A Contemporary Long

Inspired by Northwest Native American homes, a new retreat points its gabled prow seaward and shows off its structure inside

BY DAVID HALL

When the Christoffersens invited me to visit their summer residence, I was not prepared for such a remarkable site. A rocky peninsula, approached from the east by a gravel road winding through evergreen forest, offered commanding views of Washington's Puget Sound. A charming but dated cottage sat on the outcropping.

Early discussions centered on a remodel, but poor conditions and low, dark rooms made this impractical. We decided instead to start fresh, although shoreline regulations required us to build exactly on the footprint of the old cottage.

Pointing to the sea. *Similar to the orientation of Northwest Native American long houses, this peninsula-perched home has its short-side gable toward the water. Photo above taken at A on floor plan; photo facing page taken at B.*

A modern floor plan from an ancient model

Traditionally, Native Americans of the coastal Northwest built long houses with their gable ridges pointing toward the sea. Because the water served as both highway and market, front doors always faced seaward. Inside a long house, communal activities took place in the center of the structure, and private spaces for clan families flanked the outer walls. A fire pit, whose smoke rose through an opening in the cedar roof, occupied a place at the lodge's center.

The footprint of the Christoffersens' original cottage—long axis running along the length of the peninsula—allowed the design of the new house to follow loosely the floor plan of a traditional long house. Quite often, waterfront homes are built with the broad side facing the sea to maximize views; but on a narrow outcropping with water on three sides, this traditional design becomes unnecessary. By reversing the main entrance from the water to the forest side, we were able to accommodate the obvious: Today, people arrive by car.

Along with its axial orientation, the new house has a floor plan that shares traits with a long house. Common spaces are in the center of the building, flanked by private spaces along the eaves. Two bedrooms, a den, and a kitchen are located to the sides of the main roofline; a fireplace, a hallway, and a living room are centered under the ridge.

A house battened down against the elements

Building on such an exposed site does not come without problems. Three sides of the house face the sea and must bear the brunt of its attendant sun, wind, rain, and corrosive saltwater.

Ample roof overhangs protect the building from rain, while sunshades above the living-room windows help to reduce heat gain in summer. Patios off each side of the

SPECS

Bedrooms: 2, with a loft office

Bathrooms: 2

Size: 2200 sq. ft.

Cost: $360 per sq. ft.

Completed: 2004

Location: Lopez Island, Wash.

Architect: David Hall

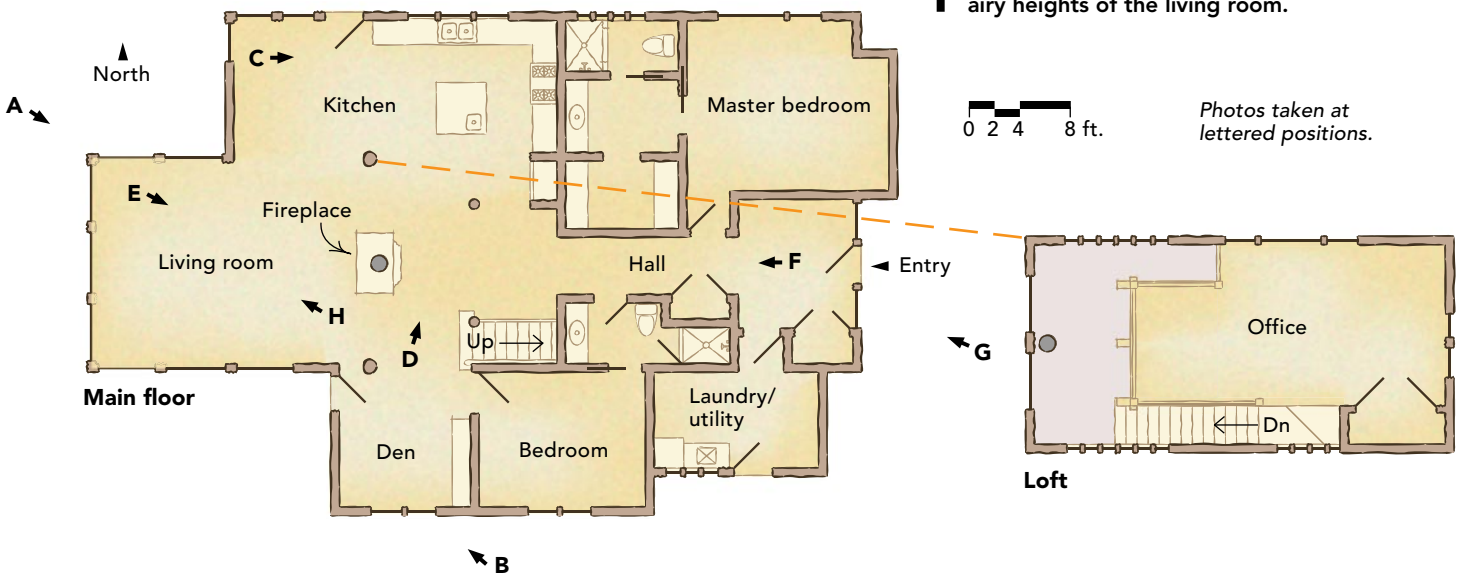
Builder: Paulson Construction Inc.

Photo this page: J.K. Lawrence

House

NEW LIFE FOR A TRADITIONAL PLAN

Arranged on an axis, the private spaces of the house open onto a central hall. As it progresses through the house, the hallway leads through a low-ceilinged space under the loft toward the airy heights of the living room.



Photos taken at lettered positions.

Drawings: Paul Perreault

Sheds on the sides. *Tucked under a shed roof on the north side of the house, the kitchen receives a portion of its daylight from clerestory windows. Black metal, used in handrails, window frames, and the chimney stack, is a unifying theme throughout the house. Light-colored wood cabinetry matches peeled-log posts and contrasts well with a black-and-white stone counter and a full-height stainless-steel stove backsplash. Photo above taken at C on floor plan; bottom photo taken at D.*

living room provide a sheltered outdoor space, regardless of wind direction. The metal roof, gutters, downspouts, and flashings all have a factory-applied Kynar finish (sidebar, p. 105), as do the aluminum windows. Finally, western red-cedar shingles and trim, with their time-proven ability to withstand harsh Northwest weather, clad the exterior.

In most buildings, the gable walls provide shear strength to resist the racking force of the wind. But in this house, we wanted as much glass as possible to take advantage of the view. Unfortunately, glass doesn't have much, if any, shear strength. Stainless-steel tie rods were the solution: They give the gable end needed resistance to wind and other forces working against the structure. The rods are exposed elegantly just outside the living-room windows (photos p. 105) and are connected to eyebolts embedded in concrete.

Because of the house's prominent location, we chose exterior colors that would help it to recede into the forest backdrop. The metal roof is dark bronze to reduce glare. The shingle siding and trim are stained a semi-transparent dark gray, and the aluminum windows are black. Beams, rafters, and eaves all are stained a natural raw-cedar shade. The camouflaging is a success. Ferries pass daily, and when my wife and I were aboard last summer, I barely could find the house with binoculars.

Signature details are also part of the structure

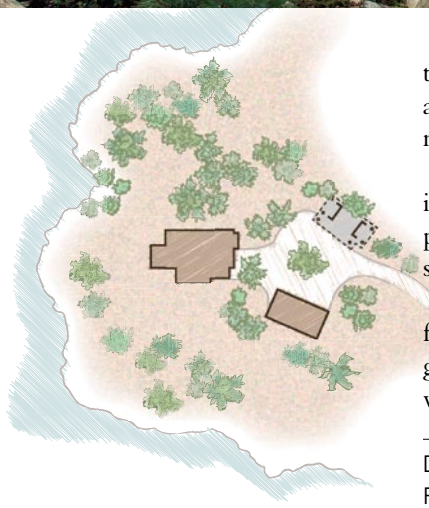
The roof structure was designed for both visual importance and structural efficiency. The 3x8 rafters are exposed at 2 ft. 8 in. on center,

Long house, long view. *At the entry, a central hall is flanked on each side by bedrooms and a utility space. At the end of the hall, the fireplace arrests the eye. Along with throwing off heat on chilly days, the fireplace acts as an interior focal point, serving to separate the living room from the entry hall. Photo left taken at E on floor plan; inset taken at F.*

three bays thus being equal to a sheet of plywood, or 8 ft.; the 2½-in. dimension of a 3x8 is well proportioned for its span. The 4x6 outriggers are exposed and bolted to the undersides of the joists to carry the load of the roof overhangs. The timber scissors trusses support the ridge beam and lend rhythm, scale, and a sense of importance to the main social space.

Another unifying material in the house is the concrete floors. With bedrock just a few inches beneath the entry elevation, concrete was a logical flooring choice. An in-floor hot-water system circulates heat throughout the house. Because quality control of truck-mixed concrete is difficult due to intra-island ferry travel, the concrete was poured without a color additive, then ground smooth to expose the randomly patterned aggregate. Aluminum control joints, ⅜ in. thick, help to control cracking; they were installed in a grid corresponding to the rafters to add visual interest.

The front is in the back. *A parking space surrounded by trees gives way to a flagstone path that leads to the main entrance. Photo taken at G on floor plan.*



The fireplace is central to the interior

In addition to providing heat, the fireplace serves as a defining element of the house's interior. It's not only visible from the living room, the dining room, the kitchen, and the den, but it's also one of the first things you see when you look down the entry hall from the front door.

The design of the fireplace was a source of continual discussion. Ideas ranged from wood to gas to see-through to no fireplace at all. In the end, we decided on a wood-burning fireplace built from concrete block. Plate steel, ¼ in. thick, wraps the block and provides a frame for the glass doors. Veneer granite encases the upper portion and the back of the fireplace, which tops off at about 5 ft. with a granite mantel. A stainless-steel flue rises from the mantel and passes through the trusses to the outside.

The same unfinished steel used for the fireplace is incorporated into the loft's balcony details. The balcony rail panels are made from plywood with maple framing members designed, again, to express structure and materials while lending privacy to the office loft.

In the end, the house feels right from both inside and out, peeking from a forest backdrop on the prow of the peninsula. The views are great and the lifestyle informal, thanks, in part, to an ancient Northwest archetype: the long house. □

David Hall is a partner in HKP Architects in Mt. Vernon, Wash.
Photos by the author, except where noted.

Structural efficiencies. *Rafters and scissors trusses made from 3x8s are laid out 2 ft. 8 in. on center, allowing three bays to equal 8 ft. Eaves-end outriggers that project into the room support the roof overhang and visually emphasize the structure. Outside, diagonal stainless-steel rods run from the gable eaves to a center footing, providing shear strength to the all-glass gable end. Photo taken at H on floor plan.*

Photo facing page: J.K. Lawrence

Corrosion-resistant paint

Although metal makes for a durable roof, it does corrode. That's one reason why lots of metal roofs are painted (another is that you might want a green, red, or blue roof rather than just plain metal).

Like all paints, the stuff used to coat metal roofs varies in quality. All paints have three basic components: pigments, resins, and solvents. Solvents do their job by mixing together the pigments and resins, then disappearing as the paint cures. Pigments provide the color, and resins protect the pigments and make everything stick to the metal.

Polyvinylidene fluorides, or PVDFs, are acknowledged in the industry as the best resins for coating metal because of their superior ability to resist fading, chalking, staining, and chemicals, and because of the way they retain gloss. The original trade name for PVDF resin is Kynar; while it's almost synonymous with PVDF, other brands are available.

Not all factory-coated, Kynar-based products are the same. Products with 70% Kynar in the resin are most durable. Higher concentrations won't coat as well, and lower ones aren't as durable. While most top-quality products contain the optimum amount of Kynar, some companies use coatings with only 50% PVDF resins. When buying a metal roof or any other painted exterior metal, specify that they be coated with products that contain Kynar 500 or Hylar 5000, another popular brand name; those two designations guarantee that 70% of the resin is made from PVDFs. Everything else is just paint.