



Client/Developer: Puyallup Nation Housing Authority
 Design Architect: Daniel Glenn, AIA, NCARB
 Architecture Firm: Environmental Works
 Contractor: Puyallup Nation Housing Authority and Marpac

Civil Engineer: Haozous Engineering
 Structural Engineer: Malsam Tsang Engineering Corporation
 Landscape Architect: Thomas Rengstorf & Associates
 Partner: Ecotope

MAY 2009
Community design

JULY 2009
Funding application

MAR 2010
Completion of schematic design

MAY 2010
Construction starts on housing

NOV 2010
Construction starts on rec center

AUG 2011
Completion of rec center

MAR 2012
Housing occupied



Photo: Tucker English

CULTURAL FORM

Place of Hidden Waters represents culturally and environmentally responsive new housing for the Puyallup Tribe in the Pacific Northwest, one that achieved Leadership in Energy and Environmental Design (LEED) for Homes Platinum certification. The project is located on traditional Puyallup tribal lands on a hill overlooking the Puget Sound tidal flats. The design emulates the rectangular, shed-roofed form of a traditional Coast Salish longhouse, using a variation of the modern townhouse courtyard.

CORE PROJECT EMPHASES:



LESSONS LEARNED

- Affordable tribal housing can achieve LEED Platinum certification and be a national housing model.
- Resident and staff participation in the design process was a critical ingredient to the project's success.
- Careful study of historic precedents can provide inspiration for modern living.

BEST PRACTICES

- An integrative process was key to the design from the beginning, following the requirements for LEED for Homes.
- The vision for the project came from engagement among the housing authority, community, and architect. The Project was developed through careful site evaluation, historic precedents, and green building goals.
- Consistent project leadership by housing staff allowed for continuity.

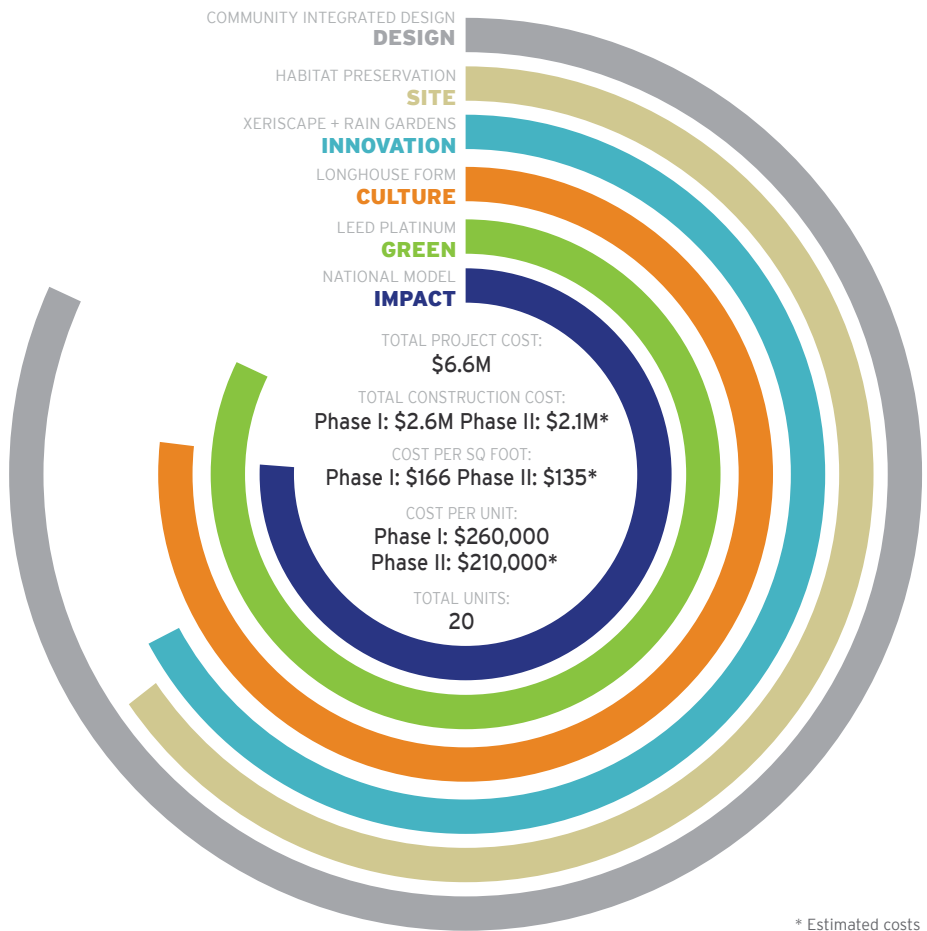


Photo: Tucker English



Multifamily



Northwest





PLACE OF HIDDEN WATERS

CONTEXT

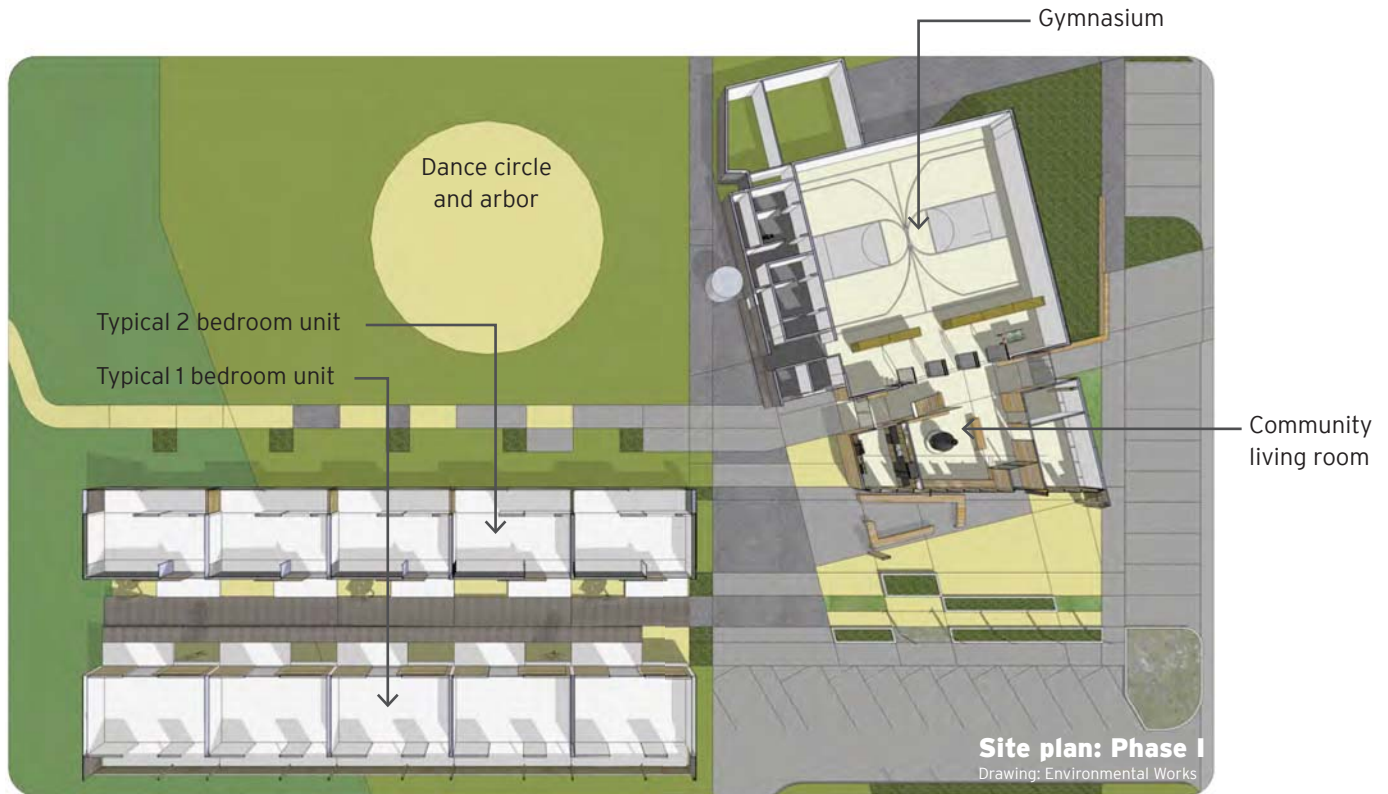
Located near the city of Tacoma, the project lies between a mid-century, single-family development and a forested habitat corridor. The site is 75 percent flat, giving way to a gently sloping, big leaf maple forest and dropping steeply toward the west into a seasonal creek called Julia's gulch. The gulch feeds into Commencement Bay via the Hylebos Waterway, which historically is one of the most productive salmon runs in the state of Washington. It was critical that the project have no negative impact on this important habitat.

INNOVATION

The residential buildings are sited along an east-west axis to allow for prevailing summer breezes and for passive solar heating/cooling. It was initially designed with a "solar-ready" roof design for future installment of a photovoltaic array (to be installed in phase two). This design, combined with the installation of ground-source heat pumps, is targeted to yield a zero-energy building. (Phase two does not use ground-source heat pumps.)

DESIGN

Of the three buildings in the newly developed area, two are 10-unit townhouse clusters designed to emulate the traditional Coastal Salish "longhouse" in which multiple families shared a single long building and a shared linear gathering space. The one- and two-story townhomes face a central, partially covered courtyard, with an orientation that maximizes natural light, views, and cross-ventilation in every room. On the south side are five one-story, one-bedroom homes, designed for seniors or disabled residents as fully accessible units. On the north side are two-story, two-bedroom homes for small families. The shed roof is partially open to the spaces below, adding height and daylight to the homes. The newly renovated and expanded gymnasium building is located between the two developments, with new community rooms, a kitchen, and office space. A "community living room" with a gas fireplace serves as an informal meeting space for storytelling and conversation.



SITE

The project site is located in a wooded, suburban area adjacent to 27 units of Puyallup Nation Housing Authority (PNHA) rental townhouses built in the 1980s. The site originally included an abandoned youth home and a deteriorated gymnasium. The wooded area is sloped, overlooking the Puget Sound tidal flats, with a wildlife corridor on the lower slope, which has been redeveloped with a nature trail leading to a sweat lodge area. Rain gardens and native plants help to provide a natural setting, minimize irrigation, and protect the Puget Sound from runoff. The site amenities include a dance arbor, playground, salmon-bake pit, sweat lodge area, and walking trail.



Salmon bake pit



COMMUNITY PROCESS

Resident and staff participation in the design process was a critical ingredient in the project's success. Design workshops were held in the old gymnasium, and residents were invited to give input. Additional design meetings with maintenance and operations staff were held at the Puyallup Nation Housing Authority (PNHA) offices. Residents and staff also helped to deconstruct the abandoned youth home and clean the wooded site.

LEED

An integrative design process was key to the design from the beginning and also met the LEED for Homes requirements. An interdisciplinary green charrette was held at the outset, which included the full design team and PNHA staff. Agreement was made to pursue a LEED for Homes Platinum certification, if it could be achieved within the budget. This early decision helped to guide the process from the beginning and brought the design team, contractors, construction manager, and staff together to achieve this goal.



Shed style frame, Lummi Washington



Daylight from above, Chinook



Shed style longhouse interior, Klallam Salish



Photo: Tucker English



Photo: Tucker English

CULTURE

The housing and the community center designs emulate the traditional multifamily cedar plank longhouses of the Puyallup Tribe, a housing type common throughout Pacific Northwest Salish tribes. Multiple families were housed in linear shed-or gable-roofed structures sharing a long, central, linear gathering space with sleeping spaces on either side. This design was redefined in this project in contemporary terms as a linear courtyard, partially covered, with townhomes lining either side. The courtyard, like the longhouse, creates a shared common area and protected entry area, which is intended to encourage community interaction, provides safe play space for children, and ensures greater security for each family. Like the longhouse, Place of Hidden Waters is designed as a single, repeatable modular structure. The existing gable-roofed, cinder-block gymnasium was renovated and extended to the south, emulating the way longhouse structures were added onto for additional families. A community living room, with its own fireplace, offices, kitchen, and activity rooms are housed in this two-story addition to the gym. A salmon-bake fire pit on the south-facing community front porch is used for traditional salmon bakes. A nature trail leads to a site for a sweat structure in a wooded park to the west.



PLACE OF HIDDEN WATERS

INNOVATION

The project was managed and built by tribal members—force-account labor crews from the Puyallup Nation Housing Authority (PNHA) combined with an experienced construction manager who developed training apprenticeships. The contract documents were divided into two separate bid packages to facilitate this training component, with the community center, gymnasium, site redevelopment and infrastructure under one contract, and the vertical construction of the housing, built by the PTHA crews, under another contract. The housing features Structural Insulated Panel (SIP) construction, which facilitated rapid construction and assured a very tight building envelope. Tribal workers were trained in SIPs technology and installation. The modular design allowed for the crews to learn on the first units and speed up production on the rest of the development.



VISION

The design evolved from concept through construction, integrating a community process in which the vision for the project came from engagement with the client and the community, with careful study of historic precedents and culture and with analysis of the site and its challenging opportunities.



“ This project is not only protecting mother earth, it is transforming lives. The design encourages community interaction. Our tenants are gardening, cooking, learning, praying, and living in concert together, like we have done for generations. - Annette Bryan, PNHA ”

LESSONS LEARNED / CONCLUSION

This project provides a strong example of sustainable and culturally-responsive housing. For centuries, the Coastal Salish people lived in cedar plank longhouses in the Pacific Northwest. Ideal for a rainy climate, this compact, multifamily dwelling type also reduces environmental impact. The project type also provides a highly communal environment, although there was concern that perhaps it was “too” communal for today’s tribal people, who are accustomed to a more individualized contemporary lifestyle. Interviews with current residents, however, demonstrate that the typology has been well received by the residents however, demonstrate that the design has been well received. Place of Hidden Waters also proves that a tribal project can be a model for green housing nationwide, even beyond tribal housing. The project received the Project of the Year Award by LEED for Homes as well as recognition through the 2013 Social Economic Environmental Design (SEED) Awards, the 2011 Excellence in Affordable Housing Award, and locally through a Tacoma Pierce County Housing Consortium for Sustainability award.

