

Leading Defense Contractor Ups The Ante With High-Efficiency LED Lighting & Secure IoT Controls

PROJECT OVERVIEW

A federal defense contractor had 1,400 outdated fluorescent lighting fixtures in their building, which meant poor lighting in their manufacturing facility and, consequently, lower productivity for their workers.

SBT Alliance's Direct Discount Lighting (DDL) provided the federal defense contractor with high-efficiency LED fixtures controlled by SBT's IoT-Controls Ecosystem partner, Avi-on controls. This switch improved working conditions and enhanced security without increasing energy costs.

THE PROBLEM

The federal defense contractor needed to reduce energy output and costs throughout the facility, including their production, warehouse, and office areas. Their lighting system was not effective at illuminating the whole facility, had a harsh yellow-orange tint, and was uncontrollable. If an employee wanted to turn on or shut off lights, they would have to flip a massive breaker for each bank of lights the breaker controlled (each breaker was 480 volts.) - which presented a safety concern.

Their building layout made it difficult to add a traditional wired lighting controls system as it was constructed pre-1945. The presence of CNC machinery covering the production floor further complicated the project, because ignoring the machines would cause dead zones, resulting in poor system performance. Additionally, since the work they do is sensitive, they needed a controls system that was entirely internal.

THE SOLUTION

SBT installed DDL specified high-efficiency high bay fixtures and flat-panel LEDs with a Bluetooth Mesh networked controls system (Avi-On). SBT ensured the controls system had no outside network interaction but were still just as effective and simple to operate.

Avi-on's Bluetooth with Mesh technology has a limitless network range, which is ideal for manufacturing facilities. With custom zoning to work around the CNC machinery, custom light scheduling (to accommodate different shift workers' lighting needs), and occupancy detection to dim or brighten the LED system as needed, SBT delivered a system that both lowered energy costs and increased productivity.

THE RESULTS

The new LED lighting system went from under 20 foot-candles (fc) to 50 fc without increasing energy costs or energy usage, drastically increasing worker safety as a result.

Avi-on's Bluetooth Mesh networking technology turned a once difficult-to-operate breaker controls system to a single-switch operating system. In case of emergencies, security personnel can operate all of the lights in the facility from a set of switches right in their security station.

The next phase of this project will upgrade the exterior lighting system as well, including incorporating it into the Avi-on controlled system to provide enhanced security.

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