAN, DISCONNECT, INTERLOCKED WITH REMOTE SWITCH IN POOL MECHANICAL ROOM, AND SPEED CONTROLLER
- FAN TO BE ROOF MOUNTED FAN WITH 14" ROOF CURB, MOTORIZED DAMPER INTERLOCKED WITH FAN, DISCONNECT, INTERLOCKED WITH LIGHT, AND SPEED CONTROLLER
- FAN TO BE ROOF MOUNTED FAN WITH 14" EXTENDED ROOF CURB, MOTORIZED DAMPER INTERLOCKED WITH FAN, DISCONNECT, INTERLOCKED WITH LIGHT, AND SPEED CONTROLLER. COORDINATE SIZE OF CURB FOR CONNECTION TO BACK TO BACK EXHAUST CHASES.

PTAC SCHEDULE													
MARK	MANUFACTURER	MODEL	CFM	OA	COOLING BTUH	HEATING KW(Ø208V)	SEER	ELECTRICAL					COMMENTS
								VOLTS	PH	HZ	FLA	MOCB	
PTAC-1	-	-	270	35	7,000	2.82	12.0	208	1	60	14.5	20	①
PTAC-2	NOT USED												
PTAC-3	-	-	280	35	9,000	2.82	10.2	208	1	60	14.5	20	②

- ① PROVIDE PLUG-IN CONFIGURATION (DISCONNECT) WALL SLEEVES, SUB-BASES, DRAIN KITS, FACE GRILLES, SUBMIT ALTERNATE FOR COMM LINK INTERFACE AT FRONT DESK. MANUFACTURER: MUST BE ISLANDAIRE EZDR07
- ② PROVIDE PLUG-IN CONFIGURATION (DISCONNECT) WALL SLEEVES, SUB-BASES, DRAIN KITS, FACE GRILLES, SUBMIT ALTERNATE FOR COMM LINK INTERFACE AT FRONT DESK. MANUFACTURER: MUST BE ISLANDAIRE EZDR09

ELECTRIC UNIT HEATER SCHEDULE						
GENERAL DATA				ELECTRICAL DATA		COMMENTS
MARK	SUPPLY AIR-CFM	MOUNTING HEIGHT	HEATING CAPACITY (BTU/HR)	KW	VOLTS/ PHASE	
UH-1	160	12"	10,250	3	208/1	①
UH-2	160	12"	10,250	3	208/1	①
UH-3	160	12"	10,250	3	208/1	①
UH-4	700	8'	17,050	5	208/1	②
UH-5	700	8'	17,050	5	208/1	②
UH-6	700	8'	17,050	5	208/1	②
UH-7	160	12"	10,250	3	208/1	①
UH-8	160	12"	10,250	3	208/1	①
UH-9	160	12"	10,250	3	208/1	①
UH-10	160	12"	10,250	3	208/1	①
UH-11	700	8'	17,050	5	208/1	②

- ① UNIT HEATER SHALL BE EQUAL TO INDEECO MODEL WCI WITH UNIT-MOUNTED TAMPERPROOF THERMOSTAT & DISCONNECT. UH TO BE RECESSED IN WALL. COLOR OF UH TO BE SELECTED BY ARCHITECT.
- ② UNIT HEATER SHALL BE EQUAL TO INDEECO MODEL UCI WITH UNIT-MOUNTED TAMPERPROOF THERMOSTAT, DISCONNECT, & MOUNTING BRACKET.

HEAT PUMP SCHEDULE											
GENERAL DATA			COOLING DATA			HEATING DATA		ELECTRICAL DATA			COMMENTS
MARK	SERVES	NOMINAL TONNAGE	MIN SEER	AMBIENT AIR (°F)	COOLING CAPACITY (BTU/HR)	AMBIENT AIR (°F)	HEATING CAPACITY (BTU/HR)	MIN HSPF	MCA	VOLTAGE/ PHASE	
HP-1	AHU-1	3	13	105	34,590	47	33,000	7.7	18	208/1	①②③

- ① HEAT PUMP SHALL BE EQUAL TO TRANE MODEL 4TWB OR AN APPROVED EQUAL.
- ② MOUNT UNIT ON ROOF SUPPORT.
- ③ SIZE REFRIGERANT PIPE PER MANUFACTURER'S RECOMMENDATIONS.

AIR HANDLING UNIT SCHEDULE														
GENERAL DATA				ELECTRICAL DATA		DX COOLING COIL DATA				ELECTRIC HEATING SECTION DATA			COMMENTS	
MARK	CFM	OSA	EXT. S.P.W.G.	MOTOR HP	VOLTS/ PHASE	REFRIGERANT	ENT. AIR TEMP		SENSIBLE BTU/HR	TOTAL BTU/HR	ENT. AIR TEMP °Fdb	NO. OF STAGES		INPUT KW
							°Fdb	°Fwb						
AHU-1	1125	140	0.25	1/6	208/1	R-410A	77.9	65.4	26,560	34,590	70	1	8	①②③④

- ① FAN COIL UNIT SHALL BE EQUAL TO JCI MODEL FHP OR AN APPROVED EQUAL.
- ② SIZE REFRIGERANT PIPE PER MANUFACTURER'S RECOMMENDATIONS. REFRIGERANT PIPING SHALL BE TYPE ACR DRAWN COPPER TUBING WITH WROUGHT COPPER FITTINGS. REFRIGERANT PIPING TO HAVE 3/8" ARMAFLEX INSULATION. PROVIDE VALVES AND SPECIALTIES IN ACCORDANCE WITH EQUIPMENT MFR.'S RECOMMENDATIONS.
- ③ PROVIDE 7 DAY PROGRAMMABLE THERMOSTAT, ELECTRIC RESISTANCE HEAT, SINGLE PT. ELECTRICAL CONNECTION, AUXILIARY DRAIN PAN UNDER ENTIRE UNIT WITH FLOAT SWITCH, DISCONNECT, & 1" PLEATED FILTER.
- ④ SUPPLY AND RETURN DUCT SMOKE DETECTOR TO BE PROVIDED AND WIRED BY ELECTRICAL CONTRACTOR AND MOUNTED BY MECHANICAL CONTRACTOR.

VRF HEAT PUMP SCHEDULE									
GENERAL DATA			COOLING DATA		HEATING DATA		ELECTRICAL DATA		COMMENTS
MARK	SERVES	NOMINAL TONNAGE	AMBIENT AIR (°F)	COOLING CAPACITY (BTU/HR)	AMBIENT AIR (°F)	HEATING CAPACITY (BTU/HR)	MCA	VOLTAGE/ PHASE	
HP-2	IU-1, 2 SYSTEM	4	95	48,000	47	55,000	21	208/3	①②③④
HP-3	IU-3, 4 SYSTEM	2	95	24,000	47	55,000	12	208/3	①②③④

- ① HEAT PUMP SHALL BE EQUAL TO TRANE, MITSUBISHI OR DAIKIN WITH VARIABLE SPEED COMPRESSORS AND CONDENSER FANS.
- ② SIZE REFRIGERANT PIPING AND PROVIDE ALL NECESSARY REFRIGERATION ACCESSORIES PER MFR.'S RECOMMENDATIONS.
- ③ HP CONSISTS OF MULTIPLE MODULES EACH WITH A SINGLE POINT ELECTRICAL CONNECTION. COORDINATE WITH CONTRACTOR TO PROVIDE NECESSARY POWER, PROVIDE DISCONNECTS. CONTRACTOR TO WIRE AND INSTALL DISCONNECTS.
- ④ THE VRF EQUIPMENT SHALL BE SUPPLIED WITH A BACNET MS/TP OR BACNET IP INTERFACE FOR COMMUNICATING WITH THE EMS. UP TO 15 POINTS WILL BE MAPPED IN TO THE EMS FOR SCHEDULING, MONITORING, AND ALARMING FUNCTIONS.

VRF INDOOR UNIT SCHEDULE									
GENERAL DATA				ELECTRICAL DATA		COOLING/HEATING DATA			COMMENTS
MARK	CFM	OSA	EXT IN. WG	MCA	VOLTS/ PHASE	REFRIGERANT	COOLING BTU/HR	HEATING BTU/HR	
IU-1	550	30	N/A	0.3	208/1	R-410A	17,100	27,000	①②③④
IU-2	550	30	N/A	0.3	208/1	R-410A	17,100	27,000	①②③④
IU-3, 4	300	-	N/A	0.3	208/1	R-410A	12,000	13,500	①②③④

- ① UNIT TO BE WALL MOUNTED EQUAL TO TRANE. PROVIDE THERMOSTAT CONNECTED TO EMS, DISCONNECT, AND CONDENSATE PUMP.
- ② PROVIDE EACH INDOOR UNIT WITH REFRIGERANT BALL VALVES FOR ISOLATION.
- ③ INSTALL CONDENSATE PIPING PER MANUFACTURER'S RECOMMENDATIONS & PER PLUMBING DRAWINGS.
- ④ THE VRF EQUIPMENT SHALL BE SUPPLIED WITH A BACNET MS/TP OR BACNET IP INTERFACE FOR COMMUNICATING WITH THE EMS. UP TO 15 POINTS WILL BE MAPPED IN TO THE EMS FOR SCHEDULING, MONITORING, AND ALARMING FUNCTIONS.

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