



Town of Arlington  
State Seal



Customer Success Story

## Town of Arlington/Peirce School Arlington, MA

### Town of Arlington



The Peirce School's Main Control Screen,  
Generated Via GENESIS64™

#### About Town of Arlington/Peirce School

The Peirce School is a public elementary school located in the town of Arlington, MA. The school is named after Captain Solomon Peirce, who served in the Revolutionary War. The original school building was built in 1924 and demolished in 2001. The current school facilities were built in 2003.

#### ICONICS Software Deployed

The Town of Arlington, working with Microsoft, selected ICONICS GENESIS64™ HMI/SCADA suite, in addition to the AnalytiX® suite of analytical tools, including Facility AnalytiX predictive software for facilities management.

#### Project Summary

Arlington Public Schools sought to consolidate its sum-

mer-school operations into one building at The Peirce School. Anticipating the need for an increase in air conditioning, the district immediately purchased a new chiller for the school building. The Regional Energy Manager for the town of Arlington (and also of nearby Bedford, MA), Ruthy Bennett, is responsible for looking for ways to reduce energy costs, a high priority for a town named a Green Community by the State of Massachusetts in 2010.

The town and school district, both operating on tight budgets, wished to ensure that their decisions to consolidate summer school classes to one location and to purchase a new chiller made financial sense. With the goal towards lower energy and operational costs, Bennett sought energy management software that would be more beneficial than what she considered "glorified schedulers". While researching solutions, she learned of ICONICS' Facility AnalytiX being used to help cut energy costs at Microsoft's headquarters in Redmond, WA. After taking a look at competitors' offerings, Bennett, the town and the school district decided on ICONICS.

Based on advanced Facility Detection and Diagnosis (FDD) technology, Facility AnalytiX uses customizable fault rules to weigh the probability of equipment failure and alerts staff to actions they can take when faults occur. When equipment fails, the software analyzes current and historical information (along with symptom/cause relationships), executes probability algorithms, and provides a list of possible causes sorted by probability.

To save on project costs for the town and school district, Bennett opted to utilize Facility AnalytiX' ability to integrate with Microsoft's Azure cloud computing platform. With no additional hardware required, installation was quick. ICONICS engineers connected equipment with

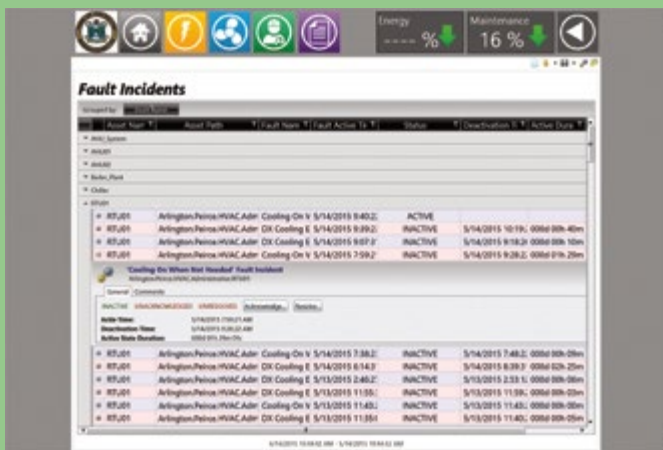
control boxes that communicate with the cloud. Using Facility AnalytiX with Azure also allows the school district to access and store millions of data points across a wider range of time, rather than their previous 72-hour restriction.

### Benefits of the System

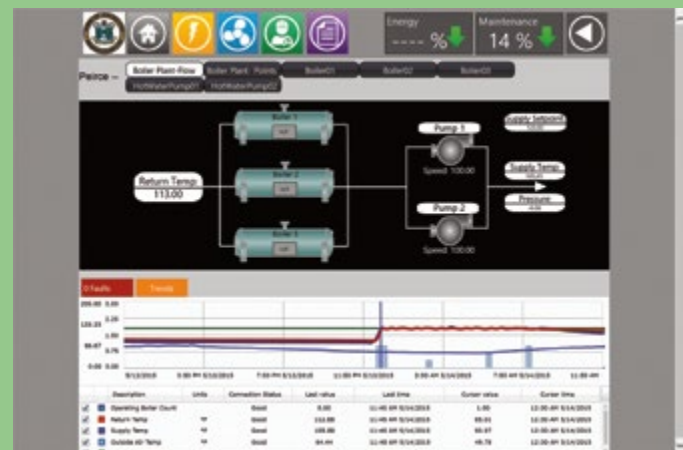
The installation of ICONICS software, especially Facility AnalytiX, immediately paid off during the summer session and continued to do so into the cold New England winter. In the summer, Facility AnalytiX was used to determine that the new chiller was cooling the building to within half a degree of perfection. Although there were no complaints by the occupants, this meant the system was not running at peak efficiency. The software showed

Using ICONICS software; Facility AnalytiX, in particular; has helped the school district cut 15 to 20 percent of the time that third-party HVAC contractors spend searching for causes to malfunctions. Natural gas consumption was reduced by roughly 20 percent at the school over its first winter with the new software compared to the previous year, according to Bennett.

With such constant commissioning, the town and school district are able to see how repairs or schedule changes effect thermal comfort and energy consumption instantly, without waiting for user complaints or the next month's utility bill. The actions and results are stored via the software and this data can be used at any time within its ex-



*A Maintenance Alarm Screen Created Through  
ICONICS Facility AnalytiX*



*Boiler Plant Monitoring Dashboard  
Created in GENESIS64*

excessive on/off cycling by the chiller about every five minutes. Using past bills for comparison wasn't an option since the chiller was newly installed. Facility AnalytiX showed that the chiller was overcycling. The right repairs were then made, saving not only on energy costs but also on the chiller's total lifespan – since constant cycling would put more wear on the equipment.

“ICONICS technology was the most user-friendly,” said Bennett, “providing a dashboard with all the information on one screen. I wouldn't have to call a third party, who would then write a report each month—and in the time it took to get the report, I could miss seeing a problem for a month.”

tended trending capability. The town and school district are hopeful that the results of implementing Facility AnalytiX and Azure can be quantified and applied to other locations within the town.

### Conclusion

The Town of Arlington was pleased enough with the implementation of Facility AnalytiX at Peirce School that it is looking into applying the ICONICS solution within another Arlington school. Bennett hopes the success of the Peirce School deployment will help other Massachusetts cities and towns receive state funding for similar FDD projects. For software that literally made summer school “cool”, there seem to be no limits.