



## THE PORT AUTHORITY OF NEW YORK AND NEW JERSEY

The Goethals Bridge

FSG Designs And Provides New LED Lighting For The Goethals Bridge

### Owner

The Port Authority of NY and NJ

### Contract Type

LED Lighting Upgrade

### Contract Amount

\$266,576

### General Contractor

Constellation Energy

### Electrical Contractor

Port Authority Electrical

### Energy Savings

\$44,225 a year

### Number of Fixtures Replaced

829

### Annual kWh Reduction

266,576 kWh per year

### CHALLENGE

One of the "firsts" in the Port Authority legacy, the Goethals Bridge was built as part of an overall project to accommodate greatly increased interstate automobile traffic following World War I. The bridge spans the Arthur Kill, linking Elizabeth, NJ, with the Howland Hook area of Staten Island, NY. As part of a contract to update lighting on several PANYNJ locations, FSG designed an LED lighting retrofit that included both cobra head roadway lighting, toll plaza lighting, building mounted wall pack and floodlights, and interior fixtures in the administration building, garage and maintenance areas.

### SOLUTION

Installation on this project was performed by Port Authority electrical personnel. FSG designed lighting solutions supervised mock-up installations and took pre and post light readings to validate results. Existing 250W HPS roadway fixtures were upgraded to 83W LED roadway fixtures. Other outdoor fixtures included wall packs, flood lights, canopy fixtures in toll lanes and explosion proof fixtures in fueling areas. All were converted from HID to LED. Interior recessed fixtures were upgraded to new LED fixtures, and screw in lamps were converted to LED.

### RESULT

The new lighting system greatly improved appearance, with CRI improving from 22CRI to 80CRI. Lamp life for the roadway increased from 24,000 hours to 100,000 hours, greatly reducing maintenance costs in the future.

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