

Building Green in Indian Country

How to Effectively Promote Sustainable Building Projects

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Indigenous nations always had planned communities. We had the ways of the earth - which was the environment and the land-use practices associated with that. That is our tradition, which was the use of sustainable communities designed to preserve the health and spirit of a person. Modern planning makes use of some of the same things.... in some circles it's referred to as Smart Growth, in others, Sustainable Development and in others, it's planning with nature. Quite simply, it's "common sense"-doing what is smart in conjunction with the various constraints and requirements that govern planning. The difference is that Native American planning was never separate from the person. The existence of the spirit or soul of the person was a primary consideration, not just the physical but also the spiritual elements.

The Past

Kim Yerton Memorial Library and Archives- Hoopa



Xonta at Matiliton



**Built in 1992 from a grant from the Library Services Construction Act
2008 Winner of a National Medal for Museum and Library Services**



Filled concrete blocks and furring strips

South facing building and earth berm



Natural lighting and skylights

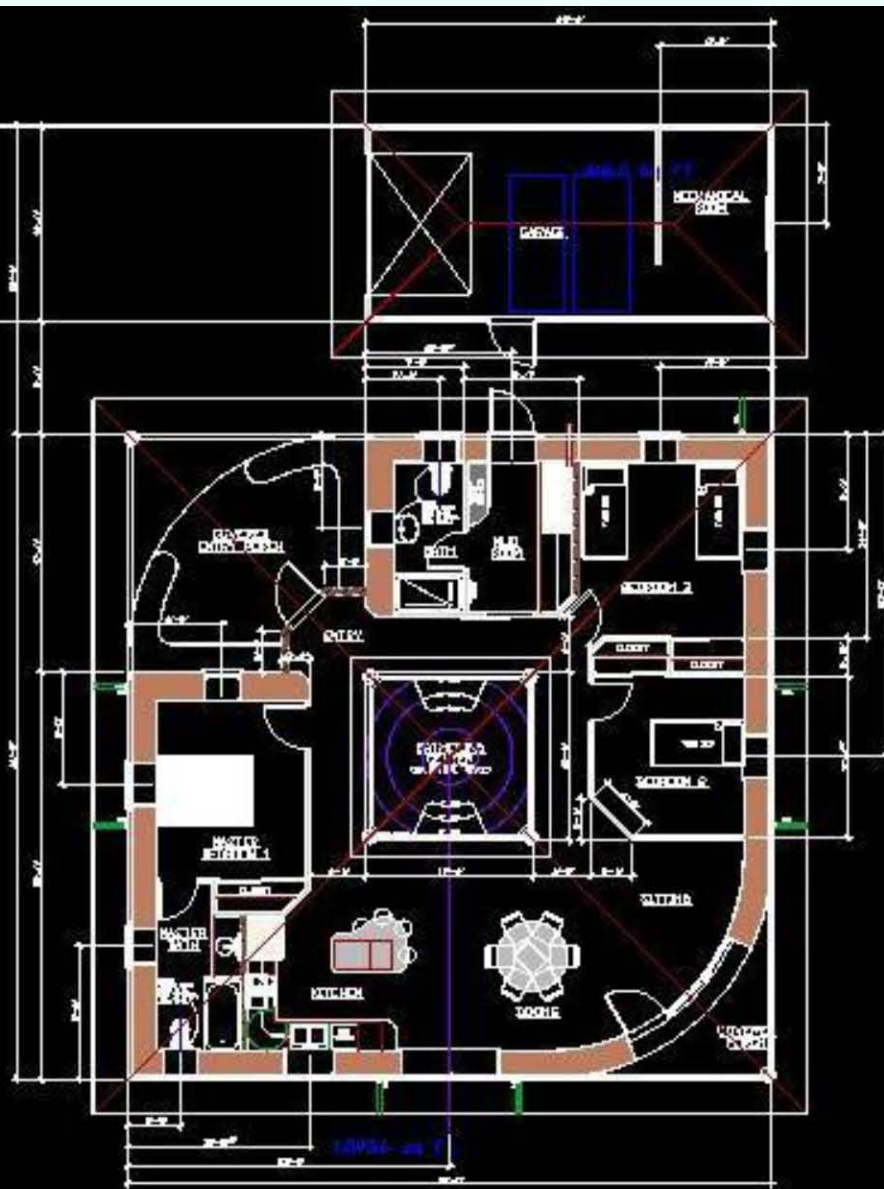


The Present

Pinoleville Pomo Nation Housing - Ukiah



Pomo Roundhouse at Kashia (Stewarts Point Rancheria)



FLOOR PLAN
 PER GARDEN SITE 03/04/0
 LTR-2 of 71 CONCRETE WALLS OF 10' MIN

SCALE 1/8" = 1'-0"

WALL LEGEND
 10' MIN CONCRETE WALL
 10' MIN WALL OTHER OF 10'
 10' MIN WALL OTHER OF 10'

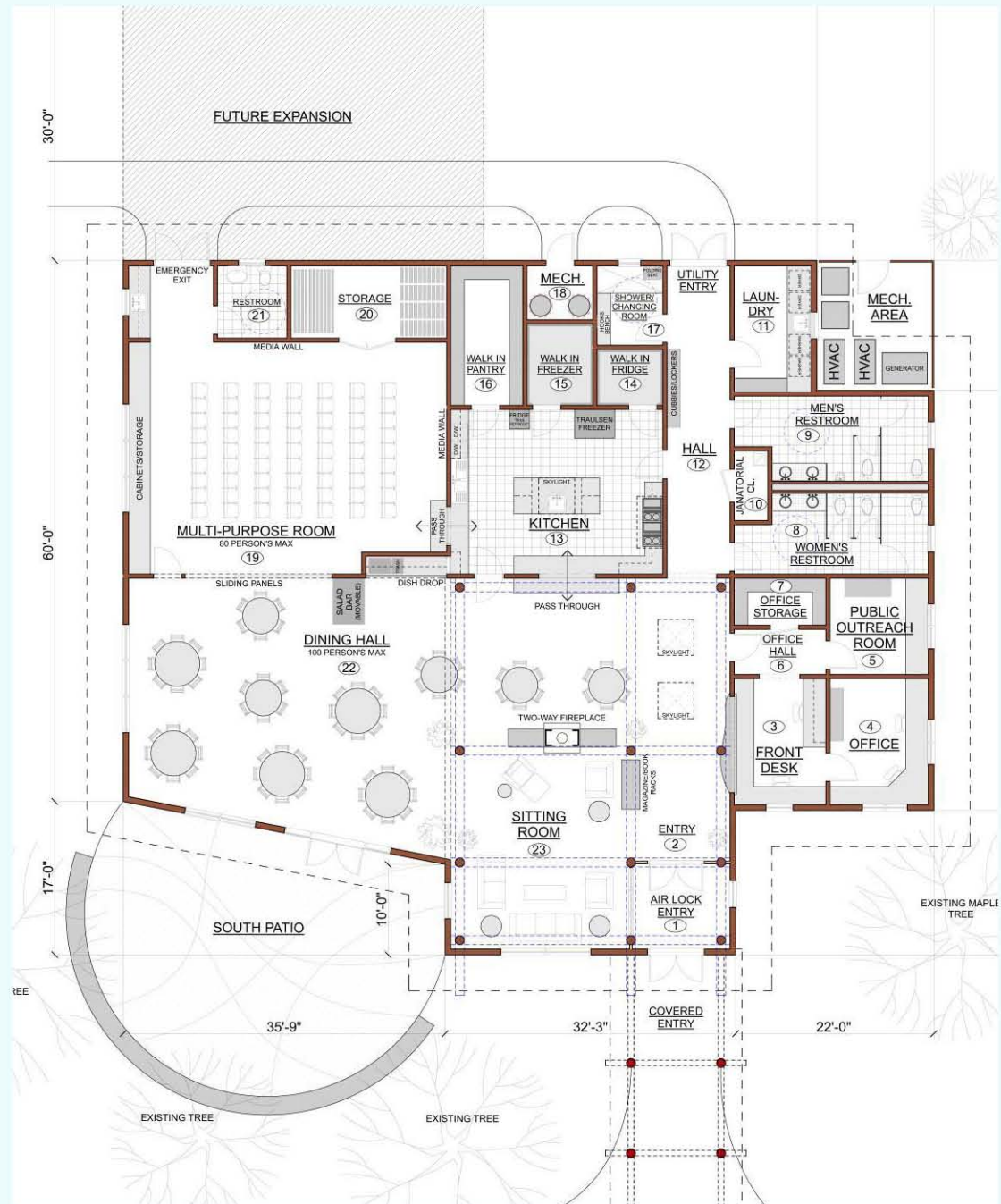
Selected Sustainable Design Features:

Strawbale Construction
Geothermal heating/cooling
Passive solar
Composting toilets
Rainwater catchment system
Grey water irrigation
Photovoltaic (Future)

The Future

Hoopla Elders Center - Hoopa





Selected Sustainable Design Features:

Passive solar design elements

Natural ventilation

Passive heating and cooling – cross ventilation

Wood heat – for heating during power failure

Locally produced woods as finish materials

Zero and low emitting materials

Low embodied energy materials

Air lock entry for energy savings and comfort

Rain gardens for run-off filtration and rainwater catchment

Permeable paving

Native landscaping

What are the two things these buildings have in common besides the culturally inspired architecture?

1. CONCRETE OR STRAWBALE

In primitive brick and strawbale construction, straw served as the aggregate and mud served as the paste. Once the mud had hardened, the embedded straw strengthened the structure of the brick.

In modern concrete, a variety of materials help make up aggregates, including sand and various sizes of gravel and crushed stone.

Modern concrete can be 100% sustainable and 100% natural. It has been in use for 7,000 years, has great R values, when reinforced is stronger for seismic purposes, and aggregate material is found on and near Reservations and Rancherias.



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2. BUREAUACRACY

Most Indigenous sustainable planning had been done in response to Federal program or agency planning mandates in order to secure funds. Therefore much of the planning had been fragmented and was a convenience to the funding agency and not necessarily the Tribal community.

Furthermore, when Tribes attempted culturally-inspired sustainable design across Federal responsibilities, these plans are often thwarted by the inability of Federal agencies to coordinate supporting actions.

The Past

Examples of Bureaucratic Constraints

Under the United States Housing Act of 1937, construction cost limits are called Total Development Cost (TDC) limits. These limits did not take into account the “upfront” cost for sustainable housing or the “pay-back” of energy savings.

Federal agencies considered culturally-inspired designs are frivolous as they added cost to buildings. AFFORDABLE HOUSING/MODERATE DESIGN: As specified in §1000.156, affordable housing must be of moderate design. For these purposes, moderate design is defined as “housing that is of a size and with amenities consistent with unassisted housing offered for sale in the Indian tribe's general geographic area to buyers who are at or below the area median income.”

The Present

Examples of Bureaucratic Constraints

The 2010 TDC for Pinoleville housing is \$298,266 for a three-bedroom home. This hasn't changed since 2006. Certain amenities (solar) were eliminated in order to obtain reasonable bids.

Alternative building materials are not always covered under the Uniform Building Code (Strawbale construction is)

Culturally appropriate buildings are multi-generational (extended family) and are not always supported by federal agencies

The Future

Examples of Bureaucratic Innovation

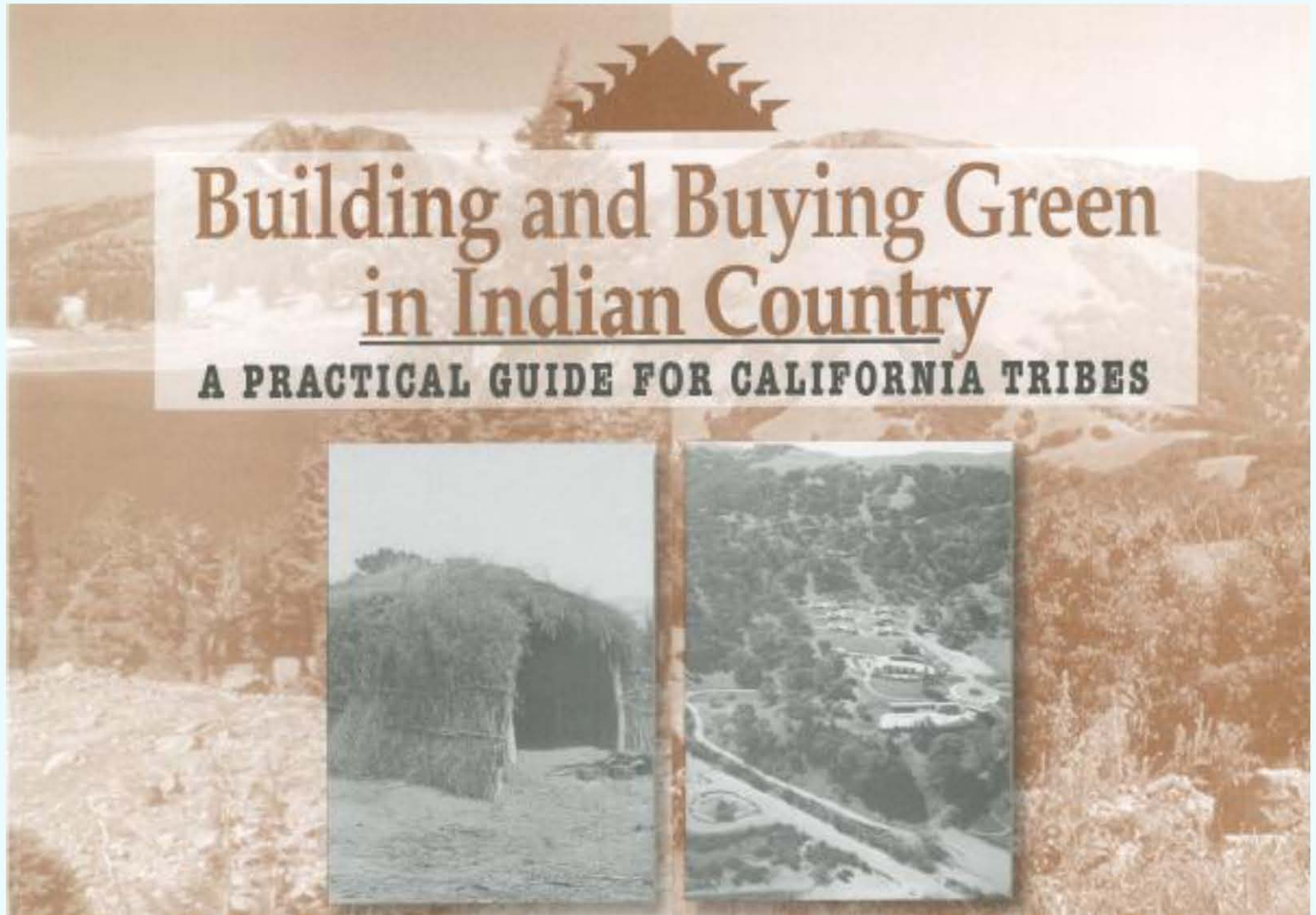
President Obama is calling for a 21st-Century Regulatory System, which would launch an audit of all obsolete laws—including the regulations in question. (*If the FDA deems saccharin safe enough for coffee, then the EPA should not treat it as hazardous waste. – President Barack Obama 1/18/11*)

New Initiatives:

Sustainable Communities Regional Planning Grant Program

- 1. Strengthen the Nation's Housing Market to Bolster the Economy and Protect Consumers**
- 2. Meet the Need for Quality Affordable Rental Homes**
- 3. Utilize Housing as a Platform for Improving Quality of Life**
- 4. Build Inclusive and Sustainable Communities Free from Discrimination**
- 5. Transform the Way HUD Does Business**

***A GOOD PRIMER GEARED TOWARDS TRIBES FOR LOW COST
SUSTAINABLE BUILDINGS:***



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Questions?