

# PROJECT SPOTLIGHT

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The power of NALMCO is when members share practical experience from the field. Our goal is to increase the number of real-world project spotlights in each issue of *LM&M*. We are searching for Project Spotlights for our 2017 issues. Contact NALMCO Headquarters at [director@nalmco.org](mailto:director@nalmco.org) to request a copy of our submission guidelines.

## SALK INSTITUTE FOR BIOLOGICAL STUDIES

Submitted by NALMCO General Member *FSG Solutions*, Placentia, Calif.



Use this QR code to learn more about this project.

The Salk Institute for Biological Studies desired to retrofit their outdated and inefficient lighting, without compromising the space's original architecture or interfering with ongoing research. Completed in 1965, the institute is now a designated historical site. The founder's vision included open, clean laboratory interiors that would complement the facility's location, encouraging the creativity and open-mindedness necessary for a top flight research institute.

The Salk Institute is one of the world's preeminent scientific research facilities, working primarily in the areas of molecular biology, neuroscience, and plant biology. Founded by, and named for, the inventor of the polio vaccine, Jonas Salk, the institute has counted among its faculty such luminaries as Francis Crick, discoverer of the DNA double helix, and Leo Szilard, nuclear physicist who patented the nuclear reactor and contributed to the Manhattan Project. A designated historical structure with a striking architectural plan and aesthetic style, a lighting upgrade at the institute would be both immensely important and dauntingly difficult. That made Facility Solutions Group the ideal choice for the project.

Originally designed around T12 lamps, the Institute was keen to retain the original, historic lighting enclosures while also improving energy efficiency and lighting quality. FSG installed LED lamps that fit these requirements perfectly. Some 2,900 fixtures were retrofitted, including 360 fixtures that were made by the Institute to match the original designs. All of the fixtures were individually addressed, allowing each to be programmed for independent operation. As the retrofit continued, FSG removed older lamps which contained mercury, and disposed of them. The project scope eventually expanded to cover six levels of research laboratories, as well as six levels of office space.

Beyond the tremendous savings in energy costs, Salk Institute also realized the wonderful advantage of improved quality of light. LED lamps are much less stressful on the eye, and produce a more uniform output, making the research laboratories of the institute safer and more comfortable workspaces. The Salk Institute was amazed and gratified to see the risks associated with worker's compensation be greatly reduced by the application of LED lighting in their working spaces.

In addition to the fixture upgrades, more than 3,800 wireless nodes were incorporated, consisting of wireless fixture controllers, sensors, photocells, and switches. Thanks to the facility's enchanting design, large amounts of natural light were available, allowing the Institute to perform daylight harvesting. Tim Ball, Salk's senior director of facilities, praised FSG's work, saying, "FSG's ability to work with us was phenomenal. No damages, no inconveniences whatsoever."

The end results for the retrofit were spectacular. Sixty-seven kilowatts were reduced from the peak lighting load, leading to an annual kWh reduction of 1,129,000. The actual savings over baseline was calculated at 81 percent.

Facility Solutions Group specializes in creating and installing lighting retrofits. Utilizing our extensive design experience, and our thorough, conscientious installation professionals, we met Salk Institute's threefold challenge: (1) improve lighting efficiency and efficacy, (2) preserve the site's historic aesthetic, and (3) accommodate the Institute's ongoing work schedule. The Institute's managers were greatly impressed by FSG's work, and extremely satisfied in their new lighting system. FSG is very proud of our work on this project. It was a unique opportunity to work in such an important and special venue, and clearly demonstrates our capabilities and our workmanship.