

** 2001 National Award Winner for Sustainable Design
AIA Architecture + Energy Program
* 2002 Top Ten Green Buildings Award, AIA*

BANK OF ASTORIA

MANZANITA, OREGON



BUILDING COMMUNITY SUSTAINABILITY

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Community Banking

Nationwide, people are leaving mega-banks and switching their financial transactions to community banks, where available. Why? Impersonal, arbitrary service, unfamiliarity with local conditions, customs, and needs. Skimming the cream of investments and services, and leaving the rest of the community to flounder. Pulling profits, loans, and service out of the community to somewhere they can make more profit with less work. Deceitful shell games with fees to make their services “appear” less expensive than others. Becoming so large it becomes virtually impossible to get even a simple question answered.



So what *is* community banking, what can and does it offer, why are people flocking to it in droves? In part the answer is humanness – local staff, who know and recognize you when you walk in the door. No need to produce twenty pieces of identification to cash a check. Reasonable loan processes. Willingness to develop rules which fit local realities. Preferring to make a reasonable profit from providing you services over many years rather than making a killing foreclosing your loan because a payment was a day late. Having the community’s interest at heart, not just their own profit. Knowing their own well-being depends on that of the community.

From an energetic standpoint, the architecture of banking facilities plays a role in the success of that institution, like any. Everything we build reflects and embodies the values and policies of our institutions. If the institution and its architecture are based on sustainability and life- and community-enhancing values, it will hold a place in our hearts and contribute positively to the energy of community. If it, and the process of designing and building its facilities, are based on greed and exploitation, it will poison the energy of community.



So from a design standpoint, we have to find and work from the positive heart of institutions we house. What is the heart of a bank? Of money? Both are institutions we've developed to simplify the exchanges and repayment of promises and the achievement of our dreams. A bank is a tool for achieving our dreams. Money represents satisfactions from our work which we have postponed, and allowed others to enjoy in the interim. We put money into a bank for security, to save for retirement or college, to buy a house, to put aside for emergencies. We borrow money from a bank that others have placed there, in order to achieve a dream we hold of buying a home, a car, or starting a business. So at heart, a bank is community – sharing and queuing the desires and dreams we hold individually and as community. It is a mechanism for passing energy back and forth, giving of our time and work, so each of us can benefit from the sharing of others. It is *community* – barn-raising for each of us in turn.

Like any institution, banking can become twisted – into the exploitation of community, of depositors and borrowers alike, into the skimming of wealth out of a community, of favoring and abetting certain individuals and social classes. Our own community serves as an example as well as any. It has been served for the past twenty years only by a branch of a single mega-bank – a bank whose record has been abysmal. Although required by law to reinvest within a community, the bank has been in blatant violation of the law since it opened, and local reinvestment has been virtually nil. People pay a sizeable fee to have a loan application processed, then turned down. *Not* making loans has become as much a “profit center” as making loans.

The local fire department asked the bank for a loan, backed by a just-passed serial levy, so emergency equipment could be purchased and available immediately. Approved? Of course not. A homeowner, with an existing mortgage from the bank on their house, requested a loan for an addition. Refused. Reason? A *local* contractor was used, none of whom, of course, could meet the bank's big-city, big-business criteria. Were local firms used to build the local branch? Guess again. The local branch staff was even required to remove a historical photograph of the area which had been hung in the building. Almost any local business or resident could add their own stories to the list. The mega-bank president boasted in an interview in the Portland paper a number of years ago what a wonderful “cash cow” his bank was. Read that as how easily they had been able to milk their customers. Now, through mergers, bank headquarters are several *thousand* miles away, service has deteriorated even further, and policies have come to have no relevance to local conditions.



The situation got to the point where a petition was circulated and signed by over 400 people – probably half the adults in our community – requesting a community bank in the neighboring county expand their service to our area. When asked to design the bank building, I found that this bank walked their talk – they wanted a local architect, local builders, local resources, local artists. They wanted their building to honor and contribute to the community, to be built on the principles of community sustainability and well-being. In the resulting building, we can tangibly feel the difference from a conventional “mega-bank”.

From the outside, the building already nestles into its native-plant landscaping. Rainwater is put back into the ground on-site, rather than passed downhill for someone else to deal with. In the process, the rainwater creates something of beauty to be enjoyed, rather than hidden away in pipes.

Inside, there is a feeling of *aliveness* rare in contemporary buildings. It is fully daylight from windows and skylights. The air is fresh from outside, rather than sealed-in and mechanically recirculated. You hear the sound of water, see the shadows of tree branches on the floor and the reflections of light on the pond shimmering on the ceiling. You remain in touch with the trees and clouds and people outside. There is a feeling of aliveness to every detail you see of the building itself – of skill, craft, and love in how every piece comes together with others, of honoring the local materials, culture, and community. Under its surfaces, the building is twice as energy-efficient as Oregon’s already stringent code, reducing the demands placed on others. It is a building that touches and warms the heart, and enhances the life energy of all who use it. This communicates to all who enter that this is a bank of, by, and for the community.

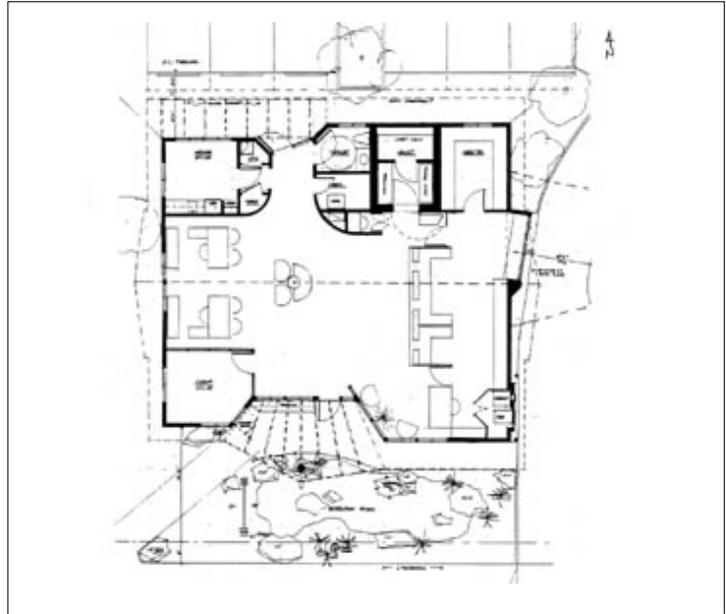
The bottom line on a construction project, like any work we do, is not just the cost of building it, but the net value it gives over its lifetime of use. Two projects may, at completion, have the same monetary cost. But one may carry very different benefits into the future than the other. One may have been planned for minimal operating and maintenance costs, the other not. Builders may leave one project with enhanced skills, an enriched sense of self-confidence, and the knowledge they have contributed something to their community of which even their grandchildren will be proud. They may leave the other with only a paycheck – and older and more worn down from stressful body-, mind-, and spirit-damaging work. One building may cause the people who work in it to look forward to their day, and reduce costs of employee absenteeism and turnover. Other impacts of how different projects are carried out ripple through the community enhancing its vitality or causing it to atrophy. The *intentions* we bring to our work shape secondary impacts which may far exceed the direct benefits sought from the project.

It is all this, not just resource efficiency, which is the heart of sustainability. Places that keep the rivers of love and caring flowing in a community; that weave us all together, aware of what we gain from all the people and life around us; places that touch and nurture our own hearts and spirits. This is truly what the life of a community banks on.

MATERIAL DIMENSIONS OF SUSTAINABILITY

• BUILDING LOCATION

An infill location within the community, rather than an alternative highway strip-development location which had also been under consideration, was made possible by creative site design on an undersized property.



• EXISTING TREES

Existing trees on the site whose removal was required were sold to a local woodworker to be milled for use as interior paneling and trim. Dead, undersized, and damaged trees were sold for firewood.



• RECYCLING EXISTING SITE PLANTS

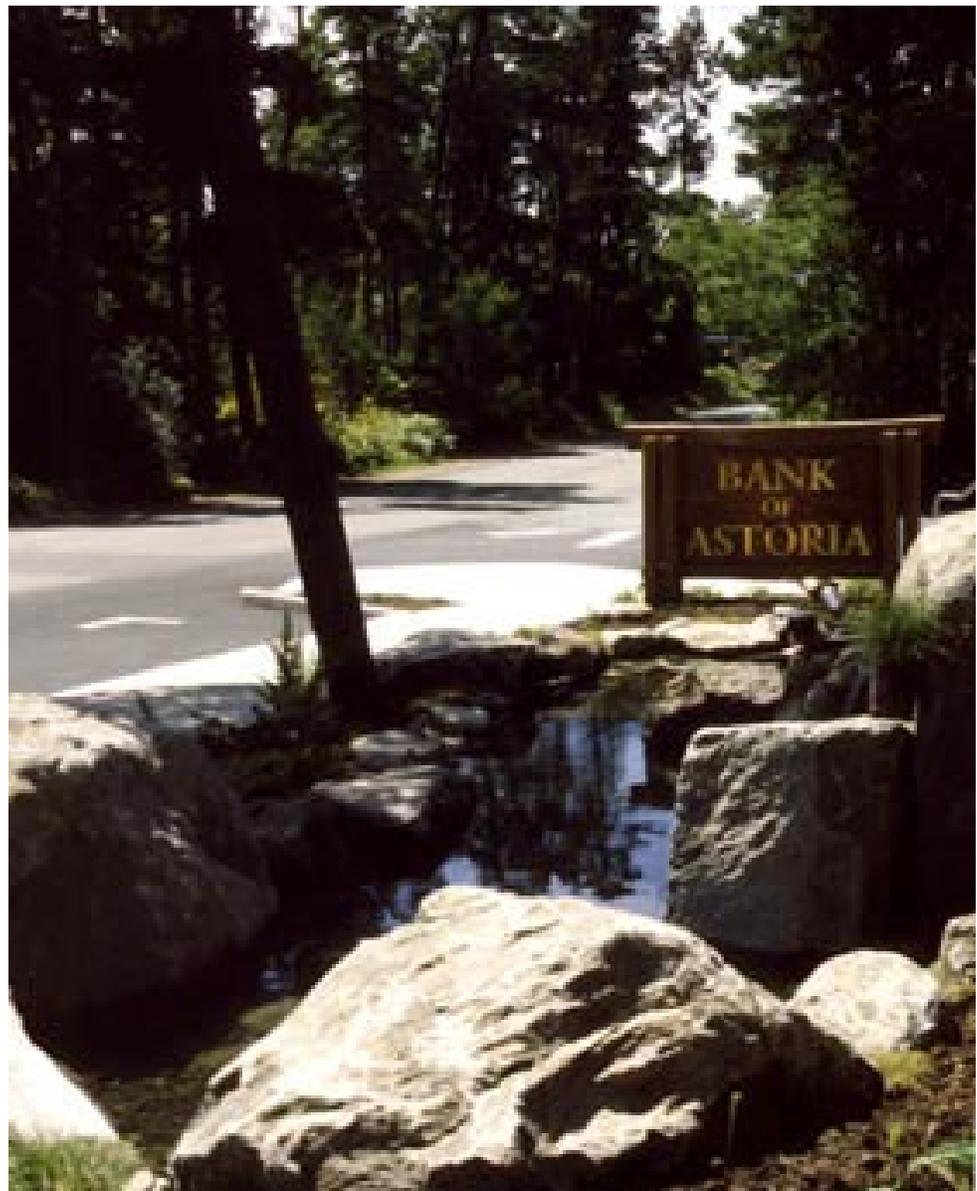
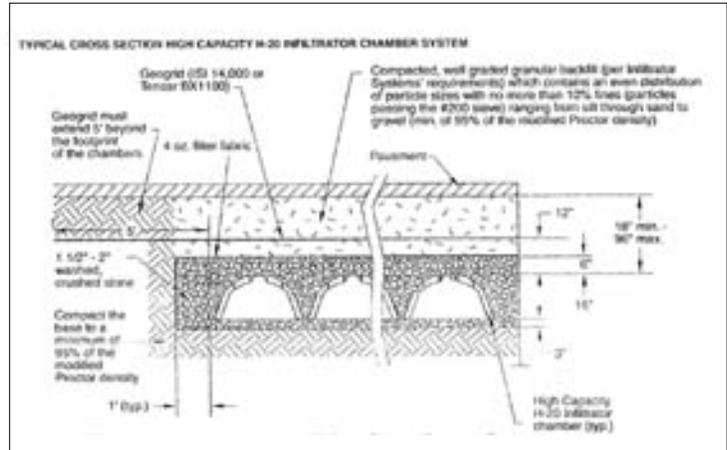
Site preparation for the bank was used as a demonstration project in conjunction with CART[™], a local recycling center, for salvage of native site vegetation where development is occurring for use in landscaping projects elsewhere.



• STORMWATER

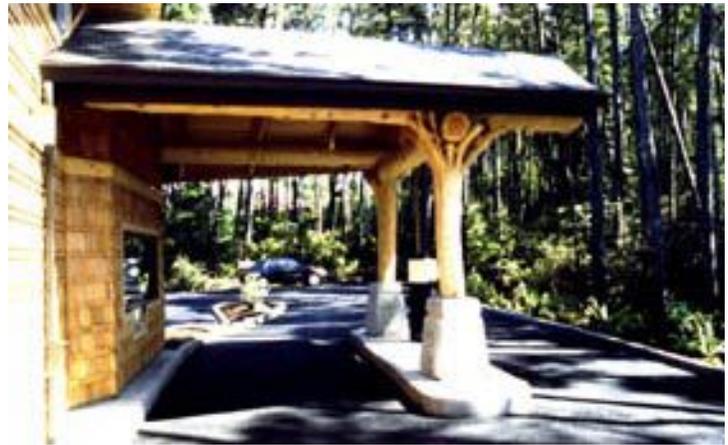
Project criteria included 100% on-site stormwater retention, on a restricted site of less than 84' x 100' with up to 120" of rain a year. Siltation blockage of permeable paving was a concern, which led to two separate demonstration techniques. The first is a prefab plastic infiltration vault system under the drive-thru paving.

In the second system, water from the roof is discharged through a scupper into a landscaping pond for storage and settling before the water is reabsorbed into sand fill below. With the region's high rainfall, stormwater is transformed into something to be celebrated and enjoyed, rather than hidden away in pipes!



- **REDUCING SPACE NEEDS**

Roof-sheltered pedestrian access and drive-thru banking, ATM and night depository, along with electronic connection with the bank's main office, made possible convenient service in an often inclement climate, while achieving reduction in enclosed building space needed.



- **BUILDING ENVELOPE ENERGY EFFICIENCY**

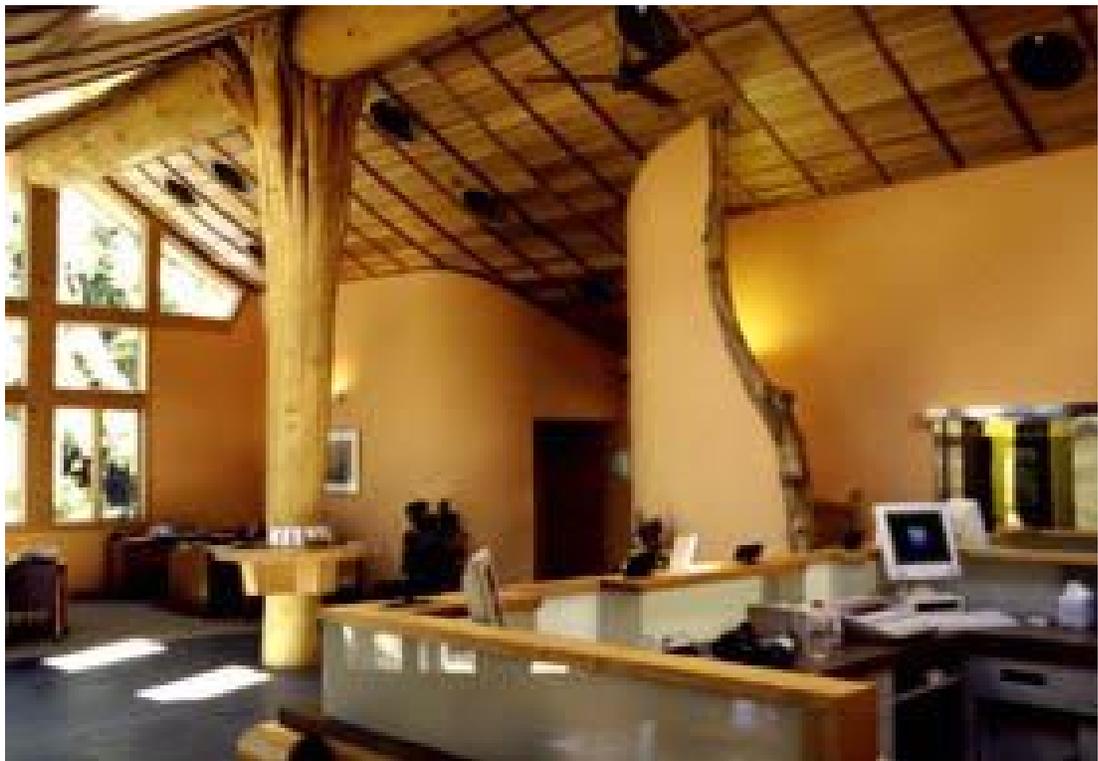
Building envelope efficiency achieved on the project, with R-21 walls, R-38 floors and roof, U.30 windows and U.37 skylights, provides an aggregate of twice the already stringent Oregon code standards for energy efficiency.



- **PASSIVE SOLAR**

Site location and building orientation were taken advantage of to allow south-facing windows and skylights for solar gain. These also provide inviting views into the building and from the building into its entry garden.





- **EQUIPMENT ENERGY EFFICIENCY**

Equipment energy and heat loads in the building were minimized by encouraging highest-rated EnergyStar standards for office equipment plus flat-screen monitors for computers. Those provided a bonus of freeing up several square feet of critical workspace at each installation, as well as helping eliminate need for air conditioning.

- **NATURAL VENTILATION**

Occupant-controlled operable windows in every space provide 100% of ventilation needs. A high-level exhaust vent allows gravity venting of hot air from the building and maintains interior air temperatures at comfortable levels.



- **ELIMINATING AIR CONDITIONING**

The bank's coastal location has normally cool nighttime summer conditions. With reduced heat loads from lighting and equipment, a night-flushing ventilation system using a high-level exhaust vent (wood louvers in photo) allows pre-cooling of the building with cool nighttime air, eliminating need for air conditioning.



- DAYLIGHTING

Except for the interior of the bank vault, the building is 100% naturally daylit. With automated dimming controls and occupancy sensors on artificial lighting, this is expected to reduce lighting energy use by 75-80% as well as to minimize summer cooling needs.



- HIGH-EFFICIENCY LIGHTING

The electrical lighting system (shown here in “on” position during photocell setting) uses recently developed dimmable compact florescent recessed light fixtures coupled with advanced photocell controls to maintain desired lighting levels without fluctuation from sunny to cloudy conditions, while maximizing daylighting and minimizing use of artificial lighting energy.

- EFFICIENT MATERIAL USE

Structural floor joists and rafters were wood-flanged engineered trusses to minimize material use. The steel-webbed roof truss design allows flexibility in curvature and configuration of the trusses by slight altering of pin location connecting the steel webs to the flanges. Finger-glued chords permit use of short sections of lumber and removal of knots which would have downgraded the structural capacity of the wood. Wall framing was advanced framing with 2x6 @ 24” o.c.



- LOCAL MATERIALS - SHINGLES

Exterior wall shingles were obtained from a local cedar shingle mill - the last of one-time 200+ mills in this county alone. Sourcewood is primarily salvage from previously downed and abandoned logs and in-stream recovery.



- LOCAL MATERIALS - ROUNDWOOD

Roundwood (from within 25 miles of the site) was employed for primary wood framing elements. The architect participated in a State Economic Development project to demonstrate local wood grading certification to develop local markets for small mills using local woodlots. Using "non-straight" and previously unmarketable timber encourages use of local resources. Other framing wood came from within an approximate 100 mile radius of the site.



- LOCAL PRODUCTS

All cabinetry and partitions in the building with the exception of teller steel were built locally, largely from local materials. Eighty-five percent of the county the building is located in is part of the world's most productive timber-growing area. We sought to honor both the material and the people who work with it.

- **NATURAL AND RECYCLED -CONTENT MATERIALS**

Wherever possible, minimally processed, non-toxic, and recycled-content materials were employed inside the building, including driftwood posts and door handles, natural linoleum and slate flooring, low-toxicity paints and wood finishes, recycled desks and carpet pads.

- **LIVING ROOFS - MOSS**

The building is designed to incorporate a living moss-covered roof surface grown on conventional composition roof shingles - a uniquely appropriate form of "living roof" for this particular climatic region. Testing is still in process at the time of writing, and efforts are underway to work with a regional roofing manufacturer to make the product available on a commercial basis.



- **NATIVE PLANT LANDSCAPING**

Landscaping on the project is locally-sourced native coastal plants, which require no irrigation after the first season, and which restore and strengthen the local ecosystem.

Compost used as a soil amendment for the landscaping is a new commercial product produced by a local excavator from yard debris collected from local recycling centers.



• CONSTRUCTION DEBRIS RECYCLING

The project contractor and architect have been team members with the local recycling center for developing job-site recycling for construction projects. All cardboard, scrap wood, scrap metals, sheetrock, etc. were kept segregated and delivered to the center. Size-sorting of scrapwood during framing allowed easy on-site reuse for blocking and other applications, minimizing total scrap. Small scrapwood is bundled and sold by the recycling center to campers at the State Park. Cedar shingle and exterior trim scraps were given to a local craftsperson who makes birdhouses.



• FULL USE OF RESOURCES

The cedar tree used for the central post in the building was debarked on site and the stripped bark given to local artists as a raw material for basket making and other art products.



• EFFICIENCY RESEARCH

Several material and energy efficiency possibilities were impossible to include because of timing and geography, but were developed to the point of future use:

- * LOW ENERGY CONCRETE - substitution of 50% fly ash cement, reducing embodied energy by a similar amount.

- * LED lighting - fixtures remain about two years from availability, but will reduce interior lighting energy use significantly.

- CLAY ALIZ WALL FINISHES - Interior wall finishes using local clays.



COMMUNITY DIMENSIONS OF SUSTAINABILITY

• COMMUNITY BANKING

The Bank of Astoria is a commendable example of community-supportive banking – ranking 5th in the nation in percentage of deposits reinvested in the local community. That reinvestment supports the health and growth of local businesses rather than large-scale businesses taking profits out of the community and often insensitive to local needs.



• COMMUNITY ECONOMIC DEVELOPMENT

Construction of the bank itself was planned to demonstrate good community economic development. Local architects, engineers, contractors and materials were used. Opportunities which arose during construction were used to spin off new developments. A local tree service, portable sawmill owner, and a carpenter-boatbuilder on the project have teamed up to mill disease-killed Port Orford cedar trees for sale to wood boatbuilders. Networks of small mill owners, timber graders, crane operators and timberframers have come together to better utilize local resources.



• COMMUNITY DESIGN

The project initiated and coordinated installation of the first stage of underground utility distribution lines on the city's main street sought by the community. This was desired both to improve esthetics for tourism and residents and to reduce power outages and utility worker hazards during winter storms.

- **COMMUNITY ART**

As well as incorporating the work of local artisans in the building construction, provision has been made in the building for a rotating exhibit to honor local artists and increase their exposure to the community and visitors.

- **HONORING COMMUNITY**

The willingness of the Bank to invest in a community by creating a facility which honors it, its natural community and resources, and the way of life which emerges out of that wholeness stands witness to its community-supportive goals in its own operation as well as in its reinvestment of depositor's funds.



- **ENRICHING PEOPLE RESOURCES**

People are one of the greatest elements of wealth and energy in a community. Investment in enriching existing local skills, traditions, values, sense of their ability to achieve, and community self-esteem on the human level was a prime goal of this project. New skills developed in this project enrich the possibilities and ease of accomplishment of future projects.

SPIRITUAL DIMENSIONS OF SUSTAINABILITY

• FULFILLING WORK

Work which employs and deepens our skills and which leaves tangible examples for our communities of what can be achieved through full use of our personal abilities enriches both us and our community. The interactive energy of work can leave us either fulfilled or empty. Every worker on this project left with new skills, a new sense of self-confidence and of personal and group achievement.

• HEALING DISEASES OF THE SPIRIT

The core of sustainability is spiritual. Diseases of the spirit – lack of self-esteem, mutual respect, meaning in our lives, or being of value to our community – are endemic in our culture. Their healing requires we honor and nurture the emotional and spiritual well-being of all Creation. It requires open hearts; honoring the elements and forces of nature, the rhythms and cycles of life, the users of a place, and all of life. All work done with reverence enhances health and well-being.



• RITUALS OF BUILDING

Construction, and the process of getting a project underway and completed, can become quite hectic and stressful. As a means of clarifying and focusing energy and intention of participants in the project, traditional ceremonies associated with various phases of construction were reinstated. Here, bank officers joined the contractors and architect in a “foundation” ceremony prior to pouring the footing for the center post of the building.

• ENERGETICS OF PLACE

Buildings reflect clearly both the values and the life-force (*chi*) energy put into their making. Most simply put, a building created as this project was is filled with life and nurtures those using it.

Sunlight, open windows, ocean breezes; the sound of moving water, the scent of plants and cedar; the feel of natural materials and the touch of creative work with them; and the intention to make a good place *does* create a place that warms our hearts.

Walking into such a building gives a powerful contrast to the energy of most commercial structures built today. Its “energetics of place” is an element of sustainability long missing from our surroundings, and one which deepens our connection with all life.

A building which is even more magical in the worst weather is one we know is in harmony with its world.



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