

BASAS RESIDENCE

This 2,350-square-foot slab-on-grade house rests on the back of a low ridge on 21 acres in rural Virginia. An existing logging road was utilized as the driveway to minimize site disturbance. The house was designed with an unobstructed internal circulation path between the public and private spaces to accommodate handicapped accessibility. Sinks and a workstation were set at a height to accommodate a wheelchair. There is a 5-foot turning radius in the kitchen corner, hallways are 4 feet wide, pocket doors were used instead of swinging doors, and drawers and shelves were used in the kitchen instead of swinging cabinets.

The high shed roof facing southeast captures daylight and direct solar gain. The lower side creates an intimate setting anchored by a stone hearth and chimney made of salvaged stone. The stepped plan creates exterior spaces adjacent to the center of the house.

SUSTAINABLE FEATURES:

The house is orientated to maximize passive solar gain.

Locally sawn poplar siding and white oak trees that were removed during construction were milled and used as exterior posts for the porch on the north side of the house. Salvaged stone from an earlier building was used for the fireplace. Maple for custom cabinets, which were built by a local cabinetmaker, came from trees harvested nearby.

BioBased soy foam was used for exterior insulation, and recycled denim from old blue jeans provided insulation inside for sound attenuation.

High-performance, metal-clad, low-E, argon-filled windows were used, and sill plates are borate-treated Enviro-Safe Plus, containing no heavy metals or arsenic.

The paint throughout the home is low in volatile organic compounds (VOC).

Energy Star appliances were selected for the kitchen, and a high-efficiency heat pump was installed for heating and cooling.

