

ALASKA LEGISLATURE COMMITTEE FILES 2007-2008 SL&C 12596



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William J. Carter

Signature of Camera Operator

10/14/2009

Date

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AND WORKFORCE DEVELOPMENT

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2/13/07

OVERVIEW

RURAL ECON.

DEV. &

WORKFORCE

DEV.

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NECA and the IBEW jointly sponsor the Alaska Joint Electrical Apprenticeship Training Trust ("AJEATT"). Apprentices attend classes at facilities located in Anchorage and Fairbanks. The annual budget exceeds \$1.5 million dollars provided by employer contributions determined by collective bargaining. Instructors are journeymen who have extensive field experience and who attend the National Training Institute annually at the University of Tennessee (sponsored by the NJATC).

	Active Line App	Completed Linemen	Active Elect App	Completed Electricians	Active Comm App	Completed Comm Wkrs
1998	56	7	120	15	65	14
1999	61	15	131	26	78	8
2000	62	7	143	20	85	14
2001	63	10	197	24	75	7
2002	59	7	201	15	70	5
2003	62	2	246	20	69	15
2004	66	14	242	29	68	16
2005	73	11	247	38	75	19
2006	79	16	232	46	82	3



Structural view of the new addition at the existing training center in Fairbanks. Higher ceiling area is the lineman training area that provides for indoor training during the winter months.



View of the addition to the Fairbanks training center from Airport Road.



11/11/11
State should support/encourage:

1. high speed telecomm. (Portland OR)
2. legis to change lending ^{investment} climate at village level
3. feasibility study - free trade zone fed-resol.
4. Knowledge ^{based-} economy eco system info/communications
Arctic Knowledge Village - Demo Project
work force dev.
5. Econ. Diagnostic support for local communities - tech
asst.

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ALASKA WORKS PARTNERSHIP, Inc.

Alaska's Construction Unions & Jointly Administered Apprenticeship Programs

Building Alaska One Community at a Time

Pipeline Training Puts Workers in the Field

Skill. Teamwork. Safety. All are paramount to building a pipeline across the Alaska's arctic. That's why realistic, hands-on training is so important. Thanks to a two week intensive pipeline training academy, workers now have what it takes to go work on pipeline projects around the state.

Ninety-seven apprentices and beginning pipeline workers graduated from the training event held in Fairbanks in October. The training program is unlike any other in the country. Unions, industry, and government partner together to give participants an opportunity to work collaboratively on all aspects of pipeline construction. Along with the skills they gained in their respective trades, trainees practiced all phases of pipeline construction as a combined workforce.

Alaska Works Partnership helped coordinate the effort. Alaska's four pipeline unions – Operating Engineers Local 302, Laborers Local 942 and 341, Plumbers and Pipefitters Local 375, and Teamsters Local 959 – along with local contractors hosted this fifth annual Alaska Joint Pipeline training.



Rural students came from villages as far away as Kiana, Napakiak, Ambler and Dillingham.

“This is a great way for people to see how all the different crafts work together and how each trade supports the others,” said Betty Jo Dibble, apprentice coordinator for the Operating Engineers/Employers Training Trust.

Participants were recruited from across the state. Rural students came from villages as far away as Kiana, Napakiak, Ambler and Dillingham. Nearly 20 percent of the participants were Alaska Native and 20 percent were female. More than 60 percent were between the ages of 18-29.

One participant, Claudia Durringer, said the training offered a glimpse into the dynamic teamwork required to build a pipeline. Durringer is new to the trades, and after the pipeline training

(Continued on page 2)



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www.uaa.alaska.edu/etc

Career Pathways

UAA Community & Technical College

Recommended High School Preparation *†

1/2-1 year Occupational Endorsement Certificate

1-2 y Undergraduate

Allied Health

- Clinical Assistant
- Coding and Billing
- Limited Radiography **
- Pharmacy Technology **
- Phlebotomist

- Dental Assisting
- Medical Assisting

Aviation Technology
264.7400

- Algebra II
- Computer skills
- Geometry
- Physics
- Reading and writing

- Aviation Maintenance
 - Airframe
 - Powerplant

Career and Technical Education
786.6423

- Algebra
- Computer skills
- Reading and writing

Computer and Electronics Technologies
786.6423

- Algebra
- Computer skills
- Reading and writing

- Administrative Office Support
- Bookkeeping
- Cisco Local Academy Networking
- Desktop Publishing & Graphics
- Medical Office Support
- Office Technology
- Web Foundations

- Computer Information & Office Systems
- Computer & Network Technology
- Telecommunications & Electronics Systems

Construction & Design Technology
786.6423

- Computer Aided Drafting and Design **

- Architectural Drafting
- Civil Drafting
- Industrial Welding
- Mechanical & Electrical
- Nondestructive Testing
- Structural Drafting

Health, Physical Education & Recreation
786.4083

- Algebra
- Computer skills
- Reading and writing
- Variety of physical activities

- Coaching Leadership
- Fitness Leadership

Transportation and Power
786.1485

- Algebra
- Computer competency
- Industrial technology elective
- Reading and writing

- Automotive Brakes, Suspension & Alignment
- Automotive Electrical
- Automotive Engine Performance
- Automotive Power Trains

- Automotive Technology
- Heavy Duty Trucks & Equipment

* This is a general list of recommended classes. Please contact the program adviser to find out more about your specific program. † Some of these classes are also available at other UAA locations.

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U i n @ w o r k

Summer 2006

No. 8

Connecting Alaska employers with University of Alaska resources

Inside This Issue

Fast Track

Workforce Development on the Fast Track at TVC

"The core idea is 'get in, get out, get working!'" says Rick Caulfield, director of Tanana Valley Campus.

Page 3

Supply Chain Management

New Graduate Certificate Offers Career Advancement

"Students who take this certificate will walk away with expert knowledge," says Dr. Oliver Hedgepeth, chair of UAA's logistics department.

Page 5

Construction Management & Trades Technology

UA Programs Build Construction Workforce

The hands-on, responsive approach benefits students, who are better prepared for careers in the field, as well as Alaska business and industry.

Pages 6-7

PWSCC Training Department

PWSCC Meets Area's Training and Workforce Needs

"We play a crucial role in workforce development for current and emerging industries," says Mark Young, director of training at Prince William Sound Community College.

Pages 8-9

Digital Arts

Going Digital with New KPC Degree

"It is critical to any program like this to listen to industry and put together a program based on what they see as important," says Gary Turner, director of Kenai Peninsula College.

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Photo by Marquana Coe for UAWORK

"The University is the place where Alaska's future begins."

UA President Mark Hamilton

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U@WORK

Summer 2005

No. 5

Connecting Alaska employers with University of Alaska resources

Mining & Petroleum Training Services

MAPTS Matches Industry Needs with UA Strengths

"It's a great advantage to the industry and the University to address training needs in a uniform and consistent way," says Dennis Steffy, UAA's Mining & Petroleum Training Service director.

Page 2

Customer Service

TVC Golden Heart Academy Prepares Fairbanksans for Visitor Industry

"This academy is helping Fairbanks reach for the gold in hospitality," says Deb Hickok, president and CEO of the Fairbanks Convention and Visitors Bureau.

Page 4

Dental Assisting

Campuses Train Dental Assistants for Alaska

"The clinic is a huge asset to our ability to teach well," says Jenifer Filotei, dental assisting program coordinator at UAF's Tanana Valley Campus. "It's state of the art."

Page 5

American Russian Center ARC Builds Business— and Relationships

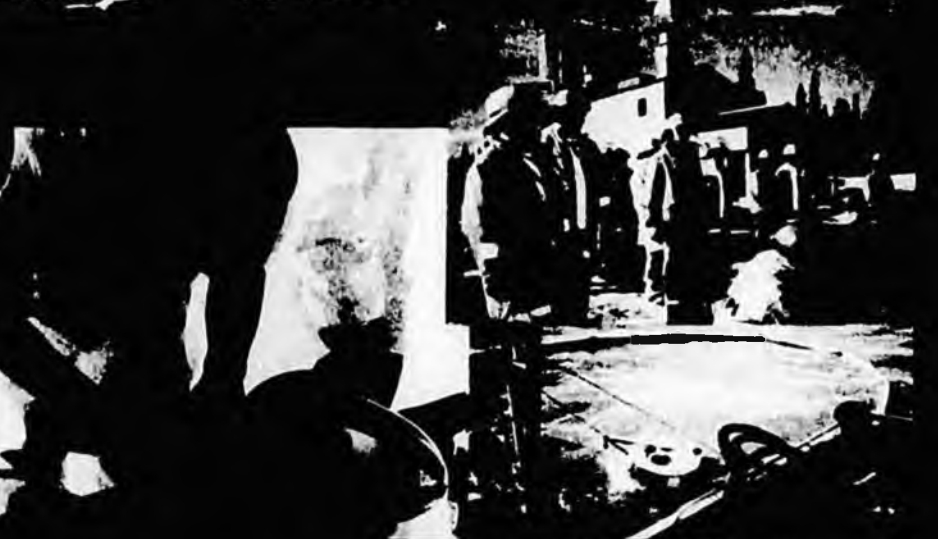
Partnerships with Alaska businesses, non-profits and government agencies are a key component to ARC's mission.

Page 6

Arabic Customs & Culture TVC Trains Fort Wainwright Soldiers on Arabic Customs and Culture

"This class is going to help out a lot, even if we learn just a little basic vocabulary," says Staff Sgt. John Bright.

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Photos courtesy of UAA KPC MAPTS. Story on page 2

"The University is the place where Alaska's future begins."

U.A. President Mark Hamilton

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U of A @ WORK

Spring 2006

No. 6

Connecting Alaska employers with University of Alaska resources

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Early Childhood Education

Program Educates Alaska's Educators

The goal is to make the program accessible to working professionals and those in rural areas.

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PWSCC Scholarships

USDA Grant Expands Programs, Trains Workforce

The success of this program is good for the students and also offers benefits to Alaska's business and industry.

Page 3

Cooperative Extension

Extension Links Alaskans with Education

Extension focuses on workforce development and economic diversification.

Pages 4 - 5

Automotive Technology

UAS Instructor Co-Authors Hybrid Technology Textbook

This textbook is the foundation for specific classes for the local workforce.

Page 7

Arctic Engineering

Engineering in: the Cold Country

Our program takes into consideration the cold temperatures, snow and ice.

It directly addresses the issues Alaska faces.

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"The University is the place where Alaska's future begins."

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**Paramedic Technology
UA's Paramedic Programs
Answer the Call**

"The demand is huge all over the country," says Doug Schrage, Anchorage Fire Department deputy fire chief. "There's a shortage of paramedics."

Page 2

Career Services

**UA Career Services Serve
Businesses, Too**

"Half of what we do is serve employers," says Michael Reeves, director of the UAA Career Services Center. "They support the university because we're building their workforce."

Page 3

**Alaska Shipyard System for
Education & Training
(ASSET)**

**Shipyard Builds Stable
Workforce**

"We design a lot of classes specifically for people at the shipyard," says John Fraley, UAS ASSET program manager.

Page 4

**Outdoor Skills Training
Outdoor Skills Important for
Work — and Play**

It's not unusual to see a BP engineer studying side-by-side with a recreational boater, or a Fish and Game biologist working with an outdoor adventure guide.

Page 6

**Web Technology
Doing Business on the Web**

"In any business, having a Web site is absolutely necessary," says Colleen McKenna, UAS assistant professor of information systems.

Page 7



TVC photo by Scott McCrea - Story on page 2

*"The University is the place where
Alaska's future begins."*

UA President Mari Mamon

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UAS @ WORK

February 2005

No. 4

Connecting Alaska employers with University of Alaska resources

Fisheries Technology Fishing for Technicians Easier with New UAS Program

"The program was started to meet local and regional needs of employers in the fish tech field," says Kate Sullivan, UAS assistant professor of fisheries technology.

Page 2

Health Science UAA ANSRPH Transforming Health Science Research in Alaska

"We are constantly scouting new opportunities and projects for training and mentoring students," says Melodie Fair, ANSRPH research associate.

Page 4

Medical Billing & Coding UA Helps Ease Shortage of Medical Support Staff

"Accurate coding is important for the patient, the doctor and the insurance company," says Pam Ventgen, UAA assistant professor in medical assisting

Page 5

Power Technology UAS Trains Students for Jobs in "Priority Industries"

"Our programs benefit Alaska companies by producing ready-to-work, trained, local workers that can perform the job that they are expected to do," says Chuck Craig, UAS associate professor of diesel/hydraulics.

Page 6

Water/Wastewater UA Offers Comprehensive Water/Wastewater Training and Education

"Now more than ever, providing safe drinking water requires highly trained engineers, scientists and operators," says Dr. Craig Woolard, professor and chair of the UAA civil engineering department.

Page 7



*"The University
is the
place where
Alaska's future
begins."*

UA President
Mark Hamilton



Photos courtesy of UAS Ken Lukin. Story on page 2.



Building Alaska's Construction Workforce



A Comprehensive Workforce Development Plan

A report prepared by the
Alaska Workforce Investment Board
April 2006



State of Alaska

*Frank H. Murkowski, Governor
Greg O'Claray, Commissioner*



**ALASKA DEPARTMENT OF LABOR
& WORKFORCE DEVELOPMENT**

Jobs are Alaska's Future

Building Alaska's Construction Workforce

A Construction Workforce Development Plan



**ALASKA DEPARTMENT OF LABOR
& WORKFORCE DEVELOPMENT**

Alaska Workforce Investment Board

Andy Baker, Chair

David Stone, Vice Chair

John Pratt, Executive Director

Building Alaska's Construction Workforce

There are over 30,000 people employed in construction-related occupations in Alaska. Among these are 18,000 construction trade and craft workers who averaged over \$59,000 in earnings during 2004. Alaska is experiencing a critical shortage of resident workers with construction skills. 20 percent of construction workers are new arrivals to the state. Historically, the industry relies on non-residents to fill jobs for which they cannot find qualified Alaskans.

The Alaska Department of Labor and Workforce Development estimates construction job growth will exceed 15% over the next decade, adding thousands of new jobs. More than 40 percent of the workforce are over the age of 45 and could retire within a decade. Job growth and replacing older workers will require about 1,000 new construction workers each year. If a gas pipeline is built thousands more will be needed.

The demand for construction workers is significantly out-pacing the supply from industry and vocational trainers. Putting thousands more Alaskans to work in construction requires additional investment in training programs and capital infrastructure and a coordinated effort by industry, labor, education and government.

The Building Alaska's Construction Workforce plan was developed after studying the workforce labor market conditions and estimated new worker demand, the current supply routes for new workers, and statewide training capacity issues. A background report titled Construction Summit II adopted by the Alaska Workforce Investment Board (AWIB) in August 2005 provides useful information. The report can be found on the Web at www.labor.state.ak.us/awib/pubs.htm.

Guiding Principles

- Industry employers, trade associations, trade unions, apprenticeship sponsors, and schools are most responsible for training workers.
- An analysis of workforce supply gaps, cost-effectiveness and return on investment should guide decisions for state investment.
- The commitment of employers to hire persons trained to meet the needs of industry is imperative to results.
- The construction industry is a market-driven system and public investment must provide opportunities for training individuals.
- The nature of training in the construction trades is that people learn on-the-job and, therefore, any public training should result in employment.
- The Alaska Workforce Investment Board will provide oversight for plan implementation.

We welcome your comments on the plan. To submit them, please send your remarks to the AWIB Executive Director at john_pratt@labor.state.ak.us.

Building the Alaska Construction Workforce

Vision: Alaska has a highly skilled and competitive resident construction workforce that meets the needs of industry employers.

Goal: Increase the number of Alaskan residents working in construction to 90 percent to meet job growth projections.

Process: The plan's process will encompass four objectives that are included in each desired outcome:

- I. Increase the access to information, support services, training and employment through effective outreach and marketing of construction related occupations and careers.***
- II. Provide quality education and training that provides Alaskans with the skills necessary to competitively secure employment in construction related occupations.***
- III. Obtain employment for all who successfully complete training and demonstrate that they have the skills necessary to be competitive in Alaska's labor force.***
- IV. Insure that Alaskans who choose to enter the construction workforce have the supports necessary to complete training and stay in the workforce.***

Desired Outcomes:

- 1. Double the number of new trade apprentices employed.**
- 2. Increase the number of Alaska high school students who choose construction and enter career training.**
- 3. Increase the number of post-secondary students trained for construction, the number of students in engineering and construction management degree and non-degree programs and the number of persons receiving job training in the construction trades.**
- 4. Increase support for operating rural training centers that provide construction training.**
- 5. More Adult Basic Education (ABE) programs are connected to construction job training.**
- 6. Increase the number of qualified vocational technical instructors to keep up with training demand.**
- 7. Decrease the number of non-residents that are recruited annually to meet the needs of the industry.**

Timeline: Begin activities in 2006. Plan covers a five-year period based on current labor market conditions and projections for workforce demand by 2011. Year one ramp up and begin new interventions. Year Two will see full activity toward all objectives.

Results: Increased number of residents employed in construction will strengthen the economy and construction industry and provide high paying jobs for residents. The plan provides a solid framework to build upon; should additional pipeline

construction workers be needed. Strategies will provide 3,000 to 4,000 resident workers over next five years.

Resources: The plan calls for an increased investment by government to assist industry and schools with recruiting, educating, training and employing residents in construction. Activities under the plan require cost and resource analysis prior to funding.

Objective #1 - Apprentice Training

Double the number of Alaskan trade apprentices employed over five years.

Strategies:

- Create an information system that tracks apprentice hire by trade to get an accurate count of apprentices employed in Alaska and for evaluating the performance of apprenticeship sponsors.
- Research apprentice data for benchmarks to gauge strategy progress and assist programs to improve enrollment and retention rates.
- Market the benefits of hiring apprentices to industry employers and create employer and sponsor incentives for apprentice hire.
- Develop mentors for apprentices off the job who guide them in work and life decisions.
- Hold an annual apprenticeship conference to improve state efforts.
- Invest in building apprenticeship training capacity as determined by occupational demand, apprentice sponsor results and experience, capability, and leverage resources.
- Develop policies that require employers to hire apprentices on state funded construction work valued over \$2 million or where construction is performed to extract natural resources.
- Work with the apprenticeship programs to develop a competency-based program for new entrants.

Results: 50 percent of new construction workers will be Alaskan apprentices.

Resources: New investment would be for an apprentice information system, marketing to employers, apprentice sponsor/employer incentives, sponsoring an apprenticeship conference, and where applicable expansion of private sector training capacity.

Explanation: Apprenticeship training is the most common method used by Alaska's construction industry to renew the workforce. Apprentices learn through course related instruction and on-the-job training under the guidance of a journeyman. They are paid a wage set to their skill level and they advance in

hourly pay based on course completions and hours of work. Apprenticeship training is paid for by industry.

It takes an apprentice two to five years to complete training depending upon the trade they learn. Apprentices need many employers and many construction projects to get the thousands of hours of on-the-job training required to complete. Employers are not required to hire apprentices. It is a voluntary decision. Nationally about half of apprentices drop out during the first or second year due to lack of work because they can't find an employer who will hire someone in training.

There are more than ten skilled workers hired for every apprentice today (10:1) in Alaska. Industry has established a hiring ratio of four skilled workers for every apprentice (4:1). Hiring at the industry ratio of four skilled workers to one apprentice provides a market driven means for employers to train a new workforce. Dramatically increasing the number of trade apprentices employed and the number of employers that hire apprentices could significantly add to the future supply of resident workers. For example, if an apprentice were to be hired for every eight skilled workers 3,000 more residents would be construction workers.

Governor Frank Murkowski signed Administrative Order 226 in July 2005 relating to the employment of apprentices on Alaska Department of Transportation civil construction projects. The Administration's policy is to increase the number of resident skilled operators, laborers and truck drivers for the construction industry. This Administrative Order creates a precedent for future policy decisions related to hiring apprentices on publicly funded construction projects and those developed under resource leases.

Objective #2 - Vocational Education

Provide more students a path from school to work in construction.

Strategies:

1. Perform a gap analysis study to determine barriers within public education for aligning with industry standards and increasing construction vocational education in schools.
2. Develop a construction career guidance and management program for school counselors and Alaska Job Center Network vocational counselors to help advise in- and out-of-school youth.
3. Fund a media campaign to reach out to Alaska students to attract them to the exciting, high paying work construction and engineering offers.
4. Support career activities such as the Vocational Student Professional Opportunities, Career Fairs, School-to-Apprenticeship and Tech Prep.

5. Offer incentives for employers to hire youth in cooperative learning positions.
6. Assist teachers in understanding and using industry standards in classroom curricula.
7. Connect academic and vocational courses through articulated agreements that build a path for students leading to industry careers.
8. Establish standards for entry-level academic and basic skill requirements and a common assessment tool.
9. Provide summer enrichment opportunities for middle and high school students on university and training center campuses to introduce engineering and construction management programs and career opportunities.
10. Use school facilities more effectively, such as providing students with vocational training during evenings, weekends and summer breaks.
11. Provide resources for construction vocational education courses that serve high school students, older youth, students in alternative education or those who have left school.
12. Develop an inventory of best practices through the school system.
13. Develop on-the-job training (OJT) programs as an element of education internships.

Results: Improving vocational and technical education for students in high school programs will supply many applicants to trade apprenticeship programs, post-secondary schools and college.

Resources: Activities would rely on public investments over several years. Funding would be required to develop marketing campaigns, student guidance materials, to align courses, develop instructors, and offer career activities and courses.

Explanation: The foundation for a highly skilled and productive workforce is a modern vocational technical education system. Our students are the largest available pool of future resident workers. Most high school students are strongly encouraged to go to college. School counselors must have information to guide a student interested in construction as a career and students must have career information available to them. A career management and guidance program for high school counselors, teachers and parents must be developed that help everyone understand how to prepare for entering the construction workforce.

An adequate public investment in vocational and technical education to keep pace with the changing nature of work is a necessary to address resident worker shortages in many high-skill, high-pay jobs. It will take a significant long-term investment to build a modern vocational education system to meet the needs of our economy and employers. A good place to start is building a road from school to work in construction.

Vocational education for construction should meet clearly defined competency standards and use one assessment tool for measuring student skills and

knowledge. This provides a basis for entry-level assessment tests to help students understand their strengths and guide them in choosing the education and training they need to prepare for construction work. Establishing programs to a common standard gives students the right foundation.

The system framework is based on alignment of academic and vocational courses between industry and education. Education includes secondary, post-secondary and higher learning. The courses must align with industry trade apprentice courses. Alignment brings a streamlined and cost-effective approach that ensures a person always advances in skills and knowledge along a path to their career goal.

Objective #3 - Post-Secondary Vocational Technical Education

Increase capacity of post-secondary institutions to supply construction workers.

Strategies

1. Provide scholarships and support for youth who attend post-secondary construction.
2. Include post secondary instructors in professional development opportunities.
3. Align existing programs with academic and industry standards for connections with secondary and college programs via such means as articulation agreements.
4. Assess institution capacity and costs for program expansion.
5. Provide more funding to support remedial education of incoming students.
6. Assess ability to expand post-secondary training through links with regional training centers and industry.
7. Develop articulation agreements with secondary and post-secondary schools that will allow students to move easily throughout the system.
8. Develop programs that require on-the-job training (OJT) as part of the basic educational experience.

Results: Post-secondary institutions for vocational technical training have more capacity and can increase the supply of residents to the construction workforce.

Resources: The state and students pay current costs. Program improvements would be spread among costs for other objectives, such as course alignment and instructor development. Initial funds would be required for student scholarships and student support, remedial education services, institution capacity assessment and to research feasibility of expansion through regional training centers. Additional funding would be required for program expansion.

Explanation: The Alaska Vocational Technical Center (AVTEC) in Seward is our largest post-secondary vocational technical education institution. The school is

straining to meet training demand for many of Alaska's important industries. Operation costs are rising and public funding of AVTEC is not keeping pace.

Post-secondary training plays an important role in developing the future workforce. Many people who aren't going on to college need more education and vocational training to get a good job. This is an important source of new workers for the construction industry.

AVTEC provides some construction courses and delivers courses for apprentice sponsors. Increasing the demand for apprentices coupled with construction paths for high school and older youth will create more demand at AVTEC.

Alaska Technical Center (ATC) in Kotzebue is a state funded post-secondary school and offers some construction training. ATC has limited capacity for training more construction workers.

Objective #4 - Job Training

Increase public funding for construction job training to upgrade incumbent workers skills and help new workers get work experience.

Strategies:

1. Use competitive grants to increase the number of Alaskans who receive services and job training to enter or remain employed in the construction workforce.
2. Support the Denali Training Fund (DTF) and the State Training Employment Program (STEP) to continue providing resources for resident training.
3. Increase STEP funding to provide additional job training for construction and further developing distance training, instructors, and instruction technology for mobile training.
4. Base grant decisions on labor market analysis of demand and supply by occupations, the performance of training providers, and matching resources.
5. Develop an industry-centered approach with the Alaska Job Centers Network to assist job seekers and employers in a streamlined process that expedites training and employment.
6. Assist youth and adult job seekers eligible for Individual Training Accounts to access training resources at Alaska Job Centers for industry training.
7. Refer students in job training who require education enrichment to an adult education provider.

Results: Continued and expanded job training will help supply 25 percent of the resident workforce required to meet the goal. In addition, thousands of current

workers will be provided assistance with upgrade training that helps them stay working in the industry.

Resources: As our economy expands more job training will be required to meet job growth in all industries. The STEP should be increased to ensure adequate resources are available. Increasing STEP funding or providing a General Fund match for STEP would resource this objective.

Explanation: Job training is public funded training that helps job seekers get a job or keep a job. Job training is a key element for retaining a resident workforce and bringing residents into the workforce. The investment in construction job training has greatly contributed over the years to Alaska hire in construction.

In 2004 more than 2,000 workers attended public funded job training. More than 90 percent of persons trained were employed in construction and most saw annual income and length of employment increase. The majority of those trained are incumbent workers who are employed and attend courses to upgrade skills so they can remain employed. Many are job seekers looking for their first construction job.

An individual's first construction job is often used to determine if they want to continue in the industry or look for another line of work. Many may continue to learn as they work while some may choose to enter structured training through trade apprenticeship or courses at a voc-tech school.

Most construction job training grants are provided by the US Department of Labor, the Denali Commission and the Alaska Department of Labor and Workforce Development. These agencies spend several millions of dollars annually. Over 75 percent is spent training rural Alaskans.

Because of government investment construction job training is mobile today. Instructors travel to every part of the state to provide training. Most courses are less than one month long and most training is for specific projects within a community where residents will be employed.

Objective #5 - Rural Training Centers

Increase capacity of rural training centers to host construction training.

Strategies:

1. Assess centers for meeting common training standards, student performance, connectivity with regional education and capacity to provide construction training, anticipated job growth in the area and connectivity with other secondary, post-secondary and apprenticeship programs.
2. Develop common standards, assessment instruments and written agreements between the AKDOLWD and Rural Training Centers for developing industry training programs that serve rural residents.

3. Issue competitive grants to rural training centers to help support operations and training.
4. Evaluate center performance for improvements.

Results: The rural training infrastructure helps train hundreds of residents living in rural Alaska each year.

Resources: State funds for operations come from the Technical and Vocational Education Program (TVEP) and total about \$1.0 million today. This funding should continue. Increasing capacity for construction training would require an increase in TVEP funding. Shifting resources for construction training from TVEP to rural centers would diminish other vocational programs operated by AVTEC and the University.

Explanation: Several rural training centers have been created over the past few years by regional partners. Center operating funds come from partners, local sources and state grants, and through resources from the University of Alaska. These centers have become a vital part of our rural training infrastructure. Rural training centers are significantly increasing the supply of rural residents to the construction workforce by hosting training in their region.

Most of the training is for local hire on rural construction projects funded by the Denali Commission and large construction projects done by contractors. The rural centers are: the Southwest Alaska Vocational Education Center in King Salmon, Yuut Elitnaurviaat Peoples Learning Center in Bethel, the Northwest Arctic Technical Center in Nome, the SMART Center in St. Mary's, the Galena Vocational Technical Center and the Delta Career Advancement Center.

Each center has working relationships with school districts, AVTEC, university campuses, apprenticeship sponsors, and mobile industry trainers. However, each center has a separate mission with no common standards between them. Continued public funding of centers should become based on an evaluation of the center's ability to provide industry courses, and to meet common standards for center operations including instruction space, instructors, facility use, and student performance. These standards should be similar to those covering job training entities and post-secondary schools.

An increase in center operation support from the state will be required to increase construction job training in rural Alaska. Additional funding decisions should be based upon the regional demand and shortage of workers, the center's ability to meet the training demands for the region, the cost per participant for use of the facility, and previous construction student employment results.

Objective #6 - Higher Education

Students entering college select and complete engineering and construction management degree and non-degree programs to meet the needs of construction and resource development employers.

Strategies:

1. Provide financial scholarships and incentives for students who select engineering and construction management programs at the University.
2. Prepare special publication of existing financial aid available for engineering and construction management students.
3. Work with industry and private donors to develop new scholarship opportunities.
4. Work with the state to develop needs-based financial aid opportunities for students.
5. Work with high schools to develop appropriate curricula in math and science to enable students to successfully enter post-secondary engineering and construction management programs.
6. Develop mentoring and tutoring programs within the University of Alaska system to increase student success and retention.
7. Seek industry-sponsored externships that provide teachers and students exposure to the work in the industry and provide opportunities for industry experts to teach in schools.
8. Resource support programs that assist students in overcoming barriers to completing demanding courses of study such as higher math and science courses.

Results: Expansion of University programs and building awareness will provide pathways to career advancement opportunities, which, in turn, will help to replace retiring managers and professionals and supply industry needs arising from growth. Additionally, incumbent workers will have the opportunity to build their knowledge and advance their skill sets, improving their earning potential.

Resources: Public funding will need to be invested to develop University programs and align them with high school curricula. Investments from the private sector will be essential for the creation of new scholarships. Industry must play a key role in marketing available programs and financial aid, developing mentorships and coordinating with University and school districts.

Explanation: The University of Alaska is responding to industry demand by initiating construction management and engineer degree programs, and providing industry related courses at campuses across the state. The University has increased their capability to train construction engineers. Program expansion will require additional resources and involved employers. Engineer students need

mentorship, internship and work experience opportunities. Alaska employers must follow through and hire engineers trained in Alaska.

There are many resources available to assist college students. Those seeking engineering and construction management degrees should be able to access information about resources to attend school. More students could be trained if additional scholarships are developed.

Resources at the University are limited for expanding these programs. In recent years the University of Alaska has had to shift instruction resources to provide remedial education for new students. The number of students requiring remedial education increases each year. These students need pre-college education to succeed in higher learning and work.

Objective #7 - Adult Basic Education (ABE)

Increase the number of adult basic education students who receive construction job training in a defined path from initial skill acquisition to employment.

Strategies:

1. Provide ABE students with career information and guidance for construction.
2. Develop mentors to assist students on the job and when they are off work.
3. Have students complete a standard assessment before applying to a job-training program.
4. Resource training that helps adults increase English reading comprehension and math skills joined with work based job training for construction jobs.
5. Improve assessment of participant needs and design adult learning programs that are adjusted for cultural differences and learning styles.
6. Assess ABE providers for ability to link with construction job training.
7. Increase partnership grants for ABE and job training providers for construction job training that result in ABE clients being employed.
8. Inventory community ABE programs, assess ABE instructor availability and determine best practices for optimal and innovative approaches to service delivery.
9. Develop appropriate ABE training materials to meet construction skill training requirements.

Results: Adult job seekers enter the workforce and continue training to be self-sufficient.

Resources: Additional funding for Adult Basic Education programs would be required.

Explanation: People who complete general education requirements and ABE programs are ready for job training programs. Job training provides initial work experience and can lead to apprenticeship training, post-secondary vocational courses or a college education. Unfortunately, there are many residents that don't complete high school education and require ABE to move forward. There are also many new residents who speak a different language and need to learn English to join the workforce.

Some job seekers are not ready to learn the technical information they need to develop construction skills. Many need more education to improve their language, communications, reading or math skills. Connecting ABE students to construction job training programs can offer many low skilled people a route to work and skills to support themselves.

Objective #8 - Instructor Development

Increase the number of qualified vocational education teachers and industry trainers in Alaska.

Strategies:

1. Provide grants for train-the-trainer initiatives that help vocational teachers and industry trainers meet industry, academic, and government standards.
2. Develop industry employer and educator externship opportunities for teachers to experience real work settings and for employers that want to assist teachers in schools.
3. Provide matching grants for industry to assist with instructor development costs.
4. Develop a network among basic education teachers, vocational teachers and industry instructors for improving training delivery.
5. Provide instructor courses to meet requirements for training and be more effective trainers.

Results: More instructors, more education and training. Instructor development will increase the supply of persons qualified to work in construction.

Resources: Public grants and leverage resources from private training entities.

Explanation: The reduced emphasis on vocational education over the years has depleted the well of instructors available. As job growth continues more instructors will be needed to keep up with training. Instructors have to continuously learn new curricula, teaching methods and instruction technology. Making sure there are enough qualified instructors to train residents is required for plan success.

There are few professional development opportunities for high school or post-secondary teachers. One excellent program has been created by the Matanuska-Susitna School District. The school district organizes a Construction Instructor Academy each year for vocational teachers and trade apprentice instructors. Apprentice schools operated by labor and management have held annual professional development workshops in Alaska the past several years.

Developing a state based train-the-trainer initiative could help improve and expand vocational and technical training for residents and build the supply of new instructors. Aligning program and instructor standards requires teachers who know how and apply them in the classroom.

BUILDING ALASKA'S CONSTRUCTION WORKFORCE

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REPORT WRITTEN BY ALASKA WORKS PARTNERSHIP
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BUILDING ALASKA'S CONSTRUCTION WORKFORCE

Construction in Alaska

Construction has become a steady economic force in Alaska. Estimates prepared by the Institute for Social and Economic Research (ISER) peg total construction spending in 2006 at \$6.525 billion dollars, an increase of 13 percent over 2005 construction spending. With \$3.925 billion provided by private funds and \$2.6 billion from public sources, this increase reflects the continuing trend of growth in Alaska's construction industry.

Alaska Economic Trends, in its Ten-Year Industry Forecast (September 2004) predicted that construction jobs through 2012 would increase at a rate of 15.7 percent. According to state and industry workforce planners, Alaska construction industry will need about 1,000 new workers each year for the next several years to address new job growth and to replace workers leaving the industry through retirement.



Building an Alaska Gas pipeline in the next decade could add an estimated 7,000 additional construction jobs to the economy. The gas pipeline project would generate an economic boom in which thousands more construction workers would be needed to build new infrastructure, support businesses, and homes.

A major challenge in building Alaska's future is the aging construction workforce. More than 40 percent of the Alaska's current construction workforce, or about 9,000 workers, could leave the industry through retirement before 2012. In addition, one in five construction workers employed in Alaska are non-residents.

Alaska Workforce Investment Board

In 2005, the Alaska Workforce Investment Board focused on developing a strategic plan for building Alaska's construction workforce. They joined with industry, labor and education to develop the Alaska Construction Workforce Plan. The plan was adopted by the AWIB in February 2006.

The plan focused on increasing Alaska hire in construction in the face of continued projected high demand for workers through 2012 and the impact on the Alaska economy.

The Board recognized the high pay and career opportunities in construction for residents, the need for a strong and competitive construction industry in Alaska, and the impact on training capacity that building a gas pipeline within the next decade might have. The plan offers a strategic blueprint from the state's workforce policy board for policies, investment, and actions to meet the construction worker supply challenge.



One task of the plan is to analyze the current capacity for training and projected capacity to train more workers out to 2012. Information about training from industry, labor and education will bring a better understanding of Alaska's capability to train new workers and connect them to jobs at all levels in the construction and pipeline industry. Two critical components are understanding industry training capacity, and the vocational, technical and career training capacity of public education.

This report looks at the industry capacity of Alaska's Joint Apprenticeship Training Committees (JATC) operated by trade unions and employers.

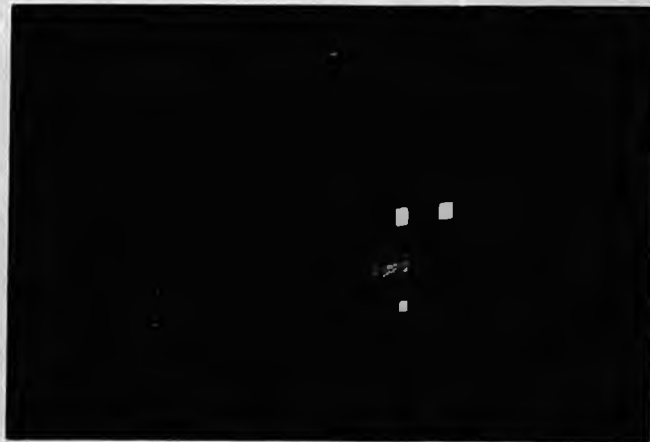
Alaska JATC administrators were interviewed during 2006 to learn more about their current capacity for training new workers and potential capacity for training out to 2012. Information was gained about:

- number of apprentices and journeyman trained in recent years
- the current level of training apprentices and journeyman
- estimated number of apprentices and journeyman trained in 2012
- the number of trade schools, value of training facilities and equipment
- number of employees (full/part-time) dedicated to training
- issues / needs for increasing capacity to train workers in the future
- investment in training for the past five years
- estimated future investment out to 2012, and,
- potential impact on training if the Alaska Natural Gas pipeline is built in the next decade.

What are Joint Apprenticeship Training Committees (JATCs)?

Alaska's JATCs are the largest supplier of new construction workers in Alaska today. The first JATC in Alaska was formed by members of the Southern Carpenters Union and their employers just after World War II. Their apprenticeship and training programs represent Alaska's largest *private sector* investment in vocational and career training.

There are thirty (30) individual JATCs providing construction training in Alaska. They train apprentices and upgrade journeyman skills for twenty-five construction crafts and trades: carpenter, electrician, lineman, plumber, pipe fitter, skilled laborer, heavy equipment operator, mechanic, surveyor, truck driver, painter, drywall finisher, roofer, asbestos worker /insulator, roofer, boilermaker, ironworker, piledriver & diver, millwright, floor coverer, glazier, sprinkler fitter, cement mason, and plasterer.



Each JATC is represented by a board made up of equal members of representatives from a trade union and from employers. The board directs training activities and manages the resources contributed by employers for apprenticeship and workforce training. The costs of apprenticeship training are borne by employers and workers.

JATCs operate fifteen postsecondary training schools. The trade schools are located in Juneau (1), Palmer (1), Fairbanks (6) and Anchorage (7). Collectively Alaska's JATCS have invested \$19 million in their training facilities. Their combined equipment value is about \$6 million for a total capital investment of \$25 million in training facilities and equipment. The JATCs employed 116 people in administrative and instructor positions in 2006. Most of those employed were part-time trade instructors.

How does Apprenticeship work?

The construction industry is built upon a foundation of skilled craftsmanship. The majority of the training of skilled construction workers is done by private industry. Trade apprenticeship is the primary method for training new construction workers. Apprenticeship is a time-tested, structured training process that involves employment of young workers who want to learn a trade. Apprentices receive paid on-the-job training under the guidance of skilled workers, take additional trade courses, and enter a high paying job with career opportunities.

Along with paid on-the-job training, apprentices attend course-related instruction that lasts 4-12 weeks each year during their apprenticeships. Length of annual weeks in training and years in training depends upon the standards set by the federal government for a specific trade. Trade-related classroom instruction gives new workers a comprehensive understanding of the theoretical aspects of their trade. The courses are delivered at the JATC trade school by qualified trade instructors. All JATC apprenticeship programs have affirmative action and equal employment opportunity goals to recruit women and minorities.

The starting hourly wage for an apprentice ranges from \$15-\$19. Apprentices also receive health care and retirement benefits. Many apprentices that reach journeyman status become crew leaders, foreman, superintendents and company owners due to the depth of knowledge they have in the industry.

JATC Success

The oldest method of training construction workers – apprenticeship – is still the largest and fastest growing supplier of new workers for construction. Because of the shortage of local workers and increasing business opportunities, industry employers have significantly increased their support for and employment of apprentices over the past few years. The number of trade apprentices registered with the USDOL in certified training programs is at an all time high.



In 2000, there were roughly one thousand active trade apprentices registered in Alaska. In 2006 there are over two thousand. In 2006 alone, apprentice sponsors brought in more than five hundred new construction workers through apprenticeships. More employers are making a commitment to hire and train younger workers and more young workers are choosing career training in construction.

JATCs represent the largest number of employers in Alaska for *any* industry that have committed to hire and train workers. According to the USDOL, eight hundred thirty-three (833) Union employers contribute funding for construction industry training through partnership with JATCs. Three hundred twenty (323) of these employers participate in more than one trade training program for a total of 1,156 employers involved with unions in apprenticeship agreements.

Each employer contributes money to their JATC through a *cents per hour* contribution for *every hour* of work performed on a union construction project. Each year thousands of union workers perform millions of hours of construction work. Hourly contributions

range from \$0.45 to \$1.00 per hour depending upon a negotiated rate for a specific trade.

JATCs reported that the annual employer investment in 2006 for training construction workers was slightly more than \$10 million. Five years ago, employers contributed about \$3.4 million. The tripling of annual employer contributions since 2001 illustrates the significant and increasing number of hours performed in construction by union construction workers and their employers in Alaska.

Anticipated Growth & Capacity of JATCs

JATCs invested more than \$25 million in construction training between 2000 and 2006. They expect annual contributions to remain high and estimate spending more than \$60 million for training between 2007 and 2012 to keep up with workforce demand for their industry employers.



At this time, the larger JATC programs – carpentry, electrical, plumbing, skilled laborer, heavy equipment – report they are actively training during most of the year and have added more full and part-time instructors in recent years. Some programs are training during the weekday, evenings and weekends to keep up with training demand.

Major areas of JATC spending include recruitment, instruction, upgrade courses, developing new courses, instructor training, mobile training, replacing and expanding instruction equipment, equipment maintenance, trade school expansions, operations, transportation costs and maintenance.

Between 2000-2006, JATCs invested more than \$10 million in building three new schools and expanding three existing trade schools: the Tom Cashen Electrical School in Anchorage, the Fairbanks Laborers Training Center, the Anchorage Plumbers & Pipefitters Apprenticeship School, the Fairbanks Painters, the Alaska Ironworkers, and an addition to the Kornfiend Electrical Training Center in Fairbanks.

Even with recent expansions, all JATCs believe they will need to enlarge their facilities and training programs to keep up with current growth. This need would increase significantly to train the number of workers required for construction of an Alaska Natural Gas Pipeline Project. Even without a new pipeline, construction work in the oil fields has increased due to new oil fields coming on line and work related to repairing and replacing pipelines.

If construction growth continues over the next several years, JATCs estimate they could sponsor more than 3,000 apprentices by 2012. They estimate 4,000 workers will need upgrade certificate courses each year by 2012.

A significant concern is developing additional instructors. Most instructors come from a trade and are developed by the JATCs through national skills training schools that train trade instructors. Most skilled workers who might consider becoming an instructor are currently working and earning top wages. Retirees are being developed as trade instructors.

JATC administrators agree that the growth in upgrade training for skilled workers will continue. Building technology, equipment, products and work practices continually change and many of these changes require additional certifications for workers to stay proficient in their fields. All JATCs cite the need to keep up with new advances in the construction trades – GPS training for grade control and machine control, welder training in the use of orbital and automated welding, instrumentation and calibration (used extensively in chemical and petroleum processing), training in computer aided design (CAD), and training in specialized pipe coating are just a few.

The most critical issues facing the JATCs today are: the need for more instruction space; the need to replace obsolete equipment and purchase additional instruction equipment; and the development of new instructors qualified to deliver industry training.

Summary

Construction jobs have a tremendous impact on Alaska communities and on the state's economy. In 2000, 25 percent (one in four construction workers) were nonresidents. By 2004 the nonresident construction hire rate had dropped to 19.0 percent (approximately one in five workers). These gains in local hire brought huge benefits to Alaskans and their communities. Between 2003 to 2004, for example, Alaska resident worker earnings increased \$56.0 million.



These significant gains in resident hire are a direct result of job training programs and the expansion of apprenticeship. In 2005, a construction worker employed in Alaska earned on average \$59,000. Clearly, increasing Alaska hire should continue to be a priority. Continued public funding for job training is essential in developing our local construction workforce.

JATCs represent the largest number of employers in Alaska for any industry that have committed to hire and train workers. They are equipped and ready to develop the next generation of construction workers. Over the past five years, Alaska's JATCs have

turned out more than 1,200 apprentices as journeymen. This represents more than 98 percent of all trade apprentices, union or non-union, to become journeyman as certified by the USDOL since the year 2000.

JATC's have a long history of meeting the demand for Alaska's construction workforce needs. As the construction industry grows, JATCs will need to expand their facilities, update their equipment, and develop more instructors. Plans are underway to continue to build Alaska through JATC's proven track record of training construction workers for the future.

JATC Apprentices by Year	2000	2005	2006	2012 (projected)
Total Registered Apprentices	900	1400	1700	2,800 – 3,200
Annual New Apprentices	160	300	400	600-750
Journeyman Upgrade Courses	1,200	2,000	2,300	4,000 – 5,000
Employer Contributions	\$3,400,00	\$8,000,00	\$10,200,000	\$16,000,000.



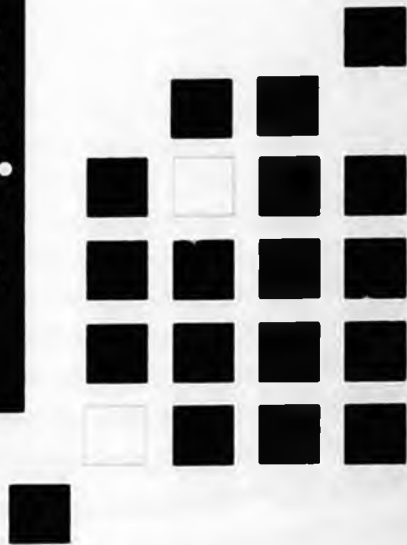
Alaska Works Partnership

2006

Innovative training
for Alaskan youth



Construction Academies





Building Alaska

What does an 18-year-old Anchorage high school graduate with no building experience have in common with a young Kokhanok woman who never learned to drive a car? Both young people attended innovative Alaska Works Partnership Youth Construction Academies this past year as they explored career options in the construction trades.

Seventy students, ages 16-24, from dozens of communities around the state attended AWP's pioneering Youth Construction Academies in 2006. What they learned ranged from construction driving to carpentry to operating heavy equipment. What they shared was an opportunity to gain skills for construction jobs in an industry that is clamoring for trained workers.

The Youth Construction Academies targeted 11th and 12th graders as well as recent high school graduates and those that had left school. Studies have shown that vocational education increases student retention and decreases high school dropout rate. After AWP's Youth Construction Academies, junior and senior participants returned to school with a renewed sense of purpose; many had plans for careers in construction. Academy graduates who had already graduated or left school had the opportunity to continue training in a building trade or be hired for capital construction projects in their own communities.

AWP's Youth Construction Academies are tailored to meet student needs. For example, in rural villages where there are no roads, local



youth often do not have a driver's license. Alaska Works Partnership addressed this barrier to employment by developing a driver education component to allow students to earn a driver's license as part of their training.



Youth Construction Academies are also customized to meet the workforce needs of local communities. In St. Mary's and Klawock, for example, academies emphasized basic carpentry skills for regional housing projects. In King Salmon, workers were needed for road construction, so training emphasized construction driving. The Academy in Delta offered training in civil construction where students had an opportunity to operate heavy equipment for local building projects.

Construction Academies are held at regional training centers. This year's Youth Construction Academies took place in Bethel at the Yuut Ellitnaurviat People's Learning Center; in St. Mary's at the St. Mary's Area Regional Training Center; in Ninilchik at the Cook Inlet Tribal Council Leadership Camp; in Klawock at the Klawock

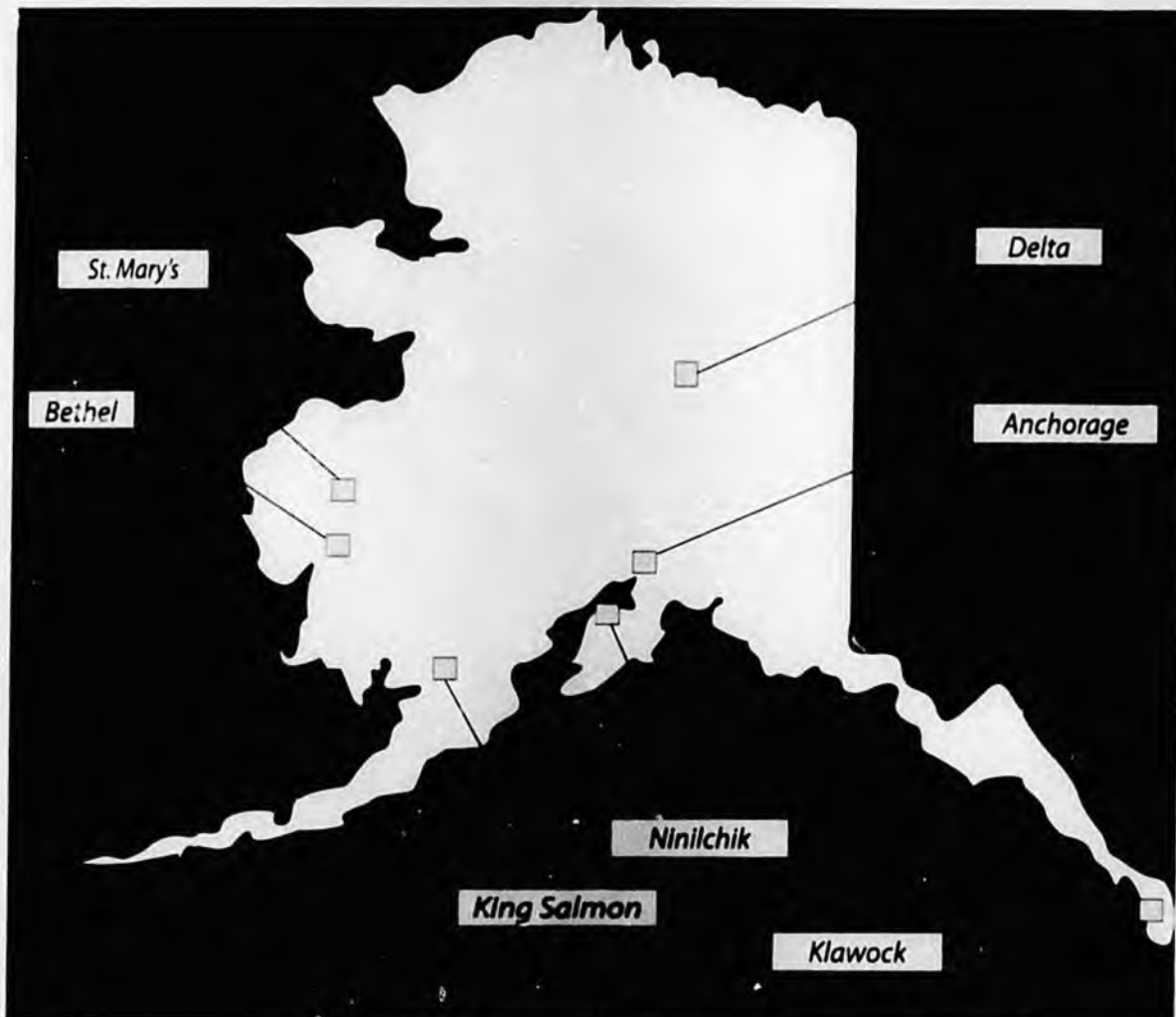
School; in King Salmon at the Southwest Alaska Vocational & Education Center (SAVEC); in Delta at the Delta Career Advancement Center; and in Anchorage at the King Career Center.

Teamwork is the foundation for the success of AWP's Youth Construction Academies. Partnerships with educators, labor, and industry help place graduates into jobs and prepare them for trade apprenticeships. School districts, Native corporations, regional training centers, local branches of the University of Alaska, Joint Apprenticeship Training Committees (JATCs) and others have partnered with AWP to train Alaskan youth for Alaska jobs.

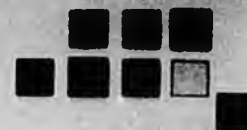
Major funding for the Academies was provided by the Denali Commission through the Youth Initiative and the Alaska Department of Labor and Workforce Development High Growth Job Training Initiative. In each region, partners contributed resources to support the Academies.



Building Alaska requires a trained workforce. Our future success depends on how well our youth are prepared to fill tomorrow's jobs. Through Youth Construction Academies, Alaska Works Partnership and its partners are working to bring vital construction training and exciting job opportunities to young people across the state.



King Salmon



Laura Wassillie, of Kokhanok, had never driven a car before. But by the second week of training, Wassillie – who had earned her driver's license just a few days earlier – was backing a 17,000-pound KW tractor trailer with amazing precision. Wassillie was one of seven students who tried their hands at construction driving at King Salmon Youth Construction Academy June 5-16.

"That was so scary!" she said as she climbed out of the cab, smiling ear-to-ear. She reflected the sentiments of all students after their first drives – yet without exception, they were all eager to get back behind the wheel.

The two week introductory course took place at the Southwest Alaska Vocational & Education Center (SAVEC) and included flagging certification, Occupational Safety and Health Administration (OSHA) 10 certification and job readiness skills. The Alaska Teamsters-Employers Service Training Trust provided instruction for the Academy. During the first week of training, students earned a driver's license – only one student had a license before the class began.

"The best kept secret is that vocational technical skills can offer careers with great wages," said Eldon Davidson, Executive Director for SAVEC. "Individuals with a CDL [commercial driver's license] can make starting wages of \$35,000 to \$40,000.



The best kept secret is that vocational technical skills can offer careers with great wages.

After a few years experience drivers can earn up to \$75,000."

Cathy Reamy, Bristol Bay Native Association's Employment and Training Program manager agreed. "I want [young people] to know that you can work construction for a season, go back to the village and live comfortably on that income for the rest of the year," she said.

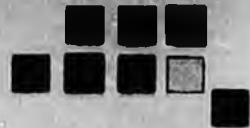


Students attending were from the Bristol Bay villages of:

- Aleknagik
- Nondalton
- Dillingham
- Chignik Lake
- Clarks Point
- Kokhanok
- New Stuyahok



AWP Partners: UAF Bristol Bay Campus, Lake and Penn School District, Bristol Bay School District, Bristol Bay Native Association, Northern Dynasty, Southwest Alaska Vocational & Education Center (SAVEC), Alaska Teamsters-Employer Service Training Trust.



The only heavy equipment Olga Kulinich had ever operated was a one-time gig running a farm combine for a friend. But when she saw a flyer posted at the Delta grocery store announcing the Delta Youth Civil Construction Academy, she thought it might be fun. It would certainly be a departure from her job working at a bank. Only two years out of high school and looking for new direction, Kulinich decided to give it a try.

Kulinich was one of ten youth, ages 17-24, who participated in the Delta Youth Civil Construction Academy June 5-23. By the end of three weeks, she and other students were operating backhoes, dozers, excavators, graders, loaders, rollers, and a truck. Delta students also received forklift safety certification.

In the end, Kulinich graduated at the top of her class and was one of two students who were accepted into apprenticeships with Operating Engineers Local 302.

Gary Hall, coordinator of the Delta Career Advancement Center where the training took place, explained that hundreds of applicants vie for these apprenticeships and usually less than a dozen are admitted into each class. He added that the Delta Youth Construction Academy offered



The Delta Youth Construction Academy offered vocational exploration and hands-on training that set many students on a new career path.

vocational exploration and hands-on training that set many students on a new career path.

"We had an excellent site, a real-world location to set up real job site scenarios," Hall said.

As part of their training, Delta students received CPR/First Aid, OSHA 10, mine safety and forklift safety certifications.

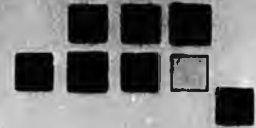
Delta Industrial Services supported the Academy by renting the machinery and providing a gravel pit in which students could operate the equipment. Operating Engineers/Employers Training Trust provided instructors and helped develop the curriculum. As part of learning to operate heavy equipment, students put their new skills to work to help grade the parking lot at the new Delta Career Advancement Center.

Following her training at the Delta Youth Civil Construction Academy and acceptance into the apprenticeship, Kulinich went to work for two months on the Dalton Highway. She took a gamble when she left her banking job to attend the Academy. "At first I had to ask myself, 'What am I doing?'" she said. "It looks like I made the right decision."



AWP Partners: Partners for Progress, a consortium comprised of Alaska Works Partnership, Delta Greely School District, Cooperative Extension Service, University of Alaska Tanana Valley Campus, and Delta Mining Training Center; Alaska Operating Engineers/Employers Training Trust.

St. Mary's



St. Mary's Youth Construction Academy students – like participants in other academies – first learned fractions in class. Then they went to work using their tape measures to figure out how much lumber they needed to build a sawhorse. All that work with fractions suddenly made a lot of sense. It's known as relevance – a catalyst for engaging students in their learning.

"One thing I really like about the Youth Construction Academies is the application of mathematics," said Debra Vo, Rural Development Specialist for the Yukon Delta Fisheries Development Association (YDFDA). "Math had always been a struggle for kids in rural areas. The question is always 'When am I going to ever use this?' The academies show a connection between math and a career track."

Vo said that the academy training also helps boost math scores which is crucial in meeting No Child Left Behind requirements for rural schools. Not only are high school students learning math, they are exploring a career field that offers lifelong opportunities for employment. Vo said that when YDFDA, the Lower Yukon School District, and community leaders came together, they looked at the amount of money that came into the area for capital projects and noticed that most of the workers were being imported.

"There are opportunities in our region and we want to grow-our-own, so to speak," Vo said. "We



knew that not all kids graduating from high school are going to college. Some like to work with their hands and be outside. So exploring construction career paths was a good opportunity."

The academies have been so successful that St. Mary's is planning its fifth Youth Construction Academy for 2007.

Ten students from the Lower Yukon Delta region were introduced to carpentry during the May 15-26, 2006 academy. Along with learning basic carpentry and tool safety, the students, ages 17-20, received math enrichment, career exploration and OSHA 10 and HILTI certification.

Training was held at St. Mary's Area Regional Training Center and instruction provided by the Southern Alaska Carpenter Joint Apprenticeship and Training Committee.



Students were from the villages of:

- Marshall
- Pilot Station
- Mountain Village
- Emmonak,
- Russian Mission
- St. Mary's



AWP Partners: Lower Yukon School District, Yukon Delta Fisheries Development Association, Southern Alaska Carpenter Joint Apprenticeship and Training Committee.