



HVAC System requires new unit to sit outside of FD building footprint on the ground. Proposed add service covers design of retaining and landscape elements to support and screen the new equipment

MECHANICAL - FIRST FLOOR NEW WORK PLAN
1/4"-1"=0'



MECHANICAL NEW WORK LEGEND	
	NEW MECHANICAL TO BE FURNISHED AND INSTALLED
	EXISTING MECHANICAL TO REMAIN

MECHANICAL SPECIFIC NEW WORK NOTES:

- INSTALL A NEW HEAT RECOVERY VENTILATOR UNIT TO SERVE THE GARAGE BAY VENTILATION. SEE EQUIPMENT SCHEDULES. MOUNT UNIT ON THE PROPOSED MEZZANINE. SEE ARCHITECTURAL/STRUCTURAL PLANS. PROVIDE 1/4" THICK NEOPRENE "BEARING PADS" UNDER UNIT SUPPORT POINTS. BOLT UNIT TO MEZZANINE WITH NEOPRENE GROMMETS. COORDINATE WITH ELECTRICAL AND CONTROLS CONTRACTORS FOR POWER AND CONTROLS.
- INSTALL OUTDOOR AIR AND EXHAUST AIR DUCTWORK FOR THE PROPOSED UNIT TO THE OUTSIDE WALLS. PROVIDE LOUVERS TO THE GENERAL TRADES CONTRACTOR FOR INSTALLATION. FABRICATE PLENUMS ON THE LOUVERS WITH BOTTOMS SLOPED TO DRAIN OUT. RUN DUCTWORK FROM THE PLENUMS TO THE UNIT CONNECTIONS WITH FLEXIBLE CONNECTORS AT UNIT. INSTALL CONTROL DAMPERS WHERE INDICATED. FABRICATE DUCTWORK AND INSULATE PER THE SPECIFICATIONS.
- INSTALL SUPPLY AND RETURN/EXHAUST DISTRIBUTION DUCTWORK FROM THE H.R.V. UNIT TO THE GARAGE BAYS AS INDICATED BOLD. CONNECT TO UNIT WITH FLEXIBLE CONNECTORS. RUN DUCTWORK HIGH, COORDINATE WITH EXISTING AND NEW SERVICES. RELOCATE OBSTRUCTIONS AS REQUIRED. INSTALL DIFFUSERS AND GRILLES APPROXIMATELY AS INDICATED, SEE SCHEDULES. COORDINATE WITH THE GENERAL TRADES CONTRACTOR FOR WALL PENETRATIONS. DUCTWORK AND INSULATION TO BE PER THE SPECIFICATIONS. LABEL DUCTS.
- INSTALL A DUCT FURNACE IN THE H.R.V. SUPPLY DUCTWORK, SEE EQUIPMENT SCHEDULES. PROVIDE HARDWARE AND FRAMING TO SUPPORT UNIT FROM THE STRUCTURE ABOVE. INSTALL FLUE PIPING FROM THE FURNACE, OVER AND UP THROUGH THE ROOF, AS INDICATED. COORDINATE WITH THE G.C. FOR FLASHING. PROVIDE TEE FITTING AT RISER AND TERMINATE 3" ABOVE ROOF WITHIN 10', WITH A "HIGH WIND" TYPE CAP. FLUE TO BE DOUBLE WALL GAS FLUE, LISTED FOR POSITIVE PRESSURE APPLIANCES.
- INSTALL A NEW PACKAGED HVAC/HEAT RECOVERY UNIT TO SERVE THE OFFICE AND MEETING AREAS, SEE EQUIPMENT SCHEDULES. FABRICATE A WELDED STEEL FRAME TO SUPPORT THE UNIT FROM THE CONCRETE PAD. PROVIDE BRACING ALL EACH LEG. COORDINATE EXACT SIZE WITH APPROVED UNIT SUBMITTALS AND HEIGHT WITH PROPOSED DUCTWORK AND INSULATION. PROPERLY PREPARE, PRIME AND FINISH PAINT WITH HIGH GLOSS ALKTD ENAMEL, BATTLESHIP GRAY. PROVIDE 1/4" THICK NEOPRENE BEARING PADS ON FRAME AND MOUNT UNIT. COORDINATE WITH PLUMBING, ELECTRICAL AND CONTROLS CONTRACTORS FOR UNIT CONNECTIONS.
- INSTALL A COMPLETE SYSTEM OF SUPPLY AND RETURN AIR DUCTWORK FROM THE UNIT TO SERVE THE VARIOUS SPACES WITHIN THE BUILDING. ROUTE DUCTWORK FROM UNDER THE UNIT, UP THE BUILDING WALL, AND THROUGH THE EXISTING ATTIC SPACE AND PROPOSED CEILING SPACES. COORDINATE WITH PROPOSED STRUCTURAL WORK. GENERALLY MOUNT DUCTWORK ON TOP OF TRUSS BOTTOM CHORDS. INSTALL CONTROL DAMPERS NEAR BUILDING WALL. INSTALL BRANCH DUCTWORK WITH TAKE-OFFS AND DAMPERS AS INDICATED. MOUNT GRILLES AND DIFFUSERS IN CEILINGS AND SOFFIT FACES AS INDICATED, SEE SCHEDULES. DUCTWORK AND INSULATION TO BE PER THE SPECIFICATIONS. INTENT IS FOR DUCTS IN THE ATTIC SPACE TO BE COVERED WITH BUILDING INSULATION (IN ADDITION TO SPECIFIED DUCT INSULATION). LABEL DUCTS IN CEILING SPACES. EXTERIOR DUCT TO HAVE ADDITIONAL WEATHER JACKET, SEE SPECIFICATIONS.
- INSTALL TRANSFER GRILLES AND DUCTWORK WHERE INDICATED. FABRICATE AND INSTALL AS SPECIFIED FOR RETURN DUCTWORK.
- INSTALL A NEW EXHAUST FAN AND DUCTWORK TO SERVE THE EXISTING TOILET ROOMS, SEE EQUIPMENT SCHEDULES. MOUNT GRILLES IN THE CEILING AND RUN DUCTWORK IN THE ATTIC SPACE ABOVE. INSTALL EXHAUST FAN IN THE ATTIC SPACE AND DUCT DISCHARGE OUT THROUGH WALL WITH WALL CAP. FABRICATE AND INSULATE DUCTWORK PER THE SPECIFICATIONS. COORDINATE WITH THE ELECTRICAL CONTRACTOR, FAN TO RUN WHENEVER THE LIGHTS ARE ON IN ANY TOILET ROOM SERVED.
- INSTALL A CEILING MOUNTED TYPE EXHAUST FAN TO SERVE THE PROPOSED TOILET ROOM, SEE EQUIPMENT SCHEDULES. DUCT DISCHARGE IN THE CEILING SPACE, OUT THROUGH THE WALL WITH WALL CAP. COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR POWER AND CONTROL.
- INSTALL A NEW SECTION OF EXHAUST DUCTWORK FROM THE BOILER ROOM EXHAUST FAN UP THROUGH THE ROOF. COORDINATE WITH THE G.C. FOR FLASHING, AND TERMINATE WITH ELBOWS DOWN. DUCT MAY BE SCHEDULE 40 PVC.
- INSTALL NEW SECTIONS OF HYDRONIC SUPPLY AND RETURN PIPING TO RECONNECT THE EXISTING SECTIONS OF FIN TUBE RADIATION. ROUTE PIPING UP IN EXISTING WALL, OVERHEAD (10'+) AND DOWN IN NEW WALL. PROVIDE HIGH POINT AIR VENTS. PIPING AND INSULATION TO BE PER THE SPECIFICATIONS.
- MODIFY THE EXISTING HYDRONIC ZONE SUPPLY PIPING. RAISE THE EXISTING FLO-CHECK VALVE AND HORIZONTAL SUPPLY PIPING TO ALLOW A BRANCH TEE TO BE INSTALLED BELOW. RECONNECT TO EXISTING RISER. INSTALL NEW TEE FITTING WITH 1" BRANCH PIPING FOR THE PROPOSED NEW BUILDING ZONE. INSTALL A FLO-CHECK VALVE AND BRANCH PIPING WITH ISOLATION VALVE.
- INSTALL A NEW CIRCULATOR FOR THE PROPOSED HYDRONIC ZONE, SEE EQUIPMENT SCHEDULES. REMOVE AND REPLACE THE REDUCING TEE ON THE HEADER WITH A NEW REDUCING OUTLET TEE AND RECONNECT TO THE EXISTING CIRCULATOR. EXTEND HEADER 1" SIZE WITH 1" BRANCH PIPING TO THE PROPOSED CIRCULATOR. INSTALL PIPING FROM THE CIRCULATOR WITH ISOLATION VALVE AND BALANCE VALVE (TOUR ANDERSON STAD).
- INSTALL NEW FIN TUBE RADIATION AND DISTRIBUTION PIPING AS INDICATED BOLD, SEE EQUIPMENT SCHEDULES. MOUNT FIN TUBE TO WALL PER THE MANUFACTURERS RECOMMENDATIONS. ROUTE PIPING IN ATTIC SPACE JUST ABOVE TRUSS BOTTOM CHORDS, AND IN NEW CEILING SPACES. INSTALL VALVES AND SPECIALTIES AS INDICATED. PROVIDE LOW POINT DRAINS AND HIGH POINT AIR VENTS. PIPING AND INSULATION TO BE PER THE SPECIFICATIONS. INTENT IS FOR PIPING IN THE ATTIC SPACE TO BE COVERED WITH BUILDING INSULATION (IN ADDITION TO PIPING INSULATION).
- PROVIDE THE SERVICES OF A CONTROLS CONTRACTOR TO INSTALL A COMPLETE SYSTEM OF CONTROLS TO SERVE EACH PIECE OF MECHANICAL EQUIPMENT OR SYSTEM. SEE CONTROLS DRAWINGS AND SPECIFICATIONS FOR COMPLETE SCOPE OF WORK. PROVIDE CONTROL VALVES TO THE MECHANICAL CONTRACTOR FOR INSTALLATION.
- PROVIDE THE SERVICES OF A TESTING AND BALANCE CONTRACTOR TO MEASURE, ADJUST AND BALANCE AIR AND WATER FLOW TO/FROM THE VARIOUS HVAC EQUIPMENT AND SYSTEMS. PROVIDE COMPLETE UNIT PROFILES WITH ALL FAN AND MOTOR DATA. SET UP MINIMUM AND MAXIMUM AIR FLOW QUANTITIES, DAMPER POSITIONS AND VFD SPEEDS. WORK WITH THE CONTROLS CONTRACTOR TO ESTABLISH PROGRAMMED POSITION SET POINTS. BALANCE ALL AIR AND WATER FLOWS TO DESIGN VALUES. REPORT ANY PROBLEMS TO THE ENGINEER PRIOR TO COMPLETION OF WORK FOR RESOLUTION. PERFORM ALL WORK IN ACCORDANCE WITH THE SPECIFICATIONS.



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DEPARTMENT
ADDITION

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MECHANICAL -
FIRST FLOOR
NEW WORK PLAN

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