

PREPARED STATEMENT OF THE HONORABLE RUSSELL SOSSAMON,
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NATIONAL AMERICAN INDIAN HOUSING COUNCIL

TO THE UNITED STATES SENATE,
COMMITTEE ON INDIAN AFFAIRS
AND THE
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS

INNOVATIVE SOLUTIONS TO ADDRESSING HOUSING NEEDS IN TRIBAL COMMUNITIES

August 25, 2010
Field Hearing, Rapid City, South Dakota

Introduction

Good morning, Chairman Dorgan, Chairman Dodd, Vice Chairman Barrasso, Ranking Member Shelby, and distinguished members of the United States Senate Committee on Indian Affairs (SCIA) and the Senate Committee on Banking, Housing, and Urban Affairs. My name is Russell Sossamon and I am the Treasurer of and a member of the Board of the National American Indian Housing Council (NAIHC), the only national tribal non-profit organization dedicated solely to advancing housing, physical infrastructure, and economic development in tribal communities in the United States. I am also an enrolled member of the Choctaw Nation of Oklahoma and the Executive Director of the Choctaw Nation Housing Authority in Hugo, Oklahoma.

First, I want to thank the Committee for holding this field hearing in Rapid City, South Dakota, the heart of Plains Indian Country -- an area that is deeply affected by the lack of resources to build and maintain adequate, safe, and affordable tribal housing. It is my honor to be here to present testimony on behalf of tribal communities across the nation.

Background on the National American Indian Housing Council (NAIHC)

The NAIHC was founded in 1974 and has, for 36 years, served its members by providing valuable training and technical assistance (T&TA) to all tribes and tribal housing entities; providing information to Congress regarding the issues and challenges that tribes face in terms of housing, infrastructure, and community and economic development; and working with key federal agencies in an attempt to address such issues and meet such challenges. The membership of NAIHC is expansive, comprised of approximately 271 members representing more than 463¹ tribes and tribal housing organizations. The primary goal of NAIHC is to support

¹ There are approximately 564 federally-recognized Indian tribes and Alaska Native villages in the United States, all of whom are eligible for membership in NAIHC. Other NAIHC members include state-recognized tribes that were

tribal housing entities in their efforts to provide safe, quality, affordable, and culturally relevant housing to native people.

Brief Summary of the Challenges Regarding Housing in Indian Country

While the country has been experiencing an economic downturn in general, this trend is greatly magnified in tribal communities. The national unemployment rate has risen and has hopefully passed its peak at an alarming rate of nearly 10 %;² however, that rate does not compare to the unemployment rates in Indian Country, which average 49 %.³ The highest unemployment rates are right here in the Dakotas, on the Plains reservations, where the **average** unemployment rate is 77 %.⁴

Because of the remote locations of many reservations, there is a lack of basic infrastructure and it is often difficult for tribes to identify and pursue economic development opportunities. As a result, the poverty rate in Indian Country is exceedingly high at 25.3 %, nearly three times the national average.⁵ These employment and economic development challenges exacerbate the housing situation in Indian Country. Our first Americans face some of the worst housing and living conditions in the country and the availability of affordable, adequate, safe housing in Indian Country falls far below that of the general U.S. population.

- ❖ According to the 2000 U.S. Census, nearly 12 % of Native American households lack plumbing compared to 1.2 % of the general U.S. population.
- ❖ According to 2002 statistics, 90,000 Indian families were homeless or under-housed (meaning over-crowded).
- ❖ On tribal lands, 28 % of Indian households were found to be over-crowded or to lack adequate plumbing and kitchen facilities. The national average is 5.4 %.
- ❖ When structures that lack heating and electrical equipment are included, roughly 40 % of reservation housing is considered inadequate, compared to 5.9 % of national households.
- ❖ Seventy percent of the existing housing stock in Indian Country is in need of upgrades and repairs, many of them extensive.
- ❖ Less than half of all reservation homes are connected to a sewer system.

There is already a consensus among many members of Congress, U.S. Department of Housing and Urban Development (HUD), tribal leaders, and tribal organizations that there is a severe housing shortage in tribal communities; that many homes are, as a result, over-crowded; that

deemed eligible for housing assistance under the 1937 Act and grandfathered in to the Native American Housing Assistance and Self-Determination Act.

² See <http://www.bls.gov/news.release/empsit.nr0.htm>.

³ Bureau of Indian Affairs Labor Force Report (2005).

⁴ Many of these reservations are here in the state of South Dakota, which, ironically, has one of the lowest unemployment rates in the nation. On some SD reservations, the unemployment rate exceeds 80%.

⁵ United States Census Bureau, *American Indian and Alaska Native Heritage Month: November 2008*. See <http://www.census.gov>.

many of the existing homes are in need of repairs, some of them substantial; that many homes lack basic amenities that many of us take for granted, such as full kitchens and plumbing; and that at least 200,000 new housing units are needed in Indian Country.

The Native American Housing Assistance and Self-Determination Act

In 1996, Congress passed the Native American Housing Assistance and Self-Determination Act (“NAHASDA”) to provide federal statutory authority to address the above-mentioned housing disparities in Indian Country. NAHASDA is the cornerstone for providing housing assistance to low-income Native American families on Indian reservations, in Alaska Native villages, and on native Hawaiian Home Lands. Since the passage of NAHASDA in 1996 and its funding and implementation in 1998, the Indian Housing Block Grant (“IHBG”), the primary funding component of NAHASDA, has been the single largest source of funding for housing for Native Americans on reservations and in Alaska Native villages. Administered by the Department of Housing and Urban Development (“HUD”), NAHASDA specifies which activities are eligible for funding.⁶ Not only do IHBG funds support new housing development, acquisition, rehabilitation, and other housing services that are critical for tribal communities; they cover essential planning and operating expenses for tribal housing programs. Between 2006 and 2009, a significant portion of IHBG funds, approximately 24 %, were used for planning, administration, housing management, and services. Without critical federal funding, many tribal housing authorities would be unable to operate.

Despite the positive developments in federal law and the impact of NAHASDA, the funding it provides is plainly and simply insufficient to meet the existing and, in fact, growing housing need in our tribal communities. While NAHASDA funds are immensely appreciated by tribes and are tremendously helpful in beginning to meet tribal housing needs, they have never, in the history of the program, been sufficient to meet all of the basic housing needs of Indian tribes or to accomplish the purposes for which NAHASDA was designed. Like many government programs, it is consistently and continuously underfunded. Therefore, tribes have been forced to think outside of the box and come up with unique and innovative tools to meet the housing needs in their communities.

Innovative Tribal Housing Programs

Out of sheer necessity and in the interest of promoting tribal self-determination and self-governance, tribes across the nation have begun developing innovative programs that complement NAHASDA programs in order to meet the tremendous housing backlog in Indian Country. Such developments generally fall into two categories: financing innovations and actual program or housing development innovations. I will offer examples of innovations in each category in my testimony for the Committees’ review and consideration.

⁶ Eligible activities include but are not limited to down-payment assistance, property acquisition, new construction, safety programs, planning and administration, and housing rehabilitation.

Financing Innovations

PROBLEMS WITH TRIBAL ACCESS TO TRADITIONAL HOME FINANCING OPTIONS

As recently as a little over a decade ago, few lenders made mortgages on Indian reservations.⁷ Mortgages on reservations are complicated by various issues, particularly land title status. On many reservations, land is held in trust by the United States for the benefit of the tribe as a whole or for the benefit of an individual tribal member. The lack of ownership of the full “bundle” of property rights, otherwise known as fee simple absolute title, has long been a deterrent to real estate investment in Indian Country. Therefore, the market functions differently in Indian Country than it functions anywhere else in the country. Much like the afore-mentioned economic factors, the mortgage and real estate investment factors that plague the rest of the country are greatly magnified in tribal communities.

During a five-year period in the 1990s (1992 – 1996), a Government Accountability Office (GAO) study could find just 91 mortgages made on the more than 300 reservations that constitute United States Indian Country. Those 91 mortgages were made to members of two tribes, the Tulalip in Washington state and the Wisconsin Oneida, which had forged relationships with local banks. Though the numbers improved by 1999 to approximately 471 mortgages that were closed in Indian areas, the average was still less than one per federally recognized tribe. Now, eleven years later, the situation is not much different.

Since the mortgage peak in 2005, mortgages to native people, one of the most under-served if not the most under-served population in the country, have fallen by more than two-thirds, according to data collected pursuant to the 2008 Home Mortgage Disclosure Act.⁸ This is due, in large part, to the lack of a traditional mortgage market in Indian Country. During the past few decades, a majority of the mortgages extended to tribal members were underwritten by “subprime” lenders. Because of the current mortgage crisis, the subprime lending market has virtually ceased to exist and, as a result, the number of mortgages extended to tribal members has dropped dramatically. The stark reality is that loans to Native Americans went from \$51.6 billion in 2006, just after the real estate market peak, to barely \$17.5 billion in 2008.⁹

UNITED STATES HOUSING AND URBAN DEVELOPMENT SECTION 184 INDIAN HOME LOAN PROGRAM

The HUD Section 184 program is a mortgage loan product designed to resemble a conventional, or private, housing loan program. There are no income limits for the Section 184 program. Initially, the program gained acceptance in areas such as Oklahoma and Alaska, where much of the property in Indian areas has passed out of trust status and into “fee” status, meaning that

⁷ <http://www.indiancountrytoday.com/living/80707512.html>, 1/8/2010.

⁸ This includes mortgages made to Native Americans both on and off reservations, as the study did not distinguish between the two. *Id.*

⁹ *Id.*

the federal government no longer holds title to the individual parcel for the benefit of the individual tribal member. Over time, the program has gained some traction on trust lands. Because the Section 184 Indian Home Loan program is guaranteed by the federal government, the program has provided much-needed access to capital to many individual natives that might otherwise find home financing difficult. The Section 184 program is the most successful Indian Country mortgage program. However, it should be noted that fewer than 20 % of the Section 184 loans made to tribal members have been made on tribal trust or individual allotment land. Of the 11,000 Section 184 loans, 9,034 have been made on fee simple land. More than half of these loans have been made in Alaska and Oklahoma, and nearly all of them were made on fee simple land rather than trust land.

TITLE VI TRIBAL HOUSING ACTIVITIES LOAN GUARANTEE PROGRAM

Under Title VI of NAHASDA, HUD is authorized to guarantee notes or other obligations issued by Indian tribes, or tribal housing entities, if approved by the tribe, for the purpose of financing affordable housing activities as described in Section 202 of NAHASDA. Eligible borrowers must be a tribe or a tribal housing entity that is an IHBG program recipient. IHBG funds may be used as security for the guarantee or other obligation. The objectives of the program are to enhance the development of affordable housing activities, increase access to capital to further economic growth, and encourage the participation, in the financing of tribal housing programs, of financial institutions that do not normally serve tribal areas.

CREATING A NON-PROFIT TO ENHANCE ACCESS TO FUNDING OPPORTUNITIES

Some tribes, such as the Ho-Chunk of Wisconsin, have formed 501(c)(3) non-profit corporations for the purpose of establishing an independent housing agency that could access additional sources of housing funding. For NAHASDA purposes, tribal departments and governments must endorse the 501(c)(3) concept. The structure of any housing entity has pros and cons; non-profits are no different. Pros include organizational autonomy, enhanced non-profit relationships, flexibility of leveraging and financing, a limitation on tribal liability, being able to serve as a housing developer, and the ability to receive tax-free donations. Cons may include less financial support from the tribe, fewer educational opportunities, a lessened ability to build capacity, and added paperwork and government scrutiny.

Forming a 501(c)(3) is a multi-step process. First, the concept must be endorsed by the tribe's governing body. Once the concept is sanctioned by the tribal government, a charter must be developed. Once developed, it must be submitted to and approved by the tribe. Once approved and chartered, the non-profit must go through the somewhat extensive process of IRS approval as a non-profit entity.

Based on the Ho-Chunk experience, perhaps the most difficult part of operating a tribal non-profit housing entity is striking a balance between tribal government's support of the housing entity and the non-profit's independence. On the other hand, one of the most persuasive

reasons to pursue such an option is increased access to a variety of funding possibilities and a greater ability to serve the individual housing needs of tribal members.

TRIBAL USE OF LOW INCOME HOUSING TAX CREDITS

The Low Income Housing Tax Credit (LIHTC) Act was authorized as a rental program in the 1986 federal tax code and has been utilized by several tribes to offer rent-to-own opportunities to their members. Under the program, in return for providing funds to help developers or builders renovate housing for low income households, those who invest in tax credit projects receive a credit against federal taxes owed.

The Salish-Kootenai Housing Authority in Pablo, Montana is one of the pioneer tribes in this area. It used the LIHTC Act to finance a 24-unit lease-to-purchase housing development. After 15 years of occupancy, residents may purchase their individual units. Other tribes are utilizing similar approaches with the LIHTC program and achieving some degree of success.

One limitation on this program that has received national attention at NAIHC and National Congress of American Indians (NCAI) conferences is a limitation on tribal access to this program because of how program benefits are disseminated by the federal government. The tax credits are distributed via formula to the states, and the access to the credits depends entirely on the relationship between states and tribes. Some states do not cooperate and share with tribal communities. This issue has highlighted the need for tribal set-asides in any federal program that is designed to address low income housing needs. Tribal members are often among the neediest of the needy, yet their access to effective federal low income housing programs may be barred by the states when they have the authority to make determinations about how funds are distributed. Tribal set-asides should always be a consideration in funding such programs.

LEVERAGING FUNDS

Leveraging funds is simply investing with borrowed money in a way that amplifies potential gains. Tribes are increasingly exploring innovative ways to utilize NAHASDA grant funds, combined with tribal funds and other resources, to maximize housing project outputs. The passage of NAHASDA in 1996 and its funding in 1998 have spurred several tribes into exploring creative partnerships with lenders or utilizing existing funds to enhance the effectiveness, efficiency, and success of housing projects.

Bay Mills Housing Authority Tri-Party Agreement:

The Bay Mills Housing Authority in Michigan has a tri-party agreement that includes the Central Savings Bank as a partner. The bank can offer the HUD Section 184 loan program, United States Department of Agriculture Rural Development loans, or conventional loans to members of the tribe. The tribe hired a tribal member who is a former banker to provide credit and homeownership counseling to prospective borrowers. NAHASDA funds are used to provide downpayment assistance of up to 10 percent of the loan (not to exceed \$8,000.00) to families with incomes at or below 80 % of the area median. The tribe provides similar downpayment

assistance to families with higher incomes. At least 15 loans have been processed under this innovative program.

White Mountain Apache Tribe (WMAT) Project:

For the first time, funding for an Indian Country project is being provided by a blend of NAHASDA grant funds, Section 184 guarantees, and tribally issued tax-exempt bonds. The 250-unit single-family housing project is being sponsored by the WMAT but will initially be owned by the White Mountain Apache Housing Authority. When completed, the project will provide long-term rentals with the housing entity as lessor. Each family's ability to pay will be assessed and the amortized debt service will be attributable to each home. Under the program, tenants will have the opportunity to purchase their units.

Saginaw Chippewa Tribe – Assignment of Per Capita Payments:

The Saginaw Chippewa Tribe is one of a growing number of tribes that has utilized income gained from profitable gaming operations to enhance homeownership opportunities for tribal members. The Tribal Council, the tribe's governing entity, recently approved a resolution authorizing gaming profit payments that would normally be paid to an individual tribal member (referred to as tribal member per capita payments) to be used to secure mortgage loan payments. Under the resolution, leasehold mortgage payments are secured by the tribe through the assignment of per capita payments from the tribal member. An agreement is executed and the per capita payments are direct deposited to a restricted savings account. The local bank partner assisting with development and implementation of this program, Isabella Bank and Trust, deducts the mortgage and escrowed insurance payments from the account each month. The actual application and underwriting process is extensive and is managed by the tribal housing office. As the tribe has a fully staffed loan and credit department, licensed realtors, complete title work onsite, and full credit and budget counseling services, the tribal housing office is able to provide tribal members complete homebuyer and home improvement financial services.

Program Innovations

In addition to exploring innovative financing options, tribes have spent substantial time, energy, and resources exploring innovative home design and building programs. The following section highlights a few tribes' program successes that could serve as models for other communities.

ROSEBUD SIOUX MANUFACTURES ITS OWN ENERGY EFFICIENT TRIBAL HOMES

Almost a decade ago, the Rosebud Sioux tribe had a revolutionary idea: why not manufacture tribal homes ourselves, using tribal facilities and tribal labor? That germ of an idea has grown to fruition this year. Though it was not an easy road and has taken years of creative financing and hard work, the project, managed by Sicangu Wicoti Awayankapi (SWA) Corporation, a tribally owned subsidiary, is now a reality. The tribe is poised to roll out five complete tribal homes using American Recovery and Reinvestment Act (ARRA) funds and seven homes using Bureau of Indian Affairs Housing Improvement Program (HIP) funds in the imminent future.

Moreover, rather than being stick-built on home sites, the homes will be built from scratch in the SWA home building facility. The facility was only recently completed and is energy efficient. It uses geo-thermal heating and cooling technology,¹⁰ which has brought the total monthly costs of heating and cooling the entire facility, which is sizable, down to approximately \$50.00 per month. The building is air powered and the homes will move through it on air casters as they are being produced. The facility is capable of producing approximately six homes at a time, each at a different stage of production.

While the homes are being manufactured, a contractor is busy developing the infrastructure and home sites. When both processes are complete, a home will simply be loaded onto a truck, delivered, set up, and ready for occupancy.

The tribe will soon have approximately 76 home sites developed and ready for use. The tribe's wastewater treatment facility is being updated, and such upgrades should be completed by November 2010. The tribe is hoping to receive funding for an additional 15 homes through a low-income housing tax credit project and is actively pursuing other funds to develop houses for the planned sites. When the building facility is fully up and running, the SWA anticipates that the home building corporation will provide 15-20 full-time jobs to tribal members.

ISLETA PUEBLO HOUSING AUTHORITY "LAVA BLOCK HOMES"¹¹

The Isleta Pueblo, located in central New Mexico, is utilizing a familiar building layout, local natural resources, and local labor to create a green building technique that is easily exportable to other communities. The "Lava Block Construction" project is based on a concept started in 1996 by Ken Detjen, a retired engineer. Lava blocks, which will form a home's exterior walls, are made out of lava cinder and cement, along with other ingredients. Lava rock walls have been tested to have an R-value¹² of 50 and can withstand winds of up to 300 miles per hour. The concept was introduced to the Isleta Pueblo Housing Authority in 2007 and was well-received by the housing authority and the tribal council.

The lava block project has numerous advantages. The method is environmentally-friendly in that no drywall or sheetrock is needed in the construction process; no insulation is required; lava rock walls are naturally fire proof, sound proof, termite resistant, and maintenance free;

¹⁰ Geothermal heat pumps (GHPs) are a relatively new technology that can save home and business owners money. These ground-source heat pumps use the natural heat storage capacity of the earth or ground water to provide energy efficient heating and cooling. GHPs should not be confused with air-source heat pumps that rely on heated air. They use the relatively constant temperature of the ground or water several feet below the earth's surface as source of heating and cooling. Geothermal heat pumps are appropriate for retrofit or new homes or business locations, where both heating and cooling are desired. In addition to heating and cooling, geothermal heat pumps can provide domestic hot water. They can be used for virtually any size home or lot in any region of the United States.

¹¹ See Appendix A hereto for photographs of this project.

¹² The "R-value" is defined as a measure of the capacity of a material, such as insulation, to impede heat flow, with increasing values indicating a greater capacity.

and the home will have reduced energy costs because of its efficient design and construction. Labor costs are also lower, by roughly 50 %, with lava rock homes because no specialized training in masonry or any other of the construction arts is required.

In 2008, the Isleta Tribal Council approved the use of tribal funds to design and create a lava block building machine. A Memorandum of Agreement was executed between the tribe, Habitat for Humanity, and Lava Living, LLC, in which the tribe agreed to allow its old cinder and gravel plant to be used for the production of lava blocks.

In doing so, the tribe created jobs for its citizens and created a mechanism for providing sustainable, energy efficient, affordable homes for tribal families. On August 26, 2008, the Isleta Pueblo Housing Authority held a ground-breaking ceremony to launch a home renovation project for tribal members Jose and Mary Keryte. This is the first lava block building project in the pueblo. It is expected to be the first of many and the tribe is already in discussion with other tribes to market the lava rock to other reservations.

PUYALLUP TRIBAL HOUSING AUTHORITY LONGHOUSE DESIGN STRATEGY¹³

The Puyallup “Longhouse” design for homes emulates the traditional rectangular, shed-roofed coastal Salish longhouses utilized by tribes for centuries. A central feature of a longhouse is a central, linear common area for gathering and circulation, and private areas are accessible from the common space. The concept created by the Puyallup Tribe using American Recovery and Reinvestment Act (ARRA) funds fuses this traditional design with a modern townhouse courtyard structure. The project is being constructed on a four-acre parcel adjacent to 27 existing units and will create 10 new housing units in Phase I of the project. The design will incorporate community meeting space, be culturally responsive, and employ green building and design techniques.

As in a traditional longhouse, the modern building configuration utilized by the Puyallup tribe creates a “defensible space” hierarchy of public to private space. Level changes and material modulation create a flow and transition from public spaces, or common areas, into private space. The conscientious design imparts ownership to individuals while fostering active use of shared space. The tribe has created both one and two-story designs, and in both models the main floor is handicap accessible. The one bedroom units are fully accessible.

In traditional longhouses, ventilation and illumination were provided by removing roof planks. The modern adaptation utilizes an open roof over the courtyard to evoke this historic strategy and employs an innovative cross-section ventilation system. Air will be drawn through the low windows on the south side of the homes and exhausted through the high windows on the north. The same high windows allow daylight to penetrate the spaces. Some of the windows in each home will face the courtyard, a common area, further embracing the traditional concept of communal living and sharing space.

¹³ See Appendix B hereto for a photographic illustration of this project.

The Puyallup's modern design embraces energy efficiency in several ways. Solar orientation is optimized, as all homes are located on an east/west axis so that windows will have a northern or southern exposure. The homes feature generous roof overhangs so that passive solar and day lighting strategies are employed for maximum benefit. Compact floor plans are utilized, as they are easier to heat and cool. Other home features, such as the appliances, windows, faucets, and lighting, are energy efficient, designed to conserve energy in every way possible.

The tribe is also looking toward the future with the longhouse design and hopes that someday the units will actually generate energy on-site. The tribe is making every unit solar-ready and is looking toward utilizing solar hot water and photovoltaic¹⁴ panels in the future.

Conclusion

Given the funding constraints in the tribal housing arena and the need to not only maintain existing units but keep up with growing tribal populations and meet the tremendous existing housing backlog, tribes have, out of necessity, been very creative in crafting innovative solutions to meet their unique housing needs. Some innovations are in the form of utilizing non-traditional financing mechanisms or leveraging limited financial resources to realize their maximum benefit. Other innovations are in the actual design and building arena.

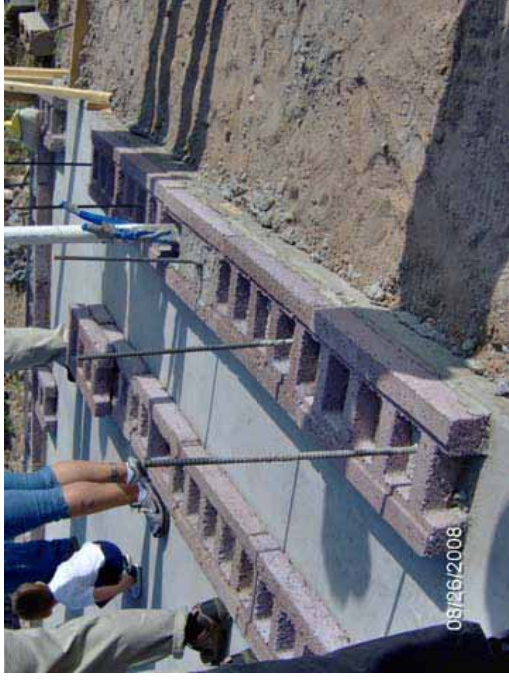
In spite of the forward movement detailed herein, federal funding under NAHASDA, including the Indian Housing Block Grant program, the Indian Community Development Block Grant program, and the provision of invaluable Training and Technical Assistance to help tribes develop, enhance, manage, and improve tribal housing programs, is essential and cannot be over-stated. One of the important functions that the T&TA provided by NAIHC serves is to provide a forum in which to share such innovations among tribal communities. We do so with hope that such strategies might be more broadly adapted and utilized.

Thank you, Chairman Dorgan, Chairman Dodd, Vice Chairman Barrasso, Ranking Member Shelby, and members of the SCIA and the Banking, Housing, and Urban Affairs Committee for allowing us to testify here today regarding potential innovative solutions to meeting the overwhelming housing needs in tribal communities. Your continued support of tribal communities is truly appreciated, and the NAIHC is eager to work with you and your professional staff on any and all issues pertaining to tribal housing programs, living conditions for America's indigenous people, and ways to meet the growing housing needs in Indian Country.

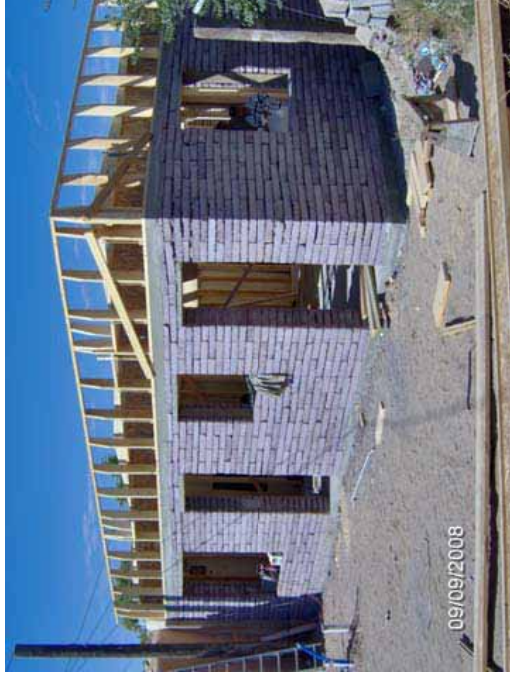
This concludes my testimony. I would be glad to answer any questions you may have.

¹⁴ Photovoltaic means that a material is capable of producing a voltage when exposed to radiant energy, especially light.

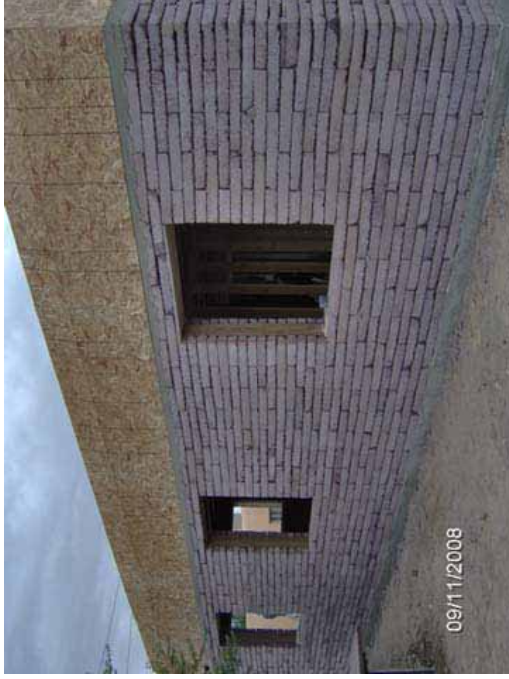
Isleta Pueblo Lava Block Homes Program



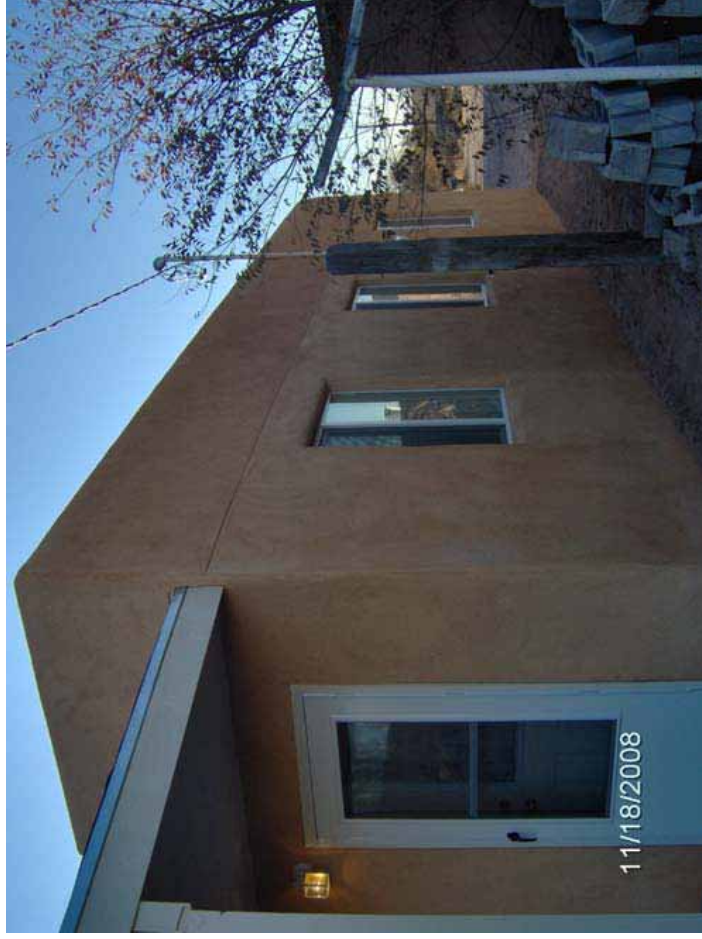
Isleta Pueblo Lava Block Homes Program



Isleta Pueblo Lava Block Homes Program



Isleta Pueblo Lava Block Homes Program



Puyallup Tribe Longhouse Project

- Sources of Funds: ARRA Formula: \$883,573 ARRA
- Competitive: \$3,000,000IHBG:\$1,200,000TOTAL:\$5,033,573
- **Culturally Responsive LEED Certified:**
- 20 units, a community building and longhouse, a maintenance designed to emulate the rectangular, shed roofed form of a traditional Coast Salish longhouse using a variation of the modern townhouse courtyard building. Like a traditional longhouse, the structure has a central, linear common area for gathering and circulation to private dwelling areas. Ventilation and illumination was provided in traditional longhouses by removing roof planks. The open roof of the courtyard evokes this historic strategy.

Puyallup Tribe Longhouse Project

- LEED gold/platinum certification
- Low-flow faucets and showerheads
- Solar hot water and *photovoltaic panels*:
- –South-facing roof area positions the project well to generate a significant portion of its own electricity.
- High-efficiency heat source: high-efficiency heating systems, including 95% + efficient gas boilers or high-efficiency heat pump combined with radiant floors.
- Energy Star appliances
- High quality windows
- Wildlife habitat awareness

Puyallup Tribe Longhouse Project



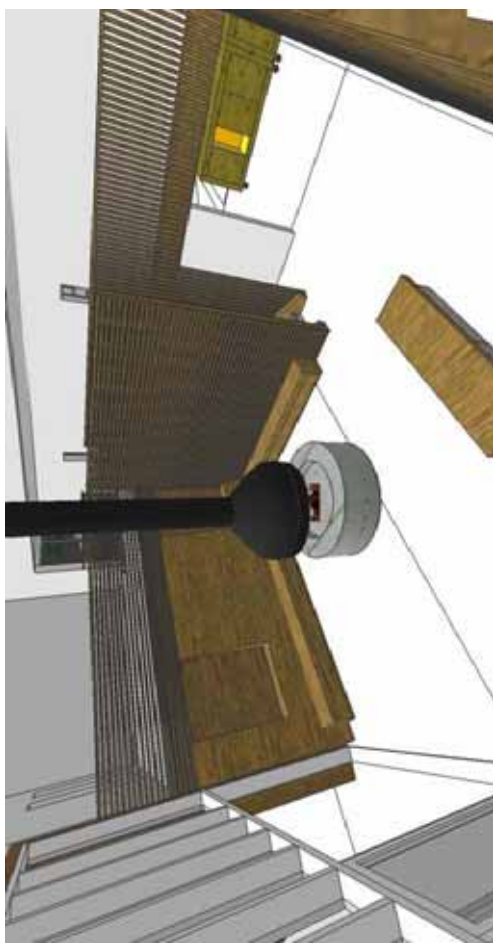
Puyallup Tribe Longhouse Project



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