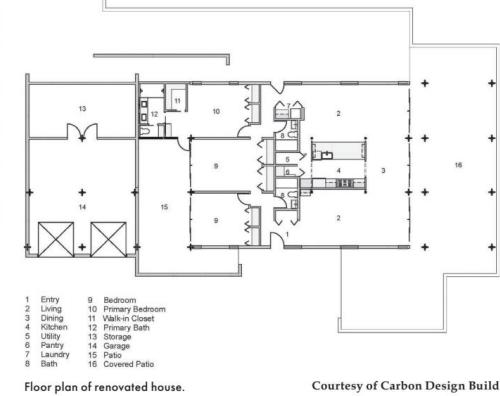


Project: Alcoa House Addition/Renovation, Alexandria, VA
Design/Build: Carbon Design Build
Structural Engineering (patio roof extension): Scovis



Aluminum Loyal

1950s Alcoa Demonstration House is Lovingly Refurbished

by Celia Carnes



Cover of original brochure for the Alcoa Care-free Home. Source: Alcoa brochure

Renovated Alcoa House with new screen wall lining covered patio at right. All photos © Tammy Loverdos | Showcase Photo Tours, except as noted

When **Deborah Lerner** and **Matt Bieschke**, the husband-and-wife duo behind boutique design and construction firm **Carbon Design Build**, were engaged to renovate the Charles Goodman-designed “Alcoa Care-free Home” in Alexandria’s Hollin Hills neighborhood, they already had some ideas about the project—because they’d previously looked into purchasing the house themselves. However, when the eventual owners, two area real estate agents, ultimately acquired the iconic mid-century residence, Lerner and Bieschke were more than happy to come on board to shepherd the home’s rehabilitation.

“In this project there was absolutely no clashing,” said Lerner. The homeowners shared with Lerner and Bieschke a

love for mid-century design and a commitment to the integrity of the property, though they were somewhat unfamiliar with the unique qualities of the Alcoa houses at the outset. Built shortly after World War II, Alcoa houses were developed by the Alcoa aluminum manufacturing company as an experiment in utilizing this inexpensive, mass-produced material in new industries like residential construction. Around the country, Alcoa partnered with talented designers, including Goodman, to design model homes that could be replicated in large numbers.

Unfortunately, “it was a failure,” said Lerner. The houses were much more expensive to produce than originally thought, meaning that “the only houses that ended up built were the

models around the country,” according to Bieschke. That includes the house in Alexandria, making it a rarity even within the already precious market of mid-century modern homes. While the homeowners were already familiar with the mid-century Hollin Hills neighborhood, “it’s not as if they had researched Alcoa homes before; this one fell in their laps,” said Lerner, but “once they got on this project, they dug deep, researched the homes, talked to other owners, and became heavily invested.”

This sensitive, creative rehabilitation required a significant mental investment by all involved. “Every decision has to be about what’s best for the home—not necessarily for the budget

or even for the residents,” said Lerner. The design team took a forensic approach to repairs, necessitated by the home’s unique materiality. “You can’t just run to the store and get what you need, [through] sometimes we were able to salvage bits and pieces from the house to use somewhere else,” she explained. Bieschke added, “We painstakingly removed and labeled all of the trim pieces while we updated.”

In a few cases, difficult-to-replace items had to be sourced from unexpected places. “We really wanted to salvage the original sink in the bathrooms, but if you remove the sink, you have to remove the brackets, then you’re into the original laminate walls, and so on,” Lerner explained. The original sinks

were completely rusted, forcing Lerner and Bieschke to think outside the box to find a solution. The right person for the job? "It was an automotive guy," Lerner revealed—one who'd never worked on a sink before. "They had to patch, rebuild, powder coat them, and it worked out at the end of the day," she said. "We found the right guy."

While the house retained its two original bathrooms, a third bathroom, connected en suite to the home's primary bedroom, constituted the only major addition. The house's original layout, an open plan unique for its era, placed the kitchen and living spaces at the heart of the home. Although it was designed more than six decades ago, the configuration "feels entirely current," according to Lerner, and required no major changes. "It's beautiful, efficient, and straightforward." The house's electrical and plumbing systems, however, were less than current. "The bottom line was the house was not functional to live in and not efficient at all," according to Lerner. HVAC and plumbing were carefully updated, and heated floors were installed throughout the house to improve energy efficiency.

At every step, the integrity of the structure and materials was prioritized. Maintaining the living area's dramatic vaulted ceiling "was priority number one," according to Lerner. "We did everything we could to hold on to that and make it last another 60 years." The numerous aluminum elements used as trim throughout the exterior and interior were similarly given new life. "Even though we had to repaint, clean, and powder coat, the actual aluminum elements of the house are just as beautiful as when they were installed," said Lerner. Aluminum lattice panels



Kitchen with rear living area and dining room beyond.



Front living area.



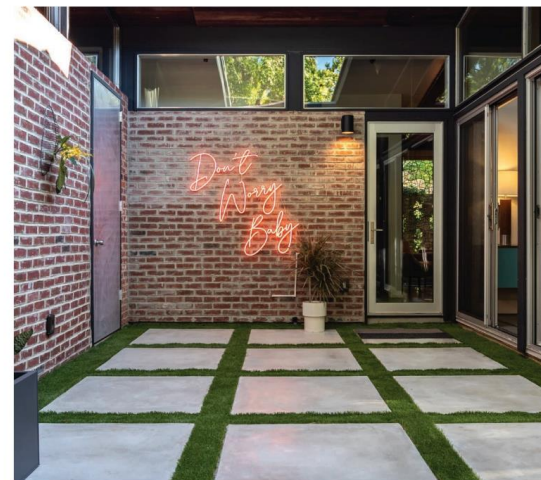
Front living area and covered patio.



Front bedroom with patio beyond.

were restored to their original shade of teal, and siding panels were similarly refurbished. Salvaged aluminum siding pieces were used to create a screen shielding a new outdoor space adjacent to the living room. Protected by a roof that extends seamlessly from the original roofline, the outdoor area increases the house's comfortable living area for much of the year.

"This is a testament to what can happen when you've got clients, designers, and contractors completely on the same page with a love for this mid-century design and architecture," said Lerner. "It was such a labor of love, and everyone feels so accomplished with having saved such a unique home." 🏡



Patio lining bedroom wing.