



Hillsborough County

Performance Contract • Hillsborough County, Florida

About Hillsborough County

Located midway along the west coast of Florida, Hillsborough County has 1,048 square miles of land and includes the incorporated cities of Tampa, Temple Terrace, and Plant City.

The history of the county government dates back to 1846, when Hillsborough was organized as Florida's nineteenth county. In 2004, the estimated population was more than 1,150,000 persons.

"We're looking at \$1.2 million a year in savings."

—Randy Klindworth, Hillsborough County energy manager.



Trane Central Plant Serves:

- County Center—houses Hillsborough County, county administrator, commissioners, county services offices
- Edgecomb Civil/Family Courthouse—new 320,000 sq. ft. facility
- Main Courthouse—historic courthouse built in 1952
- Courthouse Annex—houses state attorneys, criminal and traffic courts
- 700 Twiggs—various court functions, offices, records
- Raymond O. Shelton Complex—houses Hillsborough School District
- Rampello K-8 School

Systems Installed

Chiller Plant

- 1500-ton ice making chiller
- 84 thermal storage tanks
- 7000+ feet of chilled water piping serves seven buildings

Energy Conservation Measures

- Tracer Summit™ system controls chiller plant, five county buildings
- Air handler, VAV upgrades
- Re-commissioned all spaces
- Variable speed drives
- Exhaust air heat recovery
- 3-million gallon condensate collection system
- Lighting retrofits, occupancy sensors
- Water conserving fixtures
- County staff training programs
- Full-time operation, maintenance
- Utility monitoring

Performance contract saves county \$1.2 million per year, January 2006

Hillsborough County, on Florida's west coast, serves more than a million residents, including metropolitan Tampa. The county operates more than 1.5 million square feet of building space in downtown Tampa, including the county's administration office and four court buildings. Randy Klindworth, Hillsborough County's Energy Manager, oversees the county mission to reduce energy consumption in all county facilities.

Challenge

While building a new courthouse, the County recognized an opportunity to centralize chilled water production for all downtown buildings. An energy efficient central plant was built in 2001, but due to a lack of capital funding, the county could not implement the necessary capacity and piping to connect the plant to all downtown buildings.

Solution

Hillsborough County entered into a performance contract with Trane to expand the central chiller plant and implement energy saving measures in five county buildings. Trane guarantees the resulting savings from the project. To expand the chiller plant, Trane installed a thermal storage system. A new 1500-ton Trane chiller

charges 84 ice tanks at night when energy rates are lower. The ice is melted during the day to produce chilled water for cooling. Underground chilled water pipes distribute cold water to the five county buildings. Two school district buildings were also connected to the piping network, generating revenue for the county from the sale of chilled water. This partnership allowed the school district to reduce construction cost of a new school by eliminating the need for chillers.

Results

Trane installed a system-wide building automation system allowing HVAC systems at all five county buildings to be monitored from one location. A condensate reclaim system captures air handler condensate that is used for cooling tower make-up, saving about three million gallons of water per year. Lighting retrofits, variable speed drives and air handler upgrades complete energy conservation measures. "The whole project, with energy and water savings, we're looking at \$1.2 million dollars a year in savings to the county," said Mr. Klindworth. "That's a direct benefit to our taxpayers."

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