Bradley National Guard Air Base

Design-Build Services

East Granby, Connecticut

The Connecticut Air National Guard selected Alares to design and build a 50-ton geothermal heating and cooling system for one of their operations buildings. The Guard wanted to minimize energy costs and off-set the use of conventional fuel. The Guard recognized that the additional first costs for the geothermal system would be offset by the savings in energy costs. This exciting geothermal project for our client, the Air National Guard, fits in with our stated objective of helping our clients clean the environment, reduce energy consumption and decrease carbon emissions. Expected savings can be as much as 40% compared to other standard systems.

Currently, the building is an 20,000 sq.ft., single story building consisting of office, conference and briefing areas. The existing HVAC system which was installed in the early 1980's consists of one variable volume air handling unit located in the mechanical room. The air handling unit utilizes hot water and chilled water which is produced by a natural gas boiler and a water-cooled chiller with a closed loop cooling tower.

The new closed-loop geothermal system includes a geothermal well field, condenser water pumping and piping, above the ceiling geothermal heat pumps, air distribution and controls.

Alares was responsible for the removal of the old HVAC system and for the design and installation of a complete and functioning closed-loop geothermal heat pump system and associated electrical work. Design services included architectural, mechanical, electrical, civil and environmental. The installation was completed in 2009.

Client
US Property and Fiscal Office of Connecticut

Status
September 2009

Total Cost
$1,030,000

Highlights

The Connecticut Air National Guard selected Alares to design and build a 50-ton geothermal heating and cooling system to replace the existing HVAC system in one of the base buildings. The project included the demolition of the existing HVAC system, the installation of a closed-loop geothermal well field, the installation of high-efficiency heat pumps and commissioning the new system.