“Rounding the Corner”
For Tribal Housing

Living Stone Lodge

PRESENTED TO
The U.S. Department of Energy (DOE) Office of Indian Energy
Project Goals


• Commercialize plans, kits, and instructions for tribes across the United States.
The Modern Earth Lodge

The Concept
The Modern Earth Lodge

The Reality
1st Place - 2019 ICF Builder Awards
Initial Performance Results
The Model Home Comparison Report

Home Energy Science

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Home Energy Science is an ENERGY STAR partner.
The ICF/SIP home is on the left, stick-built on the right. These homes are on opposite sides of the infiltration scale.
This IR image (above) shows the uniform warmth of the ICF walls and SIP roof of the Travers residence. In these images, warm surfaces are red. Yellow is slightly cooler. Blue surfaces are the coolest.
Stick Frame IR Image
Construction Process: The Building Envelope
Pouring Monolithic Slab

LESSON LEARNED
Building with ICF Blocks
Utilities Piping VS New Flexible Opening

LESSON LEARNED
Roof Beams
Installing Precut VS Custom Cut Roof Beams

LESSON LEARNED
Installing 1-Piece VS 2-Piece SIPS Panels

LESSON LEARNED
Completing the Building Envelope
Blower Door & Thermal Imaging Test

LESSON LEARNED
Renewable Energy Technologies
Ground Mounted Solar Panels
GEOTHERMAL WELLS
2 wells per home - 300’ deep
AIR SOURCE HEAT PUMP
Partnerships
Partners…it takes a team

Councilman Cory Spotted Bear
Twin Buttes South Segment

Chairman Mark N. Fox
Mandan, Hidatsa, and Arikara Nation
Living Stone Lodge Team

- Tribal Council
- Engineers
- Architects
- Local Workers
- Volunteers
- Tribal Finance Office
- Tribal Grant Office
- State Grant Partners
- Vendors
Professional Partners…it takes a team
Partners...it takes a team
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