

* DENOTES UNIT REQUIRES A SMOKE DETECTOR														PACKAGED HEAT PUMP SCHEDULE									
SYMBOL	MFG.	MODEL NO.	NOMINAL AIR FLOW CFM	MIN. O.A. CFM	EXT. ST. PRESS.	EVAP. FAN MOTOR-HP	COOLING AT 80°F db / 67°F wb & 95°F O.A.				REFRIG.	NO. OF COMPR.	ELEC. HEATER KW	HEATING @ 17°F O.A. & 70°F E.A.T.				VOLTAGE VERIFY WITH ELEC. CONTR.	MCA (AMPS)/MOP (AMPS)	APPROX. WEIGHT WITH ACCESSORIES (LBS.)	REMARKS		
							TOTAL MBH	SENSIBLE MBH	S.E.E.R. OR E.E.R.					TOTAL MBH 1st + 2nd STAGE	H.S.P.F. OR C.O.P. UNIT	ASHRAE 90.1							
									UNIT	ASHRAE 90.1													
* RTHP-6	TRANE	WSC090	3000	300	0.70	1	93.0	71.6	11.1	11.0	R-410A	1	18.0	50.0	61.4	111	3.4	3.3	480-3-60	47/50	950	1, 2, 3, 4, 5, 6, 7, 8	

- FURNISH WITH ELECTRONIC THERMOSTAT.
- FURNISH WITH SINGLE SOURCE POWER ENTRY.
- FURNISH WITH SEISMICALLY CERTIFIED ROOF CURB ADAPTER.
- FURNISH WITH 100% ECONOMIZER WITH ENTHALPY CONTROL AND BAROMETRIC RELIEF.
- FURNISH WITH ANTI-SHORT CYCLE TIMER.
- FURNISH WITH LOW AMBIENT CONTROLS TO 0°F.
- FURNISH UNIT WITH CONTROL HARDWARE TO COMMUNICATE WITH THE CAMPUS TRANE TRACER SUMMIT CONTROL SYSTEM AT A FUTURE DATE.
- FURNISH WITH FILTER RACK WITH MERV 8 FILTERS.

**ROOFTOP UNIT DEMOLITION NOTES:**

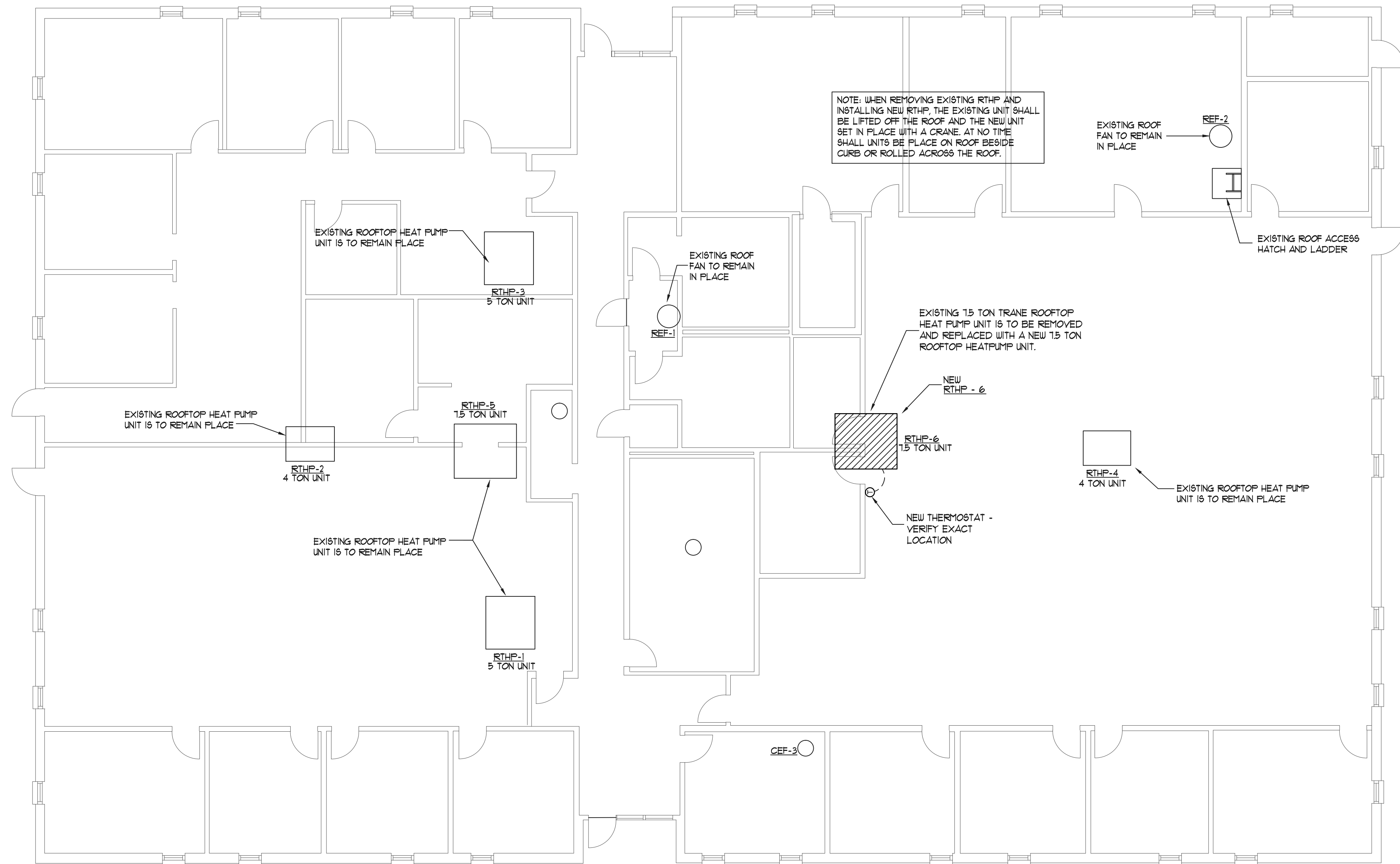
- REMOVE EXISTING TRANE ROOFTOP HEAT PUMP UNIT MODEL BUC090F, 460 VOLT-3 PHASE, WITH 193 KW STRIP HEATER. ROOF CURB SHALL REMAIN.
- EXISTING ROOF CURB SHALL REMAIN IN PLACE. EXAMINE CONDITION OF CURB TO INSURE IT IS STRUCTURALLY SOUND. REPORT ANY DEFICIENCIES TO THE OWNER.
- INSPECT EXISTING SUPPLY AND RETURN DUCTWORK CONNECTIONS TO EXISTING CURB. REPORT ANY DEFICIENCIES TO THE OWNER.
- REMOVE EXISTING DISCONNECT AND FLEX CONDUIT TO UNIT. DISCONNECT ALL CONTROL WIRING AND REMOVE EXISTING HEAT-COOL THERMOSTAT.

**RTU-1 RENOVATION NOTES:**

- INSTALL NEW 15 TON ROOFTOP HEAT PUMP UNIT ON SEISMIC CERTIFIED CURB ADAPTER ON EXISTING ROOF CURB.
- INSURE PROPER SEAL BETWEEN NEW CURB ADAPTER AND EXISTING SUPPLY AND RETURN DUCT CONNECTIONS INSIDE EXISTING ROOF CURB.
- INSTALL A NEW FUSED DISCONNECT SWITCH ON ROOF AND PROVIDE NEW WEATHERPROOF FLEXIBLE CONDUIT AND FEEDERS FROM NEW DISCONNECT TO UNIT. VERIFY EXISTING BREAKER SIZE AND INSURE BREAKER AND WIRING IS ADEQUATE TO MEET NEW ROOFTOP UNIT ELECTRICAL REQUIREMENTS.
- INSTALL NEW FULL SIZED PVC CONDENSATE DRAIN WITH P-TRAP AT UNIT AND PIPE TO NEAREST ROOF DRAIN. SUPPORT PIPE AT 4 FEET ON CENTER ON 12" LONG TREATED 4 X 4 BLOCKS.
- INSTALL NEW HEAT-COOL ELECTRONIC THERMOSTAT INSIDE BUILDING WHERE OLD THERMOSTAT WAS REMOVED. MODIFY CONTROL WIRING, CONDUCTORS, ETC. AS REQUIRED.
- THE NEW RTU SHALL BE START-STOPPED BY THE EXISTING HVAC BUILDING TIME CLOCK SYSTEM. RECONNECT TO SYSTEM AS REQUIRED. THE NEW RTU SHALL BE PROVIDED WITH ALL NECESSARY COMMUNICATIONS HARDWARE AND CONTROLS FOR FUTURE CONNECTION TO AND MONITORING BY THE EXISTING CAMPUS WIDE TRANE TRACER BUILDING AUTOMATION SYSTEM.

**HVAC SPECIFICATIONS**

- ALL WORK SHALL COMPLY WITH THE 2012 EDITION OF THE INTERNATIONAL BUILDING AND MECHANICAL CODES AND THE LATEST EDITION OF THE ELECTRICAL CODE.
- THE CONTRACTOR SHALL PAY ALL FEES AND SECURE ALL LICENSES AND PERMITS REQUIRED FOR THE WORK INDICATED ON THIS DRAWING.
- ALL CONTROL ITEMS AND PIECES OF EQUIPMENT SHALL BE PERMANENTLY LABELED WITH BAKELITE LABELS.
- THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER FOR REVIEW AND APPROVAL A COMPLETE SET OF SUBMITTAL DATA FOR ALL NEW MECHANICAL EQUIPMENT AND MATERIALS BEING INSTALLED INCLUDING EQUIPMENT, MATERIALS AND CONTROL DIAGRAMS, BEFORE ORDERING OR INSTALLING ANY EQUIPMENT.
- THE CONTRACTOR SHALL VERIFY THAT THE EXISTING ELECTRICAL SERVICE FOR THE ROOFTOP UNIT BEING REMOVED IS ADEQUATE TO MEET THE REQUIREMENTS FOR THE NEW UNIT. CONTRACTOR SHALL REPORT ANY DEFICIENCIES TO THE OWNER AND ENGINEER BEFORE ORDERING EQUIPMENT.
- THE CONTRACTOR SHALL COOPERATE WITH THE OWNER TO MINIMIZE CONFLICT, AND TO FACILITATE OWNER'S OPERATIONS. USE APPROPRIATE CONSTRUCTION BARRIERS SUCH AS SAW HORSES, PLASTIC BARRIER TAPE, WOODEN BARRIERS, ETC. AS APPLICABLE TO PROTECT OCCUPANTS DURING CONSTRUCTION. ANY DAMAGE TO OWNER'S PROPERTY SHALL BE REPAIRED OR REPLACED AT THE DISCRETION OF THE OWNER.
- THE CONTRACTOR SHALL ENSURE THAT THE WORK AREA IS SECURE BEFORE LEAVING EACH DAY. CONTRACTOR SHALL FURNISH AND INSTALL ALL FLYWOOD, FRAMING, HARDWARE, ETC. AS REQUIRED. CLOSE AND SECURE DAILY ALL ROOF OPENINGS WHERE EQUIPMENT IS REMOVED AND/OR REPLACED. ALL ACCESS TO ROOFS (LADDERS, LIFTS, CRANES, ETC.) SHALL BE SECURED AND LOCKED AS APPLICABLE. ALL OPENINGS SHALL BE CLOSED IN SUCH A MANNER AS TO MAKE THE BUILDING SECURE FROM EXTERIOR INTRUSION AND WEATHER TIGHT.
- THE NEW ROOFTOP UNIT SHALL BE INSTALLED ON A SEISMIC CERTIFIED CURB ADAPTER INSTALLED ON THE EXISTING ROOF CURB. ROOFTOP UNIT SHALL BE SECURED TO THE CURB ADAPTER WHICH IN TURN SHALL BE SECURED TO THE EXISTING ROOF CURB.
- THE NEW ROOFTOP UNIT SHALL BE CONTROLLED BY A NEW ELECTRONIC HEAT-COOL THERMOSTAT FURNISHED BY THE UNIT MANUFACTURER. THE UNIT SHALL BE START-STOPPED FROM THE EXISTING HVAC BUILDING TIME CLOCK. PROVIDE ALL INTERLOCK WIRING BETWEEN THE UNIT, THE NEW THERMOSTAT AND THE EXISTING TIME CLOCK AS REQUIRED. THE UNIT SHALL OPERATE IN THE ECONOMIZER FREE COOLING MODE WHENEVER THE OUTSIDE AIR TEMPERATURE AND HUMIDITY ARE FAVORABLE. THE ECONOMIZER CYCLE SHALL BE CONTROLLED (ADJUSTABLE) FROM UNIT MOUNTED TOTAL ENTHALPY CONTROLS FURNISHED WITH THE UNIT.
- THE CONTRACTOR SHALL PROVIDE COMPLETE OWNER TRAINING FOR THE NEW EQUIPMENT INSTALLED.
- THE CONTRACTOR SHALL PROVIDE 2 COPIES OF OPERATION AND MAINTENANCE MANUALS TO THE OWNER AT PROJECT CLOSEOUT.
- THE CONTRACTOR SHALL PROVIDE A TEST AND BALANCE REPORT FOR THE NEW ROOFTOP UNIT.
- THE CONTRACTOR SHALL PROVIDE A 1 YEAR WARRANTY ON ALL EQUIPMENT, MATERIALS AND LABOR.



**HVAC FLOOR PLAN**  
SCALE: 1/8" = 1'-0"

REVISIONS	
DATE	DESCRIPTION

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SCALE:	AS NOTED

