

# Custom Builder®

JULY/AUGUST 2015

CustomBuilderOnline.com

## Tearing Down and Building Anew | 10

Demolition challenges present opportunities to repurpose

Design spotlight: porches | 18

Rebranding your company | 20

# Teardown, Salvage, and Design

By Mike Beirne, Editor

For preservationists, a teardown can mean a vintage home that exemplifies the character of a neighborhood will be knocked down to make way for a behemoth of a house. But there also are cases, as profiled here, where a building is so damaged or obsolete that the cost of gutting it versus the expense of building new makes the decision obvious. However, demolition need not be total, as a portion of the original home, such as the foundation or another part of the structure, can become part of the new design.

Here is a tale of two homes that were originally intended for significant remodeling but ultimately were demolished. The first is a Wyoming house on the east side of the Jackson Hole valley that was completely uninhabitable due to mold, rodent infestation, and a foundation on the brink of collapse. The second is a Cape Cod on the Connecticut shore that would have cost significantly more than new construction just to make it sturdy enough to withstand the severe storms in that area.

## The Mountain House

Ted and Joanne Wong inherited a mountain retreat from Ted's uncle Ling Tung, who was the music director of what became the thriving Grand Teton Music Festival. The original owner before Tung was a handyman who built the house piecemeal during the 1970s. The building was a log cabin hodgepodge with a dozen elevations, a gambrel roof, and decks adjacent to and on top of an octagonal room that served as a bedroom. The ceilings were very low—so low that the octagon offered a view of the Tetons only if visitors taller than 6 feet bent under the beams to look

Two custom home projects take on demolition challenges and opportunities to repurpose portions of the original

out the windows. Even the gravel carport below one of the decks offered barely enough clearance for a minivan.

"It was a crazy hobbit of a house, but it was cool," says Chris Moulder who stands 6 foot, 6 inches tall and is a principal of Dubbe Moulder Architects, in Jackson, Wyo. "It harks back to how the valley was back then when people would carve living space into every nook and cranny of the valley to have somewhere to hole up for the winter and ski."

The Wongs wanted to keep the house as an homage to their maestro uncle. The initial plan was to add to it and make the height of the rooms code compliant. But the demolition phase unveiled a cascade of problems.

When builder Pete Welker of Mountain Home Builders, also in Jackson, started the teardown, his crew discovered nests and carcasses of squirrels and other woodland creatures that lived





**Left:** The original Jackson Hole valley house was a hodgepodge of elevations and decks added over the years to an octagonal room. The new home above is three times the size of the original at more than 4,000 square feet. The octagon was kept in the new design.



The open floor plan connects the kitchen to this living room, which includes entryways to outdoor decks on both sides of the house.

and died within the walls. Later, the crew removed a wood-framed wall built in front of a foundation wall that abutted the hillside. They unveiled an unreinforced concrete block wall that was bulging, lacked mortar, and was on the brink of failing.

Either the handyman owner or a remodeler tried to “fix” the problem by scribing studs against the bulging CMU wall and attaching joist hangers to the studs so they wouldn’t kick out from the bottom plate due to the lateral pressure of the hillside. The main building was literally draped over that wall; it and another lateral shear wall were the only supports holding up the house. Given that the valley is in the same seismic zone as Los Angeles County, in addition to weathering wind gusts and at least four feet of annual snowfall, “the fact that the house was still standing is amazing,” Moulder says. The building was jacked up for about eight weeks while crews worked to excavate the foundation, which was a combination of blocks and hand-mixed concrete. But rain steadily fell during the first two weeks, and the temporary support cribbage started to sink.

“It was really spooky,” Welker says. “We adjusted the cribbage, reshored the house, and started to rip out the foundation with this ominous house just kind of sitting there in the air.”

Black mold was the next discovery, forcing the job to shut down for about three weeks until lab results confirmed the toxic presence of penicillium. Mold mitigation required another three weeks. As demolition proceeded to the kitchen, the crew found 8 feet of ceiling that sloped about 3 inches. At that stage the problems piled up to a point where Welker and Moulder called for a meeting with the owners. Wong, an engineer, accepted the reality that new construction was the more viable and healthy option.

The house was set down and demolished, except for the octagon and a portion of a concrete slab in the basement. Moulder designed a new house that used the existing logs and timbers from the octagon room. However, that part of the home, which now serves as a second bedroom and office, seemed too compressed for a 4,000-square-foot house that is three times larger than the original building. Welker suggested raising the octagon’s ceiling by 3 feet, lowering the floor a foot, and adding new walls and bigger windows.



**Top:** The octagon room still includes the original timbers after the ceiling was raised 3 feet and the floor lowered by a foot. The mountain view became the focal point by enlarging the windows in the room and (above) designing windows to daylight the stairway leading to the second floor.

“Every project that I do, I feel like I’ve got to step back and if there is something too bold or too minute, it’s not going to balance,” Welker says. “The art with remodels or additions is that a portion of the house cannot look like it was an add-on. I think there’s an art to finding that balance and design and craftsmanship to let the project flow nicely and make it feel like it’s all meant to be.” Building new rather than remodeling resolved any issues with updating plumbing and electrical, having the walls and ceilings level and true, and enabled the home to include a two-car garage. The new concrete foundation was built with structural steel and more hold-downs than any other house Welker has built because the seismic, wind, and snow loads on that hillside are “intense,” he says.

The jobsite presented challenges that called on Welker’s problem-solving ability just to get materials there because it was on top of a steep mountain road. When the first snow fell on the project, Welker invited two neighbors on the road to meet his crew at the bottom of the hillside. They critiqued the tires on their vehicles, dividing them into two categories: tires that might make it up the mountain and tires that wouldn’t. That session was Welker’s introduction to the mountain, and he stayed on the neighbors’ good side by regularly plowing and sanding the road.

But the maintenance didn’t tame the steep road. When the Gradall telescopic handler truck carrying trusses and lumber spun out in the snow, the crew had to shovel sand from the middle of the road into the tracks in order to move the vehicle up the mountain. When the trucks were stuck, the crews boomed out the material as far as the boom would go and then carried the materials by



All lights in this Connecticut shore house are LEDs and the kitchen flooring is 5-inch character grade white oak with a natural finish.

hand or strapped them to a pickup truck and dragged them to the jobsite.

"It was such an interesting project, so much was thrown at me, and it was really just shooting from the hip as we went," Welker says. "Then the new building went up and came together so nicely."

## Connecticut House

The 1960-ish Cape Cod overlooking Mumford Cove in Groton, Conn., was to be a whole-house remodeling project. But after the new owners calculated the cost of the labor-intensive work just to strip the interior down to the studs, remove and replace all the windows and siding, redo the roof, and take down—brick by brick—the chimney that jugged from the middle of the floor plan, they opted to build anew.

A teardown and new construction were more feasible, particularly considering the work required to anchor the walls on the old house and add wind shear-control features just to comply with the building code for being within the state's wind-borne debris zone. Besides, the Cape Cod didn't take



The streetside view shows how venting for the overhead rangehood in the kitchen was subtly designed into the center of the front elevation. "We worked hard to incorporate the hood into the exterior trim, and we have glass all around that. I think it worked very well," says architect Jack Kemper.