BID DOCUMENTS

FULLY SPRINKLERED BUILDING

NO.	REVISIONS	DATE
1		
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8		

KEY PLAN
N.T.S.

SYMBOLS/EQUIPMENT LEGEND

- CEILING-HUNG THERMOSTAT (2ND LETTER DENOTES ZONE)
- DUCT-MOUNTED SMOKE DETECTOR
- WALL-MOUNTED OVER-RIDE SWITCH
- CAV-B01 — WALL-MOUNTED THERMOSTAT
- CONNECTION BETWEEN NEW AND EXISTING
- SUPPLY AIR DIFFUSER
- DIRECTIONAL SUPPLY AIR DIFFUSER (SOLID HATCH INDICATES DIRECTION W/O AIR FLOW)
- RETURN OR EXHAUST AIR GRILLE
- CAV/VAV AIR TERMINAL UNIT (VAV/AIR DENOTES BOX SIZE)
- RADIANT HEATER (VU/BER DENOTES UNIT SIZE)
- VERTICAL-TYPE UNIT HEATER (VU/BER DENOTES UNIT SIZE)
- RADIANT HEATER FOR DOCK DOOR (GAS-FIRED)
- BALANCING DAMPER
- FLEXIBLE DUCT TO AIR OUTLET/INLET
- COMBINATION FIRE/SMOKE DAMPER
- DUCT-MOUNTED FUSIBLE LINK FIRE DAMPER
- DUCT-MOUNTED SMOKE DAMPER
- DUCT-MOUNTED EXPLOSION-PROOF DAMPER
- CEILING CASSETTE HEATING/COOLING UNIT (LETTER INDICATES ZONE / NUMBER, CU)
- WALL-MOUNTED HEATING/COOLING UNIT (LETTER INDICATES ZONE / NUMBER, CU)
- NEW CONDENSING UNIT

KEYNOTES

1. NEW EXHAUST FAN SHALL BE DUCTED INTO EXISTING OPENING FOR UNDERGROUND ELECTRICAL ROOM. OUTLET DUCT SHALL BE ROUTED UNDERNEATH SLAB TO DISCHARGE AT NEW LOADING DOCK DOOR. UNIT SHALL BE PROVIDED WITH FACTORY-MOUNTED DISCONNECT & SPRING ISOLATORS. SEE CRAWLSPACE NEW WORK SHEET FOR NEW EXHAUST DUCT ROUTING UNDER SLAB.
2. NEW 48"X36" 6 LOUVER UNDERNEATH NEW DOCK DOOR. LOUVER SHALL HAVE MINIMUM 50% FREE AREA AND SHALL BE OF ENAMELED STEEL CONSTRUCTION. UNIT SHALL BE SELECTED FOR DUTY IN HIGH-IMPACT ENVIRONMENT AND SHALL BE CAPABLE OF WITHSTANDING VEHICLE STRIKES WITHOUT SIGNIFICANT DAMAGE. OPENING SHALL BE PROTECTED FROM UNWANTED ENTRY OF PERSONS WITH REMOVABLE BARRIER (VA TO POSSESS KEYS) LOUVER SHALL BE EQUIPPED WITH BIRD/INSECT SCREEN AND ALL PENETRATIONS SHALL BE SEALED WEATHER-TIGHT. FINISH AND COLOR TO MATCH EXHAUST LOUVER AT DOCK DOORS.
3. NEW GAS-FIRED RADIANT HEATERS FOR DOCK DOORS – COORDINATE MOUNTING LOCATION AND HEIGHT WITH EQUIPMENT REQUIREMENTS. OPERATION OF RADIANT HEATER UNITS AT DOCK DOORS SHALL BE INTERLOCKED WITH DOOR OPERATORS. HEATERS SHALL BE PROVIDED WITH TEMPERATURE OVER-RIDE SWITCH, ENABLING USER-DESIGNATED OPERATION OF HEATERS. SWITCH SHALL BE MOUNTED ON WALL ADJACENT TO DOCK DOOR.
4. NEW TRANSFER AIR GRILLE AT 48" A.F.F. MOUNTED IN DOOR SHALL BE PROVIDED WITH INTEGRAL FIRE DAMPER.
5. MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL BLAST DAMPER IN NEW PENETRATION TO SWITCHGEAR ROOM AND FOR EXISTING EXHAUST FAN. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY LABOR AND MATERIAL INCIDENTAL TO WORK RELATED TO REMOVAL AND RE-INSTALLATION OF EXISTING EXHAUST FAN NECESSITATED BY NEW DAMPER INSTALLATION. DAMPER SHALL HAVE 90 DEGREE QUARTER-TURN OPERATION WITH MAXIMUM CLOSURE TIME OF ONE (1) SECOND.
6. NEW EXHAUST FAN FOR LOADING DOCKS AND LINEN STORAGE AREAS SHALL BE MOUNTED AT A HEIGHT ABOVE THE NEW DOCK DOORS. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR SEALING ALL PENETRATIONS WEATHER-TIGHT. UNIT SHALL BE PROVIDED WITH FACTORY-MOUNTED DISCONNECT AND GRAVITY DAMPER. PROVIDE FLEXIBLE DUCT CONNECTION BETWEEN FAN AND DUCTWORK.
7. NEW EXHAUST FAN FOR TRASH AREA. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR SEALING ALL PENETRATIONS WEATHER-TIGHT. UNIT SHALL BE PROVIDED WITH FACTORY-MOUNTED DISCONNECT AND GRAVITY DAMPER. PROVIDE FLEXIBLE DUCT CONNECTION BETWEEN FAN AND DUCTWORK.
8. NEW EXHAUST FAN FOR EXISTING EXHAUST (LAUNDRY) MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR SEALING ALL PENETRATIONS WEATHER-TIGHT. UNIT SHALL BE PROVIDED WITH FACTORY-MOUNTED DISCONNECT AND GRAVITY DAMPER. PROVIDE FLEXIBLE DUCT CONNECTION BETWEEN FAN AND DUCTWORK.
9. MECHANICAL CONTRACTOR SHALL FURNISH NEW VRF CAMPERS AT PENETRATIONS INTO NEW UNIFORM STORAGE. PENETRATIONS WEATHER-TIGHT. UNIT SHALL BE PROVIDED WITH FACTORY-MOUNTED DISCONNECT AND GRAVITY DAMPER. PROVIDE FLEXIBLE DUCT CONNECTION BETWEEN FAN AND DUCTWORK.
10. MECHANICAL CONTRACTOR SHALL PROVIDE SOFFITS AS NECESSARY TO CONCEAL DUCTWORK IN AREAS INDICATED WITH DARK LINE. IN TRUE AREAS, SOFFIT SHALL MATCH SURROUNDING FINISHES.
11. MECHANICAL CONTRACTOR SHALL FURNISH NEW FIRE/SMOKE DAMPERS AT RETURN AND SUPPLY DUCTWORK FOR NEW AIR HANDLING UNIT. ACTIVATION OF FIRE/SMOKE DAMPERS SHALL RESULT IN SUPPLY AND RETURN FAN SHUT-DOWN AS ALARM BEING GENERATED.
12. NEW DX DUCTWORK UP SIDE OF BUILDING EXTERIOR. NEW DUCTWORK SHALL BE ROUTED (INCLUDING DUCT TRANSITIONS NECESSARY IN ORDER TO FIT BETWEEN WINDOWS) TO AVOID ANY EXISTING WINDOWS, LOUVERS, ETC. ON BUILDING EXTERIOR. DUCTWORK SHALL BE ROUTED TO AVOID CONFLICT WITH EXISTING DUCTWORK ON BUILDING EXTERIOR. AS WELL AS NEW CAMPERS AND EQUIPMENT. (APPROXIMATE OUTLINE OF EXISTING DUCTWORK IS SHOWN). DX DUCTWORK SHALL EXTEND TEN (10) FEET ABOVE ADJACENT ROOF. INTAKE SHALL BE PROVIDED WITH RAIN HOOD AND BIRD/INSECT SCREEN ALL EXTERIOR DUCTWORK SHALL BE FABRICATED FROM 16 GAGE DOUBLE-WALL STAINLESS STEEL.
13. CAV-B24 AND CAV-B25 SHALL SHARE A COMMON THERMOSTAT. REHEAT OPERATION OF CAV-B24 AND CAV-B25 SHALL BE INTERLOCKED.
14. CONNECT NEW DUCTWORK TO EXISTING EA LOUVER FROM GAS STORAGE ROOM.
15. NEW HYDRONIC UNIT HEATER TO BE MOUNTED 8'-0" A.F.F. POWER CONNECTION SHALL BE PROVIDED BY ELECTRICAL CONTRACTOR. OPERATION OF HEATERS SHALL BE INTERLOCKED WITH DOOR OPERATORS. HEATERS SHALL BE PROVIDED WITH TEMPERATURE OVER-RIDE SWITCH, ENABLING USER-DESIGNATED OPERATION OF HEATERS. SWITCH SHALL BE MOUNTED ON WALL ADJACENT TO HEATERS AT 48" A.F.F.
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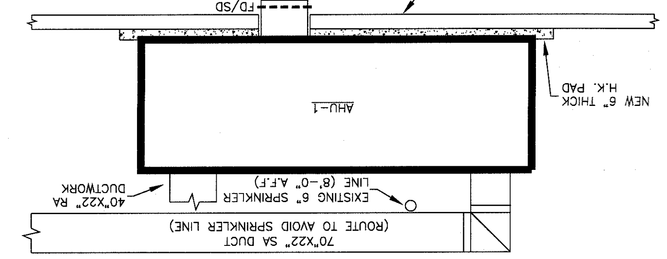
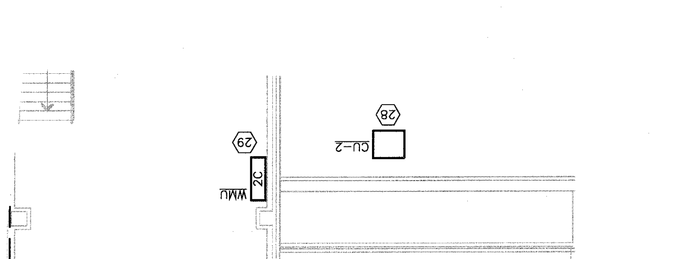
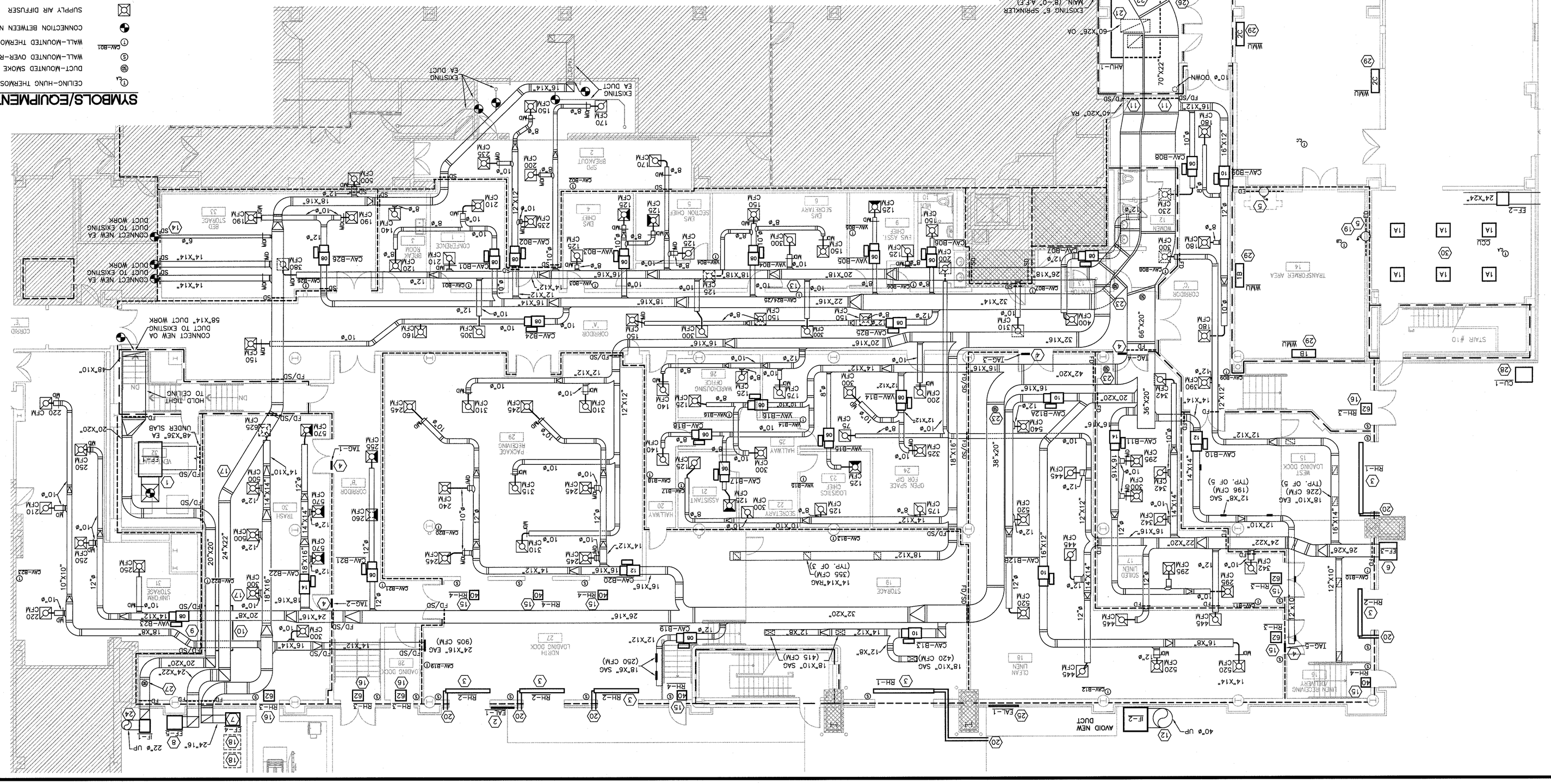
17. NEW DUCT SHALL BE ROUTED ABOVE EXISTING BUS DUCT TO AVOID CONFLICT.
18. RELOCATED DOWNSING UNITS. NEW UNIT SETS SHALL BE EXTENDED TO RELOCATED UNITS. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ASSOCIATED WITH RELOCATION, INCLUDING, BUT NOT LIMITED TO: REMOVAL OF EXISTING REFRIGERANT LINES; REFRIGERANT POSITIONING OF NEW LINES AND INSULATION; APPROVED REMOVAL OF EXISTING REFRIGERANT IF NECESSARY; NEW REFRIGERANT CHARGE FOR UNITS IF NECESSARY; AND ALL ASSOCIATED ACCESSORIES/LABOR INCIDENTAL TO THIS WORK. IF LINES MUST BE OVERSIZED TO ACCOMMODATE FOR INCREASED LENGTH OF LINE RUNS, MECHANICAL CONTRACTOR SHALL PROVIDE LARGER LINES AND SUFFICIENT REFRIGERANT. NEW POWER CONNECTION SHALL BE COORDINATED WITH ELECTRICAL CONTRACTOR. SEE NEW HYDRONIC WORK SHEET FOR ROUTING OF REFRIGERANT LINES.
19. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MATERIAL AND LABOR REQUIRED TO EXPAND EXISTING OPENING SCREEN. MANUFACTURER'S DOCUMENTATION FOR REQUIRED VENT SIZES, CLEARANCES, ETC. ALL PENETRATIONS SHALL BE SEALED WITH APPROVED JOINT-SEALANTS AND FIRE-STOPPING MATERIAL.
20. PROVIDE GAS-FIRED RADIANT HEATER WITH NEW INTAKE AND FLUE VENT DUCTS. AS WELL AS NEW RAIN HOOD AND INSECT/BIRD SCREEN. MANUFACTURER'S DOCUMENTATION FOR REQUIRED VENT SIZES, CLEARANCES, ETC. ALL PENETRATIONS SHALL BE SEALED WITH APPROVED JOINT-SEALANTS AND FIRE-STOPPING MATERIAL.
21. NEW 60"X26" EA DUCTWORK SHALL BE ROUTED BENEATH SLAB TO EXISTING EXHAUST LOUVER. DUCTWORK SHALL BE FABRICATED FROM 16 GAGE DOUBLE-WALL STAINLESS STEEL.
22. NEW AHU LOCATED ON NEW 4" HOUSE-KEEPING PAD. UNIT SHALL BE PROVIDED WITH VIBRATION ISOLATORS, CHILLED WATER COOLING COIL, STEAM HUMIDIFIER, STAINLESS STEEL DRIP PANS, AND ECONOMIZER DAMPERS. UNIT SHALL BE PROVIDED WITH FIELD MOUNTED STEAM HUMIDIFIER, STAINLESS STEEL DRIP PANS, AND ECONOMIZER DAMPERS.
23. NEW DUCT-MOUNTED SMOKE DETECTOR. UPON ACTIVATION, DETECTOR SHALL COMMUNICATE WITH CENTRAL FIRE ALARM SYSTEM AND SHUT DOWN AHU-1.
24. NEW DX DUCTWORK UP SIDE OF BUILDING EXTERIOR. NEW DUCTWORK SHALL BE ROUTED (INCLUDING DUCT TRANSITIONS NECESSARY IN ORDER TO FIT BETWEEN WINDOWS) TO AVOID ANY EXISTING WINDOWS, LOUVERS, ETC. ON BUILDING EXTERIOR. DUCTWORK SHALL BE ROUTED TO AVOID CONFLICT WITH EXISTING DUCTWORK ON BUILDING EXTERIOR. DX DUCTWORK SHALL EXTEND TEN (10) FEET ABOVE ADJACENT ROOF.
25. NEW 60"X36" EA LOUVER FOR CRAWLSPACE VENTILATION. LOUVER SHALL HAVE MINIMUM 50% FREE AREA AND SHALL BE OF ENAMELED STEEL CONSTRUCTION. UNIT SHALL BE SELECTED FOR DUTY IN HIGH-IMPACT ENVIRONMENT AND SHALL BE CAPABLE OF WITHSTANDING VEHICLE STRIKES WITHOUT SIGNIFICANT DAMAGE. OPENING SHALL BE PROTECTED FROM UNWANTED ENTRY OF PERSONS WITH REMOVABLE BARRIER (VA TO POSSESS KEYS). LOUVER SHALL BE EQUIPPED WITH BIRD/INSECT SCREEN AND ALL PENETRATIONS SHALL BE SEALED WEATHER-TIGHT. FINISH AND COLOR TO MATCH EXHAUST LOUVER AT DOCK DOORS.
26. SEAL ALL WALL PENETRATIONS (EXISTING PIPE, DUCTS, AND ALL OTHER UTILITIES AS NEW AS NEW PENETRATIONS CREATED DURING WORK) ASSOCIATED WITH INSTALLATION OF AHU-1) PER SPECIFICATIONS.
27. NEW DUCT-MOUNTED SMOKE DETECTOR. UPON ACTIVATION, DETECTOR SHALL COMMUNICATE WITH CENTRAL FIRE ALARM SYSTEM AND SHUT DOWN FAN.
28. CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDENSING UNIT FOR WALL-MOUNTED COOLING UNITS IN ELECTRICAL AND MECHANICAL ROOMS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING NEW EQUIPMENT PADS, REFRIGERANT LINE-SETS, CONTROLS, ETC.
29. CONTRACTOR SHALL PROVIDE AND INSTALL NEW WALL-MOUNTED COOLING UNITS IN ELECTRICAL AND MECHANICAL ROOMS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL LABOR & MATERIAL NECESSARY FOR HANGING UNITS. CONTROLS, CONDENSATE DRAIN, ETC.
30. CONTRACTOR SHALL PROVIDE AND INSTALL NEW CEILING-SUSPENDED COOLING UNITS IN ELECTRICAL AND MECHANICAL ROOMS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL LABOR AND MATERIAL NECESSARY FOR HANGING UNITS, CONTROLS, CONDENSATE DRAIN, ETC.

*** SEE SHEET M1.1 FOR MORE GENERAL NOTES ***







Department of Veterans Affairs

UPGRADE SPD AND SECURITY DOCK
PROJECT: 646-367

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NEW HVAC WORK
GROUND FLOOR PLAN

DRAWING NO. M1.0 | REV.