

Agency: Commerce, Community and Economic Development**Grants to Named Recipients (AS 37.05.316)****Grant Recipient: Cook Inlet Tribal Council, Inc.****Federal Tax ID: 92-0094184****Project Title:****Project Type: Remodel, Reconstruction and Upgrades****Cook Inlet Tribal Council, Inc. - CITC Dena'ina Academy
Fab Lab Demonstration Project****State Funding Requested: \$500,000****House District: Anchorage Areawide (11-27)**

One-Time Need

Brief Project Description:

Cook Inlet Tribal Council (CITC) respectfully requests a state capital grant of \$500,000 to leverage with other funds for expanding STEM capacity and developing a partnership with the Massachusetts Institute of Technology to bring a Fabrication Laboratory (Fab Lab) to CITC's Dena'ina House program and the community. These funds will be used for the expansion, testing and implementation of the Fab Lab demonstration project described below over the next two fiscal years.

Funding Plan:

Total Project Cost:	\$935,000
Funding Already Secured:	(\$435,000)
FY2014 State Funding Request:	(\$500,000)
Project Deficit:	\$0

Funding Details:

In FY 2013, CITC has allocated internal resources to purchase the equipment and membership with Massachusetts Institute of Technology (MIT) for the initial installation of the Fab Lab, which will be installed in April, 2013. The current capital request is to leverage and scale up this investment.

Detailed Project Description and Justification:

CITC would like to combine efforts with the State of Alaska in a public/private partnership to fund seed money for a demonstration project to support the development of a unique arrangement between CITC and the Massachusetts Institute of Technology (MIT) that will bring a Community Fab Lab to Anchorage. Fab Lab is a group of off-the-shelf, industrial-grade fabrication and electronic tools, wrapped in open source software and programs written by researchers at the Center for Bits and Atoms at MIT. Basic Fab Labs include a laser cutter that makes 2D and 3D structures, a sign cutter that plots in copper to make antennas and flex circuits, a high-resolution milling machine that makes circuit boards and precision parts, a large router for making personalized housing and furniture, and a suite of electronic components and programming tools for low-cost, high-speed microcontrollers.

The vision for the CITC Fab Lab would support the students who reside at CITC's Dena'ina Academy, and also be open to the larger community, therefore supporting a broad array of education initiatives and programs. Fab Labs are focused on developing creative learning experiences for people of all ages, and engaging students and the community to explore ideas through the use of innovative technology. Fab Labs have demonstrated success preparing students for college and successful careers in STEM fields through a dynamic, rigorous curriculum and project-based learning environment that will

prepare them for the 21st century global economy.

CITC has initiated its partnership with MIT and is working towards an installation date in the current fiscal year. Through this partnership, MIT will provide CITC with all necessary equipment to establish a Fab Lab, hands-on help with installation, and on-going training and educational support, which will be required in the next two fiscal years. MIT will lead an initial training program that will build Fab Lab expertise throughout the community. CITC staff (teachers and youth support) will receive training, and the training course will also be available to other community members who are committed to teaching and mentoring youth from across Alaska in the use of Fab Lab for the development and creation of student-centered projects.

Pilot demonstration project expenses are estimated to be approximately \$250,000 per year, which includes potential equipment expansion, facility and costs, paid student internships, and misc. items such as transportation and materials for student projects. CITC will be leveraging existing resources and staff to keep the operating costs at a sustainable level. Depending upon available funds in the future and the proven effectiveness after the initial demonstration project stage, the goal is to scale up Fab Lab to become a statewide resource.

In summary, this capital grant award from the State of Alaska will expand crucial STEM opportunities to the Alaska community, leverage current funds to bring this demonstration project to reality, and further CITC's vision to ensure that our youth, the stewards of our future, have the courage, confidence and ability to reach their endless potential.

Project Timeline:

Pilot demonstration project expenses are estimated to be approximately \$250,000 per year, which includes potential equipment expansion, facility and costs, paid student internships, and misc. items such as transportation and materials for student projects for the next two fiscal years.

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

CITC

Grant Recipient Contact Information:

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Has this project been through a public review process at the local level and is it a community priority? Yes No