

EXETER TOWN OFFICE
EXISTING MECHANICAL, PLUMBING, AND FIRE SPRINKLER SYSTEMS
REPORT
11-11-05

EXISTING CONDITIONS

Mechanical Systems

Three Teledyne Laars, Modutherm Series JN, gas fired boilers are located in a basement boiler room. Two have an input capacity of 175 MBH and the third has an input capacity of 250 MBH. The boilers were all installed in 1978. Combustion air is ducted to the boiler room from a window located in a nearby crawlspace. The units have ANSI category I atmospheric vent, which is routed to discharge above the roof.

The heating water is distributed through a one-pipe diverting tee system. The piping is split into two circuits in the basement. Flow from each heating circuit is diverted to risers serving finned radiation on the upper floors and then returns back to the same circuit. A single Taco inline pump provides circulation.

Most of the heating is provided by perimeter finned tube baseboard fitted with self-contained unit mounted thermostats. Three convectors are located in the lobby on the first floor and in the large meeting room on the second floor.

There is very limited supply of tempered outside air ventilation provided to the building. Two window mounted RecoupAerator units have been installed to serve two separate office areas on the first floor. The units each provide approximately 130 CFM of filtered outside air and exhaust the same amount of room air. Heat exchangers in the units allow some preheating of the cold intake. In an attempt to bring additional outside ventilation into the building, three exhaust fans have been installed, one in the attic and two in the basement. Their purpose is to create a negative building pressure and cause an increase in building infiltration.

Two toilet rooms, one on the first floor and one on the second floor, each have dedicated exhaust. Several ceiling mounted paddle fans are located throughout the building to provide air movement.

Two wall-mounted grilles on the second floor are connected to shafts that open to the attic.

Simple controls are in place to allow some time-of-day control of boiler operation and reset of heating water temperature according to outside air temperature.

Window mounted air conditioners are installed in the summer to provide localized air conditioning.