AHFC Cold Climate Housing Research Center (CCHRC) **FY2019 Request: $1,000,000**
Reference No: 6351

AP/AL: Appropriation
Project Type: Energy
Category: Development
Location: Statewide
House District: Statewide (HD 1-40)
Impact House District: Statewide (HD 1-40)
Contact: Les Campbell
Estimated Project Dates: 07/01/2018 - 06/30/2023
Contact Phone: (907)330-8356

Brief Summary and Statement of Need:
This project provides funding for a designated grant to the Cold Climate Housing Research Center (CCHRC) to conduct housing construction research, analysis, and information dissemination among the housing industry and the public. Data gathering and analysis is being continually related to energy efficiency technology for homes constructed in northern building and market conditions.

Funding:	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	Total
1139 AHFC Div	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$6,000,000
Total:	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$6,000,000

☐ State Match Required ☐ One-Time Project ☐ Phased - new ☐ Phased - underway ☑ On-Going
0% = Minimum State Match % Required ☐ Amendment ☐ Mental Health Bill

Operating & Maintenance Costs:

	Amount	Staff
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	
Totals:	0	0

Prior Funding History / Additional Information:
Sec1 Ch1 SLA2017 P7 L4 SB23 $1,000,000
Sec1 Ch2 SLA2016 P16 L16 SB138 $1,000,000
Sec1 Ch38 SLA2015 P6 L14 SB26 $500,000
Sec25 Ch38 SLA2015 P39 L17 SB26 $250,000
Sec1 Ch18 SLA2014 P61 L27 SB119 $750,000

Project Description/Justification:
This program funds research, monitoring and testing of energy efficiency designs, products, and construction technology-methods in areas where little is being done in the Alaskan arena. Considering the diverse building conditions and requirements across the state, the home building industry has indicated they would like to see research and testing of affordable energy efficiency designs in different regions of the state.

Program Description

This program funds research, monitoring and testing of energy efficiency designs, products, and construction technology and methods for cold, and very-cold climates**.** Considering the diverse building conditions and requirements across the state, the home building industry has indicated they

would like to see research and testing of affordable energy efficiency designs in different regions of the state.

Energy Efficiency (EE) in Alaska is an energy resource, similar to coal, oil, gas or hydro. AHFC is required by state statute to purchase homes that meet minimum energy efficiency and construction standards. The State of Alaska and the Corporation have established and funded incentive programs for increased energy efficiency in homes and public facilities. CCHRC is an integral partner with AHFC to help maximize this resource, determine best, most cost effective EE practices, techniques and materials; how effective certain energy efficiency designs have been across Alaska's climate regions; and scoping out promising technologies for the future.

Funds requested here are used to conduct research, analysis, and implementation of energy efficient materials techniques and practices. CCHRC also provides information dissemination and facilitates interchange among members of the building industry as well as between the industry and the public.

The following will be provided through the CCHRC:

- Data gathering and analysis of energy efficient designs for homes. Alaska has a wide range of climates and temperatures, with everything from coastal rain forests to arctic tundra.
- Energy efficiency designs and technologies for homes need to address climactic conditions in each of these regions across the state.
- Homes with different energy efficiency designs would be monitored for energy usage, comfort levels, durability, occupant health, safety, and economic benefit of efficiency features. Different regions of Alaska would be monitored along with different energy efficiency designs.

Activities should have a high level of effectiveness and success based on three reasons:

1. **Programs and projects are results-oriented -** Home building is a practical activity. Monitoring research and analysis should seek workable answers to real problems of home building and to real ways to improve homes across Alaska. Future trends and developing technologies need to be considered, with an emphasis on the impact that such trends and technologies will have on the way the homes are actually built.

2. **Contact with the real world of home building needs to exist by having some ties to the state home building industry -** In addition to a statewide association, local home building associations exist in Anchorage, the Kenai Peninsula, Ketchikan, Juneau, Interior Alaska, Mat-Su, and Kodiak. These associations provide a grassroots network of cooperating builders. When research is launched, builders can provide direction on specific questions, technologies, designs, and to cooperate in studies and field tests.

3. **Research and analysis flow directly into the building industry and the public -** Monitoring results help link the research and product development communities with the practitioners who put methods into practice and products into use. The involvement of the building industry increases builder's confidence in the findings. All results and analyses would be publicized and disseminated throughout the housing industry, creating a favorable climate for the adoption of desirable changes.

CCHRC's Cold Climate Building Infrastructure Research and the Testing Facility (RTF) is located in Fairbanks, Alaska. CCHRC is a 501c(3) corporation founded by members of the Alaskan homebuilding industry. Project deliverables include: ongoing web-based performance reports, final reports, policy recommendations based on research, PowerPoint presentation, and provides information and recommendations on renewable energy systems, passive refrigeration, and masonry heating systems, EE software development, and associated databases, biomass heating systems, EE standards, rural housing and community design.