



Hospital

## Project Overview

# Veteran's Memorial Hospital Seattle, Washington

Vive wireless control helped reduce labour and installation costs and simplify project setup at the Seattle VA Hospital.

## Overview

Northwest Edison was recently contracted for a lighting retrofit at the Veteran's Administration (VA) Hospital in Seattle, Washington. Facilitated through the Bonneville Power Administration, Northwest Edison took on the system design role for the project and was also responsible for installation and setup.

Sinjin Anterola, Chief Technology Innovation Officer, and Brendan Richards, Project Manager at Northwest Edison and their team had a goal to design, install, and setup a system that saved energy while improving the lighting for the occupants in the space.

The team originally planned to use a wired system until Anterola suggested Vive, promoting the opportunity to save time and money with a wireless installation. The current installation includes the Facilities building, some office space and laboratories – eventually the goal is to use Vive in patient rooms as well.



## The Challenge

The Northwest Edison team was focused on energy savings and working within a tight budget, so maximising labour savings was paramount. Other factors in the decision to use a wireless solution include the fact that the hospital building was constructed from 1949 to 1951, making rewiring costly, time consuming, and disruptive. The wireless installation ensured the building was able to remain in use during the lighting and controls upgrade process. Richards was able to work room by room as the spaces became available.

His team was also responsible for creating a proposal that met the requirements of the hospital administration, and providing all the designs and documentation required for the project. The installed system had to be flexible, efficient, allow for future changes and additions, and ultimately offer the possibility of networked control to other buildings.

## The Solution

Since the original proposal was a wired system, Anterola was able to compare solutions and quantify savings resulting from the use of wireless controls to lower labour cost, reduce design time, and meet the budget and timing goals of the project. At first, the proposal of a wireless solution raised concerns among hospital administrators who were worried about the potential for interference and inconsistent performance. Richards was able to demonstrate the reliable, interference-free performance of the Vive system, and overcome all their concerns.

Vive uses ultra-reliable Lutron Clear Connect RF communication technology. Clear Connect devices communicate at a different frequency (434MHz in the US, 868MHz in Europe) than BlueTooth or Wifi devices, which eliminates the risk of interference and ensures reliable communication.

Anterola designed a system that includes Vive Wireless hubs, wireless occupancy sensors and daylight sensors, and Pico controls that can be placed exactly where the building occupant wants them. Using the Designer+ software from Lutron, he was able to upload a floorplan and drag-anddrop the controls where he needed them.

The software then generated all the project documentation, like the bill of materials, system layouts, and one-line diagrams that simplified both the design and installation process. "The Designer+ software really made designing Vive easy" said Richards, "I was even able to make changes and all my documentation updated automatically, which saved my team time."

The Vive wireless system also offered opportunities for additional energy savings. By implementing dimming, the customer was able to save an additional 15% of the lighting energy using high-end trim to lower the max output of the new LED fixtures, which were already brighter than the fluorescent fixtures they were replacing.

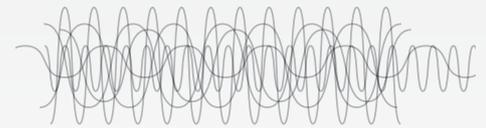
Flexibility is also key on this project. Throughout the building, wireless daylight sensors are installed to dim lights when daylight is sufficient. The building is awash in beautiful daylight, and the original sensor placement resulted in electric lights being dimmed to OFF. For many building occupants, that was not the most desirable outcome.

## Ultra-reliable wireless

**868 MHz:** Lutron devices operate in an uncongested frequency band, providing ultra-reliable operation.



## "Other" frequency bands



**2.4 GHz:** Cordless phones | Bluetooth devices | Wireless security cameras  
Other devices operate in congested frequency bands, creating a high potential for wireless interference.

Ultra-reliable wireless performance ensures clear communications between system controls.

"With wireless we are able to do more than reduce labour time; wireless also allows us to address the needs of the occupants in the building and adjust quickly to requests we received along the way."

— Brendan Richards,  
Project Manager,  
Northwest Edison

Wireless daylight sensors were relocated in just minutes, and electric lights then dimmed to a low level in response to sensors but did not dim all the way to off. With a wired solution, the change would have been costly and time consuming – wireless sensors ensured a simple fix.

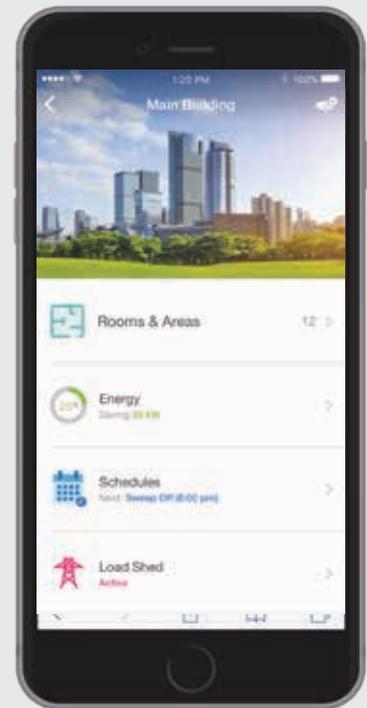
Employees especially appreciate the opportunity to use wireless Pico controls to raise or lower lights based on their specific task or project. Again, the ease and flexibility of design and installation with Pico proved to be a major benefit. In many cases, contractors were able to eliminate existing switches that were poorly located and replace them with wireless switches wherever the user wanted them.

## Results

Vive wireless hubs were installed to ensure simple setup, programming, and ongoing system tweaks. Adjustments can be made quickly and easily using the Lutron app. As the hospital becomes more comfortable with connected control, the system can be easily networked via BACnet with building management systems, effectively future-proofing the system design.

Wireless has proven to be invaluable to the Northwest Edison team at the VA Hospital as well as on many other jobs. Vive wireless control solutions are saving time and money, and during a very busy construction cycle in the greater Seattle area, Northwest Edison is able to complete more jobs in less time, creating value for its customers, and growing business at the same time.

*System Design and Installation – Northwest Edison  
Lighting Control Solutions – Lutron Electronics*



Simple-to-use software that works on any smart device, made setup and adjustment easy for Brendan Richards and his team.

“I was even able to make changes and all my documentation updated automatically, which saved my team time.”

— Brendan Richards,  
Project Manager,  
Northwest Edison

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