

## TOWN OF CHAPEL HILL



### TOWN FACTS

Founded in 1819

Town Organization: 14 departments, approximately 700 employees

Town of Chapel Hill's goal is to reduce carbon footprint 60% by 2050

### BUILDINGS

Town Hall: 35,270 ft<sup>2</sup>

Community Center: 31,932 ft<sup>2</sup>

Homestead Aquatic Center: 26,950 ft<sup>2</sup>

Buildings constructed between 1971 and 2008

Includes offices, indoor natatoriums, basketball courts, meeting rooms, locker rooms

### CASE STUDY HIGHLIGHTS

Project Size: \$871,000

Construction Period: 1 year

Project Term: 15 years

Guaranteed Savings to Date: \$180,342

Actual Savings to Date: \$204,205

Implemented a comprehensive set of energy conservation measures (ECMs)

### THE CHALLENGE

Develop a self-funding project for the Town of Chapel Hill to reduce energy consumption, reduce operating costs, replace outdated equipment nearing end of life, and assist Chapel Hill in approaching their goal to reduce Town carbon footprint 60% by 2050. Measures implemented under the performance contract also provided benefits of increased comfort for building occupants through the new building HVAC controls as well as provide increased lighting output for better visibility.

### THE SOLUTION

Piedmont Service Group performed an extensive analysis of the existing building conditions and utility consumption for the Town of Chapel Hill Community Center, Town Hall, and Homestead Aquatic Center. A new pool dehumidification system was installed at the Community Center that was properly sized for the facility. New building HVAC automation controls were added and HVAC system airflows were balanced at the Community Center and the Homestead Aquatic Center to better control spaces for occupant comfort and increased efficiency. The HVAC energy management system at Town Hall was improved and recommissioned for better performance.

Lighting upgrades were installed at all three sites including replacing HID and incandescent fixtures with new linear fluorescent T5 and LED luminaires. Occupancy sensors and daylighting sensors were installed to turn off lights in spaces when they are not needed. Pool filter pump controls were added at Homestead Aquatic Center to enable the pumps to operate at variable speeds and reduce energy consumption. The amount of return ductwork for the pool dehumidification units at Homestead Aquatic Center was increased to provide adequate airflow back to the units.

The total guaranteed cost savings of this project over the 15 year project term is \$1,153,959, which includes savings from reduced electric and natural gas consumption as well as operational cost savings for the first 5 years of the term.

## ABOUT THE CLIENT

The Town of Chapel Hill was first organized by a University of North Carolina Board of Trustees' committee. The first residents of the area arrived in 1795. The population of the town includes students attending UNC - Chapel Hill. Chapel Hill currently covers more than 21 square miles. The Town has adopted the description of "A Town within a Park" that embodies its principles of sustainability.

## HOW CAN WE HELP YOUR BUSINESS GROW?

Piedmont Service Group makes buildings more efficient. A leader in energy services, Piedmont has expanded its core HVAC business to address the growing market demand for energy efficiency and sustainability services. The company is headquartered in Raleigh, NC and employs 168 people across seven locations in North Carolina, South Carolina and Virginia. Piedmont was founded in 1971.

Piedmont Service Group

1031 Nowell Road  
Raleigh, NC 27607

Phone: (919) 851-5800

[www.piedmontsg.com](http://www.piedmontsg.com)