

OLCERI Lodge

Office Space and Worker / Visitor Quarters

Project Financing

Total Project Cost:	\$138,000
Donations obtained to date:	\$5,500
Balance of Funding Sought:	\$132,500

Purposes of this Project

- Provides office space for OLCERI operations
- Provides efficient, all-season lodging services for up to 10 visitors or workers; includes a kitchen, adequate bathrooms, laundry and small greenhouse.
- Serves to demonstrate the design and operation of graywater and blackwater waste systems, greenhouse design, strawbale construction, bio-mass space and water heating system, rooftop rainwater collection, and solar heating.

With distances as great as they are on the 5000 square mile Pine Ridge reservation and with the nearest town with services being 25 miles distant, this structure is necessary to accommodate visitors, students and workers overnight or for longer stays.

Requirements

1. Provide lodging space for continuous occupancy by up to 10 visitors or workers. Structure to include:
 - A. Space for sleeping and personal gear stowage
 - B. Toilet, shower, sink facilities (existing domestic septic tank used by household cannot be expected to service this lodge)
 - C. Kitchen facilities for 3 meals/day.
 - D. Meeting / lounge / common area
2. Take advantage of "green design" to principles to demonstrate the lowering of recurring and non-recurring cost by means of:
 - A. Use of gray- and blackwater recycling systems as a means to demonstrate how they increase soil fertility and increase food production.
 - B. Heating and cooling by passive means (solar heating, extreme insulation, earth-berming, thermal siphons, etc.)
 - C. Solar lighting (skylights, ambient light pass-throughs)
 - D. Use of easily available materials (strawbale, local timber, earth)

- E. Rainwater capture and storage (gutters, cisterns)
 - F. High-efficiency active heating system capable of burning easily available bio-mass (wood debris, waste oil)
3. Structure shall be designed to comfortably service occupants during the climatic extremes of South Dakota: Prolonged periods of extreme winds (100+ mph), extreme cold (-70 degrees F), extreme heat (100+ degrees F), heavy rain, prolonged drought.

Design & Construction Team

Design services are provided by Richard Draut and Bob Rich. Richard has been an active licensed, general contractor, designer and draftsman for 25 years. Based in Southern California, he is also very experienced in the various disciplines of "green" architecture and construction, including strawbale, earth-bag, black- & graywater systems, solar electric, and rainwater catchment systems.

Additional strawbale technical assistance and crew supervision is being provided by the Colorado Strawbale Association.

Overall project management, laborer selection and heavy equipment services will be provided by Bryan Deans.

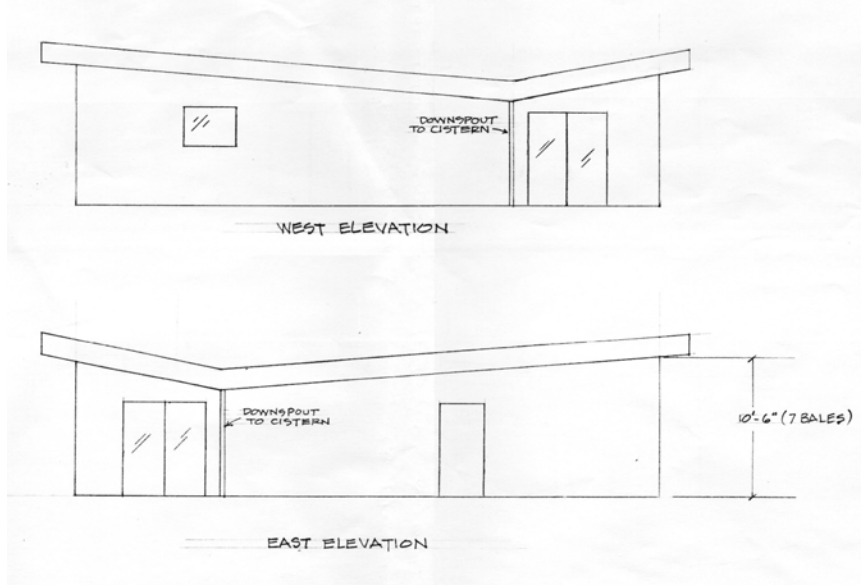
Experienced construction labor will be obtained from on-reservation sources in the Slim Buttes district.

Schedule

Design phase is completed. Construction is scheduled to begin as soon as weather conditions at the site and funding availability permit.

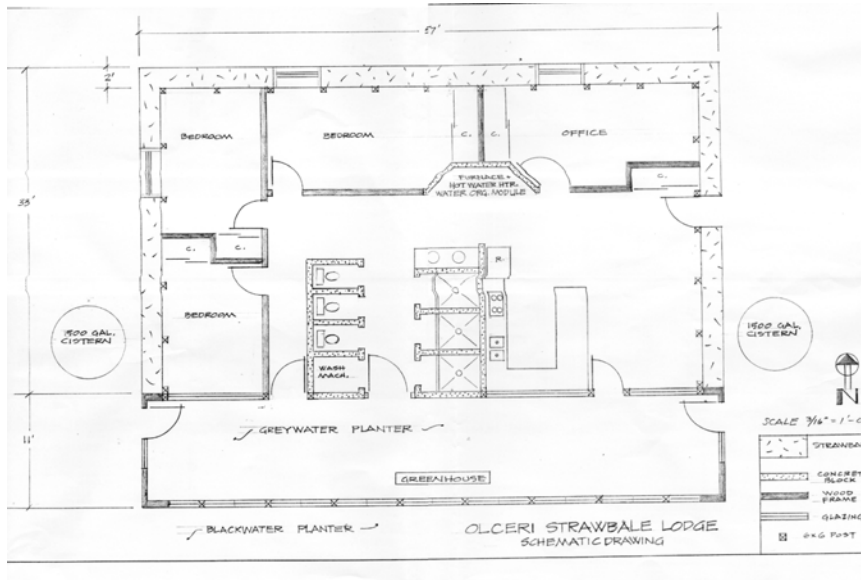
OLCERI Lodge Design

Results of design phase has produced the following design.



West Elevation shows the “butterfly roof” design which facilitates rainwater collection and permits more light into the greenhouse (at right). There are 2 entrances (E & W) through the greenhouse and one into the main building on the E side.

Figure 1: OLCERI Lodge, Elevation



The three bedrooms shall be further subdivided into semi-private sleeping spaces for up to 10 persons. Shower and sink water are treated through the greenhouse graywater planter. Toilet water is treated in the outside blackwater planter.

Figure 2: OLCERI Lodge, Plan View, Schematic

Detailed Project Budget

Item	Cost
Materials	
Foundation + Slab floor	\$ 6,000
Posts, beams	\$ 3,000
Trusses	\$ 9,000
Windows & Skylights	\$ 6,000
Doors / Hardware	\$ 2,000
Interior walls framing & wallboards	\$ 2,500
Interior walls block	\$ 500
Insulation @ roof + floor + foundation	\$ 3,500
Plumbing: pipe / pumps / valves	\$ 4,000
Electrical: wire / lights / switches / outlets / panel	\$ 4,000
Roofing, 2000 sq ft	\$ 3,500
Plaster / Site material / cement	\$ 500
Hardware: rebar / framing connectors / lathe	\$ 1,000
Fixtures: toilets / sinks / fridge / oven / faucets / wash. machine	\$ 5,000
Hot water heater / solar collector panels / furnace, ducting	\$ 5,000
Lumber: roof ply / fascias / misc forms & framing	\$ 3,000
Cisterns (2 @ 1500 gal): lathe / plaster	\$ 1,000
Furnishing: bunk built-ins w/ mattresses	\$ 2,500
Kitchen cabinets, closet shelving, countertops	\$ 4,000
Miscellaneous	\$ 2,000
Materials Total	\$ 66,000
Labor and Overhead	
Construction Labor	\$ 40,000
Construction Management, technical consulting & supervision	\$ 3,000
Design fees	\$ 4,000
Administrative Overhead	\$ 22,000
Travel expenses (Richard Draut, Bob Rich)	\$ 3,000
Labor & Overhead Total	\$ 72,000
TOTAL	\$ 138,000