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Barn-based Home
House combines 19th century barn frames and modern green technology

Wood Distinctions
Ontario Wood WORKS! annual design competition celebrates inventive architecture

ILMASI School
Education center for handicapped children uses wood to create an inspiring learning environment

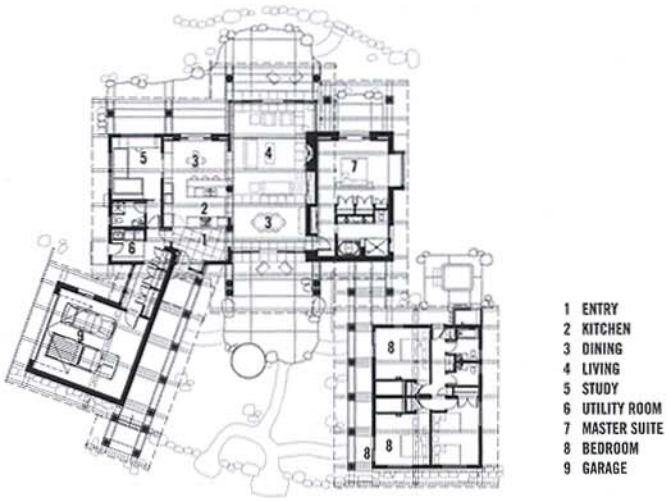
Canyon House

Natural mountain beauty drives a design that blurs the distinction between indoor and outdoor

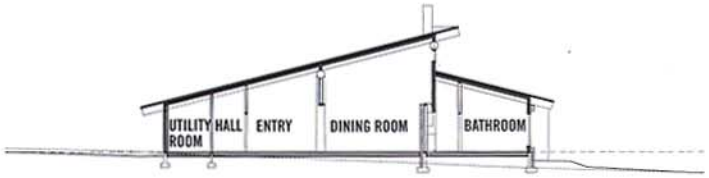
Scott LaBenz

The 3,000 sq.ft. Canyon House sits in a deep narrow valley in the foothills of Washington's Cascade Mountains. The site has been ranched and mined since the early pioneer days.

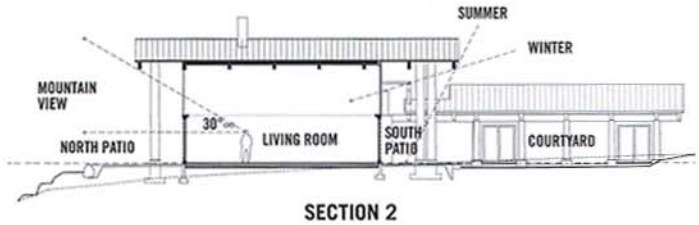
Photos by Steve Keating



MAIN FLOOR PLAN



SECTION 1



SECTION 2

The house is a second home for a couple that desired a small cabin, yet needed room for their large extended family. In order to reduce the scale of the house it was divided into three separate buildings – the main cabin, a garage and a bunkhouse. A large shed roof connects all the forms together into one building. The connection between the cabin and the house is enclosed, providing a mudroom hallway adjacent to the utility room. The connection between the cabin and the bunkhouse is left open as a covered breezeway to provide more privacy for the master suite, which is located adjacent to the bunkhouse. The building form is arranged in a U shape creating a southern facing central courtyard with a small water feature.

The amazing beauty of the natural setting led to a design that brought the site indoors by continuing exterior building materials indoors and through the use of glass walls and clerestory lighting. Large glass walls on each end of the main living space allow the views of the spectacular valley walls that rise 3,500 ft. off the valley floor. The glass walls protrude in a U shape at the north end to create more interior space connected to the primary view. On the south end, the glass wall recedes allowing more useable exterior space in the southern courtyard patio. The roof overhangs on both ends were calculated so as not to block the view of the mountain peaks, while at the same time controlling seasonal solar exposure on the southern end.

Exterior building materials wrap around each side of this space to reinforce the connection to the exterior. Weathering (rusting) steel is used for roofs and upper wall siding to relate to existing homestead cabins and farm structures on the property that have been preserved in a ruinous state.

River rock walls form the base of the main building to relate to the adjacent river at the properties' edge. The stone walls continue indoors to form a large fireplace, and extend out into the landscape to provide retaining walls for patios and courtyards. In addition, large boulders were cast in the concrete patios creating landscape borders and informal seating. The secondary building forms are sided in rough-sawn dark stained cedar channel siding that relate to the log buildings of the original homestead. Further connecting to these forms, the main structure consists of log beams and columns. The log structure is exposed both inside and

out – much of the wood used throughout the house was reclaimed and resawn into sizes needed for the construction.

The structural system used is a modified post and beam with light framed wood construction walls and ceilings. Oversized wall framing members consisting of 2 x 8s were used to increase the R value of the walls. The log columns and posts were cut and fabricated off site by Two Dog Timberworks, and then assembled on site.

The local snow design load of almost 100psf dictated the need for large roof framing members. A thin profile at the buildings' eaves was desired. At the recommendation of the structural engineer (Tom Rines, PE, Magnusson Klemencic Associates) a laminated Douglas Fir/Larch structural decking from Filler King, Homedale, Idaho, was selected. This allowed an exterior beam spacing of eight feet on center to match the internal spans of 2 x 8 rafters hung between the beams. Full cavity spray foam insulation was used to achieve an R value of 50. Matching tongue-and-groove decking on the interior ceilings was selected to relate the interior and exterior soffits. Clear finishes from Sikkens were used for all woodwork.

ARCHITECTS: BALANCE ASSOCIATES, SEATTLE, WA
PRINCIPAL: TOM LENCHEK, AIA
PROJECT ARCHITECT: SCOTT LABENZ, AIA
STRUCTURAL ENGINEER: TOM RINES, PE, MAGNUSSON KLEMENCIC ASSOCIATES, SEATTLE, WA
GENERAL CONTRACTOR: RICK MILLS, NORTH CASCADES CONSTRUCTION, WINTHROP, WA
LOG FRAMING CONTRACTOR: TWO DOG TIMBERWORKS INC., FERNDALE, WA
RECLAIMED WOOD SUPPLIER: HAVILLAH SHAKE CO., TONASKET, WA
LANDSCAPE DESIGNER: WINDY VALLEY LANDSCAPING, BREWSTER, WA
PHOTOGRAPHY: STEVE KEATING PHOTOGRAPHY, PORT ORCHARD, WA