

1. Municipal Building - 1261 Chews Landing Road, Gloucester Township, NJ 08012

Stories and Area (sf) - Two-story building with 43,000 sf. There are two buildings attached; offices in 1973 and police building in 1976.

Building condition -

Roof	Walls	Windows
The roof is mostly flat, built up rubber roof where the majority of the HVAC exits are.	The whole building is a brick exterior with a concrete interior construction.	The windows in the facility are in average condition, most windows are ¼' single pane glass with aluminum frames.

Facility Use And Occupancy	Description	Hours
	The building is comprised of administrative offices, lounges, courtrooms, holding areas, and surveillance areas.	Monday – Thursday 8:00 am to 5:45 pm. The police building (1/3) is in use 24 hours a day, 7 days a week. The building is occupied with 120 employees.

HVAC Systems The building is heated mainly through a baseboard heat and hot water fan coil unit that is offered hot water by a central boiler plant located beneath the police building. The building uses one (1) Weil McLain gas-fired boiler that has an input of 2,049 MBH and an output of 1,632. The boiler efficiency is 80%.

The cooling for the police building utilizes two (2) 20-ton Drake Refrigeration Inc. Air-cooled chillers. The courtroom is cooled by one (1) 5-ton York packaged A/C unit with 125 MBH of gas heat, one (1) 20-ton packaged A/C unit with 400 MBH of gas heat and one (1) 13-ton packaged A/C unit with 250 MBH of gas heat (CEG.) Continuing on the police building, the communications building is cooled by a 3-ton York condensing unit. Lastly, one (1) 2.5-ton Fujitsu split system serves the server room.

Currently, 11 Coleman cooling units with 7 kW electric heat strips provide the municipal offices. With the heat strips they go to; one (1) 2-ton unit, eight (8) 2.5 ton units, and two (2) 3-ton units. In addition, there are two (2) Trane 15 ton split systems condensing unit, which cools the council room.\

Lighting - Lighting is good in the Municipal Building. Recently the lighting fixtures were replaced with T-8 energy efficiency fluorescent fixtures by in house employees, saving on costs of installation.

2. Library - 15 South Black Horse Pike, Gloucester Township, NJ 08012

Facility Description	Stories and Area (sf)	Roof	Walls	Windows
	One story masonry facility totaling 9,868 sf. Construction in 1989, with no renovations.	Roof is flat, built up rubber roof where HVAC lays. Roof is insulated with 2"-5" of insulation.	Walls are brick faced with concrete block, with ¾" foam insulation.	Good condition and well maintained. Typical windows are double pane, ¼" clear glass with aluminum frames. Also office areas, windows are blinded.

Facility Use And Occupancy	Description	Hours
	Building serves as a public library with administrative offices.	Monday through Thursday 9:00 am and 9:00 pm. Friday and Saturday 9:00 am and 5:00 pm.

HVAC System The system is controlled by a non-programmable thermostat. These are two settings; occupied mode and unoccupied mode. Currently, the Library is not one of the buildings controlled via the building management system in the Department of Public Works. The hours set at the moment are for the hours of operation 9:00am to 9:00pm Monday through Thursday and 9:00am to 5:00pm on Fridays and Saturdays. The approx. temperature set points are 70°F for cooling and 72° for heating.

Lighting The majority of the lighting in the Library are 32-watt T-8 bulbs with electronic ballasts. But there are a few locations with T-12 lamps with magnetic ballasts. In certain locations throughout the Library there are incandescent lamps as well.

3. Recreation Center - 80 Broad Acre Drive, Gloucester Township, NJ 08012

Facility Description	Stories and Area (sf)	Roof	Walls	Windows
	One story - 19,855 sf and was built in 1992 with no renovations.	Is a flopped A-frame style with metal seam roofing throughout.	Concrete block construction with stucco façade. Approx. insulation is 2 inches.	Good condition, well maintained. In the office, blinds are utilized.

Facility Use And Occupancy

Description	Hours
Building is used only during event, but serves as a daycare program during the week.	Monday through Thursday Daycare Average use/week 12 hrs. /day 4 days a week

HVAC Systems

The system calls for two (2) large “King Air Systems” for the ice rink area and one (1) Lennox Pulse Air handling unit. The “King Air Systems” are paired with York condensing units outside the building for cooling. These cooling capacities hold approx. 20 tons, supplying 17,500 CFM of air to the space. These are fired by gas burners to head the location as well. The two (2) King Air Systems are in poor condition. The Lennox Pulse is located in the mechanical room and supplies the office area with 100 MBH and is paired with a condensing unit that provides 5 ½ tons of cooling. This system is in fair condition.

Lighting

The recreation center is lit up by 34-watt T-12 fixtures with magnetic ballasts in the offices, lobby and mechanical rooms. The hockey rink are lit up by a 400 watt MH lamp and the second is a 250 watt HPS lamp, lighting in the center is inefficient.

4. Gloucester Township Senior Center - 1261 Chews Landing Road, Gloucester Township, NJ 08012

Facility Description	Stories and Area (sf)	Roof	Walls	Windows
	One story masonry building with 4,000 sf. Building was built in 1990, with no renovations.	Sloped shingled, shingled roof, which has bathroom and kitchen exhausters penetrating the roof.	Brick face with a concrete block construction.	Good condition, well maintained. Most windows are ¼’ clear glass wood frames and single pane storm windows.

Facility Use And Occupancy

Description	Hours
The building is typically used every other day for events. The building comprises of a kitchen, lobby, and a community room.	Every other day for 8 hours. Employs 2 people.

HVAC System

The center is conditioned by two (2) Carrier gas furnaces and one (1) Carrier air conditioning only unit. The two indoor gas units have a 132 MBH input for heating and also have A-Coils installed which are connected to two (2) five ton condensing units located on the perimeter of the building. The single cooling Carrier unit is connected to a 5 ton condensing unit on the perimeter. This serves the senior center with the second stage of cooling.

Lighting The majority of the lighting in the Senior Center are 32-watt T-8 bulbs with electronic ballasts.

5. Department of Public Works - 1729 Erial Road, Gloucester Township, NJ 08012

Facility Description	Stories and Area (sf) There are two buildings both one story. The old facility was built in 1968 and the most recent in 2004. It is 26,500 sf with both facilities.	Roof The roof over the new building is flat with a built up rubber roof. On the old PW building, the roof is sloped with standing metal seams.	Walls Both buildings are brick faced with concrete construction. The new PW building has R-19 insulation versus the old PW-R-13.	Windows The windows in the facility are in average condition, most windows are ¼' single pane glass with aluminum frames.
Facility Use And Occupancy	Description The building is comprised of administrative offices and multiple garages.	Hours The typical hours of operation are Monday – Thursday between 7:00 am to 5:30 pm. The PW building employs 50 people.		

HVAC Systems The PW facility is air handled by two units with hot water and direct expansion coils. There are two (2) gas fired condensing boilers manufactured by Gas Master Industries Inc. that provide the hot water for the HVAC System. These boilers currently use has an input of 4,000 MBH and an output capacity of 3,800 MBH, with an approx. efficiency of 95%, which is great.

The owner when approached by Concord Engineering stated that the Riello RS Series Power Gas burners have not been firing properly ever since they installed them. The air-handling units have a heating set point of 70 degrees Fahrenheit during the winter months.

Lighting The Public Works building is currently using 32-watt T-8 lamps with electronic ballasts. These are very efficient bulbs, but there is still a presence of T-12 fixtures with magnetic ballasts.

6. Academy Hall - 27 South Black Horse Pike, Gloucester Township, NJ 08012

Facility Description	Stories and Area (sf) Three-story masonry facility, built in 1930 with a renovation in 1985.	Roof Sloped shingled, shingled roof. The amount of insulation below the roof is unknown.	Walls Brick face with a concrete block construction and insulation is unknown.	Windows The front door and windows in the front half of the building have gaps, the rest are well maintained.
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Facility Use And Occupancy	Description The building is comprised of administrative offices, lounges and a basement mechanical room.	Hours Monday – Thursday 8:00 am to 5:30 pm. The building employs 10 people and state police rent out a portion of the building, which is occupied till 8:00 pm.
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HVAC System Academy Hall uses a gas-fired boiler with hydronic baseboard for heat. The boiler is a Weil McLain gas-fired boiler with an input efficiency of 450 MBH and an output capacity of 360 MBH. From CEG’s audit, the boiler efficiency is 80%.

Lighting Lighting is poor in Academy Hall. Most of the lights in the facility are T-12 fixtures with magnetic ballasts. Also there is the presence of incandescent lamps as well.

7. Monroe Pool Facility - Monroe Drive, Gloucester Township, NJ 08012

Facility Description

Stories and Area (sf)
The pool building is a one story, 1,460 sf public facilities. The pool building was built in 1970.

Roof
The roof is sloped roof with shingles.

Walls
Building is a brick faced, concrete construction.

Windows
There are no windows in the facility.

Facility Use And Occupancy

Description

The pool facility has a mechanical room, bathrooms and an outdoor pool area.

Hours

The pool facility is open from Memorial day – Labor day and employees 6 people.

Lighting At the pool facility, it is a mixture of T-12 lamps as well as T-8 lamps. The latter half of this analysis will describe the implementation of replacing the existing T-12 fixtures.

Pumping System There are two (2) 5 HP filter pumps that circulate water for the main swimming pools. There is two (2) 1 HP pumps are installed for the sewage ejection system. Also in the pool facility there is one (1) ½ HP filter pump that is dedicated for the baby pool.