



MECHANICAL - FIRST FLOOR PLAN
1/8" = 1'-0"

HVAC LEGEND	
	DRAWING NOTE SYMBOL
	NEW RECTANGULAR DUCTWORK AND SIZE
	NEW ROUND DUCTWORK AND SIZE
	BALANCING/VOLUME DAMPER
	THERMOSTAT
	REMOTE SENSOR
	NEW SUPPLY AIR DIFFUSER AND CFM
	NEW RETURN GRILLE
	NEW EXHAUST GRILLE AND CFM
	NEW EXHAUST FAN
	AIR FLOW DIRECTION
	SMOKE DETECTOR

HVAC DESIGN CONDITIONS	
COOLING:	HEATING:
OUTDOOR = 82°DB/74°FWB	OUTDOOR = 17°DB
INDOOR = 72°DB/50°RH	INDOOR = 70°FDB

- ### KEYED NOTES
- PROVIDE CEILING CASSETTE UNIT AND INSTALL IN CEILING LOCATION INDICATED. PROVIDE WIRED THERMOSTAT TO CONTROL MOUNT THERMOSTAT AT 4' AFF. ROUTE CONDENSATE TO NEAREST FLOOR DRAIN. PROVIDE CONDENSATE PUMP AS REQUIRED. TERMINATE WITH AIR GAP. REFER TO PLUMBING PLAN FOR LOCATION OF FLOOR DRAIN. SEE DETAIL 412.02.
 - PROVIDE NEW ROOFTOP UNIT AND CURS. ROUTE SUPPLY/RETURN DUCTS IN THROUGH EXTERIOR WALL. REFER TO WALK PLAN FOR CONTINUITY. COORDINATE ROOFTOP UNIT LOCATION WITH STRUCTURE DRAWING. PROVIDE NEW THERMOSTAT, CONTROL WIRING, AND STAND ALONE CONTROLS FOR RTU OPERATION. ROUTE CONDENSATE TO ROOF. BALANCE SUPPLY AND OUTSIDE AIRFLOW AS SCHEDULED. IC TO TURNISH DUCT MOUNTED SMOKE DETECTOR AND PROVIDE CONTROLS TO DETECTOR. ANNUNCIATOR/TEST SWITCH. ACT TO INSTALL SMOKE DETECTOR IN RETURN DUCT. PRIOR TO ANY OUTDOOR AIR CONNECTIONS. ACT TO PROVIDE INTERLOCK WIRING BETWEEN SMOKE DETECTOR AND UNIT TO SHUT DOWN UNIT UPON DETECTION OF SMOKE. IC SHALL PROVIDE WIRING FOR FINAL CONNECTION TO CENTRAL FIRE ALARM SYSTEM, IF APPLICABLE, AND WIRING TO REMOTE ANNUNCIATOR/TEST SWITCH.
 - PROVIDE THERMOSTAT TIED TO REMOTE SENSOR. MOUNT THERMOSTAT ON WALL 4 FEET A.F.F.
 - REMOVE SENSOR AND MOUNT ON WALL 5 FEET A.F.F.
 - PROVIDE ELECTRIC CEILING HEATER AND INSTALL IN CEILING.
 - PROVIDE AIR DOOR / AIR CURTAIN AND MOUNT IN SOFFIT. ACT TO WIRE LIMIT SWITCH TO AIR DOOR CONTROLS. AIR DOOR TO TURN ON WHEN DOOR IS OPEN AND LIMIT SWITCH IS ACTIVATED, AND REMAIN ON AFTER DOOR CLOSES UNTIL THE SET RELAY TIME EXPIRES (1 MINUTE, ADJUSTABLE).
 - RUN EXPOSED DUCTWORK TIGHT TO UNDERSIDE OF STRUCTURE.
 - ORDER BOTTOM OF SUPPLY DUCTWORK TO JUST ABOVE LIGHT FIXTURES IN CEILING GRID. LEAVE AS MUCH ROOM ABOVE THE SUPPLY DUCT AS POSSIBLE. COORDINATE WITH E.C. FOR LIGHT FIXTURE DEPTH.
 - PROVIDE GREASE DUCT EQUAL TO CAPTIVEARE SYSTEMS MODEL "DM" ROUND 30 GAUGE 430 STAINLESS STEEL DUCTWORK. PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 2' ON CENTER. RUN EXHAUST DUCTWORK INSIDE PATIO ROOF STRUCTURE. PROVIDE ACCESS PANELS AND CLEANOUTS AT ALL TURNS. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
 - WALK IN COOLER OUTDOOR CONDENSING UNIT PROVIDED BY WALK IN COOLER CONTRACTOR. COORDINATE FINAL LOCATION WITH OWNER. ENSURE UNIT IS INSIDE SCREENED IN FINISHING.
 - ICE MACHINE CONDENSING UNIT PROVIDED BY ICE MACHINE VENDOR. COORDINATE FINAL LOCATION WITH OWNER. ENSURE UNIT IS INSIDE SCREENED IN FINISHING.
 - PROVIDE AIR CURTAIN AND MOUNT OVER COMMENSARY DOOR. ACT TO WIRE LIMIT SWITCH TO AIR CURTAIN CONTROLS. AIR CURTAIN TO TURN ON WHEN DOOR IS OPEN AND LIMIT SWITCH IS ACTIVATED, AND REMAIN ON AFTER DOOR CLOSES UNTIL THE SET RELAY TIME EXPIRES (1 MINUTE, ADJUSTABLE). HEAT TO BE ACTIVATED ON CALL FOR HEATING BY THE UNIT MOUNTED THERMOSTAT.
 - TYPE II HOOD** WITH ANSUL FIRE SUPPRESSION SYSTEM FURNISHED BY KITCHEN CONSULTANT AND NOTED BY MECHANICAL CONTRACTOR. MAKE ALL DUCT CONNECTIONS AS INDICATED AND INSTALL HOOD AT 80" A.F.F. REFER TO CAPTIVE ARE DRAWINGS FOR ADDITIONAL INFORMATION.
 - INSULATE ALL EXTERIOR DUCTWORK WITH RIGID FIBERGLASS BOARD INSULATION WITH OUTDOOR JACKET. INSULATION SHALL HAVE MINIMUM INSTALLED "R" VALUE OF 6.0. PROVIDE SELF-ADHESIVE OUTDOOR JACKET FOR ALL EXPOSED DUCTWORK. JACKET SHALL HAVE LAMINATED VARIOUS BARBER AND WATERPROOFING MEMBRANE CONSISTING OF A RUBBERIZED BITUMINOUS RESIN ON A CROSS LAMINATED POLYETHYLENE FILM COVERED WITH STUCCO EMBOSSED ALUMINUM-FOL FACING.
 - TYPE III HOOD** FURNISHED BY KITCHEN CONSULTANT AND INSTALLED BY MECHANICAL CONTRACTOR. MAKE ALL DUCT CONNECTIONS AS INDICATED AND INSTALL HOOD ABOVE EQUIPMENT IT SERVES AT A HEIGHT THAT DOES NOT INTERFERE WITH THE OPERATION OF THE EQUIPMENT. REFER TO CAPTIVE ARE DRAWINGS FOR ADDITIONAL INFORMATION.
 - ALL EXPOSED SPIRAL DUCTWORK TO BE PAINT GRIP GALVANIZED TO ALLOW FOR FIELD PAINTING. ALL EXPOSED SPIRAL DUCTWORK SHALL BE COLORED WALL AND INSULATED DRAWINGS FOR ADDITIONAL INFORMATION.
 - PROVIDE ELECTRIC RADIANT HEATER, WITH UNIT MOUNTED THERMOSTAT. HEATER SHALL BE MOUNTED FROM UNDERSIDE OF STRUCTURE. SET THERMOSTAT TO 87° (ADJUSTABLE).
 - INTERNALLY LINE FIRST 10 FEET OF SUPPLY AND RETURN AIR DUCTWORK WITH JOHN'S MANVILLE OR EQUIVALENT, 1 INCH THICK SPRACACOUSTIC FIBERGLASS DUCT LINER. DUCT SIZES SHOWN ARE CLEAR INSIDE DIMENSIONS.
 - PROVIDE WALL MOUNTED DUCTLESS SPLIT SYSTEM AND INSTALL IN LOCATION INDICATED. ROUTE CONDENSATE TO NEAREST APPROVED KEYPHASE. PROVIDE CONDENSATE PUMP AS REQUIRED. PROVIDE WIRED THERMOSTAT TO CONTROL DUCTLESS SPLIT SYSTEM. MOUNT THERMOSTAT AT 4' AFF.
 - PROVIDE HEAT PUMP AND LOCATE ON LEVEL OF DEEP CONCRETE PAD BY G.C. TOP OF THE UNIT SHALL BE LEVEL. MAINTAIN UNIT MINIMUM REQUIRED SERVICE AND MINIMUM CLEARANCE FROM ANY LIQUID AND SUCTION LINES BETWEEN HEAT PUMP AND DUCTLESS SPLIT SYSTEM AND SEAL WALL PENETRATIONS WEATHER TIGHT. ROUTE AND SIZE LINES AND ACCESSORIES PER MANUFACTURER'S GUIDELINES. PROVIDE A FULLY CHARGED SYSTEM AND INSULATE ALL REFRIGERANT PIPING WITH ANNEKER INSULATION.
 - PROVIDE EXHAUST FAN FOR TYPE II HOOD AND INSTALL ON WALL MOUNT BRACKET. DISCHARGE OPENING SHALL BE NOT LESS THAN 12" ABOVE GRADE. MAINTAIN MINIMUM CLEARANCE FROM ANY OUTDOOR AIR INTAKES. DUCT SERVING TYPE II HOOD SHALL BE MADE OF ALUMINUM. JOINTS, SEAMS, AND PENETRATIONS SHALL BE SEALED TO DUCTILE SURFACE AND SHALL BE WEATHER TIGHT. HORIZONTAL DUCTWORK SERVING TYPE II HOOD SHALL BE SLOPED DOWN IN THE DIRECTION OF THE HOOD. SLOPE DUCT AT 1/8" / FT.
 - AS LOW AS POSSIBLE. TAKE SUPPLY AND RETURN DUCT IN THROUGH EXTERIOR WALL, INTO BUILT-OUT WALL, THEN TURN VERTICAL TO CEILING SPACE.
 - MOUNT RETURN GRILLE AS HIGH ON WALL AS POSSIBLE. PAINT GRILLE TO MATCH WALL COLOR.
 - PROVIDE IN TAKE HOOD WALL LOUVER, EQUIVALENT TO GREENHECK GRS-15 ROUND 24" 270K, AND MOUNT HIGH ON WALL OR 12" HIGH INSULATED ROOF CURB. CURB COMPLETE WITH BROGROCK. PROVIDE DUCTWORK PLUMB BOY BEHIND LOUVER AND SEAL WATER TIGHT.
 - PROVIDE GREASE DUCT EQUAL TO CAPTIVEARE SYSTEMS MODEL "DM" ROUND 30 GAUGE 430 STAINLESS STEEL DUCTWORK. PROVIDE RATED ACCESS DOORS AT EVERY CHANGE IN DIRECTION AND EVERY 2' ON CENTER. RUN EXHAUST DUCTWORK INSIDE PATIO ROOF STRUCTURE. PROVIDE ACCESS PANELS AND CLEANOUTS AT ALL TURNS. CONNECTION TO PIZZA OVEN IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.
 - COORDINATE SUPPLY/DIFFUSER LOCATIONS IN BAR AREA WITH G.C. PRIOR TO INSTALLATION.

- ### GENERAL NOTES
- THE DRAWINGS ARE DIAGRAMMATIC IN NATURE. EXACT LOCATIONS OF DEVICES AND ROUTING OF DUCTWORK SHALL BE DETERMINED BY CONTRACTOR AFTER COORDINATION WITH ALL OTHER TRADES AND FIELD DETERMINATION OF FINAL CONSTRUCTION DETAILS. MINOR ADJUSTMENTS TO DUCT ROUTING AND CONFIGURATION TO AVOID CONTACT WITH BUILDING STRUCTURE OR OTHER TRADES SHALL BE INCLUDED IN CONTRACTOR'S PRICE. CONTRACTOR SHALL OBTAIN ENGINEERS APPROVAL IN WRITING FOR ANY MODIFICATIONS TO SYSTEM DESIGN PRIOR TO INSTALLATION.
 - ALL EXPOSED MATERIALS AND EQUIPMENT SHALL BE INSTALLED AND SUPPORTED IN A FIRST CLASS AND WORKMANLIKE FASHION. DUCTWORK SHALL BE RUN PARALLEL AND/OR PERPENDICULAR TO MAIN BUILDING STRUCTURE. ANY WORK THAT IS NOT DONE IN A FIRST CLASS OR WORKMANLIKE FASHION, IN THE ARCHITECT'S OPINION, SHALL BE REDONE AT THE CONTRACTOR'S EXPENSE.
 - ALL DUCT JOINTS, SEAMS AND CONNECTIONS SHALL BE SECURELY FASTENED AND SEALED. DUCTS SHALL BE SUPPORTED WITH APPROVED HANGERS AT INTERVALS NOT EXCEEDING TEN FEET. DUCT COVERINGS AND LININGS SHALL HAVE A FLAME-SPREAD INDEX NOT MORE THAN 25 AND A SMOKE DEVELOPED INDEX NOT MORE THAN 50.
 - PROVIDE VOLUME DAMPERS AT ALL ROUND BRANCH DUCT TAKE-OFFS THAT ARE ACCESSIBLE. PROVIDE TURNING VANES AT ALL 90 DEGREE SQUARE ELBOWS IN SUPPLY AIR DUCTS. PROVIDE 45 DEGREE VEE'S AT ALL RECTANGULAR SUPPLY AND RETURN BRANCH DUCT TAKE-OFFS.
 - OUTDOOR AIR INTAKES SHALL BE 10'-0" MINIMUM AWAY FROM AN EXHAUST AND PLUMBING VENT OUTLET.
 - WIRE UP ALL LOW VOLTAGE (24V) THERMOSTATS.
 - CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL PIPES, DUCTWORK, UNITS, ETC. WITH ALL OTHER TRADES AND SHIF LOCATION ON OFFSET WHERE NECESSARY. PROVIDE TRANSITIONS IN DUCTWORK TO AVOID CONTACT WITH EXISTING DUCTWORK AND OTHER STRUCTURES.
 - CONTRACTOR SHALL COORDINATE ALL AIR DEVICES WITH ELECTRICAL AND ARCHITECTURAL REFLECTED CEILING PLANS.
 - COORDINATE LOCATION OF ALL EXTERIOR LOUVER OR OUTLET WITH ARCHITECTURAL ELEVATION PLAN.
 - COORDINATE ROOF WORK WITH BUILDING OWNER'S ROOFING CONTRACTOR TO ASSURE THAT THE ROOF WARRANTY IS NOT VOIDED.
 - EXHAUST AIR DUCTS SHALL BE EQUIPPED WITH BACKDRIFT DAMPERS.
 - ALL DUCT OPENINGS AND OTHER AIR DISTRIBUTION OPENINGS SHALL BE COVERED DURING CONSTRUCTION EXCEPT FOR TESTING AND INSPECTION.
 - PROVIDE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND WARRANTIES / WRITTEN GUARANTEE FOR EACH SYSTEM. O&M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CCR TITLE 8, SECTION 5342 AND OTHER RELATED REGULATIONS.
 - ALL DUCT ELBOWS SHALL BE LONG RADIUS OR MITERED.

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 MECHANICAL - 1ST LEVEL FLOOR PLAN
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