

SOUTHWESTERN REGION

633 17th Street Plaza

When it came to relighting the plaza at 633 17th Street in downtown Denver, subtlety was the name of the game. The building owner wanted to light the building to make it stand out and draw people to the site. According to lighting designer Marla Stauth of Frankly Lighting, SCS Lighting Studio (Littleton, CO), less was more with regard to freshening up the aging site. “Even though this was in a downtown location, I was concerned about too much light pollution. I wanted to give enough ‘wow’ without creating something that didn’t fit with the look we have here in Denver. People are sensitive to buildings that are over-lit,” explains Stauth.

The resulting lighting concept involved a pathway with pedestrian luminaires leading into the plaza. The 12-ft-tall luminaires use indirect 35-W T6 ceramic metal halide (CMH), and are mounted to a parking garage below, requiring a custom base design. At the intersections of dark striped concrete patterns are luminaires arranged in a winding serpentine path that leads into the courtyard. In addition, a new custom sign was added to the plaza and lighted internally with neon, as well as channel-mounted LEDs for the free-standing letters, and uplit with in-ground 20-W MR16s for vertical elements. As for the building itself, custom vertical poles at each column have perforated shrouds to direct light as high up on the façade as possible, minimizing light pollution. The custom-designed shrouds surround standard cylindrical 70-W CMH downlights and 100-W CMH 3.7-deg VNS floodlights to reach high on the 40-story building. The shrouds have three bands of 3,000K neon with hidden transformers.

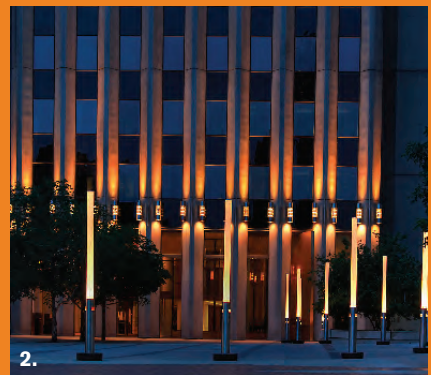
The MR16s used for uplighting the trees use minimal power, drawing from sources on the site so that light pollution and glare are limited and fall within limits of existing power available from the two building sources that were required to be used. All sources on the site (except for the LEDs) are 3,000K. Stone bollards were used at a secondary building entry, and round steplights were built into them.

According to Stauth, the new lighting design for the plaza used far less energy than the old plaza design. However, finding a viable power source presented some challenges. “Ownership of the plaza is split between two buildings, two existing electrical systems and a limited amount of existing power. In addition, existing conduit had to be used. No spare capacity for the plaza could be found anywhere,” says Stauth. “It was less difficult to design because power was available—we just had to find the right floor to bring it from for conduit routing,” says Stauth. Both systems are controlled by an astronomic time clock and photocell system that responds to seasonal changes.

In addition, maintenance was a concern for the owner. As a result, all MR16s are at ground level for ease of replacement, and all lamps are within reach of an extension ladder and have a minimum of 6,000 hours of life.

2007 AWARDS OF MERIT

1. A custom sign is internally lighted by neon uplit stainless steel letters with channel-mounted LEDs. Vertical features are lighted by 20-W in-grade MR16s.
2. Pedestrian luminaires use indirect 35-W T6 CMH and create a serpentine path leading into the courtyard.



Photos: Jim Delures

IES Award of Merit DTC MONUMENT

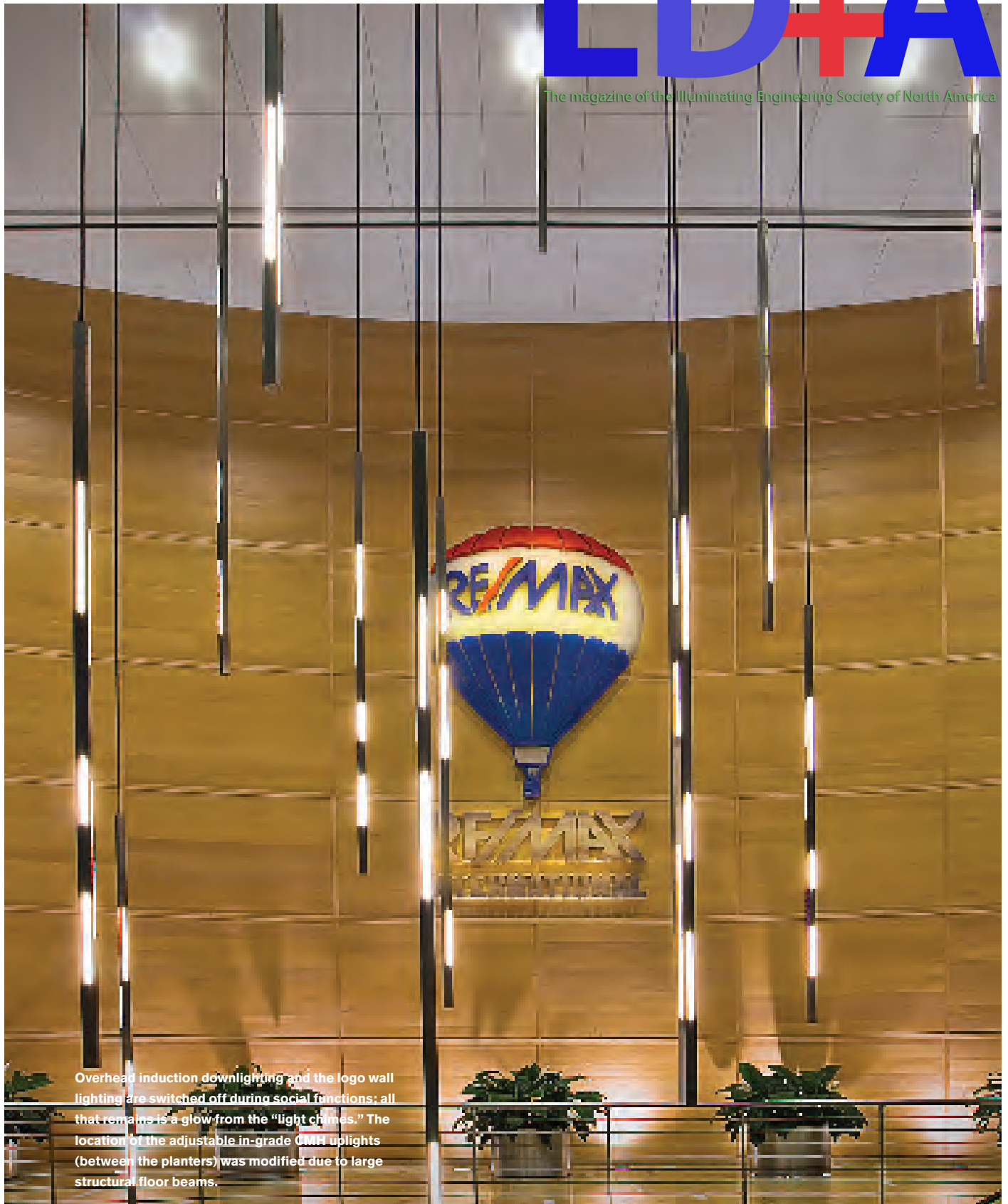
Adjustable in-grade luminaires with 39-W PAR38 metal halide lamps light flag poles and trees.



Luminaires graze the base horizontally with a 5-deg aim to light the stone and bottom third of the monument.

Straight, narrow, curvy and tall: All the architectural elements that make the Denver Tech Center monument aesthetically compelling also make it difficult to light. To capture the steel ribs of the 100-ft-tall structure (created by Barber Architecture), lighting designer Marla J. Stauth of Frankly Lighting LLC used floodlights in two different locations. Set 25-ft back from the monument, above-grade narrow floodlights illuminate the top of the monument and narrow-medium floodlights are aimed its middle. The luminaires use 175-W metal halide lamps fitted with hoods or grill louvers to control spill light. "Since the sculpture is hollow, I didn't want too much light to shine through it so I chose low-wattage lamps," says Stauth. The same lamps were positioned at the monument's stone base to light its lower third.

Elizabeth Hall



Overhead induction downlighting and the logo wall lighting are switched off during social functions; all that remains is a glow from the “light chimas.” The location of the adjustable in-grade CMH uplights (between the planters) was modified due to large structural floor beams.

Photos: Jim DeLuca www.jdphotos.com

A real estate company shows off its own real estate. But lighting it was no easy deal

RE/MAX

REDO

BY PAUL TARRICONE

Have we got a building to show you—a hot new listing, just on the market. It's located in beautiful Denver, easily accessible from major roads and highly visible to drivers, giving your company plenty of free PR. There's just one small problem. When it comes time to install the lighting, there might be a few hurdles to overcome—like beams and ductwork.

The building in question is the 12-story, 259,000-sq ft headquarters for Re/Max. Lighting designer Marla Stauth (formerly of Swanson Rink and now with Frankly Lighting, Arvada, CO) had to navigate some tricky structural conditions within the real estate company's new real estate. But not to worry, the lighting concept (which earned Stauth a 2009 IES Illumination Award of Merit) conquered these challenges while providing a handsome HQ that emphasizes Re/Max's global reach.

Stauth was responsible for lighting all aspects of the project, including the exterior, a 288,500-sq ft underground parking garage, and most notably, the lobby atrium, common areas, hallways and an in-house TV studio used for training sessions. Barber Architecture, Den-

ver, was the architect on the project, which was completed in 2007.

Not surprisingly, considering the nature of real estate sales, Re/Max “wanted a building that would stand out when people drive by on Interstate 25,” says Stauth. To provide that visibility, Stauth “streaked up” each of the window mullions at the front of the building with 3.7 deg narrow spotlights aimed 200 ft up the face of the 240-ft-high structure. The lowest wattage lamps possible (250-W metal halide) were used to avoid light pollution. “I wanted to keep the light levels low while still meeting the client's needs.”

After Re/Max's clients enter the grounds, the main entrance at the rear of the building makes the next bold statement. Here, the porte cochere is lighted from above and below by 70-W metal halide luminaires mounted away from the drive lanes and walking paths to reduce glare. Visitors approaching the entrance are then exposed to the Re/Max brand in all its glory. Looking through the glass walls of the two-story atrium, they're able to view the company's famous balloon logo, flags that represent its international footprint, a trophy

case and even some unusual hanging “light chimes.”

MAKING IT FIT

The contours of the atrium and other interior areas dictated several important lighting decisions. For example, since “glass surrounds the two-story atrium, there were no walls to wash,” Stauth explains. Consequently, induction downlights were used to light the atrium. Their long lamp life minimizes maintenance, and since there is no warm-up time for induction lamps they can also be used for emergency lighting. Stauth likens the visual effect to a “glowing jewel box with a splash of color.”

More technically challenging were the areas of the building that required Stauth to work around structural beams and ductwork. The under-floor ductwork forced most luminaires to the ceiling, but in-grade fixtures were used to light the 40-ft high, acoustic wood Re/Max logo wall. The adjustable 150-W ceramic metal halide (CMH) lights create an interplay of light and shadow across the wall. However, the location for these lights had to shift when large structural floor beams were adjusted during construction.

PROJECT



The façade of the 240-ft high building is streaked with light from 250-W metal halide lamps. One luminaire is located at the base of each window mullion.

Art walls are located one floor beneath the atrium and on the same architectural plane as the logo wall. Once again, Stauth's design had to accommodate the massive ductwork (this time overhead). "I used a really narrow and shallow slot for the T5 cove lights." Track lights were originally considered, "but they clutter up the space. Instead, we got the glow of a cove and it washes down nicely on the art." The cove lights are supplemented by 37-W MR16s to save energy.

Re/Max is an international company in the truest sense of the word, with offices from A (Argentina and Austria) to Z (Zambia) in more than 70 countries. Each time, a new office opens, a ceremony ensues at the Re/Max headquarters and the home nation's flag is hoisted along the



Flags representing international Re/Max offices hang on two large walls. Two rows of 6-in. adjustable 70-W T6 CMH downlights penetrate through rows of flags.

flag wall in the lobby. (There are now two walls due to the large number of flags.)

Stauth designed two rows of adjustable 70-W T6 CMH downlights that penetrate through three thick rows of flags. In addition, Re/Max wanted its awards case to be prominently displayed. A room was created behind the cases and painted white, and fluorescent strips placed so that light would be distributed evenly to the glass walls of the case.

The building also includes a training center/TV studio used for teleconferencing. The lighting design had to ensure an even level of vertical footcandles on the faces of the people using the room. The lights are also completely dimmable. "The source is two 40-W biax lamps in each luminaire. I used 40-W instead of 50 or 55 because the 40-W lamps have a 20,000-hour life. If you go up [in wattage], the

life goes down to 10,000 hours," says Stauth. In some areas, 54-W lamps had to be used to achieve the desired 30-35 fc.

THE ICE STORM

Perhaps the building's most stunning design flourish are the "light chimes" in the atrium. There are approximately 20 of these "semi-custom" chimes (manufactured by a furniture company) hanging in two parallel rows from the ceiling. "The interior designer, Deborah Barber, and I designed them and came up with the configuration and location and presented it to the owner," says Stauth. What makes the design stand out, says Stauth, is that the length of the chimes is staggered across each row. "They look like icicles dripping off a house. They're not uniform. The two rows are not noticeable because the chimes are in staggered lengths." Moreover, since they reflect off the

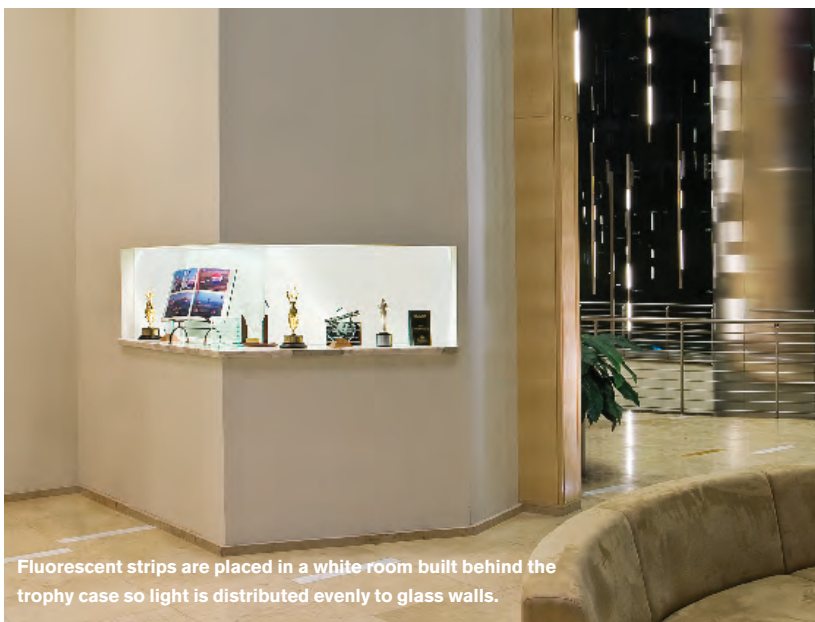
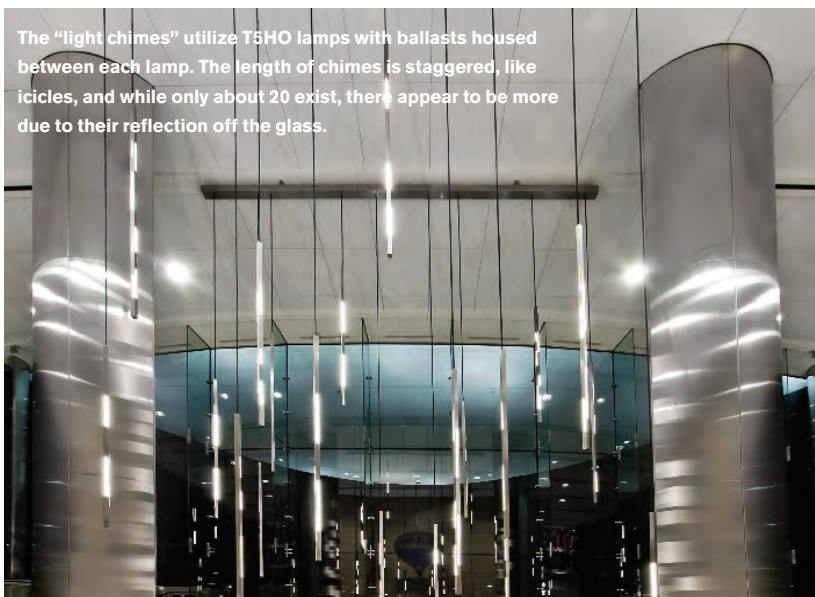
glass in the atrium there appear to be many more chimes than actually exist, depending on the visual angle.

The chimes house T5HO lamps with a ballast housed in between each lamp. Their waterfall effect is visible from the lobby and the level below, from the escalator looking up and, of course, from outside. The owner approved the concept even though main-

tenance will require that scaffolding be placed over the escalator.

Typically, the chimes and flag wall lighting provide the lobby illumination during the day. Other lobby lights are usually off. At night, during the various social function that take place in the facility, Re/Max staff can switch off the overhead induction downlights and logo wall lighting, leaving only


The “light chimes” utilize T5HO lamps with ballasts housed between each lamp. The length of chimes is staggered, like icicles, and while only about 20 exist, there appear to be more due to their reflection off the glass.



Fluorescent strips are placed in a white room built behind the trophy case so light is distributed evenly to glass walls.



Shallow and narrow coves—their size restricted by the massive ductwork above—house T5 fluorescent lamps which light the art walls.

the glow and reflections that emanate from the chimes. When the lighting is right, even the corporate logo—balloons and all—can be downplayed. Now that’s a company secure in its branding. 

METRICS THAT MATTER

Re/Max Headquarters

Watts per sq ft: 1.06, including site lighting load (complies with Colorado Model Energy Code)

Illuminance Levels: atrium and corridors = 10 fc (estimated); offices, AV and conference rooms = 30-35 fc (estimated)

Lamp Types: 31 total (25 interior)

Fixture Types: 79 (includes site and building)

About the Designers: Marla J. Stauth, PE, LEED



AP, Associate IALD, Member IES (1999), is a lighting consultant, electrical engineer and owner of Frankly Lighting. She has over 20 years experience in lighting design, controls and power design. Her projects include corporate offices, retail, hotels, historic buildings, institutions, monuments and sculptures, landscapes, streetscapes, malls, parking lots, facades and residences. Ms. Stauth has received multiple local lighting awards and several IES International Illumination Awards of Merit. She is active in her local section of the IES and serves on several IALD committees.



Deborah Barber is a principal/director of programming and interiors with Barber Architecture.