

## GARDE ARTS CENTER

### Energy Savings and Improved Aesthetic Environment

ENTERTAINMENT

#### Turnkey Energy Services Project Addresses Environmental and Operating Cost Concerns

##### Challenge

Facing rising energy costs, the Garde Arts Center wanted to reduce energy consumption, save money, and at the same time improve the aesthetic environment of their theatre and commercial office complex.

##### Solution

Trane provided a Tracer Summit<sup>®</sup> Building Management System which gives The Garde the ability to centrally monitor and modify the building environment to ensure that the theatre, offices space, as well as a planned second theatre and stage addition are operating at peak efficiency. Through a lighting retrofit, Trane reduced the existing lighting system electrical load while improving the illumination throughout the facility.

##### Project Scope

\$108,480 project included:

- An investment grade energy audit
- A Tracer Summit Building Management System
- A lighting retrofit that began with an evaluation of 331 fixtures and ended with an energy efficiency upgrade to 159 fixtures resulting in an annual savings of 8813 kWh
- Installation of 54 single and dual technology PIR (Passive Infrared) and Microphonics<sup>®</sup> (sound detection) occupancy sensors to control 274 lighting fixtures throughout the center for an annual savings of 44,345 kWh
- Owner training on the Energy Management System

##### Results

Annual kWh Savings: 264,660 kWh (the equivalent of 26 homes provided with electricity for one year)

Lifetime kWh Savings: 2,514,645 kWh (per ASHRAE and utility guidelines, estimated lifetime is 15 years)

##### Positive Environmental Impact:

241,000 pounds of carbon dioxide (CO<sub>2</sub>) emissions avoided  
or 112,000 pounds of coal not burned  
or 14,000 gallons of oil not burned

Annual Energy Savings: \$51,568

CT Energy Efficiency Fund (CEEF) Incentive: \$41,112

Simple Payback: 1.3 years with a ROI (Return on Investment): 76.7%



Garde Arts Center

The Garde Arts Center, a non-profit regional performing arts & education center, owns and operates four adjacent buildings on State Street in downtown New London, Connecticut. The centerpiece of the four is the 45,000 FT<sup>2</sup>, 1,472-seat *Garde Theatre*, a historic movie/vaudeville house built in 1926. The Garde's *Mercer Building* is a three-story, 22,500 FT<sup>2</sup> commercial office building.

After some restoration and renovations, The Garde Arts Center is becoming nationally recognized for its unique architecture and multi-faceted programming.

For more information, contact your local Trane office at 860-678-3300 or visit [www.trane.com/hartford](http://www.trane.com/hartford).

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