

CaseInPoint



Forest Hills School District Updates Multiple Facilities With Lochinvar High Efficiency Boilers

School districts across the country are facing the battle of providing the best education possible with limited funds and shrinking budgets. During lean times, it becomes hard to justify spending money on facility renovations, but many schools are recognizing that facilities are just as important as textbooks.

The Forest Hills School District in Grand Rapids, Mich., was founded in 1956 when 13 neighboring, one-room schools consolidated into one district. The District serves more than 8,600 students and annually gains approximately 200 new students.

In 2000, voters approved three separate bond proposals totaling more than \$122 million to invest in the future of Forest Hills Public Schools. In order to maintain smaller schools and improve the current facilities, the community approved major renovations, including district-wide heating and cooling replacements and upgrades, technology replacements and upgrades, land purchases, and bus and roof replacements. Funds also were provided to build a new 7-12 school and a new K-6 school. These new buildings, along with the renovations in the existing facilities, will be sufficient to house the increased number of students anticipated for the next five years.

“With the student population growing, facility expansion was inevitable and the boilers were not able to keep up with the demand. The boilers were old, undersized and requiring more maintenance,” said Bob Langerak, director of operations for the School District.

“In addition, air conditioning was being installed, so it was the right time to renovate the boiler system.”

In Brief:

Project:

Forest Hills School District
Facilities include:
Collins Elementary School
Northern Hills Middle School
Central High School
Administration Building
Community Aquatic Center

Location:

Grand Rapids, Mich.

Products Used and Number of Units Installed:

11—Lochinvar Power-Fin® Boilers (PBN1500 and PBN2000)
4—Lochinvar Copper-Fin II® Boilers (CHN0751 and CHN1440)
3—Lochinvar Harmony™ Sequencers

For More Information:

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Grand Rapids, Mich. 49546

URS Corp.
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About Lochinvar

Lochinvar® Corporation is a leading manufacturer of high-efficiency water heaters, boilers and pool heaters, ranging in capacity from small residential units to two million Btu/hr models. Lochinvar's world headquarters is located in Lebanon, Tenn. Other facilities include Detroit, Mich., Tampa, Fla., Philadelphia, Pa., and Dallas, Texas. Lochinvar stocks equipment at all locations.

For more information regarding Lochinvar's line of high-efficiency water heaters, boilers and pool heaters, contact: Lochinvar Corporation, 300 Maddox Simpson Parkway, Lebanon, Tenn. 37090; Phone: (615) 889-8900; Fax: (615) 547-1000; www.Lochinvar.com.



The Built-In Advantage™



to operate and maintain," commented Robert Gengelbach, PE, senior mechanical engineer with URS Corp.

The most challenging part of the new boiler system design was the overall size of the units, which was a critical factor in each of the installations. The Central High School mechanical room was originally designed with 13 units that have now been replaced with six Lochinvar Power-Fin® (PBN2000) boilers. Collins Elementary School installed two Power-Fin (PBN1500) boilers; Northern Hills Middle School was renovated with three Power-Fin (PBN2000) boilers; the Administration Building was retrofitted with two Copper-Fin II® (CHN0751) boilers; and the Community Aquatic Center installed two Copper-Fin II (CHN1440) boilers.

"The Power-Fin and Copper-Fin II boilers have higher heating capacities but are small in size, which has opened up a lot of space in each of the mechanical rooms," said Langerak.

"The compact size of the Lochinvar boilers definitely aided in the installation, especially the Power-Fin boilers at Collins Elementary School and Central High School," explained Gengelbach. Because of the unique vertical chassis design, the Lochinvar Power-Fin boiler fits in less than six square feet of floor space.

Operating efficiency was another key factor in choosing the products. The Power-Fin models operate at an 87 percent thermal efficiency rating, which means 87 cents out of every fuel dollar are used to create heat. The Copper-Fin II models operate at an 84 percent thermal efficiency rating. Winter 2002 will be the first heating season for the boiler systems, and Langerak expects to see energy savings compared to last year, even with the building expansions.

Recognizing the importance of installing an energy-efficient system, Lochinvar sales representative Paul Hedlund recommended using the Harmony™ Sequencer on the Power-Fin boilers and Heat-Timer® controls on the Copper-Fin II units. The Harmony Sequencer precisely matches the infinitely proportional firing rate of the Power-Fin with the fluctuating demand of the system, optimizing system efficiency and reducing boiler cycling thus saving product life and fuel dollars.

"Our goal was to install an energy-efficient heating system that would be able to accommodate our growing student population and building expansions. The new Lochinvar boilers, operating with advanced control systems, will provide the needed heat and cost savings we are striving to achieve," said Langerak.

The mechanical rooms in five of the School District's facilities were equipped with new Lochinvar® high efficiency boilers. The heating and cooling systems were upgraded at Collins Elementary, Northern Hills Middle School, Central High School, the Administration Building and the Community Aquatic Center. The previous boiler systems, comprised of multiple units with varying capacities, were 15–35 years old.

"In designing the upgraded boiler systems for the School District, we chose to specify Lochinvar boilers because they are proven, reliable products that are simple

