

THE NEW AMERICAN HOUSE

Innovations in Residential Design
and Construction

30 Case Studies

Edited by
OSCAR RIERA OJEDA



WEST ELEVATION

1/4" = 1'-0"

House in the West 1990-1993

**CESAR PELLI, CESAR PELLI &
ASSOCIATES, INC.**

Owner: Name withheld at owner's request.

Architect: Cesar Pelli, Cesar Pelli & Associates, Inc.

Design Team: Cesar Pelli (design principal), William Butler (design team leader), Robert Charney (project director), Russell Holcomb, Craig Copeland (designers), Diana Balmori (bridges design), Berlin Architects (architect-of-record), Larry K. Berlin (principal), Kristoffer Prestrud, Robert Carter, Kenneth Harvey, Michael Riise, Russell Holcomb (project team).

Engineers: Beaudette Consulting Engineers (structural, main house), Rutherford & Chekene (structural, guest house), McFall-Konkel & Kimball (mechanical).

Consultants: Jorgenson Engineering (roads and bridges), David L. Adams (acoustical).

General Contractor: Bontecou Construction.

Photography: Scott Frances/ESTO.

Site: Western United States.

Program: Vacation retreat for family and guests. Main house: Entry, mud room, living room, dining room, kitchen with outside eating deck, exercise room and sauna, laundry room, pantry/bar, guest suite and caretaker apartment on first floor; master bedroom suite with private study and outdoor balcony, two guest bedrooms with baths, AV room with attached bath and outdoor balcony, secretary's office and master study with outdoor balcony on second floor; 4-car garage with mud room connector to house. Guest house: Bedroom loft, living room, kitchen, two full baths, 1-car garage attached to the south.

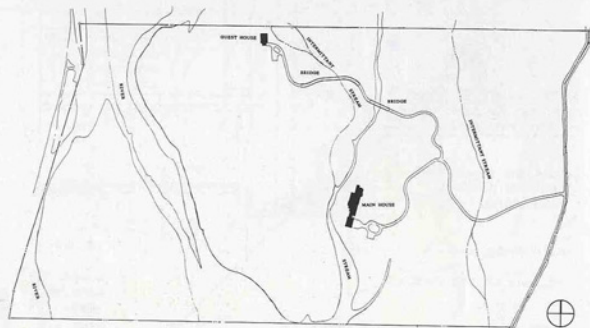
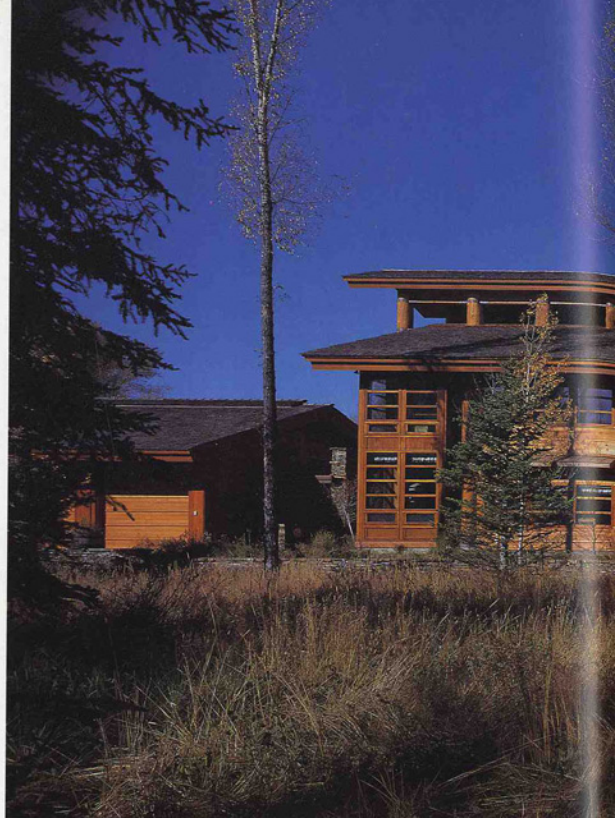
Square Footage: 9,600 (main house), 1,200 (guest house).

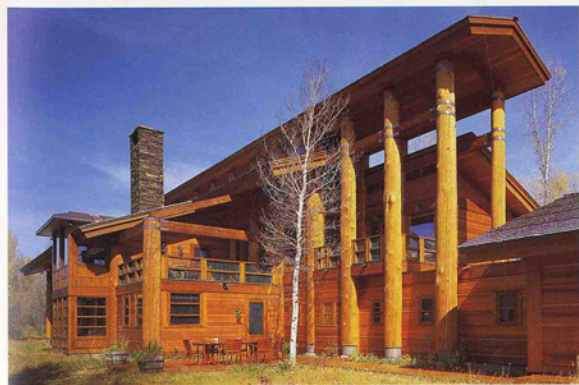
Structural System: Post and beam frame, hand peeled Engelmann spruce log posts 28" (guest house: 24") in diameter with resawn wire-brushed Douglas fir beams, integrated with 2 x 6 plywood sheathed shear walls. Connections held rigid by metal straps lag bolted into beams and columns. Concrete foundation. Truss joist floor and roof framing.

Mechanical System: Forced-air supplemented by radiant floor heat and a wood-burning stove. Cooling through central attic fan and natural convection through high clerestory windows.

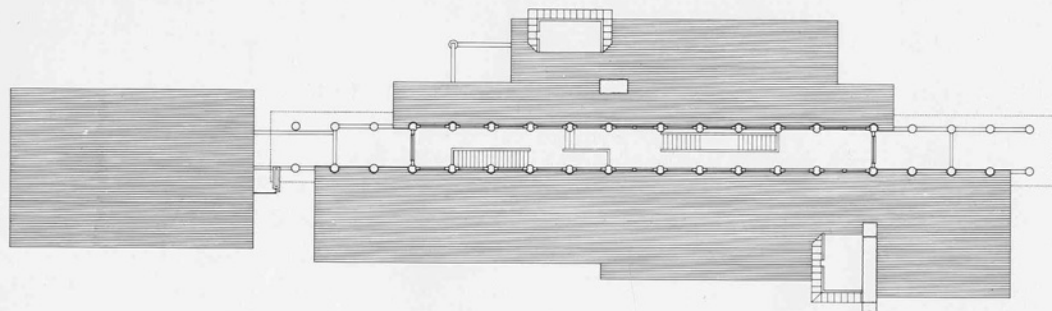
Major Exterior Materials: Siding: Engelmann spruce logs and Douglas fir beams. Western red cedar tongue-in-groove siding, rough face out with custom-milled smooth cedar board on an 18" vertical module throughout. Roofing: Cedar shakes with double layer every seventh course. Copper flashing and copper roofing on secondary roofs (main house).

Major Interior Materials: Main house—walls, ceilings, floors: Cherry floors, quartzite flooring, Kirkstone flooring, and carpet in bedrooms. Various stone-floor combinations in bathrooms. Mixed-grain tongue-in-groove Douglas fir ceiling boards. Vertical grain tongue-in-groove Douglas fir wall cladding. Vertical-grain Douglas fir bead board in bathrooms. Millwork: Alder and red birch veneer plywood, cherry and cherry veneer plywood, mahogany veneer plywood cabinets, mahogany window trim. Solid alder interior doors. No exposed plaster or painted surfaces. Dakota stone chimney and walls. Guest house: Pine wood floors, Idaho quartzite stone in kitchen, carpet in bedroom, and tile and Idaho quartzite in bathrooms. Mixed-grain tongue-and-groove Douglas fir ceiling boards. Vertical grain Douglas fir bead board with alder trim at walls. Alder and red birch veneer plywood cabinetry throughout. Solid alder interior doors. No exposed plaster or painted surfaces.

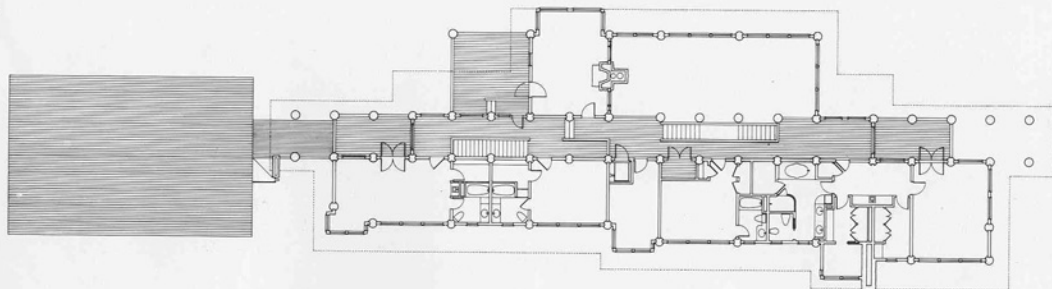




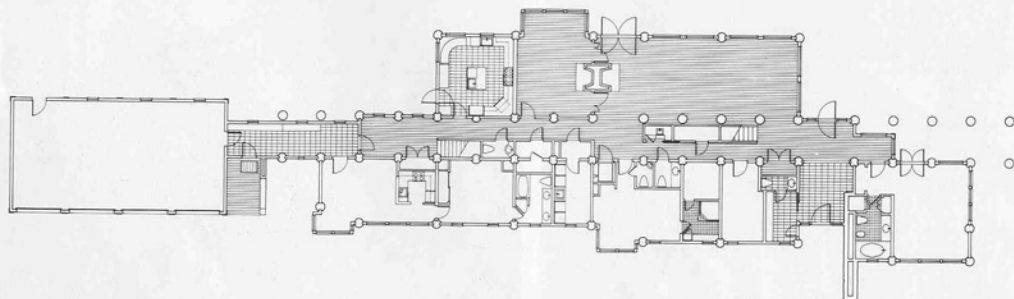
Roof plan



Second floor



Ground floor



West elevation



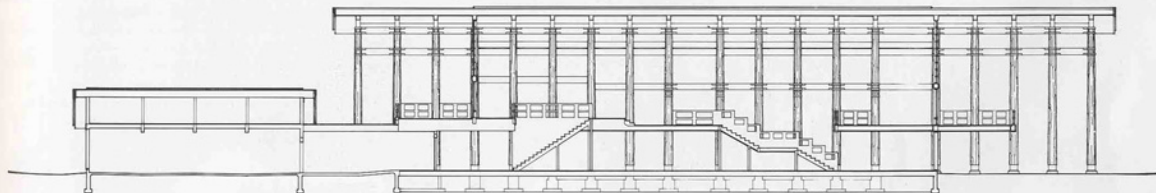
North elevation

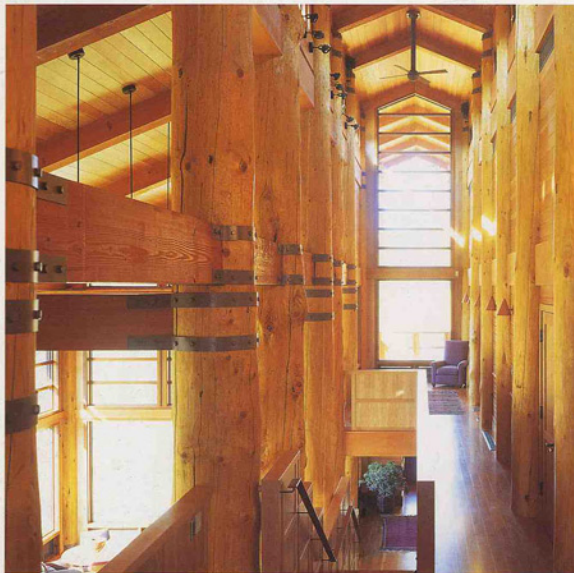


South elevation

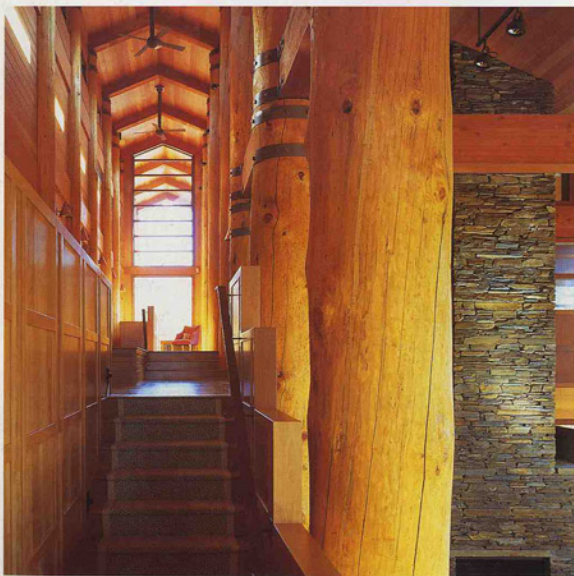


Longitudinal section through spine





LEFT AND BOTTOM: Hallway.
FACING PAGE: Living room.



Furnishings and Storage: Built-in by architect.

Doors and Hardware: Exterior mahogany doors by Duratherm; interior alder doors designed by architect. Sargent door hardware.

Windows: Duratherm, mahogany frames, Low-E glass with UV filter. Main house: Triple-insulated glass in mahogany frames; motorized solar shade system on west elevation. Guest house: Laminated insulating glass with UV filter. Elaborate post-and-beam connections.

Fixtures: Kohler (bathroom); fittings by Grohe and Dornbracht with some other individual pieces.

Appliances and Equipment: Sub-Zero kitchen refrigerator/freezer, Amana pantry refrigerator/freezer, Dacor ovens and cooktop, KitchenAid dishwashers, Vent-a-Hood range hood, GE microwave, Maytag washer/dryer.

Cost: Withheld at owner's request.

Siting

The two-level main house is centrally located on a 96-acre site alongside a creek. The guest house is near a corner of the site by a stream, surrounded by cottonwoods and evergreen trees. Access to the guest house can be had from two bridges crossing a spring creek and overflow channel of a river.

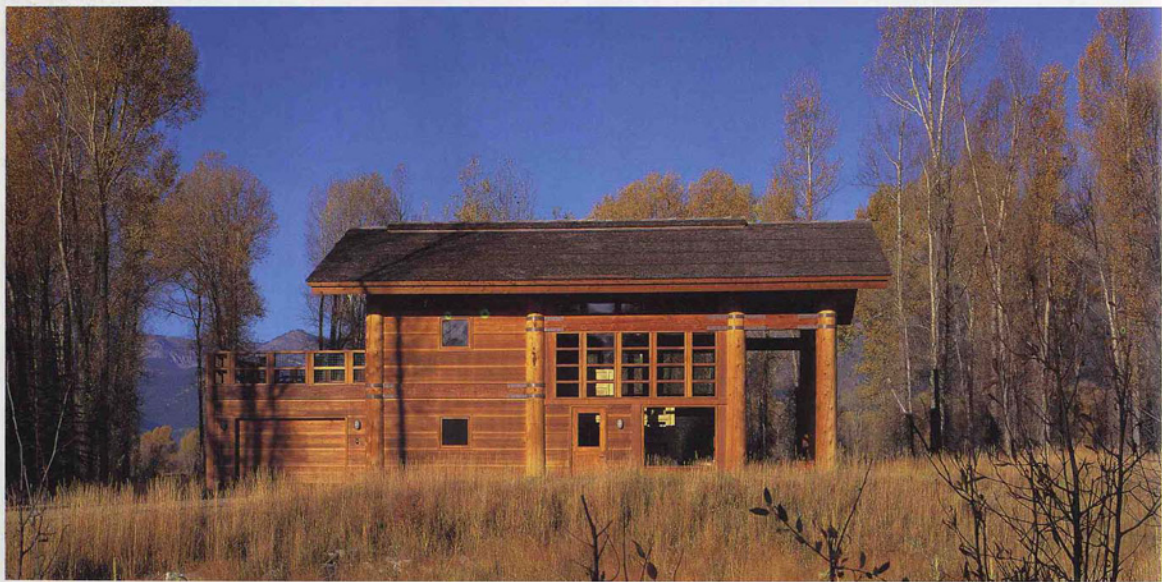
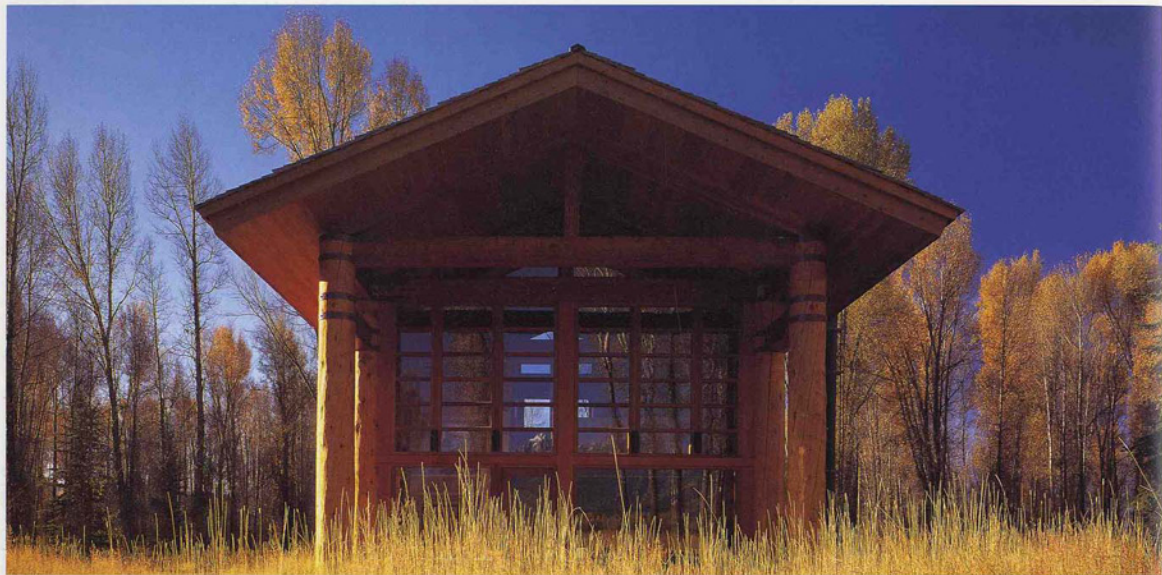
Design

The main house plan is organized around a central spine which serves as both horizontal and vertical circulation. Living room and dining room, kitchen and study (common or public areas) are to the west of the spine while bedrooms and other private spaces are to the east. The garage is located to the south, connected by an enclosed walkway. A contemporary wilderness retreat, the guest house combines a rustic location with modern amenities.

Construction

Construction of the main house is post and beam with wire-brushed Douglas fir beams, mortise-and-tenoned into hand-peeled Engelmann spruce logs of approximately 28" in diameter. The connections are held rigid by metal straps lag bolted into beam and column connections. The fifty-five log columns of varying heights were harvested as standing, beetle-killed dead trees. Exterior infill walls are a combination of insulating glass and mahogany frame windows, and rough-sawn tongue-and-groove cedar siding with a custom-milled cedar board on a 1'-5" module. Large windows in the common spaces of the house face west to the adjacent creek and mountains, while smaller areas of windows on the east elevation denote the more private side.

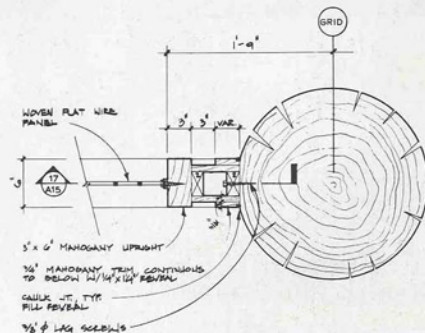
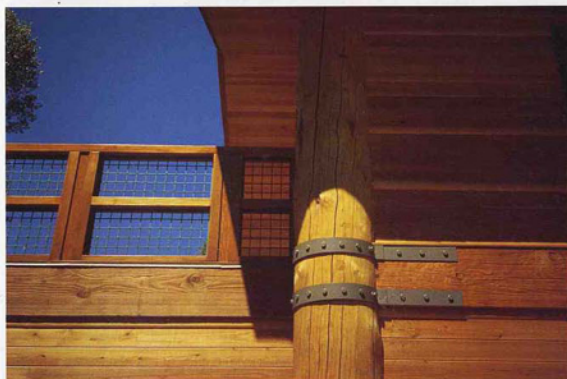




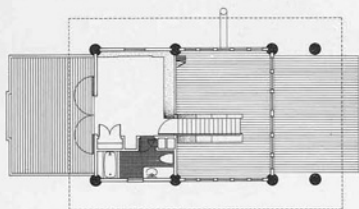
The gable roofs, made with such materials as wood shakes and flat-seamed copper, have a shallow pitch with a ridge running north/south. The circulation spine projects above and incorporates a double clerestory. A stone chimney also projects through the roof, and a second stone wall rises above the roof at the entrance. The entrance incorporates stained glass in the front-door sidelights, as well as in the windows of the projecting floor above.

The main house interior has exposed wood columns and beams, as well as wood-clad walls, ceilings and floors. Walls and ceilings are horizontal Douglas fir, with tongue-and-groove boards and windows trimmed with mahogany, and doors and trim are solid alder. Bathroom walls have vertical Douglas fir beaded boards, also trimmed with alder. Floors are of cherry wood. Built-in cabinetry consists of alder and red birch veneers, mahogany and cherry. The main house is heated by an electric forced-air system; bathrooms are supplemented with radiant floor heat. The landscaping is endemic to the existing site, punctuated by low stone walls and terraces.

The details of the guest house wood construction consciously juxtapose rugged and refined treatments. Following local tradition, the construction system is a rough-hewn post and beam arrangement, roofed with a shallow gable and wide eaves. The columns are hand-peeled Engelmann spruce tree trunks, interconnected by boxed heart rough-cut beams. Structural joints are mortise and tenon, held rigid by hand-forged steel straps and attached with lag bolts. The window wall is laminated insulating glass with UV filter in mahogany frames. Exterior walls are Western red cedar clapboard, tongue and groove in a shiplap construction. A custom-milled rounded board establishes a 1'-5" vertical module. The house is two columns wide and four deep, spaced to fit its functions. Its main roof extends one bay to cover an outdoor wood terrace at its north end.



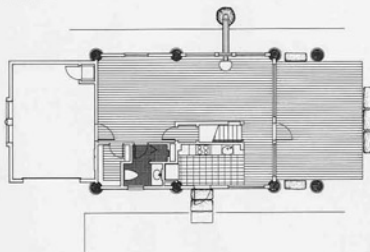
Second floor



Section looking west



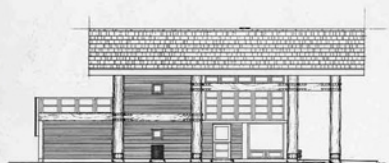
Ground floor



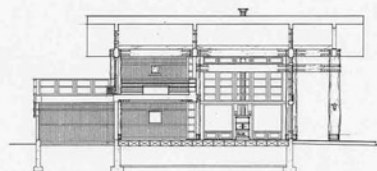
Section looking west



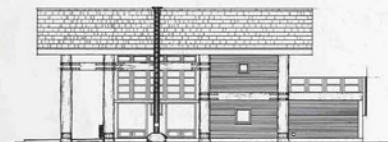
South elevation



Section looking north



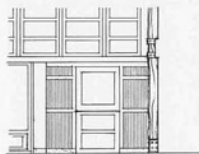
North elevation



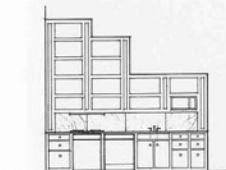
Section



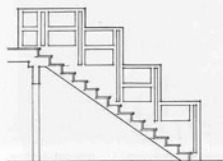
Elevation at kitchen



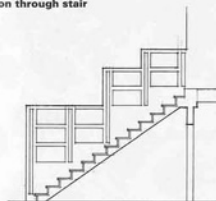
Elevation at kitchen



Section through stair



Section through stair



Exploded axonometric

