

TekDek Retrofit Brightens Hospital Garage, Cuts Lighting Costs by 78 Percent



Project: NorthShore University Health System Parking Garage
 Location: Evanston, Illinois
 Engineers: Dickerson Engineering

“In this particular project, Kenall offered what the other (lighting manufacturers) were unable to offer—exceptional light spread, even illumination, critical shielding and direction, uplighting, significant cost and energy savings, and rapid payback.”

– Tim Vander Molen, President of IFS



Above: The TekDek LED fixtures shown on the top floor are in sharp contrast to the existing metal halide fixtures on the floor below it.

Left: TekDek provides enhanced light levels and smooth, even illumination, addressing NorthShore University HealthSystem’s concerns about inadequate lighting.

Project Summary

Challenge: Provide even, safe and consistent light levels for the patrons of a very busy hospital parking garage, while also addressing issues related to aesthetics, color, glare, energy-efficiency, maintenance and cost savings.

Solution: Kenall TekDek™ TD17 LED with TekLink™ (formerly SmartSense™) Controls

Benefit: Improved max-to-min ratios, improved light distribution and efficiency, significant energy savings, rapid payback

Impressive Performance & Payback in Evanston, IL

When Integrated Facility Solutions (IFS) decided to retrofit the NorthShore University HealthSystem parking garage lighting system, they turned to trusted partner, Dickerson Engineering.

“I consider Kenall to be one of the top lighting manufacturers in the industry. In this particular project, Kenall offered what the other (lighting manufacturers) were unable to offer—

The garage contained 175-watt metal halide fixtures that were inadequate and expensive to operate and maintain. According to Jayson Nordstrom, Project Manager for IFS, “The ultimate goal was to provide even, safe, consistent light levels (for our parking garage patrons), which was not present with the garage’s existing fixtures.” Other goals included energy efficiency, cost savings and maintenance savings. Stephen Barnard, Senior Associate at Dickerson Engineering, added, “The biggest challenge was to create energy savings while simultaneously improving max-to-min ratios.”

Dickerson and IFS conducted an extensive retrofit evaluation. “My biggest concern was the installation and its impact on the user, and certainly the aesthetics,” said Nordstrom. According to Tim Vander Molen, President of IFS, they were also concerned with “color and glare issues” sometimes associated with LED.

Barnard suggested that IFS meet with Kenall Manufacturing. “I consider Kenall to be one of the top lighting manufacturers in the industry. In this particular project, Kenall offered what the other (lighting manufacturers) were unable to offer—exceptional light spread, even illumination, critical shielding and direction, uplighting, significant cost and energy savings, and rapid payback,” he explained.

“The ultimate goal was to provide even, safe, consistent light levels which were not present with the garage’s existing fixtures,” concluded Nordstrom.

Kenall recommended TekDek™ LED luminaires and TekLink™ (formerly SmartSense™) controls. A proposal was issued to change out 34 existing fixtures on the busy third floor (P3) of the parking garage. IFS confined the retrofit to P3 in order to compare the light levels of the new TekDek™ LED luminaires to a floor with existing luminaires. P3 included some areas enclosed in glass block and others that were open to the environment—conditions that were critical to the project’s success.

“There was no question that the light distribution was significantly better with TekDek. Glare was not a factor, and TekDek’s light levels appeared to be triple that of the other fixtures. It’s noticeable!” Nordstrom stated. Barnard agreed, “The fixtures exceeded the spread and illumination that I was anticipating.” Barnard also noted that “TekDek allowed them (IFS) to use all of their existing wiring locations and meet their desired max to min ratios.”

TekDek’s light levels appeared to be triple that of the other fixtures. It’s noticeable!”

- Jayson Nordstrom, Project Manager, IFS

TekLink™ controls sense and adjust based on light levels and occupancy: this enables footcandle requirements to be met, and results in significant cost and energy savings. According to Vander Molen, “By employing TekDek™ with TekLink™ controls, the savings were considerable, and when you factor in maintenance reductions and savings, it obviously makes the system even more inviting.” Nordstrom added, “The cost savings are impressive! There was a 78% reduction in lighting costs.” Vander Molen concluded, “The bottom line is that the owner is very happy with the results!”



TekDek with TekLink™ Features

- Zonal dimming based on occupancy and daylight
- Flexible light level control, field adjustable standby mode
- Scalable, modular system
- Ability to use existing conduit for wiring
- Control system signals LED end of life (L70)
- Push-button auto-commissioning
- Sweep off and override on capabilities
- Emergency activation for optimized patron safety
- Durable, sealed and gasketed construction
- Patented thermal management
- LED lifetime (L70): Up to 150,000 hours

Benefits for NorthShore University HealthSystem

- 1.26 year payback
- System provides 77% energy savings
- Enhanced pedestrian and vehicle safety
- Dimming tailored to facility usage patterns
- Simplified installation and maintenance
- No expensive field commissioning
- Maximum savings during periods of non-use
- Wired using existing conduit runs.
- Configurable; facilitates the easiest wiring layout in the facility.

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