

Case Study:

Lancaster General Health | Lancaster, Pennsylvania



Background

Lancaster General Health is a comprehensive health network that includes 300 primary-care and specialty physicians, outpatient, and Urgent Care services; and four hospitals with a total of 786 licensed beds. Lancaster General Hospital is consistently ranked among the top hospitals in Pennsylvania by U.S. News & World Report.

In recent years, the hospital purchased two empty, unused office buildings to house its administrative staff. Both buildings had to be brought up to code before they could be occupied. This project was completed, from start to finish, by Lighting Solutions, Inc.



- Easy installation
- Better cost-efficiency than a wired control solution
- Reduced labor

Challenge (Mill Building)

The first building was a beautiful old mill that had been converted into office space with linear pendant lighting. New energy codes required daylight harvesting, so the lights would dim automatically as more daylight entered the space. Unfortunately, running new wires to allow for dimming control would have been costly and time-consuming.

Solution

Lighting Solutions, Inc., the agent on the project, developed an adapted solution on their own. They knew the Cooper Lighting Solutions WaveLinx PRO Lighting Control System would be ideal for this job.

The lighting fixtures were specified with integral wireless controls that allowed for dimming plus motion and daylight sensing without the need for any additional wires or external sensors. This also meant that existing power could still be used; the project was completed as a one-for-one retrofit without running any new wires whatsoever.

Challenge (Commercial Avenue Building)

This building had a unique ceiling – a 4 x 4 structural grid with acoustical tiles and recessed 2 x 4 fluorescent light fixtures that were not providing enough light. Although the drop ceiling provided some flexibility for running wire, existing fixture locations had to be used, and energy code still required daylight harvesting, motion sensing, and smaller zones of control for open offices.



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Solution

As with Mill Building, the lighting fixtures were provided with the same integral wireless sensors. The basket-style LED fixtures provided better light output and distribution than the old fluorescent fixtures, drastically improving the illumination in the space. Since the fixtures were addressable, the large open spaces could be broken up into smaller zones of control through programming instead of wiring, and motion sensing could be implemented without installing any additional equipment. The Cooper Lighting Solutions WaveLinx PRO Lighting Control System provided all the functionality Light Solutions, Inc. was counting on to design and deliver for both buildings.

Results

Lighting Solutions helped Cooper Lighting Solutions deliver the full value of our system.

- The system was easy to install
- The system reduced costs for installation as low-voltage wires between fixtures were not required as the controls were self-contained within most of the fixtures
- The system reduced labor due to lighting control devices that were integrated onto each fixture such as occ/vac sensors and daylight harvesting
- The system has helped the end-user realize energy cost savings
- The system has options for wireless wall controls which helps reduce costs with both labor and materials by eliminating switch wiring

Bill of Materials

2444 Luminaire Integrated Sensors

43 Room/Area Controllers

434 Wireless Wallstations

36 Switchpacks/Load Controllers

18 Wireless Occupancy Sensors



These two projects were on a fast track for completion along with challenging budgets. We needed a lighting control solution that was flexible, easy to install, and allowed most of the existing circuiting to stay in place. The WaveLinx RF fixture-integrated controls met all of our needs.

*- Lori Dropik, PE Senior Project Electrical Engineer
WSP (Formerly Leach Wallace Associates)*