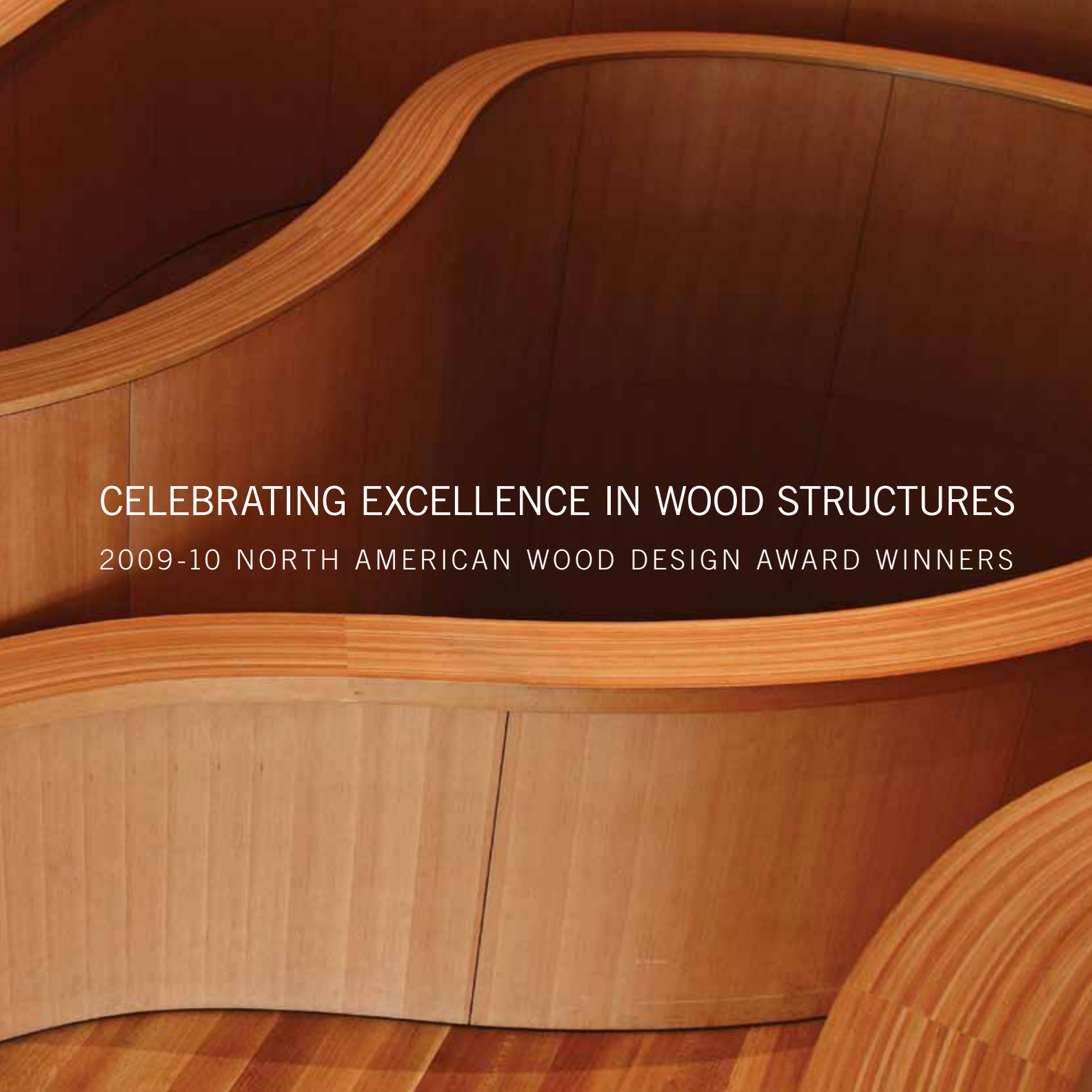
CELEBRATING EXCELLENCE IN WOOD STRUCTURES

2009-10 NORTH AMERICAN WOOD DESIGN AWARD WINNERS



CELEBRATING EXCELLENCE IN WOOD STRUCTURES

2009-10 NORTH AMERICAN WOOD DESIGN AWARD WINNERS

Canadian Wood Council
99 Bank Street, Suite 400, Ottawa, Ontario K1P 6B9
Tel: (613) 747-5544 Fax: (613) 747-6264
www.cwc.ca

Celebrating Excellence in Wood Structures
2009-10 North American Wood Design Award Winners

Editor: Bernadette Johnson, Dovetail Communications Inc.
Design: Sharon MacIntosh, Dovetail Communications Inc.

The publishing team would like to thank all the
individuals who contributed to the book including:
Sarah Hicks, Areni Kelleppan, Rory Koska, Ivana Kraljevic, Lorna Malone,
Maureen McLaughlin, Duane Schantz, Pat Schleisman, Bryan Schuyler and Roxane Ward

Printing: Friesens

National Library of Canada Cataloguing in Publication Data

ISSN 1708-5233 The Wood Design Awards
ISBN 978-0-9783213-5-2

1. Building, Wooden-Canada.
2. Building, Wooden-United States.
3. Architecture-Awards-Canada.
4. Architecture-Awards-United States.
5. Architecture-Canada-21st century.
6. Architecture-United States-21st century.
I. Canadian Wood Council

Cover: Art Gallery of Ontario, Gehry International Inc.
Photo: Sarah Hicks, Toronto, ON

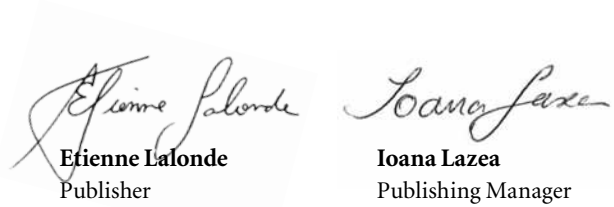
Inside front and back covers: Art Gallery of Ontario, Gehry International Inc.
Photo: Craig Boyko/Art Gallery of Ontario, Toronto, ON

The Best of Wood Architecture and Design

This year's awards book showcases leading architectural and structural wood uses from across North America, illustrating the significance of good design and construction.

Our 2009/2010 compilation comprises award winners from three key award programs: the North American Wood Design Awards, the Canadian Wood *WORKS!* Awards (including Alberta, British Columbia and Ontario), and the U.S. WoodWorks Wood Design Awards (including California, North-Central U.S. and Southeast U.S.). These award-winning projects demonstrate a wide range of wood product applications of various types and scales, and reveal a thorough understanding of – and passion for – the many special qualities of this renewable building material.

Thank you to all of our program sponsors and congratulations to the winners featured in this book. Your work supports our mission to heighten the awareness and importance of wood architecture and design and inspires the continued use of wood among readers and the broader design community.



Etienne Lalonde
Publisher
Wood Design & Building

Ioana Lazea
Publishing Manager
Wood Design & Building

contents

Wood Design & Building Awards

2009 NORTH AMERICA

Canadian Wood *WORKS!* Awards

2009 ALBERTA

2010 BRITISH COLUMBIA

Wood Design & Building Awards

Jurors

SILVIO BALDASSARRA
Vice President
NORR LTD. ARCHITECTS AND ENGINEERS
www.norrlimited.com

KEITH BOSWELL
Technical Director
SKIDMORE, OWINGS & MERRILL LLP
www.som.com

WENDY EVANS JOSEPH
Partner
WENDY EVANS JOSEPH ARCHITECTURE
www.wejarchitecture.com

Sponsor

Canadian Wood Council
Conseil canadien du bois
www.cwc.ca

North American Wood Design & Building Awards Program

The Wood Design Awards program – the only one in North America that annually recognizes achievements in wood architecture – attracts the best of the best. It's not easy to stand out among so many amazing entries. And the winners of the 2009/10 Wood Design Awards did not disappoint.

This year's award winners stood out among hundreds for their exceptional design, extensive use of wood – both structurally and aesthetically – and for their innovation. These projects push the boundaries of conventional wood building practices and highlight the special qualities, versatility and sheer beauty of wood as a building material.

The collection of winners displayed on the following pages offers varied building types (including residential, institutional and commercial projects) with equally diverse effects. From light and airy, or rich and warm, to sophisticated and even monolithic, the 2009/10 award-winning projects showcase the enormous potential of wood and design.

For more information about the Wood Design Awards, and to enter future awards programs, please visit www.wooddesignawards.com.

Bernadette Johnson
Editor
Wood Design & Building

HONOR **Awards**

The final addition to the architect's riverside settlement of buildings near Granite, Colorado, this chapel was designed as a place for meditation and reflection on life, nature and the surrounding environment. Wood was chosen to fit the context of the settlement's tradition.

Chapel of the Sky

AndersonMasonDale Architects

"One word: serenity. This is such an elegant and simply detailed wood enclosure – both inside and out. The use of color between floors and walls is very effective."

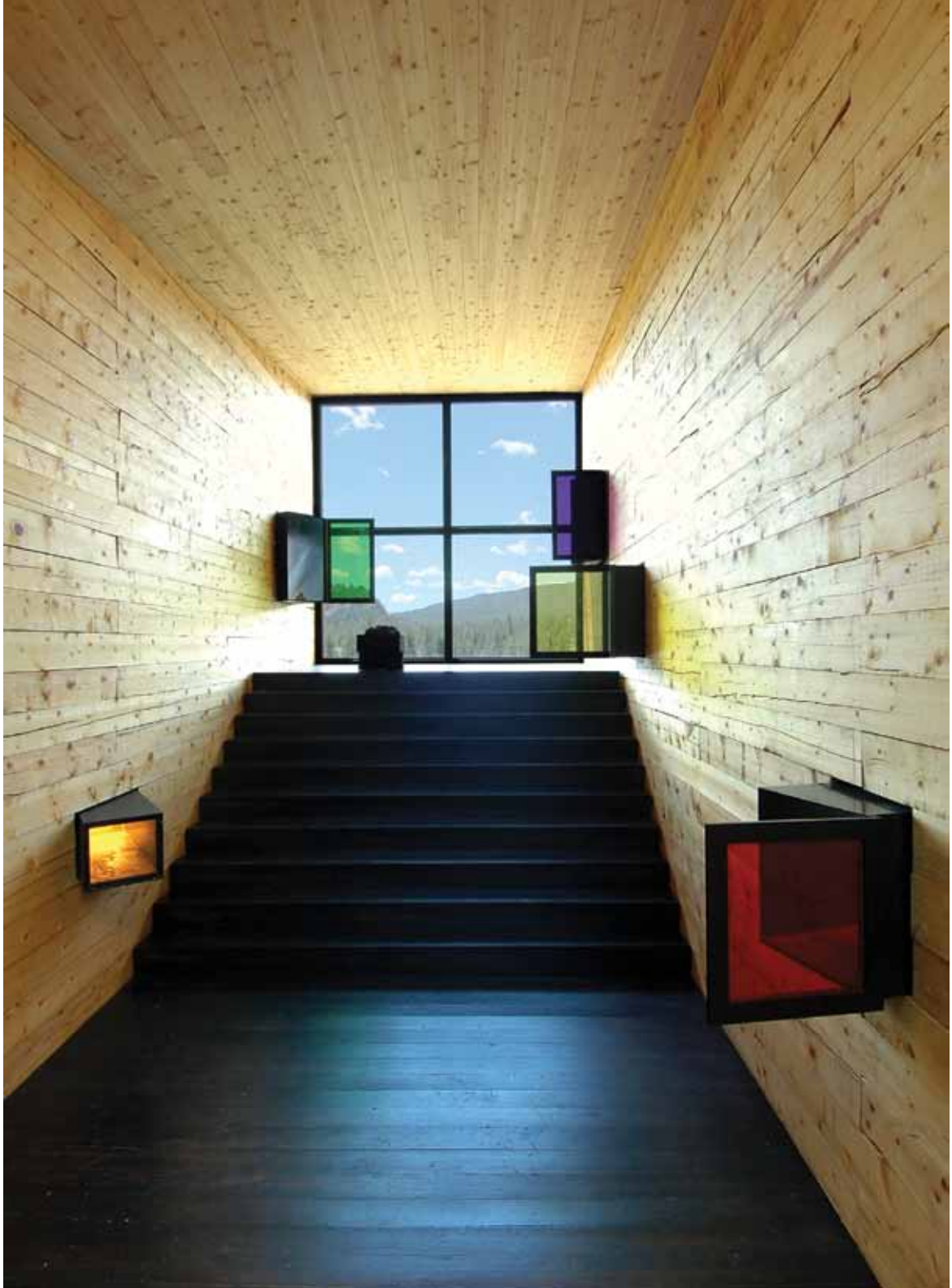
– Jury

The remote site heightens the sense of separation from daily life and provides an expansive view of the sky. Access is by a quarter mile foot path, to underscore the journey as a reconnection with nature and one's arrival in ultimate seclusion. The chapel is meant to be a deeply personal and straight-forward statement of the architect's values and a spiritual legacy for his family.

Standing alone atop a rock outcropping at 8,900 ft., the simple wooden form has a powerful attitude as it overlooks the Arkansas River Valley with its surrounding mountain peaks that rise to 14,000 ft. The chapel is perched on legs as a reminder that it is a privileged visitor within the landscape, and treads lightly to minimize its impact. Spruce logs – cut from a standing dead forest near Durango, Colorado and milled in nearby Saguache – enabled simplified building construction and required no additional finishing material on the inside or outside walls.

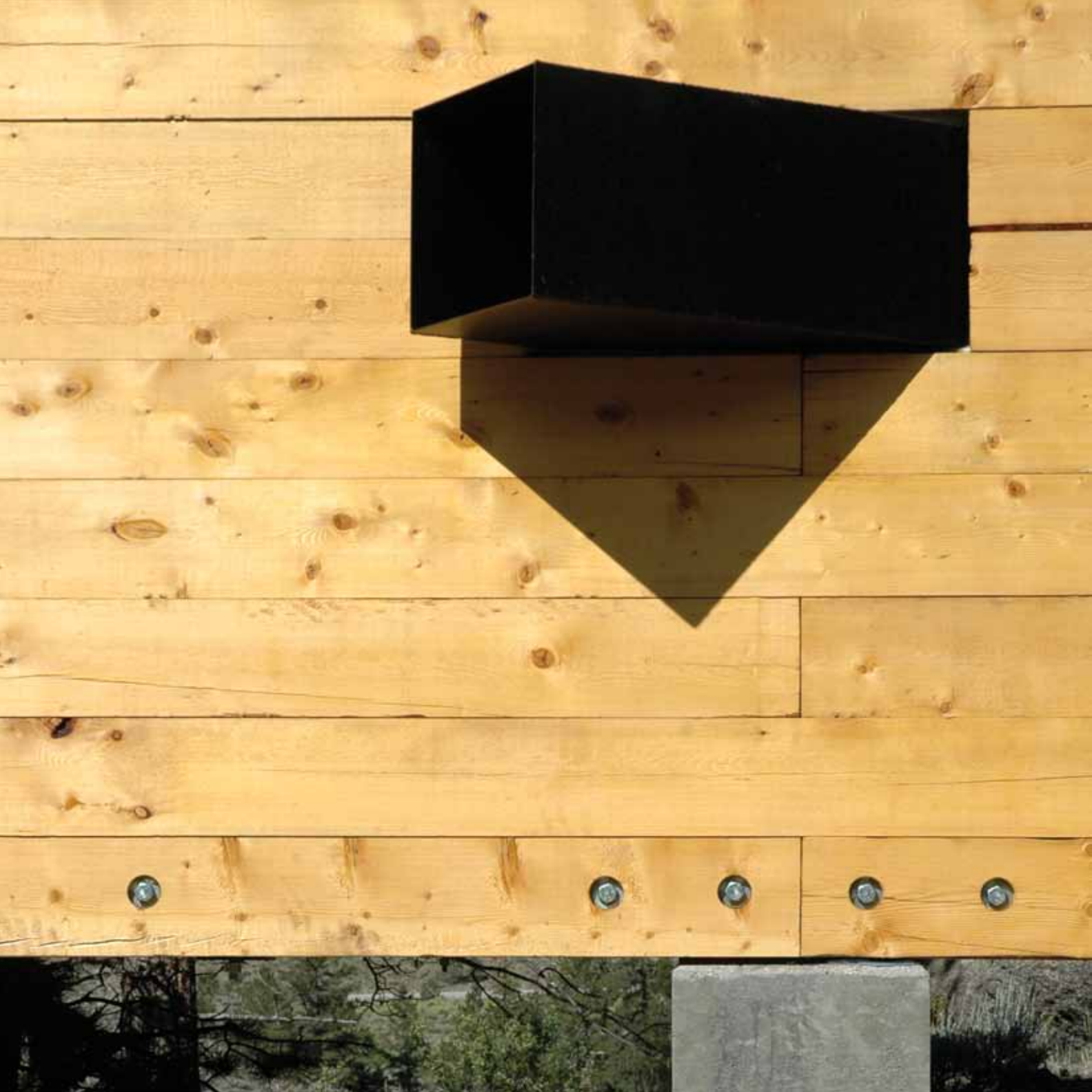
Upon entering the chapel, focus is immediately drawn upward. A dramatic and unexpected stair fills the space and directs the eye to the sky through a massive clear window at the top of an elevated platform. This platform and the lower entry nave offer contrasting places for reflection and meditation. Both spaces are connected fluidly with a wave-like ceiling shape which, when standing on the platform, lyrically draws the eye up to the imposing rock cliffs of the mountain. This curved roof also collects and pours all water down on the rocks along the arrival pathway.

The body of the chapel is penetrated with tubes that are focused on specific sites within the surrounding context. The tubes are each different in size and incorporate colored glass win-



dows which render and articulate the views in unexpected ways. These tubes shelter the windows and allow them to be left open during the frequent rain and snow squalls common to the near alpine environment. This provides an always-open atmosphere connected to the outside air.

The chapel walls and main floor are constructed of 6 x 8 tongue-and-groove (T&G) spruce logs with threaded steel rods extending from the top to the bottom of the walls. All of the logs are glued and screwed to each other. The end walls function as steel moment frames and integrate one-inch insulating glass with twelve gauge steel panels. All steel is shop-coated with a truck bed paint finish. The integrity of the chapel's shell coupled with direct south solar gain frequently affords winter use without an alternative heat source.



ARCHITECT
AndersonMasonDale Architects
Denver, CO

CLIENT
Ron Mason
Denver, CO

GENERAL CONTRACTOR
Kiel Moe
Denver, CO

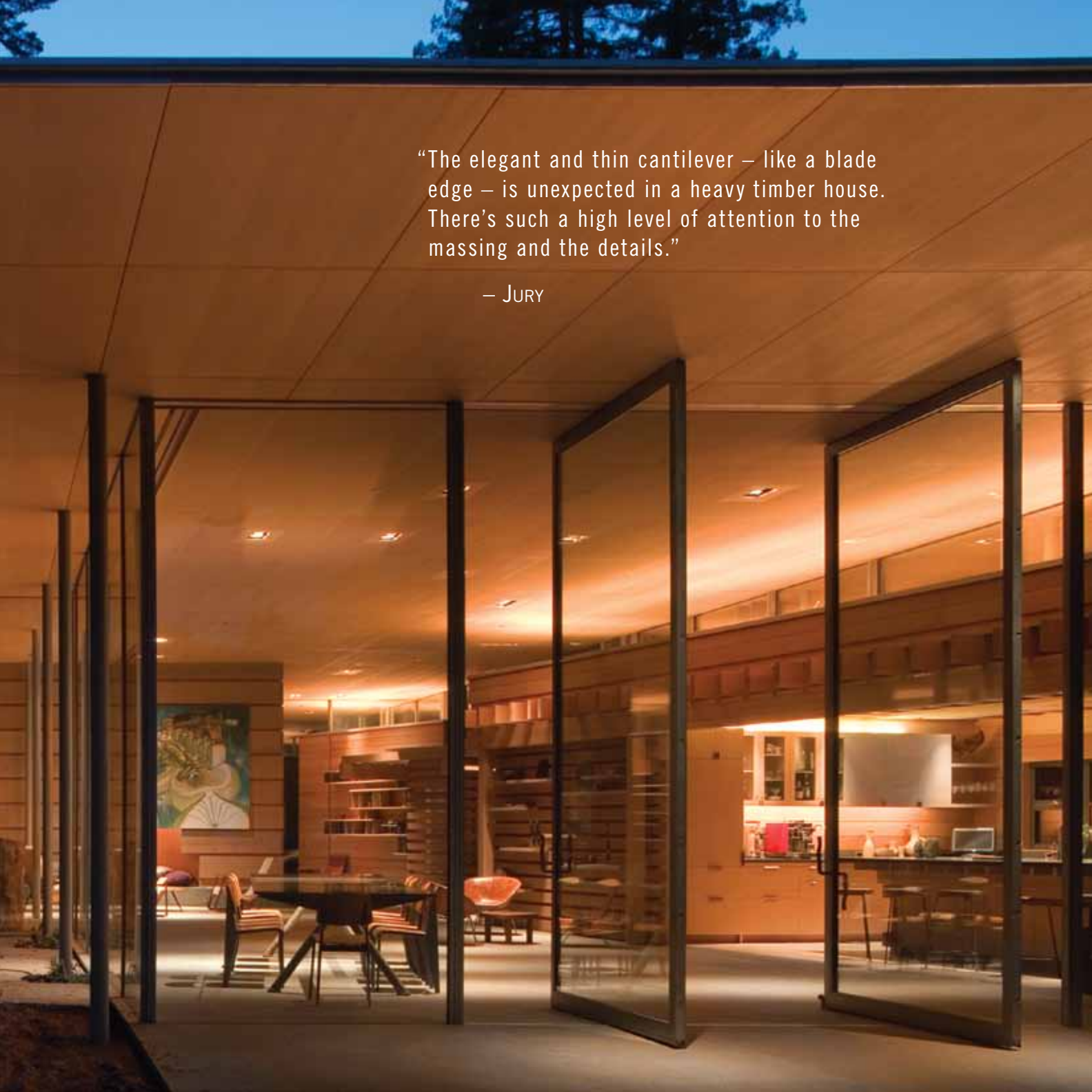
STRUCTURAL ENGINEER
Charles Keyes, Martin/Martin Inc.
Lakewood, CO

PHOTOGRAPHY
Ron Mason
Denver, CO

Summers along the eastern slope of Northern California's coastal range tend to be arid, warm and dusty. Winters bring heavy rains, leaving the surrounding hillsides lush and green.

Creekside House

Bohlin Cywinski Jackson



"The elegant and thin cantilever – like a blade edge – is unexpected in a heavy timber house. There's such a high level of attention to the massing and the details."

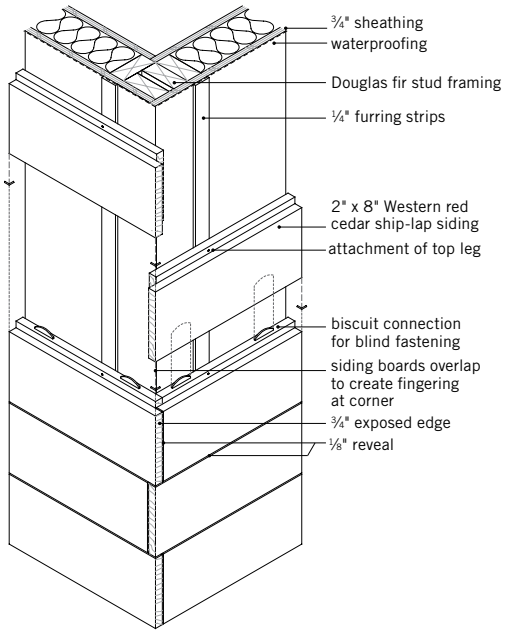
– Jury

Here Creekside sits in its own natural world: a meadow hemmed by dense forests of old growth cathedral redwoods, great western oaks, 500-year-old Douglas fir and aromatic bays bordering two creeks that never meet. Diminutive boxes slide under the pavilion's delicate roof that dances along the landscape.

The old agrarian property is approached on a winding country lane that drops down through a grove of mature oaks and leads to a private bridge spanning Dry Creek. Originally the main house was sited close to the Legend Oak that grows out of Bear Creek and was surrounded by randomly placed lesser buildings. Now the drive passes a pair of small outbuildings, placed exactly where two older ones had been, and follows corral-like wood fences to the meadow where the main house is arrayed along its southern and western edges.

A fully glazed living and dining pavilion blends into the extended, bucolic landscape. The roof extends out in a plane of Douglas fir and engages the surroundings. Weathered cedar boxes of lesser height house kitchen and sleeping spaces and provide a shift from the pavilion's dramatic exposure. The entire project is essentially a large millwork project executed with the care, precision and craft that goes into a custom piece of cabinetry. Vertical grain Douglas fir shelf walls are integrated into the cedar siding at the kitchen, pavilion and corridor.

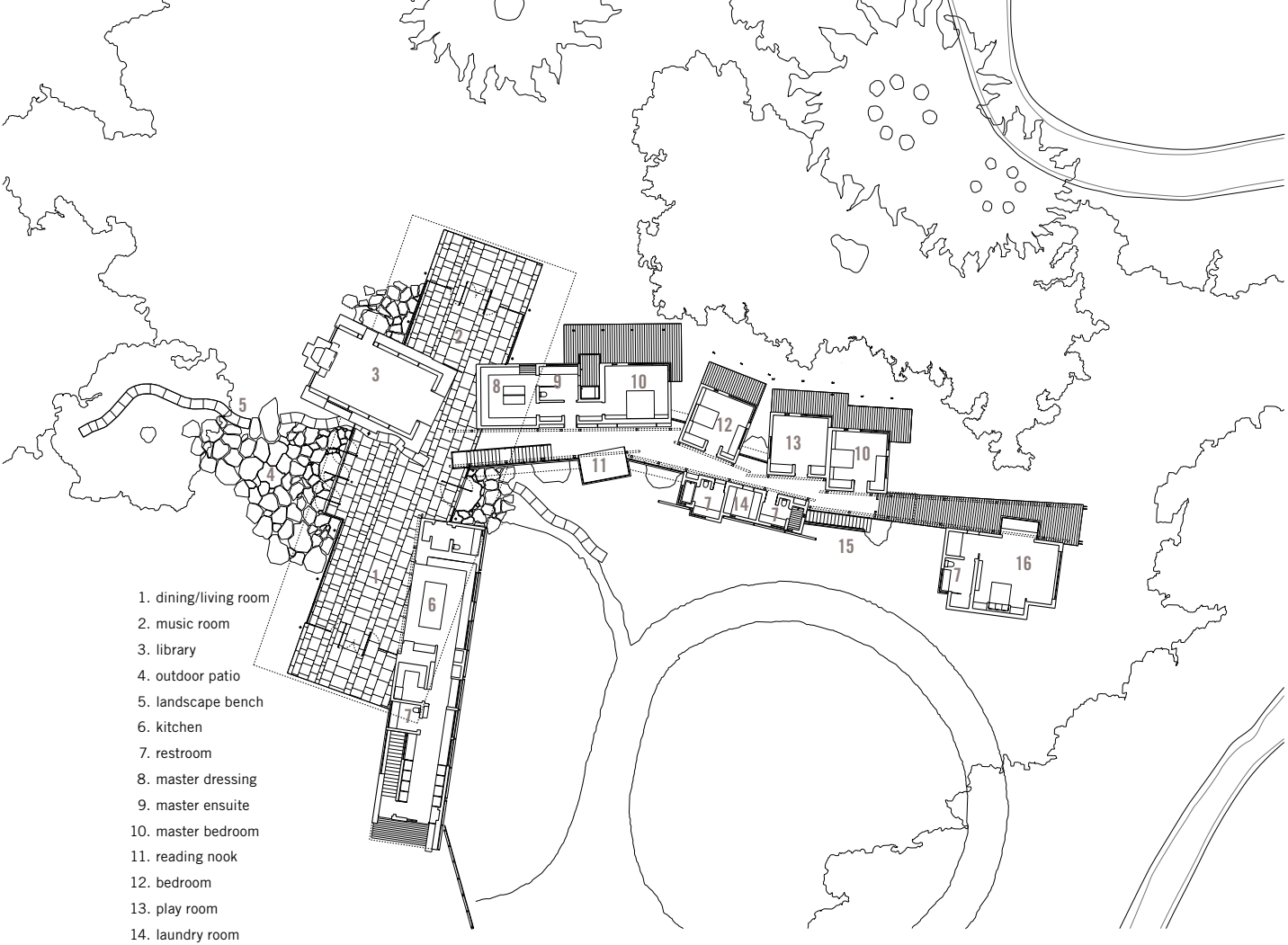
Slipping into the pavilion is a room conceived as a library; a Douglas fir cabinet of book shelves 20 ft. tall with a great fireplace is surrounded by glazing on the wall and faces a forested glade. The floor-to-ceiling vertical grain Douglas fir shelving was designed and installed with custom ladders for access.



TYPICAL CORNER AT WOOD BOXES

Bedroom boxes form the north wing and are connected by a hallway of shifting angles reminiscent of a village and the random, haphazard nature of the original outbuildings. The bedrooms ramble along defining the western edge of the corridor, while a custom cedar and glass slat wall welcomes the dappled morning light to the east. The articulated Western red cedar siding defines the edges of the spaces. The nature of the material is revealed through the fingering and lapping of the boards at the corners. The bedrooms and walkway to the guesthouse have ipe decks and an ipe trellis system above custom steel.

Creekside is composed of many dreams ultimately creating a fresh, modern home floating in a gentle meadow, there forever among the ancient trees.



FLOOR PLAN

ARCHITECT
Bohlin Cywinski Jackson
San Francisco, CA

CLIENT
Ken Morrison (owner representative)
The Rockridge Group
San Francisco, CA

GENERAL CONTRACTOR
Van Acker Construction
Mill Valley, CA

STRUCTURAL ENGINEER
Umerani & Associates
Palo Alto, CA

LANDSCAPE ARCHITECT
Patrick Brennan
San Francisco, CA

PHOTOGRAPHY
Nic Lehoux
Vancouver, BC

"The aggressive use of modular pre-fabrication here reduces the construction footprint on the landscape. It's very sensitive to the site…floating over the topography like a treehouse."

– Jury

The site is a wooded lakefront property with a pronounced ridge running roughly parallel to the shoreline, separating the approach to the site from views of the water. Sited to preserve as many existing trees as possible, this year-round cottage to be shared by two related families was imbedded along the ridge to allow all three floors access to grade.

Prefab Cottage for Two Families

Kohn Shnier Architects

A long, narrow wooden causeway touches the forest floor very lightly and threads its way between the trees to arrive at the public upper floor. In order to reduce site impact and increase efficiency of construction time and materials, a prefab structure was proposed.

The cottage consists of seven prefabricated units built at an indoor facility 325km from the site. The design of the cottage accepts and exploits some of the inherent limitations of this process to respond to the site and program. The cottage is built to the 4.875m width limit allowed on local highways, resulting in a long, thin form. Program demands were met and the heavily treed site vastly preserved by stacking the units on top of one another. This narrow cross-section creates an intimate scale, an unavoidable immediacy to the outdoors and an opportunity for natural cross ventilation on hot summer days. The length, 38.4m, generates considerable distance within the house offering remoteness and privacy when desired. This makes the cottage both small and big at the same time.

The cottage is embedded into the lake side of the ridge obliquely, such

that there is a point on each of the three floor levels with access to grade. Shared facilities are at the highest level, affording the best views. This level is entered from the top of the ridge. Sleeping areas are in the middle level, and workshop, play and utility uses are in the lowest level. Facing the lake, the east elevation of the cottage consists entirely of sliding glass doors and provides every room with views of the water and access to the forest or balconies.

Materials were selected to be long lasting and maintenance free. They fall into two categories: reflective surfaces (glazing and mirror) and those with a muted coloration (unfinished cedar, zinc cladding and galvanized steel). The objective is to visually push the structure into the background.

Construction of the units, totalling about 375 sq.m. in area, took 25 days in the builder's facility. Transit and placement of the units was accomplished in about 48 hours. The use of factory construction allowed for minimal disruption on the site (and to neighbors) during peak seasons as the units arrived at the site in early fall. A summer of sawing and hammering was replaced by the concentrated and exciting event of delivery and placement. Site work – the foundations, lower level, cladding, balconies and the construction of one bay containing a two-story high-glazed section – required normal construction durations.

The interior of the project is conceived holistically, as a piece of fine millwork. While the surfaces facing the lake are floor to ceiling glass, every other surface including floors, walls and ceilings are white ash. This creates a heightened transition between exterior and interior that highlights the contrast between the natural textures and smells of the forest and the seamless and continuous qualities of the interior wood. Major programmatic furniture elements such as the dining table, benches, coffee tables and beds are hand-crafted from solid jatoba – a dark wood that provides a distinct dark and weighty presence within the field of light ash.

1. restroom
2. bedroom
3. sitting room

FIRST FLOOR PLAN

ARCHITECT
Kohn Shnier Architects
Toronto, ON

PREFABRICATOR
Klaas Jorritsma, Royal Homes
Wingham, ON

GENERAL CONTRACTOR
Wayne Judges,
Judges Contracting Ltd.
Bracebridge, ON

STRUCTURAL ENGINEER
Tim Kieffer, Kieffer Engineering
Bracebridge, ON

MILLWORK
Alex Krupa, Tomalex Woods
Toronto, ON

PHOTOGRAPHY
Tom Arban Photography
Toronto, ON

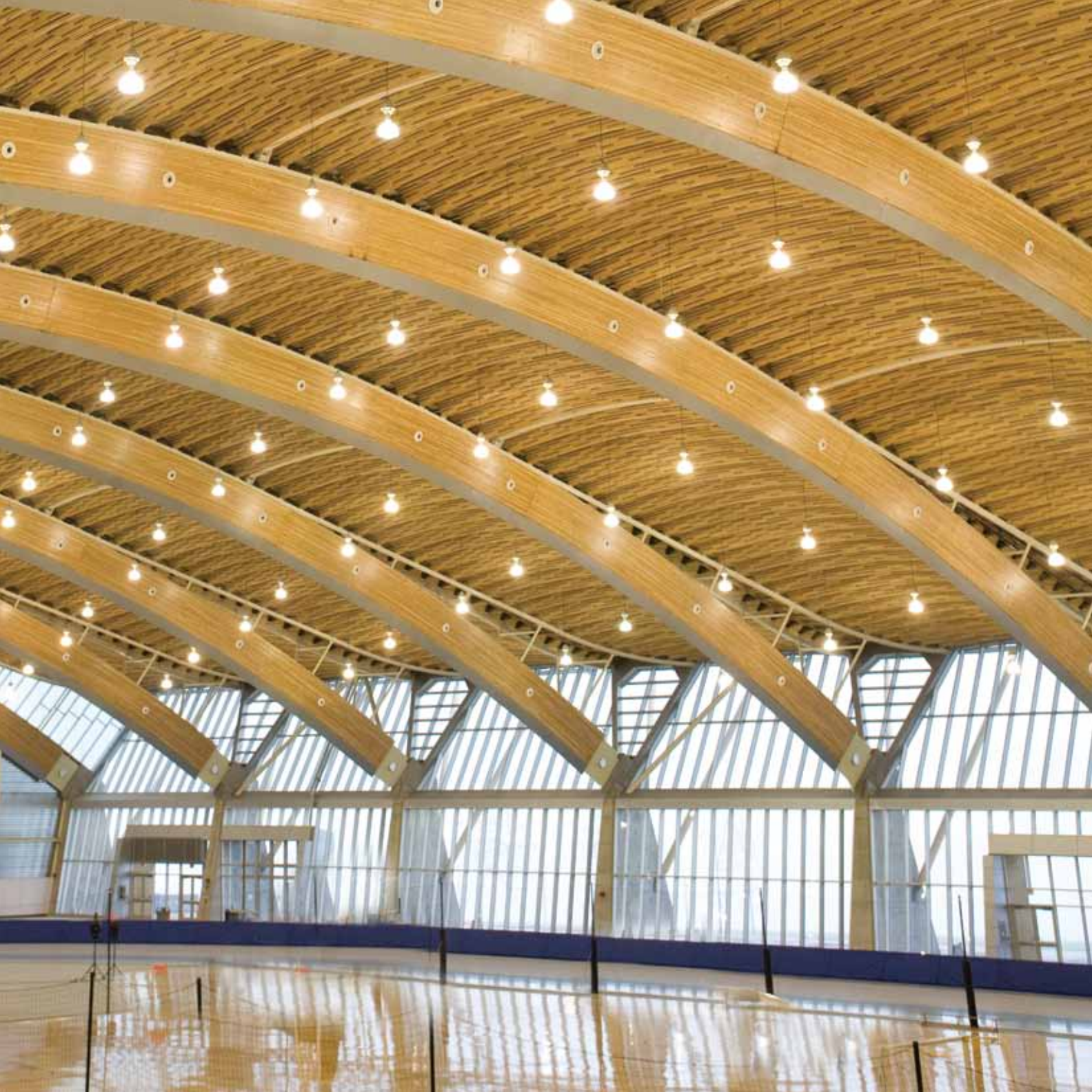
This 2010 Olympic Games venue and legacy community facility is located on one of the most visible sites in Richmond. It is prominently situated between the No.2 Road Bridge and the Dinsmore Bridge and can be seen from most flight paths at the Vancouver International Airport.

Richmond Olympic Oval

Cannon Design Architecture Inc.

"This is an imaginative and creative way of doing a large span with individual members. It demonstrates such an innovative use of wood on such a large-scale project."

– Jury



The Richmond Olympic Oval is approximately 43,000 sq.m. in gross area. The second level is the primary activity space; its width approaches 100m and was clear spanned so that the 8,000 Olympic spectators experienced no visual obstruction. The ultimate post-Games use of the building will consist of community and high-performance sport, recreation and training facilities. The building is a strategic urban design destination icon with a significant role in the transformation of the local area to a high-amenity neighbourhood and a riverfront circulation node.

The program-mandated clear span for the 100m width of the building was in many ways the most demanding parameter of the design. The use of wood and composite wood products to achieve this structural feat was driven by cultural and sustainability criteria. The design team and the City of Richmond made the decision early in the design process to use local and regional sustainably produced materials – in particular wood – to connect with the First Nations' building aesthetic. The aim was also to showcase, on the world stage, the province's resources and ability to use them in challenging and creative ways. Ultimately, the design goal was to achieve a warm and inviting aesthetic in a cost-effective way.

While the size of the building effectively prohibited the use of wood for all building components, the primary element of the structure – the roof – lent itself very well to the use of wood. The design poetic of 'flight, flow and fusion' resulted in a roof shape that evoked the dynamism of flight through its resemblance to Heron wings and wing-tips. This is an image that resonated well with the First Nations' imagery that was identified in the design team's collaboration with the Musqueam Nation. The use of wood, the history of the site and the design poetic of flight were fused to result in the warm, open and inviting final solution.

The most important parameter in the design of the Richmond Olympic Oval was the imperative of keeping the project on budget. The composite wood glulams that span the main space were adopted early in the design process. The thin, hollow sectional V shape of the torque tube arch elements emerged out of the integrated design process as an elegant, cost-effective strategy for the 98m-long span. The arch element seamlessly integrates HVAC ducting and distribution, sprinkler mains and primary electrical runs to service the space below.

The wood-wave roof deck feathers are a prototypical, locally designed and custom-built system. It is a discrete, secondary structural system that bears on the arch through a mediating wide flange beam, which bears on the top of the glulams over the center two thirds of the long span and peels up and away to the south to integrate clerestory glazing and the primary lateral service runs. The feathers peel up and away to the north opening the space up to generous, diffused daylight and dramatic views of the Fraser River and coastal mountain range beyond.

The second major design constraint was the combustibility of wood. The building code calls for non-combustible construction for structures the size of the Oval. The design team had to provide significant fire engineering modeling to obtain an equivalency under the British Columbia Building Code to enable combustible roof construction.

Weather protection (both during construction and during the life of the building), acoustic attenuation and reverberation performance, dimensional stability over time and sole-sourced procurement (of proprietary technology of the wood-wave deck) were some of the other wood-related issues that had to be overcome by the architects and the entire design team.

The acoustic considerations for the space were resolved by the increased material mass of the roof and the acoustic lining of the interior of the wood-wave panels, with the gaps in the panel surfaces being effectively sized and tested prior to mass-production. The fire protection sprinkler lines and heads were seamlessly integrated into the inner form of the roof deck assembly. The only expression of this system is the small head projections from the bottom of alternate panel Vs.

The project offered an opportunity, through client initiative and the design team's expertise, to take an innovative step in the evolution of British Columbia's wood construction culture. Building designers in British Columbia are aware of the cultural, environmental and programmatic sustainability issues that impact their region. The team recognized that a col-

lective approach to design would allow for the most accountable, inclusive and ultimately successful solution. Through collaboration, the design team came to understand the rich cultural heritage of the First Nations' building tradition, the effects of the pine beetle infestation, the engineering issues of long-span structures, and cost and procurement issues associated with an original and innovative use of wood products on such a large scale. Ultimately, the best way to support the wood culture of British Columbia was to inspire the public, users and designers with the possibilities inherent in the use of this wonderful, renewable, local building material.

The Richmond Olympic Oval was seen as the signature venue of the Olympic Games and the great wood roof has become one of the most memorable architectural images of the games. Given the significant advances in structural design, the architectural expression of dynamic movement, the integration of all building systems and the inviting warmth of the building material, the Richmond Olympic Oval is an important ambassador of the local history, environment and skill.

ARCHITECT
Cannon Design Architecture Inc.
Vancouver, BC

CLIENT
City of Richmond
Richmond, BC

GENERAL CONTRACTOR
Dominion Construction Company
Vancouver, BC

STRUCTURAL ENGINEERS
Fast + Epp
Vancouver, BC

Glotman Simpson
Consulting Engineers
Vancouver, BC

LANDSCAPE ARCHITECT
Phillips Farevaag Smallenberg
Vancouver, BC

PHOTOGRAPHY
Stephanie Tracey, Photography West Ltd.
Kelowna, BC

Craig Carmichael Photography
Parksville, BC

Jon Pesochin, Green Tea Photography
Vancouver, BC

KK Law Creative
Vancouver, BC

StructureCraft Builders Inc.
Delta, BC

Ziggy Welsch,
George Third and Sons Ltd.
Burnaby, BC

Koerner Hall – Royal Conservatory of Music
Please see page 170

"You can't help but admire this execution. It shows an imaginative use of laminated wood beams – one that provides a rich context, and also tones the sound quality. It's admirable."

– JURY

Louver House

Leroy Street Studio

"It is almost like it has a lace exterior…it's beautiful that you can see through it. The screen embraces the outside and allows natural light. This project shows a high level of attention to external finishes and framing."

– Jury

The Louver House is designed as a response to its unique site on the edge of an agricultural reserve in Long Island. Generous spaces and repetitive timber trusses evoke traditional barn structures once common to the area.

Louvered walls and variously scaled openings contextualize the flat expansive view of the seasonal corn fields and the nearby moody Atlantic coast. The exterior teak, with rich weathering qualities and natural impermeability from the elements, is scaled to give a modern texture. The building is actually a complex program of fenestrated interior and exterior spaces unified by a translucent wrapper of wood louvers and rain screens. In all, five outdoor courts and gardens are all tucked under the single roof, giving the structure a double reading of complexity from up close, and simple monolithic harmony from afar. When illuminated at night, the main house shines from within, creating a gauzy translucence rarely seen in solid, volumetric structures.

As a departure from the flat landscape, the entrance incorporates a floating staircase that opens onto a two-story foyer and overlooks a three-story interior garden courtyard. Thick, oak slabs form the stairs, while repeating rails echo the exterior posts in the landscape.

The open living, dining and kitchen areas, which form the main volume of the house, are located on the upper

floor to take in the panoramic view. Teak and high-tech hybrid steel trusses support a roof with a continuous slot skylight, and louvered walls let sunlight angle in. The design suffuses the space with dappled light and brings the outdoors in. A stone fireplace divides this hall from the outdoor, screened porch beyond. The upper mezzanine opens to an elevated platform connected to a study tucked into the rafters.

The property is distinguished simply in the landscape through contemplative groves of tall grass, mown paths, and repeating stainless steel posts. A kitchen garden area features board-formed concrete potting and storage sheds.

An outbuilding that combines the functions of pool pavilion, wood working shop and garage serves as a gate house and is scaled appropriately with the country road that leads up to the property. The state-of-the-art wood shop is on the second floor and accessed from an exterior stair to a covered porch. Sliding doors on two sides provide ventilation, and material delivery is facilitated via an overhead hoist. The shop was a special request from the client, an avid woodworker with passionate requirements about the shop's aesthetic and geographical relationship to the house.

ARCHITECT
Leroy Street Studio
New York, NY

GENERAL CONTRACTOR
Lettieri Construction
Westhampton Beach, NY

STRUCTURAL ENGINEER
Blue Sky Design Engineers
New York, NY

LANDSCAPE ARCHITECT
Reed Hilderbrand Associates
Watertown, MA

PHOTOGRAPHY
Paul Warchol
New York, NY

COMBINED SECTIONS

Spiral House

Joeb Moore + Partners Architects, LLC

"The treatment here – with one piece hovering – is dynamic. The composition of vertical wood detailing is well resolved; all the pieces come together. Very elegant wood massing."

– Jury

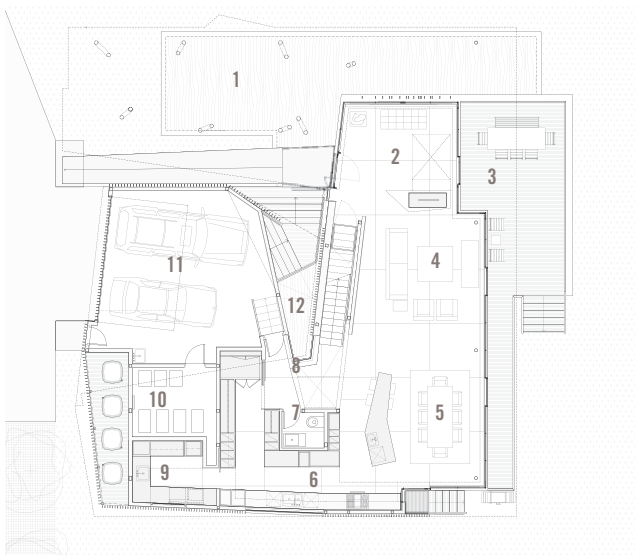
Situated along the Connecticut shoreline of Long Island Sound, the Spiral House seeks to engage, enhance and reflect the surrounding coastal micro-climate and its atmospherics of light, air, water. Formally and spatially, the house is a direct and pragmatic response to the strict environmental (FEMA and flood elevations) and local zoning restrictions and regulations (height, building setbacks, FAR, footprint) imposed on the building and site.

The coastal landscape of the site is one of indeterminacy. Subtle changes in the environment's tidal and atmospheric conditions are framed in the space between the distant horizon and the property's sea wall. The diaphanous glass walls of Spiral House that face the sea allow the architecture to merge with its surroundings, both mimicking the light and airy flows of the site and framing the dynamic flow and ebb of the tides and the winds beyond.

In conjunction with the glass walls, a Western red cedar lattice system clads the house exterior in a manner that reinterprets the traditional vernacular of New England shingle-style board and batten techniques. The vertical battens

The house-form is actually the result of an interface and tension between two systems of geometry, one projective + linear and the other, radial + dynamic. Through an overlapping system of spatial and geometric progression, growth, and interference the social-spatial roles of public and private, interior and exterior, house and landscape are intimately connected and entwined, and yet are also left curiously open-ended and indeterminate (nautilus shell).

Overall, the house (and its underlying dueling geometries) operates precisely and creatively within the found and prescribed social and environmental boundaries of the site to produce a dynamic, experience-oriented dwelling.



1. reflection pond
2. entry foyer
3. rear porch
4. living room
5. dining room
6. kitchen
7. restroom
8. mudroom
9. laundry
10. mechanical
11. garage
12. water cistern

FIRST FLOOR PLAN

are offset from tongue-and-groove siding with stainless steel fasteners creating a reticulated effect across all of the building's exterior surfaces. This screen responds to various site and programmatic requirements (solar orientation, privacy, etc.) and is allowed to weather naturally. The warm material qualities of the cedar are contrasted with the austere glass curtain wall system and minimalist interiors. The wood lattice serves to further compound the dynamism of the site, creating a moray effect that is ever-changing as the user moves through the space and the sun passes overhead.

ARCHITECT
Joeb Moore + Partners Architects, LLC
Greenwich, CT

CONCEPTUAL DESIGN
Joeb Moore (Principal), Matt Burgermaster (Project Architect)

PROJECT TEAM
Clement Valla, Demetrios Comodromos, Leigh Stewart, Julianna von Zumbusch

GENERAL CONTRACTOR
Frank Talcott, Talcott Construction
Redding, CT

STRUCTURAL ENGINEER
Nat Oppenheimer, Nava Abir, Robert Silman Associates, P.C.
New York, NY

PHOTOGRAPHY
Jeff Goldberg, Esto Photographics Inc.
Mamaroneck, NY

To provide a sustainable range of social, environmental, and economic benefits to the people of Oregon, the Tillamook Forest Center was designed to explain the history, recreation, and forest practices of the 355,000-acre Tillamook Forest.

Tillamook Forest Interpretive Complex

The Miller|Hull Partnership

"This is a modern conception housed within a vernacular form, with an imaginative use of wood for a large-scale structure. The interior has a softness that mimics the landscape."

– Jury

The interpretive center focuses on the story of the Tillamook Burn, a devastating forest fire that obliterated more than 350,000 acres of forest between 1933 and 1951. A massive two-decade reforestation effort ensued. The reforestation brought back the forest, but the lack of tree species diversity created a monoculture that the Oregon Department of Forestry (ODF) has since been correcting by planting new species, creating snags for habitat and openings in the tree canopy. The center is situated within an area of forest diversification, so the interpretive elements that tell the story of the restoration efforts happen both inside and outside.

The interpretive nature of this building's function and the desire to weave the building into the forest led to a linear solution. The building takes its form from the historical skid that is a long-level, partially covered platform for moving and sawing timber. In this case the skid becomes the arrival point. A glulam bridge that spans across the Wilson River connects the interpretive center to campgrounds and trails. The building entry spans a pond created by stormwater runoff from the roof. The pond is used as water a storage area for the building's fire sprinklers and as an alternative source for refilling fire engines. The water is also used for flushing toilets and for what little mechanical cooling the building requires. The main feature is the interpretive exhibition space, which doubles as the lobby and occupies one long continuous space.

Alongside the skid is a secondary building which houses classrooms, the gift shop, administration spaces and the theatre as well as restrooms and mechanical rooms. The mechanical

fuel source is wood pellets which are a by-product of forest industry operations and are carbon neutral. A metal silo and auger system feed the pellets to the high-efficiency boilers. The ash is re-introduced into the forest. A re-created forest service lookout tower anchors the entry and acts as an iconic element that can be seen by motorists from the state highway.

The Tillamook Interpretive Center is a vehicle to explain ODF goals. Naturally the use of forest materials and products in the construction of the center was important. This was an opportunity to showcase the versatility, beauty, sustainability and cost effectiveness of wood. The building demonstrates these qualities on many levels. The building was conceived and executed in a way that tells the story of wood construction.

Throughout the main building, the framing and layers of finish are expressed with wood products as the primary finish material. The structural systems and windows consist of certified wood and engineered wood products from the state forests. The wood beam framing, siding and window systems were milled from sustainable forests. At times in the exhibit spaces, the wood paneling is peeled away to reveal the structure beneath. The wood slat ceilings conceal the acoustic batts and fire sprinkler piping. A suspension bridge spans the Wilson River and connects directly into the center. Even waste produced in the sawmills is recycled into wood

pellets that fuel the wood boilers.

Tiles and partitions in the restroom are manufactured from recycled content materials. Flooring choices included natural linoleum which is made from linseed oil, pine tree sap, and wood dust and can be composted at the end of its life. The ODF strived to use regionally manufactured materials and local companies within a 150-mile radius of the site. Fifty eight different materials with green features were used on the project including seven kinds of FSC certified wood, nine kinds of SFI certified wood and several salvaged or on-site reused wood sources.

ARCHITECT
The Miller|Hull Partnership
Seattle, WA

CLIENT
Oregon Department of Forestry
Forest Grove, OR

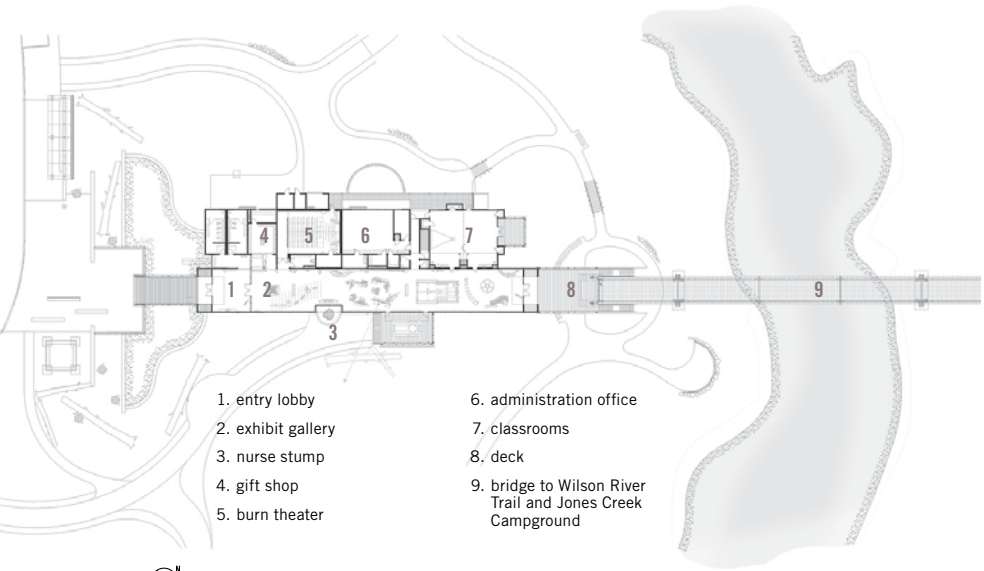
GENERAL CONTRACTOR
Precision Construction Company
Portland, OR

CIVIL & STRUCTURAL ENGINEER
Tetra Tech/KCM Inc.
Seattle, WA

PHOTOGRAPHY
Loren Nelson
Beaverton, OR

Nic Lehoux
Vancouver, BC

Yoram Bernet
Seattle, WA



1. entry lobby
2. exhibit gallery
3. nurse stump
4. gift shop
5. burn theater
6. administration office
7. classrooms
8. deck
9. bridge to Wilson River Trail and Jones Creek Campground

FLOOR PLAN

CITATION **Awards**

The Camouflage House sits on a steep lake bluff, its narrow, linear volume nestled into the hillside.

Camouflage House

Johnsen Schmaling Architects

"This is one of the only projects that use various woods and stains to create an artistic composition. There's a real play with the changing seasons and colors. It's refreshing."

– Jury

Approaching the house from the rugged access road weaving through the site's heavily wooded plateau, the building's faint, low-slung silhouette virtually disappears in the surrounding vegetation. With its precisely detailed exterior wood skin and interior wood paneling, the house achieves an elegant clarity and rustic warmth that avoids bucolic sentimentality.

Informed by careful conceptual studies of the most striking features of the site, a complex system of façade layers wraps around the building's geometrically disciplined volume. Throughout the house, the superimposition of natural and man-made wood components – natural cedar, resin-based wood veneer panels, glue-laminated posts and beams, exposed MDF paneling – illustrates the wide range of aesthetic and functional characteristics of wood, celebrating the material's inherent tension between durability and temporality, perfection and imperfection, nature and technology. The base façade layer is clad in untreated vertical cedar strips and serves as the backdrop for a series of polychromatic wood veneer resin panels that echo the ever-changing hues of the surrounding deciduous trees. The panels overlap with the strict base grid of the building's exposed structural columns, mimicking the rhythmic shift between tree trunks as one moves through the forest. Over time, the cedar walls will weather to a silver-gray, while the wood veneer panels will retain their original color and pristine finish.

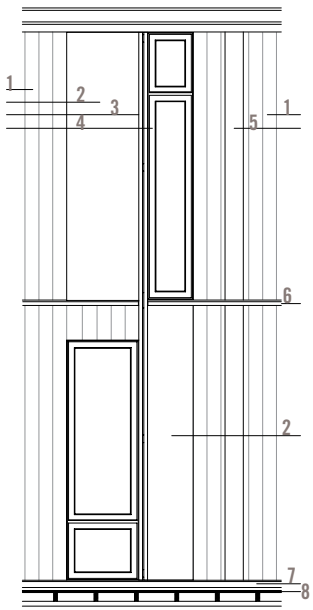
The inside of the house, while unapologetically contemporary, continues Wisconsin's long history of lake cottage architecture, which has traditionally featured exposed timber construction, interior wood siding, combined living and dining halls centered around a fireplace, and a limited palette of natural materials. Meticulously detailed, the entire entry level of the Camouflage House is clad with clear-sealed MDF panels, held apart by reveals that align with the exposed engineered wood beams above and accentuate the structural rhythm of the house.

From the small clearing of the entry court, the low roof plane of the open breezeway connecting house and garage leads to a linear, glazed foyer that penetrates the two-story building

and terminates at a partially covered balcony with spectacular views of the lake. Stairs connect to the lower level, which is fully exposed on the lake side and houses all bedrooms, providing access to the zero-edge bluff terrace that stretches along the entire length of the building and to the master bedroom "grotto," an intimate outdoor space between the western edge of the house and the site's imposing rock formation. On the upper level, kitchen, dining and living functions occupy an open space that can extend into the adjacent spacious screen porch by retracting the large, foldable glass door system that separates the two. Throughout the spring, summer and fall, the screened porch functions as the home's lung, taking in the mild lake breezes.

The main volume of the house is a simple post-and-beam structure based on a strict 48-in. on center baseline. The exposed glulam roof beams are supported by 4 x 6 wood posts. 2 x 6 stud walls fill in the structural frame and provide lateral strength. 1 1/8-in. thick plywood spans between the roof beams and cantilevers over the building edge to provide an exceptionally thin roof line.

The design is based on a set of sustainable components and materials intended to minimize the building's environmental impact. The lumber products are native and sourced locally, or are FSC-certified, depending on availability. Walls achieve an R-30 insulation value with soy-based expanding foam insulation, and all windows are Energy-Star rated. Roofing membranes contain recycled rubber. Throughout the house, low-VOC sealers and paints were specified. The concrete used for foundations and for the exposed floors and walls has a high fly ash content.



1. vertical cedar board siding
2. epoxy core wood veneer paneling
3. double-layered ipe column
4. aluminum-clad wood window
5. ipe wall panel
6. ipe sill
7. aluminum sill
8. ipe board

ELEVATION DETAIL

ARCHITECT
Johnsen Schmaling Architects
Milwaukee, WI

CLIENT
John Geiger and Kathy Murkowski
Green Lake, WI

GENERAL CONTRACTOR
Gale Burg Construction Inc.
Fond du Lac, WI

STRUCTURAL ENGINEER
Ambrose Engineering Inc.
Cedarburg, WI

LANDSCAPE ARCHITECT
Johnsen Schmaling Architects
Milwaukee, WI

PHOTOGRAPHY
Kevin Miyazaki
Milwaukee, WI

This 3400-sq.ft. house, composed of two volumes, is one of a series of related projects built on the drumlin headlands of Nova Scotia's south shore.

Hill House

MacKay-Lyons Sweetapple Architects Ltd.

"I love the juxtaposition of the two boxes. And the vernacular use of cedar shakes as a volume with small openings emphasizes the material qualities."

– Jury

It occupies the crown of a drumlin, from which it enjoys a 360 degree view over both the outer ocean and the inland landscape. The bald, exposed hilltop suggested a site strategy with the archetypal desire for both prospect and refuge.

Both the structures turn their plain rumps outward against the wind, while their glazed bites face one another across a courtyard sheltered by low concrete walls. A dynamic, pin-wheeling relationship is established between the two structures, so that one focuses out to the landscape by looking inward through the court. This house merges with the land through its sculptural form.

The monolithic, wedge-like forms appear to be scribed to the curvature of the drumlin. In its extreme zero approach to detailing, Hill House exhibits an essential plainness, echoing the vernacular forms of barns and boats.

Both structures have blunt ends which contain two storys of cellular spaces: sleeping quarters and studio in the main house and guest areas in the barn. Open plan spaces face covered decks and the courtyard. The servant functions, including entries, stairs, and restrooms, are located on the sides of the buildings. Two pinwheeling concrete walls appear to slide out from under the shingled skins to form the courtyard. A continuous line of cabinetry follows the concrete wall in each structure, becoming a wood storage unit outdoors.

A monolithic effect is created by the use of consistent 4-in. Eastern white cedar shingles. Corners are woven with four layers of alternating shingles. The low monopitch roofs clad in standing-seam metal, and the commercial aluminum windows will eventually match the cedar shingles as they age and take on a silver color.

The house's bold siting on the top of a drumlin required that the building's form and material selection respond to the harsh climate of the North Atlantic coast. West facing views are provided with large overhangs via the covered porches to alleviate heat gain and glare. Southern exposures are generously glazed to take advantage of solar heating in the colder months. The two roofs collect rainwater for an underground cistern that allows the owners to substitute their domestic water with the turn of a lever.

Floors are polished concrete with in-floor radiant heating that provides an efficient thermal storage system.

The Eastern white cedar shingle skin and spruce decks, both locally milled, are treated with a non-toxic, water-based

wood preservative. Tongue-and-groove hemlock ceilings, also produced locally, flow continuously from inside to the outer covered decks.

Maple cabinetry fills both buildings and contributes to the warmth provided by the hemlock ceilings, albeit in a more refined manner. The highlight of the millwork is showcased in the great room where a 36-ft. solid maple countertop (1 ½ in. x 1 ½ in. laminated strips) runs the entire length of the space. All kitchen functions are contained and hidden in this counter below the 3-ft. line, allowing the glazing to fully occupy three sides of the space. In comparison with this grounded cabinetry in the public section of the house, a 30-ft. long maple bookcase lines the loft area of the private space, accessed by a rolling maple library ladder.

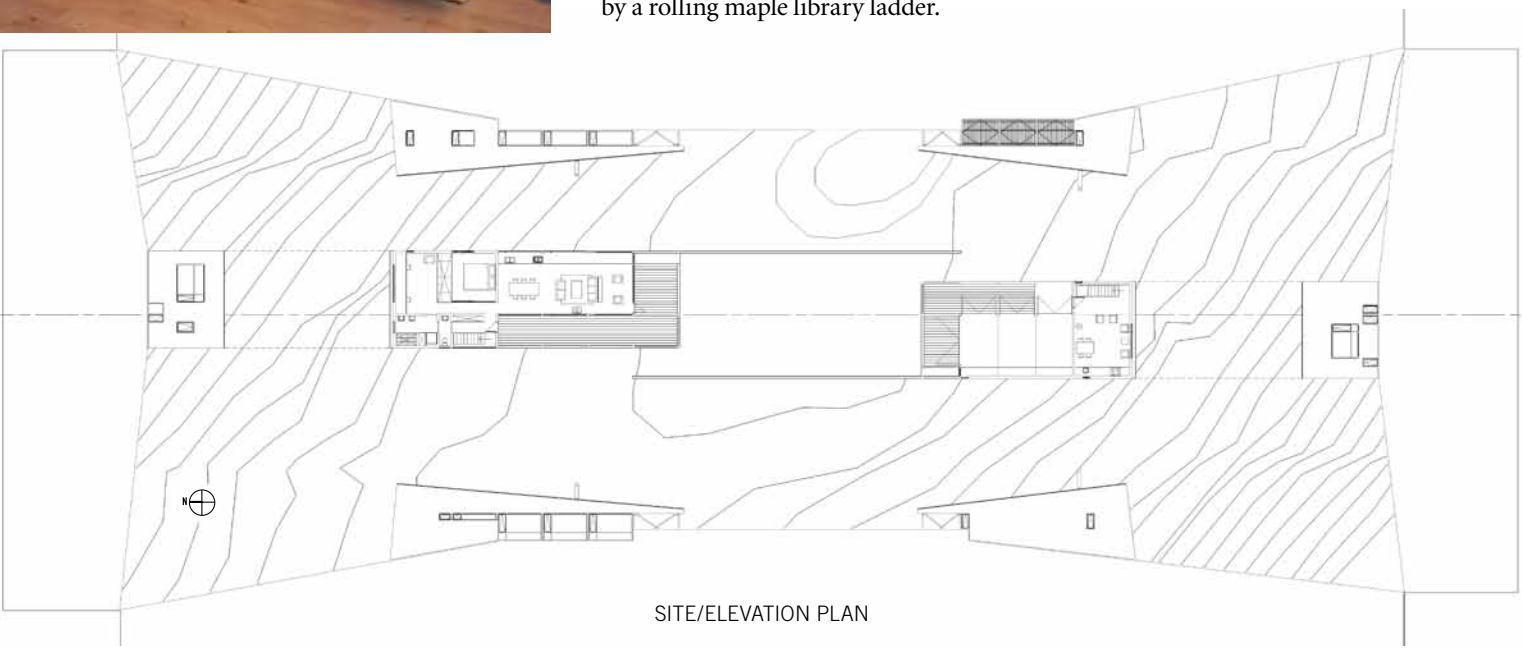
ARCHITECT
MacKay-Lyons
Sweetapple Architects Ltd.
Halifax, NS

PROJECT TEAM
Brian MacKay-Lyons,
Talbot Sweetapple, Chad Jamieson,
Peter Blackie

GENERAL CONTRACTOR
Arthur Baxter
Bedford, NS

STRUCTURAL ENGINEER
Campbell Comeau Engineering Ltd.
Halifax, NS

PHOTOGRAPHY
Steven Evans
Toronto, ON



SITE/ELEVATION PLAN

"There is a playful architecture here because of the curvature and the way it breaks the view inside and out. The idea of shades is taken to a high level of study."

– Jury

The Integral House is a place for architecture, music and performance at the edge of a Toronto ravine. From the street it appears as a two-story building with a grounded wood base and, sitting on top, a translucent, gently shaped, etched glass skin.

The Integral House

Shim-Sutcliffe Architects Inc.

The wooden base is composed of solid walls clad in oak that dissolve into oak clad fins. These serpentine walls made of vertical glass separated by projecting oak fins form the gentle perimeter to the house, echoing the undulating contour lines of the river valley and the winding pathways in the native forest of oaks, maples and beaches. The client's passion for curves provided a starting point for this project. Curvilinear volumes require double integrals and result in complex shapes that permeate this project.

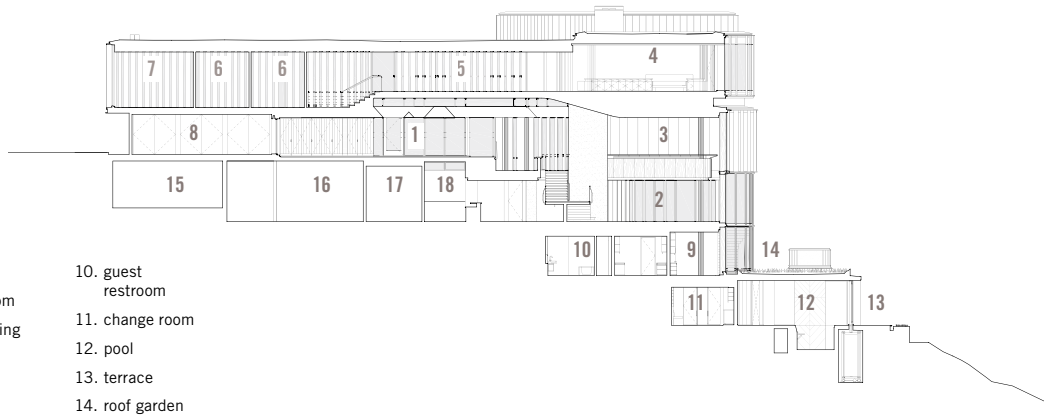
The cross-section of the house parallels the experience of descending the ravine slope as well as ascending above into the tree tops. The key moment in the journey through the project is a performance space for 150 people to gather located a full floor below the entry level and visually intertwined with the ravine landscape. Upper level dining and living areas double as balconies during a performance with additional seating overlooking the performance space.

Each of the project's five stories on the ravine side has a different and emphatic relationship to the ravine landscape. At the lower floors, the experience of the forest floor is primary. As one ascends through the house, both the palette and spatial experiences lighten until you are in the airy tree tops.

Sustainability is integrated into the project and not considered as features. Beneath the entry driveway,

23 geothermal pipes provide heating and cooling for the main performance space and rest of the residence. The demands of an assembly space for larger events and gatherings necessitated an approach that was simultaneously energy efficient and also extremely quiet both inside and outside given its prime location in the heart of a large urban metropolis and along a ravine edge. The project's extensive green roof, which can be viewed from many parts of the project, reduces the heat island. The vertical wooden fins provide sun shading on the exterior as well as contribute to the acoustical effect of the performance space on the interior. Materials have been selected for their aesthetic contribution as well as their enduring qualities based on life-cycle costing calculations.

The project features many experiments and explorations throughout – fireplaces, staircases, door handles. One special integrated element is a blue glass stair, the result of collaboration between glass artist Mimi Gellman, Shim-Sutcliffe Architects and structural engineer David Bowick.



1. entry
2. living room
3. upper living room
4. master bedroom
5. hall
6. guest room
7. guest suite
8. garage
9. study
10. guest restroom
11. change room
12. pool
13. terrace
14. roof garden
15. mechanical room
16. storage
17. servery
18. bar

LONGITUDINAL SECTION

ARCHITECT
Shim-Sutcliffe Architects Inc.
Toronto, ON

CLIENT
James Stewart
Toronto, ON

GENERAL CONTRACTOR
Eisner Murray
Toronto, ON

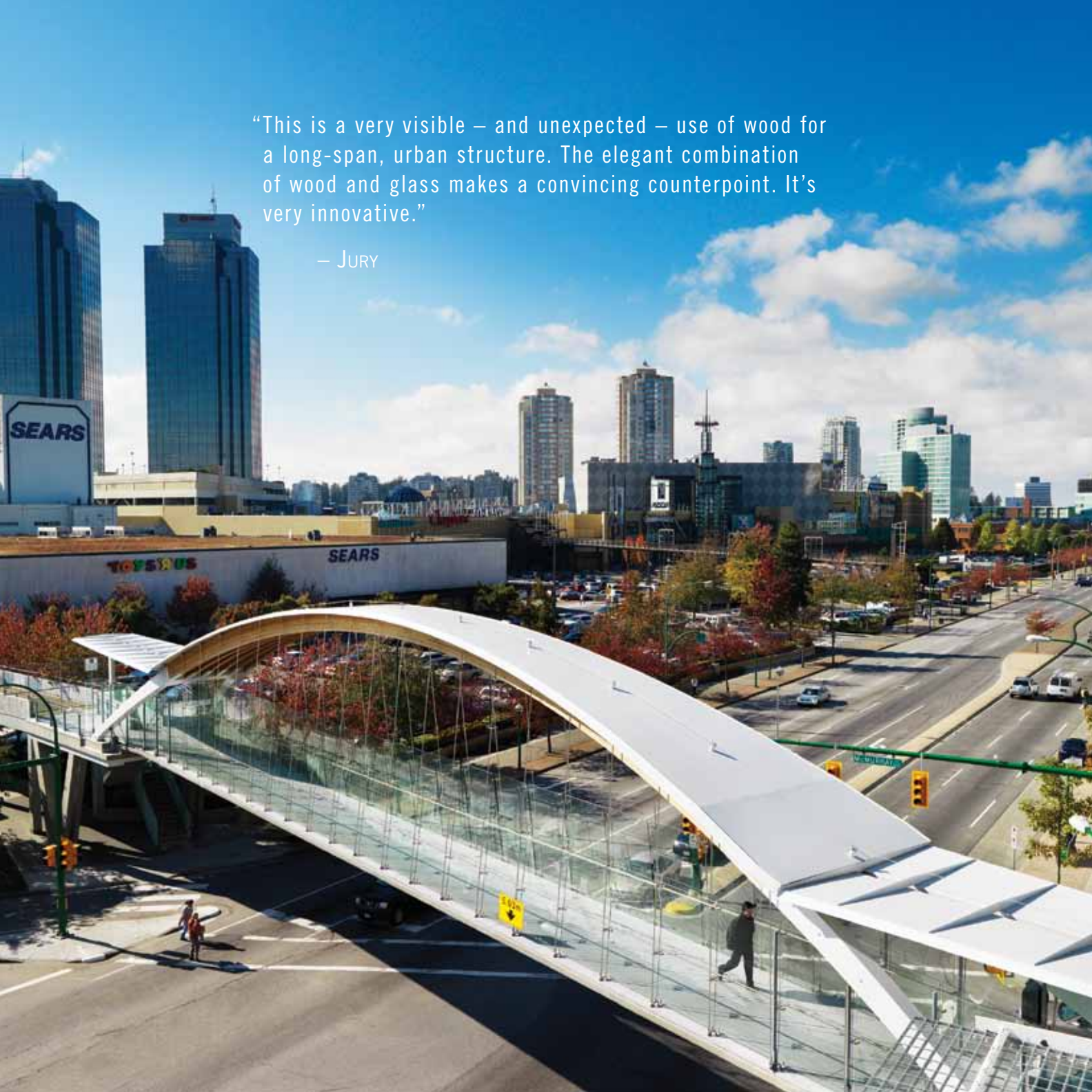
STRUCTURAL ENGINEER
Blackwell Bowick Partnership Ltd.
Toronto, ON

LANDSCAPE ARCHITECT
NAK Design Group
Toronto, ON

PHOTOGRAPHY
Bob Gundu
Toronto, ON

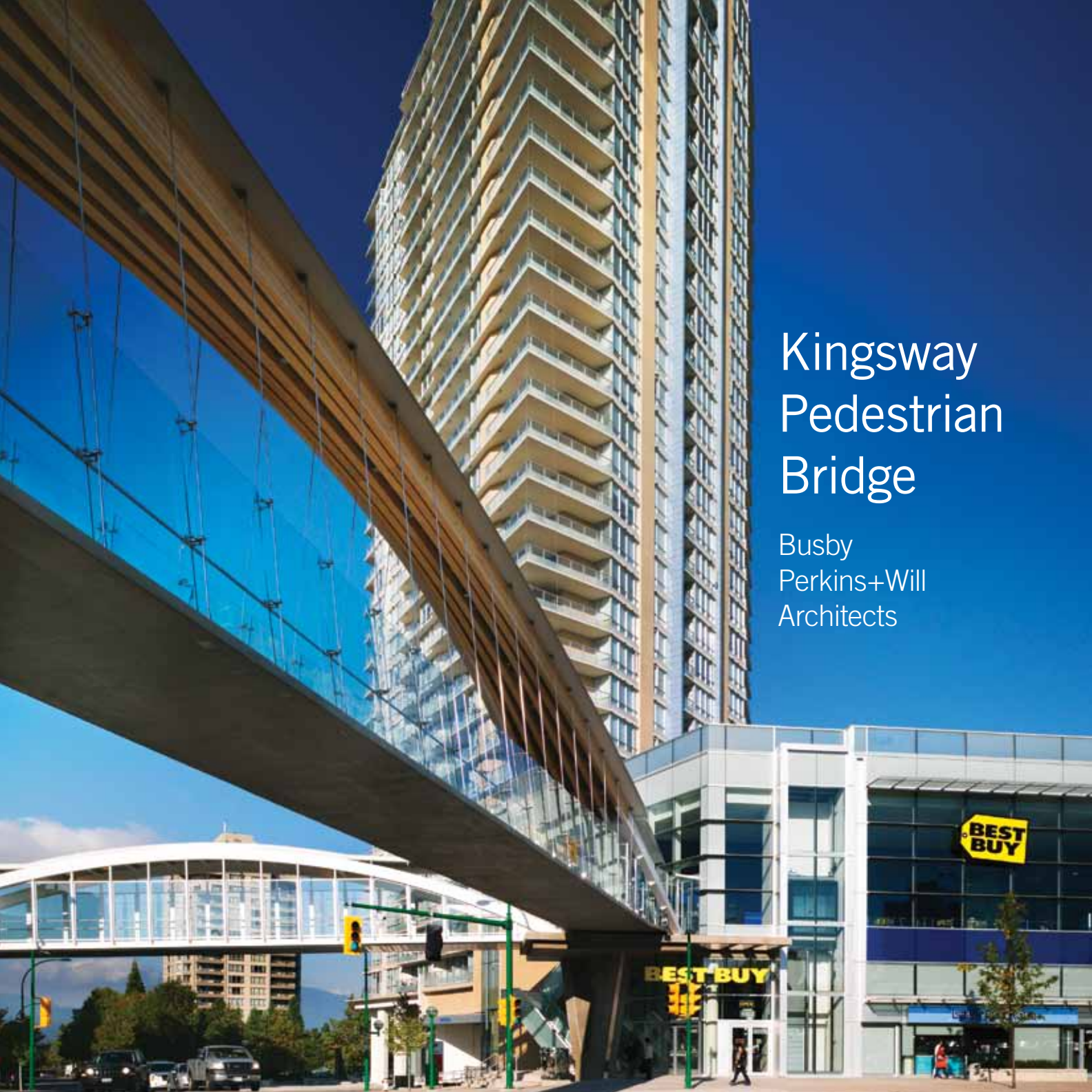
Edward Burtynsky
Toronto, ON

James Dow
Edmonton, AB



"This is a very visible – and unexpected – use of wood for a long-span, urban structure. The elegant combination of wood and glass makes a convincing counterpoint. It's very innovative."

– Jury



Kingsway Pedestrian Bridge

Busby
Perkins+Will
Architects

The Kingsway Pedestrian Bridge is a landmark structure connecting Metrotown to the growing commercial and residential areas north of Kingsway in Burnaby, British Columbia.

EAST ELEVATION

The intent was to create an urban landmark through an architectural approach; a transparent and light structure made of wood, steel, and concrete that doesn't disrupt views.

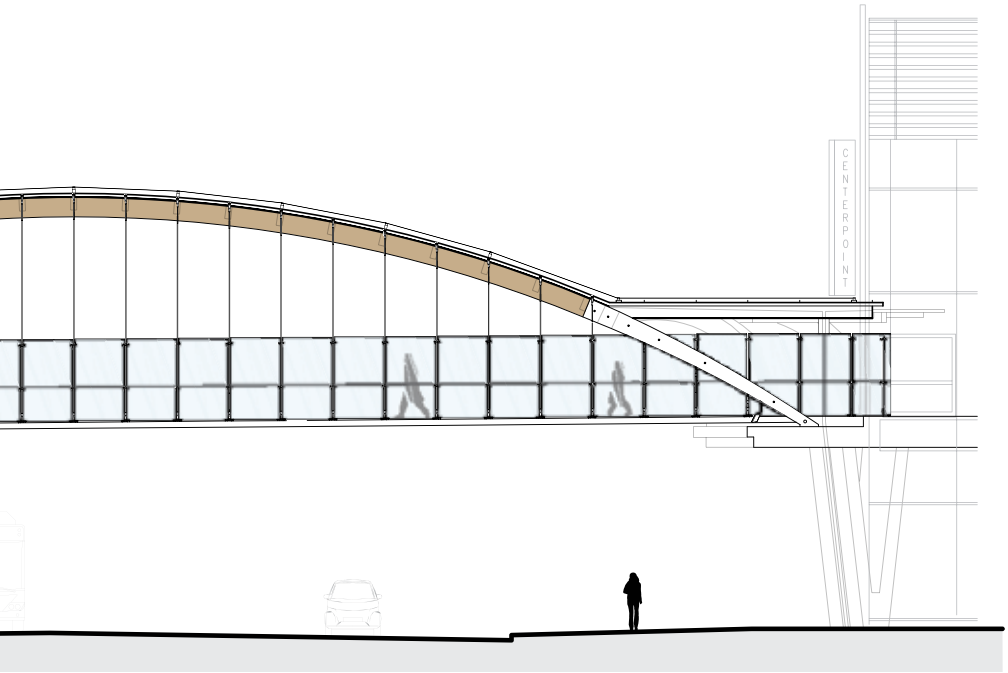
Structural components of this bridge are a combination of wood and steel. The project spans 140 ft. and uses a steel base yolk frame to support elegant double-curved glulam frames. Stainless steel rods suspend a precast concrete deck and a ¼-in. coated steel plate serves as the roof. The deck is 10-ft. wide with a guardrail height of 8 ft. The guardrail system includes frameless glass with cast stainless steel brackets. The project also includes concrete support piers, access stairs, architectural lighting consisting of LED lamps set into the steel base yolks and a continuous blue LED light strip along the curved roof edge.

The striking double-curved glulam wood form hovers above the footbridge that crosses Kingsway at McMurray Avenue, blending an elegant design solution with an inviting passage across a busy intersection.

The decision to utilize wood on the Kingsway project was based on wood's sustainability and aesthetics. At the outset of this project the architectural team resolved to incorporate a large wood component into the final product. After ensuring that the glulam beams would hold the double-curve geometry that would match the structural steel expression, the focus was turned to convincing the client that glulam beams would be durable enough to use in an exterior public pedestrian bridge that crosses a high-traffic vehicular street.

The use of glulam beams in the bridge was also intended to promote the use of sustainable, renewable materials as the main structural component of a public project. Glulam beams, glulam cross beams and plywood roofing are sustainable, renewable materials.

The design intent was to express the centre 100-ft. portion of the bridge through the warm glulam wood. The client requested that the entire bridge deck not be completely covered, that



it should allow some rain to enter the bridge deck to deter public assembly at the centre of the bridge. The continuous 8-ft.-high glass along both sides of the bridge dictated the structural geometry, allowing the centre arch to be high enough to allow rain on the bridge deck.

To ensure that the glulam beams had double curves, they were manufactured with one arched curve and then assembled in a staging area near the final site. The six glulam beams were then tensioned together at their center with threaded rods at 5 ft. on center through varying sized glulam blocks which give the set the second inward curve. This assembly sequence permitted the beams to have a double curved geometry.

To protect the glulam beams from the elements, a clear, non-yellowing polycarbonate urethane coating with UV protection was applied to the wood, and the steel plate overhang along the bridge sides was extended to equal the depth of the beams.

The wood beams in the Kingsway Pedestrian Bridge have an inherent natural beauty and grace that is especially resplendent when contrasted with the surrounding urban environment. The successful use of wood in this public project promotes the use of Canadian wood and reflects British Columbia's historical connection with the wood industry and its cultural importance.

ARCHITECT
Busby Perkins+Will Architects
Vancouver, BC

CLIENT
City of Burnaby
Burnaby, BC

GENERAL CONTRACTOR
Dominion Fairmile
Vancouver, BC

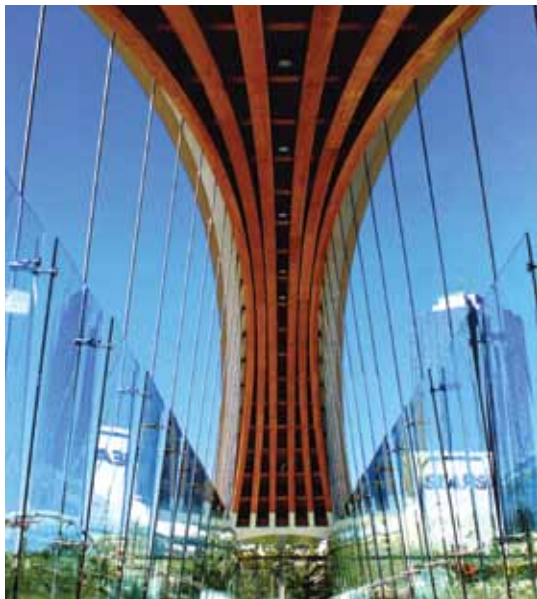
STRUCTURAL ENGINEER
Fast + Epp
Vancouver, BC

ELECTRICAL ENGINEER
RFA Consulting Engineers
Vancouver, BC

LANDSCAPE ARCHITECT
PWL Partnership
Vancouver, BC

PHOTOGRAPHY
Enrico Dagostini
Vancouver, BC

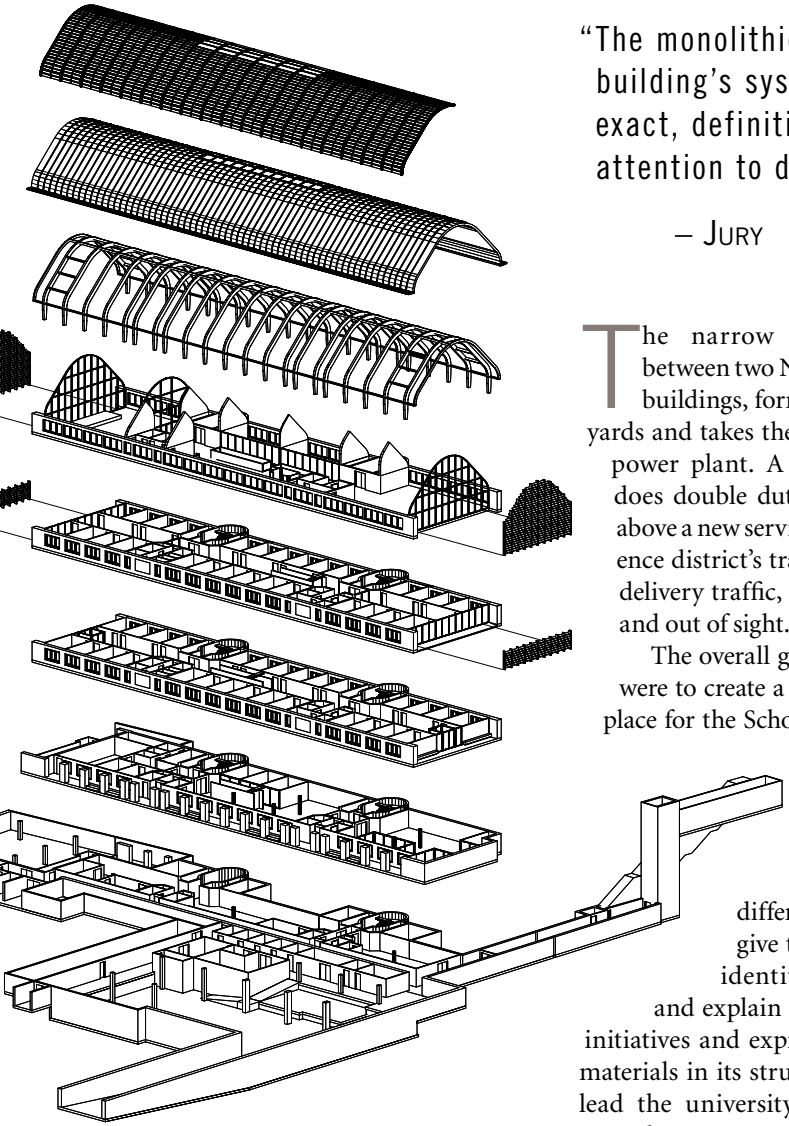
Martin Tessler
Vancouver, BC



The greenest building on campus and flagship of Yale University's sustainable mission, the New School of Forestry and Environmental Studies is designed to use 58 per cent less energy than its peers.

Kroon Hall, School of Forestry and Environmental Studies

Hopkins Architects/Centerbrook Architects and Planners



AXONOMETRIC VIEW

"The monolithic use of one wood type integrates all the building's systems and technologies. The detailing is exact, definitive and deliberate. It's this refinement and attention to detail that is exemplary."

– Jury

The narrow rectangle, sited between two Neo-Gothic science buildings, forms two new courtyards and takes the place of an aging power plant. A grassy courtyard does double duty as a green roof above a new service node for the science district's trash, recycling, and delivery traffic, now underground and out of sight.

The overall goals of this project were to create a collegial gathering place for the School of Forestry and Environmental Studies community, which had been scattered among nine different buildings, and give the School a visual identity; demonstrate and explain sustainable design initiatives and express the building's materials in its structure; and finally, lead the university, and the world, toward a more sustainable future.

Given the school's focus and hopes for a sustainable building, wood was used extensively both inside and out. Red cedar louvers shade the east and west ends from harsh summer light, Douglas fir graces the interior walls of the exterior arcades, and red oak, much of it from the school's own forests, warms the interiors.

The gabled roof recalls its neighbors while integrating photovoltaic arrays and skylights. The end glass walls with wooden screens offer sheltered views in both directions. The top floor houses a cathedral-like lecture hall, classrooms, and environment center. The middle floors accommodate faculty offices, while the ground floor's classrooms and library open to the south courtyard.

LEED Platinum certification is anticipated from the U.S. Green Building Council. Sustainable aspects of the building include photovoltaic roof panels, deep geo-thermal wells, a storm-water recycling and cleansing pond, solar hot water heaters, abundant insulation, automatic daylight dimming, maximum use of natural ventilation and thermal energy exchange, displacement air systems, indirect evaporative cooling, built-ins for recycling, and the use of green building materials like wood, which are expressed in the building's structure.

ARCHITECT
Hopkins Architects
London, UK

EXECUTIVE ARCHITECT
Centerbrook Architects and Planners
Centerbrook, CT

CLIENT
Yale University
New Haven, CT

STRUCTURAL, MEP, AND
FIRE PROTECTION ENGINEER
ARUP
New York, NY

SUSTAINABLE DESIGN
Atelier Ten
New York, NY

LANDSCAPE ARCHITECT
The Olin Studio
Philadelphia, PA

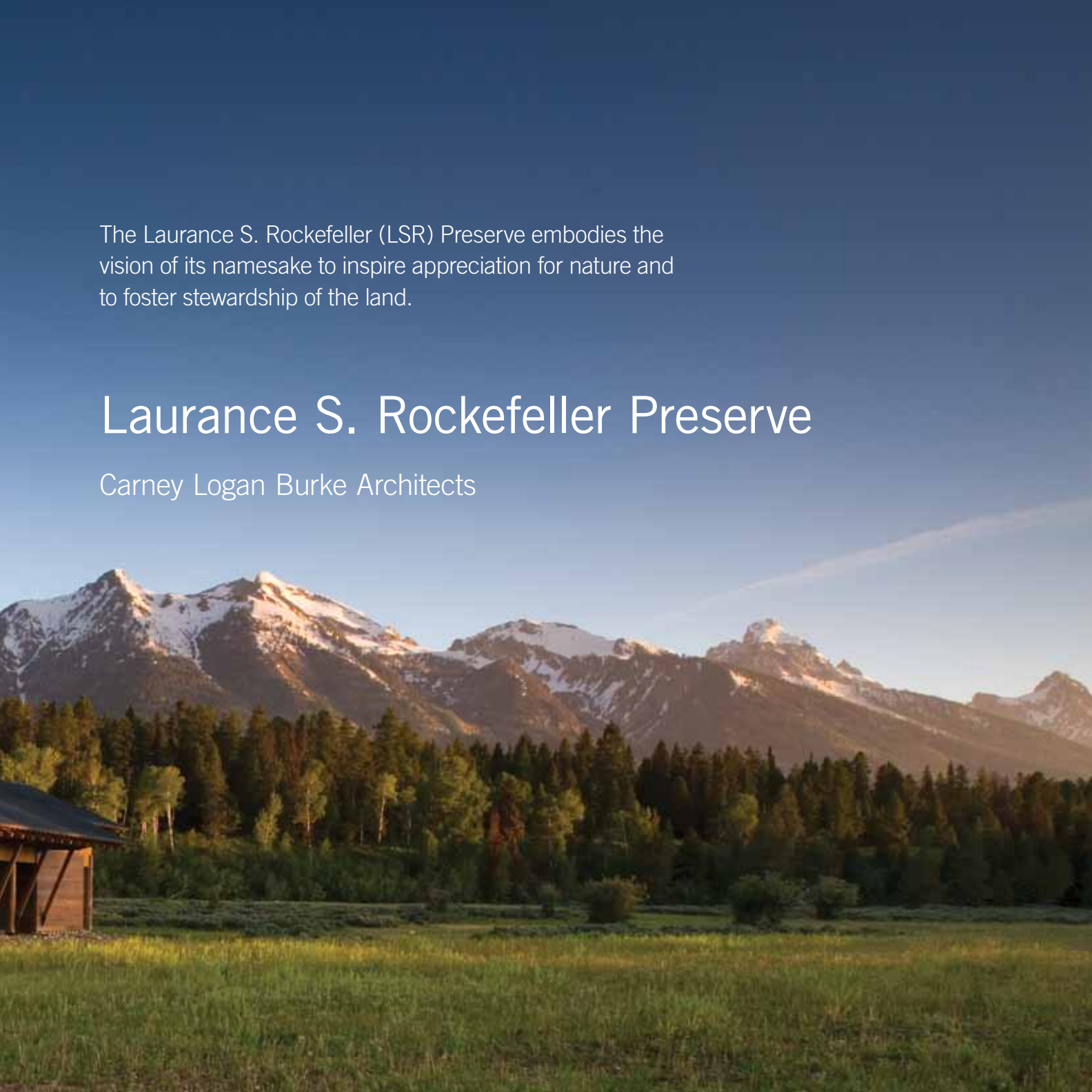
FAÇADE ENGINEERING/
THERMAL PERFORMANCE
Simpson Gumpertz & Heger Inc.
Waltham, MA

PHOTOGRAPHY
Morley Von Sternberg, RIBA
London, UK

The Laurance S. Rockefeller (LSR) Preserve embodies the vision of its namesake to inspire appreciation for nature and to foster stewardship of the land.

Laurance S. Rockefeller Preserve

Carney Logan Burke Architects



"This is a simple, elegant exterior volume, with a varied use of wood. It's very refined. The building is broken apart and well-considered in terms of views and use of the land."

– Jury

This groundbreaking project started with a gift from Laurance S. Rockefeller to the American people: a 1,100-acre inholding in Grand Teton National Park that had been a family retreat for more than 75 years. Mr. Rockefeller's concept was to remove the family compound of 35 structures from the shores of Phelps Lake and create a network of trails linking a new interpretive center at the south end of the site to the lake at the north. After the project was completed it was turned over to the National Park Service in June 2007.

Every aspect of the building and site was designed to reinforce a message of stewardship, conservation, and the power of nature to restore the soul. In addition to the 7,000-sq.ft. interpretive center, the project included parking, three restroom outbuildings with composting toilets, and a major reclamation effort to remove all former roads, horse trails, and other signs of human development. The center was the first LEED Platinum building in the National Park Service and in Wyoming. Through its design and program the center advances environmental responsibility on every level.

The overall mission of the project inspired the design team to envision the building as a kind of secular chapel, a place to quiet the mind and open the senses to the experience of nature. Wood was chosen as the primary material for the structures to invoke the memory of the original structures without being imitative, and to use building systems that would have a chance to achieve LEED Platinum. The building program includes a welcome and orientation area, exhibit galleries and a resource library. The exhibits tell the Rockefeller family story and prepare visitors for their hike by highlighting visual, auditory, and tactile qualities of the preserve's flora and fauna. The resource library provides a place for visitors to relax and learn about the preserve. Comfortable seating, tables, chairs, and lighting, all designed by the architects, invite visitors to explore books, albums, and maps about the preserve, and learn more about the ecology of the region.

The design of the center reflects a timeless aesthetic, with wood, stone, zinc, and oxidized steel chosen for their durability and connection to the site and region. A message of simplicity and economy of use is reinforced by the limited palette of materials both inside and out. The structural system consists primarily of a FSC Douglas fir timber-frame, coupled with highly recycled insulated concrete form (ICF) bearing walls. The frame itself is comprised of 16-in. diameter turned log columns with a more traditional sawn timber-frame roof structure above. The roof structure is a layered system of 2x sub-rafters and 3x sub-purlins over 6 x 10 rafters and 6 x 12 purlins, all of which are supported by custom composite wood and steel king post

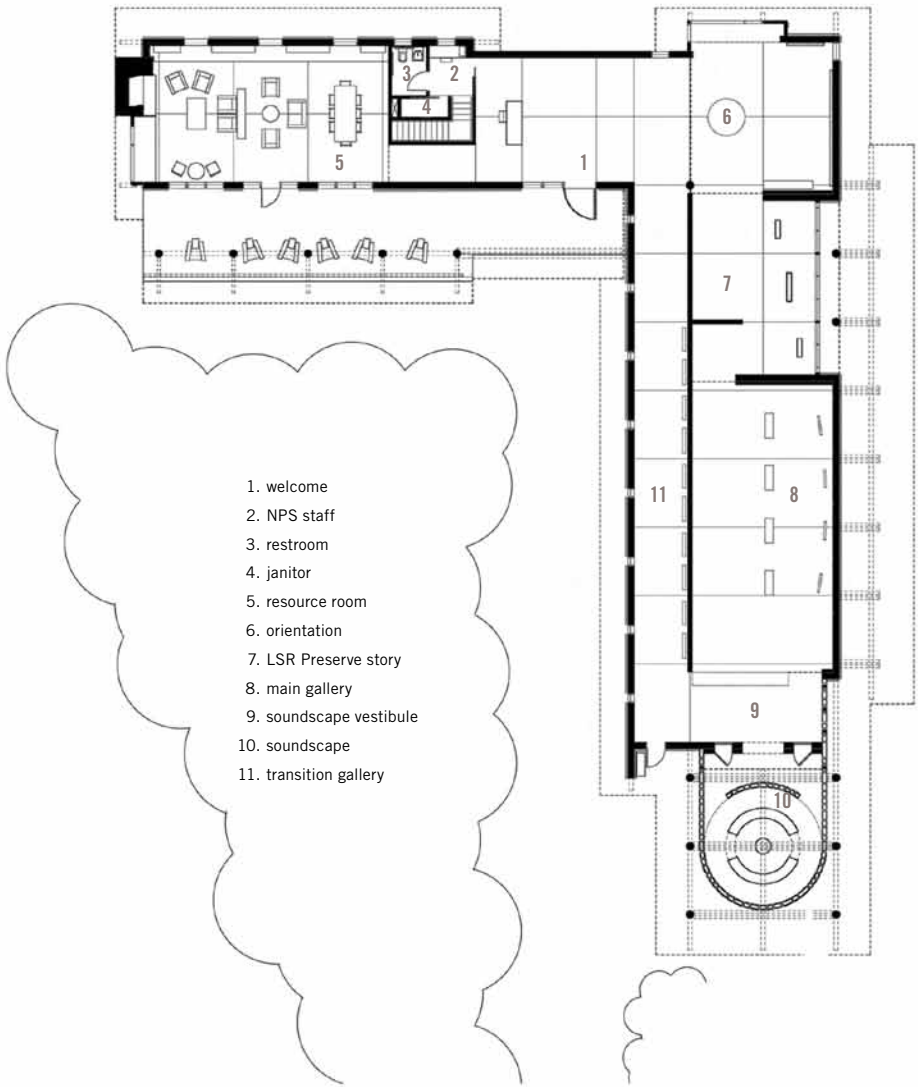
trusses inspired by the property's historic boathouse.

The ICF bearing walls are clad on the exterior with a rain-screen of FSC clear 2 x 12 custom profiled T&G Western red cedar horizontal siding, which transforms to a clear vertical grain 1 x 12 custom profiled T&G horizontal Douglas fir paneling on the interior.

The interior materials reflect a more refined aesthetic and sense of detail which is demonstrated in the 1 x 4 square edge vertical wall paneling, 1-in. standing and running trim, built-in cabinetry and custom designed furniture found throughout the center – all manufactured and fabricated from FSC clear vertical grain Douglas fir. Acoustic dampening ceilings in between rafters are finished with gapped 1 x 4 square edge clear reclaimed hemlock.

A generous south facing covered porch with custom fabricated Adirondack chairs of the same Western red cedar as the exterior cladding invokes the spirit of old ranch structures and provides a place for park rangers to give talks about the site and the project.

The combined effect of the architecture and the exhibits allows visitors to experience a spiritual and emotional connection to the natural beauty of the site and prepares them for an inspiring hike to Phelps Lake.



FLOOR PLAN

ARCHITECT
Carney Logan Burke Architects
Jackson, WY

CLIENT
Grand Teton National Park
Moose, WY

GENERAL CONTRACTOR
GE Johnson Construction Company
Jackson, WY

STRUCTURAL ENGINEER
KL&A of Colorado
Golden, CO

TIMBER FRAME AND WOOD PRODUCTION
Spearhead Timberworks
Nelson, BC

LANDSCAPE DESIGNER
Hershberger Design
Jackson Hole, WY

PHOTOGRAPHY
Paul Warchol Photography Inc.
New York, NY

Nic Lehoux
Vancouver, BC

Art Gallery of Ontario

Please see page 164

SPECIAL **Awards**

The residence at Combs Point is sited in a diverse natural world of glacial lake, deciduous and evergreen forest, valley and stream. It is both a center of activity and a quiet retreat for a family that treasures life on the lake.

Combs Point Residence

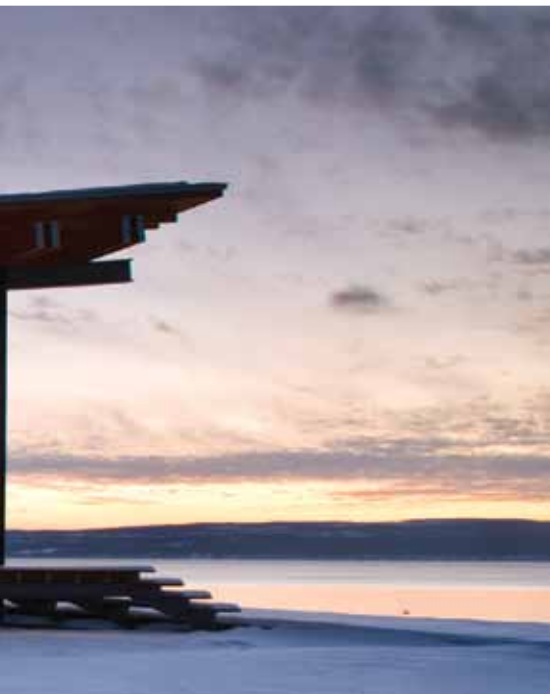
Bohlin Cywinski Jackson

From the fanning delta at the lake's edge, a delicate necklace of wood clad buildings stretches through a forested glen that leads to the waterfall at its head. An elevated boardwalk echoes the twisting course of the stream as it connects the buildings and eventually dissolves into a path leading to the falls.

Upstream, the guesthouse and office-exercise structures inhabit a narrow valley meadow with forested edges. Mirroring the path of the nearby stream, these utility and activity spaces are clipped to and detached from the main house. They share simple massing and wood siding, discreetly revealing the composition of the wood roof structure.

Downstream, the main building's large living space opens to a full view of the deep lake, broad sky and weather. With their longer spans, the primary spaces are framed robustly in laminated wood rafters and steel beams. The southern glass wall extends toward the waterfall at one end while focusing on the lake at the other. A linear steel beam projecting through both east and west elevations marks circulation. The beam is the fulcrum of the southern edge which inflects upward to catch the sun above the ravine's rim.

Slipped into the site with a light touch, the residence and its outbuildings possess a transparency that reveals the richly varied qualities of this natural place.



ARCHITECT
Bohlin Cywinski Jackson
Wilkes Barre, PA

PROJECT TEAM
Peter Q. Bohlin, FAIA
(Principal for Design)
Todd Howard (Project Manager),
Justin Harclerode, Julia Dalton

GENERAL CONTRACTOR
Pennwood Construction and
Development
Corning, NY

STRUCTURAL ENGINEER
CVM Structural Engineers
Oaks, PA

PHOTOGRAPHY
Nic Lehoux
Vancouver, BC

Canadian Wood *WORKS!* Awards

Canadian Wood *WORKS!* Awards

This year, we are pleased to showcase the winning projects from the Wood *WORKS!* Awards programs held in Ontario, British Columbia and Alberta.

We are excited to see awareness and appreciation of wood growing at an extraordinary rate, building an already burgeoning wood culture in Canada and expanding opportunities for wood use in contemporary architecture. As world attention focuses on the environment, wood use continues to gain momentum as its significant inherent environmental attributes are recognized. Building with wood is a statement about our Canadian past and our future, as our communities share a common desire for a more sustainable way of life.

Wood *WORKS!* is proud to honor Canadian architects, engineers and project teams who continue to push the limits of wood design and construction, inspiring us with their unique and innovative uses of natural, beautiful, versatile, sustainable and renewable wood. We salute the winners for their leadership in the pursuit of wood design excellence.

Marianne Berube
Executive Director
Wood *WORKS!*
Ontario

Mary Tracey
Executive Director
Wood *WORKS!*
British Columbia

Brady Whittaker
Executive Director
Wood *WORKS!*
Alberta

Jurors

DINO LOUTAS,
B.SC., P.ENG.
Principal
PROTOSTATIX ENGINEERING CONSULTANTS INC.
www.protostatix.com

BRIAN OAKLEY
Director of Architecture and Planning
ALBERTA INFRASTRUCTURE,
TECHNICAL SERVICES BRANCH
www.infrastructure.alberta.ca

SHAFRAAZ KABA
Partner
MANASC ISAAC ARCHITECTS LTD.
www.manascisaac.com

Sponsors

Alberta
SUSTAINABLE RESOURCE DEVELOPMENT

Canadian Wood Council / Conseil canadien du bois

CANFOR

FPInnovations

Natural Resources Canada / Ressources naturelles Canada

Western Economic Diversification Canada / Diversification de l'économie de l'Ouest Canada

western archrib
structural wood systems

ALBERTA

The design and inspiration for this library reflects the late Alberta Lieutenant-Governor Lois Hole's passion for reading, people and nature.

Lois Hole Library

Barr Ryder Architects & Interior Designers

The use of natural products – most importantly wood – was fitting, as the Hole family not only owns a local greenhouse, but wrote several horticultural books and worked tirelessly to promote horticulture and landscaping in Edmonton, AB.

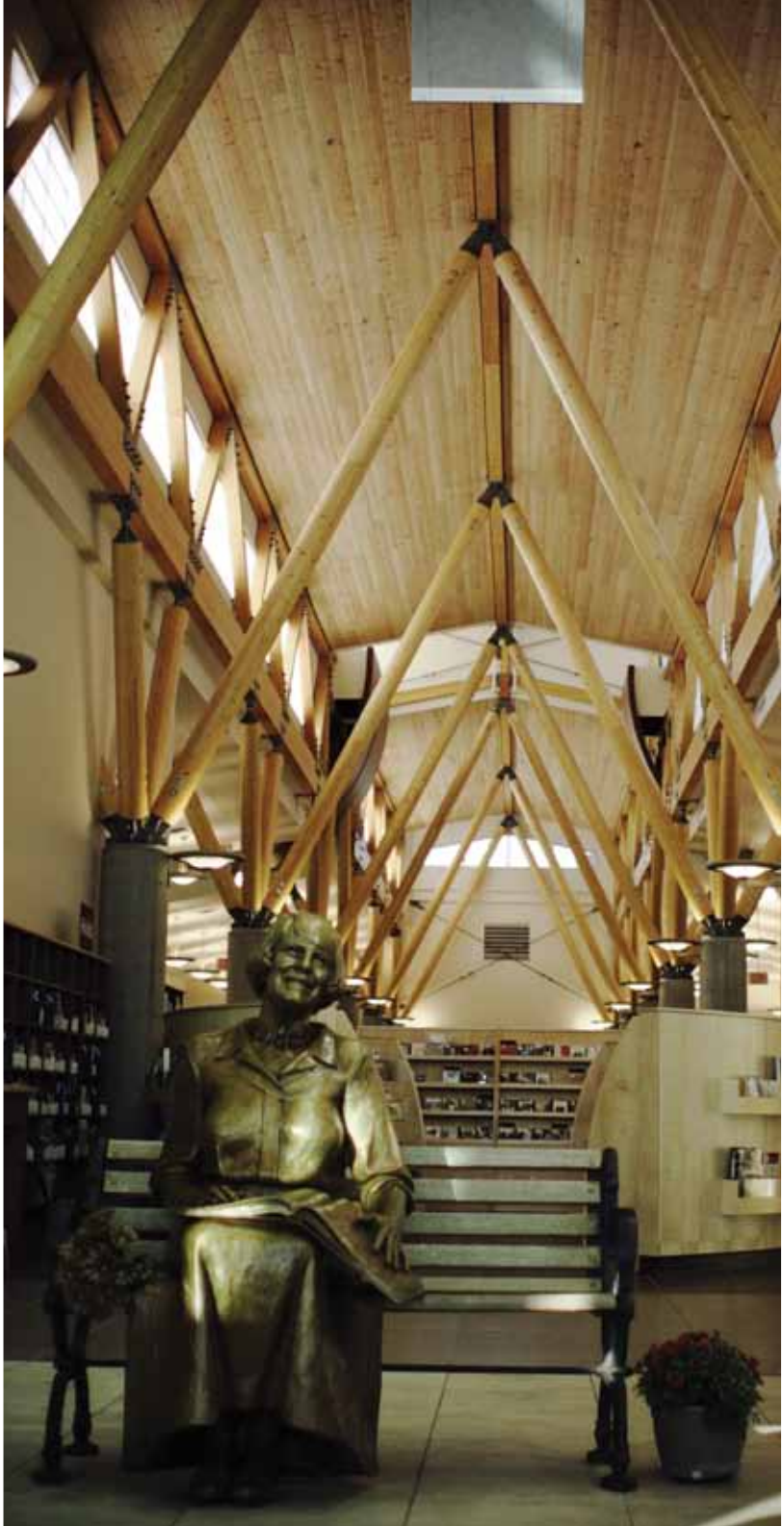
The 25,000-sq.ft. library is a hub for the entire community – a destination not only for book lovers but also for the community at large. Located on a shared site that enriches the established community fabric of the region, the library is a productive partner along with the neighboring school, YMCA facility and arena.

The building is oriented to capitalize on daylight patterns, the natural surroundings, trail systems and playing fields. The main entrance, with full-height glazing, is transparent and highly visible from the main thoroughfare, acting as a beacon during the evening and dark winter months by yielding a glimpse into the warm, natural, inviting interior.

Lois Hole and the City of Edmonton's dedication to enrich the built environment and surrounding natural landscape provided the perfect opportunity to showcase wood as the key design of the facility. The exposed structure is a canopy of wood that offers visitors an experience similar to walking through a forest or down a boulevard of mature trees. The play of natural light through the canopy creates a space that is dynamic and ever changing as the seasons. The tree-like concept progresses through the heart of the building, leading patrons to lower and more personal spaces.

Sustainability concepts pursued in the building include diverting waste from landfills, using wood and other renewable materials, rainwater/grey water retention and re-use, daylighting with views to the exterior landscape and energy efficient mechanical and electrical systems.

The natural, warm and inviting atmosphere of the facility has made the Lois Hole Library a fitting tribute and a favorite destination in the city.



ARCHITECT
Barr Ryder Architects &
Interior Designers
Edmonton, AB

OWNER
Edmonton Public Library
Edmonton, AB

CLIENT
City of Edmonton
Edmonton, AB

GENERAL CONTRACTOR
Pentagon Structures Ltd.
Edmonton, AB

STRUCTURAL ENGINEER
Walters Chambers & Associates
Edmonton, AB

MECHANICAL/
ELECTRICAL ENGINEERS
Williams Engineering Canada
Edmonton, AB

LANDSCAPE ARCHITECT
Douglas Walters Landscape
Architect Ltd.
Nisku, AB

PHOTOGRAPHY
Barr Ryder Architects &
Interior Designers
Edmonton, AB

MUNICIPAL/RECREATIONAL and INTERIOR BEAUTY Award

The Heritage Park project involved the redevelopment of approximately 20 hectares on Heritage Park's existing 58-hectare site.

Heritage Park

Gowling & Gibb Architecture

The town square project creates a new sense of arrival for Heritage Park through a user-friendly, barrier-free historic plaza, new parking facilities and extensive landscaping in a truly pedestrian-oriented environment. Historically accurate architecture and an appropriately scaled arrivals plaza create an immediate sense of place and time where the park visitor is invited to the awaiting experience.

The project includes four principal structures: a world-class transportation and gasoline memorabilia exhibit (Gasoline Alley); a new administrative and retail facility (Heritage Block); and a new food service facility consisting of a railway café circa 1904 (Canadian Pacific Railway Station), a fine dining area for 220 patrons, a banquet facility for up to 400 patrons; and a Founders Lounge for 60 patrons. The project also includes five lesser structures: a ticketing building, a bandstand/gazebo, and three tram stations.

Because the entire complex is modeled on historic buildings, the use of wood was absolutely critical to the historical accuracy and to the feel of all of the new structures. The design team worked diligently to ensure that the interior use of wood was not restricted in any way by current Alberta Building Codes. This included careful study of building areas, firefighting access, limiting distance, fire resistance ratings, and the use of sprinklers.

Specific uses of wood to enhance the beauty of both the exterior and inter-

iors occur throughout the complex.

The above grade structure of the buildings features a combination of wood construction with a supplemental steel column and beam frame system. Exterior bearing walls are a combination of conventional 2 x 6 lumber framing in combination with LVL's and micro-lams sheathed in plywood. Both the ground and second floor structural system is developed on TJI's with a plywood subfloor. The second floor also has an acoustic underlay and concrete topping.

All roofs in the complex are spanned with structural insulated panels (SIPs). The 100mm thick SIPs are skinned with OSB on both sides. The sloped roof over the fire hall, clock tower, and CPR station is built with conventional wood trusses and plywood sheathing covered in fire retardant treated cedar shakes.

The exterior of the apothecary building is clad in clear cedar horizontal lap siding and the mechanical screen on the roof is clad in clear cedar solid stock 1 x 4s on a PWF frame. A custom-made cedar carriage-style garage door was constructed for the fire hall.

Gasoline Alley, the principal building of the complex, features a custom-designed heavy timber truss structural system which spans 13.6m. The trusses are made up of radio frequency dried (RFD) Douglas fir members in various sizes from 150 x 250mm to 200 x 200mm complete with double rows of continuous horizontal

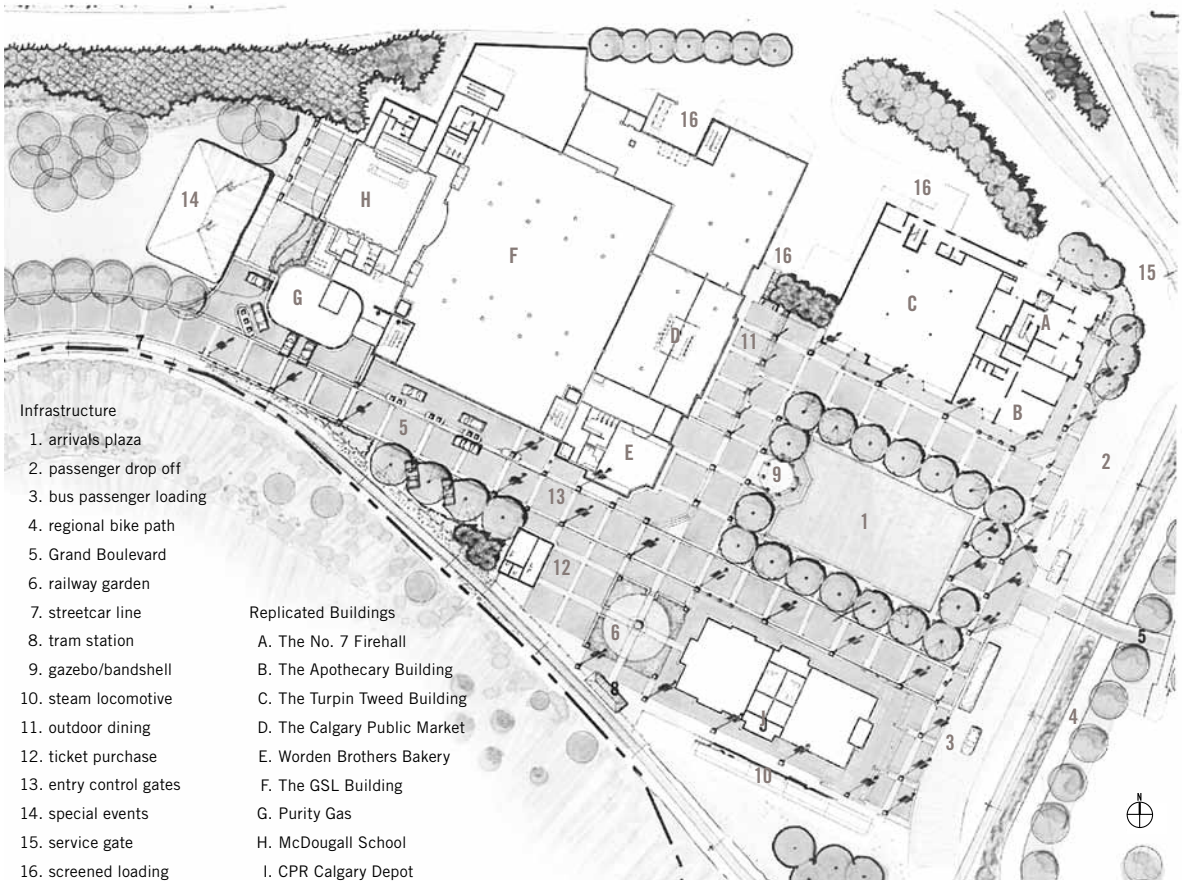
bracing 65 x 150mm. The trusses are held by double-column RFD fir posts which are over 9m in height on the north side.

The acoustic ceilings in the hall and restaurant were custom designed using negative baffle space between the slats of alder, which in turn were finished with a clear lacquer. The east end of the great hall features a custom, three-section vertical lift wood door. The door covers an 11m-wide opening and is 3.8m high in the center. Made of solid stock fir, it was built as a timber-frame structural shell with a combination of tongue-and-groove fir and glass panels laid out in a pattern.

All the millwork and running trim throughout the various buildings was custom fabricated from a variety of wood species (fir, mahogany, alder, oak, and birch). The Founders Lounge contains the most intricate work and features solid stock mahogany and mahogany veneer on all running trim, casings, false beams, a custom bar, a custom fireplace surround (mantle and bookcases) and pilasters. This area featured over 20 different-milled moldings as well as four hand-carved capitals.

In the administration building, a beautifully detailed feature stair is completed in vertical grain fir. It includes traditional wood detailing in the running trim, newels, rails and balustrades all in matching fir with a clear finish. Doors and windows throughout the complex are all of vertical grain fir with a clear finish.

Although the choice of wood is an obvious one for historical reproduction work, authenticity was not the only reason wood was used so extensively in the project. Wood offered the versatility for fine detailing without sacrificing the warmth, richness and desired variety of finishes. In this case, wood was also a perfect contrast to the polished high-gloss finish, color, and graphics of the automobiles, pumps and other memorabilia featured at Heritage Park.



SITE PLAN

ARCHITECT
Gowling & Gibb Architecture
Calgary, AB

CLIENT
Heritage Park
Calgary, AB

STRUCTURAL ENGINEER
David C. Woodall Structural Engineering
Priddis, AB

GENERAL CONTRACTOR
Dominion Construction Company Inc.
Calgary, AB

HEAVY TIMBER CONTRACTOR
Timber Ridge Log Structures
Cochrane, AB

FRAMING CONTRACTOR
SIS Supply Install Services
Calgary, AB

MILLWORK CONTRACTOR
Executive Millwork
Calgary, AB

CUSTOM DOORS
Equal Door Industries
Calgary, AB

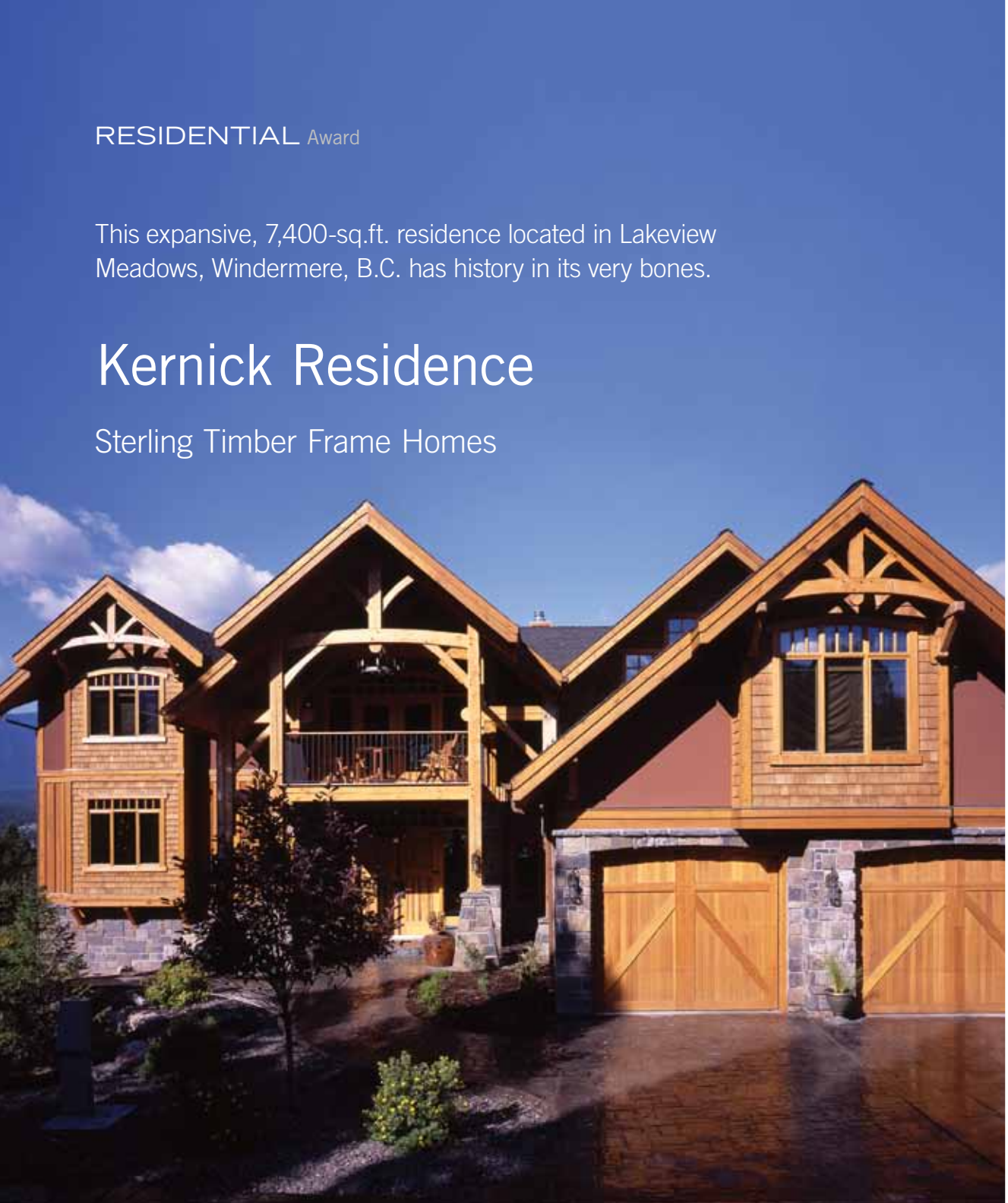
PHOTOGRAPHY
Gowling & Gibb Architecture
Calgary, AB

RESIDENTIAL Award

This expansive, 7,400-sq.ft. residence located in Lakeview Meadows, Windermere, B.C. has history in its very bones.

Kernick Residence

Sterling Timber Frame Homes



The owner wanted his lakeside home to reflect not only the history of his native province of Alberta, but also the history of the local area.

Construction of the majestic 22,000-FBM (foot board measure) timber-frame, built from Douglas fir reclaimed from historic grain elevators that dotted the prairies, began in the fall of 2002. Sourcing the wood for the project was a feat in and of itself. After scouring the province for the correct size and quantity of timbers required for the frame, an elevator that was being dismantled east of Camrose, AB provided the exact wood necessary to complete the project.

Oversized timbers were hand selected and re-sawn into precisely sized timbers needed to bring the new structure to life. After 18 months, a mere three months from completion, tragedy struck. A fire left only the charred remains of the front timber-frame entrance.

Undaunted, the search for reclaimed timbers to rebuild began again. Larger timbers were becoming quite scarce to find because most of the majestic grain elevators had already been torn down. Eventually, replacement timbers were sourced – the larger ones coming from a grain shipping terminal that was torn down under the second narrows bridge in Vancouver.

The new timber frame was cut and erected. Exposed ceilings were done in edge grain clear 1 x 6 Douglas fir. The entire main floor used 12-in. reclaimed barn board with Jatoba (Brazilian cherry) border and bull nosing. Open timber stairs were constructed of fir stringers with solid Jatoba through mortised treads and feature Jatoba and wrought iron railings.

The home has six bedrooms, five restrooms, two laundry rooms, a cherry wood office with Murphy bed, a games room, a wine cellar, a 14-person theatre, a gear room, and a two-car/boat/golf cart garage. The kitchen has a fully functioning wood-fired pizza oven and features a custom-made dining room table constructed of black walnut with a top slab of a single 18-ft. x 5-ft. slab of curly redwood.

All cabinets and doors feature Douglas fir panels made from reclaimed Douglas fir wood staves that were salvaged from long-abandoned wooden water flumes. In the early 1900s, these flumes carried water from the mountains to farms on the valley floor. The mantel for the great room fireplace is made out of timbers salvaged from the original home.

The exterior of the home is finished with a mixture of Rundle stone, stucco and Western red cedar fascia, siding and shingles, with clear edge grain fir soffits. The home boasts over 2,000 sq.ft. of decks overlooking the lake. A matching wood-fired cedar sauna house sits adjacent to the great lawn.

After three years in the making and thousands of hours of painstaking wood sourcing and craftsmanship, the Kernick residence sits proud on Osprey Point – a labor of love and perseverance.

CLIENT
Frank Kernick
Canmore, AB

TIMBER FRAME/GENERAL CONTRACTOR
Norman Flann,
Sterling Timber Frame Homes
Canmore, AB

CRAFTSMEN
Norman Flann, Shawn Taggert, Randy Vanloo, Kurt Burtyicki

DESIGNER
Tanya Larson, Alpine Designs
Canmore, AB

TIMBER HANDLING
Canadian Timber Frames
Golden, BC

ENGINEERING
Cascade Engineering
Canmore, AB

PHOTOGRAPHY
Peter Powles
West Vancouver, BC

Jurors

(Back row left to right:) Tom Williamson and Kent Fargey
(Front row left to right:) Michael Green, Dr. Robert Kozak and Oliver Neumann

TOM WILLIAMSON, P.E.
Managing Partner
T. WILLIAMSON TIMBER ENGINEERING LLC

KENT FARGEY
President
WESTERN ARCHRIB
www.westernarchrib.com

MICHAEL GREEN
Principal
MCFARLANE | GREEN | BIGGAR ARCHITECTURE + DESIGN
www.mgb-architecture.ca

DR. ROBERT KOZAK
Faculty of Forestry
UNIVERSITY OF BRITISH COLUMBIA
www.ubc.ca

OLIVER NEUMANN
Associate Professor, School of Architecture and Landscape Architecture
UNIVERSITY OF BRITISH COLUMBIA
www.ubc.ca

Sponsors

EVENT SPONSORS

Forestry Innovation Investment

Natural Resources Canada / Ressources naturelles Canada

GOLD

Council of Forest Industries

GORMAN The Finest Boards

WESTERN RED CEDAR LUMBER ASSOCIATION REALCEDAR WRCLA

BC WOOD

STRUCTURLAM INNOVATIVE WOOD SPECIALISTS Glulam • Parallam® • Solid Timbers

Coast Forest PRODUCTS ASSOCIATION

FPInnovations

CANFOR

western archrib structural wood systems

TOLKO

Weyerhaeuser The future is growing™

SILVER

Applied Science Technologists & Technicians of British Columbia

ASTT technology professionals

BRONZE

Tembec

BRITISH COLUMBIA

COMMERCIAL Award

As part of a plan to renew the passenger facilities of all its terminals, BC Ferries sought to create a new architectural vocabulary which enhanced services and improved the experience of the traveler.

BC Ferries Departure Bay Passenger Facilities

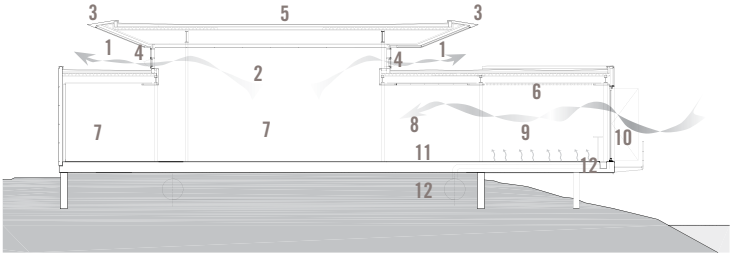
Clive Grout Architect Inc.

The 28,000-sq.ft. prototypical ticketing, retail and waiting facility at Departure Bay, Nanaimo, was developed under this mandate. The open and inviting new facility for the traveling public accommodates over 300,000 foot passengers annually.

The complex is comprised of a ticketing and arrivals hall located on the southern portion of the terminal; a departures/arrivals corridor, retail shop, food court, and restrooms, located along the shoreline; and a waiting lounge and escalator connection to the ferry berths located on the northern tip of the site.

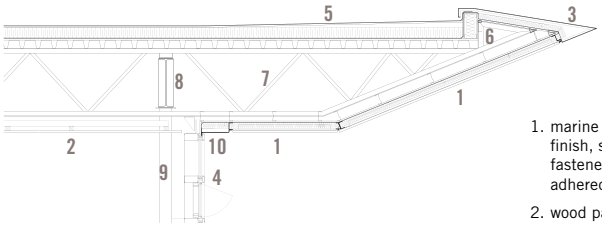
The project was developed within a strict budgetary environment and construction sequencing that required the design team to develop an overall master plan that allowed for continued operations of the terminal during the course of construction. Emphasis was placed on sustainable design initiatives, low operating budgets and the development of a simplified architectural vocabulary. The design symbolizes the meeting of the forest and the sea with an elegant wood fascia and ceiling floating above glass walls that focus on the sea vistas beyond. Through the use of natural day lighting and ventilation, a Sea Loop heat


ALS



1. exterior-grade wood soffit
2. wood panel ceiling
3. pre-finished aluminum eaves
4. operable ventilation window with clear glass curtainwall
5. 2-ply SBS membrane roof
6. solid fir slat ceiling
7. retail space
8. walkway
9. seating area
10. operable bi-folding doors
11. radiant floor cooling/heating
12. sea water loop cooling system

CROSS SECTION THROUGH RETAIL BUILDING



SOFFIT DETAIL

1. marine exterior-grade wood soffit, fir veneer finish, semi-rigid insulation, stainless steel fastener and suspension system, self-adhered membrane on exterior plywood
2. wood panel ceiling, fir veneer finish:
3. pre-finished aluminum eaves, stainless steel fastener and suspension system
4. operable ventilation window with clear glass curtainwall
5. 2-ply SBS membrane roof system
6. eaves steel support
7. steel joist
8. steel beam
9. steel column
10. perforated stainless steel soffit, continuous ventilation

exchange system and a radiant heating and cooling floor slab system, this project achieved a LEED silver rating within its budget parameters and set a new standard for BC Ferries' terminals.

A master planning exercise identified key linkages between foot passenger, vehicle, and ship servicing flows within the overall site. The desire to locate the foot passenger facilities as close to the berths as possible and minimize walking distances was balanced with the need to keep the existing ticketing facilities and drop off area operational during construction. The functional requirements for parking lots and vehicle compound sizing provided a long, narrow site at the edge of the water where the components of ticketing, retail and waiting are interconnected by a glazed walkway at the water's edge.

Visual connections to the shoreline are maintained throughout the complex with a continuous glazed eastern façade containing a series of clerestory ventilation windows. The potential for heat gain and traffic noise from the large expanse of asphalt located directly adjacent to the building complex was miti-

gated with simple precast concrete wall panels containing a series of clerestory ventilation windows for the western façade. A sequence of courtyards links the major building elements (including the entries to the new retail area and children's play facilities) within an axial configuration and provides cross ventilation to the interior spaces.

Wood was an excellent choice for ceiling and exterior fascia material and became a signature material symbolic of the land and mountains of coastal BC, as well as the experience of the sea on the ships. The warmth and comfort of wood is expressed on the ceiling, leaving the floors for utilitarian finishes, while the full-glass walls integrate visually with the spectacular setting on the water's edge.

The dramatic shape of the building and its roof, dictated by the site planning constraints, is enhanced by the prominence of wood panels. Two key steps were taken to ensure the long-term durability of the fir veneer in the sea air and rainy climate: the fascias are designed to slope sharply from the edge, keeping them out of the line of direct rain; and the entire assembly was rigorously tested by Forintek Canada.

ARCHITECT
Clive Grout Architect Inc.
Vancouver, BC

CLIENT
BC Ferries Services Inc.
Victoria, BC

GENERAL CONTRACTOR
Knappett Projects Inc.
Victoria, BC

PROJECT MANAGEMENT
SNC-Lavalin Inc.
Vancouver, BC

STRUCTURAL ENGINEER
Equilibrium Consulting Inc.
Vancouver, BC

MECHANICAL ENGINEER
Cobalt Engineering
Vancouver, BC

ELECTRICAL ENGINEER
MMM Group
Vancouver, BC

PHOTOGRAPHY
Michael Elkan
Vancouver, BC

GREEN BUILDING Award

In an effort to consolidate work and family life, the clients wanted to build an at-home workshop for their interior and furniture design/ build business.

The New but Historic Workshop

Nico Spacecraft

They eventually settled on a property with an existing 3,500-sq. ft. house located on five acres in Roberts Creek – the heart of the Sunshine Coast, and a 40 minute ferry ride from Horseshoe Bay in West Vancouver. The site had ample room to build a sufficient-sized workshop.

One of the main goals in designing and building the new structure was to be environmentally responsible and use as much sustainable and reclaimed material as possible.

The 2,000-sq.ft. shop stands 23 ft. tall. It is built from lumber, plywood, steel siding and Wilson trusses pulled out of an old mill on the Fraser River in South Vancouver. In the end, almost 85 per cent of the materials used, including the bay lamps, the flores-cent lighting, ceiling fans, most of the doors and even the insulation, had a previous purpose somewhere else. For structural and safety reasons, certain sections of the structure, such as the roof and shear walls, are built from virgin material. Construction debris was used for heating, composting or recycled where possible; very little waste reached the landfill.

Another goal was to ensure the natural surroundings were respected. The chosen site had been mostly cleared and used by the previous owners. Only smaller trees and three cedars with extensive core-rot needed to come down. The cedars were later dried and used to side the front of the shop, while the other wood will find a future in the shop's creative work. The remaining debris was turned into bark mulch for the garden.

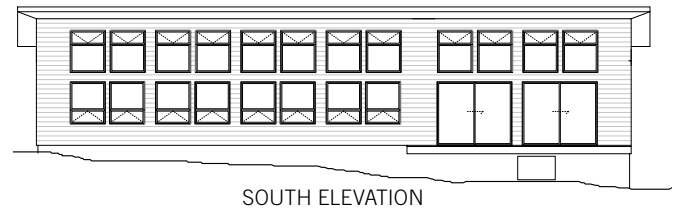
Despite its large footprint, the structure's design was kept simple. The shop faces an open but private part of the property. The entry side was kept narrow, turning the structure into more of a long house than a box and angling it slightly so the large back wall would have less of an impact from the driveway. This positioning also allowed for the creation of a courtyard in conjunction with the adjacent two buildings – the residence and studio.

The reclaimed steel roofing was flipped inside out, which provided an instant rain screen with back-ventilation. The same approach was used for the cedar; the batten and board (vs. board and batten) picked up on the reversed look of the steel with the same practical benefits. Visually, the vertical alignment with the trees resonates with the forces of nature and lends respect to the surroundings. Reclaimed wood products also included 5,244 ft. of 2 x 8 Douglas fir studs, 200 ft. of 2 x 4 spruce studs, and 159 sheets of 4 x 8 plywood. The superior strength of Douglas fir and the fact that it was well seasoned adds to the lifespan of the building (no more shifting, wood is dimensionally stable).

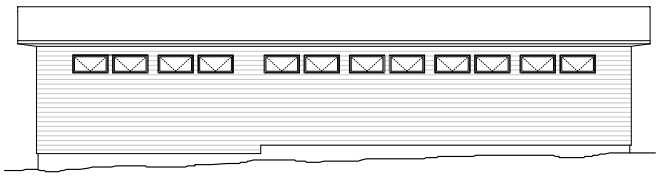
Steel roofing was designed to collect rainwater for irrigation purposes. When the reclaimed insulation ran out, the remaining roof cavities were filled with blow-in insulation manufactured from recycled newsprint.

The 41 windows that flood the work space with natural light and offer inspiring views of the two-acre garden are energy efficient low-e. All windows are south-facing to maximize the available daylight time for work (decreasing the use of electrical lights) and contribute to the efficient heating of the building during the day.

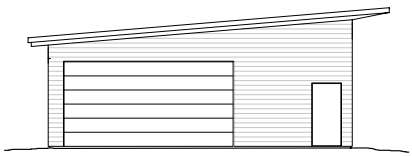
The owners now relish their 20-step commute to work. And the majestic workshop – already steeped in history – looks like it has always belonged on the site.



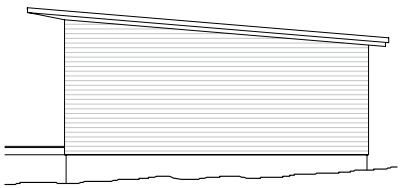
SOUTH ELEVATION



NORTH ELEVATION



WEST ELEVATION



EAST ELEVATION

DESIGNERS/CLIENTS/ CONTRACTORS
Jess & Nicolas Meyer, Nico Spacecraft
Roberts Creek, BC

STRUCTURAL ENGINEER
John Enevoldson Engineering
Gibsons, BC

SALVAGE SUPPLIER
Lawrence Laroche & Monique Duchesne, Techno Dismantling
Vancouver, BC

PHOTOGRAPHY
Nicolas Meyer
Roberts Creek, BC

INSTITUTIONAL <10M Award

Crawford Bay Elementary-Secondary School was designed to accommodate up to 200 students from Kindergarten to Grade 12, and to replace the existing school which was built in various stages beginning in 1946. Additionally, the community raised $850,000 to add to the school's program with a community fitness center, a preschool/daycare facility, and a number of multi-purpose rooms.

Crawford Bay Elementary-Secondary School

KMBR Architects Planners Inc.

Located in Crawford Bay on the shores of Kootenay Lake in the southeastern corner of British Columbia, the new school serves the East Shore communities, a population of approximately 1,500. Crawford Bay is a small rural community and, with the exception of electricity, has no municipal services. Accordingly, the new school had to be almost completely self-sufficient (off the grid).

Kootenay Lake is well known for its natural beauty. Environmental awareness ranks high among priorities of local residents who demanded the new school be designed to an advanced level of sustainable design. The primary design considerations were identified early on, and included the following: preserve natural site features and vegetation; integrate school and community, recognizing the unique qualities inherent to a small rural K-12 school; create a healthy environment for learning, working and recreation, in a friendly, non-threatening atmosphere; create employment for local residents; maximize resource and energy efficiency, building longevity and economy of maintenance.

Crawford Bay is a small logging community in the heart of an important lumber-producing region. By designing the new school to incorporate a maximum of locally produced wood products, two important sustainability objectives were met. First, the use of locally produced wood products avoided the shipping of materials from afar and thereby reduced the new school's environmental footprint. Second, the use of wood was an intentional, socially responsible move that created local employment – in the lumber industry and by employing local carpenters – and thus helped this economically challenged community by fueling the local economy.

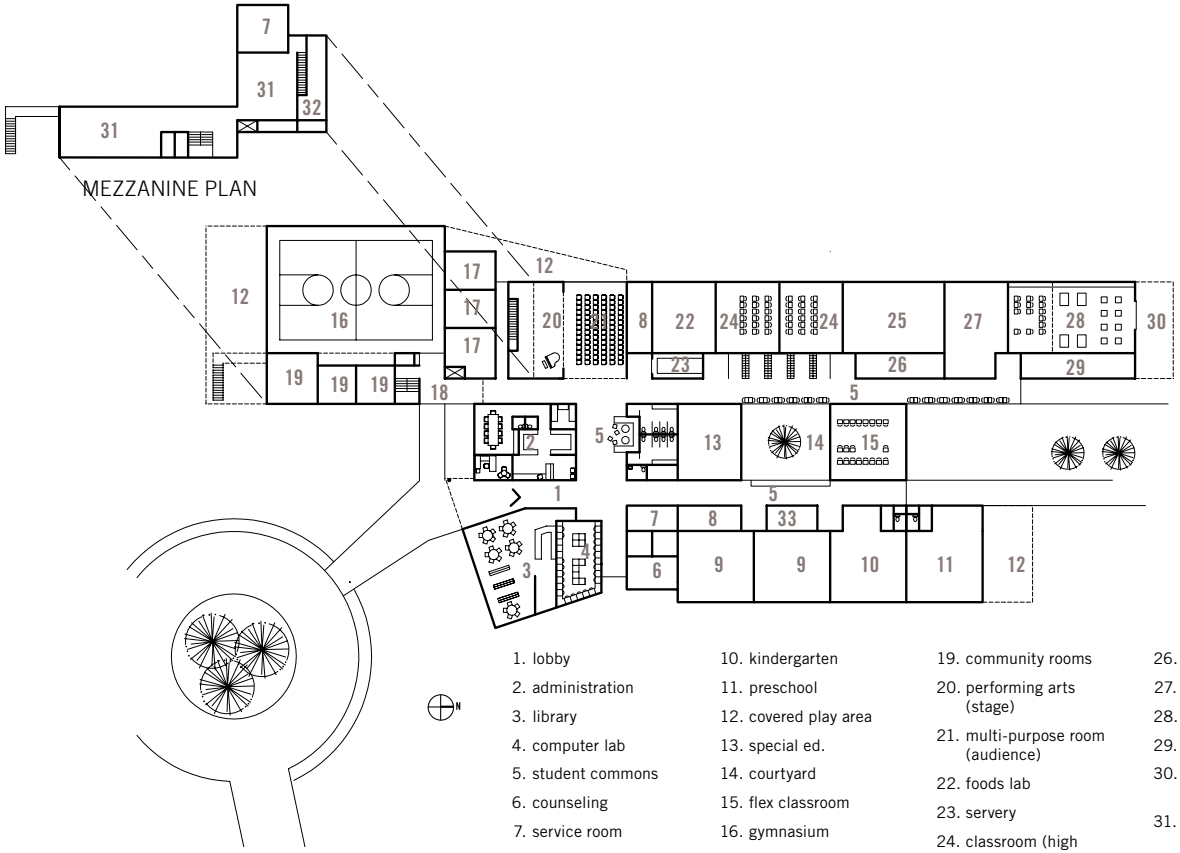
Wood's beauty and tactile qualities were particularly appropriate in creating a healthy, comfortable, and friendly learning environment. Much of the structural glulam posts and beams were left exposed to enhance the interior aesthetic appeal.

The ability of wood to serve double duty as a structural member as well as finish material was exploited to the greatest possible extent. Roof overhangs were constructed of stacked alternating 2 x 4 and 2 x 6 lam stock material laminated into panels that span between cantilevered glulam roof beams. These panels were prefabricated on the ground and then lifted into place, to serve as structural roof elements. The underside of the stacked plank panels was left exposed, and thus provides an attractive soffit finish.

Wood was used as a finishing material both inside the building and on the exterior. On the inside, wood slats were milled and installed over acoustic insulation, allowing a gap between boards. This not only provides an attractive wall finish in the corridors, gymnasium and multipurpose rooms, but also serves an important acoustic function. Other uses of wood on the interior include doors of edge grain fir veneer, birch paneling, wood slat ceilings, chair rails and baseboards, maple sports flooring in the gymnasium, and birch veneer plywood millwork, among others.

The primary exterior finish material is horizontal wood siding. Rather than using traditional Western red cedar, larch was selected for its longevity and local availability. Cantilevered glulam roof beams, columns, and stacked-plank roof eaves/soffits are the other major exterior uses of wood on this building.

The new community school is designed to achieve LEED Gold Certification and incorporates leading-edge sustainable design strategies. As a true community based project, the construction was carried out almost entirely by local labor and the local artisans were invited to include their products and creations in the building.



1. lobby
2. administration
3. library
4. computer lab
5. student commons
6. counseling
7. service room
8. storage
9. elementary classroom
10. kindergarten
11. preschool
12. covered play area
13. special ed.
14. courtyard
15. flex classroom
16. gymnasium
17. gymnasium ancillary
18. gym lobby
19. community rooms
20. performing arts (stage)
21. multi-purpose room (audience)
22. foods lab
23. servery
24. classroom (high school)
25. science lab
26. science prep
27. visual arts
28. industrial education
29. ind. ed. ancillary
30. ind. ed. covered work area
31. community fitness centre
32. perf. arts mezzanine
33. teacher prep room

FLOOR PLAN

ARCHITECT
KMBR Architects Planners Inc.
Vancouver, BC

CLIENT/GENERAL CONTRACTOR
School District No. 8 (Kootenay Lake)
Nelson, BC

STRUCTURAL ENGINEER
Fast + Epp
Vancouver, BC

MECHANICAL ENGINEER
Poole & Associates Mechanical Engineering Ltd.
Kelowna, BC

ELECTRICAL ENGINEER
Falcon Engineering Ltd.
Kelowna, BC

LANDSCAPE ARCHITECT
Maruyama & Associates
Vancouver, BC

PHOTOGRAPHY
Brandi Abele, Witmar Abele, KMBR
Vancouver, BC

Gateway Lodge Complex Care & Assisted Living Facility

Neale Staniszkis Doll Adams Architects

INSTITUTIONAL
>10M Award

Over the past several decades, gerontology research has clearly shown the design of the physical environment of long-term care facilities can have a profound impact on the physical, mental and emotional well-being of the elderly.

Northern Health Authority desired a non-institutional residential environment for the elderly that would reflect the uniqueness of the North region and foster social opportunities between the two lifestyles of the residence and the community-at-large. Located in northern BC in Prince George, Gateway Lodge is an integrated Community of Care project providing 94 complex care beds for frail elderly who require 24-hour nursing care and 78 assisted living units for those who need some daily assistance to remain independent.

The northern climate is one of extremes, with temperatures reaching 30˚C in the summer and -30˚C in the winter. There is a limited construction window between spring thaw and the onset of a harsh winter. Forestry plays an important role in the local economy with several sawmills, plywood manufacturing plants and pulp mills located in the region.

The challenge to create a home-like residential environment for a large institutional care facility was achieved with an innovative planning concept and extensive use of wood products. The project uses a de-centralized approach to create households or homes comprised of small groups of 14 to 20 residents, similar to an extended family arrangement. Each home has its own dining, living, activity and bathing area, permitting the residents to live among familiar faces in an emotionally supportive environment. The homes are configured to create secured gardens and oriented for maximum exposure to natural light, views and fresh air. Resident rooms are arranged around the perimeter, with support service rooms in a central core, allowing the corridor to form an internal wandering loop for Alzheimer's residents. Several shared realms and a major community gathering space link the homes, providing opportunities for interaction and socialization.

To the greatest extent possible, locally available wood products were used in the design of the facility. The unique qualities of wood – beauty and warmth, tactile character, durability and ease of construction and ultimately its ability to create a home-like residential setting for the elderly residents – made wood an ideal choice. Engineered glulam beams and columns of Douglas fir coast region species are used in the wood structures that mark the building's entrances, major social spaces, community hall, communal decks, porches and courtyard pavilions. Horizontal wood slats counterpoint the expressive structural framework and exterior cladding. Painted MDO exterior grade Douglas fir plywood is used on window bays and soffits.

A hierarchy of interior spaces creates a coherent yet varied domestic content with finely crafted public rooms and circulation spaces. The community hall, the heart of the facility, is a two-story vaulted pavilion with an exposed engineered glulam Douglas fir post and beam structure. A stone-clad fireplace acts as the focal point in the double-height volume and large expanses of glass bring plenty of natural light into the community space. Solid maple and maple veneer is used extensively on the interiors for millwork elements including reception desks, care centers, memory boxes, trims, handrails, interior doors and feature walls.

To control the quality of construction and reduce the overall project schedule (important considerations in working in the north), a prefabricated panelized wall system by Mitsui Homes Canada was utilized. Factory-built wall panels were manufactured while extensive site and foundation work progressed. The panels were on site, ready for installation, as each foundation section was completed thus ensuring the building shell was completed before the onset of winter.

Gateway Lodge has a modern, materially expressive architectural aesthetic that reflects the uniqueness of the north, the local forestry economy and natural environment, and most importantly, provides a supportive home-like environment for the elderly residents.

ARCHITECT
Neale Staniszkis Doll Adams Architects
Vancouver, BC

CLIENT
Northern Health Authority
Prince George, BC

GENERAL CONTRACTOR
Western Industrial Contractors Ltd.
Prince George, BC

STRUCTURAL ENGINEER
Krahn Engineering
Vancouver, BC

MECHANICAL/ ELECTRICAL ENGINEER
MMM Group
Vancouver, BC

LANDSCAPE ARCHITECT
Perry & Associates
Vancouver, BC

PHOTOGRAPHY
Derek Lepper
Vancouver, BC

INTERIOR BEAUTY OF WOOD Award

The goal was to create a multipurpose space within an existing building for celebrating, feasting, storytelling, counseling, advising, studying, and relaxing. The design was requested by a group acting on behalf of Kwantlen Polytechnic University and the Kwantlen, Semiahmoo, Tsawwassen and Katzie Nations.

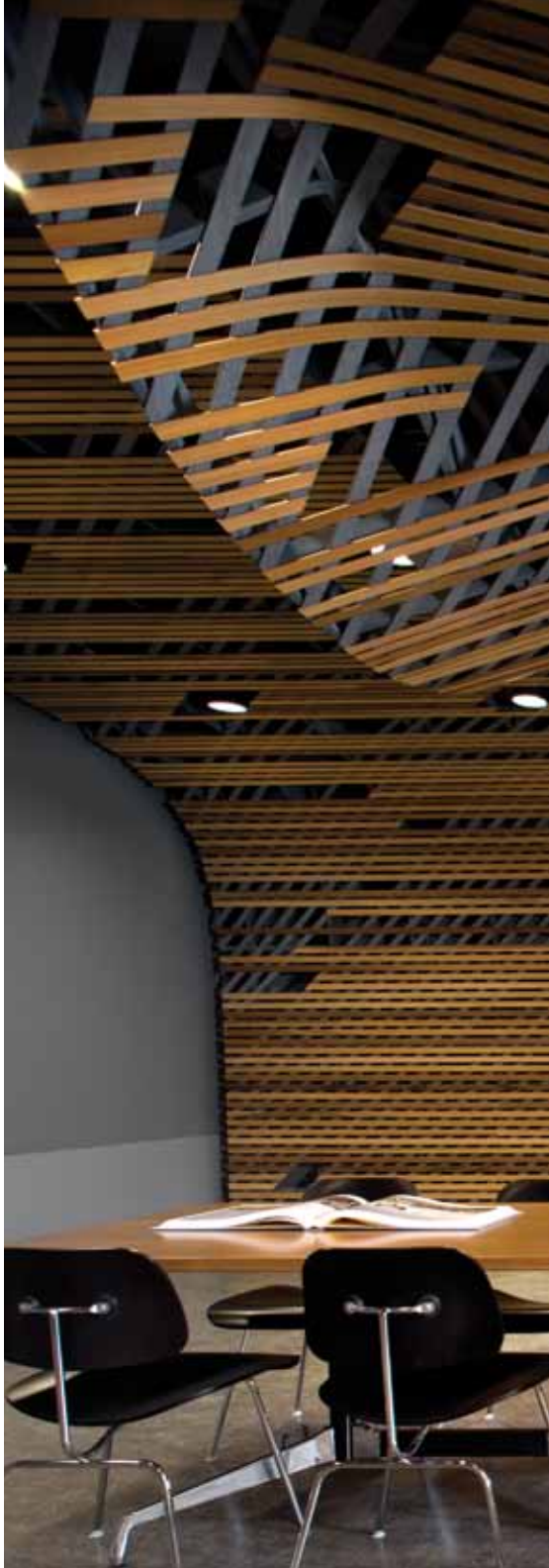
Kwantlen Polytechnic University Gathering Place

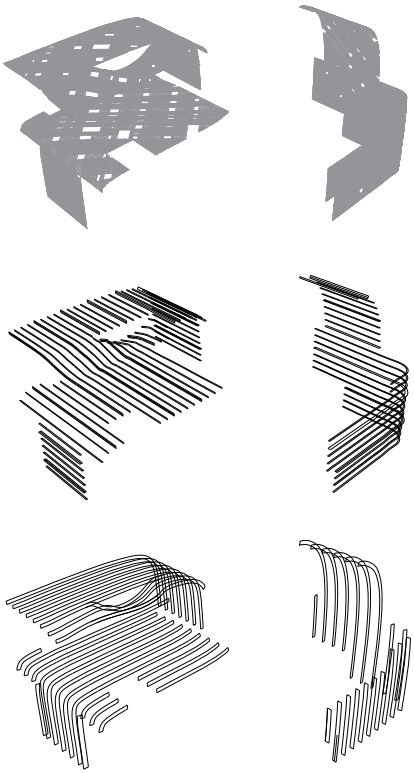
Public Architecture and Communication Inc.

The project – also known as Xthum, a Hul'qumi'num word meaning basket and drum – is located on the east edge of campus in a 25 x 30-ft. former classroom, a conventional box with suspended ceilings in a concrete masonry building.

The design process began with a search for a response to the project's most significant constraint: the program was too big for the space provided. The solution anchored flexible zones of occupation around a fixed kitchen and fireplace element. Defining these zones is a ceiling/wall-scape that obscures references to the original classroom; ceiling datums, corners, and existing windows are draped and concealed.

Given the client's desire for a large multifunction space, the small space reaches up and out, establishing connections to the sky and forest. A new roof monitor draws natural light down into the center of the space, while a vestibule addition becomes an east-facing entry that frames new artwork located near a stand of second-growth trees.





EXPLODED DRAWING

Small dimension lumber, milled with computer-numerically-controlled (CNC) machinery, was an essential building system for this complex form because it provided rapid prototype capabilities, had an acceptable tolerance to adapt to site conditions, and provided a final finish that was culturally appropriate. An integrated design and construction team exchanged and discussed proposals digitally, while hypotheses were mocked up to test material tolerances, capabilities and finishes, and to confirm construction sequences and methodologies.

The final iteration was shop-fabricated, assembled, checked, disassembled, and brought to site. Oriented strand board templates, again CNC-cut, were laid directly on the finished floor and included grid references for the location of suspension points and panels. Cable hangers with turnbuckles allowed on-site coordination with mechanical and electrical services. The inner cedar lathe was hand-applied on site to permit further coordination with local services and provide a reference to the manual craft of traditional woven textiles.

The contemporary construction

and fabrication methodology resonated with students who are nomadic by nature: studying at all hours, eating when convenient rather than at traditional meal times, and technology enabled. The result is both an exploration of digital design and output media, and a dialogue between First Nation culture and the formal language of contemporary architecture.

ARCHITECT
Public Architecture and Communication Inc.
Vancouver, BC

CLIENT
Kwantlen Polytechnic University
Surrey, BC

GENERAL CONTRACTOR
Parkwood Construction Ltd.
Burnaby, BC

STRUCTURAL ENGINEER
Bush Bohlman and Partners
Vancouver, BC

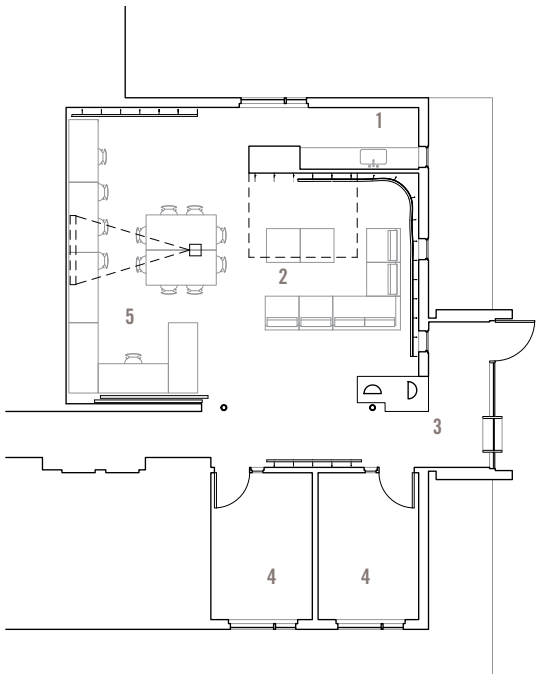
MECHANICAL ENGINEER
Cobalt Engineering
Vancouver, BC

ELECTRICAL ENGINEER
Genivar Consultants Ltd.
Vancouver, BC

BUILDING CODE CONSULTANT
Gage Babcock and Associates
Vancouver, BC

WOODWORK SUBCONTRACTOR
Pacific Woodworking Ltd.
Burnaby, BC

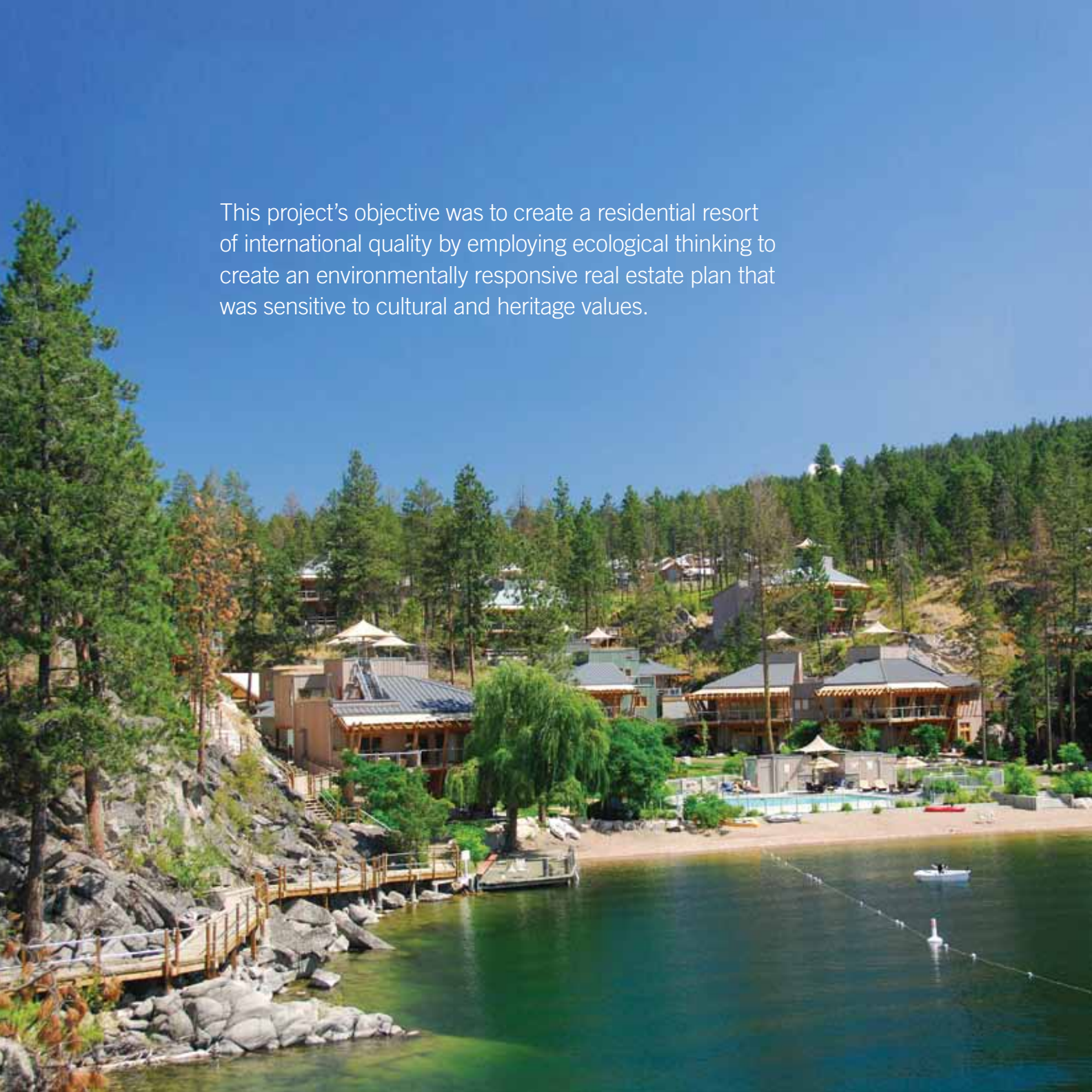
PHOTOGRAPHY
Nic Lehoux
Vancouver, BC



1. kitchen
2. multipurpose
3. entry
4. office
5. reception

FLOOR PLAN

This project's objective was to create a residential resort of international quality by employing ecological thinking to create an environmentally responsive real estate plan that was sensitive to cultural and heritage values.



MULTI-UNIT – RESIDENTIAL Award

The Outback Resort

Coast Architectural Group

The natural landscape of the Outback is world-class, extremely rich and diverse. For thousands of years, people have been visiting and respecting this beautiful landscape. The responsibility of the designers to retain the nature and character of the site was considerable. The imagination is free to explore the creative here and reconnect with the beauty of granite cliffs and tortured ancient firs amidst brilliant sunshine and the azure blue of Okanagan Lake. This is a place to disconnect from the conformity of prescribed action; experience an enlivened state of playfulness in mind, body and spirit; and recognize that all decisions must be land-based – the needs of the land come first.

The project leveraged materials that are native to the site – granite and weathered rock, wood, and other environmentally appropriate solutions. Wood was used extensively throughout the project. It is an important component of what connects the architecture to the landscape and cultural heritage. Large cantilevered glulam beams suspend homes over the cliffs. Sawn timbers of interior fir form vaulted roof spaces and internal post and beam supports. Fir is used for interior finishes and paneling. Rough-sawn fir siding boards are stained with a diluted, semitransparent stain to enhance the natural tones and textures of the wood. Timber poles support the building and deck structures. Engineered joists are used in the flat roof and floor framing.

The building form combines the elements of unlimited openness and solid enclosure, the unexpected and the adventurous. Recycled stone used on stone dash walls form out of the ground to grasp the building, merging with individual rough wooden boards that rise vertically to the parapet to culminate in a tent on top of the forested cliff.

The fabric awnings are retractable manually and add a varying, fluted edge to the building as the occupant adjusts them to suit the sun. The fabric screens are alive at night, reminiscent of a lantern in a tent. The transition from enclosed lower terrace to the tented lookout tower defines the cliff experience and recreates the experience of an outdoor tent. Lower terraces are sheltered and private for sleeping under the stars.

ARCHITECT
Coast Architectural Group
Kamloops, BC

CLIENTS
McDonald Development Corporation
Vancouver, BC

Okanagan Land
Development Corporation
Kelowna, BC

GENERAL CONTRACTOR
Stonecroft Management Ltd.
Vancouver, BC

STRUCTURAL ENGINEER
Chiu Webster
Vancouver, BC

MECHANICAL ENGINEER
Trak Energy Engineering Inc.
Kelowna, BC

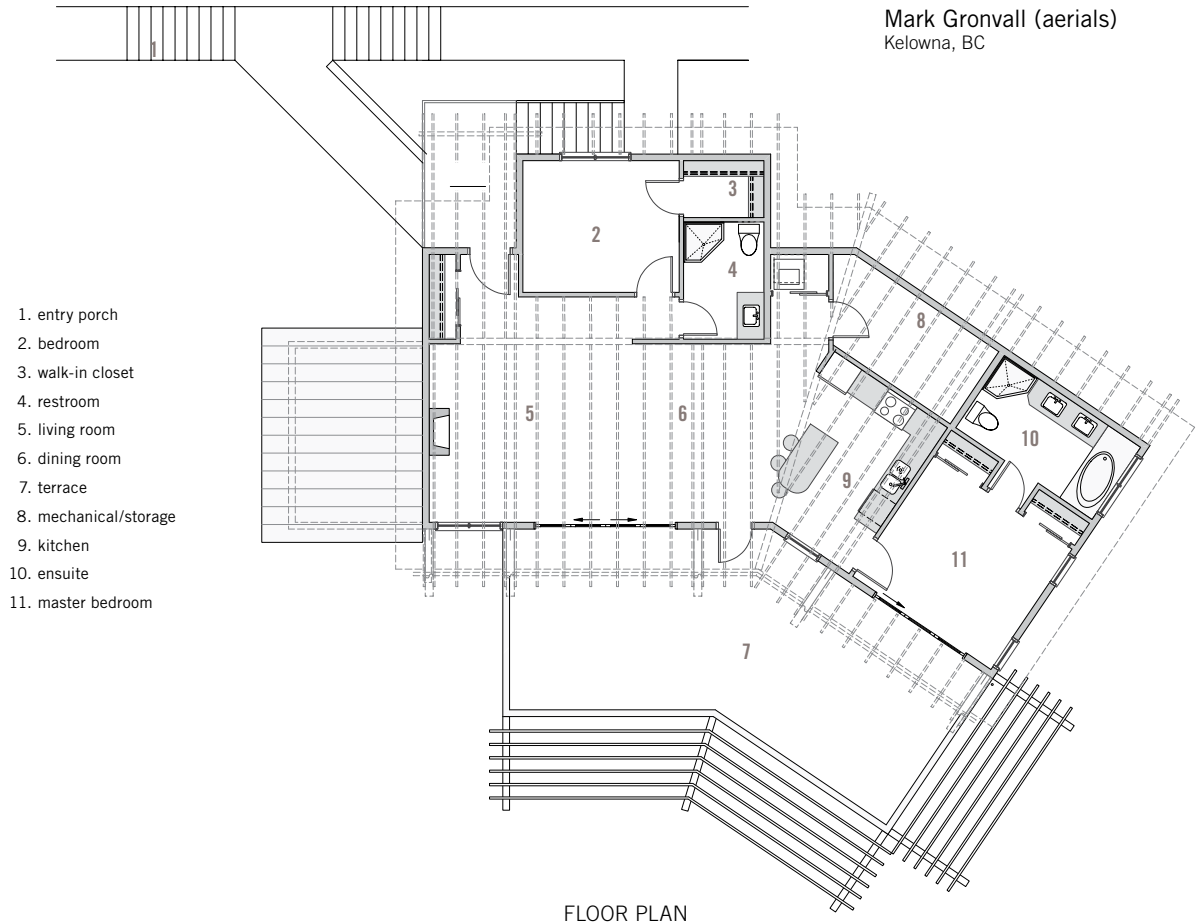
ELECTRICAL ENGINEER
Falcon Engineering
Kelowna, BC

LANDSCAPE ARCHITECT
Eckford & Associates
Vancouver, BC

PHOTOGRAPHY
Peter Powles (exteriors)
West Vancouver, BC

Ivan Hunter (interiors)
Vancouver, BC

Mark Gronvall (aerials)
Kelowna, BC



FLOOR PLAN

RESIDENTIAL Award

This project is located on a south-facing, gently-sloping site on the northern shore of Shuswap Lake in B.C.

Shuswap Cabin

splyce design inc.

Mature cedar, fir and poplar trees litter the site on the north, west and east sides. The southern portion of the site rolls towards the beach, dominated by 180-degree views of the lake and the low-lying hills that bound the lake's opposite shoreline.

Built to be a seasonal retreat for a couple, this 2,300-sq.ft. single-level house was designed to support weekends of casual indoor/outdoor living for the owners and their guests. One of the main design objectives was to seek ways of marrying a traditional cabin vernacular with a contemporary, modern, open-concept space, tailored to the site with an ease of movement between interior and exterior spaces.

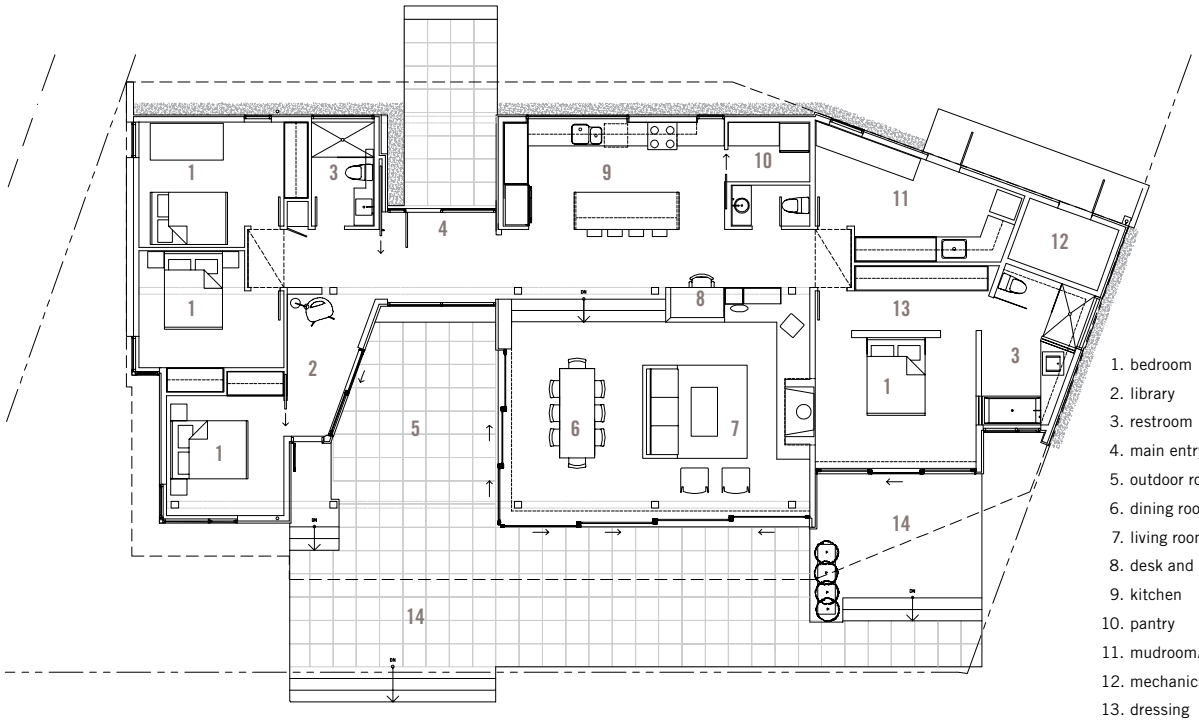
This was achieved with the extensive use of wood. Upon entry into the space, a clear structural order in wood becomes apparent. The interior spaces of the cabin are organized around a central circulation hall lined by a row of exposed 7 x 7-½ ft. Douglas fir glulam posts, and punctuated with light cast from skylights at either end. A 7 x 12 ft. glulam beam supporting 3 x 9 ft. exposed glulam joists leads one from the main entry to the living area of the home as it gently rises to create a tall, light-filled volume. In the opposite direction, the wood ceiling slopes down, creating the compressed, intimate spaces of the library and guest bedrooms.

A large outdoor room carved out of the plan separates the guest wing from the rest of the cabin and serves as a shaded refuge from the intense midday summer sun. Glazed on its north, east and west sides and open on the south, the outdoor room affords lake views from deep within the interior and blurs the boundary between inside and outside. Detailed to allow their bottom track to be flush with both interior and exterior floors when open, large sliding doors on the eastern side of the outdoor room expand the interior space outwards, further eroding any clear demarcation between interior and exterior spaces.

Together with a supporting cast of natural materials, wood ultimately works to shape, define and unite the spaces of the home seamlessly from inside to out. Western red cedar clad exterior walls continue through to the interior, becoming tactile elements in the enclosed space and important details in consideration of the overall interior palette.

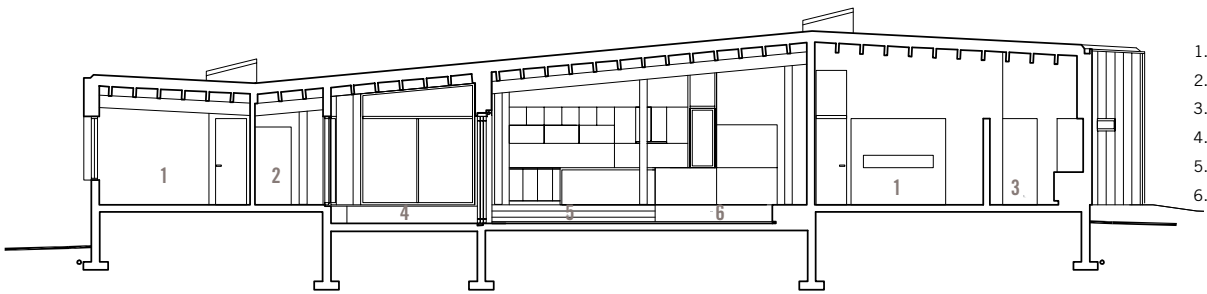
Vertical grain Douglas fir built-in millwork throughout the home references the living firs on the native lakeside site and imbues the clean, simple spaces with warmth and texture. Juxtaposed to these varying soft wood tones is a monolithic polished concrete floor and robust slate fireplace that anchors the home and draws one's gaze upward to the exposed Douglas fir glulam roof structure and ceiling decking. These structural elements extend out to the exterior and define the continuous roof line that quietly commands the north and south elevations. Subtle sloping undulations in the roof structure delineate the three main segments of the house: the guest-wing, the living area, and the owners' bedroom with en suite.

While the resultant modern architectural form strays from the popular cabin vernacular, the integral use of wood throughout the project immediately associates the home with the rustic quality of a typical cabin.



1. bedroom
2. library
3. restroom
4. main entry
5. outdoor room
6. dining room
7. living room
8. desk and media storage
9. kitchen
10. pantry
11. mudroom/laundry
12. mechanical
13. dressing
14. terrace

FLOOR PLAN



1. bedroom
2. library
3. restroom
4. outdoor room
5. dining room
6. living room

SECTION

ARCHITECT/DESIGN
Nigel Parish, splyce design inc.
Vancouver, BC

STRUCTURAL ENGINEER
Structural Solutions Engineering Inc.
Vancouver, BC

GENERAL CONTRACTOR
Darren Stewart
Vancouver, BC

PHOTOGRAPHY
Ivan Hunter
Vancouver, BC

WOOD INNOVATION Award

Austria House stands as a testament to the world that Passive House building technology is a real and feasible solution to global energy problems.

Austria House

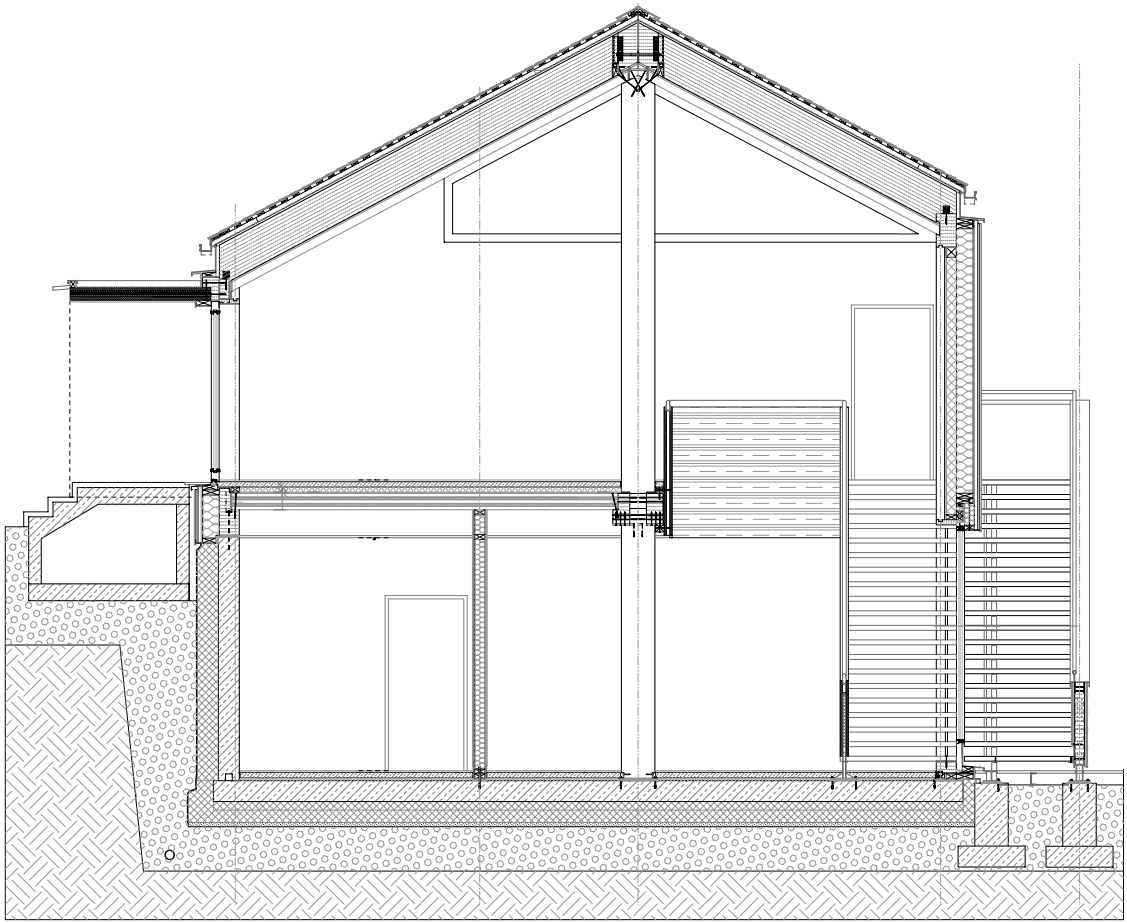
Equilibrium Consulting Inc.

The 2010 Olympic Winter Games – labelled as the Green Olympic Games – provided an ideal platform to showcase the solution. The 2,700-sq.ft. house, the first Passive House (Passivhaus) to be built in Canada, was constructed with ecologically sustainable materials, according to the latest standards of passive house and passive window technology. Austria House also features the first Canadian application of Cross-laminated Timber (CLT) panels for roof and floor structures and diagonally dowelled solid wood panels for wall structures.

Solid wood wall and roof elements were chosen to achieve the stringent thermal insulation and air tightness requirements of the Passivhaus standard. Structurally, the use of CLT panels enabled a flat slab (with no beams) wood structure for the roof and floor elements, transferring both vertical and lateral forces. Dowelled solid wood panels provided shear wall resistance. The Austria House stands as a pioneer in Canada for the domestic use of the innovative and emerging utilization of CLT panels as structural elements.

Austria House was a traditional hub of activity at Olympic Winter Games, a place for athletes, dignitaries, VIPs, media and fans to meet and greet. It was a showcase for Austrian quality, know-how and hospitality. Austria House is where the Austrian Olympic committee (ÖOC) was headquartered during the games, and where the Austrian public broadcaster (ORF) produced daily radio and TV programs.

The inspiration for the design of Austria House came from the traditional buildings of Austria's alpine



regions. It is a compact south-facing structure, covered with a gable roof. Its monolithic appearance is amplified by energy efficient black cement fiber shingles (Eternit) on the roof, and panels on the exterior walls.

The body of the house is constructed without any glues, using solid double diagonally dowelled fir structures.

On the main floor, a spiral structure doubles as a bar and a partition between the stairwell and the rest of the floor. On the upper floor, it highlights the flexible homogeneity of the house and potential modular use of its space.

The catering area and bar on the ground floor look out to the south-exposed patio. From there you notice the fluidity of the house, along the expansive seamless, triple pane window wall, mirrored by the identically twinned inside and outside staircases that lead to the top floor. Upstairs, you are immediately taken by the striking, unobstructed views of the mountains, through the wood/

aluminum framed (Alu2Holz), triple pane, thermal-insulated and argon-filled windows. Their casements and frame insulation consists solely of sustainable wood and cork.

Throughout the house the temperature is maintained at a steady level and the air is continually renewed through the heat recovery and ventilation system.

Now that the Olympic Games are over, Austria House is the home of the Whistler Nordic Ski Club and WORCA (Whistler Outdoor Recreational Cycling Association).

ARCHITECT
Treberspurg & Partner Architekten
Vienna, Austria

STRUCTURAL ENGINEER
Equilibrium Consulting Inc. with University of Innsbruck
Vancouver, BC

BUILDING CONTRACTOR
Austrian Passive House Group (APG) with Resort Municipality of Whistler
Vienna, Austria/Whistler, BC

GENERAL CONTRACTOR CANADA
Durfeld Log Construction Ltd.
Whistler, BC

GENERAL CONTRACTOR AUSTRIA
Sohm Holzbautechnik
Alberschwende, Austria

PHOTOGRAPHY
Ira Nicola
Vancouver, BC

WESTERN RED CEDAR Award

This 12,875-sq.ft. multipurpose educational facility is located on the University of Victoria campus and is the only major wood structure centrally located at its heart.

First Peoples House

Alfred Waugh Architect

The university allowed a wood structure clad in cedar because of the material's symbolic and cultural importance to the native people along the Northwest Coast. The facility houses the Indigenous Graduate Student Union, Native Student Union, classrooms, faculty and counselling offices, elder and student lounges, study space and a ceremonial space.

The Office of Indigenous Affairs' main objective was to develop a building design that honors the identity and pride of the native students on a local as well as national level. The mission was to provide a welcoming, supportive environment for native students. Acting as a home away from home, the center is a place of culture, honor and spirit.

The design celebrates First Nations culture through the use of cedar inside and outside the building. This material is symbolic to the First Nations of the Northwest Coast. The architect assisted the university in locating and purchasing First Nations salvaged Western red cedar a year before construction to ensure adequate preparation time for the material. The clear A, edge-grained cedar used for the interior and exterior siding, house posts and carved doors was sourced from the Dididat Nation located along the northwest coast of Vancouver Island.

The design strategy – whether inside or outside – focuses on the use of cedar as a cladding material and is inspired by the coastal First Nations' use of large planks and grand post-and-beam structures. The building is split into three volumes with a large sloped roof covering the ceremonial hall and classrooms and the lower roof

enclosing the administration block.

The use of heavy timber for the larger volume represents the Coast Salish Longhouse; each enclosed room is defined by this post-and-beam structure. The heavy timber reveals a structural expression at the main entrance canopy and the entrance lobby. The glulam beams from the ceremonial hall and classrooms extend beyond their enclosures to define the public corridors.

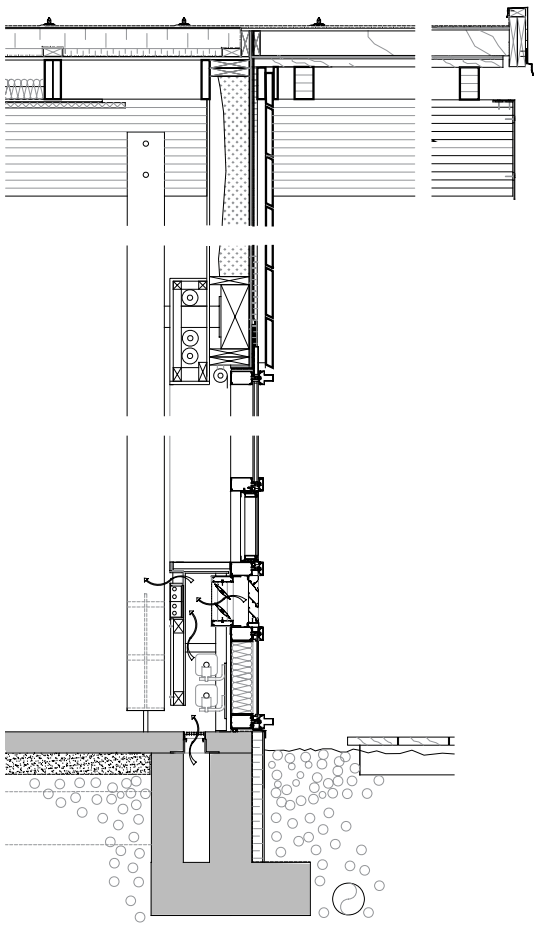
This design strategy uses Western red cedar cladding to articulate the program and the descending volume under the main roof corresponds to the decreasing size of rooms from east to west. Each programmatic element is clearly defined by wrapping the outside and inside of the classroom wing and ceremonial hall with Western red cedar under the main roof and then connecting all three building volumes with a ribbon of glass.

The predominant use of Western red cedar is in the plank board cladding. The exterior cladding is 235mm wide x 32mm deep and is finished on one side and two edges. The interior is clad in a matching 235mm wide x 19mm deep boards backed by acoustic insulation. On the exterior, the cedar planks are spaced 15mm apart, serving as a rain-screen. They are fastened to vertical nailers in a controlled pattern with stainless steel fasteners. Access panels for fire sprinkler drain valves and pond controls are concealed behind carefully designed, flush mounted cedar-clad panels. A visual screen enclosing the fish cleaning area is clad with West-

ern red cedar fastened alternately inside and outside of the enclosure to allow natural light to penetrate and add interest to the façade.

The university required the architect to design a visual element to provide sun shading for the clerestory and screen the rooftop services that were otherwise highly visible from adjacent buildings. The solution was to use 38mm x 140mm Western red cedar louvres fastened to aluminum frames. This system provides sun shading to the clerestory over the ceremonial hall and visually screens the kitchen exhaust fan and roof access hatch. Each screen is hinged at the top to allow for window cleaning and access.

The ceremonial hall, the heart of the building, is a sacred space celebrating the use of red cedar as the cultural blood of the Coastal Salish people. Art is an integral part of First Nations culture and this project incorporates two sets of carved cedar house posts, carved ceremonial doors and eight carved inset panels in the ceremonial hall. The lower wall and bleachers



WALL SECTION

are clad in 19mm x 235mm cedar boards and the upper wall is clad in woven 6mm x 45mm Western red cedar panels spaced at 1500mm on center contained in 64mm x 38mm frames. This system recalls the tulle or bulrush woven mats used to line the walls of historic longhouses and separate family clans. The panels are fastened by concealed clips and the rich textured surface is enhanced by lighting along the bottom.

ARCHITECT
Alfred Waugh Architect
West Vancouver, BC

GENERAL CONTRACTOR
Knappett Projects Inc.
Victoria, BC

STRUCTURAL ENGINEER
Equilibrium Consulting Inc.
Vancouver, BC

CEDAR WOOD SUPPLIER
Coast Ecotimber Inc.
Delta, BC

PHOTOGRAPHY
Nic Lehoux
Vancouver, BC

Jurors

(From left to right) Lloyd Hunt, Meg Graham, Jamie Lim and Silvio Baldassarra

LLOYD HUNT
Principal

LLOYD HUNT ARCHITECT, AND ADJUNCT ASSOCIATE PROFESSOR
UNIVERSITY OF WATERLOO, SCHOOL OF ARCHITECTURE
www.lloydhuntarchitect.com

MEG GRAHAM
Principal

SUPERKÜL INC | ARCHITECT
www.superkul.ca

JAMIE LIM
President and CEO

ONTARIO FOREST INDUSTRIES ASSOCIATION
www.ofia.com

SILVIO BALDASSARRA
Senior Vice President

NORR LIMITED ARCHITECTS, ENGINEERS AND PLANNERS
www.norr.com

Sponsors

AWARD SPONSORS

Natural Resources Canada / Ressources naturelles Canada

Ontario

Ontario
Northern Ontario Heritage Fund Corporation
Société de gestion du Fonds du patrimoine du Nord de l'Ontario

Canada FedNor

abitibi bowater

Boise Cascade Engineered Wood Products

grant

LP BUILDING PRODUCTS

OFIA
ONTARIO FOREST INDUSTRIES ASSOCIATION

ONTARIO WOOD TRUSS FABRICATORS ASSOCIATION

"The Wise Choice" owl® DISTRIBUTION

Tembec

Weyerhaeuser
The future is growing™

PROGRAM SPONSORS

ONTARIO CONSTRUCTION REPORT

ELK LAKE ECO-CENTRE

FPInnovations FORINTEK

NORMERICA AUTHENTIC TIMBER FRAME

Timber Systems

twg* COMMUNICATIONS

The Working FOREST newspaper

ONTARIO

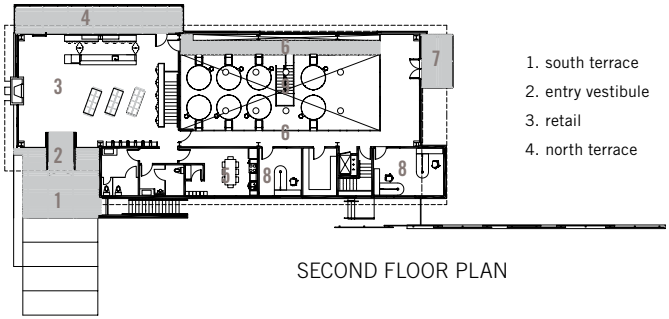
When Fielding Estate Winery – a fledgling family-run company producing small batch wines by traditional methods – outgrew the borrowed building where it started, its owners recognized an opportunity to create a purpose-built winery building that would reflect both the high quality of their wines and the commitment their family had made to the label.

Fielding Estate Winery

superkül inc | architect

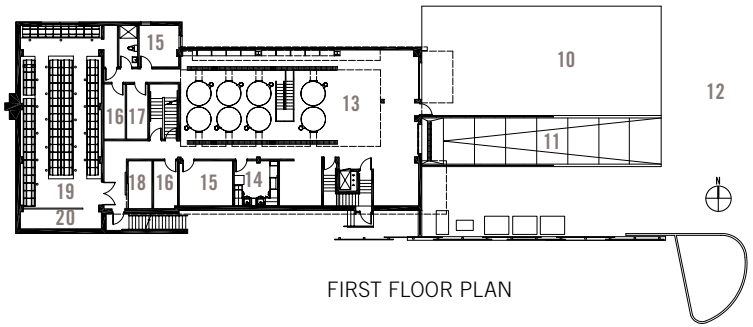
From the outset, the building was conceived of by the owners and the architect as one closely tied in with both its landscape and the vernacular agricultural architecture of southern Ontario. As such, it was always a building that was honest in its form and use of materials – true to its purpose as a working agricultural building. The use of wood predominates.

Clad in knotty cedar, the winery sets itself into the 18-acre vineyard site on the Niagara Escarpment in Beamsville, ON, tied in with the woody vines and against the trees of the Bruce Trail that borders the vineyard to the south.



SECOND FLOOR PLAN

1. south terrace
2. entry vestibule
3. retail
4. north terrace
5. staff lounge
6. catwalk mezzanine
7. tour balcony
8. office
9. open to below



FIRST FLOOR PLAN

10. crush pad
11. loading ramp
12. service court
13. fermentation
14. laboratory
15. mechanical
16. storage
17. electrical
18. barrel wash
19. barrel cellar
20. wine library

Warm in its expression, the form and materiality of the building clearly evoke those of a traditional barn.

Inside, the largely bipartite program of production and retail spaces sits under the long clear span gabled roof. Required to accommodate the large vats and equipment of the production area, the clear span – achieved with exposed and carefully detailed black spruce glulam beams – visually and spatially integrates the production and

retail spaces to give the visitor a fuller experience of the winery.

The ground level production areas are laid out sequentially, according to the wine making process. Wine making begins at the east end of the building with the hand sorting and crushing of the grapes, which are then put in the tanks to ferment. When fermentation is complete, the wine is aged in the barrel cellar – portions of which are buried in the slope of the site to take advantage of its temperature-moderating effects. The wine is then bottled. Tours of the building follow this process, beginning at a north terrace that runs the length of the retail area and overlooks the vineyard. Nestled in the site against the treeline of the Bruce Trail, the winery has long views north over the estate's vineyard to the horizon line traced by the surface of Lake Ontario.

The building incorporates a number of sustainable design elements and systems including: a gravity-fed septic system and filter treatment bed that minimize the use of mechanical pumps; operable, thermally broken aluminum windows for natural ventilation at the lower floor and a continuous thermally broken aluminum central skylight with operable, vents at the roof ridge allow for daylighting and passive ventilation and cooling; a permeable, granular drive to reduce surface water run-off; a storm water retention pond; and building materials – concrete and wood – left in their self-finished states.

ARCHITECT
superkül inc | architect
Toronto, ON

CLIENT
Ken and Marg Fielding
Beamsville, ON

CONSTRUCTION MANAGER
Merit Contractors
St. Catharines, ON

STRUCTURAL ENGINEER
Blackwell Bowick Partnership Ltd.
Toronto, ON

MECHANICAL/
ELECTRICAL ENGINEER
Jain and Associates Ltd.
Mississauga, ON

PHOTOGRAPHY
Tom Arban Photography
Toronto, ON

GREEN BUILDING Award

In order to root the main branch public library for Bridgenorth, Ontario in its surroundings, the building was conceptualized as a great lodge – a grand community cottage for books and information that takes its cues from the nearby trees and landscape.

Bridgenorth Library and Community Hall

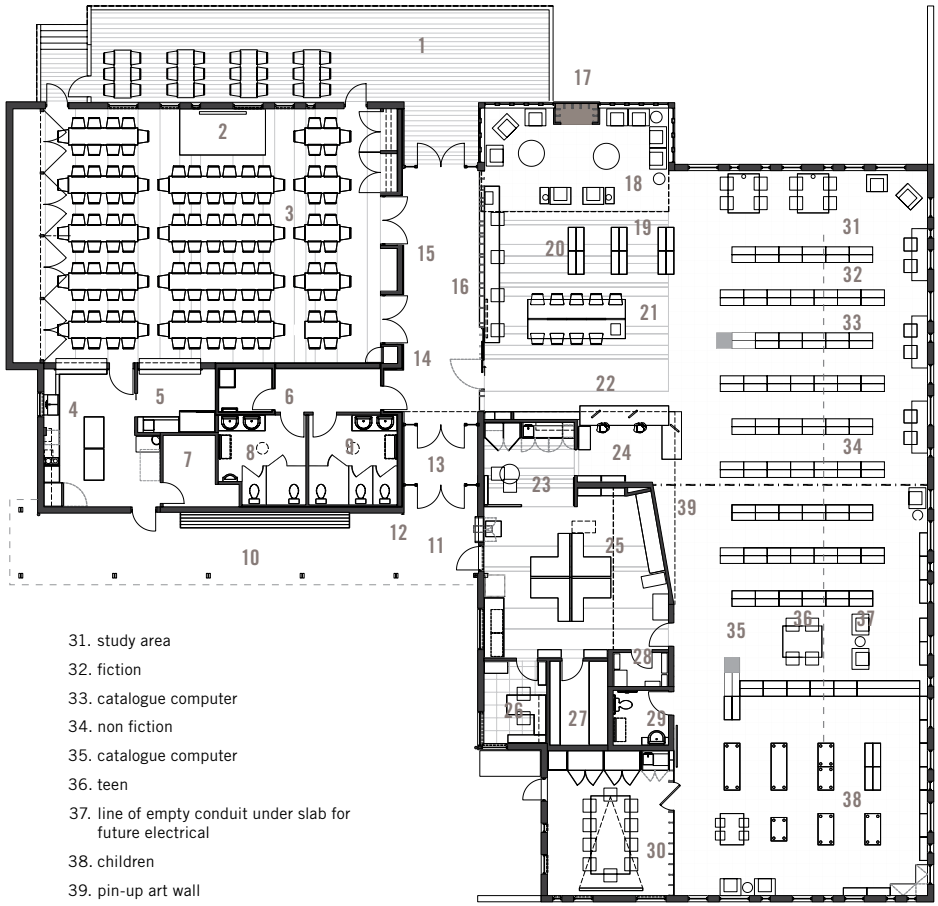
Levitt Goodman Architects Ltd. and Phillip H. Carter Architect

This civic building is constructed almost entirely from wood products. The expressive qualities of typical residential wood construction set a tone that supports this vision.

Perched on a hill overlooking the main street, the library's narrow windows, vertical wood siding and tall chimney evoke a grove of slender trees. There are plenty of indoor and outdoor spaces with operable windows. These facilitate an enjoyment of the seasons and encourage engagement with the surrounding landscape, including views of Chemong Lake.

Crisp white walls create a light, airy atmosphere that is offset by a dark-stained red oak plywood liner that brings the soaring scale of the 18-ft.-high ceilings back to human proportions. Light skips through the lacy ribbons of wood in the library's exposed wood truss ceiling like daylight dispersing through a canopy of trees. Linoleum and carpet have been laid in strips that were inspired by aerial views of the rural landscape. There is a stone fireplace surrounded by comfy couches under a low overhang, reminiscent of an intimate cottage living room.

1. viewing deck
2. stage
3. community hall
4. kitchen
5. bar
6. janitor
7. mechanical
8. mens restroom
9. womens restroom
10. covered walkway
11. staff entry
12. book drop and display case
13. entry
14. foyer
15. community bulletin wall
16. glass doner wall
17. fireplace
18. reading nook
19. magazines
20. laptop counter
21. computer hub
22. merchandising wall
23. kitchenette
24. circulation
25. workroom
26. office
27. storage
28. electrical
29. bf restroom
30. program room



31. study area
32. fiction
33. catalogue computer
34. non fiction
35. catalogue computer
36. teen
37. line of empty conduit under slab for future electrical
38. children
39. pin-up art wall

FLOOR PLAN

The two wings of the library create a new formal public square for the community; the first public square in the area. A long cedar reading deck is accessible from both the library and the community multi-purpose hall. On a beautiful day, library users can read a book outside; when the hall is used for a wedding, guests can spill outdoors.

The library's budget was tight. More finished exposed wood solutions, such as glulam construction, were not an option. Residential double ply wood trusses made from 2 x 4 lumber are exposed in the library's high ceiling space, while 20-in.-deep engineered wood joists are exposed in the remainder of ceiling spaces. Walls are primarily comprised of exposed, painted 7-in. laminated veneer lumber or exposed, painted oriented strand board. These exposed wood elements achieve an expressive structure at low cost, while eliminating the need for drywall ceilings and wall coverings that normally hide such utilitarian structures. Ultimately, these econom-

ical modes of wood construction played an expanded role in the making of space.

This approach required a careful consideration of wood detailing that usually goes un-addressed because it is hidden. With the wood trusses and engineered wood joists, chord shape, gusset plates, cross bracing and attachment details were all carefully considered. On the walls, base plates, bracing details, attachment details, as well as interfaces with building systems were all reviewed and coordinated with the contractor.

The township now has a library whose exposed walls have the verticality of trees. In a subtle way, this connects the book back to its source – the tree. The ceilings, with their filigree of stick construction, produce a beautiful filter for abundant natural light and create a warm overhead canopy for library patrons. The library becomes a decidedly more rustic community space, linked to the land yet connected globally to a larger community.

ARCHITECT
Levitt Goodman Architects Ltd.
in association with
Phillip H. Carter Architect
Toronto, ON

CLIENT
Township of Smith-Ennismore-Lakefield
Bridgenorth, ON

STRUCTURAL ENGINEER
Blackwell Bowick Partnership Ltd.
Toronto, ON

GENERAL CONTRACTOR
Garritano Bros. Ltd.
Oshawa, ON

MECHANICAL ENGINEERS
OTS Engineering
Peterborough, ON

ELECTRICAL ENGINEERS
Kirkland Engineering Ltd.
Peterborough, ON

PHOTOGRAPHY
Ben Rahn, A-Frame
Toronto, ON

Native Child and Family Services Longhouse

Levitt Goodman Architects Ltd.

INSTITUTIONAL <$10 MILLION Award

Native Child and Family Services is an agency providing services to the native children and families living in Toronto. Their new headquarters on College Street is intended to represent native heritage in a contemporary way that reflects the unique situation of the urban native.

The longhouse is a room within the larger facility that serves as a spiritual meeting place. The form and materiality of the structure is derived quite explicitly from traditional native longhouses where wood is the sole building material. In this case, cedar was chosen.

The contemporary construction techniques and details of this longhouse are intended to inspire optimism and confidence for the native person in the urban context. The structure of the longhouse consists of a reciprocal frame arch.

The reciprocal frame is an ancient building technique, derived from weave patterns, that allows longer spans to be achieved with short members, none of which are long enough to cover the whole span individually. In the case of an arch, the reciprocal frame also allows a curved surface to be created with short straight members. The efficiency of the arch allows the span to be achieved with much smaller members than would have been required for a flat structure.

The traditional longhouse structure includes closed ends, not usual for a reciprocal frame arch. The geometric wrapping of the reciprocal frame around the ends is a very unique aspect of this project. The complex geometry and architectural intent precluded the use of light steel hardware at the connection points. Connections were mocked up and tested to verify their capacity, which fell outside of the range of application of normal design techniques.

ARCHITECT
Levitt Goodman Architects Ltd.
Toronto, ON

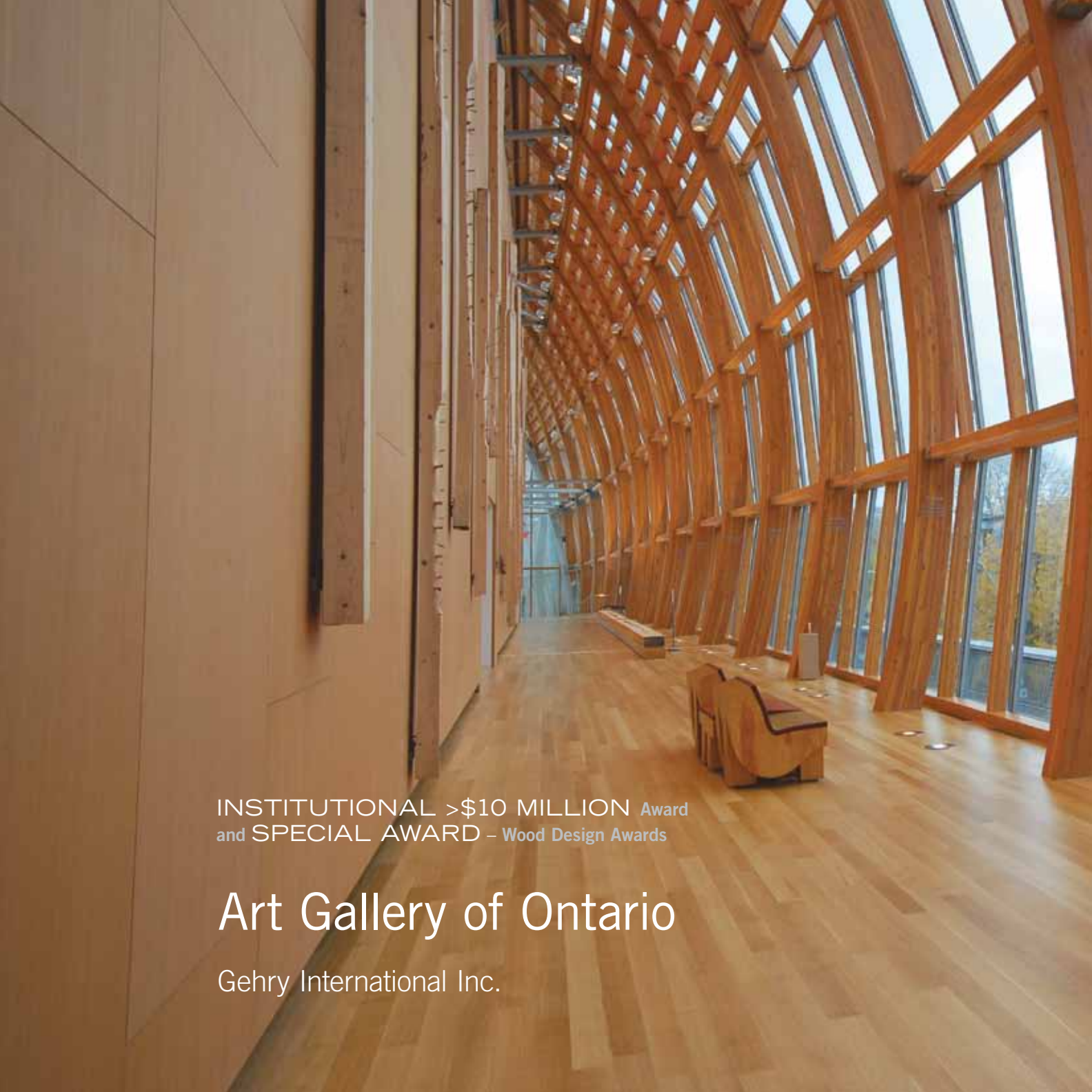
CLIENT
Native Child and Family Services
Toronto, ON

STRUCTURAL ENGINEER
Blackwell Bowick Partnership Ltd.
Toronto, ON

GENERAL CONTRACTOR
Boszko and Verity Inc.
Toronto, ON

CONSTRUCTION SUBCONTRACTOR
MCM 2001
Toronto, ON

PHOTOGRAPHY
Jesse Jackson Photography
Toronto, ON



INSTITUTIONAL >$10 MILLION Award
and SPECIAL AWARD – Wood Design Awards

Art Gallery of Ontario

Gehry International Inc.

The 2008 transformation of the Art Gallery of Ontario involved the renovation of existing spaces and the addition of 92,000 sq.ft. of new floor space.

The design needed to unify and enhance previous constructions done in 1918, 1929, the 1970s and the 1980s. Complex structural and decorative wood elements were used to achieve this goal, as well as to lure, calm, entice and amaze visitors.

Demonstrating qualities of strength and beauty in its application as the supporting structure for the gallery's most prominent feature – the Dundas Façade – each of the 1,800 Douglas fir glulam members within the 600-ft. glass and timber façade has a unique configuration and is informed not only by architectural intent, but also by the character of the existing structure to which it connects. The strength of the fir was relied upon heavily to minimise the volume of structural materials used.

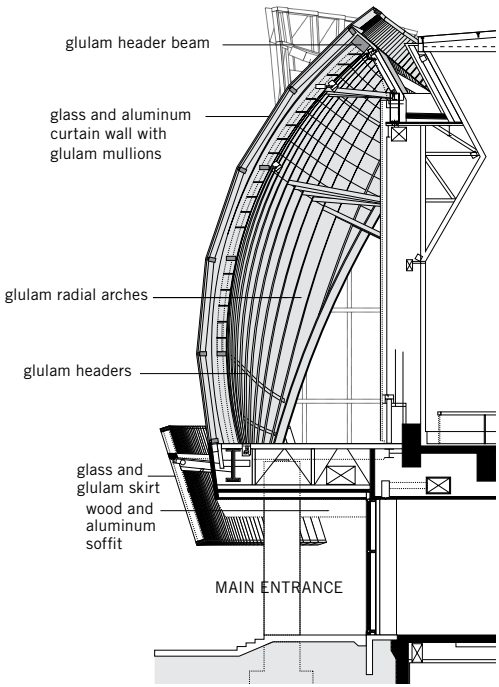
Galleria Italia, the enclosed portion of the Dundas Façade, is comprised of curved glulam members tilted in elevation, resulting in a warm, wood-lined atrium. Referred to as radials, the glulam member over the main entrance is vertical; east and west

of that member, each radial slopes at an angle that increases with distance from the entrance, changing both the dimensions and the degree of curvature.

Douglas fir glulam was used to support the curtain wall, and was consistently applied throughout the feature areas of the building, including the skylight above Walker Court and the full-height windows for the 30-ft. tall galleries of the new Contemporary Tower.

The beauty of wood is exhibited throughout the interior of the building as a finish material for walls, feature stairs, ramps and furniture. In public gathering areas, walls are clad with vertical grain Douglas fir veneer panels arranged in an earthquake pattern. The natural beauty of the wood grain is emphasized by concealing any fasteners from view on the unexposed backside.

The sensuous curves of the Walker Court staircase weave 90 ft. high, from the second to the fifth floor of Walker



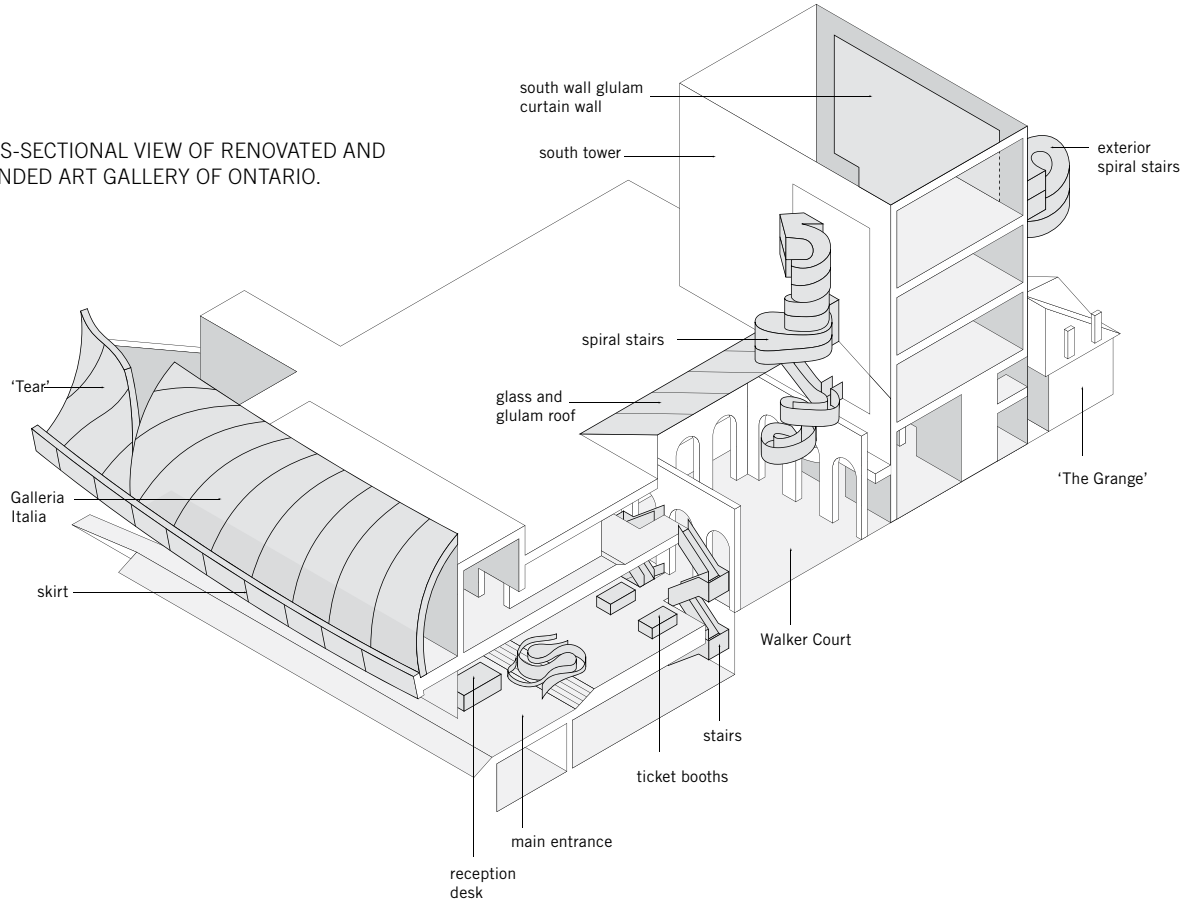
SECTION THROUGH MAIN ENTRANCE AND GALLERIA ITALIA

Court. The wood panels for the stair were fabricated onsite using a layered system of furring strips and cold-bend CSP plywood and bonded vertical grain Douglas fir veneer to conceal all fasteners. While the balustrade walls of the staircase have single-curvature geometry, the soffit of the staircase, also clad in wood panels, has true double-curvature geometry. Likewise, the balustrade cap, which runs the entire length of the staircase and curves both in plan and in elevation, was laminated and hand-shaped on site. The entry ramp that visitors encounter upon first entering the Art Gallery of Ontario was clad in a similar manner to the feature staircase, but also incorporates a reception desk which is seamlessly integrated with the Douglas fir cladding.

Engineered wood products are used, in a unique manner, as casework in the retail area and as cabinetry in the guest services areas. The casework and cabinetry utilise traditional joinery techniques applied to built-up layers of vertical-grain Douglas fir plywood leaving no exposed fasteners. Polished to a furniture-grade finish, the focus of attention is on the natural rich grain of the wood.

The engineered oak floors provide a deep, rich uniform tone throughout, and will withstand the foot traffic of the thousands of visitors the AGO receives each year.

CROSS-SECTIONAL VIEW OF RENOVATED AND EXPANDED ART GALLERY OF ONTARIO.



ARCHITECT
Gehry International Inc.
Los Angeles, CA

ON-SITE ARCHITECT
Adamson Associates Architects
Toronto, ON

CLIENT
Art Gallery of Ontario
Toronto, ON

STRUCTURAL ENGINEER
Halcrow Yolles
Toronto, ON

GENERAL CONTRACTOR
Ellis Don Corporation
Mississauga, ON

GLULAM SUPPLIER
Structurlam Products Ltd.
Pentiction, BC

GLULAM CONNECTION/ ERECTION ENGINEER
Equilibrium Consulting Inc.
Vancouver, BC

GLULAM ERECTOR
Spring Valley Classic Custom Corp.
Ancaster, ON

MILLWORK CONTRACTOR
Provincial Store Fixtures Ltd.
Mississauga, ON

FLOORING CONTRACTOR
Barwood Flooring
Scarborough, ON

PHOTOGRAPHY
Sean Weaver
Image Resources,
Art Gallery of Ontario
Toronto, ON

John Burrows
Toronto, ON

Sarah Hicks
Toronto, ON

DIAGRAMS
Flavio Trevisan, Design Studio,
Art Gallery of Ontario
Toronto, ON


A

The new TELUS Centre for Performance and Learning is the final jewel in the crown of Toronto's cultural renaissance, a phenomenon that was catalyzed in the slipstream of the Bilbao effect.

Koerner Hall, The Royal Conservatory

Kuwabara Payne McKenna Blumberg Architects

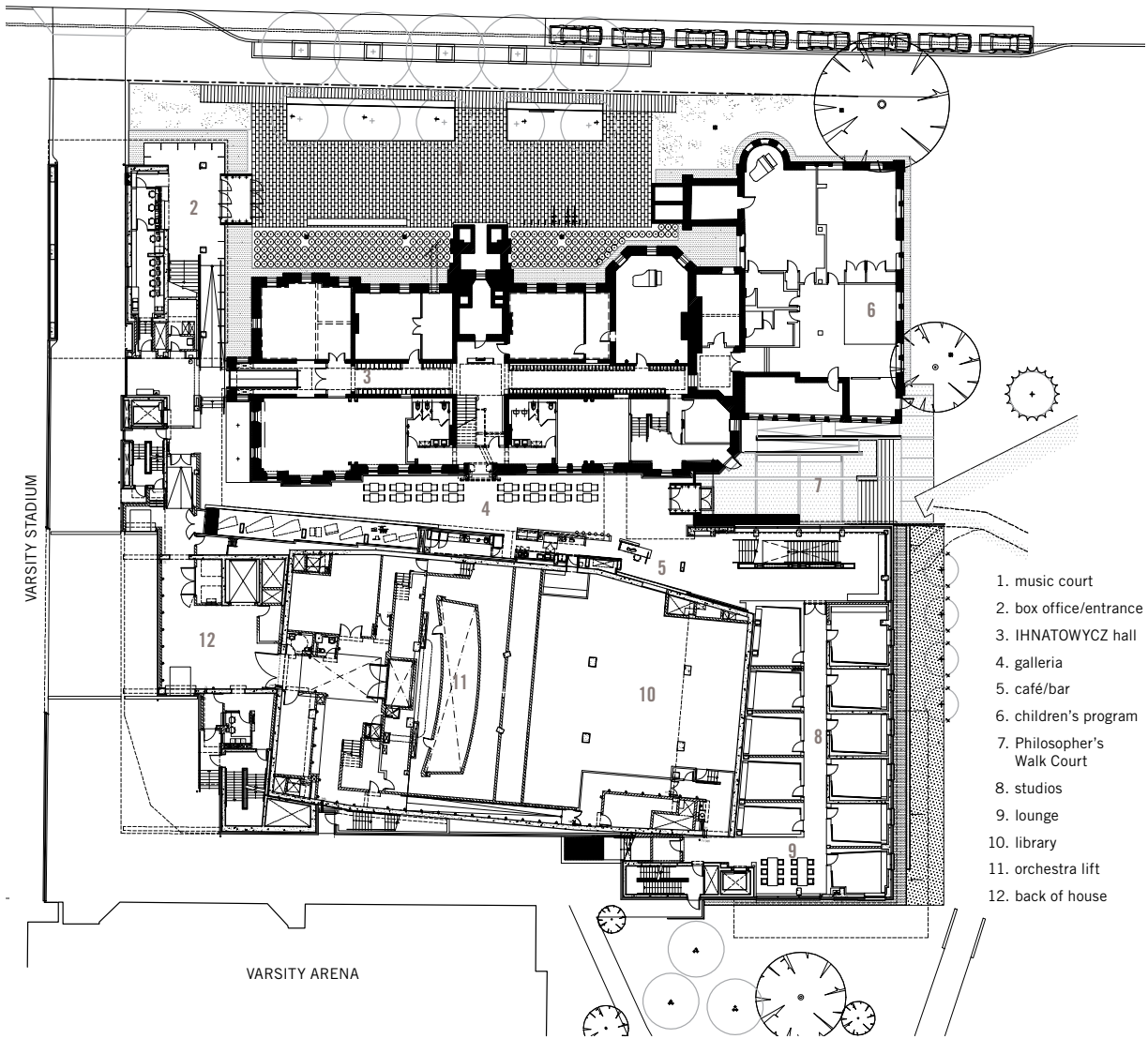
Koerner Hall fulfils a 20-year dream to build a new home for Canada's premier music and arts educator, The Royal Conservatory (RCM). The heart of the project is Koerner Hall, a 1,135-seat concert hall named after donors Michael and Sonja Koerner.

The signature element is the veil of twisting oak strings which forms the backdrop for the chorus at the first balcony level and hovers over the stage below the fixed acoustic canopy, extending into and over the hall at the technical balcony level. The strings act as part of the acoustic reflection when under the canopy, and then become acoustically transparent over the rest of the space. Balcony fronts and seats, as well as the hall floors, are natural oak, contrasted against undulating black plaster panels that line the hall and reflect the dark stone of the exterior cladding.

Guidelines for determining the size of the strings were set by the acoustician. The architect worked within these parameters to develop a dimension

and a form that marries the theatrical lighting and theatre equipment. There are 15 pairs of strings that twist to allow for openings in the reflector for theatrical and architectural lighting and to separate the lighting bridges to fit in between the wood members. The dimension of the strings varies from a constant width of 38mm to depths of 300 to 400mm. Across the length of the concert hall, the ceiling strings are nearly 30m in length. The vertical strings that rise from the chorus level curve downstage and extend in front of the technical balcony.

Koerner Hall is designed to achieve an N1 acoustic rating, and is ideal for classical music, jazz, world music, amplified music, lectures and film. The design is based on the classic shoebox shape of some of the world's finest concert halls, and features two balcony tiers above the main orchestra level, and a third technical balcony. Juxtaposed against the shoebox form of the hall, the wood balcony fronts and curving walls create a warm, sculpted liner within the rectangular form. Sightlines and adjustable acoustics allow for a broad range of concert types including live televised broadcasts.



SITE/FLOOR PLAN

ARCHITECT
Kuwabara Payne McKenna Blumberg Architects
Toronto, ON

CLIENT
Royal Conservatory of Music
Toronto, ON

GENERAL CONTRACTOR
PCL Constructors Canada Inc.
Mississauga, ON

STRUCTURAL ENGINEER
Halcrow Yolles
Toronto, ON

ACOUSTICIANS
Sound Space Design
London, UK

Aerocoustics Engineering Ltd.
Toronto, ON

PERFORMANCE CONSULTANT
Anne Minors Performance Consultants
London, UK

ELECTRICAL ENGINEER
Crossey Engineering Ltd.
Toronto, ON

MECHANICAL ENGINEER
Merber Corporation
Toronto, ON

ARCHITECTURAL LIGHTING
Martin Conboy Lighting Design
Ottawa, ON

A/V CONSULTANT
Engineering Harmonics Inc.
Toronto, ON

COST CONSULTANT
Turner & Townsend
Toronto, ON

PHOTOGRAPHY
Tom Arban Photography
Toronto, ON

Eduard Hueber
New York, NY


STAFF

JURY'S CHOICE Award

The Spadina, Simcoe and Rees WaveDecks – a series of uniquely Canadian gathering places at the water's edge – have become a symbol for the revitalization of Toronto's waterfront.

Spadina, Simcoe and Rees WaveDecks

West 8 + DTAH

Their whimsical and dynamic design and impressive wooden curves have made all three WaveDecks must-see waterfront attractions. Inspired by the Canadian cottage experience and the shorelines of Ontario's Great Lakes, the WaveDecks create new public space at the water's edge by replacing narrow sidewalks with grand waterside gathering places. Located at the end of major north/south streets, these urban docks connect key waterfront spaces such as the Music Garden, HTO Park and Harbourfront Centre.

Ranging from 480 sq.m. to 650 sq.m., these striking WaveDecks made of yellow cedar glulam and ipe are completely flexible spaces. In addition to offering people a place where they can relax by the lake, they are also impromptu playgrounds, dynamic performance spaces and outdoor classrooms for small boating clubs in the area. The upper crest of each WaveDeck offers broad views of both the lake and the city.

In addition to amphitheatre-style seating on the steps of each WaveDeck created by the rise and fall of the deck, a backless bench creates a perfect place to relax and gather by the lake. The bench allows people to face the activity of the deck and street beyond, or to face the water and quietly contemplate the lake. These benches also act as an innovative and elegant barrier to the water and showcase the beauty of ipe wood. In the evening, the WaveDecks are lit from below with LED fixtures.

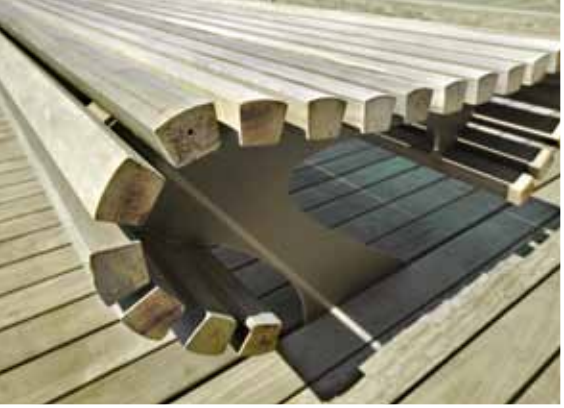
These colorful lights cast a glow from the lake creating a beautiful effect on the deck and the water.

Two types of wood were used to build the deck: ipe (decking), a durable hardwood with an extended life-cycle; and curved glulam coastal yellow cedar (beams), chosen for its water-repellent character.

The primary structure of the WaveDecks includes steel beams supported on pipe piles, driven into the lake bottom to bedrock. The secondary frame structure is made of 275mm x 570mm glulam yellow cedar beams that are supported by the primary structure. In order to obtain the precise, playful undulating curves of the deck, the timber beams, including ledgers and connections, were milled to accurate radii and then assembled on site. The deck is designed to withstand enormous wave uplift forces, lake freezing, and can support the full weight of a fire truck, or 1000 people. Ipe deckboards (38mm x 89mm) are laid between the timber beams, fastened to the integral ledgers by stainless steel wood screws. The timber components are essential to the structural integrity of the deck. Ipe purlins are fastened to the underside of the deckboards, running parallel to the secondary timbers, preventing twisting and warping of the deckboards over time. Great care was taken to ensure the deck is accessible to all users. Anti-slip strips are integrated into the deckboards to prevent slipping on the sloped surfaces. Visibility markers and tactile devices are also incorporated to allow the visually impaired to safely enjoy and explore the WaveDecks.

The construction of the WaveDecks also included the creation of almost 2,000 sq.m. of new high-quality, diverse fish habitat. Riverstone shoals, tree logs and embankments were installed to provide shelter and increased feeding and forging opportunities for lake fish.

An important element in the master plan for Toronto's downtown waterfront, the WaveDecks introduce new public spaces, promote interaction with the lake and – materialized in wood with iconic forms – help create a coherent identity for the area.



LANDSCAPE ARCHITECTS
West 8 + DTAH (joint venture)
Rotterdam, NL and Toronto, ON

CLIENT
Waterfront Toronto
Toronto, ON

STRUCTURAL ENGINEER
Halsall Associates Ltd.
Toronto, ON

GENERAL CONTRACTOR
Somerville Construction
Toronto, ON

AQUATIC HABITAT
Schollen and Company Inc.
Toronto, ON

LIGHTING CONSULTANT
Mulvey + Banani International Inc.
Toronto, ON

SPECIFICATION CONSULTANT
Brian Ballantyne Specifications
Oakville, ON

COST CONSULTANT
A.W. Hooker Associates Ltd.
Oakville, ON

PHOTOGRAPHY
Waterfront Toronto
Toronto, ON

MULTI-UNIT Award

This four-story, seventy-two unit condominium building is located on land, adjacent to the old Welland Canal, that had been vacant for many years.

Seaway Pointe, Phase 1

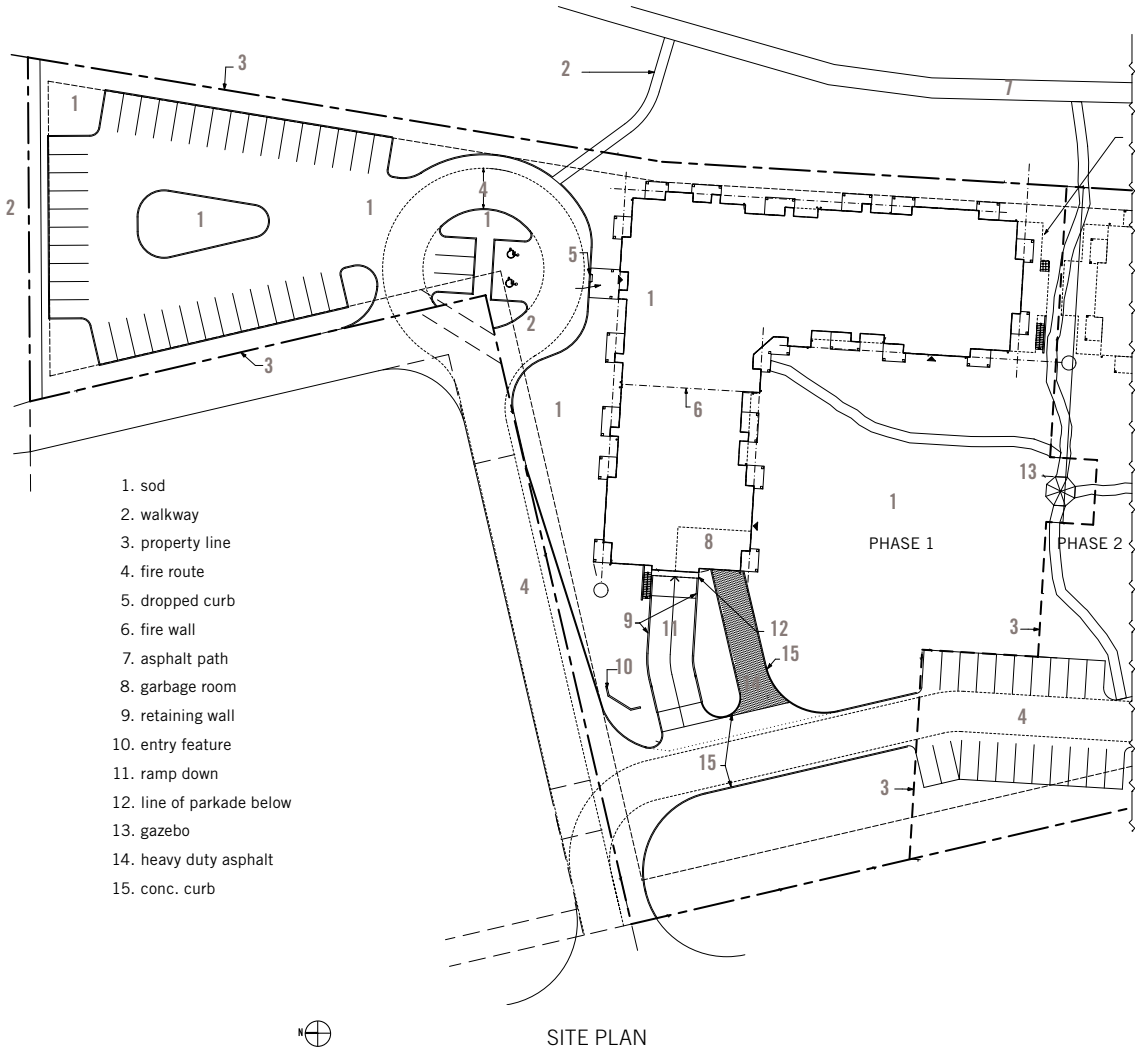
Jonathan Weizel Architect

The orientation and configuration of the building enables 65 per cent of the units to have a view of the picturesque waterway which is now used only by non-powered watercraft.

The developer chose wood for the structure due to its cost efficiency compared to light gauge steel or poured reinforced concrete. When reviewing the economic feasibility of a project outside of a major metropolitan center it is essential to start with the maximum selling price of typical one and two bedroom units (regardless of the level of finishes and extras) in the region and work backwards. This exercise helped the developer quickly determine that wood was the only way to go.

The fully sprinklered building is divided into two wings separated by a two-hour firewall to conform to the current Ontario Building Code limits for four-story combustible construction. The firewall was constructed using a wood stud core with two layers of 15.9mm-type X paperless gypsum board on both sides. This type of construction resulted in substantial savings, in terms of both cost and installation time. Only one supplier was required to install the firewall and the entire structure of the building, which eliminated the need to coordinate trades, material deliveries and concrete curing time.

The floors and roof structures were constructed using trusses selected for their strength and dimensional stability. All interior and exterior walls, load-bearing and non-load-bearing, were panelized in a controlled factory environment and delivered to



SITE PLAN

the site for placement and erection. Installation of the floor, wall and roof systems continued during severe winter conditions.

The use of light-weight gypsum concrete floor topping (Levelrock), resilient channels, acoustic insulation and double layers of 15.9mm type X gypsum board resulted in the floor, party wall and corridor walls that meet or exceed code requirements for sound attenuation (STC ratings) and fire separation and resistance ratings.

The exterior cladding consists of fiber-cement siding. Hardie Plank Lap Siding and GenStone panels were selected for their cost efficiency, durability and ease of installation.

ARCHITECT
Jonathan Weizel Architect
Thornhill, ON

CLIENT/DEVELOPER/
CONTRACTOR
Pointe of View Developments Ltd.
Toronto, ON

STRUCTURAL, MECHANICAL
AND ELECTRICAL ENGINEER
Hallex Engineering Ltd.
Niagara Falls, ON

CIVIL ENGINEER
R.J. Burnside & Associates Ltd.
Pickering, ON

LANDSCAPE ARCHITECT
Terraplan Landscape Architects
Toronto, ON

FLOOR/ROOF TRUSS AND
WALL PANEL FABRICATOR/
ERECTOR
Tampa Hall Ltd.
Ayr, ON

PHOTOGRAPHY
Jonathan Weizel
Thornhill, ON

NORTHERN ONTARIO EXCELLENCE Award

Carefully positioned in a lush and mature coniferous forest of red and white pines, the Hôpital de Mattawa Hospital embodies an earth-integrated architectural approach that fosters a comforting environment for healing.

Hôpital Général
Mattawa General Hospital

Larocque Elder Architects, Architectes Inc.
and ANO Architects/Architectes Inc.

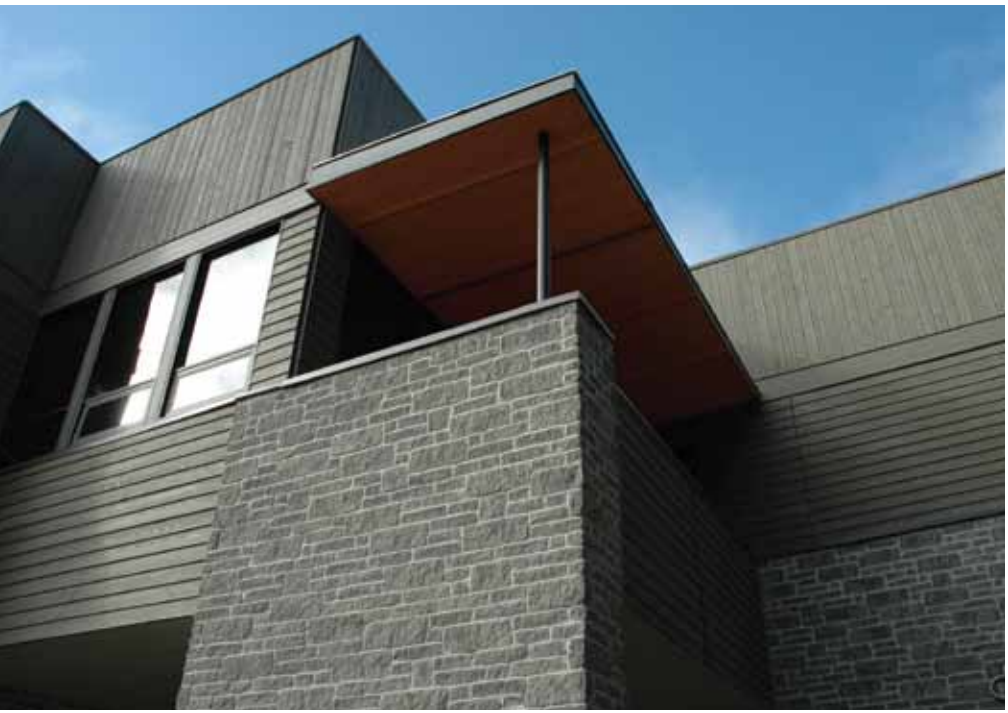
SITE PLAN

Mattawa ("Matonawang" meaning the "Meeting of the Waters" in the Algonquin tongue) is a small town in northeastern Ontario situated at the confluence of the Mattawa and Ottawa Rivers. Historically, Mattawa was a hub of commerce where aboriginal people, Europeans, explorers, missionaries, fur traders, loggers, miners and settlers wishing to access central, western and northern Canada, congregated at the water's intersection. For both the fur and lumber trades, the two converging rivers served as major transportation routes linking Upper to Lower Canada and furthermore Europe. Recognizing the rich cultural connection to the forestry industry and the lumber barons who harvested the forests of Mattawa and the Ottawa Valley, the hospital board and design team selected the use of wood as the primary material for the construction of the 19-bed facility.

Structural and exposed wood elements are used throughout the facility in public areas, the main entrance, the foyer, the boardroom and the chapel, as a means to de-institutionalize the clinical and machine-like environment commonly attributed to medical settings.

The large clear open spaces on the main floor were achieved by utilising long-span composite wood-I roof joists to span more than 9.5m between a combination of load-bearing wood stud walls and structural steel beams. Exposed Douglas-fir glulam girders span the length of the main entrance clerestory. Tapered glulam beams were also used to frame the dramatic winged canopy at the rear of the building. The seamless integration of the engineered wood structure with a structural steel sub-frame allowed for the large spans and numerous benefits associated with the use of local materials and trades, while minimizing costs and construction time.

Much of the exterior is clad with pre-stained cedar ship lap and beveled wood siding mixed with aluminum accents at windows and fascias. Cedar veneered plywood soffits provide a visual connection to the outside when viewed from the interior. The use of masonry cladding at grade is reminiscent of the large exposed rock face cliffs commonly found along the Mattawa and Ottawa rivers. The natural palette of exterior materials complements the site's park-like setting and unlike in many urban hospitals, provides visiting patients with a resort-like atmosphere. All of the inpatient bedrooms have spectacular views of the forest and the Laurentian Mountains beyond. The ever-changing landscape views and accessibility to natural daylight and ventilation is integral to the healing process.



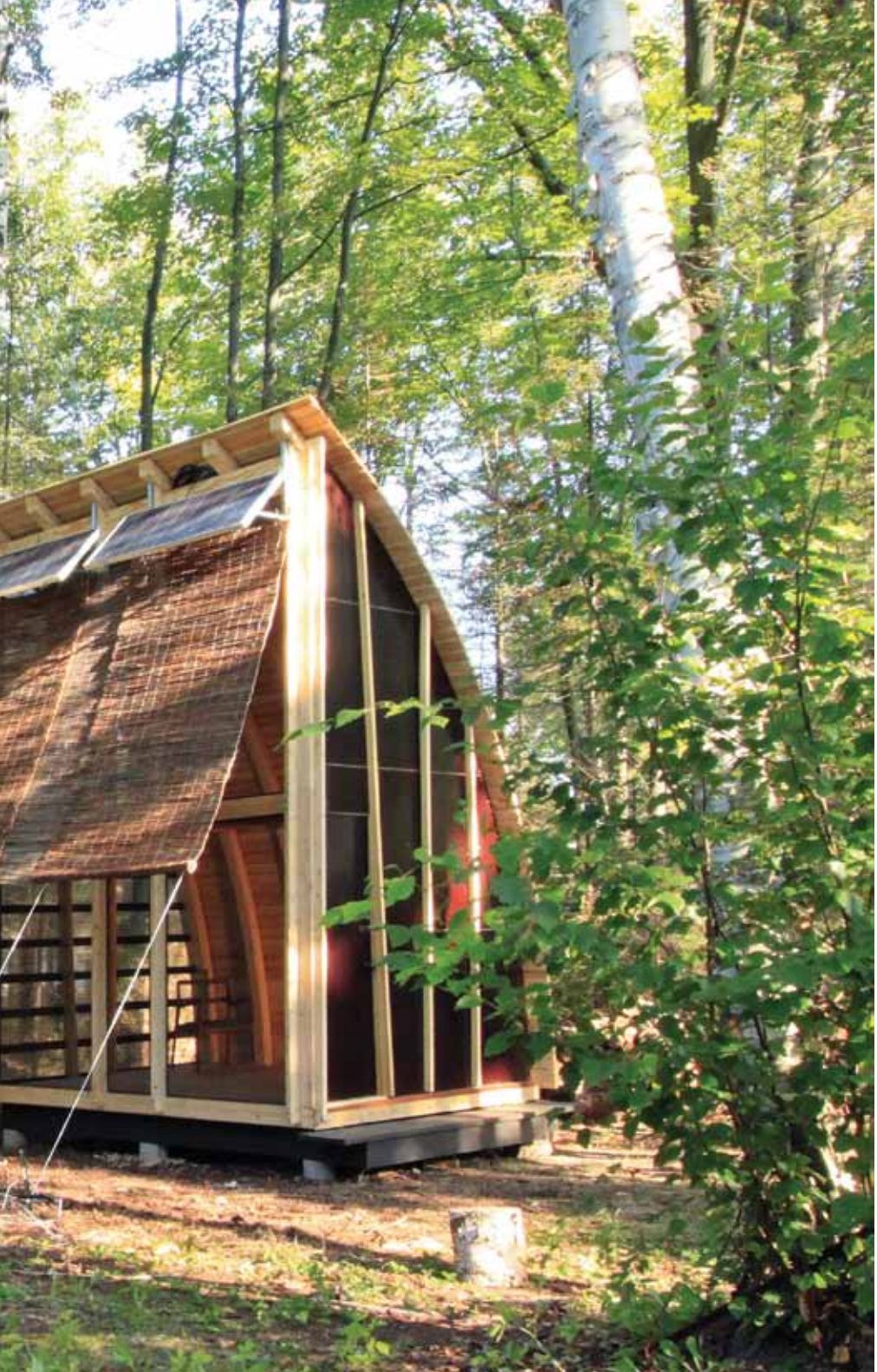
ARCHITECT
Larocque Elder Architects, Architectes Inc. and ANO Architects/Architectes Inc. in joint venture
North Bay, Sudbury, Timmins, ON

CLIENT
Hôpital de Mattawa Hospital
Mattawa, ON

STRUCTURAL ENGINEER
Halsall Associates Ltd.
Sudbury, ON

GENERAL CONTRACTOR
Bondfield Construction Company Ltd.
Toronto, ON

PHOTOGRAPHY
Larocque Elder Architects, Architectes Inc.
North Bay, ON



RESIDENTIAL Award

AerieLOFT was designed as a separate outdoor room for display at the 2009 Green Living Show. Instead of expanding and over-building in order to increase living space, the design objective was to facilitate contact with the natural environment with minimal impact.

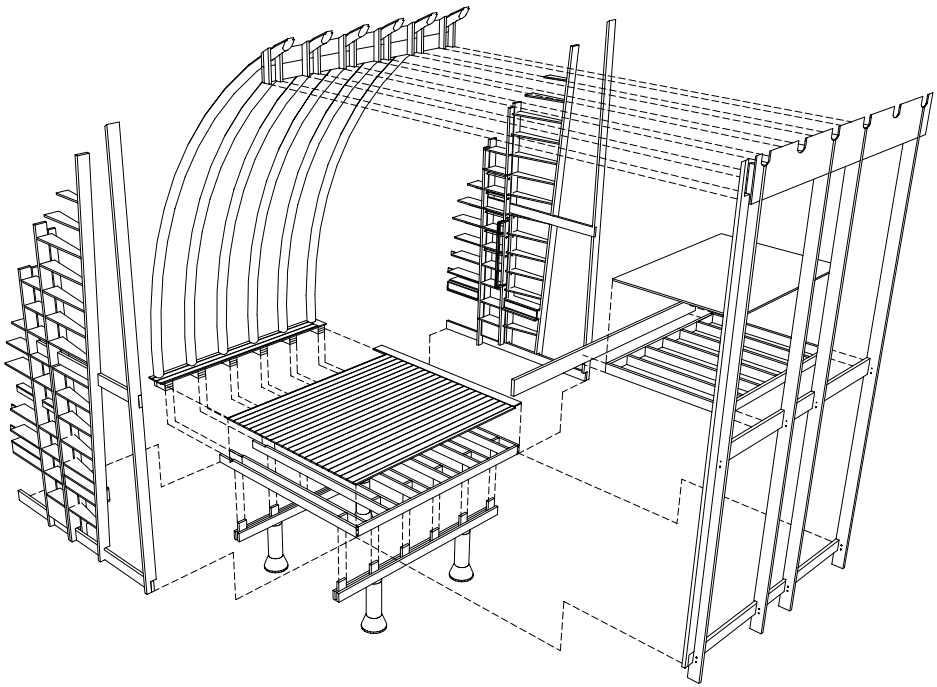
aerieLOFT

Breathe Architects

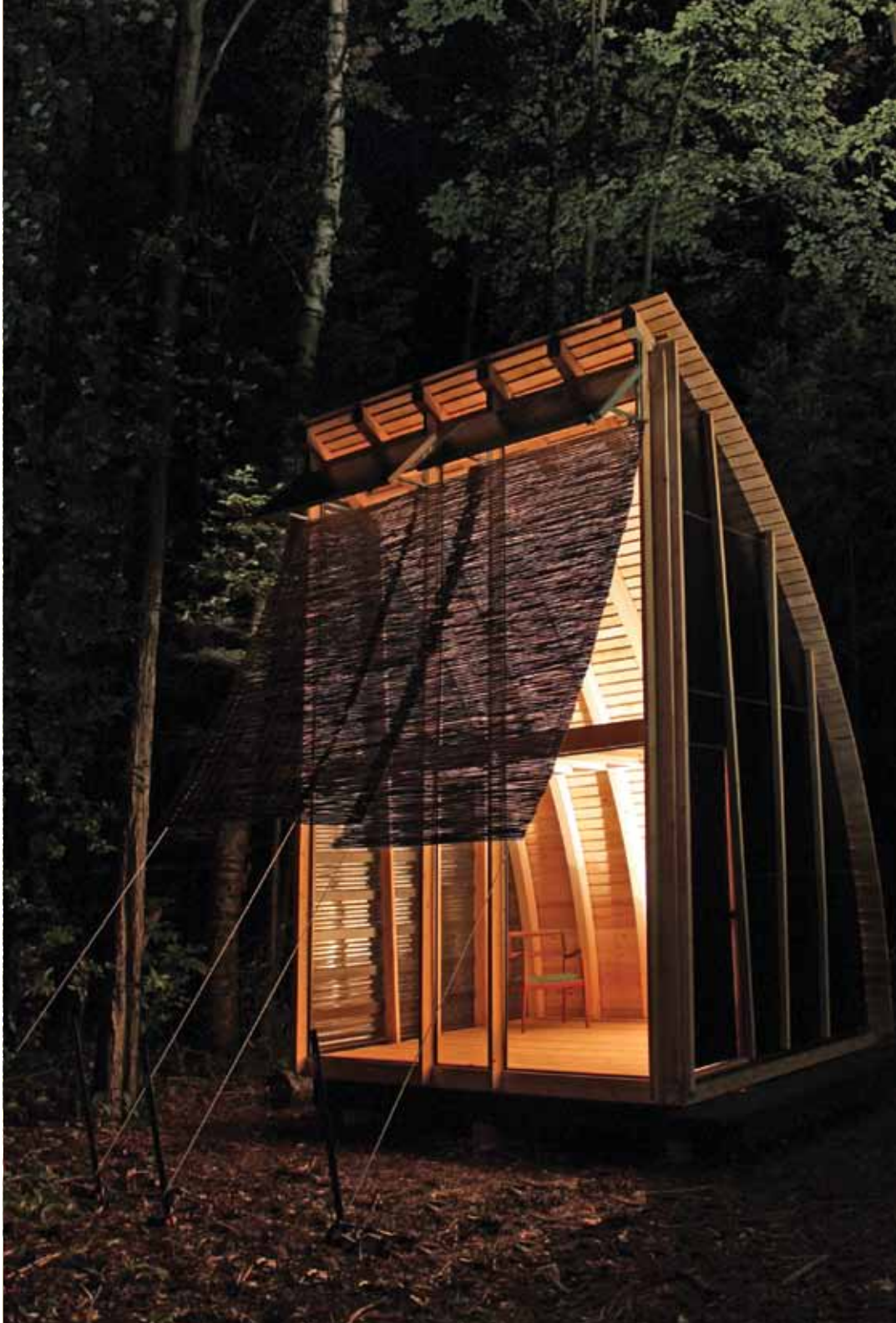
The structure serves as an exterior room or bunkie located in either cottage country or in a city backyard. For urban dwellers, it provides the vacation experience without leaving the backyard, saving time, money and greenhouse gases. For the cottage faithful, it pares down the experience to the bare essentials and provides a white cedar, back-to-nature bunkie. Either way, it decreases the carbon footprint to an essential 108 sq.ft. of living space.

A ribbed overlapping cedar plank roof wall gives aerieLOFT its dominant shape. The opposing open floor-to-ceiling screen wall brings the outside in and expands the limited space. Fully sheltered from inclement weather and insects, it also has a sleeping loft to experience the nighttime sky without light or sound interference.

Harvested and supplied locally, Eastern white cedar is a plentiful, common wood native to Ontario. Its special oils make it resistant to rot, moisture and insects. It is 100 per cent biodegradable and lightweight to transport, which minimizes the loft's carbon footprint. It is a product that allows us to be in the natural world and at the same time protects that world.



EXPLODED PERSPECTIVE



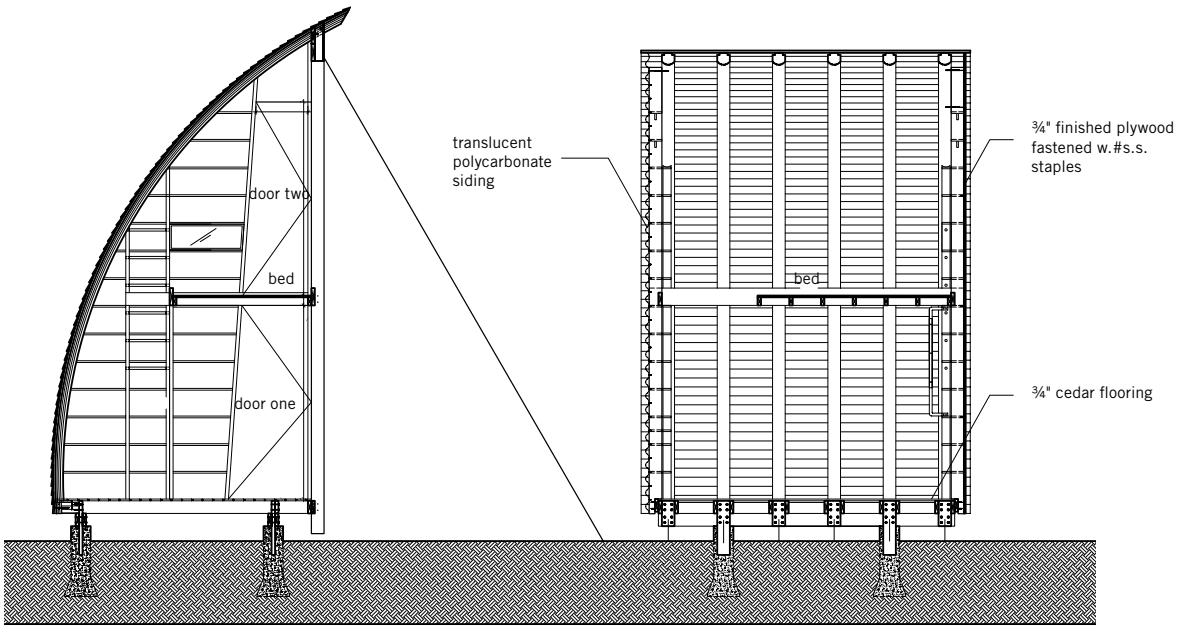
The aerieLOFT is for those who want to comfortably experience the outdoors while being protected from the elements. As a result of minimal energy requirements, solar panels can be installed to provide electricity. Rainwater can be harvested from the large roof surface area. A separate white cedar water column and composting toilet allow for total off-the-grid installation. The aerieLOFT can be purchased as a plan for those who wish to manage the project from start to finish or as a kit with pre-assembled components for construction by either the DIY consumer or a carpenter.

ARCHITECT
Breathe Architects
Toronto, ON

STRUCTURAL ENGINEER
C+C Engineers Inc.
Mississauga, ON

GENERAL CONTRACTOR
Old Soul Carpentry Club
Toronto, ON

PHOTOGRAPHY
Rico Law
Toronto, ON



SECTIONS

U.S. WoodWorks Wood Design Awards

Thanks to wood's incredible diversity, we are experiencing its benefits more than ever before. Innovative technologies and practices are enabling architects and engineers to build higher and bigger wood buildings that meet all requirements for safety and performance. As a result, the positive impact of wood's softer environmental footprint as compared to other materials is also expanding. Building owners are benefiting from its lower cost, designers from its extraordinary design flexibility, and building occupants by its contribution to a warm and enriching living and working environment.

We are on the verge of a wood revolution and bold designers are taking advantage of characteristics such as wood's high strength-to-weight ratio, carbon storage ability, reusability, adaptability and sustainability. Architects and engineers are not only using more wood, but making it central to their designs – and it is these leaders of the wood revolution that we recognize in this book.

Award programs are hosted annually in each of the three U.S. WoodWorks regions – including California, the Southeast (Georgia, North Carolina, South Carolina) and the North-central U.S. (Minnesota, Illinois, Wisconsin) – where teams of technical advisors are also providing free education and support related to the use of wood in non-residential buildings. Awards are presented in conjunction with Wood Solutions Fairs in categories that range from green building and institutional wood design to interior beauty, multi-family wood design and wood behind the walls.

This year's award-winning structures collectively demonstrate the diversity of wood products as well as their tremendous capabilities. Some pay tribute to applications that demonstrate wood's beauty, design flexibility or the strength of wood construction, others to its environmental attributes or advances that continue to be made in engineered wood design. All are inspirational because they represent the vastness of wood's possibilities and offer a glimpse at the many exciting designs still to come.

For more information, please visit www.woodworks.org.

Dwight Yochim, RPF
National Director
WoodWorks

U.S. WoodWorks Wood Design Awards

Jurors

MICHELLE KAM-BIRON PE, SE
Technical Director
WOODWORKS CALIFORNIA
www.woodworks.org

JOHN LAWSON, SE
Associate Professor
CALIFORNIA POLYTECHNIC STATE UNIVERSITY
www.calpoly.edu

TERRENCE WAGNER, AIA
Senior Associate
BOHLIN CYWINSKI JACKSON
www.bcj.com

MARCY WONG
Partner
MARCY WONG DONN LOGAN ARCHITECTS
www.wonglogan.com

CALIFORNIA

COMMERCIAL Award

3-PAC at 3555 Hayden is the most recent addition to the ongoing Conjunctive Points development, an urban-scale collaboration between the architect and developer to revitalize an area of previously dilapidated industrial and warehouse buildings in Culver City, CA.

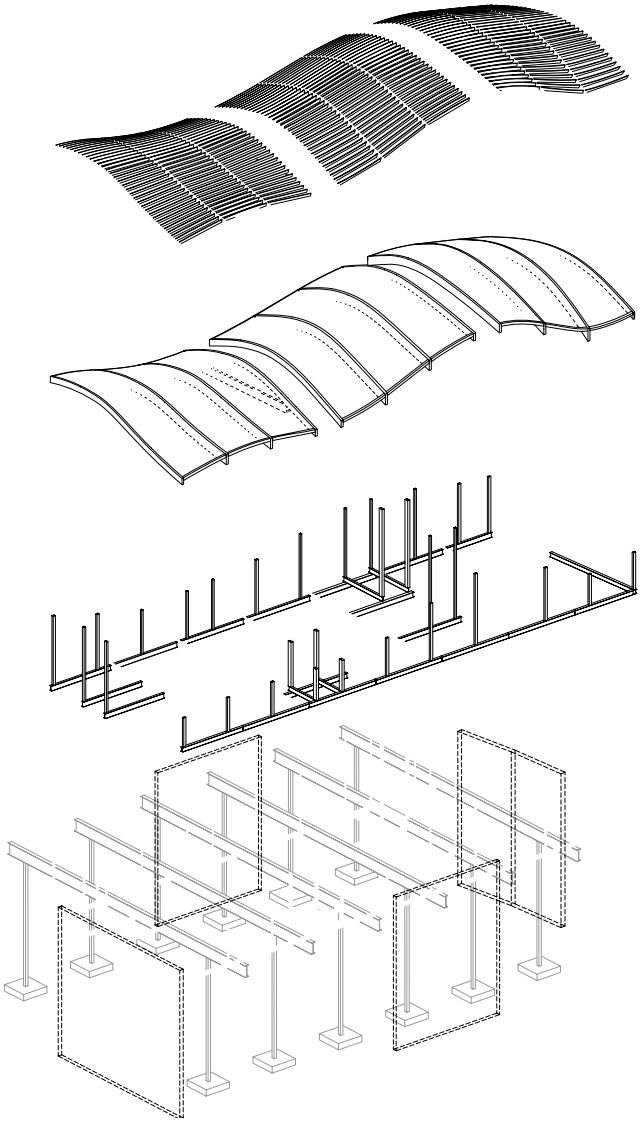
3555 Hayden Ave.

Eric Owen Moss Architects

The purpose of the 6000-sq.ft. addition was to add post production space to an existing sound stage and thus provide the necessary facilities to accommodate the headquarters of a national broadcast company.

The original brick structure was built in the early 1950s as an industrial warehouse located directly adjacent to a now abandoned Southern Pacific Railroad right-of-way. A masonry second floor was added in the late 1990s when the building was converted into a sound stage for in-coming film production companies. The recently completed second expansion phase added a third floor of additional office and conference space above the existing production facilities, serving as headquarters for a cable television station.

In order to accommodate a third floor, a foundation of steel beams was built along the perimeter of the existing roof to distribute the additional load of the new floor. Steel and wood columns extend upward from the new frame to support the new



SEQUENCE MODEL

undulating roof above. The primary zoning constraint for the project was the stipulated 43-ft. height limit. The shape of the roof was manipulated to comply with an average height overall but distribute volume where needed.

The use of wood in the undulating shaped roof was key to the design. The complex roof geometry is constructed with 42-ft. long glulam wood beams at 12-ft. centers and 2x rafters at 16-in. centers. Each beam was laminated and milled to a unique curvature and has a continuously changing bevel on the top surface. CNC-milled Douglas fir rafters were installed perpendicular to the beams and rotated to be perpendicular to the roof surface along their length. Each rafter has a curve cut on one side, is notched on either end for hanging, and has a milled index code for identification and location within the roof system.

Because the wood structure is exposed on the interior, the exterior building surface must perform as an insulated package. The surface is composed of a plywood shear diaphragm on the interior, rigid insulation and fire resistant cement board sheathing on the exterior. The outer surface is a translucent, spray-applied fiberglass material developed specifically for this project to waterproof the skin and conform seamlessly to its unique curvature.

Extensive research and testing was necessary to develop the appropriate balance of resin, color, texture, substrate and strength. Working with the fabricator and manufacturers, 12-ft. by 12-ft. mock-ups tested the application process of the fiberglass material, application techniques for corners and edge conditions, and weatherometer data to ensure the system would perform well once applied. Ridges located along topographic lines of the sloping roof accentuate the curvature while acting as a mechanism to direct water runoff.

The third floor addition is intersected by two 42-ft. long skylights of mullion-free structural glass which span 6 ft. between the three office modules. On the north side, a courtyard is cut into the façade and steeply slanted glazing is self-supporting. The aluminum storefront system is reinforced by steel to support the acute angle of the glass. The third floor expansion developed a system for adding office space to the building over time. Three additional fiberglass modules are anticipated for future expansion.

ARCHITECT
Eric Owen Moss Architects
Culver City, CA

CLIENT
Samitaur Constructs
Culver City, CA

GENERAL CONTRACTOR
Peter Brown, Samitaur Constructs
Culver City, CA

STRUCTURAL ENGINEER
Englekirk Partners Inc.
Los Angeles, CA

HEAVY TIMBER SPECIALIST
Structurlam Products Ltd.
Granite Bay, CA

CNC MILLED RAFTERS
Spectrum Oak
Orange, CA

PHOTOGRAPHY
Tom Bonner Photography
Santa Monica, CA

GREEN BUILDING Award

One of the primary objectives of the Watsonville Water Recycling Administration & Education Building was to provide conservation and protection of a degraded aquifer in the Pajaro Valley region through efficient use of water in the landscape.

Watsonville Water Recycling Administration & Education Building

WRNS Studio

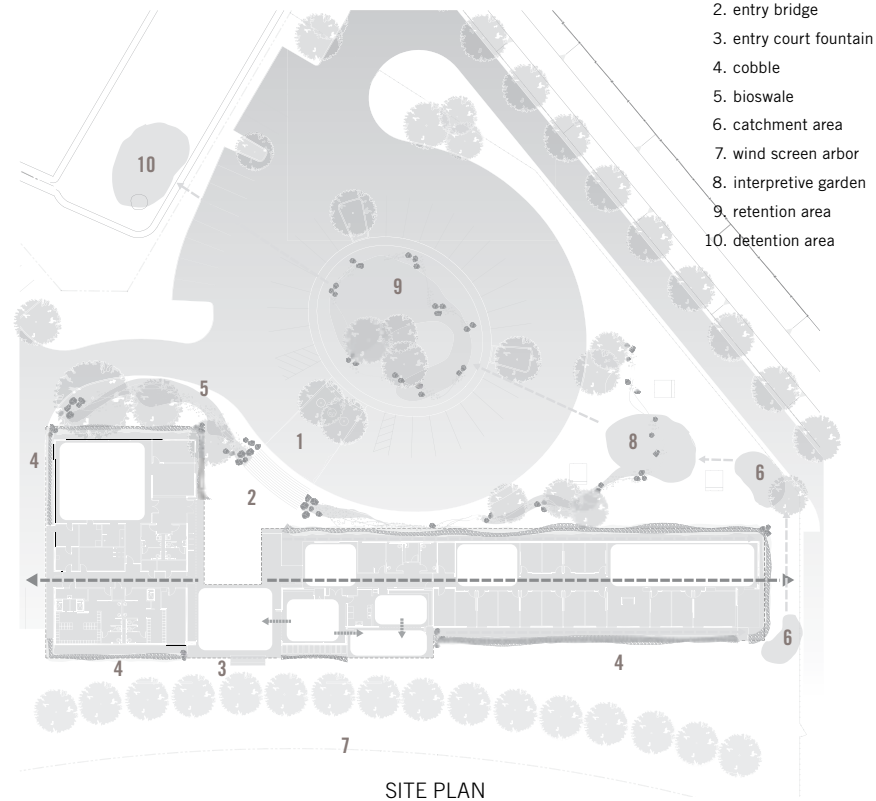

WATER RESOURCES CENTER

Eighty-five per cent of the region's water use is related to agriculture and the local aquifer is being drained more quickly than it is being replenished. This imbalance causes seawater to seep into wells near the coast, endangering the region's agricultural industry.

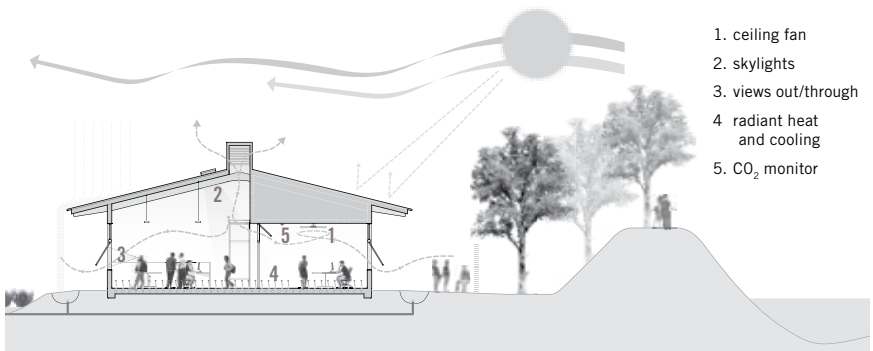
To mitigate this, the water recycling project recharges the aquifer by recycling wastewater, providing 4,000 acre-ft. of water for irrigation.

The program includes maximum use of recycled plant water, rather than potable water, and the detaining and treating of all stormwater on-site prior to infiltration. The use of reclaimed water to support heating and cooling systems in the majority of the building represents the first such effort to create free cooling in this type of facility. The decreased need for energy-intensive water transport adds to the overall reduction in the building's carbon footprint.

Bioswales, retention basins, grey water systems, low-flow fixtures, radiant heating, displacement ventilation systems, low-VOC materials and local materials are integrated into the building to illustrate the potential of building sustainably. The building's sustainable performance includes energy efficiency 76 per cent better than ASHRAE 90.1; a 50 per cent reduction in potable water use; light power density of approximately 0.7 watts per sq.ft., which exceeds current code by 50 per cent; and extensive use of regional materials.



SITE PLAN



SECTION

California redwood trees on the client-owned property within 70 miles of the project site were designated to be removed for fire prevention and mulched. These trees were made available to the project at no cost and were milled eight miles away from the project site, resulting in reduction in both materials cost and environmental impact.

The redwood was incorporated into the rainscreen cladding system. Held off the building by 1 in., with small gaps between the boards that allow the building to breathe, the wood helps to deter mold growth and keep water out by eliminating any pressure differential between the inside and the outside.

Douglas fir was selected for all structural members, with wood decking spanning between beams. Beams were spaced 24 in. on center instead of 16, further reducing material waste. Choosing an all-wood structure necessitated fewer trades on site, leading to streamlined coordination, reduced cost and faster construction.

The building's wood structure was exposed wherever possible, revealing custom-shaped Douglas fir glulam beams and 2 x 6 tongue-and-groove decking at both interior and exterior locations.

Typical of the coastal area is salt water spray, for which wood is better suited over time than alternatives like plaster or steel. By using wood, which will develop a patina with age, the building is able to connect with the regional context of agricultural land use, linking it to the heritage of the area's prevalent wooden barns.

ARCHITECT
WRNS Studio
San Francisco, CA

STRUCTURAL ENGINEER
JEC Structural Consulting
Oakland, CA

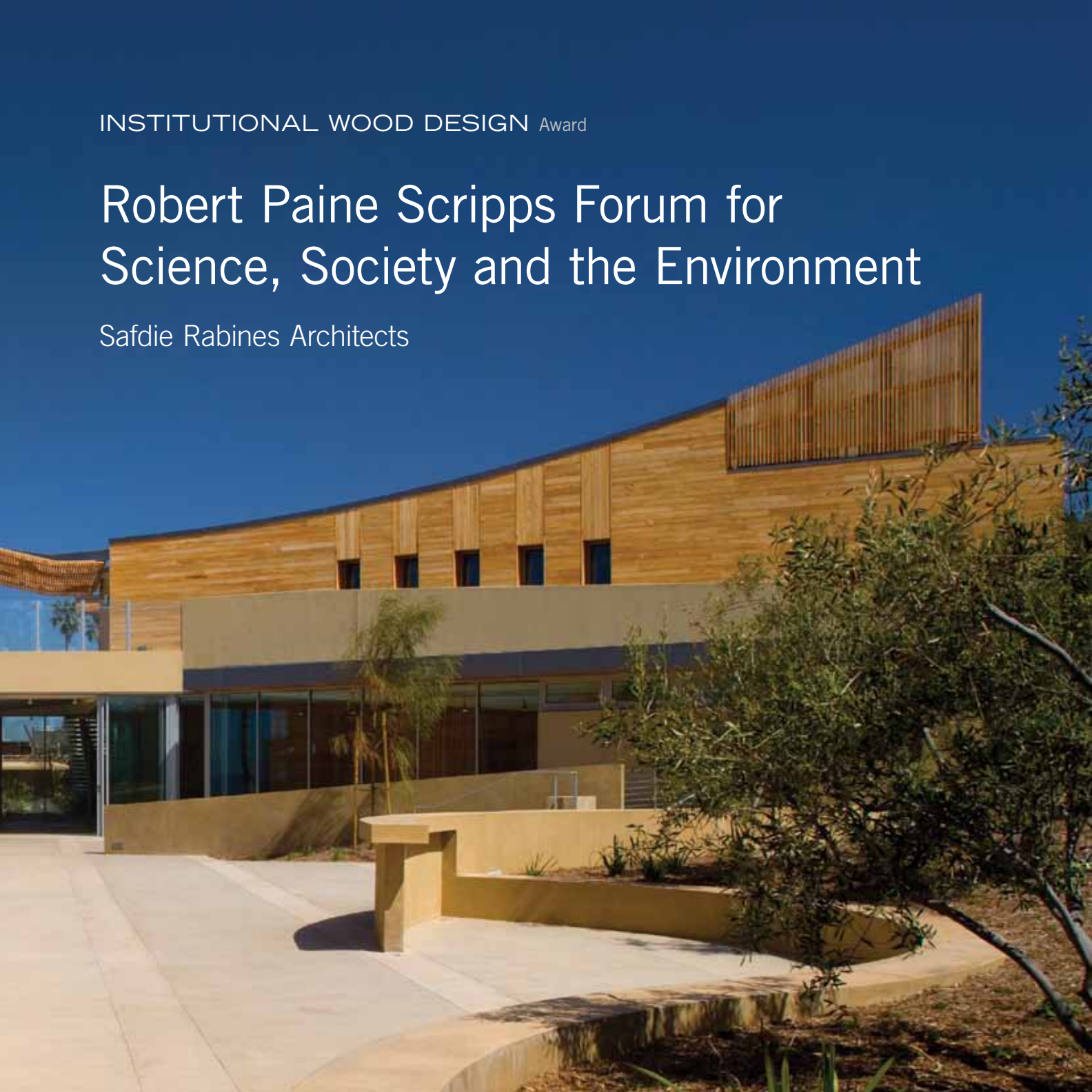
GENERAL CONTRACTOR
Devcon Construction Inc.
Milpitas, CA

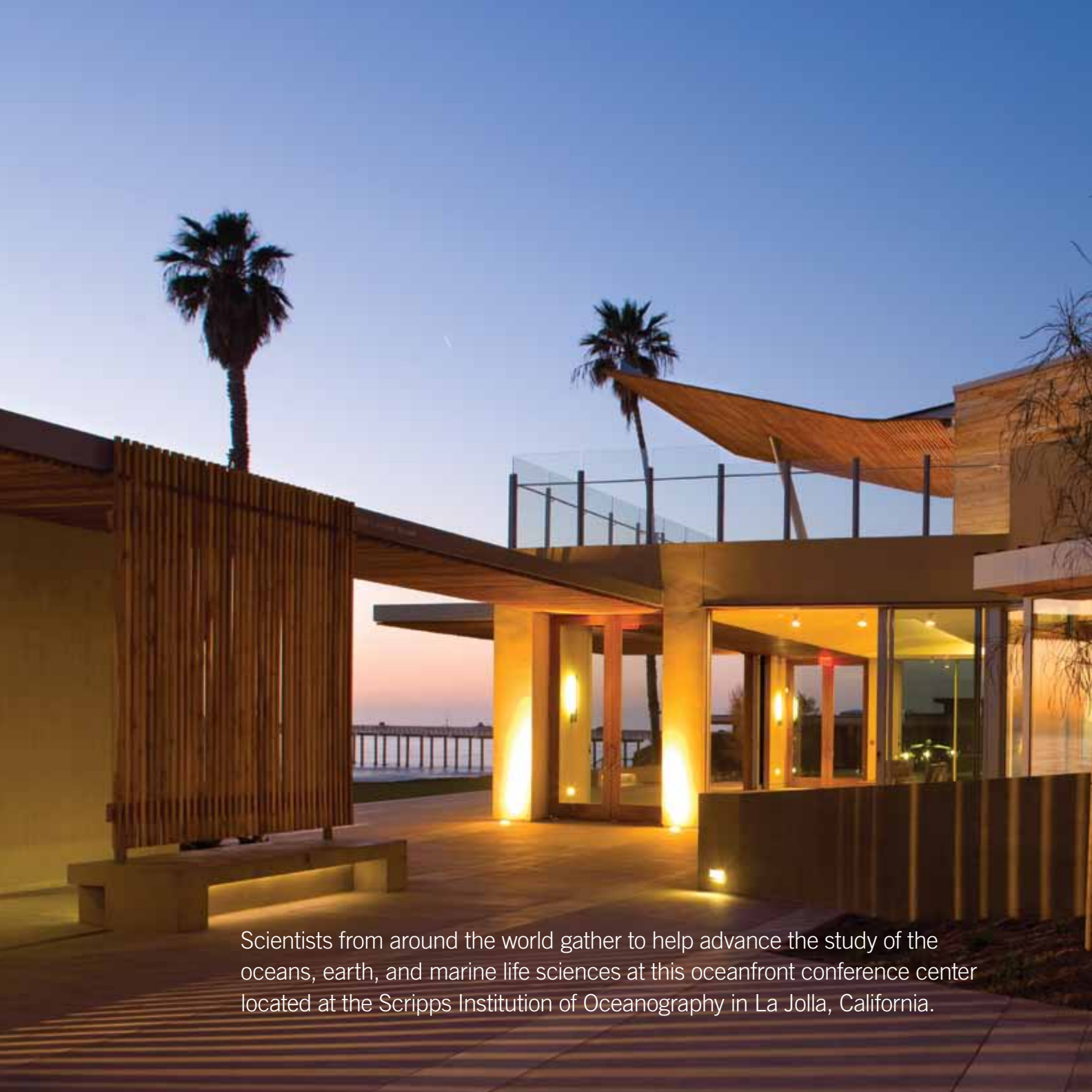
PHOTOGRAPHY
Bruce Damonte
San Francisco, CA

INSTITUTIONAL WOOD DESIGN Award

Robert Paine Scripps Forum for Science, Society and the Environment

Safdie Rabines Architects





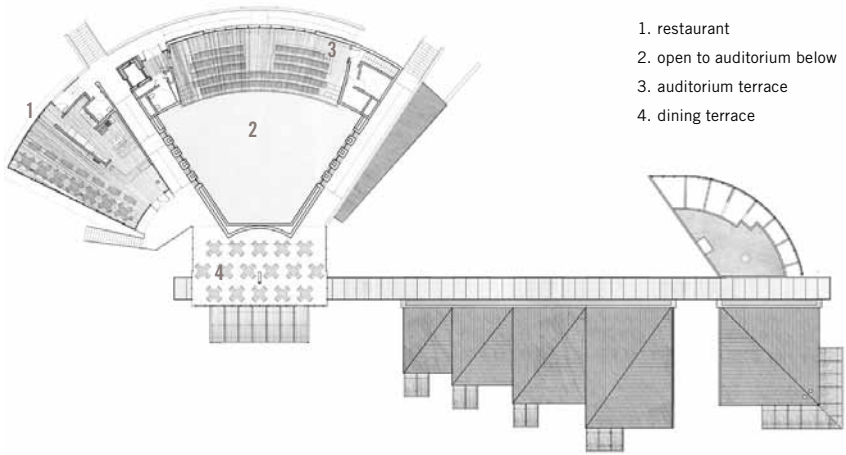
Scientists from around the world gather to help advance the study of the oceans, earth, and marine life sciences at this oceanfront conference center located at the Scripps Institution of Oceanography in La Jolla, California.

The project includes an approximately 300-person flexible auditorium space, four oceanfront meeting rooms of varying sizes, a graduate student lounge, catering kitchen and restaurant.

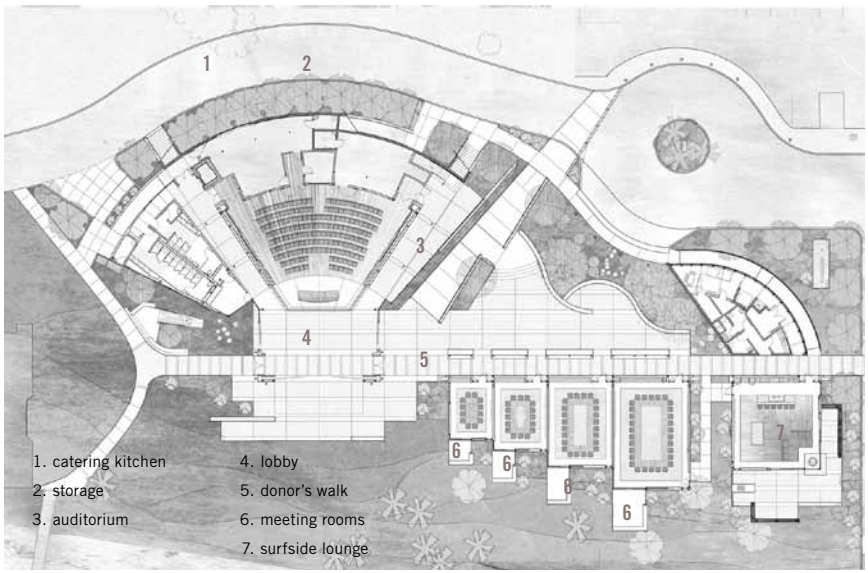
The building is located atop an ocean bluff, with strong winds, western sun, an existing grove of palms, and the ever-changing ocean providing the natural context. Responding to these forces, without impacting their natural beauty, was a driving goal in the design of the project. In addition, the uniquely informal character of the Scripps community, with its clear appreciation of the natural environment and outdoors, became an influential factor in the design. It was important to create a building that feels warm and inviting, and more importantly, one that does not feel institutional. The goal was to create a state-of-the-art conference center where a scientist dressed in shorts and flip-flops could feel at home.

The auditorium was conceived of as a box within a box that can shed its layers depending on the event and the desired configuration. It can be completely enclosed for formal presentations and movies or can be opened to the oceanfront terrace with a series of pocketing doors to allow for indoor/outdoor receptions and banquets. In addition, each meeting room opens onto its own trellised terrace enabling meetings and receptions to spill out onto the ocean bluff.

To the east of the meeting rooms,



SECOND FLOOR PLAN



FIRST FLOOR PLAN

there is an outdoor pre-function courtyard and garden protected from the ocean breezes for winter gatherings. West of the auditorium is a large outdoor terrace overlooking the ocean. The auditorium is tucked into the hillside, minimizing its mass from the campus to the east, and allowing for gentle ramps to access a rooftop restaurant and terrace. The program is broken into several buildings connected by a trellised walkway, a porous structure that preserves ocean views and breezes for the rest of the campus. Exterior circulation – taking advantage of San Diego's temperate climate – greatly reduces the need for mechanical systems and artificial lighting.

The design phase for this entirely gift-funded project spanned a long period of time and was completed prior to the establishment of the University's LEED certification goals. Despite this, instinctive design decisions regarding building envelope, materials, energy use, daylighting and passive cooling allowed the project to achieve LEED certification at the completion of construction.

Many of the buildings on the Scripps Institution of Oceanography campus use wood construction and materials which made the use of wood in and around the forum a natural choice. Plantation teak, a certified wood that is durable and wears well near the ocean, was chosen and used in a variety of ways to accentuate interior and exterior elements.

The notion of interior spaces that

are an extension of the outdoor garden spaces led to the blending of material pallets in which the exterior teak walls and trellising have been brought into most of the interior spaces. The interior and exterior of the building primarily use horizontal shiplap siding to provide visual continuity between the various building elements. Accents of vertical tongue-and-groove siding were employed at certain locations to emphasize vertical architectural elements. The exterior primary circulation spine is defined by 2 x 2 slats in both overhead horizontal and vertical applications. In addition, 2 x 2 slat trellising was used on west facing terraces to provide a welcoming canopy as well as shading for the glazing of meeting rooms and lobbies.

The main lobby space opens out to an expansive ocean terrace that is covered by a floating 34 ft. x 14 ft. trellis that extends seamlessly from the interior of the lobby space. The 2 x 2 slats were also combined with a translucent panel backing to obscure mechanical and electrical equipment spaces from view while maintaining a consistent architectural character.

The meeting rooms, graduate student lounge, and support spaces all utilized wood framing. The roof framing of the meeting rooms and graduate student lounge that pitches toward the ocean views to the northwest is comprised of exposed Douglas fir beams. The use of exposed wood beams in combination with the interior teak siding helps to create a warm and inviting interior environment.

ARCHITECT
Safdie Rabines Architects
San Diego, CA

CLIENT
University of California
San Diego, CA

STRUCTURAL ENGINEER
Flores Lund Consultants
San Diego, CA

GENERAL CONTRACTOR
Jaynes Corporation
San Diego, CA

MEP ENGINEER
Integrated Engineering
Los Angeles, CA

PHOTOGRAPHY
Anne Garrison, David Hewitt Anne Garrison Architectural Photography
San Diego, CA

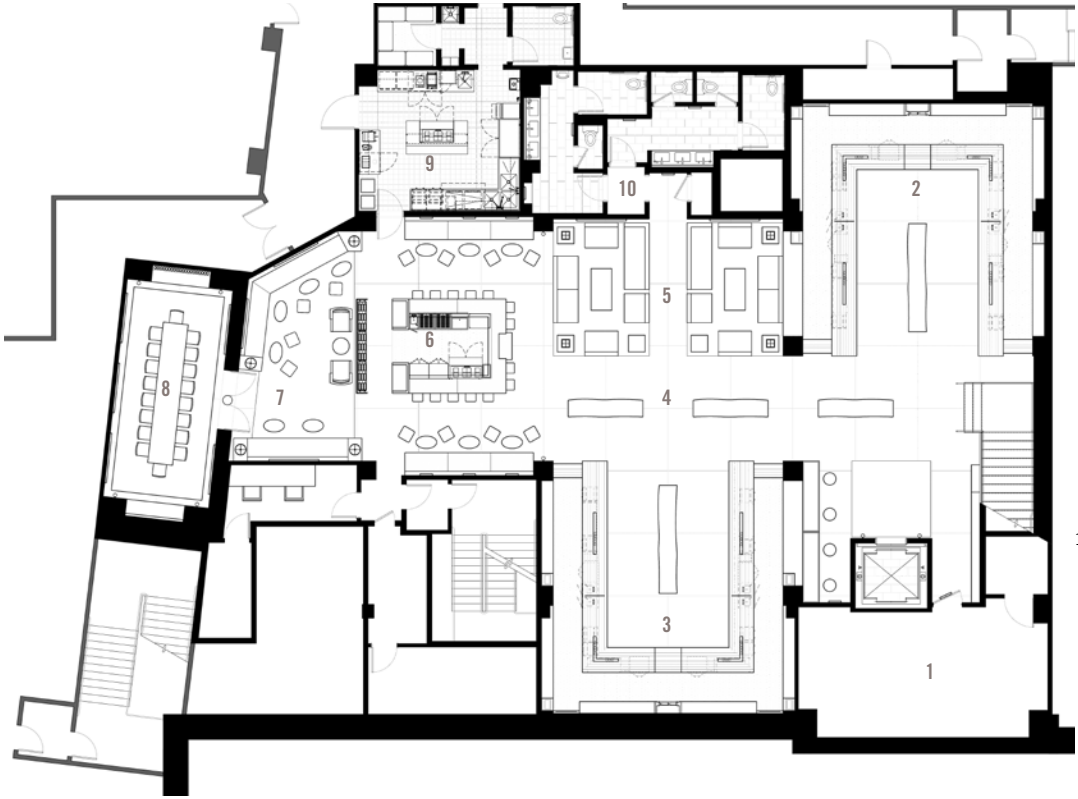
The charge for Press Club was to create an innovative and modern identity for this urban wine tasting concept. Taking cues from Napa's unique blend of industry and natural beauty, Press Club celebrates the juxtaposition of the industrial against the organic as a foundation for the project's expression.

INTERIOR BEAUTY Award

Press Club

BCV Architects


EXIT



FLOOR PLAN

Located at the foot of San Francisco's Four Seasons Hotel, Press Club is approximately 8,200 sq.ft. and includes a wine retail shop and concierge at entry level, plus a subterranean cellar space containing individually maintained tasting bars for eight regional world class wineries, public and semi-private lounge space, a central wine and food bar, private event room, and facility support spaces.

A bold, monolithic concrete stair dramatically links the upper level arrival and wine shop to the extensive wine-centric program below. A back-illuminated, feature bottle wall (carefully concealing structural transfer beams and bracing members) flanks the opening to below and contributes boldly to the sculptural expression of the project. This signature Press Club element transcends the divide between entry level and cellar and punctuates the project with its striking color patterning.

The plan of the cellar is organized primarily around a central gallery marked by stand-up, organic plank topped, communal tasting tables. From this central spine, east and west wine halls and other diverse program elements connect, sequenced from most public at the elevator/stair arrival to most private at the secluded private tasting room.

The primary expression of the industrial and organic mantra is expressed throughout in a simple pattern play of rich 4-in. American black walnut planking juxtaposed with imprinted 4-in. board-formed cement plaster. Orientation shifts of the pattern create the subtle dialogue between these two primary contrasting materials. The integration of normally discarded sapwood planking into the project further accentuates the pattern play and conserves material.

Beyond the wall surfaces, the warmth of wood is celebrated at the level of human interaction in retail and display shelving, furniture, and in the wine hall's bar tops, die walls and stand up tables. American walnut/black walnut (Juglans Nigra) was used in both veneer cabinetry and solid stock planking at the walls, counters and die walls. The wood was responsibly harvested by forest managers from privately owned forests in Missouri.

Other key materials round out the simple project palette. Maximizing the use of tactile organic materials, the project leverages the in-place structural concrete floor which is retained with a ground and sealed finish. Emerging from the floor, the introduction of board-form cement plaster columns and walls builds an expressive, industrial backdrop and gives a rational structural order to the project. Deeply toned soffit fabric made of naturally sustainable cork, locally fabricated stainless steel wine racks, precast charcoal counter tops, simple clean-lined custom furnishings, and striking yet economically fabricated decorative lighting fixtures contribute to the elemental purity of the space.

ARCHITECT/INTERIOR DESIGN
Baldauf Catton von Eckartsberg (BCV) Architects
San Francisco, CA

CLIENT
Millenium Partners
San Francisco, CA

Taste Partners LLC
San Francisco, CA

GENERAL CONTRACTOR
Plant Construction Company, L.P.
San Francisco, CA

STRUCTURAL ENGINEER
Desimone Consulting Engineers
San Francisco, CA

MEP ENGINEERS
CB Engineers
San Francisco, CA

AV CONSULTANT
Kray Cabling
Richmond, CA

PHOTOGRAPHY
Rien van Rijthoven
Sharon Risedorph
San Francisco, CA

MULTI-FAMILY Award

Hancock Lofts

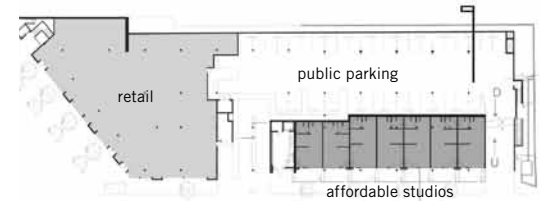
Koning Eizenberg Architecture

In the 1990s, the City of West Hollywood purchased an under-utilized 40,706-sq.ft. corner lot on Santa Monica Boulevard to address a shortage of parking in the neighborhood.

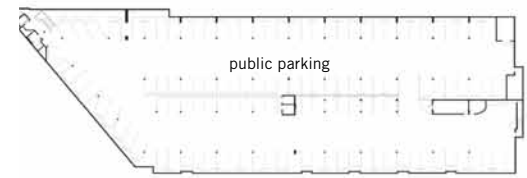
FOURTH FLOOR PLAN

THIRD FLOOR PLAN

SECOND FLOOR PLAN



FIRST FLOOR PLAN



BASEMENT

The city then selected a developer to deliver the needed public parking and flesh out a mixed-use program through a community-design process led by the architect. The process focused on achieving a balance between public parking, scale, an active street presence and the transition to the hillside neighborhood. Consensus was reached on a mixed-use program in a four-story building that provides 31 condominiums, seven affordable studios, 11,600-sq.ft. of retail space, 156 public parking spaces and 61 residential parking spaces.

This is a project about making connections and the approach to parking structured the effort. Its configuration made sense of the irregular, sloping lot and car-heavy program to both reinforce street life and create an open rooftop space. Public parking is provided below grade while residential parking (accessed from the north end of the site) loops up and over street level rental housing (behind the wood louvers) to the roof. The arrangement puts housing and people (rather than parking) at grade on Hancock Avenue. The landscape sequence at the roof creates a hillside square ringed by existing apartments and the new housing.

Architectural expression is rooted in passive, sustainable strategies utilizing thin cross-ventilated unit plans. Flats facing the Boulevard have sliding wood screens that allow exterior shading as well as a choice in level of engagement with the noisy street below. Townhouses have private courtyards which modulate the scale as the building moves north to merge with the hillside neighborhood behind.

Aesthetically, wood was chosen because of its warmth and beauty, especially since it dominates the facade that faces a major thoroughfare in the city. Mangaris hardwood – sustainably harvested from Indonesia – was used because of its affordability compared to other materials.

ARCHITECT
Koning Eizenberg Architecture
Santa Monica, CA

GENERAL CONTRACTOR
The Lee Group Inc.
Marina del Rey, CA

STRUCTURAL ENGINEERING
Englekirk Partners
Los Angeles, CA

MEP ENGINEERING
Antieri & Haloossim Consulting Engineers Inc.
Los Angeles, CA

LIGHTING
Lighting Design Alliance Inc.
Long Beach, CA

WATERPROOFING
Simpson Gumpertz & Heger Inc.
Los Angeles, CA

GEOTECHNICAL
Group Delta Consultants
Torrance, CA

ACOUSTIC
VSA and Associates
Whittier, CA

IRRIGATION
Sweeney & Associates
Murrieta, CA

PHOTOGRAPHY
Eric Staudenmaier Photography
Los Angeles, CA

DRAWINGS/RENDERINGS
Koning Eizenberg
Santa Monica, CA

TIMBER BRIDGE DESIGN Award

The gated golf community of Rancho Murieta straddles the Cosumnes River near Sacramento, California. The final build-out of the planned development required a secondary access between the north and south developments over the river.

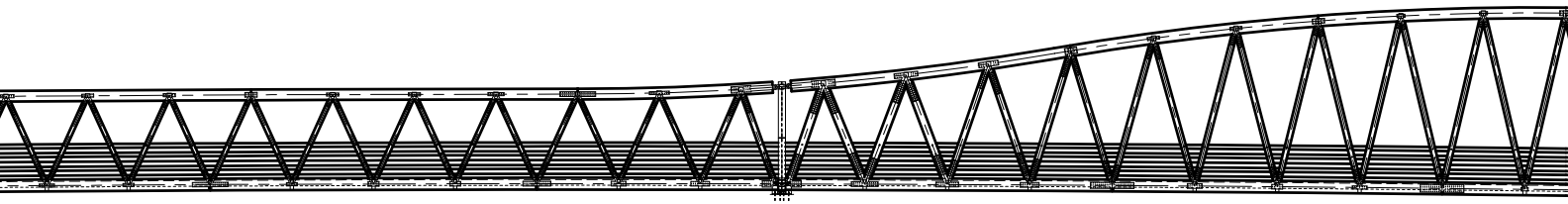
Cosumnes River Bridge

Western Wood Structures Inc.

The river at the bridge site is 200-ft. wide with a channel width of 400 ft. Intermediate piers were allowed only at the edge of the river. A glulam timber bridge was proposed. Initially, the community of Rancho Murieta balked at the idea of using timber, citing concerns about durability and strength, however once shown the performance record of a modern timber bridge, including its longevity and low maintenance requirements, as well as its ability to blend into the natural environment, the community warmly accepted the timber bridge option.

A combination parallel chord/bowstring truss configuration for the bridge structure was selected. This configuration provided a graceful, flowing profile for the truss, while optimizing the truss length-to-height ratios for economy and structural stiffness. The height of the side spans is 11 ft.-6 in. while the height of the main span is 22 ft.-6 in. Glulam members can be bent to any specified curvature during the laminating process, making it the ideal material for these trusses.

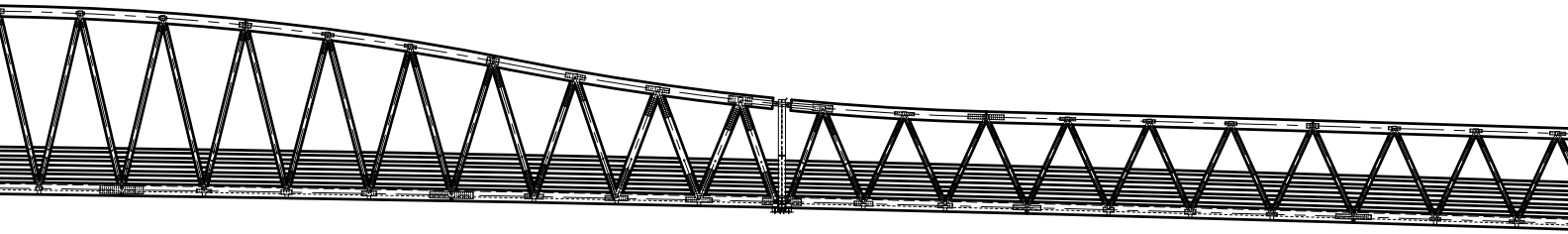
The smooth transition of the approach and center span trusses allowed the trusses to be designed as a three-span continuous structure. The continuity greatly reduced the truss member forces and increased the overall bridge stiffness. The main span has a live load deflection ratio of L/1580, which is significantly stiffer than the standard L/500 used for timber bridges.



BRIDGE ELEVATION

The bridge features a roadway width of 12 ft., allowing two-way traffic for golf carts and bicycles. Douglas fir glulam members were used for all of the structural members, including the bridge decking, longitudinal purlins, transverse floor beams, top chord struts and handrails. The longevity of the glulam material was ensured through the use of pentachlorophenol, a preservative treatment, after all fabrication was completed.

The bridge – now one of the longest timber bridge spans in the United States – will provide a necessary and highly aesthetic link between the Rancho Murieta's north and south communities for at least 75 years. The warm appeal of timber has resulted in the bridge becoming a signature structure for the communities.



CLIENT
Rancho Murieta Homeowners Association
Rancho Murieta, CA

STRUCTURAL ENGINEER
Western Wood Structures Inc.
Tualatin, OR

GENERAL CONTRACTOR
Viking Construction
Rancho Cordova, CA

CIVIL ENGINEER AND FOUNDATION DESIGN
Quincy Engineering
Sacramento, CA

BRIDGE FABRICATION AND ERECTION
Western Wood Structures Inc.
Tualatin, OR

PHOTOGRAPHY
Western Wood Structures Inc.
Tualatin, OR

TRADITIONAL USE OF WOOD Award

Originally planned as a remodelling project, the owners of the Silver Oaks Cellars decided to start fresh with a new campus after a devastating flood and fire in 2006. The new 65,000-sq.ft. winery was completed in the fall of 2008.

Silver Oak Cellars

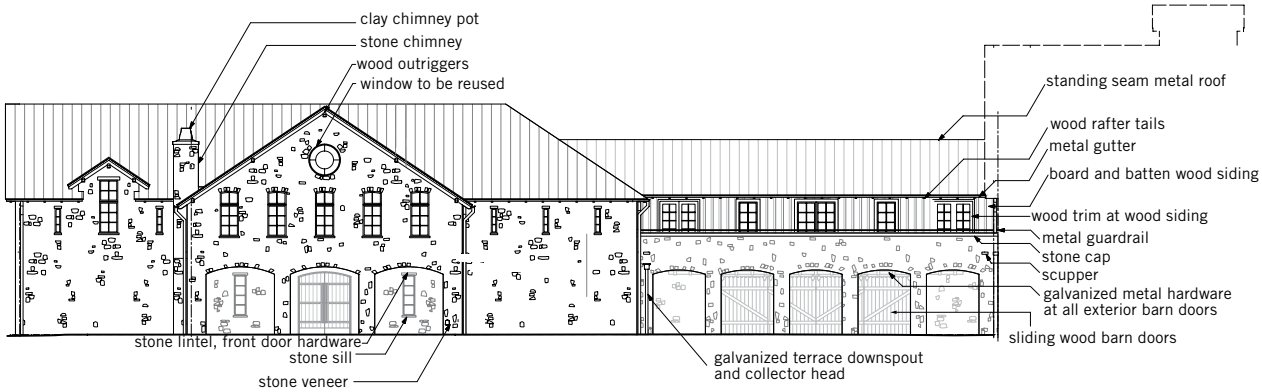
Taylor Lombardo Architects

The goal was to develop a winery that incorporated the heritage and brand values of Silver Oak Cellars with a state-of-the-art facility. Inspired by a Napa Valley vernacular, the project also incorporates sustainable design, multifunctional spaces and a focus on overall efficiency.

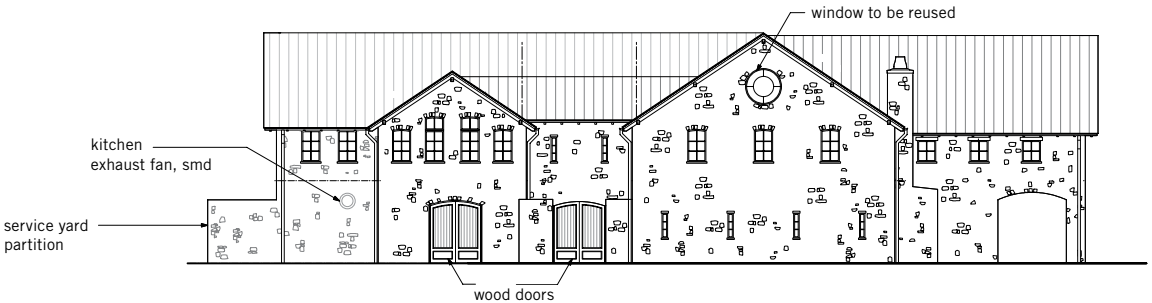
The 20,000-sq.ft. hospitality building and tasting room were designed to serve the public and act as a focal point for the entire campus. Accommodating up to 700 visitors per day, the flexible and functional design provides workspace for employees and allows for numerous, large-scale events to be hosted each year.

Several multifunction rooms were created to combine space, improve personnel efficiency, and reduce material and energy usage. Reclaimed materials were chosen for their aesthetic and old-world feel, as well as their life cycle and sustainability. Materials include limestone from an abandoned flour mill that was slated to be destroyed, as well as oak wood reclaimed from a dilapidated barn built in the 1820s. The history gallery is lined with redwood salvaged from the original tasting room and features the original front doors.

The hospitality building's roof system is one of the main architectural features of the building. Built using traditional mortise-and-tenon timber framing, the design criteria created challenges for both the structural engineers and the framers. Six heavy timber scissor trusses were used as the main roof supports. Each truss had unique structural conditions,



WEST ELEVATION



NORTH ELEVATION / VIEW FROM ENTRY ROAD

connecting to different wall or beam types. These massive trusses, which span 40 ft., are comprised of 12 x 17 rafters, 10 x 12 cords, and a 12 x 12 king post, with all traditional joinery. The exposed truss system creates the ceiling for the tasting room, the glass wine room, the conference room, and the reception area. At the top of the trusses are the ridge beams, purlins and wind braces that carry the 3 x 5 common rafters which were installed flat. The rafters are modeled after European tithe barns of the 14th and 15th centuries. Douglas fir was selected for all of the timber.

Adjacent to the tasting room is a 30-ft. tall barrel chai (wine barrel storage room). The chai also has custom timberwork, which is comprised of a four-sided hipped beam roof structure with a central kingpin. One-inch-diameter steel tie rods connect the wood members to form a two-way bow-string truss. The four-sided roof structure and bent frames were assembled outside the building and later craned into the concrete block structure in one piece.

The new Silver Oak Cellars Winery now delivers a visual experience to match its world-class wines. The sustainable design introduces modernization in energy efficiency, water conservation, and material recycling, while creating a timeless architectural design that pays homage to Silver Oak's heritage.

CLIENT
Silver Oak Winery
Oakville, CA

ARCHITECT
Taylor Lombardo LLP
San Francisco, CA

STRUCTURAL ENGINEER
Hohbach-Lewin
San Francisco, CA

GENERAL CONTRACTOR
Cello & Maudru Construction
Napa, CA

TIMBER FRAMING
Timber Creations
Santa Rosa, CA

PHOTOGRAPHY
Adrian Gregorutti
San Francisco, CA

SOUTHEAST (Georgia, North Carolina, South Carolina)

COMMERCIAL Award

For years, the geodesic dome at Charles Towne Landing served as a community center, hosting functions ranging from civic and social events to a voting precinct.

Charles Towne Landing Founders Hall

Liollio Architecture

The dome was removed in 2006 as part of a new master plan that was implemented for Charles Towne Landing. Replacing the community meeting space was a priority for South Carolina Parks, Recreation and Tourism as part of this plan.

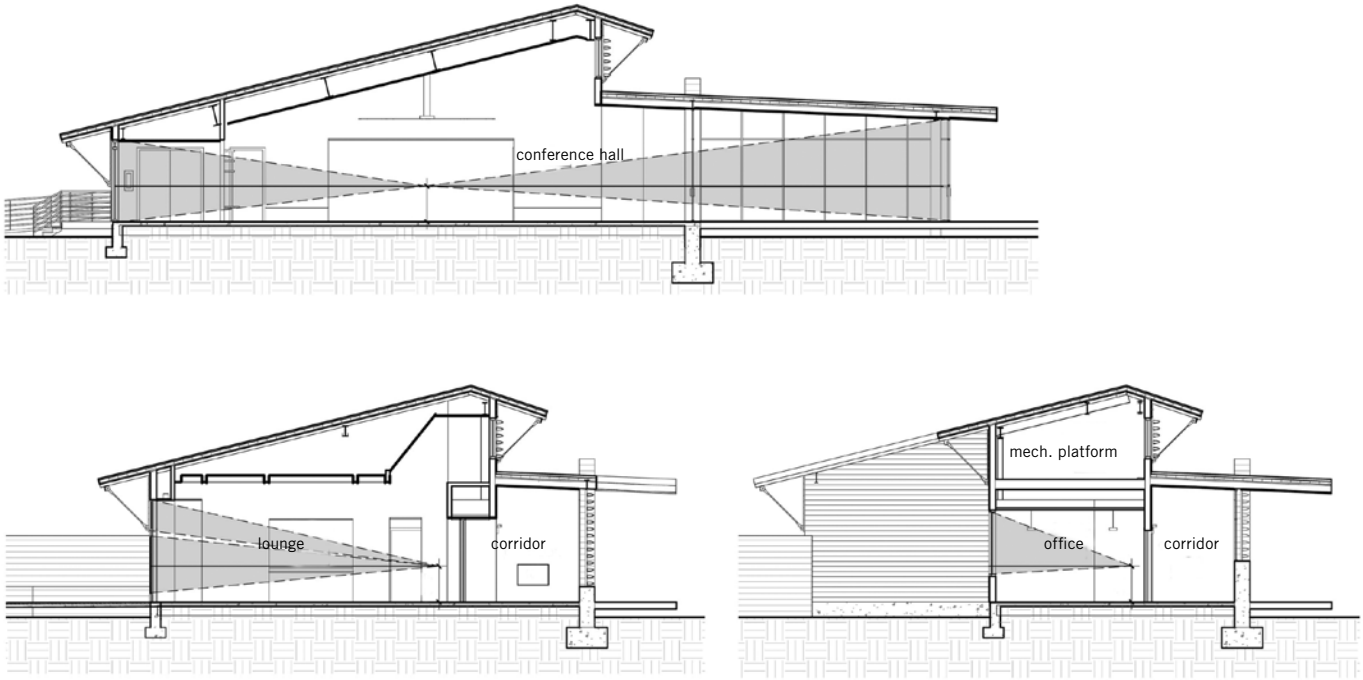
Completed in September 2009, the new 11,000-sq.ft. community center, Founders Hall, is sited thoughtfully within the park, close to the location of the animal forest and on the axis opposite the new Visitor Center. The new facility is designed to be transparent, allowing the park and surrounding landscape to dominate visually, with Founders Hall taking advantage of the park setting.

The $3.6-million, LEED Gold facility houses two flexible meeting spaces: a small executive room suitable for 40 people, and a large conference hall able to accommodate a seated dinner for 150 attendees. The conference hall offers perforated wood acoustic wall and ceiling panels to control sound and lend warmth to the large space. The executive room is adorned with wood paneling, doors, and trim finished in a contrasting species with finer grain and warmer tones.

Both spaces are directly connected to companion outdoor spaces. The executive room leads to an intimate courtyard shaded by live oaks, and the large conference hall flows onto a grand screened porch with a massive fireplace that leads to an outside flex space and yard that provides additional event space.

Wood is used as a finishing element in the interior corridors. For example, the exterior siding continues into the building, reinforcing the configuration of building volumes. The contrast between the rough texture of the cypress and the silken finish of cherry paneling animates the interior spaces. Interior flooring throughout the building is urea formaldehyde-free strand laminated bamboo.

The building is located within a state park, and the use of wood gracefully complements the setting. Cypress, used for the wood siding, is a traditional species in the low country. The rot- and pest-resistance of cypress and ipe are great attributes for this climate. The linear quality of the siding and decking reinforces the organizational scheme of the building. The board-formed surfaces of the sculptural concrete walls also reflect the warmth and texture of the wood siding. All siding, exterior decking, and finish woods are FSC certified.



SECTIONS

ARCHITECT
Liollio Architecture
Charleston, SC

STRUCTURAL ENGINEER
Chao & Associates Inc.
Columbia, SC

GENERAL CONTRACTOR
PW Construction Inc.
Mount Pleasant, SC

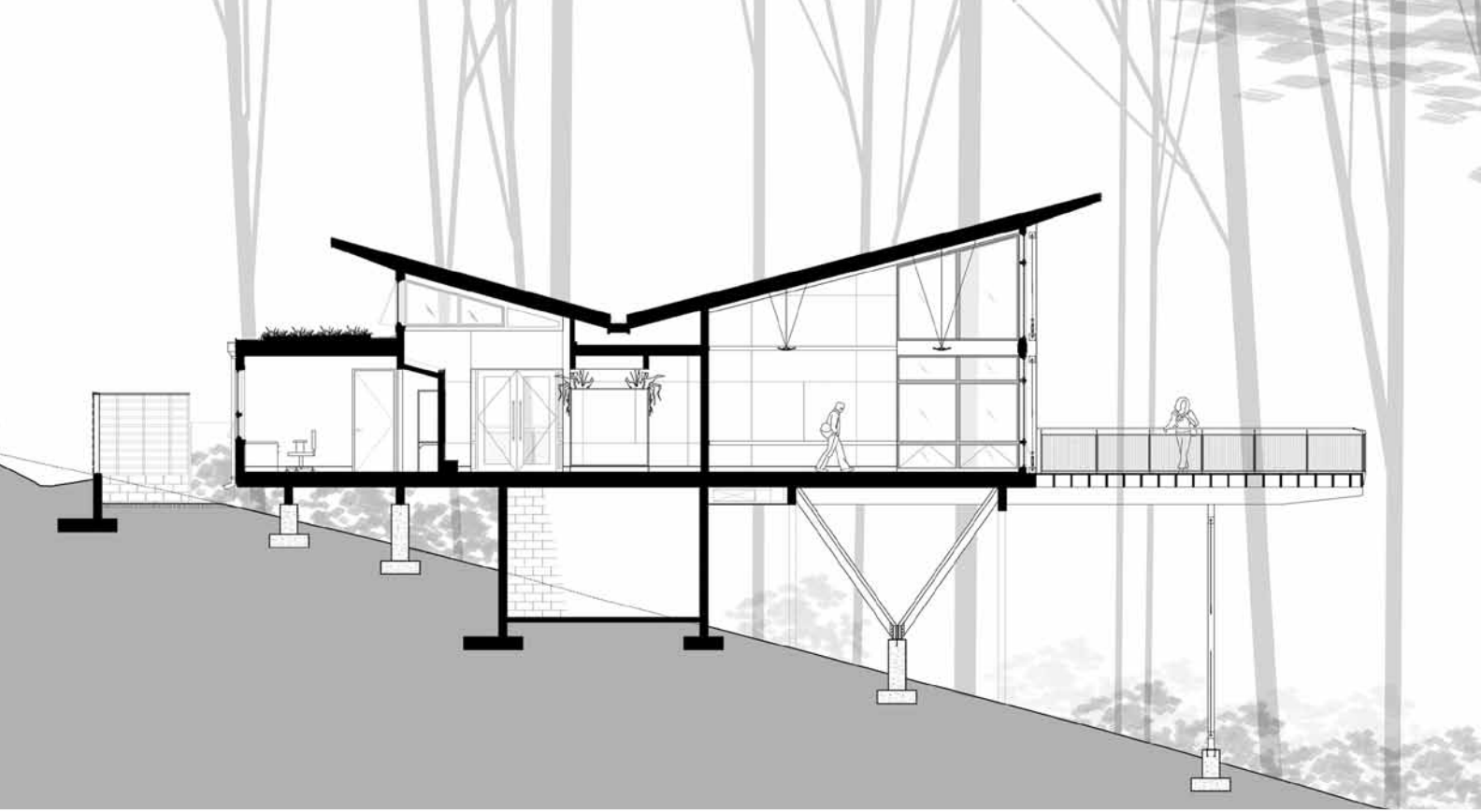
PHOTOGRAPHY
Jay White, AIA, LEED AP/Liollio
Charleston, SC

GREEN BUILDING
Award

Located in Birmingham, Alabama, the new Nature Center at Ruffner Mountain is the centerpiece of the 1,011-acre Ruffner Mountain Preserve, the second largest urban park in the United States.

Ruffner Mountain Nature Center

KPS Group Inc.



SECTION

Along with a new wood-framed education pavilion and relocated trailheads, the Nature Center facility is the culmination of the first phase of a long-range master plan.

Set above the northern slope of the mountain, the Nature Center is perched like a treehouse amidst the forest canopy. Its inverted timber pyramid supports and piers hold the building aloft and minimize its impact on the natural terrain. The building itself serves as a retreat into nature and a gateway to the park's trails. The elevated procession across the covered deck draws visitors into the building where the welcome center and exhibition gallery await. Inside, visitors can interact with native wildlife, peruse the gift shop, or attend educational programs in the large meeting room with spectacular views across the ravine below.

Each space within the building is intimately connected to nature. Carefully placed windows link the spaces within to the natural environment. High clerestories invite dappled light, filtered through the tree canopy, to dance across the floor and walls. Natural wood tone finishes provide a neutral backdrop that accentuates the foliage visible through generous panes of glass and allows the seasonal hues of the leaves to provide color to the space. The prow extending from the exhibition wing provides a quiet respite for visitors among the tree foliage.

The Nature Center is constructed

of conventional wood framing with a roofing assembly of long-span stressed skin/structural insulated panels. Selected for their superior insulating performance, the structural insulated panels also provided an efficient means of construction. Framing and panel supports are concealed within the panels to create clean, unbroken ceiling planes. Cantilevered panels floating over the administration wing and linear deck support a vegetated roof. Sloped panels that form the roof above the exhibition wing are cantilevered to support the main valley gutter which feeds rainwater into a large cistern. Large glulam columns

FLOOR PLAN

support the high roof panels at the meeting room and allow its northern half to be entirely glazed.

Below, glulam members are used throughout. Long-span glulam beams and girders frame the floor. Mimicking tree limbs, glulam quad struts, or pyramids, carry the load of the large meeting room down to three points on the ground, giving the impression that the building is floating above the terrain below.

The project makes extensive use of recycled wood-based products in the building sheathing, roof panels, composite wood decking, and cellulose insulation. It also emphasizes the use of rapidly renewable materials with the use of bamboo flooring and agrifiber wall panels throughout the public spaces of the facility.

Environmental stewardship is central to Ruffner Mountain's educational mission and the LEED design of the Nature Center. The guiding principle of sustainability informed key design decisions including the siting of the structure, mass and roof forms, fenestration, and the selection of finishes. The structure also integrates sustainable strategies such as daylight harvesting, rainwater collection for use in animal exhibits, green and reflective roofs, re-used solar panels at the pavilion, local and recycled building material as well as rapidly renewable finishes. In support of the project's educational mission, the visually prominent sustainable elements are used as teaching tools for the 20,000 or more school children who visit Ruffner Mountain each year.

ARCHITECT
KPS Group, Inc.
Birmingham, AL

CLIENT
Ruffner Mountain Nature Preserve
Birmingham, AL

STRUCTURAL ENGINEERING
Palmer Engineering Inc.
Tucker, GA

GENERAL CONTRACTOR
Stewart Perry Company Inc.
Birmingham, AL

MEP ENGINEER
CRS Consulting Engineers Inc.
Huntsville, AL

CIVIL ENGINEERING
Walter Schoel Engineering Company Inc.
Birmingham, AL

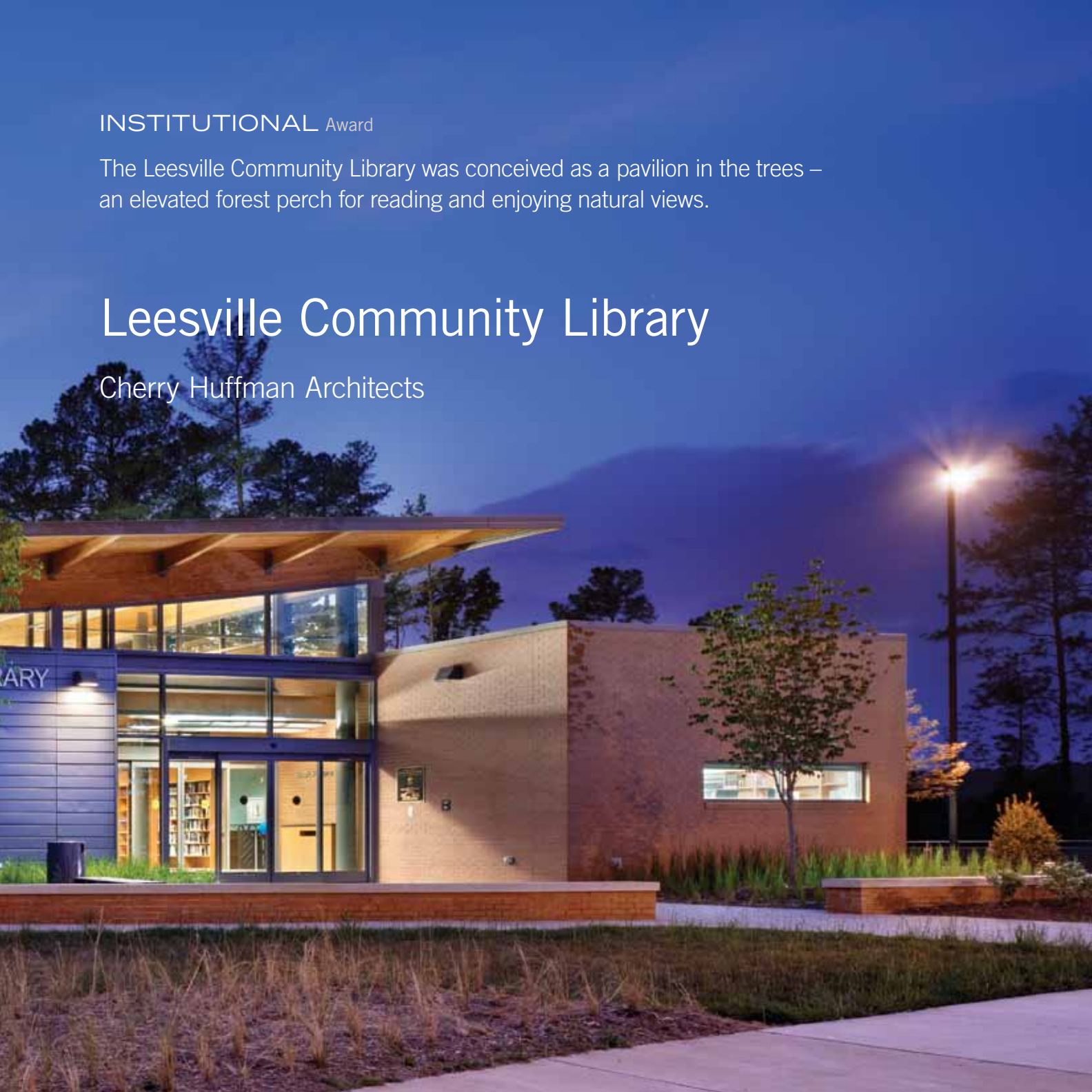
PHOTOGRAPHER
Gary Knight + Associates Inc.
Atlanta, GA

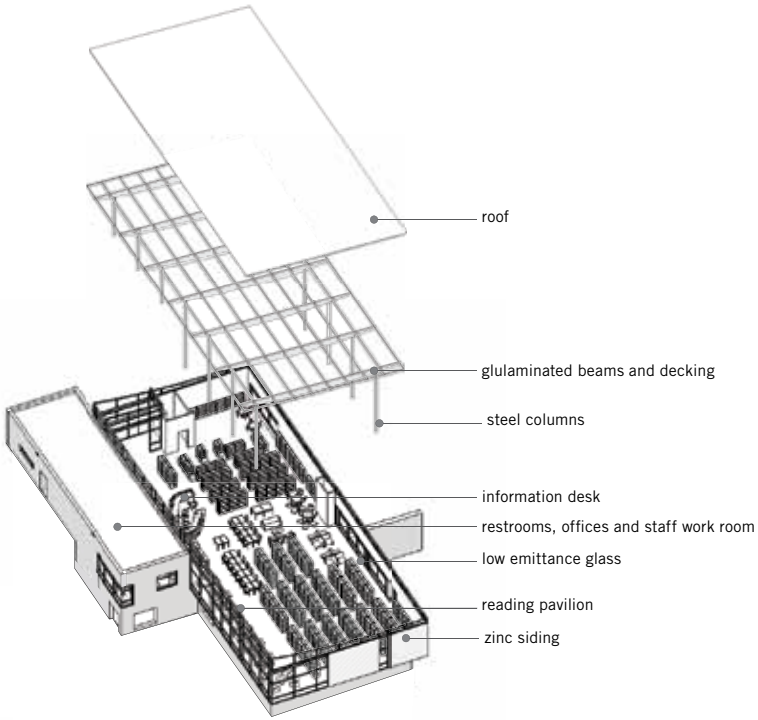
INSTITUTIONAL Award

The Leesville Community Library was conceived as a pavilion in the trees – an elevated forest perch for reading and enjoying natural views.

Leesville Community Library

Cherry Huffman Architects





AXONOMETRIC VIEW

The organization of the building plan created two long volumes: a solid brick-enclosed volume, with punched openings for fenestration, houses all the service-related spaces; a much larger reading pavilion, with uninterrupted views, houses book stacks and study areas.

The library is part of a large city park and is located at the highest point on the site. The location maximizes views into the forest while minimizing site disturbance.

The most dramatic element in the space is the laminated wood beams. One single span with two column lines along the exterior wall was utilized to create the pavilion space. The thickest portion of the beams is at the center of the span where the highest bending moment occurs. From the center, the beams taper to the bearing points and overhangs in a gently flowing curve that corresponds with the reduction in bending stress. The straight tops of the beams slope slightly to the south, creating overhangs that provide shading and shelter.

Natural materials were used throughout the library to complement the natural setting. Red clay bricks, natural patina zinc panels and honey-colored woods create a welcoming and unified palette. The wood beams, casework, and decking give the building a warmth and beauty that would be difficult to achieve with any other material.

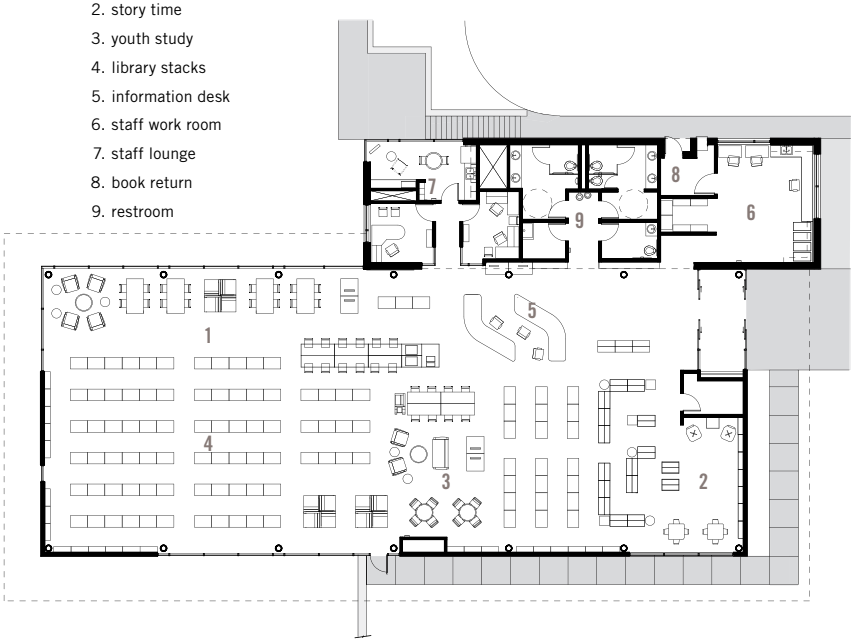
Aluminum and insulated glass walls surround the pavilion with con-

tinuous glazing along the tops of the walls. This creates the illusion that the wood roof is floating above the space. The lower portions of the glass walls are punctuated with zinc panels or brick to provide increased insulation to the building envelope.

Day lighting was also a primary consideration for the design. The long axis of the building is ideally oriented to maximize southern and northern exposures. The overhang on the southern exposure controls solar gain and glare while the northern exposure brings indirect natural light deep into the building. The lower angles of the western sun are the most difficult to control, however, the forest is thick enough to effectively shade the building year round.

The 8,000-sq.ft. library has been embraced by the community as a home away from home. Many visitors comment that they return again and again to read and think while they contemplate the changing seasons in the park from the shelter of the pavilion.

1. reading pavilion
2. story time
3. youth study
4. library stacks
5. information desk
6. staff work room
7. staff lounge
8. book return
9. restroom



FLOOR PLAN

ARCHITECT
Cherry Huffman Architects
Raleigh, NC

CLIENT
Wake County Facilities Design and Construction
Raleigh, NC

STRUCTURAL ENGINEER
Lysaght and Associates
Raleigh, NC

GENERAL CONTRACTOR
DeVere Contracting
Raleigh, NC

PHOTOGRAPHY
James West
Raleigh, NC

INSTITUTIONAL JURY CHOICE Award

Selby's treehouse floats above the forest floor, partly hidden by the broad branches of the white oak tree at the edge of the lake. The treehouse design aimed to be soft and organic, unlike the rest of Camp Twin Lakes, and the experience was meant to be up in the trees, not on the ground.

Selby's Treehouse at Camp Twin Lakes

Lord, Aeck & Sargent Architecture

Camp Twin Lakes is a place for children with serious illnesses, disabilities and other life challenges, and the most important aspect of the treehouse design was that it be magical, offering kids a sense of wonder. It was envisioned as a place to enhance the camp's nature program and gets kids excited about being in a natural setting where they could play and learn about different ecosystems, the environment and sustainability. The campers' treehouse drawings insisted that there be multiple levels, ceiling fans, a curling slide and hidden trap doors.

Since there was no single tree at camp large enough to support a platform for 25 campers, the treehouse is both the trees and the treehouse. The design is a system of wiggly-edged wood floor planes supported by a forest of telephone poles. The trunks form regular and irregular polygons in plan, defining the rooms of the treehouse. The wood-decked and screened walls float above the platforms, attached to the wood poles with integrated wood bench seating at the bottom and a wooden shelf at the top. The wood poles disappear into the environment. The edges of the floor and roof platforms defer to the green trees. The radiating wood floor joists are both floor structure and tree limbs, while the planted roof is the treehouse tree canopy.

Entry to the wheelchair-accessible treehouse is via the curved wooden boardwalk of the nature trail, which stays level as the lake shore drops off 15 ft. below the deck. The spiral slide, a wood stair and a rope climbing net connect the wood deck to the forest floor, and a spiral stair leads to the upper level.

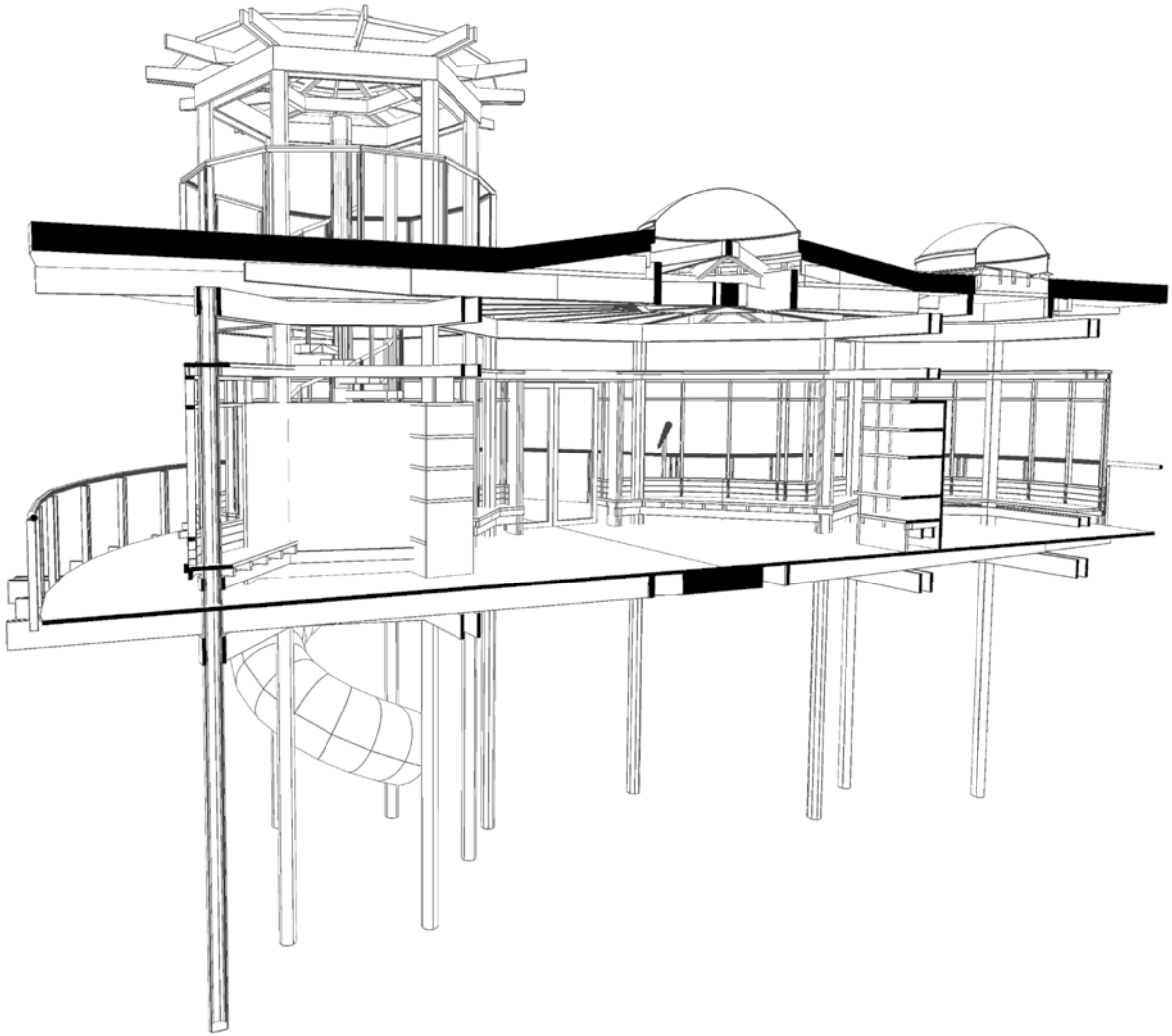
On the main level, at the center of the treehouse, is an octagonal space which is used primarily for environmental arts and crafts. There are four other multi-sided spaces. One, with a continuous wood bench in an arc of about 270 degrees, is used for the camp's drumming circle. A smaller, more intimate space is used for storytelling and small group activities. The two small spaces that flank the doorway to the main space – a utility room and a staff room – conceal, then reveal a panoramic view of the lake. Combined with an upper level overlook, these spaces provide 1,200 sq.ft. of enclosed area surrounded by about 600 sq.ft. of covered deck.

In the center of the main room there is an acrylic floor window to allow views of campers playing below. The spiral staircase leads to the bird's nest, where campers can view the lake through the branches of the oak tree and observe the 1,700-sq.ft. planted green roof over the main level. The roof garden, as the children call it, replaces the forest floor that the building occupies, and provides homes for insects and birds. Three domed skylights in the roof garden – one

aligned with the floor window below – provide natural light and allow the campers to study the tree canopy and its animal inhabitants from inside the treehouse.

While the intent of the treehouse was to commune with nature away from mechanically conditioned spaces, a very simple cooling system offers relief from the hot Georgia summers. The three main spaces have ceiling fans, and a continuous misting line runs the full perimeter of the eaves. These two systems work together to make the air in and around the treehouse noticeably cooler, and the treehouse appears to hover like a spaceship in the mist.

A pole-mounted, 1.4-kW, eight-module photovoltaic solar array in an adjacent clearing supplies the ceiling fans and the misting system pump with electricity. Unused power is fed back into Morgan County, Georgia's power grid. Two dry composting toilets are located in the woods close to the treehouse, and a copper rain chain near the main entry to the treehouse diverts rainwater from a copper gutter over the door to a wooden rain barrel.



ARCHITECT
Lord, Aeck & Sargent Architecture
Atlanta, GA

CLIENT
Camp Twin Lakes
Atlanta, GA

CREATIVE DIRECTOR
Atlanta Task Force on Play
Atlanta, GA

STRUCTURAL ENGINEER
Penta Engineering Group Inc.
Atlanta, GA

GENERAL CONTRACTOR
Merit Construction Co.
Atlanta, GA

GREEN ROOF
Decatur Roofing
Norcross, GA

ARBORIST
Arborguard Tree Specialists
Avondale Estates, GA

TOTEM POLES
SCAD, Sculpture Department
Atlanta, GA

PHOTOGRAPHY
Jonathan Hillyer Photography Inc.
Decatur, GA


ISP
America's Home for College Sports


HOME
82
0-0
GUEST
80
ISP

INTERIOR BEAUTY OF WOOD Award

International Sports Properties (ISP) is a collegiate sports marketing and sporting event management company that includes radio and television programming. Their new office occupies 31,500 sq.ft. and is designed around a sports-themed concept.

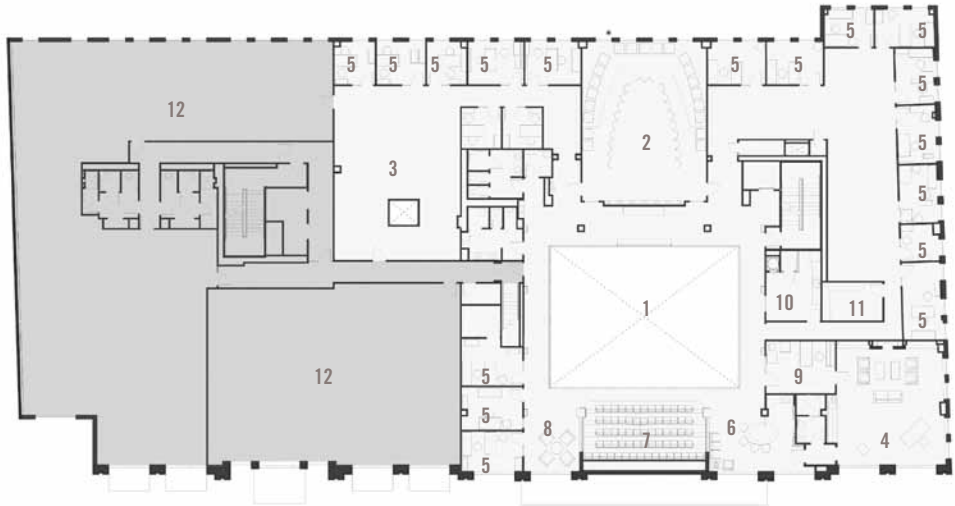
ISP Corporate Headquarters

Walter Robbs Callahan & Pierce Architects

The client wanted a lobby that captured the feeling of the gymnasium from the movie Hoosiers. This inspired the regulation half-court basketball gymnasium that serves as the main lobby, the nucleus of the office organization, and a symbol of the client's commitment to the sports industry. The lobby also features a large scoreboard and video screen with a scrolling display of ISP's partner colleges' logos. Flanking the backboard is display shelving which showcases football helmets representing ISP's partner colleges.

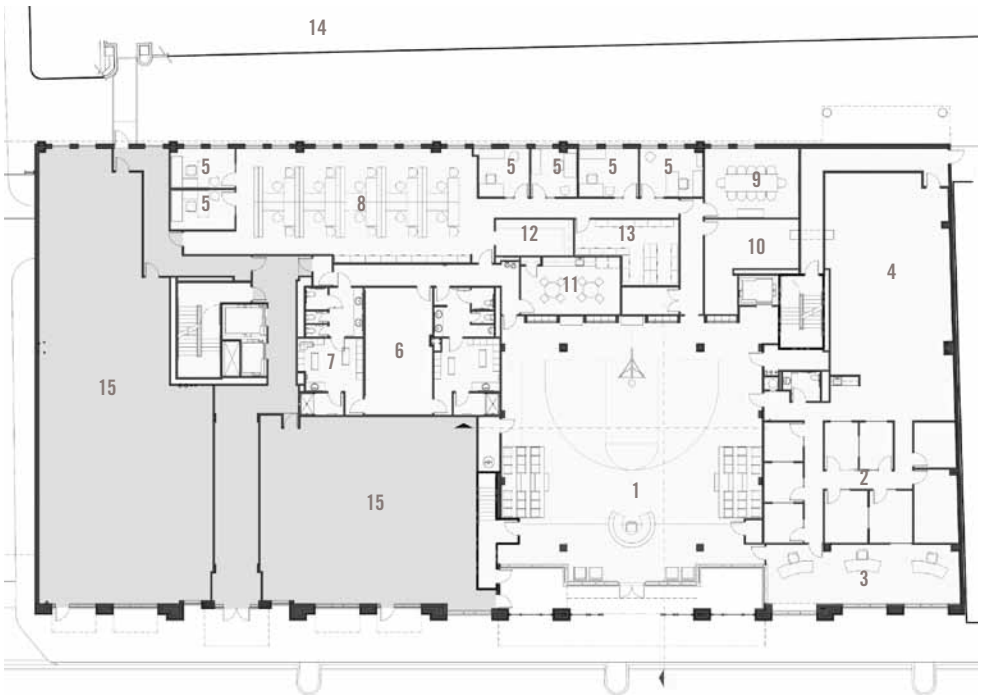
Early design modifications to the building's exterior conveyed the appearance of a large-scale sports arena at ISP's main entrance. Many design elements aligned with ISP's corporate identity including a large overhead canopy and gates that feature ballpark-style custom signage. The addition of stadium-style seating on the second level offers visitors the sense of entering into a stadium through a concourse level.

The rest of the office, on both levels, is organized around the lobby. The stadium seating above provides an



1. open below
2. conference
3. open office
4. president's office
5. office
6. sky box meeting
7. stadium seating
8. informal meeting
9. executive administration
10. break room
11. work room
12. tenant space

SECOND FLOOR PLAN



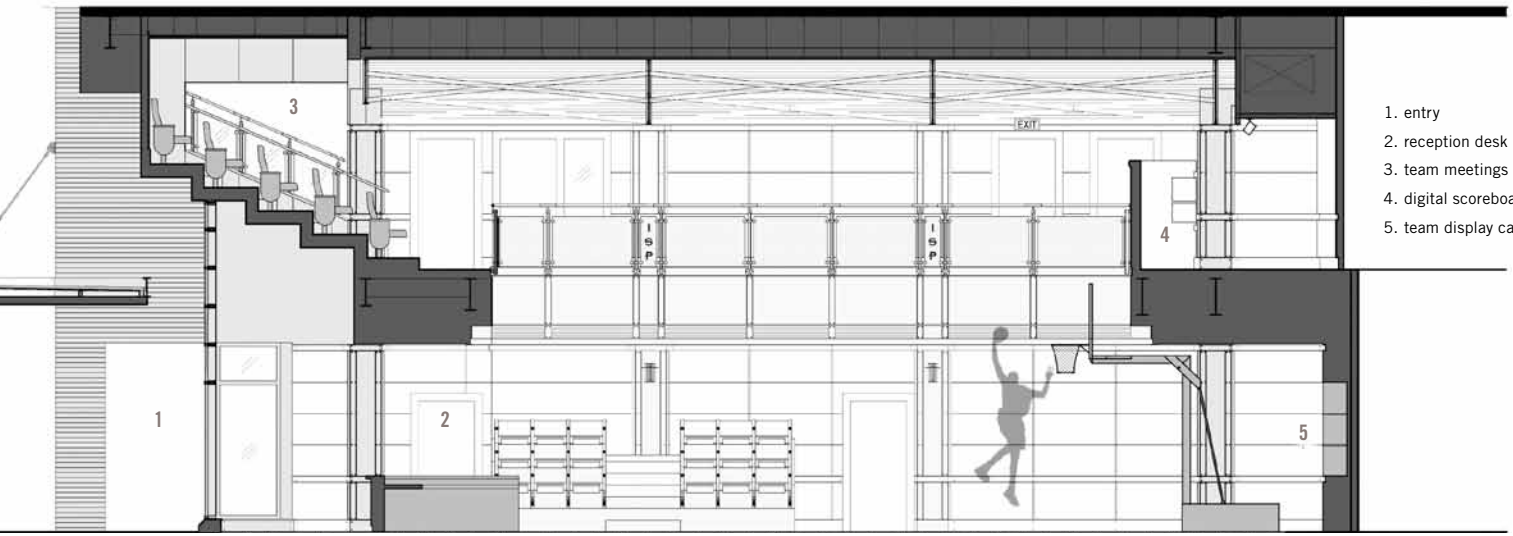
1. lobby
2. radio production suite
3. live broadcast studio
4. broadcasting studio
5. office
6. exercise room
7. locker room
8. accounting block
9. conference room
10. eng. room/tele
11. break room
12. work room
13. file
14. parking deck
15. tenant space

FIRST FLOOR PLAN

informal place for employees to gather for staff meetings and can be used for viewing of important sporting events on the large screen. The street-level features a broadcast studio with three news desks facing the street. The live sports broadcasts are visible and audible to pedestrians passing by.

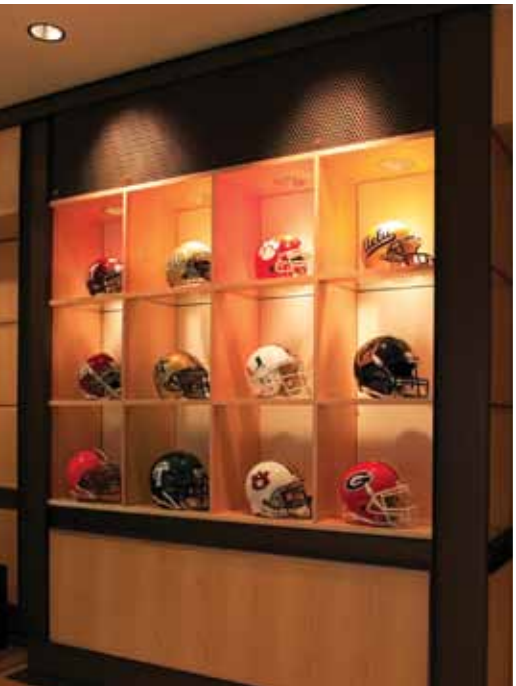
This project is enhanced by an abundance of custom millwork. Given the large quantity of paneling and cabinetry, two millwork companies were hired to meet the project's schedule. The wood paneling in the lobby is maple veneer with hardwood maple edging, trimmed with a medium bronze finished aluminum and C-channels. The floor and ceiling of the entire lobby is solid maple and the lobby's pilasters and doors are accented with cherry wood. Cherry was also used in the boardroom trim and table and almost exclusively in the president's office for paneling, cabinetry and coffered ceilings. The floors of the president's office are salvaged wormy chestnut timbers from a barn in Virginia.

The ISP headquarters is a place where employees can work productively and enjoyably, while demonstrating their commitment to clients in the sports industry.



1. entry
2. reception desk
3. team meetings
4. digital scoreboard
5. team display cases

SECTION



ARCHITECT
Walter Robbs Callahan & Pierce Architects, PA
Winston-Salem, NC

CLIENT
ISP Sports
Winston-Salem, NC

STRUCTURAL ENGINEER
Structural Solutions
Greensboro, NC

GENERAL CONTRACTOR
Samet Corporation
Greensboro, NC

MECHANICAL ENGINEER/ PLUMBING
Consultant Engineering Services Inc.
Winston-Salem, NC

ELECTRICAL ENGINEER
Electrical Engineered Systems Inc.
Lewisville, NC

PHOTOGRAPHY
Jim Sink Photography
Clayton, NC

Designed to provide a place to stay for early explorers of a new property development in Christophe Harbour, St. Kitts, British Leeward Islands, The Bungalows recall the pioneering spirit, but with a luxurious twist.

TRADITIONAL USE OF WOOD Award

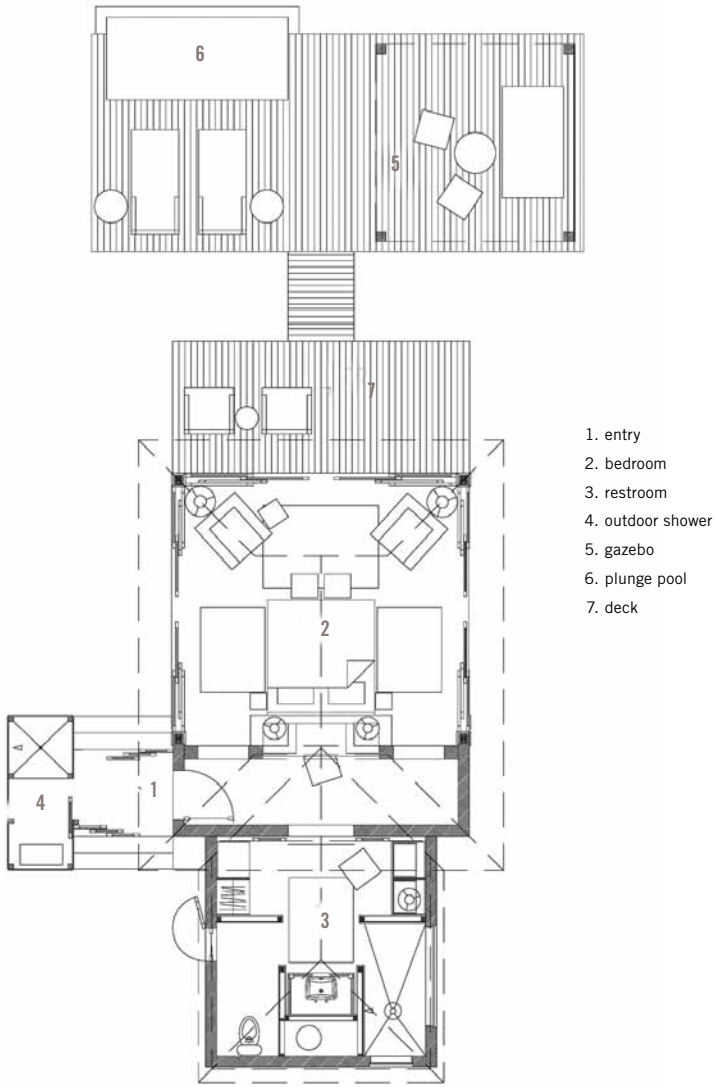
The Bungalows

John Denton Haley

The structures needed to be completed on St. Kitts in a four-month time frame in order to meet the client's season. The initial concept was to create a luxurious campsite. Tents, although romantic, were inappropriate for the heat, the constant breeze and the salt-laden environment. Pre-fabricated structures were the next consideration but it became a challenge to find something that could meet the schedule with the desired quality.

Reclaimed, hand-hewn logs met the criteria because they were more substantial, quasi prefab, extremely romantic, and offered a straight-forward, honest use of the materials. The walls above the foundations and the roof framing were assembled and built in Georgia then disassembled, packed in containers and sent to St. Kitts to be reconstructed on foundations that were being constructed concurrently. The use of wood logs as the primary building structure instantly provided a beautiful finish without the need to paint or add further materials and details. The use of wood allowed the project to continue in St. Kitts and in Georgia saving critical time in the schedule. The natural warmth added by the wood is a pleasant surprise; it provides a cozy atmosphere with the desired casual barefoot sophistication.

There are a total of four buildings. Each of the four 600-sq.ft. bungalows (enclosed 650-sq.ft. deck, gazebo and plunge pool) is a stand-alone luxury guest cottage for the Christophe Harbour Company. Set along the dunes at Turtle Beach, the enchanting bungalows – with names like Aloe and Plumbago – each have a private negative edge plunge pool, outdoor shower and seaside ipe cabana. A conventional wood frame floor structure supports ipe wood decks on the exterior, hand-scraped wide plank French oak floors on the interior and teak slat flooring in the showers. The ceilings feature exposed cypress framing and bamboo tongue-and-groove 1 x 6 horizontal bamboo sheathing. The vanity



1. entry
2. bedroom
3. restroom
4. outdoor shower
5. gazebo
6. plunge pool
7. deck

FLOOR PLAN

mirrors were strategically located to reflect the ocean view. The buildings include details such as hand-hewn and dovetailed logs, wallaba wood shingles on the roof, custom mahogany doors and windows, teak and marble slab showers and custom millwork.

The bungalows are surrounded by palms and bougainvillea, and look to be part of the landscape. Inside, there's a sea of soft pillows and other comforts among the furnishings of wood, stone, bamboo and seagrass. Guests fall asleep to the rhythm of waves, and wake to sunrises in hues of pink and amber, to barefoot walks along the curving shore that is just steps away from the deck.

ARCHITECT
John Denton Haley, AIA
Charleston, SC

STRUCTURAL ENGINEER
Nick Brisbane & Associates
Basseterre, St. Kitts, W.I.

GENERAL CONTRACTOR
Bo Childs, Wyatt Childs Inc.
Johns Island, SC

INTERIOR DECORATOR
Lanham Designs
Atlanta, GA

LANDSCAPE ARCHITECTS
Charlie Arrington, Spencer Nash, Craig Collins
Basseterre, St. Kitts, W.I.

PHOTOGRAPHY
Patrick O'Brian
Washington, DC

WOOD BEHIND THE WALLS Award

Lynches River Discovery Center is a destination field classroom and nature laboratory established by Florence County, SC to advance learning opportunities for the region by using experiential learning and thinking to increase awareness of the importance of natural resources. Several local schools and wildlife agencies are partnered with the county in the endeavor.

Lynches River Discovery Center

Drakeford Architects

A hands-on exploration of the hardwood bottomland river swamp environment and ecosystem at the site is offered to students and other visitors. The classroom/nature lab building provides access to a tree-top canopy walk elevated 30 ft. above the forest floor. It also houses a variety of real-time, on-site environmental monitoring experiments that students can remain linked to after leaving the center.

The client wanted visitors to be able to observe the site and walk in its tree tops. By studying the forest floor, an opening between the edge of the swamp and a nearby sandhill ridge was chosen. This space provided the footprint of the building as well as a launching point into the forest and the tree canopy.

An important goal of the project was to demonstrate a commitment to the environment and to emphasize sustainable design through both the construction process as well as the facility itself. Wood products and wood technology aptly suited that goal and allowed for the project to be built delicately, but with strength, flexibility and beauty. The final product is a bronze LEED registered facility.

The wood post raised foundation had minimal impact on the environment and its favorable performance during occasional flooding periods is critical. It also reduced construction time. Wood roof trusses were built off-site and required simple installation technology. A large pool of available, qualified, local craftsmen in wood frame construction made wood an excellent value choice. Significant re-use of recycled cypress wood siding and recycled heart pine flooring and trim lowered cost and reduced the impact on forest resources.

Exterior wood finishes included

EAST ELEVATION

SOUTH ELEVATION

recycled cypress board-and-batten siding and fascia trim. In addition, plywood soffit overhang and foundation were used along with treated wood decking, handrails, and insulated roof panels.

Interior wood finishes included recycled cypress for baseboard, door and window trim. Wood exposed in the interior of the building included structural beams, roof rafters, pre-engineered trusses and roof sheathing. Wood doors, plywood cabinetry and recycled heart pine flooring round out the remaining interior finishes.

ARCHITECT
Drakeford Architects
Sumter, SC

STRUCTURAL ENGINEER
Sam M. Hunter, Jr. Consulting Engineer
Sumter, SC

GENERAL CONTRACTOR
Hawkins and Kolb Construction Co Inc.
Sumter, SC

PHOTOGRAPHY
I. Wilson Baker Photography
Charleston, SC

NORTH-CENTRAL (Minnesota, Wisconsin, Illinois)

COMMERCIAL WOOD DESIGN Award

The design goal for Layton Petro Mart was to change the general perception of the gas station/convenience store.

Layton Petro Mart

Arquitectura Inc.

The fuel station has evolved to become a larger, more complex and less automobile-oriented facility. The mechanic is no longer an integral part of the station, and the imagery of a wash down, oil rag, car lift has been replaced with a myriad of alternatives.

Most station canopies are variations of the mushroom precedent of the 1950s, but a station with two to four pumps is an extinct typology. Today's stations of 12 to 16 pumps have become heavy and dark when connecting roof to canopy. The client wanted to analyze the shortcomings of existing models and re-arrange the architectural components.

The design for the new petro mart/gas station, with attendant support facilities including a car wash and mini-mart, was predicated on a vision of comfort and multi-service that would cater to the needs of highway users as well as the community of Greenfield. This is achieved through a unique roof design, covering all functions and utilizing large curved beams to unify the service-oriented uses. The new spatial experience is further enhanced by a soft translucent roof.

The large curved roof – unique and visible from afar – is the hallmark of the building. The laminated wood beams overhead connect pumps and canopy and effortlessly continue to provide a roof for the mini-mart. The ogee flow of the beams prevents snow and water from dripping on drivers, creates a lyrical connection, and has a strong expression because of the translucent paneled roof. The extension of the beams through the glazed façade to the interior accentuates the lightness of the roof and continues with an interior sheathing of 2 x 6 tongue-and-groove

hemlock fir. The curvature works in plan, section, and elevation thereby creating a consistent aesthetic motif.

The lightweight contemporary roof material provides weather protection, good light, and is easily erected. At night the station transforms into a beacon of light. The transparency of the walls and the glow of the roof create a presence that communicates a sense of security for the station, as well as being a sentry for the neighborhood and a gateway to the city.

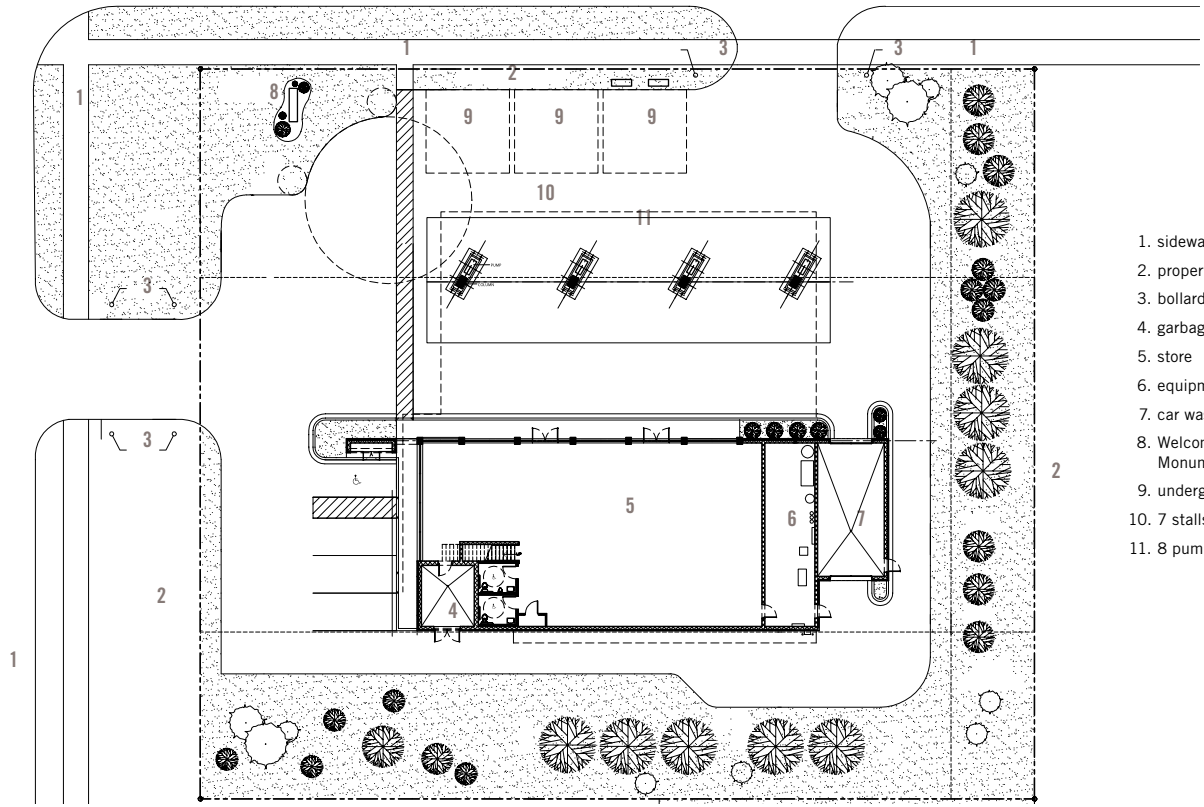
The material exudes warmth, shelter, and is visually pleasing to the eye. The darker tongue-and-groove allows the interior roof to be seen as a flowing sheet of wood, and, in combination with the stone pillars and the glass façade, creates a free-flowing, inviting atmosphere that seamlessly streams traffic between the outside and inside of the building.

ARCHITECT
Arquitectura Inc.
Milwaukee, WI

STRUCTURAL ENGINEER
Jendusa Design & Engineering Inc.
Hartland, WI

ENGINEERED WOOD PRODUCTS SUPPLIER
Structural Wood Corporation
St. Paul, MN

PHOTOGRAPHY
Andrew Herland
Cary, NC



1. sidewalk
2. property line
3. bollard lights
4. garbage
5. store
6. equipment room
7. car wash
8. Welcome to Greenfield Monument sign
9. underground tank
10. 7 stalls
11. 8 pumps

SITE PLAN

GREEN BUILDING Award

The Schaar's Bluff Gathering Center in Nininger Township, Minnesota, is an ultra-efficient, near zero-energy building designed for the Dakota County Parks Commission.

Schaar's Bluff Gathering Center

Meyer, Scherer & Rockcastle Ltd.

Schaar's Bluff was designed to give back to nature, healing the surrounding environment, both literally and figuratively. The project consists of a 3,500-sq.ft. nature center located on parkland along the Mississippi River in the Spring Lake Park Reserve. The building sits on a dramatic 100-ft. high bluff above the river – an area with an 8,000-year history of human habitation. At the outset of the project, the site was overgrown with invasive tree species and vegetation left over from 150 years of agricultural use. Consequently, one of the project goals was to heal the site by restoring the site ecology, connecting it with cultural influences and historical significance to create an inviting public facility.

The center's orientation and form is a reflection of the past, present and future. For thousands of years people have gathered on the bluff to look out over the river, often sitting around a campfire to stay warm or cook. Consequently, the building hugs the bluff – its round shape mimicking a campfire. The simple forms of the structure allude to indigenous values, such as the importance of orientations and the compass points, the sky and the earth. The design resolves the conflicts between nature and technology.

The site's wind turbine balances annual electrical loads generated by the building. Excess power is sent to the electrical grid and used by the local utility. The 35kW wind turbine

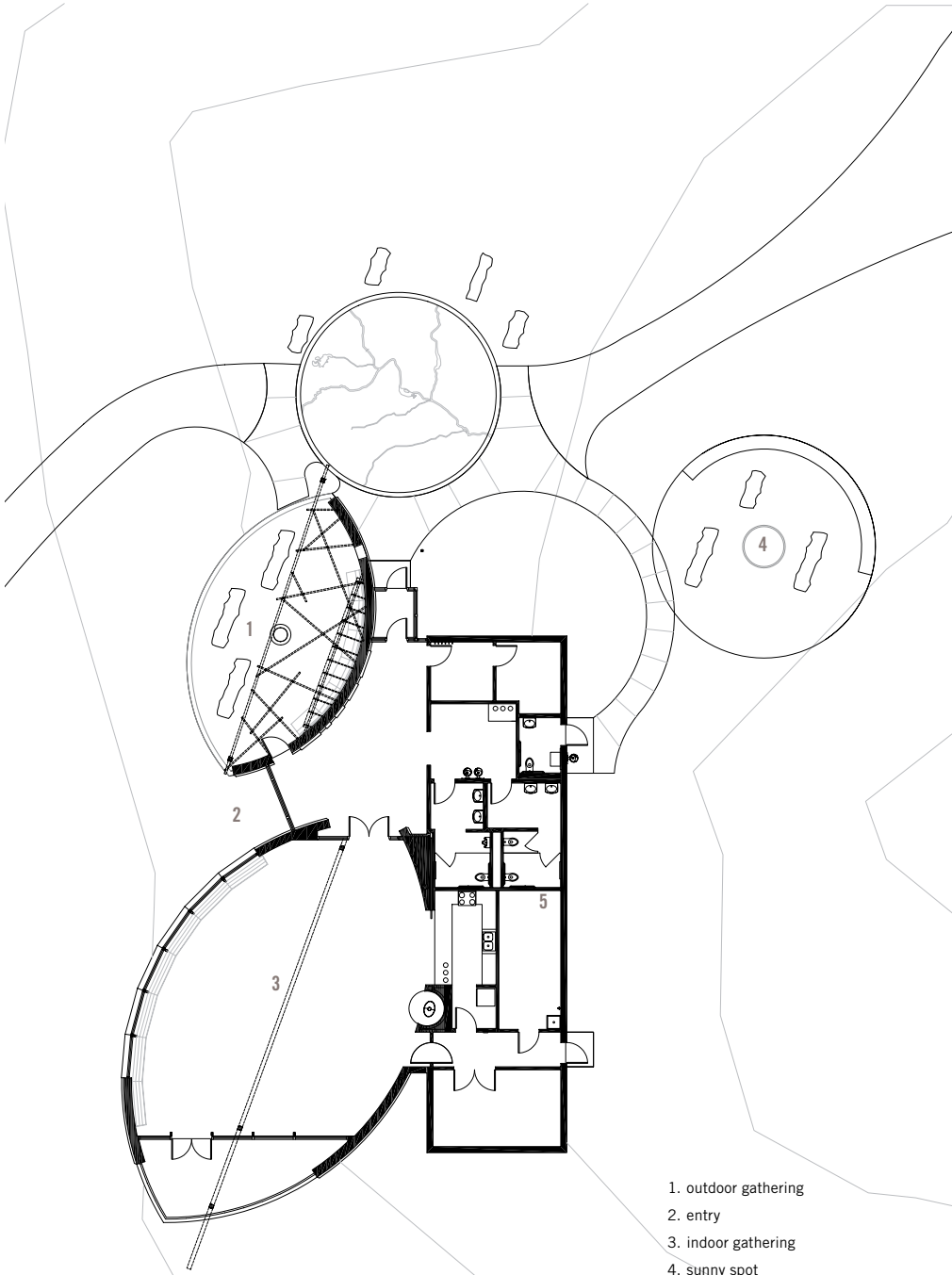
is designed to produce an estimated 83 per cent of the electricity needed to heat, cool, and power the building.

The building is sited to take full advantage of natural patterns and energies. The site was carefully studied to ensure sunlight, wind, rain, snow and other elements benefit the closed-system. For instance, operable windows located on opposite sides of the building allow breezes to cool or warm the building when needed. An outdoor trellis sustains edible vegetation for wildlife and provides shade during the summer.

The high-performance building envelope adapts to and controls seasonal heat gains and losses by using super insulation techniques, operable and fixed shading devices and operable window blinds. The building is alive, ready to respond to changing weather conditions to conserve energy. The interior temperature is closely monitored for ambient conditions and use. In-floor radiant heat keeps the building above 54 degrees in winter, which is reasonable for short-term use as a trail head. A high-efficiency air-to-air heat exchanger provides supplemental heat or cooling only when needed. Rainwater captured on the roof is used (in Minnesota's first commercial gray water recovery system) to flush toilets, then treated in an on-site septic system before recharging the aquifer.

Chosen for its flexibility, durability and sustainability, wood was instrumental in achieving many of the project goals. Wood framing afforded the carpenters maximum flexibility to accommodate the complex geometry of the building's form. Sustainably-harvested ipe (Brazilian ironwood) was used for the exterior. A dense hardwood, it provides a durable moisture- and insect-resistant skin that will last more than 50 years without stain or sealant, requiring little or no maintenance.

For years, the parks system saved ash and oak that was felled to make way for public works projects. In keeping with the client's mission of ecological stewardship, this wood was reused. To accommodate the varying lengths, widths, and species available, the wood slat-paneling uses datums (based on the most common board lengths) to create a visual ordering system, while simultaneously minimizing waste. The interior incorporates all the wood the client had available, augmented with wood from local, FSC sources.



1. outdoor gathering
2. entry
3. indoor gathering
4. sunny spot
5. serivces

FLOOR PLAN

ARCHITECT/
INTERIOR DESIGNER
Meyer, Scherer & Rockcastle Ltd.
Minneapolis, MN

CLIENT
Dakota County Parks Department
Apple Valley, MN

STRUCTURAL ENGINEER
Meyer, Borgman, and Johnson Inc.
Minneapolis, MN

MECHANICAL/
ELECTRICAL ENGINEERS
Michaud Cooley Erickson
Minneapolis, MN

COST CONSULTANT
Faithful+Gould
Minneapolis, MN

LANDSCAPE ARCHITECT
Close Landscape Architecture
Minneapolis, MN

INTERPRETIVE
DESIGN CONSULTANT
The 106 Group Ltd.
Saint Paul, MN

PHOTOGRAPHY
Andrea Rugg
Minneapolis, MN

Pete Sieger
Minneapolis, MN

INSTITUTIONAL Award

Declining attendance at worship and Sunday school services inspired the congregation at Hinsdale United Methodist Church to completely update their current facility and add new spaces that would enhance the worship and educational experience.

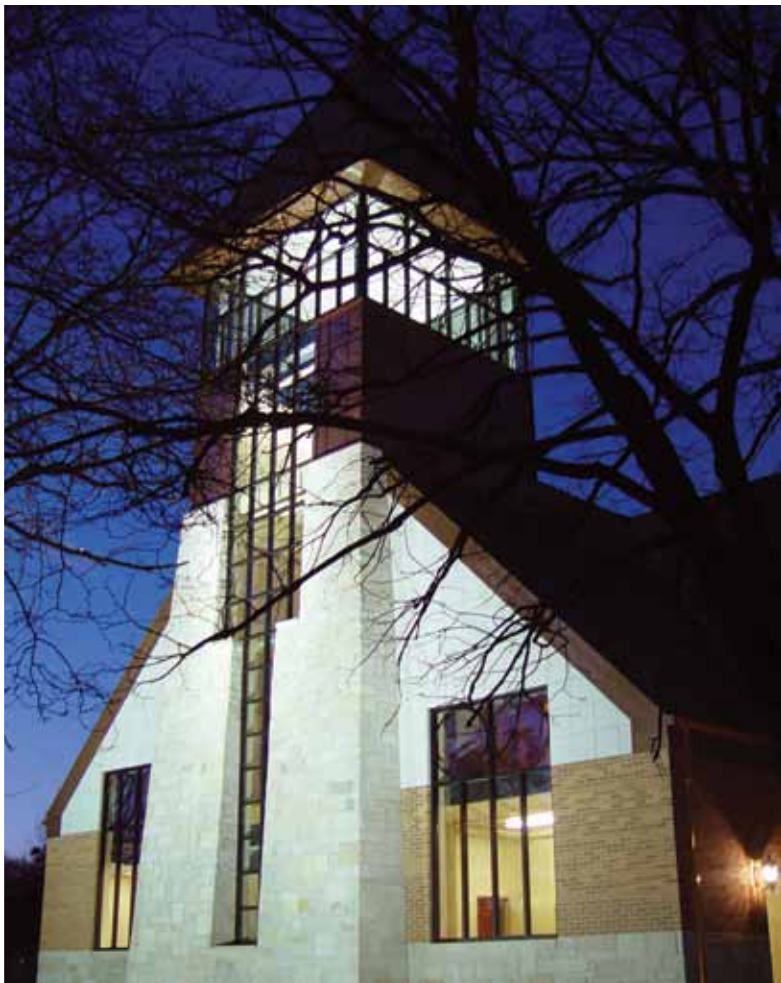
Hindsdale United Methodist Church

Saavedra Gehlhausen Architects

The 17,000-sq.ft. addition includes a new 300-seat sanctuary, narthex/hospitality space, meeting room, restrooms and a youth room on the lower level. The renovation of the existing facility incorporated new finishes, ceilings, lighting and air conditioning throughout. The renovation updated classrooms and administrative areas and saw the conversion of the old Sanctuary into a fellowship space that nearly doubled the size of the adjacent existing Fellowship Hall.

In keeping with the context and scale of the residential neighborhood, a craftsman-style design concept was chosen for the new addition. The use of high-quality materials throughout blends well with the neighboring homes. Stone, brick, slate, copper and wood were used in the design. All of the multi-million dollar homes in the area are traditional in character and of various styles. Many of the homes are quite large and of similar scale and quality of construction as the new Sanctuary addition.

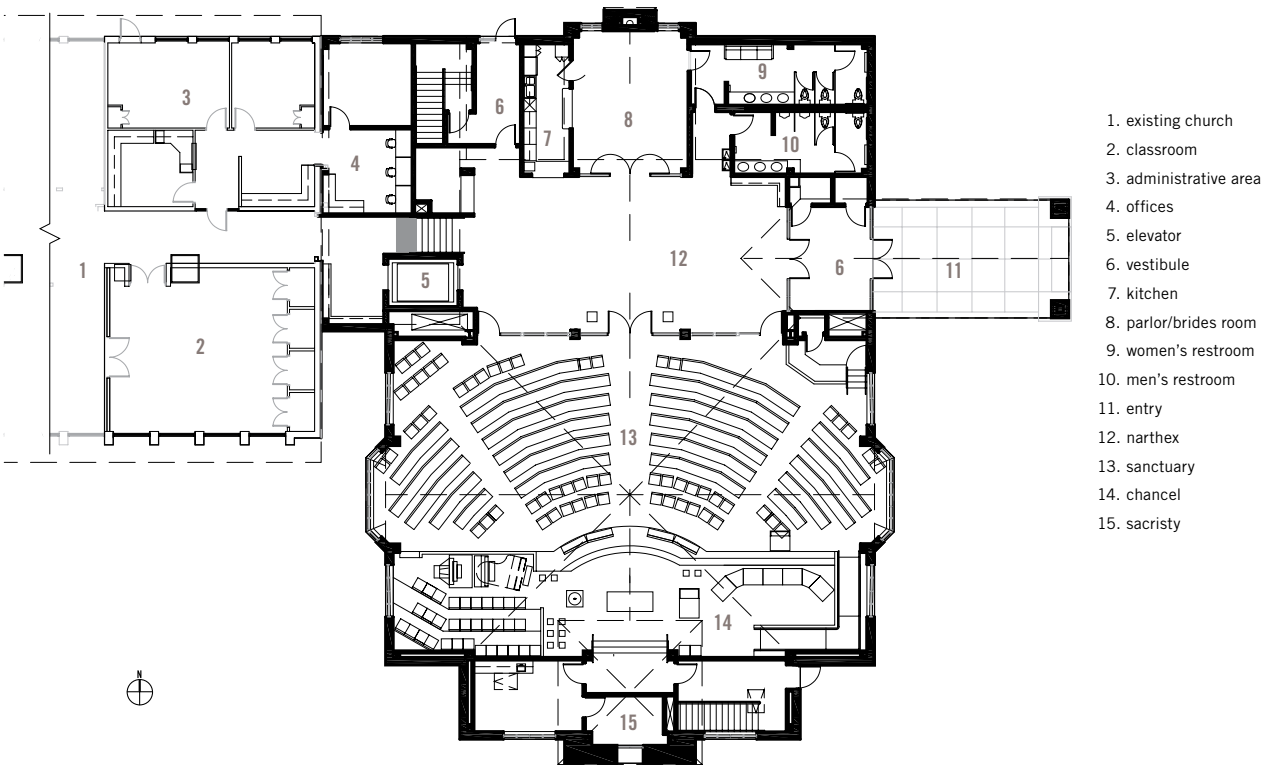
In response to the old Sanctuary that was very dark, with very little natural light and very dark materials, the new Sanctuary needed to be bright and light with an abundance



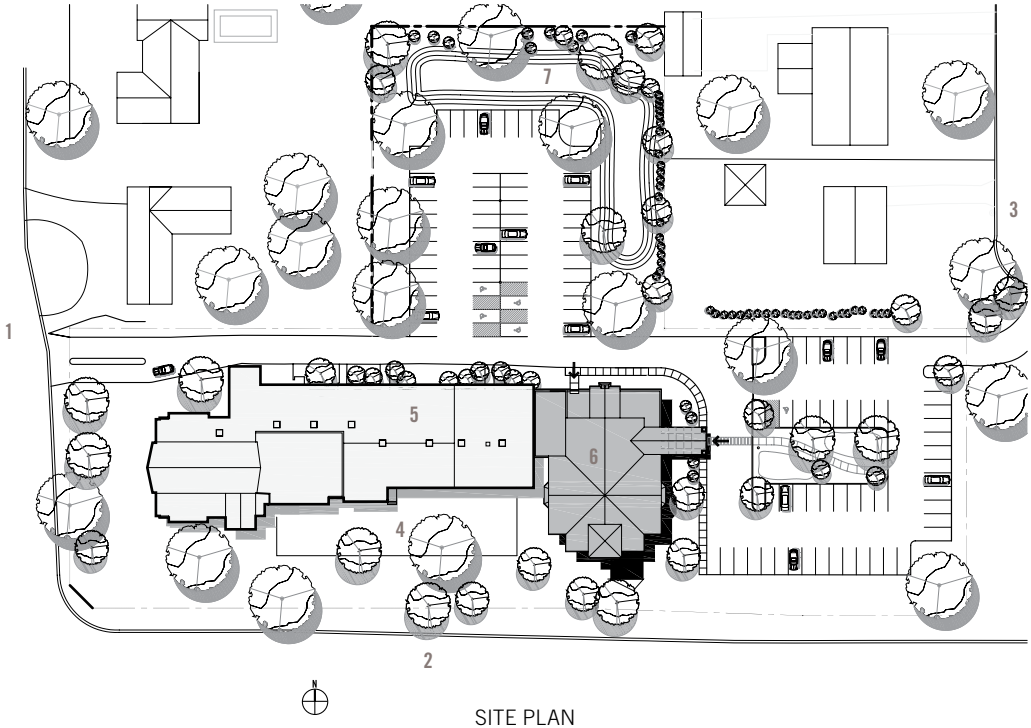
of natural light, with light colors and materials that would provide a warm and comfortable atmosphere.

The new design includes large windows, a steeple that allows warm light to filter down behind the chancel, light-colored wood trim and paneling, and autumn slate flooring. A large flexible chancel and A/V system with dual-rear projection screens facilitate both contemporary and traditional worship services. The movable chancel furnishings designed by the architect augment the flexibility of the chancel and are in keeping with the craftsman-style interpretation of the design. Liturgical banners hanging in the Narthex, double as sound-absorbing acoustical panels in the hard-surfaced space. This allows the area to be used for a gathering and fellowship space with appropriate and tolerable noise levels.

The Sanctuary is a spiritually uplifting space that brings harmony and balance between the worship area, the old part of the building, a very busy street, and the existing trees on the site. The glulam structure helps to warm the natural light, create intimacy, and enhance the worship experience for a growing congregation that was used to a dark and gloomy worship space.



FLOOR PLAN



1. Garfield Avenue
2. 55th Street
3. Park Avenue
4. playground
5. renovated existing church
6. sanctuary addition
7. detention area

SITE PLAN

ARCHITECT
Saavedra Gehlhausen Architects
Rockford, IL

CLIENT
Hinsdale United Methodist Church
Hinsdale, IL

GENERAL CONTRACTOR
Frederick Quinn Corporation
Addison, IL

STRUCTURAL ENGINEER
Hanson Professional Services Inc.
Rockford, IL

PHOTOGRAPHY
McShane Fleming Studios
Chicago, IL

Daniel Saavedra
Rockford, IL

INTERIOR BEAUTY OF WOOD Award

Lost Dunes is an award-winning private 18-hole golf club carved into a breathtaking setting of forests and spectacular dunes rising above the adjacent Lake Michigan beach.

Lost Dunes Golf Club

Chipman Adams Architects Inc.

Set upon 191 acres, the site lies just at the edge of Lake Michigan in the famed Harbor Country resort area which caters to an upscale Chicago market. Buoyed by the success of a growing private membership since opening in 1999, the client required an expansion. The goal was to enhance the clubhouse and its facilities to accommodate the much needed additional services and amenities for the membership.

Design studies explored a two-level 5,000-sq.ft. addition, focusing on solutions that kept with the original character of the club and maintained continuity and flow with the initial plans.

The pristine, forested setting called for an array of woods in the materials palette. The design aesthetic took the tone already established by the existing wood structures, and moved forward with a seamless solution that responded to the growing recreational needs of the private membership.

Lost Dunes' dining and gathering spaces have always been a jewel of the clubhouse. Both the formal and casual dining areas were enhanced with the addition of expansive decking and a stairway to the putting green. The entirely new outdoor dining space overlooks the course's finishing holes and is accessed through four-foot automatic sliding glass panels off the mixed grill and bar. The club's Pro Shop opens onto the new covered space beneath the deck, offering members combined al fresco dining capability of 80 seats.

Catering to its discerning membership, the redesign of the club's locker rooms allowed the men's and women's

rooms to each gain nearly one-third additional space with the women's locker room updated through a complete renovation. The lower-level addition houses expanded cart storage and outdoor accessible restroom facilities at the turn.

Overnight guest accommodations were added with the design and construction of a new third cottage that hosts four double guest suites. Each suite is complete with kitchen, bar, entertainment system and games room. The outdoor deck of this newest cabin overlooks the course's lakes and is named the Mike Ditka Cabin after the famous Chicago Bears Coach who is a club member.

The beauty of the 2009 Lost Dunes addition is its seamlessness. The new spaces appear to have always been part of the dune and wooded site.

From exquisite interior wood finishes to the exterior masonry stone base and cedar siding, this private club offers its membership an unparalleled recreational experience. The design solutions proposed a fitting response to the spectacular nature of the site, and complemented the palette of the surrounding forests and dunes. Woods used in the interior design expanded upon the traditionally designed exposed wood trusses, creating combinations that played off the different types of woods, color stains and varying textures throughout.

Beyond the natural beauty of the materials, durability and ease of maintenance were features that enhanced the design choices made. As a testament to the setting of the project, local and regional wood materials and fabricators were brought together to create project finishes of the highest calibre. The completed Lost Dunes 2009 addition stands as a meaningful design illustration of the outcomes that are attainable by using a variety of woods and finishes.

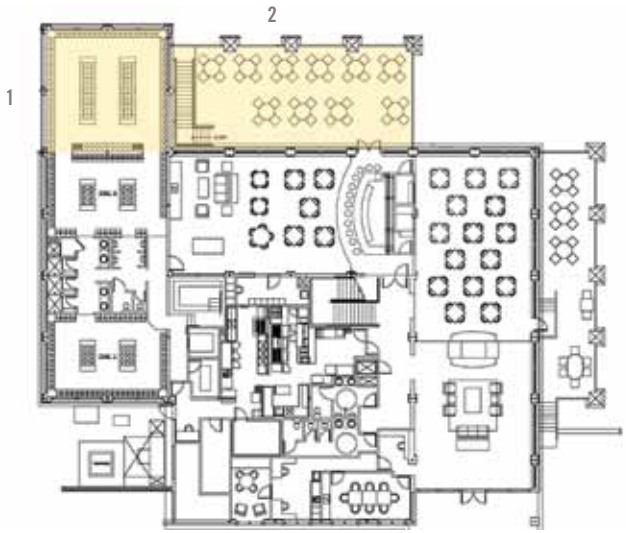
CLIENT
Lost Dunes Golf Club
Bridgman, MI

ARCHITECT/DESIGNER
Chipman Adams Architects Inc.
Park Ridge, IL

ENGINEER
C.E. Anderson & Associates
Chicago, IL

GENERAL CONTRACTOR
Kern Construction
Tinley Park, IL

PHOTOGRAPHY
John Shelves, Summit Studios Inc.
Roselle, IL



MAIN LEVEL FLOOR PLAN

1. men's locker room addition
2. deck addition
3. cart storage addition
4. women's locker renovations

LOWER LEVEL FLOOR PLAN

OTHER AWARDS

CANADA

Alberta

ARCHITECT AWARD
Barry Gowling
Gowling & Gibb Architecture
www.gowlingandgibb.com

INDUSTRY CHAMPION
Ben Sawatsky
Spruceland Lumber
www.spruceland.ca

ENGINEER AWARD
Gordon Vetro
Walters, Chambers & Associates
www.walterschambers.com

British Columbia

ARCHITECT AWARD
Darryl Condon
Hughes Condon Marler Architects
www.hcma.ca

ENGINEER AWARD
Paul Fast
Fast + Epp Structural Engineers (for Kingsway Pedestrian Bridge)
www.fastepp.com

PREMIER'S WOOD CHAMPION AWARD
Kalesnikoff Lumber Company Ltd.
www.kalesnikoff.com

Ontario

ARCHITECT WOOD ADVOCATE AWARD
Levitt Goodman Architects
www.levittgoodmanarchitects.com

ENGINEER WOOD ADVOCATE AWARD
David Moses
Equilibrium Consulting Inc.
www.eqcanada.com

WOOD CHAMPION AWARD
Leszek Muniak
Larden Muniak Consulting Inc.
www.lardenmuniak.com

UNITED STATES

California

ENGINEERING AWARD

Brandow and Johnston Inc.

www.bjsce.com

Southeast

ENGINEERING AWARD

Bulla Smith Design Engineering

YMCA Camp Thunderbird Duke Energy Pavilion

Lake Wylie, SC

www.bullasmith.com

North-Central

ENGINEERING AWARD

MBJ Consulting Engineers

George K. Brushaber Commons, Bethel University

Arden Hills, MN

www.mbjeng.com

ALSO BY CANADIAN WOOD COUNCIL:

Wood Design Awards 2008-09
ISBN 978-0-9783213-2-1

Wood Design Awards 2007
ISBN 978-0-9783213-1-4

Wood Design Awards 2006
ISBN 978-0-9783213-0-7

Wood Design Awards 2005
ISBN 0-9739122-0-0

Wood Design Awards 2004
ISBN 0-929112-52-0

Wood Design Awards 2003
ISBN 0-929112-50-4

Wood Design Awards 2002
ISBN 0-929112-49-0

For additional information:
Wood Design & Building Awards, www.wooddesignandbuilding.com
Canadian Wood *WORKS!* Awards, www.wood-works.org
U.S. WoodWorks Wood Design Awards, www.woodworks.org

WOOD DESIGN & BUILDING®
Wood Design & Building Awards

WOOD WORKS! Project of the Canadian Wood Council

WOODWORKS FOR NON-RESIDENTIAL CONSTRUCTION

Wood Design & Building Awards

NORTH AMERICA

Canadian Wood *WORKS!* Awards

ALBERTA

BRITISH COLUMBIA

ONTARIO

U.S. WoodWorks Awards

CALIFORNIA

SOUTHEAST U.S.

NORTH-CENTRAL U.S.

Wood Design & Building
Wood Design & Building Awards

woodworks!
Project of the Canadian Wood Council

WOODWORKS
FOR NON-RESIDENTIAL CONSTRUCTION

CELEBRATING EXCELLENCE IN WOOD STRUCTURES 2009-10 NORTH AMERICAN WOOD DESIGN AWARD WINNERS