The Carter Home

Blacksburg, Virginia – Est. 2019

From Concept to Home

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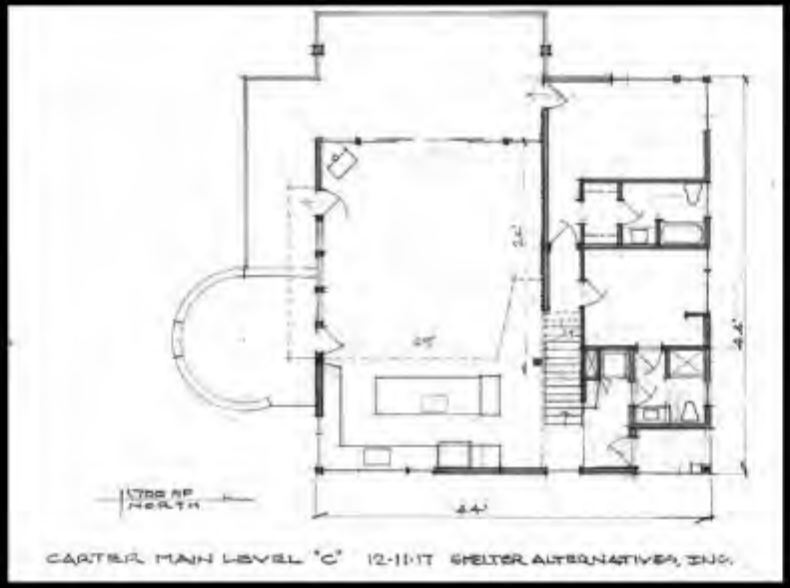
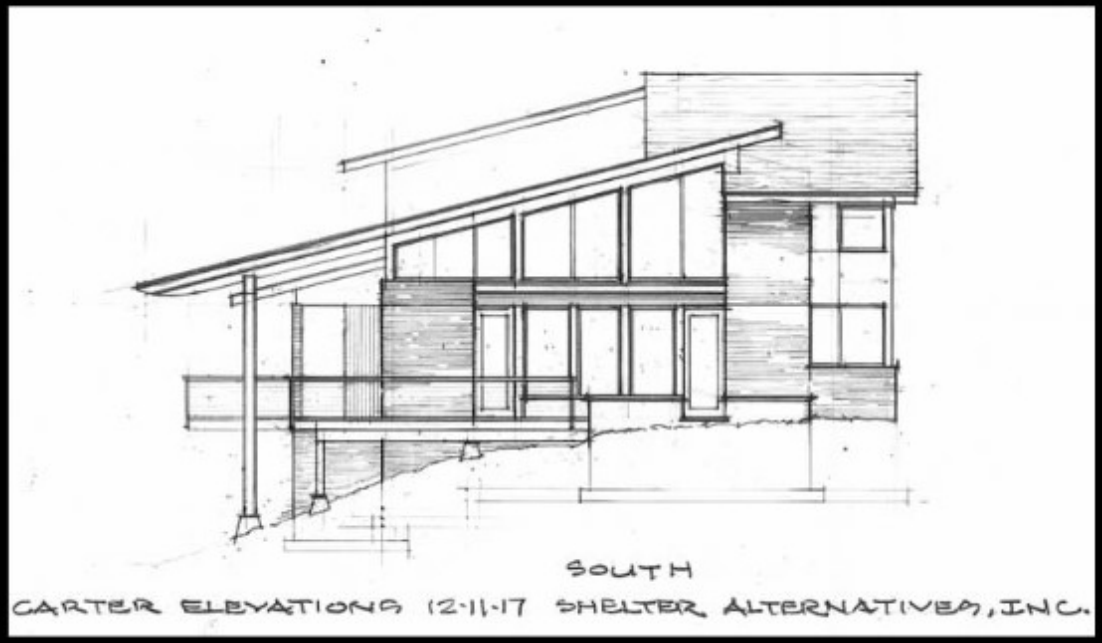


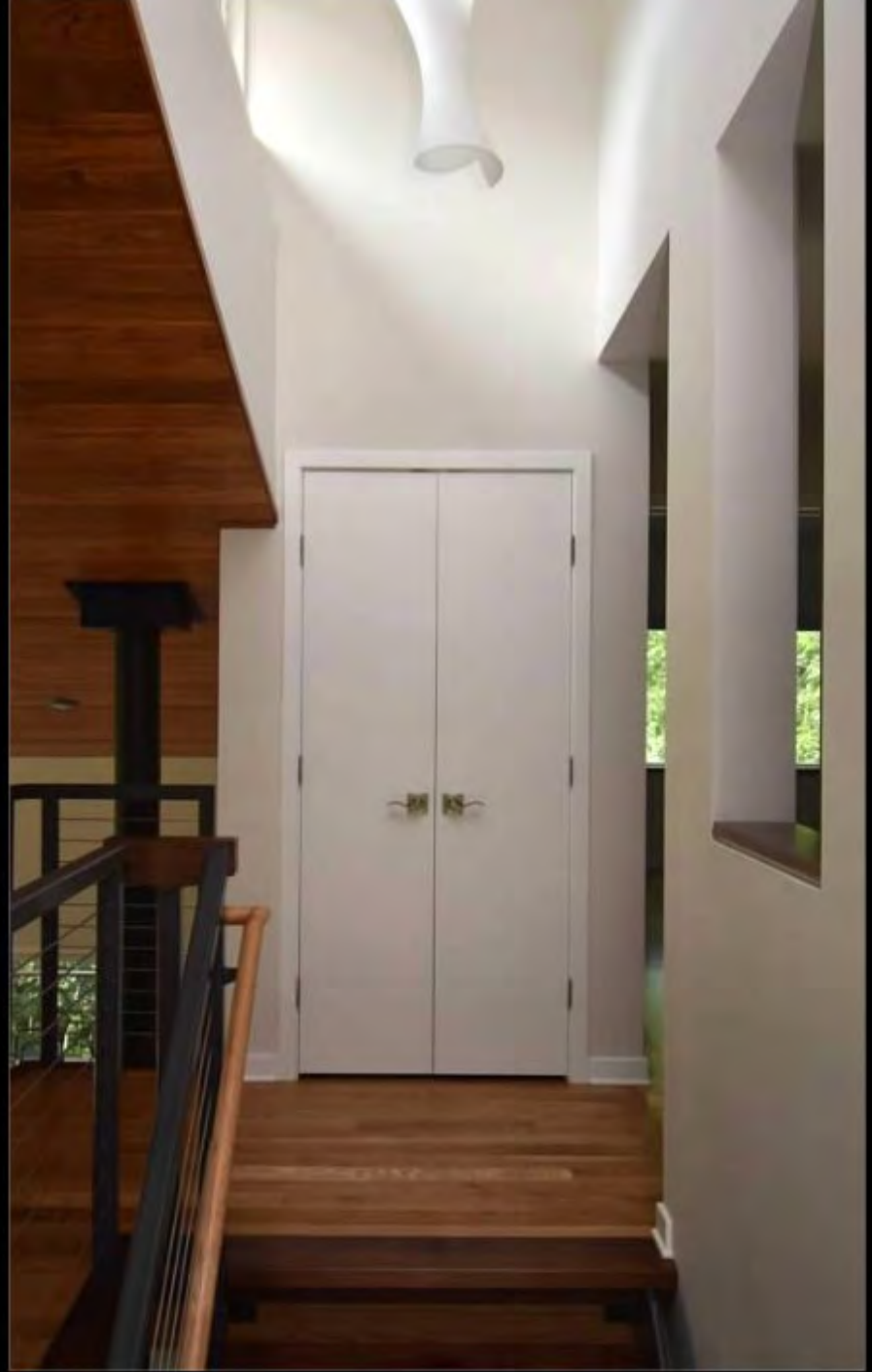
Original Drawing

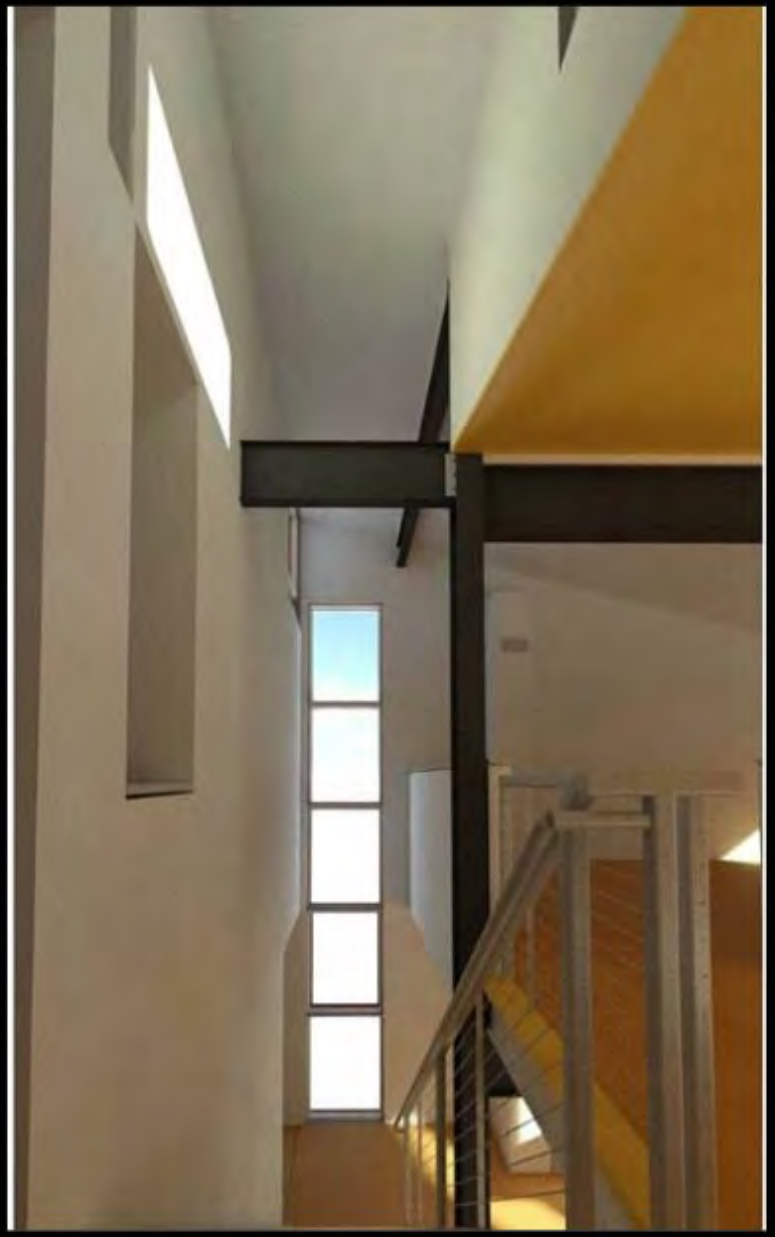
Final Digital Floor Plan



Original Drawing

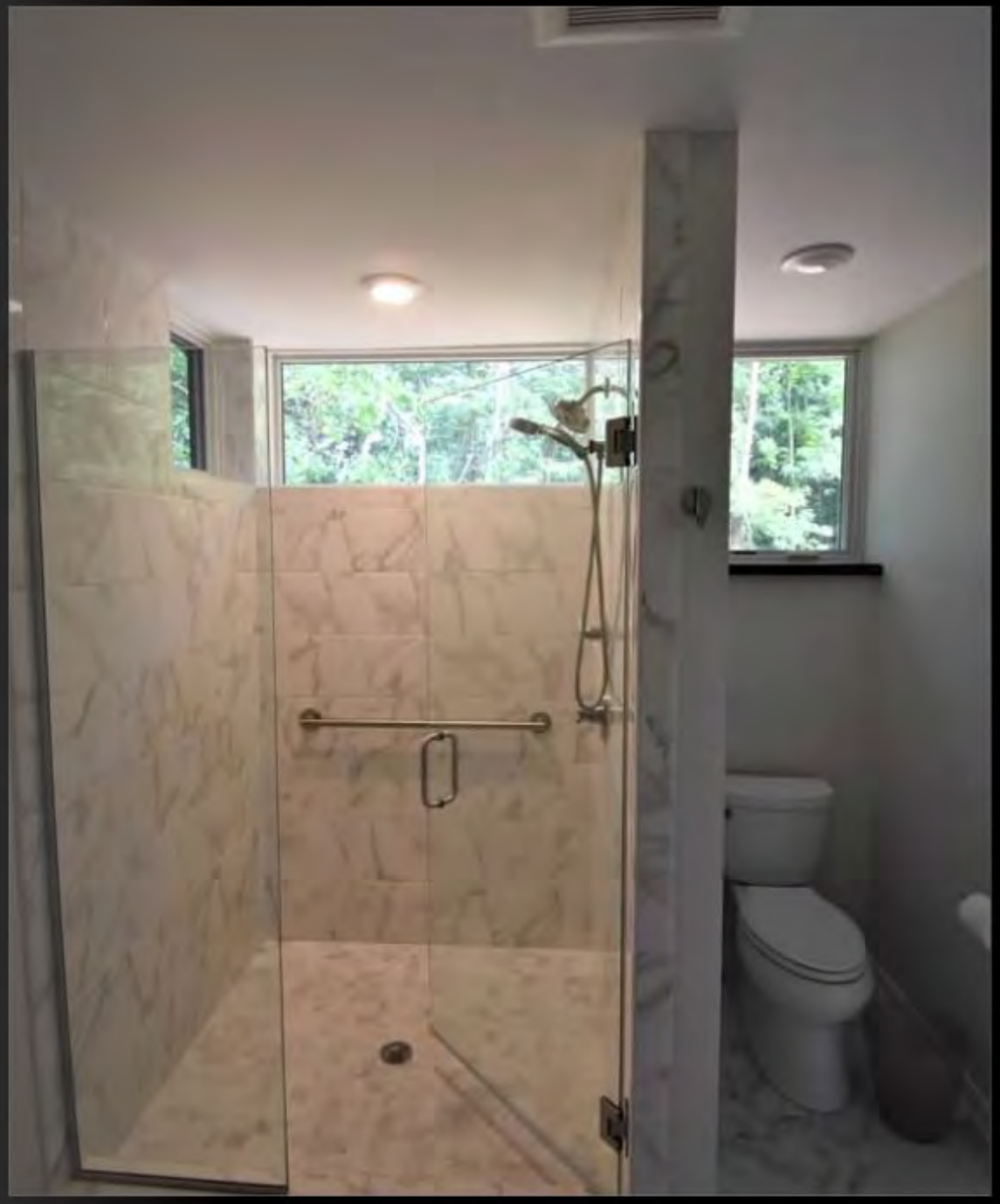
Final Elevation





Digital Rendering

Completed Photo



Modern Mountain Retreat
July, 2019

When his father passed away, outdoors aficionado Clem was the natural choice among his scattered siblings to take on the property that his father loved so much. Work began in 2017 on a modest upgrade to the studio (circa 1977) where his father Dean Carter, longtime head of the Art department at Virginia Tech, spent many hours creating sculptures and entertaining guests. Spring of 2018 saw the start of construction on a new home up the mountain above the studio, in the spot his father always referred to as the number one building spot.

Inspired by the studios shed roof and tall north windows, the views, and the mountain setting, Clem worked with designer Chris Hudson of the Shelter Alternatives, Inc. design-build team to create a home that Clems daughter would later dub the mountain modern cabin. At first look, the floor plan of the home looks simple enough with a square footprint. But the juxtaposition of four opposing shed roofs led to the need for steel structure. That was just fine with Clem as the vision forming in his mind combined the use of visible steel and glass contrasting with brick, wood and stone. The shed roof concept is also mimicked in the freestanding carport that stands as somewhat of a bandstand to welcome visitors.

Attention to detail by field supervisor Eddie Hall in executing the vision of Clem and Hudson show in the way the house came together. Former students of Dean have noted the presence of his vision in the house; he was a fan of modern architecture. Passing the studio on the drive to the house one cant help but pick up on the similarities in inspiration and angular construction. As a nod to the natural setting minimal tree cutting was done around the home and a trickle septic system is installed among the trees avoiding a clear cut.

Construction was not without its challenges. One of the biggest hurdles was the VDOT bridge on the access road with a weight limit of 10 tons. Concrete trucks and large deliveries had travel through a farm field and ford the stream. This made parts of construction highly weather dependent. Even once across the bridge there were some tight turns on the long gravel drive that could pose a problem for large trucks. One crane, trying to avoid a tight turn, got stuck up to its axle in the soft ground of the adjacent field.

Principal goals included a structure that could serve to host multi-generational family gatherings, embrace the natural mountain setting with an edginess and respect for energy efficiency. The homes efficiency rating (HERS) is nearly 50% better than a typical code compliant home. Universal design features include zero step entry, lever handles on doors, wide hallways, open floor plan, grab bars in bathrooms, and main floor bedrooms.

Wall construction is largely done with 2 x 6 studs on 24 centers filled with damp spray cellulose. Most of the exterior walls also received a continuous layer of EPS foam sheathing creating an R-30 wall envelope. The ceiling trusses allowed us to maintain the long spans and insulate to R-60 with blown in cellulose. The house sits on a sealed crawlspace. The tallest portion of the crawl space allows for a full-size walk-in door. A concrete slab in this portion of the crawl space allows easy access to service the high efficiency fully modulating heat pump (17.75 SEER 11.8 EER, 9HSPF) and the Energy Recovery Ventilator.

The 2,850 square foot home features four bedrooms. The upstairs houses two bedrooms and a generous loft. Views from these bedrooms are enhanced by large windows where the drywall from the walls and ceiling blend seamlessly. The only trim is a thick piece of walnut at the sill. This presentation of the Blue Ridge Mountain view could pose a challenge of guests not wanting to leave. In the bathrooms, the high windows provide privacy but allow for a play of light. The highest windows feature a splayed sill to spread the light lower into the room. The lower ceiling of the loft gives it a cozy feel with a view over the half wall peering down past a steel beam and wood ceiling to the expansive living room and decks below.

The main level features the master bedroom suite along with another modest bedroom intended for Clems mother. Each adjoins a bathroom, but the smaller bedroom shares its bath with the public space. Behind a large barn style door, almost hidden in the hallway to the master suite, sits the laundry area. As you enter the house through the mudroom area, though, what catches your eye is the kitchen and great room. The room opens up with a tower of light created by a stack of five windows opposite the stairway. The steel stairway carriage supports thick walnut treads locally custom made for the application and light cable handrails that sometimes disappear among the other materials. An adjacent brick wall contrasts the smoothness of the steel and smooth walls extending to blur the transition from inside to outside.

Tyvek
Tyvek

Home Designed and Built by Shelter Alternatives, Inc.
Blacksburg, Virginia

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