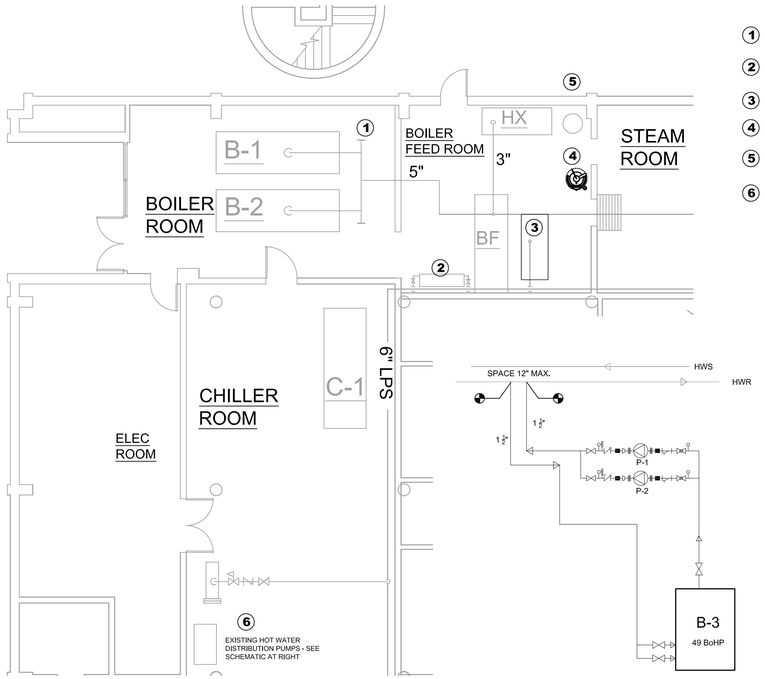


7 DANA ROAD BASEMENT PART PLAN

1" = 8' (36x24)

HOT WATER BOILER PIPING SCHEMATIC

NTS

1. EXISTING 2" NG SPARE VALVED TAKE-OFF
2. EXISTING HX AND DWH TANK AND PAD TO BE REMOVED IN ECM 08
3. EXISTING DHW TANK AND PAD TO BE REMOVED IN ECM 08 NEW BOILER LOCATION
4. NEW DHWH LOCATION
5. BOILER AND DHWH COMBUSTION AIR AND VENT TERMINATIONS LOCATIONS
6. CONNECTION TO EXISTING HOT WATER SUPPLY AND RETURN

ECM 08b Summer Boiler Plant

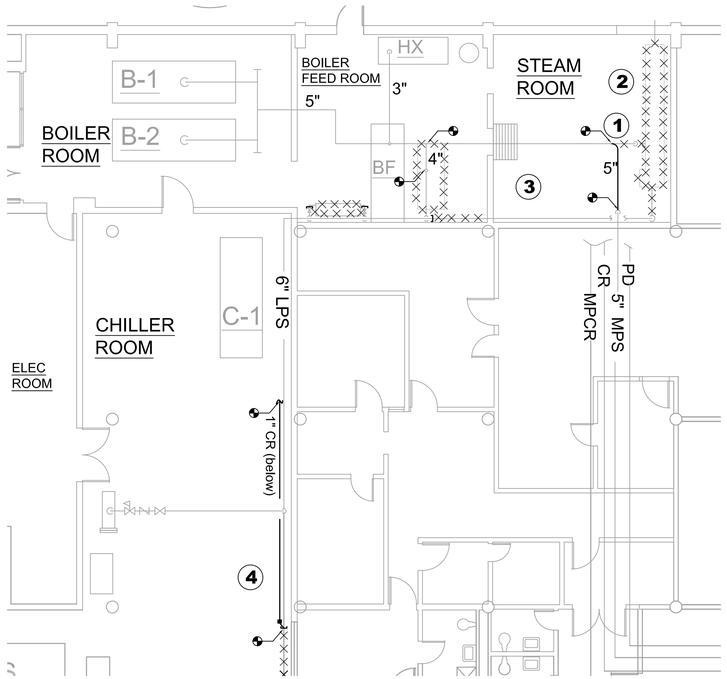
(PRICE ECM 05 AND 08b SEPARATELY)

Overview:

The existing, abandoned domestic hot water tank and heat exchanger and concrete pad at location 3 will be demolished as part of ECM 08. Furnish and install one premium efficiency, natural gas fueled, hot water boiler and connect to existing hydronic reheat circulation loop. Furnish and install one premium efficiency, natural gas fueled, domestic hot water heater (DHWH) and connect to existing cold water and domestic hot water piping. Connect to existing natural gas (NG) service. See schematic and part pla and details below.

Furnish and install a gas-fired, hot water boiler, B-3 at location 3 (refer to part plan):

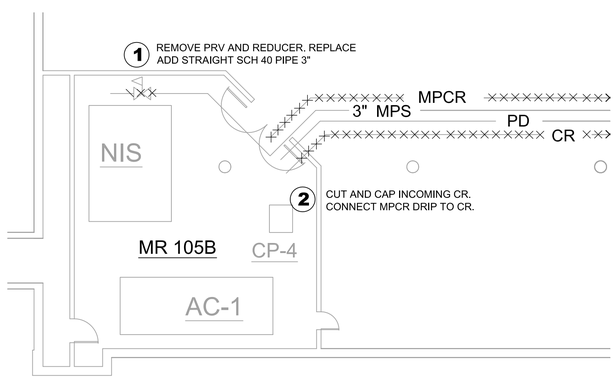
- Demolition
  - Electrical:
    - Remove any existing breakers, disconnects, starters and electric feeds to the abandoned domestic hot water heater and recirculation pump
  - Plumbing:
    - Isolate the cold water and hot water feeds, and drain the DHWH tank and heat exchanger
    - Remove the recirculation pump
  - General
    - The existing DHW tank, and concrete pad will be demolished as part of ECM 08
- Heating System
  - Furnish and install a new concrete pad for the boiler;
  - Furnish and set a new, gas-fired hot water heating boiler Buderus SB625 480, or equal
  - Furnish and install its standard burner, Riello RS 50/M, or equal.
  - Furnish and install a new vent (12") from the boiler of AL29-4C steel in accordance with NFPA 54. The vent shall be horizontal and terminate on the outside wall at location 5. Pitch vent pipe towards the termination point. Comply with manufacturers' and IMC venting requirements. Provide a sidewall vent termination device.
  - The new heating plant will utilize the existing combustion air supply system. The door between the main boiler room and the room for this equipment shall be removed.
  - The new heating plant will utilize existing expansion tanks
  - Furnish and install 1 ½" HWS and 1 ½" HWR piping and connect to existing piping in the adjacent chiller room. The existing distribution pumps shall remain in service. See schematic
  - Furnish and install a pair of parallel piped, in-line, primary circulation pumps, Bell and Gossett Series 60 ECM, at 28 gpm @ 14 HD (ft)
  - Furnish and install natural gas piping, SCH 40 steel, 2 ½", connect to existing take- off in boiler room at location 1. Add ¾" take-off with isolation valve near location 4 for the DHWH
  - Furnish and install an electric feed(s) for the boiler and pumps;
  - All new piping shall be insulated with 2" fiberglass with ASJ
  - Furnish and install a boiler drains, condensate drain and neutralizing filter.
  - Balance the hot water supply and return distribution system
  - Remove properly dispose of all debris
  - Direct digital controls by others
- **Furnish and install a new, natural gas fired, storage domestic hot water heater (DHWH)**
  - Furnish and install one (1) A.O. Smith Cyclone Xi BTH250 A with 100 gallons storage ,input input 250 MBH, recovery 254 GPH at 100 deg rise, or equal.
  - Furnish and install a new inline, bronze domestic water recirculation pump
  - Furnish and install a 3" PVC sidewall vent with sidewall vent terminaion at location 1
  - Furnish and install a 3" PVC combustion air to outdoors including termination cap at location 1
  - Connect to existing cold water piping with 1 ½" copper piping, insulated, at location 3
  - Connect to existing hot water piping with 1 ½" copper piping, insulated, at location
- Furnish and install safety and limit controls
  - Hi-limit aquastat; Low water cut-outs; T & P relief valve
- Operating controls by others
  - DDC controls by others
- Commissioning:
  - verify the boilers' performance by measuring combustion efficiency at 25, 50, 75 and 100% load
  - provide warranty information
- Provide Training and documentation as per the New York State energy code



BOILER FEED, STEAM AND CHILLER ROOMS

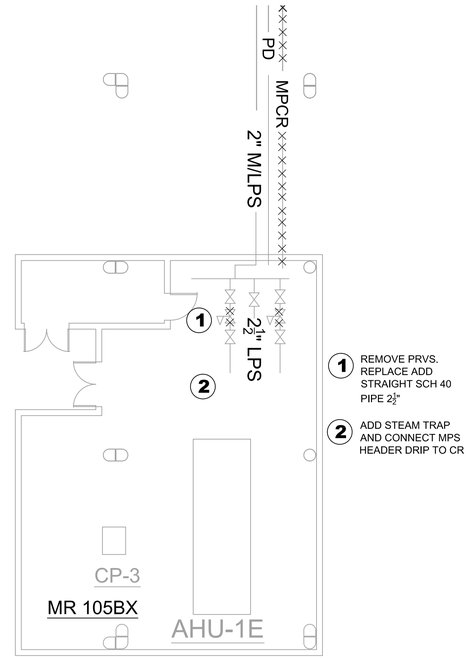
1" = 8' (36x24)

1. CONNECT 5" STEAM MAIN TO EXISTING 5" "MPS" AT ELEVATION OF STEAM MAIN ENTERING THE STEAM ROOM
2. REMOVE PRV STATION- ALL PRVS IN SYSTEM TO BE ELIMINATED
3. REMOVE DHW TANK, CONCRETE PAD AND HEAT EXCHANGER. CONNECT 5" STEAM MAIN TO EXISTING 4" LPS TAKE-OFF
4. CAP LPS AFTER TAKE-OFF TO HW CONVERTERS. ADD DRIP TRAP AND CONNECT TO EXISTING 1"CONDENSATE BELOW



MECHANICAL ROOM 105B

1" = 8' (36x24)



MECHANICAL ROOM 105BX

1" = 8' (36x24)

FOR PRICING

OCTOBER ENGINEERING
Sudbury, Ma
508-561-7553

NEW YORK MEDICAL COLLEGE
7 DANA ROAD

ECM 05 STEAM IMPROVEMENTS

ECM 08b SUMMER BOILER AND DOMESTIC HOT WATER HEATER

1-18-17

M-1
1 OF 2