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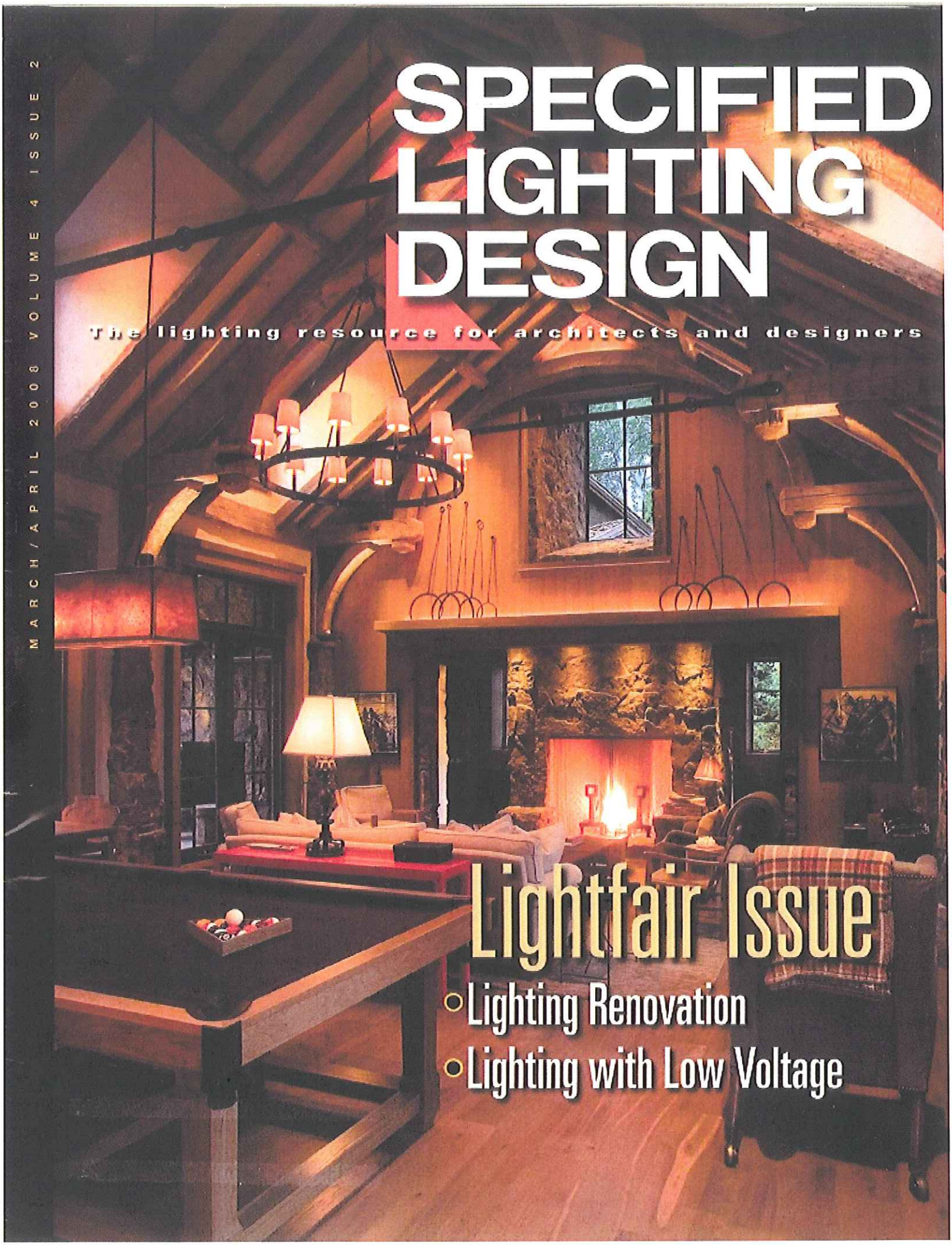
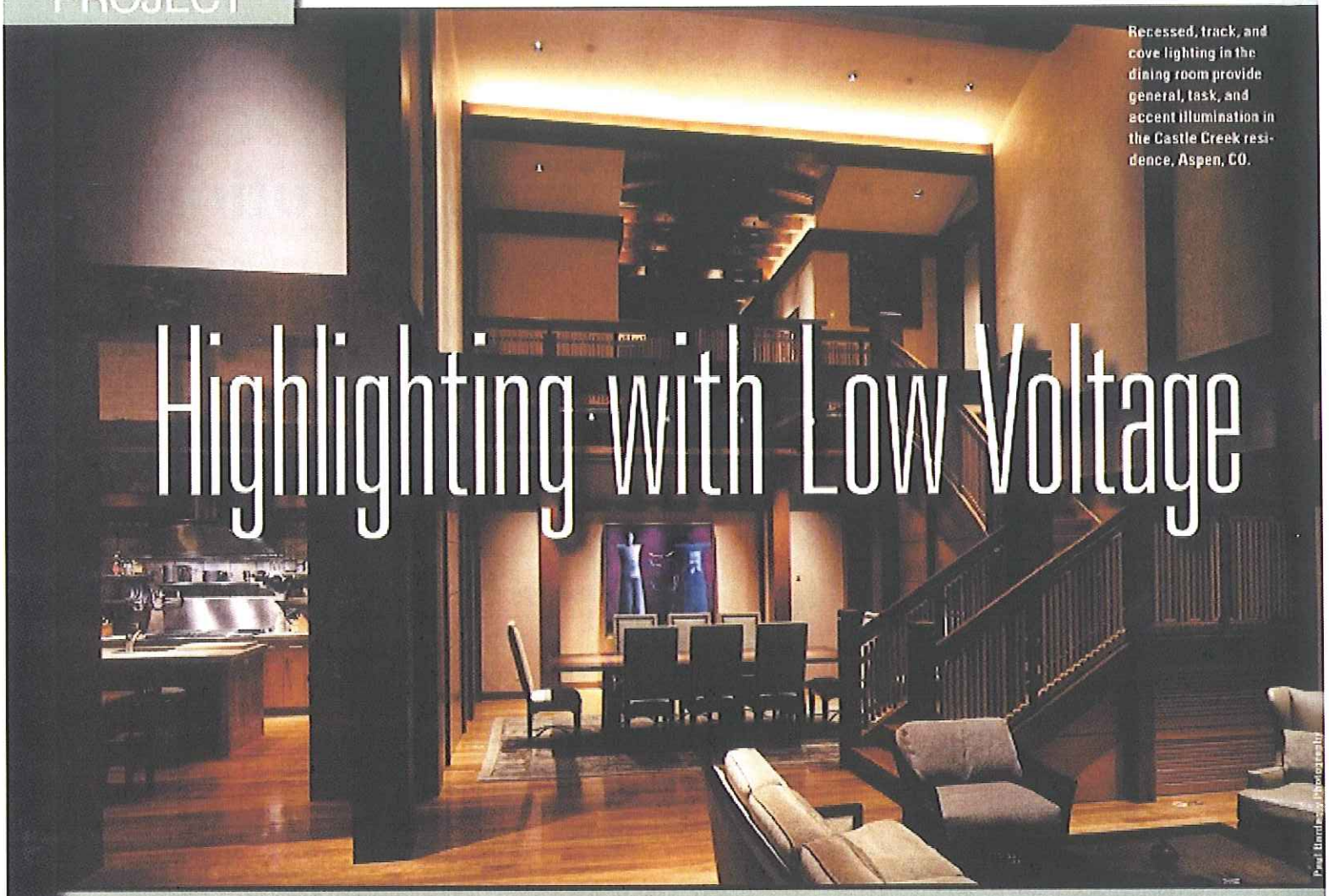
SPECIFIED LIGHTING DESIGN

The lighting resource for architects and designers



Lightfair Issue

- Lighting Renovation
- Lighting with Low Voltage



Recessed, track, and cove lighting in the dining room provide general, task, and accent illumination in the Castle Creek residence, Aspen, CO.

Paul Bardagjy Photography

Highlighting with Low Voltage

Specifying quality products and educating clients

"There is a very fine line between quality and cost savings," said Kale Lacroux, IES, vice president of the lighting design firm Robert Singer & Associates, Aspen, CO. The firm specializes in high-end residential and commercial design projects. "Specifying quality products and maintaining them throughout the design process comes down to a designer's confidence, experience, and reputation. When cutting cost becomes an issue, it's the lighting designer's responsibility to ensure that design integrity is maintained, even if cutbacks need to be made. A lot of issues can arise from a lighting design being compromised to save money."

Because reputation matters

"Any Robert Singer & Associates lighting design project including low-voltage lighting fixtures will have Semper Fi [Manchester, NH] transformers specified to power them," Lacroux said. "The transformer is an integral part of our standard specification and it is understood that we do not allow any product substitution without approval. This helps protect our designs' integrity."

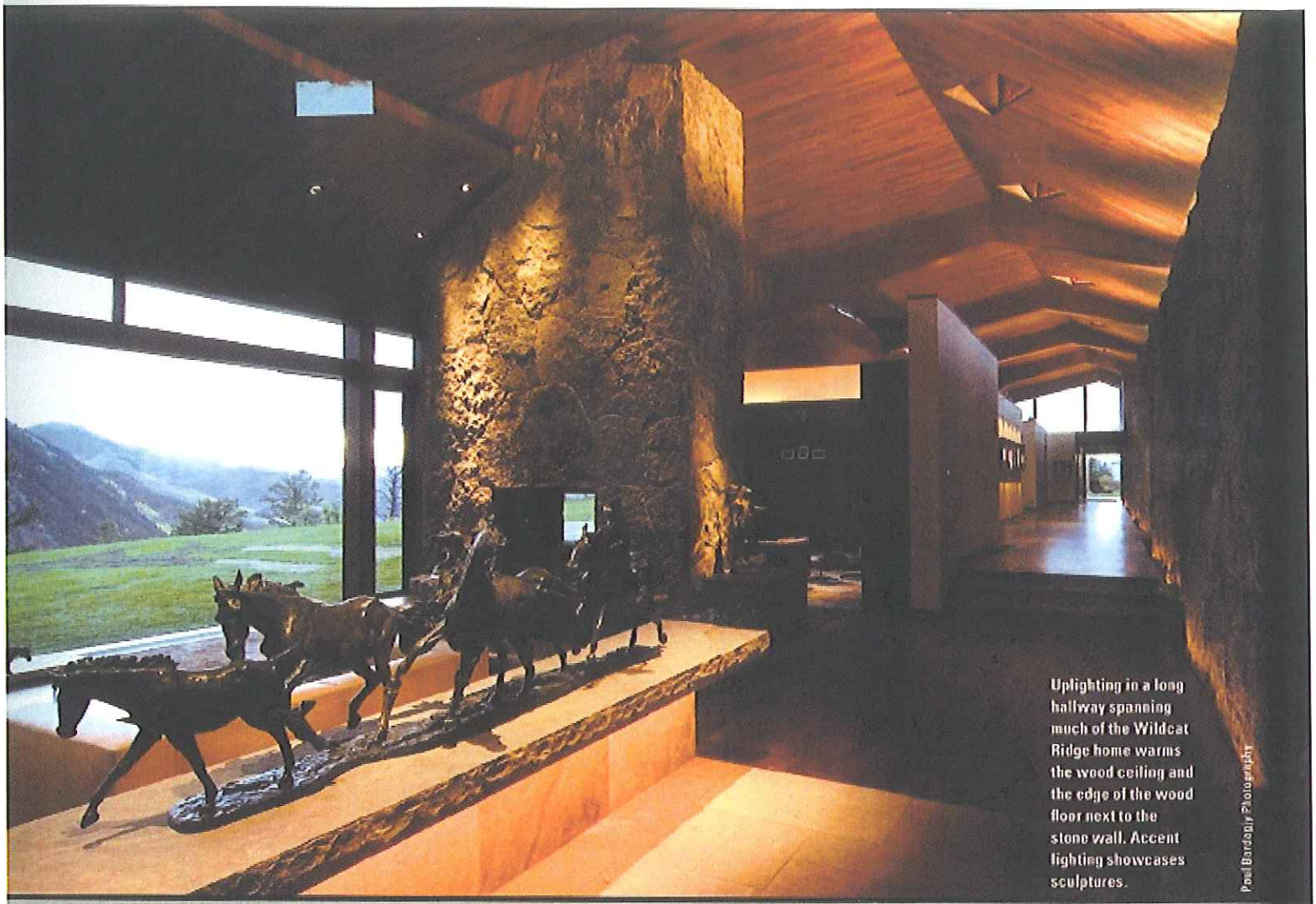
When creating the lighting design, the company maps out the entire project with various details, including lamp and fixture types. The plans also include detailed notes and instructions that transformers should load up to no more than 80% of their rated capacity. The electrical contractor, who is responsible for calculating loads and sizing transformers, then purchases the specified items and installs them in the project.

"We try to make it as simple as possible for the electrical contractor," Lacroux said. "We give them the tools and information they need to bring the project to completion."

The design firm maintains its specifications by including a liability clause in its specification sheets that stipulates no equipment substitutions will be made without approval. This makes any unauthorized substitution the responsibility of the contractor.

"The few times that people have tried to substitute our specifications, they learned immediately that they would assume responsibility for any dissatisfaction expressed by the end user after the project's complete," Lacroux explained. "You can't get the expected light output and effect with cheaper, generic transformers. Not to mention that they'll overheat, hum, and burn out faster."

"Ultimately, the client gets to make all the financial decisions when it comes to product selection on a project, so why shouldn't they understand the difference in the quality of what they are purchasing? We educate them about the level of quality and how it affects the



Uplighting in a long hallway spanning much of the Wildcat Ridge home warms the wood ceiling and the edge of the wood floor next to the stone wall. Accent lighting showcases sculptures.

Paul Bardagjy Photography

are important parts of lighting design.

design they are paying for," he said. "After a client learns about differences in transformer quality, it gives the lighting designer more control over the project."

Seeing is believing

"Our clients want to know what they're getting, but don't always understand technical lighting terminology," Lacroux continued. "Therefore, we use a lightbox to demonstrate transformer differences in terms of light output, color quality, noise issues, and heat generation. The lightbox compares a Semper Fi transformer to an integral transformer, each powering a downlight using an MR16 lamp. During the test, the lamp powered by Semper Fi produces almost twice as many foot-candles and permits full-range dimming. It makes less noise and operates cooler than the other transformer.

"We specify that the electrical contractor is to install remote transformers as close as possible to the low-voltage lamps to minimize light loss and poor color quality due to voltage drop, so the transformers have to be very quiet," he said. "No humming or buzzing can be tolerated when a transformer might need to be concealed above shelving or inside cabinetry."

The firm's designers also want a transformer that is IC-rated, since the units often need to be installed in direct contact with insulation or in tight spaces. Multiple taps and secondary breakers also are on their "must-have" list of features.

"Once clients see the lightbox and the quality difference between the transformers, they're convinced and understand the difference," Lacroux said. "Seeing is believing. If you're not using the light sources in the design to their true potential, you're not doing your lighting design or the project justice. These transformers ensure whatever we design can achieve its potential."

A series of successes

Six projects—four in Aspen and two in Snowmass, CO—illustrate the firm's philosophy on low-voltage lighting design.

One of the Aspen properties, a Maroon Creek residence, was built in the 1960s and remodeled in 2005. Due to the limitations of the existing structure, a lot of low-voltage lighting was used on this project.

In the wood-beamed family room, low-voltage linear uplighting and track-lighting systems were installed on top of wood beams to wash a stone wall and provide ambient light in the space. Since the low-voltage lamps are powered by remote transformers, simultaneous boost taps provide even and consistent light levels by overcoming voltage drop since each wire run back to

Linear, low-voltage cove lighting from Semper Fi used in the Pyramid Road home makes a bed in one of the bedrooms appear to float.

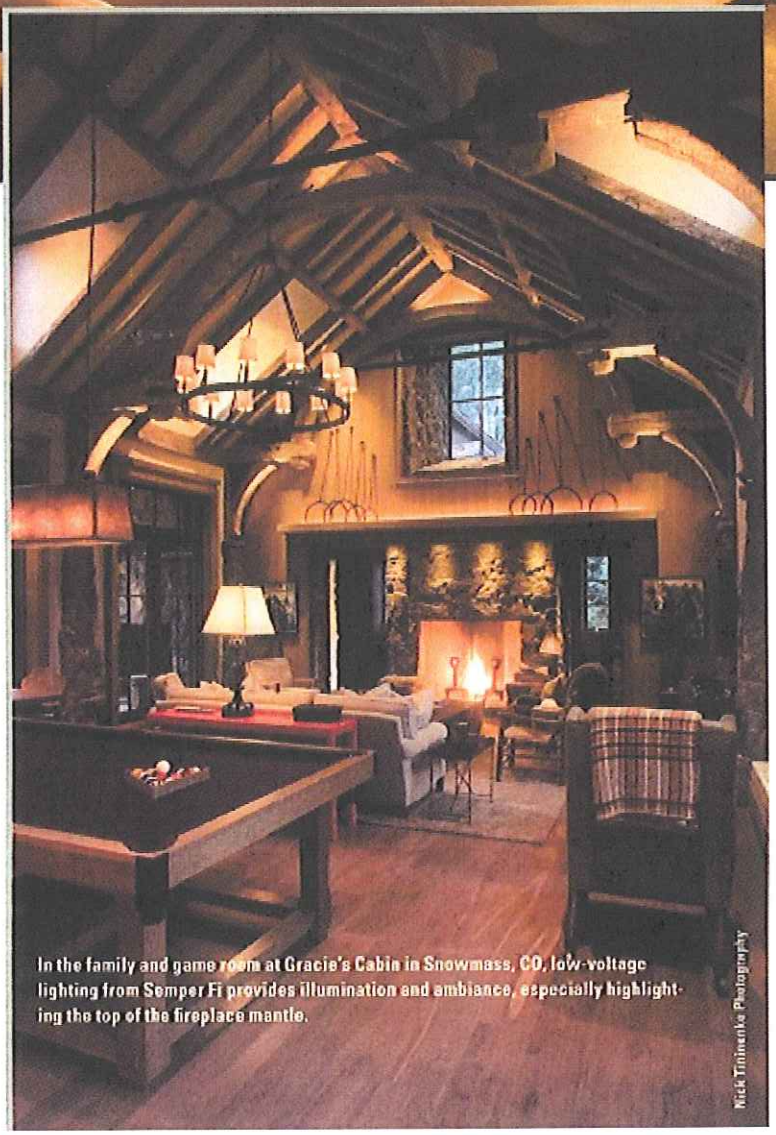
the transformer can use a different tap.

"Transformer mounting options allow us to install them anywhere," Lacroux said. "And they reliably dissipate heat, which is a necessity for tight installations."

Another Aspen home, the 9,000-sq.-ft. Pyramid Road residence, features multiple layers of light integrated into each space. Low-voltage lighting dramatically accents artwork and architectural elements, yet maintains a comfortable ambiance for a livable space. In the bedroom, a recessed, multiple head downlight over the bed provides reading light and general illumination. Linear lighting underneath the bed and bedside tables make the elements appear to float.

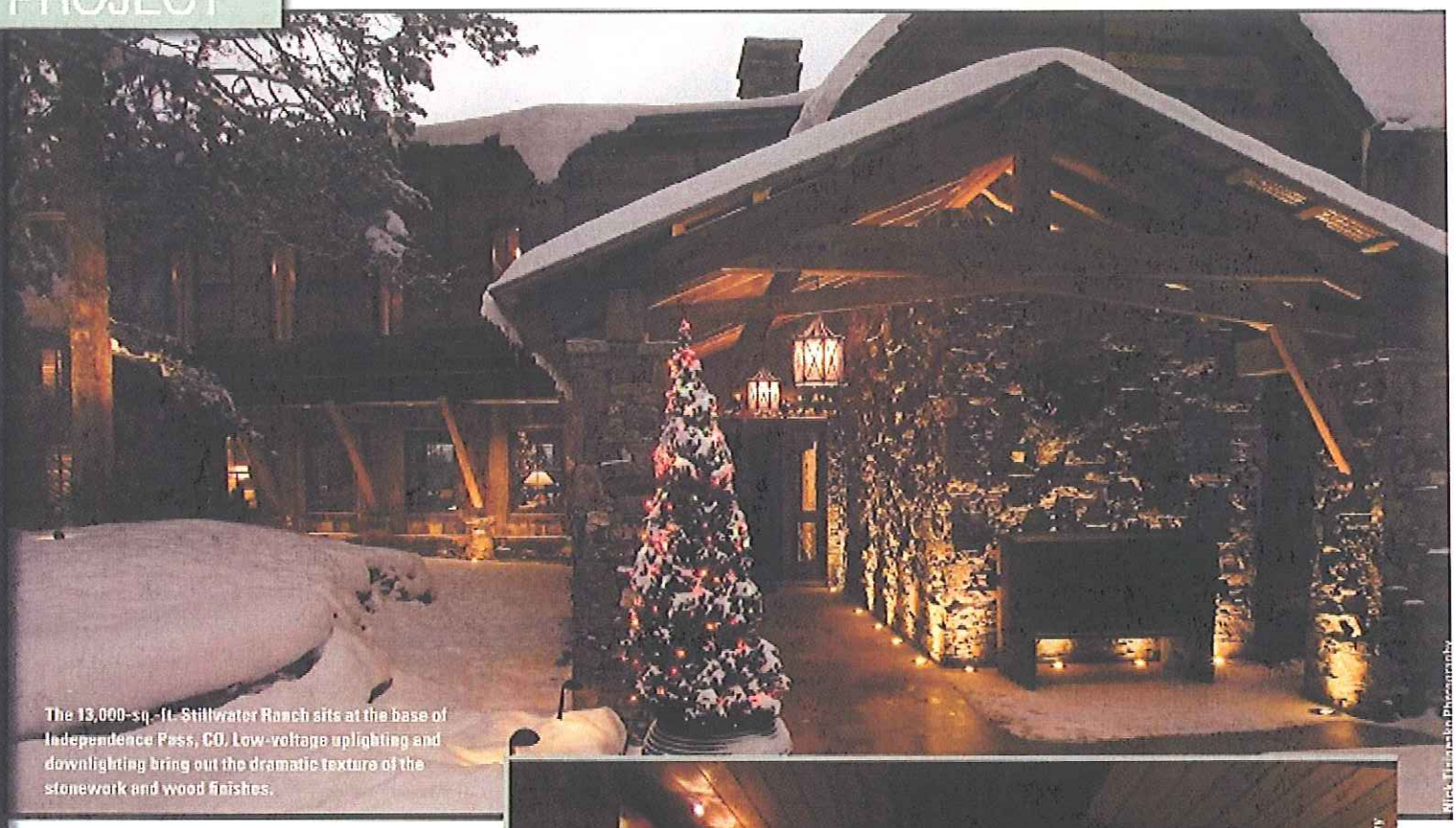
A third Aspen home is Stillwater Ranch. The 13,000-sq.-ft. home sits at the base of Independence Pass and was literally designed around its surroundings. Low-voltage uplighting and downlighting graze architectural surfaces of the home's entryway, bringing out the dramatic texture in both stonework and wood finishes.

The last Aspen example is Castle Creek, a 14,000-sq.-ft. residence with an Asian flair. Robert Singer & Associates designed a lighting system

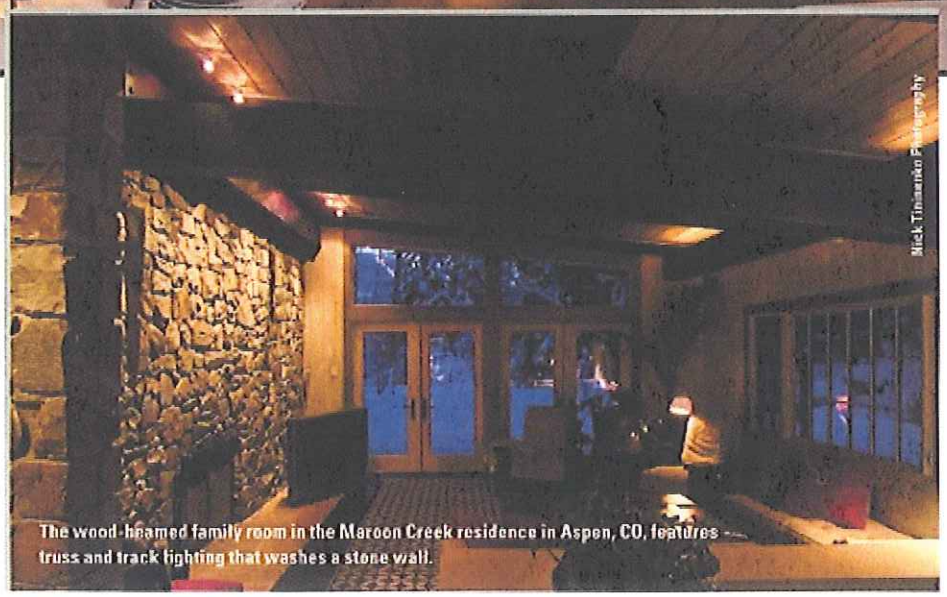


In the family and game room at Gracie's Cabin in Snowmass, CO, low-voltage lighting from Semper Fi provides illumination and ambiance, especially highlighting the top of the fireplace mantle.

Nick Trimarko Photography



The 13,000-sq.-ft. Stillwater Ranch sits at the base of Independence Pass, CO. Low-voltage uplighting and downlighting bring out the dramatic texture of the stonework and wood finishes.



The wood-beamed family room in the Maroon Creek residence in Aspen, CO, features truss and track lighting that washes a stone wall.

that complements the home's clean architecture.

The design includes almost no decorative fixtures. Recessed, track, and cove lighting in the dining room, for example, provide general, task, and accent illumination. Remote transformers quietly provide adequate power for proper light levels and color quality.

One of the two projects in nearby Snowmass, the 12,000-sq.-ft. Wildcat Ridge residence, is an open home with very few walls. Lighting integrates subtly with the finishes, complementing spaces without compromising functionality.

"We needed to design a 24-V lighting system that provided color consistency for the entire house, without an unwanted buzz echoing through the home," Lacroux said. Color consistency shows in a long hallway spanning much of the home. Uplighting warms the wood ceiling and illuminates the edge of the wood floor next to the stone wall. Accent lighting showcases sculptures.

Voltage drop wasn't an issue because the design firm relied on the transformers' secondary boost taps to ensure each lamp receives the proper voltage for light output and color quality.

"The remote transformers allow us to run longer wire runs when necessary," Lacroux said. "Not to mention that we get excellent and unparalleled support from them and the local sales representative."

Also in Snowmass is Gracie's Cabin, a 10,000-sq.-ft. residence at the base of the Snowmass ski slopes. The home helps entertain a stream of guests and handles heavy family traffic. Low-voltage lighting in the family and game room, especially on top of the fireplace mantle, helps provide the illumination and ambiance required by the owner's lifestyle. Throughout the house, lighting accents a rustic, western decor, including paintings and fireplaces. Remote transformers keep obtrusive hum away from guests and family.

"The transformers actually add value to a home," Lacroux said. "A residence typically is remodeled every 15 to 20 years so the transformer's 25-year warranty definitely factors into why we spec those specific transformers," he said. Some homes will change hands four or five times over that period, so a warranty that moves from owner to owner is appreciated.

"Bottom line, we specify Semper Fi transformers because they are the best," Lacroux said. A solid specification is critical since value engineering doesn't take into account quality or performance, only the initial cost. SLD

For more information on Semper Fi transformers, circle 8 or visit www.specifiedlightingdesign.com

For information on these or other projects by Robert Singer & Associates, circle 9 or visit www.specifiedlightingdesign.com