



Retrospective Case Study

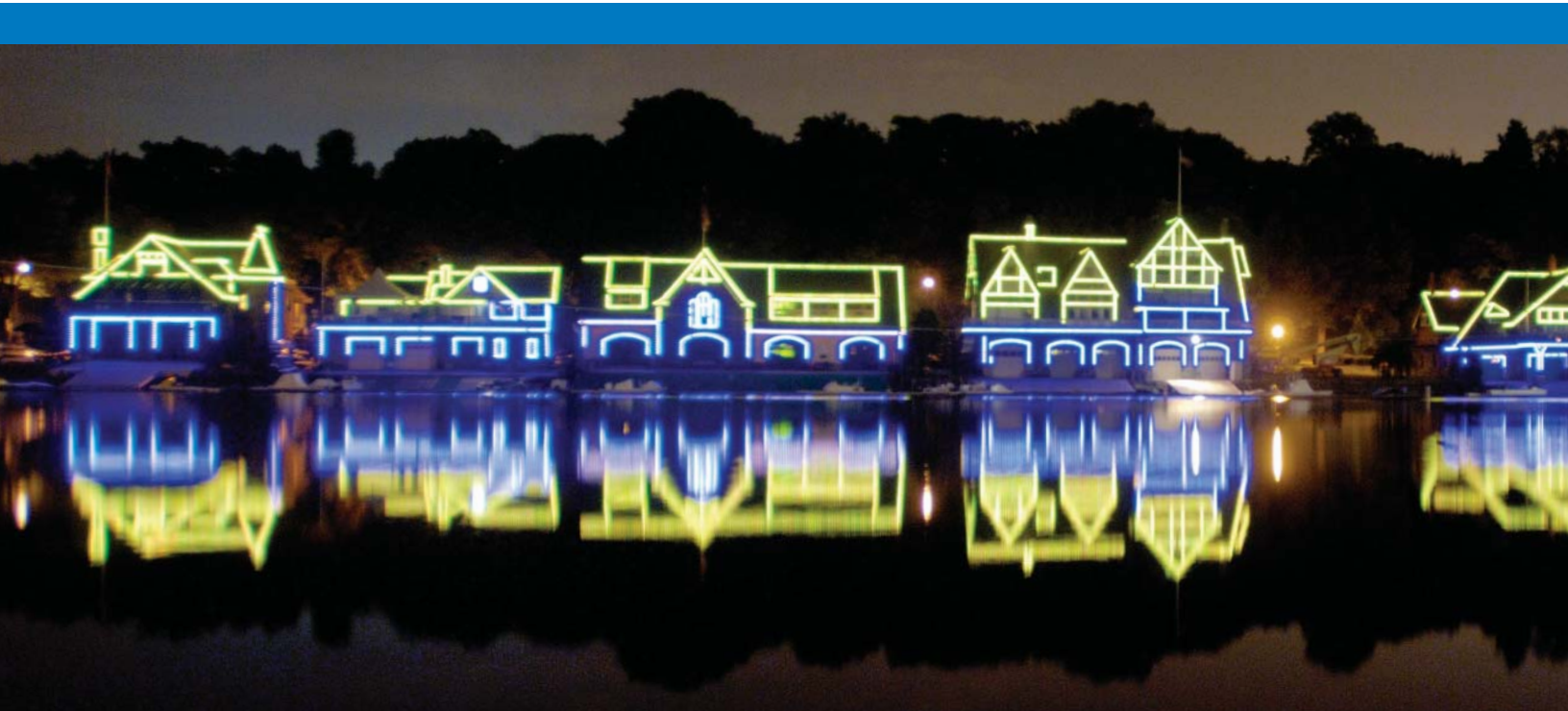
Boathouse Row 2005 – 2010

Location | Philadelphia, Pennsylvania, USA
Philips Lighting | Philips Color Kinetics LED Lighting

PHILIPS



By installing an LED-based lighting system, the Boathouse Row property managers have realized savings of approximately \$57,000 in annual labor, materials, and operating costs every year since 2005.



The LED fixtures have delivered effective, full-color light output since 2005 — over five years of daily operation — and promise to do so for many years to come.



Fast Facts

Industry Sector

Architectural

Fixtures

iColor Flex SL

Installation Integration and Support

Hase & Associates, LTD, with Pennell & Wiltberger, Inc.

Photo Credit

Jacques-Jean Tiziou, www.jjtiziou.net

Philadelphia's historic Boathouse Row received a high-tech lighting makeover in June 2005. The new intelligent LED lighting system from Philips Color Kinetics replaced a 30-year-old incandescent system that required frequent and costly maintenance.

A popular Philadelphia landmark, Boathouse Row houses twelve boating clubs in ten architecturally distinct buildings along a half-mile stretch of the Schuylkill River. PECO, An Exelon Company, spearheaded the relighting project, in partnership with the Fairmount Park Commission, the Schuylkill Navy of Philadelphia, and the International Brotherhood of Electrical Workers Local 98, who donated the labor. A public campaign raised hundreds of thousands of dollars from individuals, corporations, and foundations to supplement start-up contributions from PECO.

Prior to the relighting project, Boathouse Row's property managers were spending more than \$50,000 per year on lamp replacements, and approximately \$8,000 per year on energy costs. By installing an LED-based lighting system, they anticipated savings of approximately \$57,000 in annual labor, materials, and operating costs. A 2010 review of the project confirms these cost savings for each year of operation since 2005, with minimal maintenance and fixture replacement.

The lighting system consists of more than 200 flexible strands of iColor Flex SL, for a total of more than 12,000 full-color LED nodes. Because each node is individually controllable, the installation can

display intricate, colorful lighting sequences in addition to simple white light that closely matches the appearance of the previous incandescent system. The entire installation is controlled by a single Light System Manager (LSM), an Ethernet-based light show authoring and control solution from Philips Color Kinetics.

A series of colorful, dynamic light shows were created and programmed by Troy A. Martin-O'Shia of Hase & Associates, Ltd. According to Martin-O'Shia, "We found that the system was very flexible. We were not hindered in any way from achieving my vision of having the boathouses lit with color and movement. In fact, as we progressed we found new and exciting ways of manipulating the system."

"We knew that LEDs were the optimal light source for the project, based on their energy efficiency, lifetime, and controllability, yet the technology exceeded our expectations," said Shannon Yott of Pennell & Wiltberger, Inc., who co-managed the architectural lighting design and specifications with Martin-O'Shia. "Not only do we have the ability to cut operational expenses with the LED-based system, we can quickly and easily program customized effects for special occasions—an option that was not possible with the dated, incandescent system."

Over the years, the Boathouse Row installation has lived up to its promise. The iColor Flex SL strands, which are in use every day from dusk to dawn, require minimal maintenance in the spring and summer,



as squirrels sometimes eat through the cables—a problem that could be avoided by installing all wiring in conduit. Still, only five full strands have had to be replaced over the past five years. The lighting shows and effects can be easily changed for special events, such as the annual Fourth of July celebration, and National Breast Cancer Awareness Day in October, when the lights are pink. Additionally, corporations have hired out the lights for branding and promotional purposes—such as when the lights were turned red to celebrate the return of the world-champion Philadelphia Phillies from spring training in 2009.

Overall, the system owners and managers continue to be very satisfied with the LED-based lighting installation. Labor, materials, and operating cost savings total more than \$250,000 over five years. So far, the iColor Flex SL strands have delivered effective, full-color light output daily for over five years, and promise to do so for many years to come.



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