



C A S E S T U D Y

Watt Stopper Controls Provide Convenience, Safety and Energy Savings in ADA Home

Private
Residence

San Diego, CA

Watt Stopper Products Used:

Miro: MRD4 Universal Dimmer, MRD3 Switch, MRD8 Multilocation Controller, MRD5 House Scene Controller, MRH5 House Scene Remote, MRD6 Room Scene Controller, MKFOB Keyfob, DCD267 Universal Dimmer and MDS246 Architectural Switch

Residential Sensors: RS-150BA-N Vacancy Sensor with Nightlight and RS-250-N Occupancy Sensor with Nightlight



When interior designer Katy Mellon, Allied Member ASID, undertook designing the complete remodel of a 1968 tract home in San Diego, California, she embarked on an eye-opening learning experience. The prime goal was to create a safe, efficient, attractive and accessible home for her son, Nathaniel Ladendorf. Ladendorf is disabled from a spinal cord injury and needs wheelchair access to all areas of his residence. Mellon also had to meet California Title 24 requirements, but did not want to compromise her design scheme in order to do so.

Lighting controls, including Watt Stopper/Legrand's Miro controls and residential occupancy and vacancy sensors, played an important role in the successful completion of the project. Ladendorf moved into his home in December 2007 and Mellon says, "Every time I see Nathaniel come into his house and touch just one switch to light up his safe haven, I experience great peace of mind."

Energy code and design considerations

California Title 24 allows only limited use of incandescent lighting in residential applications, but gives designers more leeway in selecting sources if the lighting will be controlled by vacancy sensors or, in some locations, by dimmers. Mellon learned about Watt Stopper/Legrand's control options at an ASID seminar on Title 24 requirements and was pleased to find out that she did not need to sacrifice any of her design standards to achieve energy efficiency.

By using Miro dimmers in the living area and bedrooms, and vacancy sensors in the bathrooms, she was permitted to use decorative and flattering lighting including low voltage track lighting and incandescent bath bars. Additionally, since Miro Universal Dimmers are designed to dim incandescent, magnetic or electronic low voltage and dimmable fluorescent loads, she could specify the same dimmer type for all applications, simplifying the design and installation.



Mellon took additional steps to make her design as green as possible. She used laminate flooring, porcelain tiles, recycled glass tiles, quartz stone counter tops and low VOC paint.

Miro's Architectural styling also helped Mellon achieve her design goals. She selected warm white devices for their pleasing look on the walls and used matching Miro Wiring Devices throughout the home.

Wireless scene controls

Mellon took advantage of Miro's wireless control capabilities to create two layers of scene control and facilitate control of selected lighting from outside the home for safety and convenience. Ladendorf carries a Key Fob controller to turn lighting scenes on from his car when arriving home. He typically illuminates a pathway from the garage to the living room area.

Once inside, he can use wall mounted House and Room Scene Controllers to select a variety of lighting looks for either the whole house, including activating a pathway from the living area to the master bedroom, or just for the living area. Additionally, a handheld House Scene Remote, carried in his wheelchair, provides access to lighting scenes from any location.

The scene controllers send RF signals to the wireless Miro dimmers and to wireless Miro switches that were used for non-dimmable loads. Scene memory is stored in each power device, and controllers can activate any number of dimmers and switches.

Occupancy sensors

For additional security, a Watt Stopper occupancy sensor automatically activates garage lighting when

motion is detected. Inside the home, vacancy sensors allow bathroom lighting to be turned on manually when needed. The vacancy sensors include LED nightlights that provide low level illumination when the lights are off. All of the sensors ensure energy savings by automatically turning lighting off when no occupancy has been detected following a time delay.

Detailing the remodel

The 1,700 square foot home was gutted, and the floor plan changed from the original four bedroom, two bath to a three-bedroom design that is barrier free and easily accessible from exterior to interior.

The 40 year old wiring was replaced for safety and to meet current building code requirements, but controls had not yet been specified when the wiring was completed. Fortunately, since the wireless Miro controls communicate using an RF protocol, no control wiring was needed. Installing Miro did not cost any more than installing standard dimmers or switches.

Following installation, Watt Stopper's support team provided advice and assistance programming the scene controls, and the system is operating as expected.

Living in the new home

After six months in his new home, Ladendorf is settled in and comfortable. "Nathaniel is very happy with the look of the controls and the simplicity of using his lighting system," Mellon notes. She concludes, "This project has forever changed my approach to design. All future jobs will benefit from this journey."

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– Katy Mellon