

Seeing things in a new light

New product illuminates fine arts building at Tulsa private school

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TULSA – A local company will be installing a line of 20-watt retrofit LED interior/exterior white light kits at Holland Hall preparatory school, saving the private school not only money, but energy.

The LED retrofit units replace 65-watt incandescent and fluorescent can lights that are used throughout the lighting industry.

“The lights kept burning out,” said Jody Ely, technical director at the Holland Hall fine arts building. “We would replace a lamp and within 10 days to a couple of months it would burn out.”

Lights at the Walter Arts Center at Holland Hall, opened in April 1992, were at the end of their shelf life, Ely said. Ely learned that the ballasts in the compact fluorescent light fixtures needed replacing. The “ballast” creates the voltage and electric current to start and illuminate a fluorescent lamp.

Ely quickly learned it would cost \$200 per unit. With more than 150 units to replace in the fine arts center hallways, Ely was looking at a cost of about \$30,000.

“The ballast has a usable life and they were aging,” Ely said. “Ballasts were \$90 and there were two ballasts and two lamps – which cost about \$10 per unit – and we needed more than 150 units.”

But through his contacts Ely heard of Buddy Stefanoff and his company Crossroads LED.

Buddy Stefanoff and his wife, Dana, formed Crossroads LED in early 2010, working out of their Collinsville home. Crossroads provides single-color and multicolor LED lighting solutions to the amusement



Buddy Stefanoff, vice president and senior design engineer for Crossroads LED, holds one of the 100-plus LED can lights his company will be installing at the Holland Hall campus in Tulsa. PHOTOS BY RIP STELL

park, entertainment and automotive accessory industries, said Stefanoff, who serves as vice president and senior design engineer. Dana is president and owner of the company. But the Holland Hall project was a first for Crossroads, Buddy Stefanoff said.

“It is one of the first applications of LED technology where an existing lighting platform – incandescent or fluorescent – is being replaced with an LED luminaire that has both superior light output and beam angle or about three times the light output of the units found at the big-box hardware stores,” Stefanoff said. “And unlike the LED bulbs found at the hardware stores, our LED retrofit kits qualify for the AEP/PSO lighting rebate programs School Smart and Model City.”

Tulsa-based electric utility Public Service Company of Oklahoma sent a power auditor and measured the difference, Ely said. “The savings in

wattage and power use allowed us to qualify for a rebate through PSO.”

Stan Whiteford, PSO spokesman, said the Holland Hall project qualifies under PSO’s Smart Schools Program. PSO is a unit of Ohio-based American Electric Power. PSO serves 533,000 customers in eastern and southwestern Oklahoma.

“We work with schools to find ways to do efficiency improvements,” Whiteford said. “Once the project is complete PSO will issue the school an incentive rebate based on the difference in the amount of energy saved over what they are currently using.”

Stefanoff also offered a 10-percent to 15-percent savings on each unit, Ely said.

Crossroads LED is an electronic engineering and manufacturing company that focuses on creating solid-state, or LED, lighting products, Stefanoff said. An LED, or light-emitting



diode, is a semiconductor device that emits light when an electric current is passed through it. It does not work the same way as a light bulb, so it does not burn out in the traditional sense. An LED emits light at specific wavelengths to produce a variety of colors.

“I talked to Buddy Stefanoff at Crossroads and I thought I’d maybe hear back from him in four or five months,” Ely said. Stefanoff produced a prototype within days.

Holland Hall eventually ordered 206 LED retrofit kits for the Walter Arts Center, Stefanoff said.

“The existing lighting platform consists of a mix of incandescent and fluorescent fixtures that use about 23,000 watts of electricity,” Stefanoff said. “The new LED retrofit kits are brighter, last longer, and require about 4,000 watts of electricity to operate.”

Stefanoff believes there will be an immediate energy savings of more than 82 percent.

Crossroads should begin installation this month and the project should be completed in about two weeks, Stefanoff said.

The LED light products made the artists housed in the Walter Arts Center happy because the lights will provide better light and color, Ely said.

“But ultimately the benefit is that it saves the school money and keeps the maintenance guys from having to come in here and change them out all the time,” Ely said.

In addition to the Holland Hall project, Crossroads is finalizing another large lighting project in Tulsa and has proposals out for several more around the country, Stefanoff said.