

**1 HVAC PLAN**  
M1 SCALE: 1/4" = 1'-0"

**HVAC MECHANICAL EQUIPMENT/KITCHEN VENTILATION SYSTEM RESPONSIBILITY MATRIX**

EQUIPMENT	TAG	SPECIFIED MFG.	PRICE QUOTE & ORDER THRU	EQUIPMENT PROVIDED BY	ROOF CURB PROVIDED BY	CHECK TEST & BALANCE	EQUIPMENT INSTALLED BY	EQUIPMENT STARTUP BY	1ST YEAR LABOR WARRANTY
EXHAUST FANS	EF-1, EF-2, EF-3	CAPTIVEAIRE	PART OF FRANCHISEES EQUIPMENT PACKAGE				MECH. CONTR.	MECH. CONTR.	MECH. CONTR.
KITCHEN HOOD	HOOD 1, HOOD 2	CAPTIVEAIRE	PART OF FRANCHISEES EQUIPMENT PACKAGE				MECH. CONTR.	MECH. CONTR.	MECH. CONTR.
HOOD FIRE SYS.	HOOD 1, HOOD 2	CAPTIVEAIRE	PART OF FRANCHISEES EQUIPMENT PACKAGE				CAPTIVEAIRE	CAPTIVEAIRE	CAPTIVEAIRE
DUCT HEATER	DH-1	REDDI	CARRIER	CARRIER	N/A	CAPTIVEAIRE	MECH. CONTR.	MECH. CONTR.	MECH. CONTR.
ROOFTOP UNITS	RTU-1, RTU-2	CARRIER	CARRIER	CARRIER	CARRIER	CAPTIVEAIRE	MECH. CONTR.	MECH. CONTR.	MECH. CONTR.
GRILLES/DIFFUSERS	-	KRUEGER	HJC	HJC	N/A	N/A	MECH. CONTR.	MECH. CONTR.	MECH. CONTR.

- CARRIER NATIONAL ACCOUNTS PROVIDED HVAC EQUIPMENT AND MATERIAL PACKAGE**
- THE HVAC EQUIPMENT AND MATERIALS OUTLINED IN THE RESPONSIBILITY MATRIX SHALL BE PROVIDED AND INSTALLED BY THE MECHANICAL CONTRACTOR THROUGH "CARRIER NATIONAL ACCOUNTS". FOR NATIONAL ACCOUNT PRICING & SHIPPING REFER TO NATIONAL VENDORS LIST.
  - THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ORDERING, DELIVERY, AND STORAGE OF THE EQUIPMENT AND MATERIALS PACKAGE.
  - UPON PLACING AN ORDER THE HVAC CONTRACTOR WILL RECEIVE A CONTRACTOR ASSISTANCE MANUAL FROM THE CARRIER NATIONAL ACCOUNTS.
  - THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE INSTALLATION OF THE EQUIPMENT AND MATERIALS PACKAGE.
- CARRIER NATIONAL ACCOUNTS - PROVIDED ROOF TOP EQUIPMENT PACKAGE**
- INCLUDES ALL ROOFTOP HEATING AND AIR CONDITIONING EQUIPMENT WITH ALL ACCESSORIES AS SPECIFIED ON THESE PLANS AND SPECIFICATIONS. SEE SCHEDULE ON SHEET M3.
- KRUEGER NATIONAL ACCOUNTS - PROVIDED AIR DEVICE PACKAGE**
- INCLUDES ALL REGISTERS, GRILLES & DIFFUSERS WITH SQUARE TO ROUND TRANSITIONS WHERE REQUIRED AS SPECIFIED ON THESE PLANS & SPECIFICATIONS.
- CARRIER NATIONAL ACCOUNTS - PROVIDED CURB PACKAGE**
- INCLUDES ROOF CURBS FOR RTU-1 & RTU-2. ROOF CURBS ARE TO BE ASSEMBLED & INSTALLED ON SITE.
- CARRIER NATIONAL ACCOUNTS - PROVIDED DUCT HEATERS**
- INCLUDES ALL ELECTRIC DUCT HEATERS & ACCESSORIES AS SPECIFIED ON THESE PLANS & SPECIFICATIONS.
- CAPTIVEAIRE - FRANCHISEE PROVIDED KITCHEN VENTILATION SYSTEMS PACKAGE**
- THE KITCHEN VENTILATION SYSTEM COMPONENTS OUTLINED IN THE RESPONSIBILITY MATRIX SHALL BE PROVIDED AS PART OF THE FRANCHISEE'S EQUIPMENT PACKAGE. COORDINATED AND INSTALLED BY THE MECHANICAL CONTRACTOR. REFER TO NATIONAL VENDORS LIST FOR CONTACT INFORMATION.
- CAPTIVEAIRE - PROVIDED FIRE SUPPRESSION SYSTEM PACKAGE**
- A FACTORY INSTALLED FIRE SUPPRESSION SYSTEM WILL BE PROVIDED FOR THE KITCHEN EXHAUST HOODS UNDER THE FRANCHISEE'S EQUIPMENT PACKAGE. LOCAL PERMITS, HOOK UP OF DETECTION AND SUPPLY LINES, INSTALLATION OF PULL STATION AND FIRE SUPPRESSION AGENT AND CHECKOUT ARE PROVIDED BY CAPTIVEAIRE UNDER THE FRANCHISEE'S EQUIPMENT PACKAGE.
  - ITEMS THAT ARE NOT INCLUDED: SPECIAL DRAWINGS THAT MAYBE REQUIRED BY STATE/LOCAL AUTHORITIES, INSTALLATION OF GAS SHUNT TYPE VALVE, ELECTRICAL INTERLOCK TO EXHAUST FAN BY OTHERS, FULL DUMP TEST IF REQUIRED IS NOT INCLUDED.
- CAPTIVEAIRE - PROVIDED THIRD PARTY CHECK, TEST & BALANCE PACKAGE**
- A COMPLETE BUILDING AIR BALANCE, INCLUDING THE AIR CONDITIONING EQUIPMENT, TO ENSURE CORRECT KITCHEN HOOD CAPTURE & OCCUPANT COMFORT PROVIDED BY "CAPTIVEAIRE" UNDER THE FRANCHISEE'S EQUIPMENT PACKAGE.
- HVAC/KITCHEN VENTILATION SERVICES AND WARRANTY PACKAGE**
- MECHANICAL CONTRACTOR WILL PROVIDE THE HVAC SERVICES AND WARRANTY PACKAGE.
  - HVAC SERVICES AND WARRANTY PACKAGE: SEE MATRIX ABOVE.
  - MECHANICAL CONTRACTOR IS RESPONSIBLE TO CORRECT INSTALLATION DEFICIENCIES THAT OBSTRUCT THE COMPLETION OF THE BUILDING AIR BALANCING AND HVAC SERVICES WARRANTY PACKAGE.

**OUTSIDE AIR REQUIREMENTS**

OCCUPANCY TYPE	GROSS FLOOR AREA (S.F.)	PEOPLE	REQUIRED OUTSIDE AIR BASED ON 2015 IMC			REQUIRED EXHAUST AIR BASED ON 2015 IMC	
			CFM PER PERSON	CFM PER S.F.	CFM REQUIRED	CFM PER S.F. FIXTURE	CFM EXHAUSTED
DINING	929	46**	7.5	0.18	513	0	0
OFFICE	33	1	5.0	0.06	7	0	0
KITCHEN	1242	6	0	0	0	0.7	870
RESTROOM	98	2*	0	0	0	75*	150
VESTIBULE	64	0	0	0.06	4	0	0
<b>TOTAL</b>	<b>2366</b>	<b>55</b>			<b>524</b>		<b>779</b>

\* RATE BASED ON 75 CFM PER WATER CLOSET OR URINAL WITH (2) RESTROOM FIXTURES  
\*\* OCCUPANT LOAD BASED ON SEATING CAPACITY

**OUTSIDE AIR REQUIREMENTS**

TAG	CFM SUPPLY	CFM RETURN	OSA	TRANSFER AIR	CFM EXHAUST
RTU-1	3400	2380	1020	0	-
RTU-2	5000	3500	1500	0	-
EF-1	-	-	-	-	1100
EF-2	-	-	-	-	1000
EF-3	-	-	-	-	300
<b>TOTAL</b>	<b>8000</b>	<b>5880</b>	<b>2520</b>	<b>0</b>	<b>2400</b>

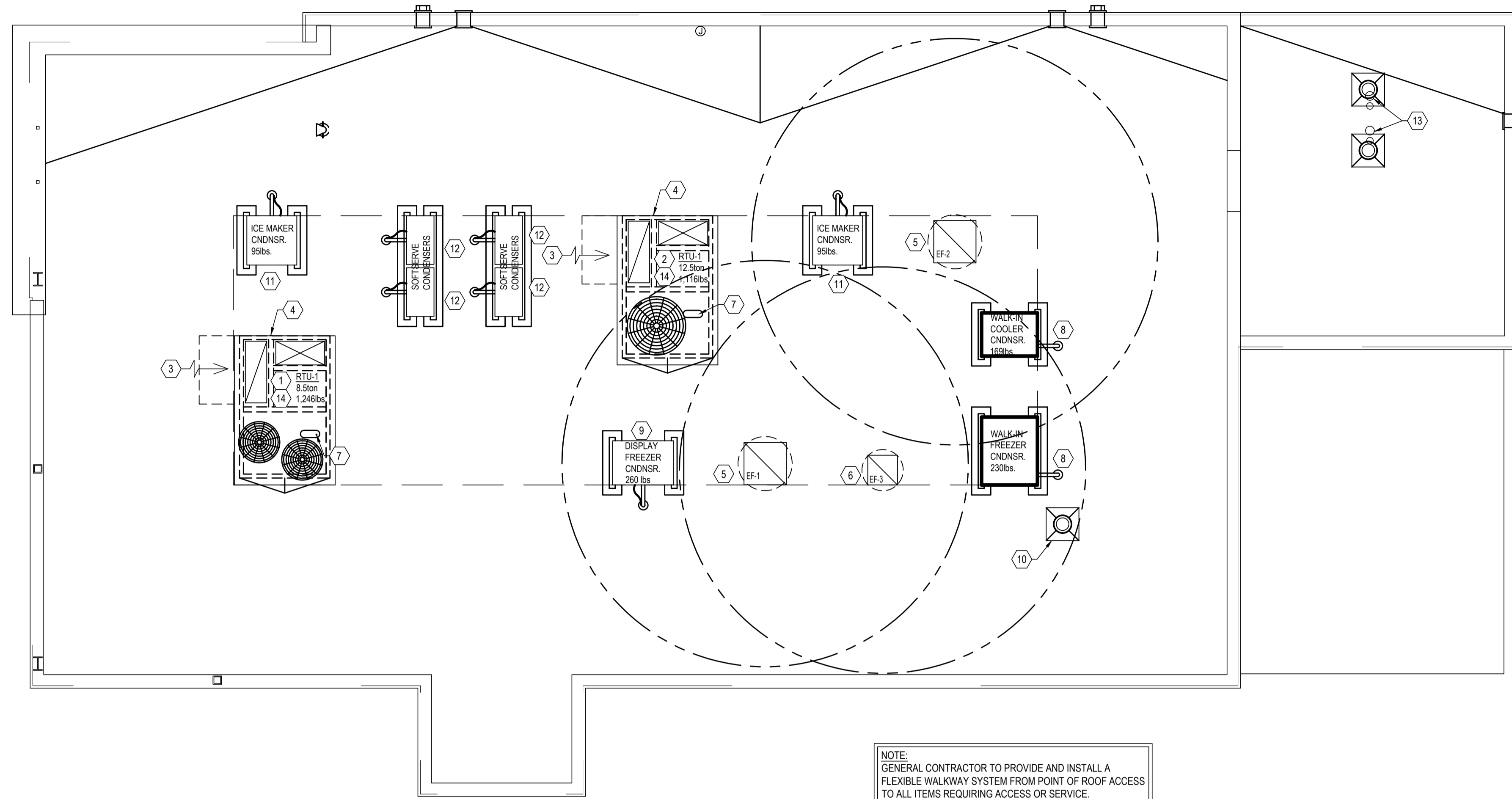
- NOTES:
- BUILDING AIR BALANCE: (120) CFM POSITIVE PRESSURE
  - KITCHEN AIR BALANCE: (750) CFM NEGATIVE TO DINING ROOM

**GENERAL NOTES**

- HVAC CONTRACTOR SHALL PROVIDE FIELD APPLIED FOIL VAPOR BARRIER INSULATION TO ALL DIFFUSER BACKS.
- RTU AND EXHAUST FAN ROOF PENETRATIONS SHALL BE COORDINATED WITH STRUCTURAL.
- MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ALL VERTICAL AND HORIZONTAL OFFSETS (NOT SHOWN) FOR DUCT AND EQUIPMENT INSTALLATION.
- REFERENCE ALL DETAILS ON SHEETS M3 THROUGH M5 FOR EQUIPMENT INSTALLATION.
- ALL ROOF CURBS SHALL BE SEALED AIR TIGHT FOR BUILDING PRESSURE TESTING.
- MECHANICAL CONTRACTOR IS RESPONSIBLE FOR REFRIGERANT PIPING. PLUMBING CONTRACTOR WILL PROVIDE ALL CONDENSATE PIPING. ALL EQUIPMENT FURNISHED WITH PRE CHARGED LINE SETS.
- SEE PROJECT MANUAL FOR BUILDING MATERIALS SPECIFICATIONS.
- DUCTWORK TO BE INSTALLED TIGHT TO BOTTOM OF STRUCTURE THROUGHOUT. COORDINATE WORK WITH OTHER TRADES TO AVOID CONFLICTS. MAINTAIN CLEARANCE ABOVE DUCT FOR INSULATION.
- CLEAN ALL DUCTWORK BOTH INSIDE AND OUT BEFORE START-UP OF ROOFTOP UNITS.
- FLEXIBLE DUCT LIMITED TO 5'-0" MAX.
- PROVIDE TURNING VANES IN ALL 90 DEG ELBOWS IN SUPPLY AND RETURN DUCTWORK.
- THE ANSUL FIRE SUPPRESSION SYSTEM, (LIQUID SYSTEM, TYPE-R102, SEE DETAIL 5M3), IS PRE-PIPED INTO HOOD BY HOOD MANUFACTURER AS PART OF THEIR PACKAGE. SEE "RESPONSIBILITY MATRIX."

**KEY NOTES**

- ROOF TOP UNIT RTU-1: PROVIDE NEW CARRIER ROOFTOP UNIT IN VERTICAL DISCHARGE CONFIGURATION. PROVIDE WITH ROOF CURB, ECONOMIZER, SMOKE DETECTORS, THERMOSTAT AND STAINLESS STEEL HEAT EXCHANGER. SEE SHEET M3 EQUIPMENT SCHEDULE AND DETAILS FOR ADDITIONAL INFORMATION.
- ROOF TOP UNIT RTU-2: PROVIDE NEW CARRIER ROOFTOP UNIT IN VERTICAL DISCHARGE CONFIGURATION. PROVIDE WITH ROOF CURB, MOTORIZED OSA DAMPER, SMOKE DETECTORS, THERMOSTAT AND STAINLESS STEEL HEAT EXCHANGER. SEE SHEET M3 EQUIPMENT SCHEDULE AND DETAILS FOR ADDITIONAL INFORMATION.
- INSTALL ALL DUCTWORK TIGHT TO BOTTOM OF DECK OR STRUCTURAL MEMBERS.
- PROVIDE SMOKE DETECTOR IN RETURN AIR STREAM WHERE INDICATED. AIR HANDLING EQUIPMENT SHALL BE INTERLOCKED WITH THE DETECTOR TO SHUT DOWN THE UNIT. FURNISH AND INSTALL AN AUDIBLE AND VISUAL ALARM DEVICE IN MONITORED AREA, PER LOCAL CODE.
- DUCTWORK INSULATION: ALL RETURN AND SUPPLY DUCTWORK SHALL BE WRAPPED WITH 1 1/2 LBS BLANKET INSULATION, WITH FOIL FACING.
- MINIMUM 1" UNDERCUT DOOR FOR PROPER RETURN AIRFLOW.
- RETURN/SUPPLY DUCTWORK DOWN FULL SIZE FROM AIR HANDLING EQUIPMENT WITH NEOPRENE FLEX CONNECTORS. SUPPORT DUCTWORK TO RELEASE TENSION IN FLEX CONNECTORS. TRANSITION AS SHOWN. SEE DETAIL 1M3.
- VOLUME DAMPER. TYPICAL FOR ALL.
- FLEX DUCTWORK CONNECTION TO DIFFUSERS/GRILLES TYPICAL. FLEX DUCTWORK TO BE INSULATED WITH FOIL VAPOR BARRIER. FLEX DUCTWORK NOT TO EXCEED 5'-0" IN LENGTH. SEE DETAIL 4M3.
- EF-3: PROVIDE ROOF MOUNTED TOILET EXHAUST FAN WITH BACK DRAFT DAMPER. MAINTAIN 10'-0" FROM ALL OUTSIDE AIR INTAKES. SEE SHEET M3 EQUIPMENT SCHEDULE AND DETAILS FOR ADDITIONAL INFORMATION.
- ELECTRIC DUCT HEATER: COORDINATE MOUNTING LOCATION WITH STRUCTURAL AND ELECTRICAL. WIRING BY ELECTRICAL CONTRACTOR. SEE SHEET M3 EQUIPMENT SCHEDULE AND DETAILS FOR ADDITIONAL INFORMATION.
- REMOTE SENSORS AND THERMOSTATS: REMOTE SENSORS AND THERMOSTATS TO BE MOUNTED WHERE INDICATED. FIELD-VERIFY THE LOCATION WITH ARCHITECT, OWNER, AND ON-SITE CONDITIONS PRIOR TO PERFORMING WORK.
- EXTEND SHEET METAL RETURN AIR PLENUM UP FROM GRILLE AND CONNECT TO RETURN AIR DUCT AS INDICATED.
- MANUAL PULL STATION FOR ANSUL FIRE SUPPRESSION SYSTEM. VERIFY WITH LOCAL AUTHORITY NUMBER OF PULLS, LOCATION, AND HEIGHT ABOVE FINISH FLOOR. SEE DETAIL 5M3.
- EXACT LOCATION OF ALL HOODS SHALL BE DETERMINED BY THE KITCHEN EQUIPMENT DRAWINGS AND EQUIPMENT CUT SHEETS. COORDINATE WITH ALL DISCIPLINES PRIOR TO INSTALLATION.
- KITCHEN HOOD SYSTEM, EF-1 & EF-2: INSTALL KITCHEN EXHAUST SYSTEM FROM INDICATED VENDOR. THE PACKAGE TO INCLUDE THE STAINLESS STEEL EXHAUST HOOD, GREASE FILTERS, GREASE CATCH PAN, WIRE WAYS, INCANDESCENT LIGHT FIXTURE RATED FOR EXHAUST HOODS, EXHAUST FAN, AND ROOF CURB.
- INSTALL KITCHEN HOOD EXHAUST DUCTWORK AS INDICATED ON PLANS. DUCTWORK SIZES AND LAYOUTS SHALL NOT BE MODIFIED WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- HOOD SYSTEM AND DUCT PROVIDED BY CAPTIVEAIRE. SEE SHEETS M4.1-M4.7, COORDINATE ANY MODIFICATIONS WITH HOOD VENDOR/CAPTIVEAIRE.



1 MECHANICAL ROOF PLAN  
M2 SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES AROUND ROOF MOUNTED EQUIPMENT. MINIMUM OF 3'-0".
2. COORDINATE ALL EQUIPMENT LOCATIONS AND ROOF PENETRATIONS WITH THE GENERAL CONTRACTOR PRIOR TO BEGINNING WORK. USE SHOP DRAWINGS PROVIDED BY THE EQUIPMENT MANUFACTURER.
3. RTU AND EXHAUST FAN ROOF PENETRATIONS SHALL BE COORDINATED WITH STRUCTURAL PRIOR TO BEGINNING WORK.
4. REFERENCE ALL DETAILS ON SHEET NUMBERS M3, M4 AND M5 FOR EQUIPMENT INSTALLATION.
5. ALL ROOF CURBS SHALL BE SEALED AIR TIGHT FOR BUILDING PRESSURE TESTING.
6. THE MECHANICAL CONTRACTOR SHALL INSTALL ALL REFRIGERANT PIPING.

KEY NOTES

- 1 ROOF TOP UNIT RTU-1: PROVIDE NEW CARRIER ROOFTOP UNIT IN VERTICAL DISCHARGE CONFIGURATION. PROVIDE WITH ROOF CURB, ECONOMIZER, SMOKE DETECTORS, THERMOSTAT AND STAINLESS STEEL HEAT EXCHANGER. SEE SHEET M3 EQUIPMENT SCHEDULE AND DETAILS FOR ADDITIONAL INFORMATION.
- 2 ROOF TOP UNIT RTU-2: PROVIDE NEW CARRIER ROOFTOP UNIT IN VERTICAL DISCHARGE CONFIGURATION. PROVIDE WITH ROOF CURB, MOTORIZED OSA DAMPER, SMOKE DETECTORS, THERMOSTAT AND STAINLESS STEEL HEAT EXCHANGER. SEE SHEET M3 EQUIPMENT SCHEDULE AND DETAILS FOR ADDITIONAL INFORMATION.
- 3 FRESH AIR INTAKE MAINTAIN 10'-0" CLEAR FROM EXHAUST OR VENTS.
- 4 CONDENSATE TRAP SEE DETAIL 2/P4.
- 5 EF-1 & EF-2: PROVIDE KITCHEN HOOD EXHAUST SYSTEM FROM INDICATED VENDOR. MAINTAIN 10'-0" FROM ALL OUTSIDE AIR INTAKES. REFER TO SHEETS M4.1 THRU M4.7 FOR ADDITIONAL INFORMATION.
- 6 EF-3: PROVIDE ROOF MOUNTED TOILET EXHAUST FAN WITH BACK DRAFT DAMPER. MAINTAIN 10'-0" FROM ALL OUTSIDE AIR INTAKES. REFER TO SHEETS M4.1 THRU M4.7 FOR ADDITIONAL INFORMATION. DETAIL 3/M3 FOR ADDITIONAL INFORMATION.
- 7 GAS PIPING UP THROUGH ROOF CURB SEE SHEET P1 FOR CONTINUATION.
- 8 WALK-IN FREEZER/COOLER REFRIGERANT SYSTEM. COORDINATE INSTALLATION WITH OTHER MECHANICAL EQUIPMENT, MOUNTED BUILDING ROOF. SEE MANUFACTURER'S INSTALL INSTRUCTIONS FOR LOCATION.
- 9 DISPLAY FREEZER REFRIGERANT SYSTEM. COORDINATE MOUNTING LOCATION WITH OTHER MECHANICAL EQUIPMENT ON ROOF TO MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES.
- 10 PLUMBING VENT SEE DETAIL ON P4. MAINTAIN 10'-0" FROM ALL OUTSIDE AIR INTAKES.
- 11 ICE MAKER REFRIGERANT SYSTEM. COORDINATE MOUNTING LOCATION WITH OTHER MECHANICAL EQUIPMENT ON ROOF TO MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES.
- 12 SOFT SERVE REFRIGERANT SYSTEM. COORDINATE MOUNTING LOCATION WITH OTHER MECHANICAL EQUIPMENT ON ROOF TO MAINTAIN MANUFACTURER'S RECOMMENDED CLEARANCES. TOP OF FAN TO BE EVEN WITH PARAPET.
- 13 WATER HEATER VENT SEE DETAIL 8/P4. MAINTAIN 10'-0" FROM ALL OUTSIDE AIR INTAKES.
- 14 RTU MUST BE PROPERLY ALIGNED ON ROOF CURB TO ENSURE AIR SUPPLY AND RETURNS ARE NOT OBSTRUCTED