

*"Promoting and advancing the development
of healthy, durable, and sustainable shelter
for Alaskans and other Circumpolar
people."*

Research • Innovation • Education



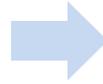
COLD CLIMATE HOUSING RESEARCH CENTER

CCHRC

CCHRC History

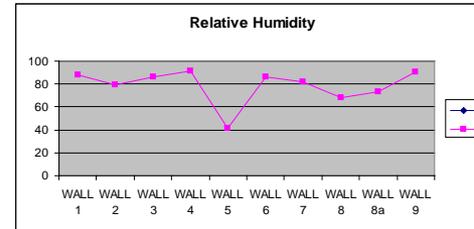
The Beginning

- AHFC
- Fannie Mae
- AK Home builders



The Development

- Collaborations
- Research



The Expansion

- RTF
- Partnerships
- Demonstration
- Increasing our network



Our Facility

- 15,000-square-foot facility designed to LEED Platinum.
- Two active research labs.
- The structure is an on-going research experiment with constant monitoring by over 1,200 sensors.
- Less expensive to build than conventional commercial space.
- Uses 53% of the energy of similarly-sized conventional commercial space.



Goals

1. Identify issues critical to creating shelter and related infrastructure for Circumpolar people
2. Develop projects to address these issues and initiate solutions
3. Expand partnerships within the circumpolar north
4. Assure long term viability of the organization through a diversified funding base
5. Stimulate local business enterprises
6. Promote our findings

Identify



Address



Promote



Organization



Research

Product Testing

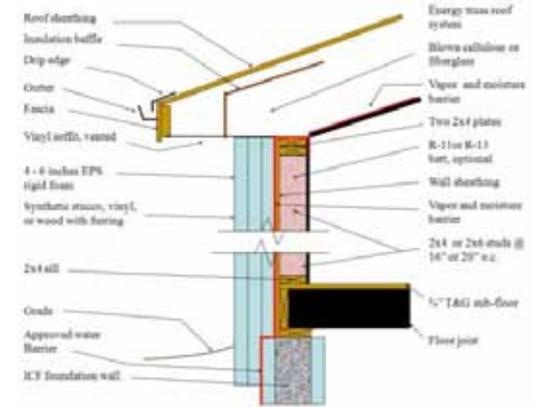
Design & Consulting

Outreach & Education



Research Programs

Building
Envelopes
& Materials



Energy &
Mechanical
Systems



Policy & Program
Development




AkWarm
Program Version: 1.03d



**Alaska
Housing**
FINANCE CORPORATION

Copyright © 1993-1996, All Rights Reserved

Product Testing Lab

Product Testing Goals

- Product Performance
- Product Durability

Types of Tests

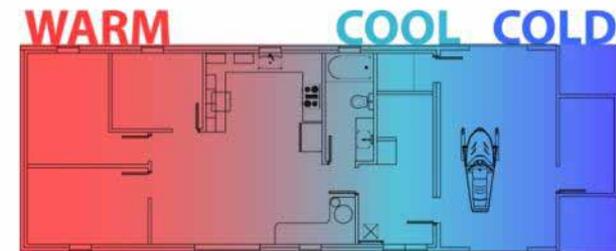
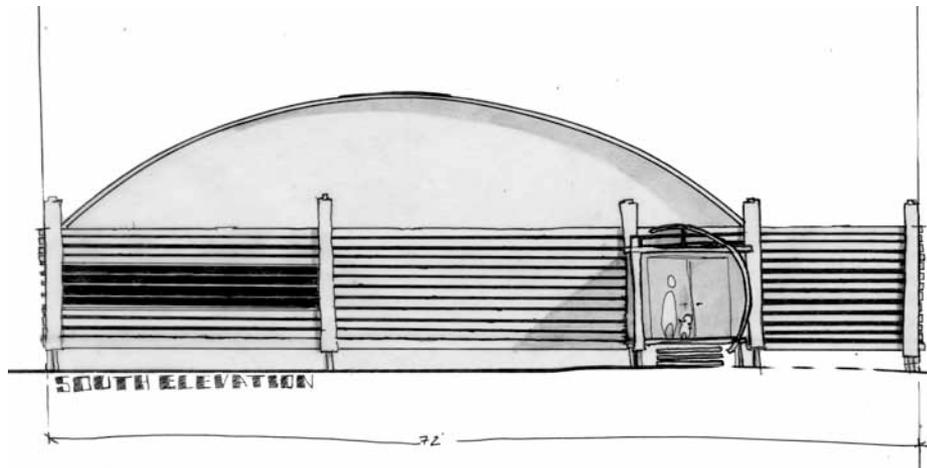
1. Publicly-funded testing
2. Fee-based testing for product certification



Design & Consulting

Sustainable Design

- Sustainable Northern Shelter
- Cold Climate Housing Design Review
- Energy Modeling
- Affordable Housing Designs



Creativity of the North

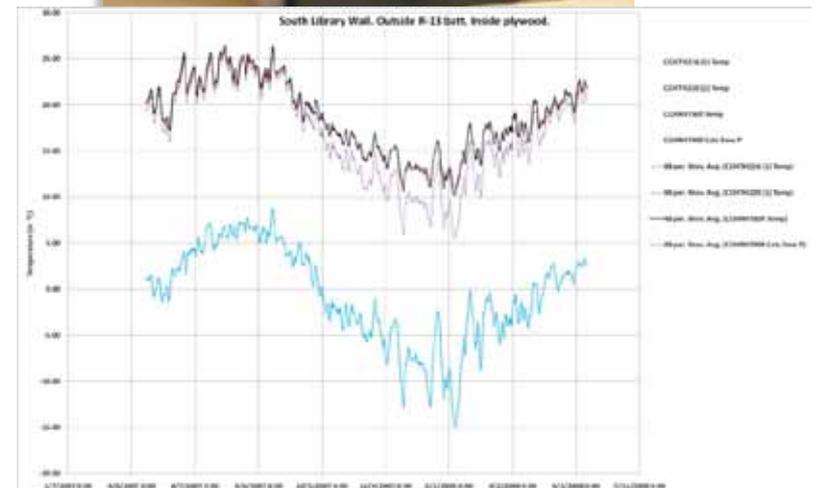
- § People of the North are creative, skillful . . . and artistic
- First pioneers who came across the Bering Straits
 - Newer pioneers, the immigrants who moved West and then came North
 - Alaska are leaders in innovation



Indigenous Wisdom



21st Century Technology



Innovative Combinations



Anaktuvuk Pass

"We need housing. Our young people have no place to live."
George Paneak, (1950-2009) Former Mayor of Anaktuvuk Pass

Design Challenges

- 16,000 HDD
- Electricity \$.60/kWh
- Heating Oil \$8/gallon
- 1,400 gallons/yr.
- New conventional house is \$750,000.
- Context-appropriate housing.

Construction Outcomes

- Final cost: \$175,000.
- Modeled 127 gallons/yr.
- Completed in four weeks.
- First new house to be constructed in Anaktuvuk Pass in 10 years.



Other SNS Activity

- Newtok -Evacuation Center 35% DAR complete.
- Point Lay -SNS process and preliminary design.
- Quinahagak -team building and design underway.
- Shaktoolik, Unalakleet, North Slope, Merktarvik, Minto, Fort Yukon, Tanacross, potential work pending.
- Continue to form partnerships to work with communities throughout Alaska to address housing challenges.

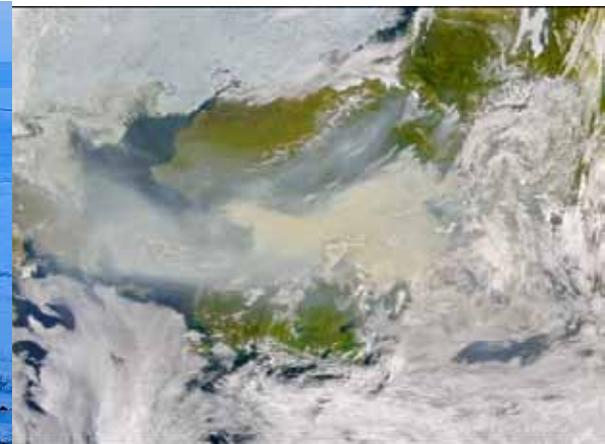


Alaska Solutions, Global Sustainability

Shelter, food, water, and stewardship of resources are of global concern.

Alaskan rural communities face the challenges of tomorrow, today.

The solutions we apply here can be a model for the rest of the nation and the world.





Cold Climate Housing Research Center

CCHRC

"Promoting and advancing the development of healthy, durable, and sustainable shelter for Alaskans and other Circumpolar people."

www.cchrc.org

