

Conroe Independent School District LED Lighting Upgrade



PROJECT BACKGROUND

Conroe ISD, located north of Houston, TX, is comprised of 60 campuses hosting more than 56,000 students. The significant growth, which the district has experienced over the last 10 years, is expected to continue in part due to its close proximity to the new North Houston Energy Corridor.

With this project, Conroe ISD was looking to significantly reduce power consumption, lower maintenance costs and improve lighting for students and faculty. The District is well known for its energy reduction strategies, having been recognized four years in a row for their participation in the Entergy Texas, Inc. SCORE program. The SCORE Program provides energy performance benchmarking, technical assistance and cash incentives to help schools save energy and money.

Once out to bid, Conroe ISD attracted lighting proposals from lighting manufacturers across the country. Potential suppliers were evaluated by Conroe ISD, DBR Engineering Consultants and Brookstone Construction. After thorough evaluation, XtraLight was chosen as the manufacturer to provide luminaires for the project. The XtraLight LED fixtures met or exceeded project specifications and provided the best financial value.

XTRALIGHT'S SOLUTION

The highest volume of products was installed in classrooms where the ACR Series was selected. This recessed 2' x 4' luminaire provides 4100 lumens at full light output, and is fully dimmable providing additional savings when full brightness is not required. The fixture also features an impact resistant proprietary lens that reduces glare while distributing the light evenly. When low profile surface mount products were required in areas such as stairwells and corridors, the LRW series was utilized.

The project was scheduled to take four months. XtraLight provided over 16,000 fixtures under the required time-frame without disruption to classes or after school activities. All fixtures were provided with a full 10-year warranty.

PROJECT BENEFITS

The District expects to realize an 83% savings* in energy costs per year. Prior to the LED upgrade, the nine campuses consumed 5,931,196 KWh per year; the XtraLight solution energy consumption is expected to fall to 996,379 KWh per year.

Proper lighting enhances the learning environment by increasing productivity and awareness. The result of this project is a state-of-the-art lighting system that will be relevant well into the future.

* Savings include HVAC reduction

LED LIGHTING UPGRADE REPORT A+	
FINANCIAL	
Annual Energy Cost Savings	\$444,134 ✓
Number of Campuses	9 ✓
Annual Maintenance Savings	\$565,601 ✓
Rebate	\$130,184 ✓
Payback	4 Years ✓
Warranty	10 Years ✓
ENVIRONMENTAL (Annual)	
Carbon Dioxide Emissions	-7,599,618 lbs ✓
Sulfur Dioxide Emissions	-29,826 lbs ✓
Nitrogen Oxide Emissions	-14,642 lbs ✓
Acres of Forest Added (Equivalent)	+942 acres ✓
Cars Removed from Roads (Equivalent)	-663 cars ✓

Numbers reflect annual project savings based on prior energy consumption, electric rates and usage hours. Savings per project may vary.

From the Customer:

Easy Foster, CISD Director of Planning and Construction

"The team of XtraLight, Brookstone, and DBR worked together seamlessly and executed this project without interruption to District activities. We are more than pleased with the improvement in lighting in our schools and the savings that have been received, and plan to use LED lighting in all of our new construction projects."

Roger Garvey, CISD Energy Manager

"After three years of research and classroom mock-ups, we elected to move forward with this district-wide LED lighting upgrade and couldn't be happier with the results."

Marshall Schroeder, CISD Director of Custodial and Maintenance

"The installation of over 16,000 maintenance free LED light fixtures has allowed my staff to focus their resources on other energy saving projects."



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ACR: A recessed luminaire designed to provide diffused illumination, eliminate glare and provide a significant reduction in energy cost



LRW: Low profile, energy efficient lighting suitable for stairwells, corridors and locker rooms



8812 Frey Road, Houston, TX 77034
(800) 678-6960
customerservice@xtralight.com
www.xtralight.com

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