Pathways to Facility Maintenance Technician (FMT) Certification:

Building a Statewide FMT Training Program in Alaska

Submitted to:

Denali Commission



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Table of Acronyms

Acronym	Definition
ACPE	Alaska Commission on Postsecondary Education
AVTEC	Alaska's Institute of Technology
AWIB	Alaska Workforce Investment Board
BCC	University of Alaska Fairbanks-Bristol Bay Campus
DACUM	Developing a Curriculum
DOLWD	State of Alaska Department of Labor & Workforce Development
FMT	Facility Maintenance Technician
I-AC	University of Alaska Fairbanks-Interior Aleutians Campus
NCCER	National Center for Construction Education and Research
RAMP	Rural Alaska Maintenance Partnership
RAMP-T	Rural Alaska Maintenance Partnership-Training
UAF	University of Alaska Fairbanks



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1 Executive Summary

1.1 RAMP-T Overview

The initial phase of the RAMP-T project, to develop State certification standards for Alaska's facility maintenance technicians, was completed and submitted in September 2013. The second phase of the RAMP-T project, to establish a single FMT curriculum and certification pathway to be used by the selected four Centers for Excellence, began in January 2014 and its findings are presented in this report.

1.2 Project History: RAMP-T Phase One

In early 2012, the Denali Commission began an initiative to make available trained facility maintenance staff throughout the State to help prolong the life and energy efficiency of Federal and State infrastructure investments in rural Alaska. For over 30 years, billions of dollars have been spent to build health facilities, schools, recreation centers, multi-use buildings, housing units, fire halls, power plants and other permanent structures for the health, safety and welfare of rural Alaskans. However, the infrastructure is not being maintained or operated in a manner that protects that investment and in some cases increases operational costs by 30% or more. Prolonging the life of the infrastructure has always been important, but now that federal funding has been drastically curtailed it is even more essential.

Maintaining and operating rural facilities is problematic; an array of challenges includes harsh environmental conditions, remote locations and lack of easy access to



communities, inadequate telecommunications, and limited funds for school districts, municipalities, health organizations, village corporations and other entities responsible for the upkeep of the facilities. Inadequate or poorly trained staff is costly in itself. Delayed repairs, faulty maintenance and inability to properly operate high-tech machinery eventually lead to energy inefficiency, facilities breakdown and the loss of expensive infrastructure.

The new initiative was coined the Rural Alaska Maintenance Partnership (or RAMP). The RAMP is an alliance of Alaska rural facility owners, facility managers and investors who are united in recognizing a need to improve the efficiency and effectiveness of rural infrastructure maintenance. Stakeholders include the Denali Commission, the Alaska



Housing Finance Corporation, the Alaska Village Electric Cooperative, Alaska's Institute of Technology (AVTEC), Alaska Works Partnership, Inc., Association of Alaska Housing Authorities, Yukon Kuskokwim Health Corporation, Alaska Native Tribal Health Consortium, Yuut Elitnaurviat, Bristol Bay Housing Authority, RurAL Cap, Alaska Energy Authority, the Alaska Department of Labor and Workforce Development (DOLWD), The Alaska Department of Education and Early Development, the Alaska Department of Transportation and Public Facilities, the Alaska Mental Health Trust Authority, and others.

The RAMP's mission is "to create a self-sustaining facility and operations maintenance system that develops the capacity of rural Alaskans to operate and maintain their infrastructure in a manner that protects and enhances the health, safety and sustainability of rural communities and their residents."

The RAMP decided two steps needed to occur to achieve its mission. The first step was the focus of the RAMP-T Phase One project and this report. The second step has not been initiated as a project.

- Step One—Develop a widely accepted industry standard certification for building or facility maintenance technicians by coordinating with participating training centers in Alaska. A sub-committee, the Rural Alaska Maintenance Partnership-Training (RAMP-T), was established to lead the training initiative based on current facility maintenance course offerings, industry knowledge, and facility owner/operator needs.
- **Step Two**—Create a business model in which regional entities would recruit and hire local maintenance workers to carry out routine maintenance on participating facilities—private and public—and build a sustainable training program for the workers.

1.2.1 Project Goals: RAMP-T Phase One

The RAMP-T Phase One goals were to facilitate the development of Alaska FMT certification standards, explore licensing for Alaska FMT training programs, and build curricula guidelines for each level of certification that could be used by all Alaska FMT training providers.

1.2.2 Project Objectives: RAMP-T Phase One

The RAMP-T project's objective was to ensure competent and consistent care for the State's rural infrastructure by promulgating state certification standards for FMTs.



To achieve the project objectives, Three Star Enterprises, LLC (Three Star) completed the assigned tasks, which included: facilitating a strategic planning meeting with key stakeholders to help design the FMT certification standard; holding monthly RAMP-T meetings; maintaining a website; facilitating the development of a curriculum (DACUM) research matrix of occupational needs; writing an analysis of FMT training programs; creating draft recommendations for an FMT certification standard, and creating an action plan for codification of the FMT certification. The strategic planning meeting set the direction for the project, the monthly meetings kept the project on track, and an employer survey determined there is a significant level of need for a well-trained facility maintenance workforce in rural Alaska and a standard State certified training program for FMTs. The inventory of Alaska's facility maintenance training programs and the examination of training models in other parts of the nation provided tools for building curricula and certification standards.

1.2.3 Findings: RAMP-T Phase One

The final stage of the RAMP-T Phase One project required an analysis of the alternatives for establishing FMT training that lead to State certification and licensure. The findings of this exploration led to the recommendation that training institutions that want to provide FMT training establish the acceptability of the training with the Alaska Commission on Postsecondary Education, the Alaska Department of Labor and Workforce Development (DOLWD) Division of Business Partnerships, and the Alaska Workforce Investment Board (AWIB). This would allow students to obtain student loans and the training institutions to be eligible for program funding. In addition, the goal of having a statewide recognized FMT certificate could be pursued through a nationally recognized organization that provides maintenance trade education accreditation.

An in-depth account of Phase One can be found in the project report entitled "State Certification Standards for Alaska's Facility Maintenance Technicians" (*Three Star, September 2013*). An electronic version of this report [in portable document format (.pdf)] is available through the RAMP website at:

https://sites.google.com/a/3starak.com/alaskaramp/

1.3 Current Project: RAMP-T Phase Two

Following the conclusion of the RAMP-T Phase One project, the Denali Commission and the RAMP committee decided to continue the project to its next logical step. That step (Phase Two) included:



- The identification and participation of Alaska training facilities in the development and establishment of a curriculum based on the work done in Phase One.
- Development of an Articulation Agreement that would allow students to matriculate between the participating schools and graduate with an established FMT certificate.

The Denali Training Fund financed RAMP-T Phase Two. This federally-funded program provides job training assistance to residents of rural communities where Denali Commission and other infrastructure projects have been developed, planned or are underway, to ensure local residents have the opportunity to learn and to earn an income from these local projects. As the Commission funds new projects, it also builds sustainability into those projects by providing training for local residents to construct, maintain, and operate the new facilities. A partnership with the Commission and the State of Alaska DOLWD Division of Business Partnerships, the granting agency with Three Star, made the completion of RAMP-T Phase Two possible.

Prior to beginning Phase Two, the Denali Commission solicited training institutions that offered FMT programs to participate as the working group for the project. The working group was charged with developing a common FMT curriculum to allow transferable credits and a pathway to a State-recognized FMT certificate. Four schools were selected for participation in the working group:

- AVTEC—Alaska's Institute of Technology
- University of Alaska Fairbanks—Interior-Aleutians Campus (I-AC)
- University of Alaska Fairbanks—Bristol Bay Campus (BBC)
- Yuut Elitnaurviat (Yuut)

These four schools were designated as "Centers for Excellence" based on two essential criteria. Once the FMT Certification Program is in place, it is anticipated that Alaska's other vocational and technical training schools will be invited to participate based on revised criteria. The current criteria include:

- The schools' ability to build, up-date, and align their Facility Maintenance Technician training with the findings of the FMT DACUM.
- The schools' willingness to work together to build pathways to an FMT Articulation Agreement will allow them to share and unify FMT program schedules and costs to benefit both the schools and students.



The initial meeting of the working group was conducted in Fairbanks on February 12-13, 2014. Over the next four months (March through June), seven additional working group sessions and public presentations (Appendix B: PowerPoint Presentation) were conducted around the State. The DOLWD FMT Grant Agreement identifies five actions for completion by the working group and the consultant. The following discussion identifies the five actions, as originally conceived, and reports the final actions. Several of the anticipated action outcomes were modified as the project progressed. The report reflects the final recommendations and actions taken by the working group.

1.4 Project Goals: RAMP-T Phase Two

According to the grant agreement, the Phase Two goal is "to build alliance to and alignment of each school's FMT program. These schools include AVTEC, Alaska's Institute of Technology; University of Alaska Fairbanks-Bristol Bay Campus; University of Alaska Fairbanks-Interior Aleutians Campus; and Yuut Elitnaurviat. Three Star Enterprises will assist the FMT Centers through facilitation, research, support and initial promotion."

1.5 Project Objectives: RAMP-T Phase Two

The objectives for the Phase Two project are described as five actions:

- Action One Facilitate dual-purpose regional meetings
- Action Two—Training Providers Articulation Agreement
- Action Three—Conduct AWIB presentation
- Action Four—Conduct three informational presentations
- Action Five—Develop an FMT website and produce two electronic newsletters.

The following discussion details each of the five actions and how the project objectives were implemented. The Centers for Excellence working group, using their knowledge and expertise, made several changes in how some aspects of the objectives were approached and developed.

1.5.1 Action One–Facilitate Dual Purpose Regional Meetings

Three Star will organize regional workgroups, and facility /employer presentations (Seward, Bethel, Dillingham and Fairbanks). It is anticipated that each regional meeting will take place over two days.

Day 1. The regional presentations (Seward, Bethel, Dillingham, and Fairbanks) will be conducted to introduce each of the FMT programs to the regional employers, government



organizations (Federal, State, Tribal and Municipal), current FMT workers and potential FMT trainees. This will allow time for visits to each of the regional training institutions and time to meet with major employers to identify their specific needs and discuss the need for employer commitment to the FMT program. The consultant will facilitate the public meetings and employer discussions. Reports will be developed from each regional session and shared with the FMT programs to assist each program in having an awareness of statewide regional needs. Planned action:

• Letters of support will be sought from employers.

Outcome—The regional employers will be informed of the FMT program and their support solicited for hiring FMT trained personnel.

Day 2. The contractor will facilitate the workgroup, with the four major current stakeholders (AVTEC, BBC, I-AC and Yuut), that will create a collaborative FMT certification pathway which aligns with the DACUM. Planned actions:

- Facilitate commonalities, overlaps and gaps in each of the center's current programs.
- Facilitate collaborative consensus of course offerings, levels and costs in each of the center's programs.
- Facilitate agreement of offerings and standards of certification.
- Research and provide information of other current national certification examples.

Outcome: The FMT Centers will create a state FMT pathway that identifies FMT levels, competencies within each level, and program delivery including cost per student for each level.

1.5.2 Action One—Outcomes

Four regional working group meetings and four public informational meetings were conducted in Fairbanks, Dillingham, Bethel,



Seward, Nome, Juneau and Anchorage (twice). Regional employers and other stakeholders were informed of the FMT program and their support for the program was solicited (Appendix C: List of Meeting Invitees). At the request of the working group, the employer information component of the meetings was not held first but always followed the working group's work sessions. The difficulty of traveling in and out of rural Alaska necessitated the consolidation of some meetings

into one-day sessions (Appendix D: Meeting Agendas).



It was anticipated that the working group would establish an agreement between the participating Centers for Excellence for the cooperative development of the FMT program. Additionally, it was anticipated that a model Memorandum of Agreement would be developed for current and future institutional participants in the FMT program. It was the conclusion of the working group that the procedural requirements for developing formal agreements with UAF presented a difficult hurdle that could take several years to negotiate. Consequently, a Letter of Cooperation was developed and signed by all parties (Appendix E: Letter of Cooperation). This model allowed the various schools (including UAF) to agree to work together towards the common goal of establishing a statewide-recognized FMT certificate program.

As a result of the regional meetings, the working group successfully developed an FMT certificate pathway for FMT Level 1 training. However, due to the large variance in how each Center for Excellence determines costs, determination of a baseline cost for completion of a Level 1 FMT certificate was not feasible.

In addition to mapping the certificate pathway, representatives from each of the four Centers for Excellence presented information on those schools and their current FMT training. Support for the FMT program was solicited from stakeholders at each meeting (Appendix F: Letters of Support). Minutes from each meeting are presented, with Sign-In Sheets, in Appendix G.

1.5.3 Action Two—Training Providers Articulation Agreements

Three Star will facilitate the development of Articulation Agreements between the FMT Centers that will allow for students to transfer from school to school to reach their FMT certification goal. Planned actions:

- Facilitate one or more work sessions with the stakeholders using telephonic and electronic tools.
- Contractor will be responsible for typing the draft MOA and disseminate for review, amendment and finalization by each of the FMT centers.

Outcome: The FMT Centers will develop a draft Articulation Agreement that will benefit both school and student and support the on-going development of a state FMT standard.

1.5.4 Action Two—Outcomes

The working group labored extensively at each meeting to create the FMT pathway. At the last meeting of the working group a draft agreement was developed which all schools agreed would comprise a Level One Certificate. The chart on the next page was developed as a graphic explanation of the agreement process:



- The 'Core Articulation' section identifies the class work offered by each school that the schools share in common, and represents the introductory core class work for FMT Level One training.
- The 'Concentration' section identifies the range of FMT concentrations a FMT student could take from the schools.

Example of possible pathway a student could take between the three Alaska Training Organizations to obtain a Level 1 FMT Certificate.

Core Articulation

I-AC/ BBC Core Technology

CTT 100: Core Technology CTT 106: Construction Math Total (98 Hours)

Or

Yuut Core Technology

RFMT 100: Workplace Fundamentals Total (80 Hours)

Or

AVTEC Core Technology:

27101: Orientation 00101: Safety 00102: Math

27102: Materials and Fasteners

27103: Hand Power tools 00109: Material Handling 00107: Communication skills 00108: Employability Skills

Total (76 Hours*)

* Included in AVTEC semester length programs

Concentration

I-AC/ BBC Facility Maintenance:

CTT 130: Intro to Facility Maintenance

CTT 131: Interior Repairs

CTT 132: Flooring Installation

CTT 133: Cabinets and Countertops

CTT 135: Boiler Troubleshooting

CTT 137: Appliance Repair

CTT 138: Residential Heating Controls

CTT 151: Basic Plumbing

CTT 153: Plastic & Copper Pipe and Fittings

CTT 199: Practicum

Elective

Total (265 Hours)

Or

Yuut Facility Maintenance:

RFMT 102: Facility Fundamentals

RFMT 110: Boiler Operator

RFMT 120: Electrical Fundamentals

RFMT 140: Potable Water Systems

RFMT 150: Waste Water Systems

RFMT 170: Fleet Maintenance

Total (344 Hours)

Or

AVTEC Facility Maintenance:

*Assistant Level or higher Certificate from one of the following programs:

Construction Technology:(609 Hours)

Plumbing and Heating: (609 Hours)

Refrigeration Technology: (609 Hours)

Industrial Electricity: (1414 Hours)

Power Plant Operator: (280 Hours)



For example, if a student went to one of these schools and successfully completed some of the FMT course-work, they could transfer to any other Center for Excellence and have that work recognized. As the articulation chart illustrates, the schools each have their individual strengths and concentrations that would be valuable on both a regional and statewide level. The UAF schools have core requirements that are required only for UAF students:

I-AC/ BBC Certificate Requirements

Communications Human Relations First Aid/CPR Total (94 Hours)

These competencies are integrated in the Yuut and AVTEC core modules.

AVTEC and Yuut Elitnaurviat have already developed a written draft Articulation Agreement for use between their two institutions (Appendix H). A written Articulation Agreement between UAF and Yuut Elitnaurviat cannot be signed until Yuut Elitnaurviat's accreditation is completed in the summer of 2014.

Additionally, the working group created a curriculum matrix with detail by program (Appendix I: RAMP-T Combined Curriculum Course Alignment), which identifies indepth the coursework required for obtaining an FMT certificate for the beginning FMT worker. The matrix delineates which classes are equivalent across the schools, and provides skill identification for FMTs.

The working group utilized the DACUM occupational analysis in identifying skills critical to the proposed Level One FMT Certificate, but it was the consensus of the working group that the DACUM's three levels were not realistic for progressive FMT certificates. The DACUM's Level One includes skills that are too basic to deserve standalone classes. Instead, the group incorporated relevant skills from all three levels of the DACUM into the Level One curriculum. In addition, the group agreed that some of the DACUM-identified skills (such as: Water Systems, Waste Management Systems, and Fleet Machinery) would serve as supplemental certificates. FMT Level Two and Three curricula should be developed by the working group at a later date.

Stakeholders were invited to attend and participate with the working group at each of the work sessions and the public meeting sessions.



1.5.5 Action Three—Conduct AWIB presentation

The contractor will develop a presentation and present it to the Alaska Workforce Investment Board. The AWIB's support will be very helpful in promoting the FMT program for future State/Federal funding and promoting the concept of training institutions working together.

- Contractor will reach out to AWIB to be placed on the agenda of their most appropriate meeting for this presentation.
- Executive Committee 2nd Tuesday of each month, 1:30 pm.
- Workforce Readiness/Employment/Placement Committee—3rd Wednesday of each odd month, 9:30 am.
- AWIB Business Meetings—At the call of the Chair (normally February, May, October).

1.5.6 Action Three—Outcome

A presentation on the project was developed and used throughout the public meetings. Due to the compressed timeframe for the project and the limited number of times AWIB meets annually, the presentation was scheduled for the June AWIB Executive Committee meeting. However, at the beginning of June, the AWIB Director resigned and the June Executive Committee meeting was canceled. Three Star's grant agreement expired on June 30.

1.5.7 Action Four—Conduct Three Informational Presentations

Three Star will organize and conduct three informational meetings (after the MOA's are developed) in Nome, Ketchikan, and Anchorage (reaching out to the Alaska Job Corp and the King Career Center). The meetings would be used to highlight the FMT program and bring together regional training centers and potential employers

Outcomes - This informational effort will help to build support for the program and expand participation by employers, training institutions and trainees from other regions; with the ultimate goal of expanding the FMT program into a statewide approach.

1.5.8 Action Four—Outcome

At each of the FMT informational meetings the FMT program was highlighted and a discussion between the regional training centers and potential employers was encouraged. The original contract with Three Star was amended, adding one informational meeting (Anchorage) and one informational meeting was changed from Ketchikan to Juneau. The location change was initiated to have greater participation



from employers. Each of the earlier work group sessions (Fairbanks, Dillingham, Bethel, and Seward) also had time set aside for a presentation on the project and the four Centers for Excellence. The public was encouraged to participate with their questions and comments (included in Appendix G). A special effort was made to extend an invitation to the Alaska Job Corps and the King Career Center to participate in the FMT informational meetings. Unfortunately, they were not able to attend.



1.5.9 Action Five—Develop an FMT Website and Produce Two Electronic Newsletters

If there is funding available Three Star will update the Rural Alaska Maintenance Partnership (RAMP) website and produce two electronic newsletters that can be used and disseminated to the contractor's email list as well any of the FMT center's listserv resources if they choose.

1.5.10 Action Five—Outcomes

Three Star used a variety of means to keep the public informed about the development of the FMT project. Each of the regional and informational meetings was publicized extensively through the use of print media (newspaper advertisements and flyers), an on-line newspaper advertisement, radio public service announcements in English and Yup'ik, and invitations were sent to regional employers and training institutions. Additionally, a newsletter with information about the entire project was produced and broadcast statewide (Appendix J: Advertising and Public Outreach). It had been anticipated that two newsletters would be produced and distributed statewide, but given the shortened contract period only one newsletter was produced and alternative means of outreach, such as radio, used instead. The RAMP website was not updated, as funding was not available and the Denali Commission preferred that communications be managed via email.

1.6 Project Findings: RAMP-T Phase Two

It was at the request of the Denali Commission that Three Star facilitated the collaboration of Alaska's new FMT Centers for Excellence. Originally, it was intended that through the efforts of this grant, the curricula for all three levels of FMT training would be established. The group quickly realized the enormity of the task and decided



to focus on establishing an agreement on FMT Level One training. From this effort several key objectives were achieved:

- Letter of Cooperation—The four schools negotiated and signed a letter of cooperation that clearly stated their commitment to work cooperatively on developing the FMT certificate program.
- Public Meetings—At each of the FMT working group's regional meetings (Fairbanks, Dillingham, Bethel and Seward), local and regional employers and training institutions were invited to learn about the developing FMT programs, to ask questions and to offer suggestions. In addition, there were three public meetings conducted (Nome, Juneau, and two in Anchorage) for local and regional employers and training institutions to learn about the FMT program. An additional meeting in Anchorage was added both for the working group to conclude its work and for public outreach.
- Level One FMT Curriculum—One of the original intents of the FMT working group was to develop a common FMT curriculum for three levels of certification. It was the consensus of the working group that at this time they could only develop the curriculum for Level One, and the other levels would be developed once the FMT program is instituted. This continued effort might take several years. Higher level FMT training is available now at AVTEC; they are currently in the process of integrating the RAMP DACUM information into their existing Facility Maintenance programs, and—when complete next year—AVTEC will likely offer multiple higher level FMT certification programs.
- Draft Articulation Agreement—Developing the draft Articulation Agreement was a long and involved process. Each of the schools has a slightly different means of determining when a student is ready for graduation from their respective FMT programs. The UAF system uses completion of credit requirements; AVTEC does an assessment for each student to determine if they meet the program requirements; and Yuut Elitnaurviat has performance and satisfactory completion standards for the FMT program. The draft Articulation Agreement recognizes common core curriculum that must be completed by every FMT student. In addition, the draft Articulation Agreement recognizes that each school offers different areas of concentration. Furthermore, the agreement recognized that UAF has additional core certificate requirements (communications, human relations and First Aid/CPR) that are incorporated by each school.



2 Methodology

2.1 Outreach

Three Star utilized a variety of approaches to reach out to rural employers and training institutions to inform the public about the development of the FMT Certificate program by the four Centers for Excellence and to provide opportunities to ask questions about the program and offer suggestions:

- Electronic—For each FMT work group meeting and regional informational meetings, email notices were sent to major employers. A special effort was made to invite employers with facilities requiring FMT workers. In addition, regional training institutions that might want to participate in or learn about the FMT program were invited. More than 217 persons were individually contacted throughout the project as part of the direct electronic outreach.
- Print Media—In the smaller communities with local papers (Bethel, Dillingham, Seward, Nome) public notices of the FMT meetings were posted.
- Radio Announcements—In the smaller communities with local radio stations (Bethel, Dillingham and Nome) announcements for the FMT meetings were broadcast.
- Newsletter A newsletter explaining the concept of RAMP, the history of Phase One and the progress made in Phase Two was distributed statewide to more than 1700 contacts, with more than 300 contacts opening the newsletter.

2.2 Cooperative Agreement

To establish a commitment to cooperation for the FMT working group, the Letter of Cooperation was developed and signed by all parties at the beginning of the project.

• Curriculum Building—The FMT working group spent the majority of its focus comparing the existing FMT class offerings with the DACUM occupational analysis developed in Phase One. From this exploration, the working group identified the core curriculum for the beginning level of the FMT program. The DACUM and the course work offered by the four schools were in line with the National Center for Construction Education and Research (NCCER). NCCER is a not-for-profit 501(c) (3) education foundation. It was developed in 1996 with the support of more than 125 construction leaders and association and academic



managers to create a standardized training and accreditation program for the industry.

2.3 Statewide Work Sessions

As previously noted, four of the eight FMT working group meetings were primarily focused on developing the FMT curriculum and Articulation Agreement. One FMT work group meeting was conducted in each of the communities (Fairbanks, Dillingham, Bethel and Seward) that housed the four Centers for Excellence. This approach had the added benefit of offering an opportunity for each of the schools to become familiar with the host schools FMT program and facilities. There was one additional session conducted in Anchorage at the end of the project to allow the project to address several unresolved tasks that also served as a public informational meeting.

2.4 Statewide Public Meetings

There were three FMT public meetings (Nome, Juneau, and Anchorage) primarily focused on participating in the public information effort. The purpose of the FMT public informational meetings was to introduce the FMT program to regions of the State that were not represented in the working group and to solicit broader support for the FMT concept.

2.5 Employer Support

As noted, at each of the meetings (FMT work sessions and public meetings) employers participating in the meetings were asked to consider sending letters of support for the FMT program to the Denali Commission. It was conceived that the letters of support would help document support and the need for the FMT program. In addition, it would help schools justify developing FMT classes.



3 Conclusions and Recommendations

At the last FMT work session the following conclusions and recommendations were developed. The recommendations provide a wide range of activities that could be instituted to support the development of the FMT concept for instructional institutions and individuals seeking a viable career.

- The success of the FMT program has many concerns to be addressed to help ensure its success. Many young adults as they enter high school become alienated because they cannot see the practical application of what they are expected to learn. For those students, it could be helpful if the instructors were familiar with the practical application of mathematics and science in the building trades. The working group would like to see more summer academy opportunities for educators seeking a great knowledge of applied math and science academics.
- Currently, the FMT career track is not included as a part of career and technical
 education in most schools. Including this track would provide students with
 another realistic educational focus that leads to a viable career path. Additionally,
 it could become a conduit connecting students and institutions offering FMT
 programs.
- Not every institution offering FMT training will have faculty available to teach
 all the required classes. It could be very helpful to schools if they could share
 information on the staff and their instructional capabilities. The development of
 an FMT instructor training pool will help insure the success and development of
 the FMT program and might encourage other institutions to participate.
- The development of the FMT program needs to continue to help insure the
 expansion of the FMT Level Two and Three curricula. The four Centers for
 Excellence need to continue to meet and work through the issues inherent in
 establishing curriculum and Articulation Agreements for FMT Levels Two and
 Three. This effort could be expanded to include other Alaska training institutions
 that would like to join the FMT program effort.
- A cost-benefit analysis of actual rural Alaska facilities utilizing FMT trained staff
 could be very helpful in demonstrating the value of the FMT program. It could
 be an effective tool in convincing employers to invest in training the FMT staff to
 preserve the life of facilities and to foster energy cost savings.



- Rural facility managers and owners have many issues to consider in keeping
 facilities operational and efficient. The development of a training class or
 workshop for facility managers to understand the benefits of having trained FMT
 staff could be an effective way to bring more workers into FMT training.
- The availability of funding for new rural facilities has declined over the past few
 years and the available funding is becoming increasing competitive. To help
 ensure that the longevity of new facilities and energy efficiency are maximized,
 funding agencies could institute a requirement that adequately trained FMT staff
 be employed.

3.1 Next Steps

The continued development and success of the FMT program is contingent upon achieving several essential objectives. The following discussion identifies and briefly explores three objectives and the rationale for inclusion in the recommended next steps.

- Continued FMT Working Group Meetings—The FMT project has made tremendous progress in developing a level of cooperation between the Centers for Excellence and the establishment of an FMT Level One curriculum. The FMT working group needs to continue meeting to ensure the development of FMT Levels Two and Three and to work out any unanticipated issues that may arise as the four schools begin to implement Articulation Agreements. These meetings are typically one day in length and should be face-to-face meetings. It is recommended that the Centers for Excellence negotiate a meeting schedule that will allow these issues to be address over the next year and seek funding from the Denali Commission or other funding sources.
- Establish Regional Employer Support—During the FMT Phase Two project, a special effort was made to inform potential employers and other training institutions about the FMT training program. Employers were unanimously in support of the effort but unsure about committing to the time and expense of training new and current FMT employees. Over the next year, an informational presentation and report could be developed that would present a cost benefit analysis on several rural employers (ranging in number of employees) to demonstrate the increased facility longevity and energy benefits of having trained FMT employees.
- Establish Partnerships with Other Alaska Schools—The four Centers for Excellence schools participating in the FMT project cover a large portion of the State and offer training to any Alaska resident able to travel to the FMT training. However, the FMT program will be more effective if it is offered and recognized



statewide as the standard for training certificated FMT workers. This effort will be enhanced if other regions of the State (North Slope, Northwest, and Southeast) become partners in the FMT program and participate in Articulation Agreements. Over the next year, the inclusion of these regions could be enhanced if dialogue between the potential partners is facilitated in statewide or regional workshops.

