



**ALASKA DEPARTMENT OF LABOR
& WORKFORCE DEVELOPMENT**

Building Alaska's Construction Workforce A Construction Workforce Development Plan

**Status Report on the Plan's Objectives
Prepared for the
Alaska Workforce Investment Board
October 2007**

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Executive Summary

The Alaska Workforce Investment Board in partnership with representatives from the training industry developed the Construction Workforce Development Plan (CWDP) in 2005. The board has requested an assessment of the CWDP's progress. Staff used a survey model to assess the CWDP, meeting with representatives from various state agencies, training providers, the University and the job centers to determine the effectiveness of the plan. During the survey it became apparent that the plan contributed to the development of new strategies and reinforced the use of existing strategies.

The CWDP raised awareness about the need for additional construction workers and provided a list of possible strategies that could be employed. Career Guides initiated under the High Growth Job Training Initiative provided a great deal of awareness to young workers interested in the construction industry. This is consistent with some of the recommended strategies to increase apprenticeship, promote vocational and post secondary education and increase job training. Other efforts, such as the Construction Academies, were of specific, measurable value increasing the number of workers.

The CWDP provided clear steps necessary to support apprenticeship. However, more work needs to be done and responsibility for apprenticeship requires stronger collaboration among stakeholders in the workforce development system.

Our review of the plan indicates that its ultimate success depends on the clear assignment of tasks and the direct involvement of the private sector. Updating the plan to include responsible parties and delivery dates is recommended to improve the overall benefit to the construction industry.

Objective #1 - Apprentice Training

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

Efforts to promote the use of apprenticeship model for training is demonstrated by the Alaska Department of Labor and Workforce Development's (DOLWD) decision to incorporate apprenticeship into several federal and state funded projects. DOLWD also designated single points of contact in the larger one-stops to provide information to job

seekers and employers about apprenticeship. In addition, DOLWD granted funds to apprenticeship training programs through the State Training and Employment Program.

While these practices and decisions are supportive of the apprenticeship model DOLWD needs to improve benchmarking of the number of registered apprentices through the U.S. Department of Labor, Bureau of Apprenticeship. DOLWD assigned apprenticeship coordinators in the one-stops but needs to provide more information to the public about this resource. DOLWD should also provide the apprenticeship coordinators with a clear description of their role and responsibility.

Generally the DOLWD has been responsive to increasing the number of apprenticeships. However, employer involvement it is the key to success. To that end, DOLWD just hired an Apprenticeship Coordinator to promote employer involvement and assist employers in establishing registered apprenticeships.

Strategies:

1. 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.
 - Funding obtained from Alaska Legislature to enable on-line public construction certified payroll reporting by contractors. A private contractor has been hired and is making significant progress. The system will be in on-line test mode as of October 8, 2007, to further identify system needs.
 - The U.S. Bureau of Apprenticeship tracks apprentice programs. We are working with the Bureau to obtain regular reports.
2. Research apprentice data for benchmarks to gauge strategy progress and assist programs to improve enrollment and retention rates.
 - In progress, working with US/DOL.
3. Market the benefits of hiring apprentices to industry employers and create employer and sponsor incentives for apprentice hire.
 - Apprenticeship counters in job centers.
 - Hired Division of Business Partnerships' Apprenticeship Coordinator (September 2007) to perform marketing function.
 - Department will host an Apprenticeship Forum, February 2008.
4. Develop mentors for apprentices off the job who guide them in work and life decisions.
 - Private sector responsibility - obtain update from apprenticeship sponsors.
 - Newly hired Apprenticeship Coordinator to implement.
5. Hold an annual apprenticeship conference to improve state efforts.

- DOLWD will hold an annual apprenticeship conference in February of 2008.
- 6. Invest in building apprenticeship training capacity as determined by occupational demand, apprentice sponsor results and experience, capability, and leverage resources.
 - This in the process of with the pipeliner training program; regional training center grants; Denali Training Fund; construction academies, and the AGIA training program.
- 7. 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.
 - Governor Murkowski signed Administrative Order setting goals for apprentice hire in certain crafts on state funded heavy and highway projects.
- 8. Work with the apprenticeship programs to develop a competency-based program for new entrants.
 - Currently program participants are measured on a time based (#of hours).
 - Particular emphasis is currently being placed on veterans through the Helmets to Hardhats program.

Objective #2 - Vocational Education

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

Several initiatives including the Youth 1st Initiative and the Denali Youth Fund provided funding that supported career advice and guidance for in school and out of school youth. Other projects under these initiatives include the Teacher Externships, Youth Employability Skills and Work Experience. Most recently the DOLWD and Department of Education and Early Development initiated an effort around the Work Keys model as a way to connect secondary education to the world of work.

Some local school districts established agreements with post secondary education providers such as construction academies, Tech prep and school to apprenticeship as a means of supporting careers paths for youth. In an effort to increase awareness and interest in construction, the Associated General Contractors and the Carpenters' Union implemented training and media campaigns.

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.

- Although a gap analysis has not been performed, DOLWD has been working with the Department of Education to implement a WorkReady program throughout the state. The beauty of the WorkReady certificate will be that it identifies each student's overall score in three critical areas: Applied Math; Reading for Information; and Locating Information. Scores in each of these categories translate to basic readiness for specific occupations.
- 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.
 - DOLWD has implemented the Alaska Youth First program, which includes career guides in the high schools.
- 3. Fund a media campaign to reach out to Alaska students to attract them to the exciting, high paying work construction and engineering offers.
 - Unions and Associated General Contractors have implemented ad campaigns.
- 4. Support career activities such as the Vocational Student Professional Opportunities, Career Fairs, School-to-Apprenticeship and Tech Prep.
 - DOLWD, School Districts, AVTEC, and the University are all actively engaged in every area except Vocational Student Professional Opportunities.
 - AWIB approved Carl Perkins Plan, which incorporates Tech Prep.
- 5. Offer incentives for employers to hire youth in cooperative learning positions.
 - This is occurring, but while incentives are created there are limitations with child labor laws that reduce opportunities to hire and train youth in construction under age 18.
- 6. Assist teachers in understanding and using industry standards in classroom curricula.
 - State and industry have partnered with Industry Based Externships - 40 teachers completed in FY 07.
- 7. Connect academic and vocational courses through articulated agreements that build a path for students leading to industry careers.
 - Alaska Construction Academies are accomplishing this in Anchorage, Fairbanks, Kenai, Mat-Su, Sitka and Juneau.
- 8. Establish standards for entry-level academic and basic skill requirements and a common assessment tool.
 - Work Keys - common assessment tool is being implemented throughout the state.
- 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.
 - The University provides summer programs for engineering.

10. Use school facilities more effectively, such as providing students with vocational training during evenings, weekends and summer breaks.
 - King Career Center, Anchorage Construction Academy during the summer for 17 - 18 year old youth and adults.
 - Hutchison Career Center in Fairbanks is in the implementation stage.
 - Alaska Construction Academies are also being implemented in Kenai, Mat-Su, Sitka and Juneau.
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.
 - Youth First funding is addressing this; \$850,000 initially, \$2.3 million second phase, and for SFY09, plans are underway to ask for additional state investments for expansion. In addition, \$3.5 invested by Alaska legislature in Construction Academies in FY 08.
12. Develop an inventory of best practices through the school system.
 - An inventory of best practices is developed by the school-to-business partnerships in Anchorage but it does not specifically address construction. However, this year two programs funded by the Department were recognized as best practices - the Construction Academy and the United Postal Services mentorship.
13. Develop on-the-job training (OJT) programs as an element of education internships.
 - No action reportable to date with respect to construction.

Objective #3 - Post-Secondary Vocational Technical Education

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

In general the capacity of post-secondary institutions to supply construction workers appears to have increased. It is difficult to determine the degree of increase as no assessment of initial post-secondary capacity has been conducted.

DOLWD reports increase use of training funds in the construction industry. Several local school districts report increased demand from secondary students for materials science courses. The Alaska Construction Academy is increasing from one academy in Anchorage to six throughout the state. The Alaska Vocational Technical Center (AVTEC) has developed courses aimed at increasing the ranks of qualified instructors for construction training.

In addition to an assessment of existing post secondary training, it would be useful to determine what training facility capacity is available. It is possible that additional training could be provided through facilities that are under-utilized for post secondary training. If employment is the objective in post secondary training for construction then

a practical connection is apprenticeship. Post secondary training centers should consider their partnership with employers providing on-the-job training and converting that to registered apprenticeship.

Other questions of post secondary capacity relate to training facilities not currently considered as part of the overall assessment. Several private providers are providing training without assistance from DOLWD. An example of this is Amundsen's training program on the Kenai Peninsula. It is important to assess the capacity of these facilities also to provide skilled workforce.

1. Provide scholarships (public and private resources) and support for youth who attend post-secondary construction.
 - DOLWD Training - Individual Training Accounts
 - AVTEC provides a number of tuition scholarships including 14 through Alaska's School Councilors Associations, one to Seward High School, and one to the Kenai Peninsula School District. These scholarships are not designated specific to construction trades, but may have been used in this area.
2. Include post secondary instructors in professional development opportunities.
 - AVTEC has taken a lead in developing and providing instructor professional development. All AVTEC instructors are "industry credentialed." In most cases the training and travel are funded by AVTEC. For instance, AVTEC's Facility Maintenance construction program instructor attended training in Colorado on two separate occasions to become certified in the International Building Code.
 - AVTEC has developed and delivered methods of Instruction and curriculum courses and continues to develop additional courses to help industry technician's transition to professional teachers and trainers.
3. Align existing programs with academic and industry standards for connections with secondary and college programs via such means as articulation agreements.
 - Numerous articulation agreements exist however no centralized summary of these agreements is available. Need to further assess institution capacity and costs for program expansion.
4. Provide more funding to support remedial education of incoming students.
 - Work Ready program includes software for self-paced learning.
5. Assess ability to expand post-secondary training through links with regional training centers and industry.
 - This issue is being discussed through the AGIA training program process.
 - Through a federal Economic Development grant, AVTEC is working with Regional Training Centers to develop links, programs and training using distance-delivered training methods.
6. Develop articulation agreements with secondary and post-secondary schools that will allow students to move easily throughout the system.

- Numerous articulation agreements exist, but a complete inventory has not been taken.
- 7. Develop programs that require on-the-job training (OJT) as part of the basic educational experience.
 - No reportable action to date.

Objective #4 - Job Training

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

The state has made significant strides in providing more funding for training incumbent workers. The Youth 1st Initiative, the Construction Academies and the STEP program have all provided new money to the training system. The federal Pipeliner job training initiative and the High Growth Job Training initiative have also provided short term new funds to the job training system for construction workers.

Another option available is to emphasize the use of cost effective training strategies such as employer sponsored apprenticeship in which the private sector invests in the training of incumbent and new workers.

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.
 - This has been done with funding through STEP, Denali Training Fund and WIA Youth the High Growth and Pipeline Training Grant, and increased general fund investments in the youth First Program, and Construction Academies.
2. Support the Denali Training Fund (DTF) and the State Training Employment Program (STEP) to continue providing resources for resident training.
 - Funding support continues for the Denali Training Fund and the State Training Employment Program.
 - Increased STEP funding allocated to job training for construction and further developing distance training, instructors, and instruction technology for mobile training.
 - Mobile training - looking at for mining industry, not other industries yet. However operating engineers are using a simulator that is portable. Through a federal Economic Development (EDA) grant, AVTEC is working with Regional Training Centers to develop links, programs, and training using distance-delivered training methods.
3. Base grant decisions on labor market analysis of demand and supply by occupations, the performance of training providers, and matching resources.

- Yes, uses labor market demand, priority industries from AWIB, occupational data.
 - Leverage funds with direct cash, in-kind and other.
4. 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.
 - High growth job training initiative for energy. Implemented fast track model.
 - Job center network has recently negotiated an agreement to continue industry center approach.
 5. Assist youth and adult job seekers eligible for Individual Training Accounts to access training resources at Alaska Job Centers for industry training.
 - Allows industry to broker and send individuals to job centers for Individual Training Accounts.
 - Fast track model.
 6. Refer students in job training who require education enrichment to an adult education provider.
 - Education Enrichment – Math in the Trades at Nine Star.
 - Work Keys will be effective assessing need and providing referral resources.

Objective #5 - Rural Training Centers

Increase capacity of rural training centers to host construction training.

Rural training centers are operating in several communities, including Bethel, Kotzebue, King Salmon, Galena, and St. Mary's, and Aniak. The training centers are in various states of capacity. Some offer formal certified classes on a regular basis. Others offer courses on an as needed basis and contract with others to provide training. Each center is interested in expanding the courses offered and meeting the needs of the residents in the area.

Several of the training centers have secured reliable funding through the Technical Vocational Education Program (TVEP). In addition, they have received competitive grants and grants from the Alaska legislature and federal agencies to cover operating expenses and program development. These financial resources allow the various centers to determine what type of training is most suited to their facility and the needs of their residents. Almost every center provides training for the construction industry.

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.

- Through a federal Economic Development (EDA) grant, AVTEC is working with Regional Training Centers to develop links, programs, and training using distance-delivered training methods.
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.
 - No reportable action to date.
 3. Issue competitive grants to rural training centers to help support operations and training.
 - Denali commission and STEP funding has been made available to regional training centers. In addition, numerous legislatively designated grants are directed to these centers. Further discussions between the department and the centers are underway.
 4. Evaluate center performance for improvements.
 - DOLWD's annual state training program performance report evaluates regional training centers.

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.
 - We have a list of scholarship opportunities and are currently working with industry advisory committees to identify under-utilized scholarship opportunities in engineering to maximize the potential for recruiting and existing students.
2. Prepare special publication of existing financial aid available for engineering and construction management students.
 - No reportable action to date.
3. Work with industry and private donors to develop new scholarship opportunities.
 - In addition to listening to the needs of industry, seeking scholarship opportunities is part of the process of cultivating relationships between private and corporate relationships and UA.
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.
 - The ANSEP program has been extremely successful in developing engineering students particularly from rural locations where partnerships have been established. Advanced Placement (AP) courses are also available for students seeking high level challenges in math and science.
 - WorkReady program includes Applied Math component.
6. Develop mentoring and tutoring programs within the University of Alaska system to increase student success and retention.
 - To ensure student success, UA is implementing new student assessment and placement strategies as well as mandatory academic career counseling for student with declared programs of study.
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.
 - The UA is partnered with the Alaska Process Industry Careers Consortium, Putting Alaskans to Work, Alaska Works, and Delta Partners for Progress to support teacher externships and encourage industry support 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.
 - In addition to the response #6, UA has programs that help students become familiar with campus and urban lifestyles, and the summer rural honors program so students can get a jump start on their college experience. Campuses also have student support groups to help enculturation by peers.

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.
 - Partnering with Nine Star, received grants for high growth jobs.
 - Information and guidance is typically received via information and referral mechanisms throughout the job center network. Construction-specific information would come to students already in an apprenticeship

- program or training program where ABE resources would be best used to tutor students and prevent attrition.
2. Develop mentors to assist students on the job and when they are off work.
 - Assets model – 20 internal variables, 20 external variables.
 - Tutors help adult students and usually after their work, not on the job. ABE instructors try to link this type of practical instruction to the student's life (and job).
 3. Have students complete a standard assessment before applying to a job-training program.
 - Standardized assessments are used in both ABE and case by case managers before applying for job training program.
 - Work Keys will be a valuable addition for job training and will enhance workplace literacy programs as well.
 4. Resource training that helps adults increase English reading comprehension and math skills joined with work based job training for construction jobs.
 - WIN curriculum and pre-Work Keys assessments will improve our efforts in this area.
 - ABE Instructors make instruction relevant to students and use construction examples as well as examples of other occupations.
 5. Improve assessment of participant needs and design adult learning programs that are adjusted for cultural differences and learning styles.
 - One-stop Operator making progress in this area.
 - Cultural differences include religion issues, hunting/fishing, subsistence lifestyles, 2 on 2 off conducive to some cultural issues.
 - This is currently a responsibility of the ABE Grantee in the various regions of the state. Others that dovetail into this are: EEO and ADA responsibilities; language line availability; formal accommodation requests etc., as well as customer service goals.
 - Federal performance measures are pointing more toward participant-identified goal attainment (such as involvement in community activities and achieving citizenship skills).
 6. Assess ABE providers for ability to link with construction job training.
 - No formal assessment.
 - Work Keys and WIN will be supportive tools for providers.
 - We should be assessing job training providers and ensure they use ABE providers that are available to them. ABE providers already link well with individual ABE students and their community. They are assessed as a part of their grant as to how well they are connected to their community including job training providers (including apprenticeship programs).
 7. Increase partnership grants for ABE and job training providers for construction job training that result in ABE clients being employed.
 - This has happened just not in “partnership grant” form. In FY 07, ESD asked for and received general funds (\$500,000) so that ABE providers

could improve their connectivity, provide trades specific tutoring, and reduce attrition in those training programs. We are still trying to assess how well we did. An entered employment is tracked 4 quarters after an exit from a program, so we may not be able to properly assess for a while.

8. Inventory community ABE programs, assess ABE instructor availability and determine best practices for optimal and innovative approaches to service delivery.
 - Alaska has a regionally apportioned, competitively administered state ABE program. The regional scheme is per our State Unified plan. This question somewhat duplicates what is already assessed by the State ABE Administrator and through the federal performance measures.
9. Develop appropriate ABE training materials to meet construction skill training requirements.
 - Modern and appropriate materials already exist that are approved for use by the state and federal government. Individual instructors can further innovate and “localize” materials to meet the needs of their students.

Objective #8 - Instructor Development

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

Several of the critical barriers to increasing the number of skilled vocational education teachers and industry trainers are being addressed by AVTEC and the University of Alaska. AVTEC is focused on building the skills of vocational and industry trainers through new curriculum and credentials. The University continues to provide teacher certification training for those with professional experience or other degrees. Both models address the quality of teachers and instructors.

The limitation for instructors is impacted by the construction industry itself. In Alaska the construction industry is the second highest paid industry in the state. By contrast vocational teachers earn 85 percent of the construction wage. The consequence is that many potential teachers in the construction industry prefer to work and earn a higher wage rather than teach.

Increase the number of qualified teachers is dependent upon a quality training system and the incentives to become a teacher.

Strategies:

1. Provide grants for train-the-trainer initiatives that help vocational teachers and industry trainers meet industry, academic, and government standards.
 - Some grant monies have been provided for Train the Trainer.

- AVTEC has taken a lead in developing and providing instructor professional development. All of our instructors are “industry credentialed.” In most cases the training and travel are funded by AVTEC. For instance our Facility Maintenance construction program instructor attended training in Colorado on two separate occasions to become certified in International Building Code.
 - AVTEC has developed and delivered Methods of Instruction and Curriculum courses and continues to develop additional courses to help industry technician’s transition to professional teachers and trainers.
 - AVTEC has partnered with Alaska Pacific University to develop and deliver an Associate of Arts in Career & Technical Education.
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.
 - Teacher externships have been implemented.
 3. Provide matching grants for industry to assist with instructor development costs.
 - No action to date
 4. Develop a network among basic education teachers, vocational teachers and industry instructors for improving training delivery.
 - No action to date
 5. Provide instructor courses to meet requirements for training and be more effective trainers.
 - No reportable action to date.