

# Project Profile

## WEST VIRGINIA UNIVERSITY

### Morgantown, WV

For nearly 20 years, Eco Engineering has supported Siemens Building Technologies by providing energy efficient lighting system upgrades as part of more than 50 of their energy savings performance contracts nationally. West Virginia University is a long-tenured SBT client across a range of mechanical system projects, including lighting. Eco Engineering has designed and installed multiple lighting system upgrade projects for Siemens at West Virginia University. The most recent was at the Health Sciences campus and other ancillary buildings in Morgantown, West Virginia.

#### Facility Type:

Higher education and healthcare

#### Square Footage:

2,000,000+ SF

#### Technologies:

LED tubular lamps, PL lamps, fixtures, and occupancy sensors

#### # of Fixtures:

More than 27,000 addressed along with 1,600+ occupancy sensors.

#### Savings:

\$570,000 in annual energy and maintenance savings



#### Situation

The Health Sciences campus in Morgantown is the largest concentration of health care, research, and health professions resources in the state of West Virginia. It is home to more than 1,000 faculty members and 4,000 students. The University was seeking ways to make the WVU Medicine hospitals, clinics, and research labs at this campus more energy efficient through multiple actions. Similarly, they desired to reduce energy costs in a set of facilities on the Evansdale and Downtown campuses by upgrading the lighting systems. In total, 12 facilities across the three campuses were targeted for energy improvements.

#### Solution

The project was initiated with an investment grade audit of the lighting systems primarily at the Health Sciences campus in Morgantown. The design and installation strategy entailed maximizing the energy savings through an upgrade of the lighting system to LED technology in the form of new fixtures or retrofitted components along with associated occupancy controls. Siemens Building Technologies partnered with Eco Engineering for the audit/design and implementation phases of the lighting system upgrade and used these energy savings to fund other necessary and more costly mechanical system upgrades.

#### Financial Benefits

- Estimated total energy and maintenance savings over 10 years is \$5,700,000
- The lighting portion of the utility bill will be reduced by 62%

#### Environmental Benefits

- Prevented the emission of 12,916,700 lbs. of carbon dioxide annually
- Equivalent to planting 946 acres of trees annually
- Equivalent to removing 1,048 cars from the road annually

#### Improved Lighting Benefits

- Equal or better color rendering increased visual clarity and comfort
- Created a more pleasing and productive work environment
- Eliminated fluorescent ballast noise and lamp flickering