

BOCES SPOTLIGHT

December 2015



Aging HVAC System Refurbished **- Facilities & Operations Bring Classrooms Fresh Air and Better Temperature Control**

Classrooms at the Salt Point Center are now more comfortable for students and staff because the unit ventilators were rebuilt during the summer to provide more fresh air and better temperature control. The units, which date back to 1972, house the HVAC components necessary to provide heat and fresh air to 38 classrooms.

The units were plagued by many problems. All of the valves that control the flow of hot water through the heating coils were seized in the open position creating overheating in the classrooms nearest to the boiler room and cold classrooms further away from the boiler room. The pneumatic controls operating the fans did not function and units had to be outfitted with toggle switches to turn the fans on and off. The exterior grills were still covered with plywood that was installed during the 1970s energy crisis to conserve heat loss. That reduced the amount of fresh air being introduced into the classrooms.

"Our main goal was to improve temperature control and to provide adequate ventilation for the classrooms, therefore providing a better environment for learning and teaching," said Cole Bender, Director of Facilities and Operations (F&O). "We are still fine tuning the settings for the different components to maximize the desired results. Although we are early in the heating season, comments have been positive and the staff has said that they can feel the difference in the air quality."

F&O worked with agency architect KGD to plan the rebuild. After consulting with vendors, Trane Industries was selected so that they could

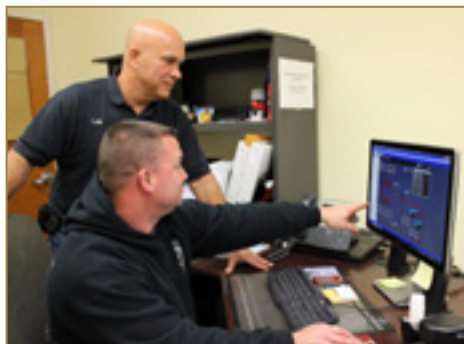
provide new electronic components for BOCES staff to install and maintain. Ray Lake, Maintenance Mechanic, took the lead on the installation and with the help of all F&O staff completed the classroom unit heaters early this fall. The project required many skill sets including plumbing, electrical, and specialized control work.

The improvements allow greater control through wireless connections, which allow adjustments to be made via a computer program. Air temperatures, boiler function, and fan operation can all be monitored. Text and email alerts are sent

if a problem is detected. The efficiency of the new equipment should also lower the amount of oil consumed, therefore saving money and reducing BOCES' carbon footprint.

The project was one of two major undertakings the Facilities and Operations Division last summer that improved operations and saved BOCES money by using inside expertise instead of relying entirely upon outside contractors.

"The unique skill set at Dutchess BOCES enabled them to save approximately \$35,000 in low voltage electrical installation," said Marc Quail, of Trane Industries. "The knowledge of the staff made the installation process occur smoothly, without issues. BOCES also saved an additional \$5,000 by directly purchasing hot water coils and supply fan motors and another \$20,000 by having the staff perform the installation of those materials."





Tornado-Like Winds Damage Roof - F&O Staff Makes Speedy Repairs

The second project was not planned, but was created by Mother Nature. A tornado-like squall moved through the BOCES campus mid-August and literally tore the top layer of the roof off the warehouse at the Salt Point Center. It landed, crumpled in front of the garage bays. The exposed plywood was in poor condition and needed to be replaced before the roof could be made waterproof.

F&O staff worked through high heat to replace 52 sheets of plywood on the 3,000 square foot roof. The emergency repairs were made to waterproof the building's roof in just three days and the entire rebuild was done in a week.

"With the cooperation of our entire team, we were able to get it done in a very timely manner," said Bender. "With our labor and \$5,000 in materials, we were able to quickly complete a job that was worth \$60,000."



Other projects undertaken over the past two years have saved more than \$200,000, said Bender. An example was the construction of a structure to securely house records and materials for three divisions adjacent to the warehouse. Bender designed the project to be climate controlled to protect the stored materials and it was custom built by BOCES staff.

The 20-member division is responsible for the daily operation and maintenance of multiple buildings that total 250,000 square feet and are located at three different sites. Planning is key to success when adding large projects due to the daily work necessary to keep BOCES operating smoothly.

The division also completes projects for component districts to bring in revenue to the agency, including reconstruction of catch basins and storm drains and retiling of damaged bathroom floors.

