

Project Profile

Type of Space

Sales, display, and office space

Square Footage

2,819

Project Objective

Quality, comfortable, energy-efficient lighting compatible with a residential atmosphere

Project Benefits

Open, comfortable work environment

Lower utility bills

When Barden Homes decided to build their new sales office in Lockport, NY they knew they wanted it to be like the homes they build – energy-efficient. They felt that the lighting design should reflect the quality of their company, be comfortable for their employees, accommodate changing sales displays, and create interest for the customers. To meet this challenge, Joe McCombes, Sales Administrator of Barden Homes, contacted Jeff Anzalone of Anzalone Electrical Contractors, Inc., an Ally in the **New York Energy Smart**™ Small Commercial Lighting Program. The result of their efforts provided a lighting system that used combinations of fixtures in each space to meet their aesthetic and visual comfort requirements, while reducing energy costs through an effective, energy-efficient design.

The Barden Homes sales office includes general office and conference room space and a display showroom. An important first impression of the company, the reception area was designed with two-lamp direct/indirect T-8 cove lighting along the walls. This provides general lighting while drawing attention to the pictures on the walls. Recessed 42-watt compact fluorescent wall washers illuminate the company’s logo behind the receptionist’s desk. Decorative pendant-mount fixtures set off the reception desk area and provide additional light on the work surface.

The general office lighting includes three-lamp T-8 low-glare parabolic fixtures and single-lamp 30-watt T-5 compact fluorescent wall washers. All of the office lighting fixtures are recessed into the ceiling, which visually opens the



Different fixture styles create various effects in the display area.

space. The combination of fixtures evenly lights the walls while providing proper light levels on the desks. By using low-glare fixtures and reflecting light off the walls, overhead glare and glare on the computer monitors are reduced, resulting in a more comfortable work environment. The inherent energy efficiency of the office lighting systems is increased by wall-mounted occupancy sensors that turn off office lights when the spaces are not occupied, providing a further reduction in utility bills.

The conference, training, and media areas use large four-lamp 42-watt compact fluorescent direct/indirect fixtures to produce a soft, diffused distribution of light. This provides a comfortable work area. As in the offices, occupancy sensors in these rooms save additional energy costs.

The display area includes models of homes, photos, drawings, product displays, and a model kitchen. In this area, a combination of ceiling-hung and wall-mounted two-lamp T-8 fluorescent direct/indirect fixtures provides even diffused lighting. Bouncing most of the light off the wall and ceiling surfaces (as opposed to direct lighting) creates a comfortable glare-free atmosphere, and the use of wall-mounted fixtures makes the space feel more open. An added benefit of the lighting design is its flexibility, which allows the showroom displays to be changed without modifying the general lighting.



Recessed downlights, wall lighting, and decorative fixtures in the reception area.

Pendant-mounted compact fluorescent decorative fixtures provide light over the work table, while visually drawing the customer's attention to the model kitchen area. Recessed 42-watt compact fluorescent fixtures are used to create a residential look, while reducing energy costs compared to standard incandescent fixtures.

To display outdoor home lighting products, a corridor called "Barden Way" was designed to give the impression of an old main street. Exterior lighting products use 13-watt and 26-watt compact fluorescent fixtures – helping to keep energy costs down.

The wide variety of fixture styles employed results in effective lighting that provides the necessary visual effects and a pleasing atmosphere for customers and employees. The selection of energy-efficient lighting

technologies will reduce Barden Homes' electricity bills, while the long service lives of the lamps will help minimize maintenance costs.

The Bottom Line

The cost of materials for the project was only \$3.00 per square foot. In addition to the low energy and maintenance costs of the lighting system, Barden Homes achieved all the other desired benefits from the system. Their new lighting system gives their sales office a visually attractive and interesting appearance, while providing proper light levels and a comfortable atmosphere for the customers and employees.

All of the fixtures used were readily available. Direct/indirect fixtures were ordered in advance and they were delivered on schedule resulting in no delay to the construction work

For More Information

The New York State Energy Research and Development Authority (NYSERDA) offers businesses energy-saving opportunities through the **New York Energy SmartSM** Small Commercial Lighting Program. Additional programs can help businesses reduce utility costs, including the **New York Energy SmartSM** Smart Equipment Choices Program, which offers financial incentives to businesses for energy-efficient lighting equipment and a variety of other electric-efficiency measures.

To learn more about these incentives and to make your lighting more effective and efficient, visit www.nysERDA.org/sclp or call toll-free 1-866-NYSERDA (1-866-697-3732).

Tech Specs

- Low-glare, pendant-mounted dome fixtures with four 42-watt compact fluorescent lamps.
- Direct/indirect two-lamp T-8 fixtures with electronic ballasts.
- Three-lamp T-8 low-glare parabolic recessed fixtures with electronic ballasts.
- One-lamp 30-watt recessed T-5 wall washers.
- One-lamp 42-watt recessed compact fluorescent wall washers.
- High color rendering compact and linear fluorescent lamps.
- Wall-mounted occupancy sensors in private offices and training rooms.
- 0.95 installed watts per square foot, after allowance for occupancy sensors.
- Estimated energy savings compared to a standard system: 9,555 kWh per year.
- Estimated energy cost savings compared to a standard system: \$812 per year.

"Our office staff and customers have been rewarded with a very effective, efficient, and very comfortable lighting system that will have long-term residual value for our company."

— Joe McCombes
Sales Administrator
Barden Homes



Exterior Lighting display inside the showroom.