COMMITTEE REPORT

HOUSE

(11)

FURTHER:

3/4/83

Date: 3/30/83

Mr. Speaker:

The Committee on FINANCE has had HB 160

An Act making a special appropriation to the Department of Education for development of a training program for Alaska aviation; and providing for an effective date.

under consideration and reports it back as follows:

[ ] do pass [ ] do not pass

[ ] do pass with attached amendments(s)

[ ] replace with CS for ________ [ ] same title [ ] new title

and recommends ________

[ ] AND attaches a "Letter of Intent" [ ] New Fiscal Note [ ] Zero Fiscal Note Attached

[✓] reports it back without recommendations

[ ] referred to the ________ Committee

MEMBERS SIGNING DO PASS	MEMBERS HAVING OTHER RECOMMENDATIONS:
	[illegible] - No rec
	[illegible] Pass with [illegible]

________ CHAIRMAN

H 60

Introduced: 2/4/83
Referred: Health, Education &
Social Services and Finance

Funding Information
General Fund $753,000
Other Funds -0-
$753,000

IN THE HOUSE

BY HURLBERT, BETTISWORTH, MCBRIDE, MALONE AND HERRMANN

HOUSE BILL NO. 160

IN THE LEGISLATURE OF THE STATE OF ALASKA

THIRTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act making a special appropriation to the Department of Education for development of a training program for Alaska aviation; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. The sum of $753,000 is appropriated from the general fund to the Department of Education for development of a training program for Alaska aviation.

* Sec. 2. The unexpended and unobligated portion of the appropriation made by this Act lapses into the general fund June 30, 1984.

* Sec. 3. This Act takes effect July 1, 1983.

The following individual is expected to testify on HB 160:

Vern Hurlbert, prime sponsor

Air carriers seek legislative funds for pilot training

The Associated Press

In an effort to win reductions in soaring insurance premiums, Alaska air carriers are asking the legislature for $780,000 to fund a pilot training program.

At the annual convention of the Alaska Air Carriers Association over the weekend, pilots and their bosses unanimously endorsed the plan to have air taxi operators offer courses tailor-made for the state's treacherous weather and flying conditions.

"There is just no question that the aviation industry in this state needs more training," said Jim Dodson of the newly formed Alaska Aviation Safety Foundation.

"By additional training we can improve safety, cut accidents and reduce the rates air carriers pay for insurance."

In 1980, in the wake of a National Transportation Safety Board report critical of air taxi operations in Alaska, the association hired American Airline Training Corp. to study possible improvements.

Alaska's rate of non-fatal airplane accidents is five times that of the Lower 48, according to Alan Crawford, regional investigator of the safety board.

The rate of fatal accidents is twice the national average, he said.

"We discovered when we studied Alaskan pilots that most needed more training to learn how to handle many uniquely difficult flying conditions," said Michael Mitchell of American.

"Flying in whiteout conditions and flying where navigation is much more difficult make it important for Alaska pilots to be better trained than those in the Lower 48," he said.

"Flying out of Bethel daily requires more skill than a commercial 747 pilot ever needs," Mitchell said.

The Civil Aeronautics Board requires refresher training for pilots, and Mitchell recommends using manuals with specific Alaska examples.

Lance Wells, executive director of the AACA, said the public would benefit as well from the training because lower insurance premiums could mean lower air fares.

Dodson said several insurance companies already have promised discounts to operators who complete the proposed training program.

Howard Weaver
Managing Editor

Steve Lindbeck
Editorial Page Editor

Lawrence Fanning, Editor and Publisher 1967 to 1971
Alaska's Only Morning Newspaper • Founded in 1946 by Norman C. Brown

ANCHORAGE DAILY NEWS

Feb 3, 1983

Upgrade pilot training programs in Alaska

Alaska's air carriers have improved their aim considerably in efforts to shoot down the high cost of flying insurance. The target this legislative season is improved pilot training, and there is at least some chance of success.

Last year the industry sought help from Juneau in the form of legal limits to the financial liability facing air carriers in Alaska. Reducing the carriers' (and thus the underwriters') liability, it was thought, would translate into reduced insurance rates. But the legislation went nowhere — presumably because it pinpointed the wrong problem.

The problem with aviation and insurance coverage in Alaska is the high rate of accidents — not the legal responsibilities arising from them. And the high rate of accidents stems too often from human error arising from the combination of harsh weather, natural hazards, navigational difficulties and unwarranted overconfidence known as "the Bush syndrome."

Industry representatives tacitly admit as much in pressing for a state-funded pilot training program tailored to the special demands of Alaska flying conditions. "There is just no question that the aviation industry in this state needs more training," says Jim Dodson, an official of the Alaska Aviation Safety Program. "By additional training we can improve safety, cut accidents and reduce the rates air carriers pay for insurance."

There may be a battle over who will pay for the training. Air carriers have asked the legislature for $780,000 to fund the second stage of a proposed training program pitched to the needs of Alaska air taxi operators. The Sheffield administration apparently has expressed interest in picking up part of the tab, though a case also could be made for funding the program through a special levy on the industry.

There is little doubt of the pressures, challenges and risks associated with flying in Alaska. But the crucial factor in safely confronting those challenges is the human judgment of pilots who must know their profession better in Alaska than anywhere else in the country. "Flying out of Bethel daily requires more skill than a commercial 747 pilot ever needs," says an official of a company hired to study air carrier operations in Alaska.

That realization alone is enough to justify upgrading pilot training programs in our state. Aviation is a crucial lifeline to every corner of Alaska, and high insurance costs ultimately raise the cost of living throughout the Bush. Working to improve the competence and training of thousands of Alaska pilots can only improve the quality of life in dozens of communities who depend on them.

2/1/83 Daily News

largest car market ...

Air carriers seek state-funded pilot training

By CHUCK KLEESCHULTE
Daily News business reporter

Prompted by the promise of reductions in current sky-high insurance rates, Alaska air carriers are pushing hard to get a new pilot training program off the ground.

Air carriers over the weekend voted unanimously to seek $780,000 from the state's Legislature to fund the second stage of a proposed training program. It is designed so air taxi operators can offer courses for pilots and ground personnel tailor-made for Alaska weather and flying conditions.

"There is just no question that the aviation industry in this state needs more training. By additional training we can improve safety, cut accidents and reduce the rates air carriers pay for insurance," said Jim Dodson, an official of the newly formed Alaska Aviation Safety Foundation, sponsor of the new training program.

The Alaska Air Carriers Association in 1980, fresh on the heels of a National Transportation Safety Board report critical of air taxi operations in Alaska, hired American Airlines Training Corp. of Texas to study possible improvements in air carrier operations.

The American report completed last year stressed that Alaska's nation-leading air accident rate could be cut if pilots uniformly would be trained to handle Alaska aviation problems and be educated in safety practices so they would avoid wreckless behavior.

"We discovered when we studied Alaskan pilots that most needed more training to learn how to handle many uniquely difficult flying conditions. Flying in whiteout conditions and flying where navigation is much more difficult make it important for Alaska pilots to be better trained than those in the Lower 48," says Michael K. Mitchell, an official of American Airlines Training Corp. "Flying out of Bethel daily requires more skill than a commercial 747 pilot ever needs," said Mitchell.

He says Alaska pilots, unlike those in the Lower 48, frequently have to fly by "dead reckoning" and by pilotage; using surface maps and landmarks to determine locations, rather than nagivational aides.

Mitchell said Alaska pilots especially face the danger of overconfidence prompting poor judgment in flight decisions, the so-called "Bush Syndrome."

To overcome such problems Mitchell proposes drafting pilot lessons especially tailored to Alaska problems, course manuals which Alaska air taxi operators will then use to satisfy Civil Aeronautics Board required refresher training.

Such training manuals, Mitchell said, could be written and in use by the end of 1984, provided funding for the safety program is found by this summer.

Lance Wells, executive director of the AACA, says the expenditure to fund the training program would ultimately benefit all air users through lower air fares, possible because of lower insurance liability premiums.

Dodson said several insurance firms have already promised to provide discounts to air taxi operators who complete the proposed safety program. He said the course also might attract other insurance firms to write policies for Alaska air carriers.

At present only Lloyds of London underwrites aviation insurance given Alaska's high-risk loss history.

The possibility of lower rates is good news to an industry which already has seen nearly a dozen smaller operators go out of business during the past several years because of rapidly escalating insurance rates — the direct result of the state's high accident rate.

Alaska has a rate of non-fatal air accidents five times the rate of the Lower 48, a rate of fatal accidents twice the national average, says Alan L. Crawford, an NTSB regional investigator in Los Angeles.

Crawford during the carrier's annual convention in Anchorage Saturday urged Alaska officials to find funding for the safety program. Wells says carriers have received a commitment from the Sheffield administration to provide at least part of the amount needed for the program in the state's FY 84 budget now under development.

Wells, however, urged carriers to contact lawmakers to try to obtain full funding for the drafting of the training program.

MEMORANDUM State of Alaska

TO: Louann Cutler, Professional Assistant
House Finance Committee

DATE: March 1, 1983

FILE NO:

TELEPHONE NO: 465-2800

FROM: Marshall Lind, Commissioner
Department of Education

SUBJECT: Alaskan Aviation Safety Foundation

In 1981-82 the Office of Adult and Continuing Education issued and administered a grant of $300,000 to the Alaska Aviation Safety Foundation to prepare, in part, a final report including:

1. a list of unranked aviation training objectives for Alaskan fixed-base operators;

2. scenarios of typical flight profiles recommended for inclusion in an Alaska aviation training program;

3. specifications for recommending aircrew training devices appropriate for Alaska; and

4. a report of progress made with insurance underwriters relative to potential premium reductions for operators who participate in the program.

Attached is a copy of the final report submitted by the Alaska Aviation Safety Foundation for your review.

Some issues should be considered prior to the issuance of a grant for the development of written training, curricula and materials. The following should be analyzed and considered:

A. Do existing training programs that prepare Alaskans for licenses address the identified objectives? Can these programs be assisted in modifying their curricula to address the objectives?

B. FAA accident reports should be examined to substantiate the interviews that were conducted by American Airlines.

C. Private pilot training is significantly more common in Alaska than commercial pilot training. Therefore, any training program and/or material should coordinate with the training and licensing of private pilots as well as commercial pilots.

D. The licensing criteria in Alaska may need to be revised if the 25 objectives identified in the American Airlines study are of critical importance to the Alaskan aviation industry.

E. How will the program be operated/implemented once the curricula are developed?

The Department of Education is concerned that if curricula are developed as a result of the safety foundation's activities it should be of top quality and be available to, if not required of, all institutions involved in the training of pilots.

ALASKAN AVIATION SAFETY FOUNDATION PROPOSAL

BUDGETARY PRICE ESTIMATES

Proposed Start Work Date:		September 1, 1983
Personnel:		
AATC Training Specialists (2.5 man-years)		$ 250,000.
Contract Secretarial Support (1.0 man-year)		25,000.
Alaskan Subject Matter Experts (9 man-months)		80,000.
Per Diem: 540 days @ $150. per day		81,000.
Communications: Telephone and Postage		3,000.
Office Supplies: @ $200. per month		2,400.
Printing: Progress and Final Reports		3,000.
Air Travel:		
Intrastate (via passes)		------
Leased Aircraft		25,000.
Media Production: (Sample AV Program)		100,000.
	SUB-TOTAL:	$ 569,400.
G + A: (@ 15%)		85,410.
	SUB-TOTAL:	$ 654,810.
Profit: (@ 15%)		$ 98,221.
	GRAND TOTAL:	$ 753,031.

ALASKA AVIATION SAFETY FOUNDATION

PROPOSED

AVIATION SAFETY TRAINING PROGRAMS

CONTENT AND BUDGET
SUMMARY

1. Develop and validate the curriculum in the form of 25 lesson plans including instructor ("How to Teach") and student manuals for use by experienced Alaskan aviation operators (pilots, managers, etc.) when training both private and commercial operators to fly aircraft safely in Alaska generally and in specific regions of Alaska. The lesson plans will cover the following most hazardous of aviation operations:

   a. Gathering weather information

   b. Interpreting weather information and trends

   c. Landings and take-offs:
      1. Gravel and sand bars 2. Lakes 3. Tundra 4. Mud 5. Ice
      6. Beaches 7. Airstrips 8. Runways 9. Snow 10. Glaciers

   d. Flight techniques in adverse weather:
      1. Vertigo 2. Whiteouts/depth perception 3. Turbulence 4. Icing

   e. Navigation/Pilotage

   f. Mountain flying, general and specific pass flying

   g. Flight techniques - area specific

   h. Fuel management and handling

   i. Cold weather operations

   APPROXIMATE COST $573,400

2. Prepare one or two exemplary audio-visual presentations for use in teaching specific validated lesson plans.

   APPROXIMATE COST $180,000

   TOTAL ESTIMATE $753,400

It is anticipated that Department of Education will issue Request for Proposal bids based on the attached proposal and the Definition of Alaskan Aviation Training Requirements previously completed by the Foundation.

The cost estimates (detailed on next page) are Foundation estimates based on a single preliminary survey of potential contractors. Actual bids may be more or less than the estimate.

Lance Wells, Executive Director
Alaska Aviation Safety Foundation
301 West Northern Lights Blvd., Suite 600
Anchorage, Alaska 99503

FUNDING REQUEST

TO

IMPLEMENT AND CONTINUE DEVELOPMENT

OF

ALASKAN AVIATION SAFETY TRAINING PROGRAMS

PREPARED BY:

ALASKA AVIATION SAFETY FOUNDATION
301 W. Northern Lights Blvd.
National Bank of Alaska Building
Suite 600, Pouch 6273
Anchorage, Alaska 99501
(907) 279-7684

Rex Bishop, Chairman

EXECUTIVE DIRECTOR & COUNSEL:

Lance Wells

DATE: January, 1983

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EXECUTIVE SUMMARY

PURPOSE: What follows is a proposed plan to develop and implement 25 Alaskan aviation safety lesson plans appropriate for advanced safety training of Alaskan aviators in the most hazardous aspects of private and commercial aviation operations. Piloting, ground operations, maintenance and management are examples of the areas covered with first emphasis on piloting. At least one of the lesson plans will be developed using audio/visual media. Additional audio/visual will be developed in the next phase.

BACKGROUND: In 1981 the Alaska Aviation Safety Foundation (Foundation) received funding from the State of Alaska to define Alaskan aviation safety training requirements which would later be used to design a training program for Alaskan aviators. American Airlines Training Corporation won the contract for that study which was Phase I of the development of a "Total Training System". The study was published in a 175 page report entitled Definition of Alaskan Aviation Training Requirements. A limited number of copies are available for examination.

The National Transportation Safety Board and the FAA have reviewed the study and found it to be excellent. Implementation of the training program suggested in the study will have a dramatic, positive impact on safety in Alaska. Numerous

insurance underwriters have indicated the same with respect to insurance rates due to the lower risk they face in a more safety conscious market. This will lead to significantly lower costs to intra-Alaska travelers since over 20% of air fares within Alaska at the present time are attributable to air carriers' insurance costs.

METHODS AND DELIVERABLES: The results of the above study are the basis of Phase II in the development and implementation of a "Total Training System" which consists of 4 phases. The second phase will be the development of 25 lesson plans suitable for use by experienced Alaskan aviation operators when training others to operate safely in specific regions of Alaska. In addition, the Foundation will develop a sample audio-visual training program for at least one of the Phase II lesson plans as an example of what will be done in Phase III of the preparation of a "Total Training System."

The development of these detailed lesson plans anticipate the efforts of experienced education/training specialists on site in Alaska working with highly experienced Alaskan pilots, managers and opinion leaders selected by the industry itself and the Foundation directors. The training specialists have selected several lesson plan formats for use when formulating the information

from Alaskan aviators into instructional materials for use throughout the Alaskan aviation community. As part of the lesson plans, the Foundation will develop instructor's materials explaining how to teach, using current methods and media, each training objective.

FURTHER PHASES: (Not included in current proposal costs.) Following the completion of Phase II, the Foundation proposes to expand the use of audio/visual media in the presentation of lesson plans selected by Alaskan operators. This will be Phase III of a planned four-phase effort. Phase IV efforts may require the construction of sophisticated aviation simulation training devices. The final result will be a "Total Training System" specifically and regionally designed for the unique Alaskan aviation environment.

FUTURE FUNDING: The Alaska Air Carriers Association and Aviation Safety Foundation are working hard to minimize, if not avoid all together, future requests for funding from the State for these projects and on-going safety training programs. Private funding mechanisms are being developed and it is anticipated that these will supply the on-going needs of the Foundation. Some of the mechanisms

are already in place and others will soon be implemented:

a. Donations from air carriers themselves
b. Group insurance dividends and savings
c. Captive insurance reserve earnings
d. Standard charitable fund raising from major aviation users.
e. Fund raising events (safety conferences, etc.)

The present request is, in effect, seed money which will allow the Foundation to start producing fruits and attract more private money. Future State monies may be needed, however, for transition into more sophisticated training modes.

CHAPTER I

INTRODUCTION

This proposal describes a process for the development of a set of approximately 25 plans. These plans will be appropriate for use by experienced Alaskan aviators to teach courses designed to make the learners safer pilots and managers. In addition, the Alaska Aviation Safety Foundation proposes to develop a sample audio-visual training program. This A/V program will demonstrate sophisticated training programs and devises which might be used in teaching more of the lesson plans.

This paper describes the background leading up to the proposed effort in Chapter II. This includes a review of relevant studies by Parker Associates, the National Transportation Safety Board, and a description of the Definition of Alaskan Aviation Training Requirements prepared by the Foundation in 1981 and 1982. Chapter III describes the proposed method for transforming the previously defined training objectives (see page 76) into lesson plans relevant to the unique needs and conditions in Alaska. A description of the deliverables available at the completion of the proposed work is included in Chapter III. Chapter IV describes proposed future efforts which might be expected in the ongoing process of creating a "Total Training System" for private and commercial Alaskan aviation.

CHAPTER II

BACKGROUND

Alaska's dependence on the air taxi industry for delivery of needed goods and services and the safety problems besetting the air taxi operators have been documented in previous sudies such as Parker Associates' study, Air Service to Rural Alaska: A Study in Inadequacy and a 1980 National Transportation Safety Board Special Study entitled Air Taxi Safety in Alaska. The NTSB study reported that, "...about 30 percent of all air taxi accidents in the United States occurred in Alaska, and their rate of occurrence was four times that of the accident rate for air taxi operators in the rest of the United States." This accident rate among Alaskan air taxi operators has resulted in a tragic loss of life and injuries sustained, in addition to skyrocketing insurance costs. A recent letter dated January 4, 1983 from the NTSB to the Air Carriers Association points out that the problem identified in 1980 continues to manifest itself in recent accidents. The NTSB urges early implementation of the program proposed by the Foundation in the "Final Report on Definition of Alaskan Aviation Training Requirements." A copy of the letter is attached as Exhibit "A".

The Parker and NTSB studies prompted a search for solution to a serious problem. An unsuccessful effort was made to identify and obtain an existing Arctic training program.

Inquiries were made of training personnel in the United States Air Force, the Canadian United Forces, and several Scandinavian countries. Existing training programs which were being conducted in Alaska were found to be designed to meet recertification requirements of the Federal Aviation Administration (FAA) and were not responsive to the unique Alaskan operational environment. "Advanced" and "specialized" safety training is necessary for Alaska flying conditions.

The decision was made to develop a specifically designed training program suited to the needs of Alaskan aviators. This training program could be based on accident records compiled by the FAA or the National Transportation Safety Board (NTSB). However, such records were often incomplete and, in fact, represented a list of failures. Instead, it was decided to discover how experienced Alaskan pilots, maintenance and managerial personnel learned to cope with the many challenging problems regularly faced by private and commercial Alaskan aviators. The process of discovery was developed and validated by John Flanagan and reported in Psychological Bulletin in 1954. Flanagan's critical incident methodology, in conjunction with traditional job analysis procedures, is the basis for the interviewing process used in this study.

After careful consideration, the State of Alaska provided

funding for the study. The funds were included with those to be administered by the Alaska State Department of Education. American Airlines Training Corporation won the contract and assisted the Foundation with the study.

The goal of the Foundation is to provide effective, advanced flight, operations and management training in Alaska, based on information gathered from experienced Alaskan aviators with excellent safety records.

This training will produce highly-qualified, professionally oriented pilots, mechanics and managers and will result in a lower accident rate. The Air Carriers Association has worked with insurance underwriters attempting to obtain insurance premium reductions for individuals and commercial operators who participate in the proposed Alaskan aviation training programs offered by the Association and the Foundation. Several underwriters have expressed support for the concept of reducing insurance premiums and making direct contributions to the Foundation (a charitable institution) if the Foundation starts producing fruits in the near future. Two underwriters already are, based on assurances that training programs will be forthcoming soon.

During the course of the study, the investigators travelled to 58 locations (cities, towns, villages) throughout Alaska; intereviewed approximately 177 air taxi operators and pilots;

visited numerous aviation facilities; and attended several aviation related seminars and lectures.

The questionnaire used in the interviews was designed by the research team and modified in response to changes suggested by the Foundation Board of Directors, and to respondents' comments and answers during the first interviews. The interviews were conducted on a one-to-one basis and lasted an average of two hours. Background information, flight techniques and operational conditions in the Alaskan environment were collected from the interviews. Respondents provided a variety of specific techniques which have helped them to prevent hazardous situations from becoming serious accidents. The information in the completed questionnaires was organized into an outline form using a computer. This outline of information provided a data base from which the training objectives were synthesized. The final report contains the unvalidated information from the questionnaires and the training objectives starting at page 76.

The Alaskan aviation training objectives indicate what needs to be taught, the instructional media and devices appropriate for presenting the information, and how to evaluate mastery of the objectives. The training objectives will serve as the basis for further development of an Alaskan aviation training program.

REGIONALIZED APPROACH

Based on information collected in formal pilot interviews and informal conversations with many other Alaskans interested in aviation, a complete Alaskan training system would have to be regionally oriented. There are sufficient differences in flying conditions among geographic regions to warrant training that addresses specific regions in which a pilot operates. Such a regionalized approach would also enable pilots to spend as little time as possible away from their home base to complete a training program. In addition, aviation training in Alaska will emphasize the development and improvement of judgment and decision-making skills rather than the manipulative skills associates with aircraft operation.

In addition to identifying training requirements that address piloting and mechanical skills and competencies, the study also investigated the management of air taxi operations. It became obvious to the research team that some operators in Alaska manage safe, profitable air taxi services. Those factors that contribute to such an operation were identified and serve as training requirements for air taxi management training.

GENERAL FINDINGS: The information collected from the interviews showed that, although some training requirements and the

training objectives to meet those requirements were applicable to Alaskan aviation in general, the majority were specific to different geographical areas in the State and also to different types and configurations of aircraft (single engine, ski, helicopter, multi-engine, float, etc.). It was also recognized that the primary emphasis of an Alaskan training system should be the development of decision making skills on the part of the pilot rather than manipulative flying skills. For example, the training emphasis should be on when to make a 180° turn to escape adverse weather or leave a mountain pass, and include specific operational procedures to be performed on the basis of such a decision.

PRELIMINARY RESULTS: The study identified several factors that had to be considered in the design of an Alaskan aviation training system:

PRIVATE AND COMMERCIAL

1. The primary objective of the training system should be acceptable and applicable to private and commercial aviation operators conducting flight operations in a uniquely stressful environment due to weather, geographic, and other adverse operational conditions.

REGIONALLY SPECIFIC

2. The training system should be tailored to specific

geographical areas of the State and to different types and configurations of aircraft.

LOCALLY AVAILABLE

3. Components of the training system should be accessible to pilots in the community in which they are located. This would avoid, as much as possible, pilots spending time away from their primary job to attend training in a distant geographic location.

PRACTICAL

4. The requirement for training system components for localized on-job-site training could be met by using transportable training devices and interactive audio-visual and print media. These programs should contain instructional components tailored to geographic area and aircraft types.

EVALUATION

5. Instructional programs would be designed to teach specific decision-making skills and the operational procedures to be performed on the basis of such decisions. Evaluation of student performance must be made by qualified, certified airmen with extensive experience in the given geographical area using structured evaluation methods.

DECISION MAKING SKILLS THEN APPLICATION

6. The training system should be capable of allowing the airmen to first learn the necessary discriminations and decision-making capabilities, and then apply these skills in a simulated or operational environment. Non-transportable training devices could be required for operational training.

TRAINING CENTERS

7. Area training centers should be established for specific geographic regions. These training centers could be co-located with existing Community College facilities. The training system would thus permit the learning of needed decision-making skills and operational procedures through transportable media, and evaluation of student performance by designated airmen for localized job-site training. Support and administration for this training would be provided by the area training center.

CHAPTER III

METHOD AND DELIVERABLES

This chapter describes the process which the Foundation proposes to use to transform the results of their report, Definition of Alaskan Aviation Training Requirements, into usable lesson plans and a sample audio-visual training program lesson.

The Foundation will assign persons with expertise in Alaskan aviation needs and experience in development of aviation training programs to work with Alaskan aviation Subject Matter Experts (SME's) for the duration of the contract resulting from this proposal. The Alaskan Aviation Safety Foundation will identify suitable SME's for each type of lesson.

The Foundation will contract with these SME's for a period of time sufficient to convert their unique knowledge into the content of the lesson plan. One to two weeks per SME will be required. Several elements will assist in the success of this process. First, appropriate lesson plan formats have been identified. Lesson plan formats will be presented to the Foundation Board for approval. The approved formats will be the basis for the information gathered from the SME's. Second, the research team has and will continue to use the recommended operational techniques previously identified

by experienced Alaskan aviators in the study. These techniques can be evaluated for efficacy and validated during the development of the lesson plans.

The validated list of techniques will become the "Trigger" which can serve to remind the SME of as many techniques as possible. In the development of some lessons, it is anticipated that several SME's will be required. Where SME's cannot agree on techniques or appropriate procedures for a lesson, the training developers will look to the Foundation Board for guidance or will include alternative methods in the lesson plans. Provisions will be made in each plan for the experienced Alaskan aviator designated to teach the courses from these lesson plans to provide specific information appropriate to the geographical area in which the learner will be operating.

One or two lessons will be selected for development into an audio-visual format. The lesson, which should take approximately 30-40 minutes, may include slide/tapes or video tapes or similar media. It may, for example, train pilots in a subject such as flying through a pass, landing on a beach, checking weather in Alaska or a similar subject. This sample program will demonstrate the use of various media therefore, the cost of this product may not be representative of each training lesson. The sample program will become the standard for transforming all of the lesson plans into

various representative media formats during Phase III of the development of a total training system for Alaskan aviators.

At this time, it appears that the completed lesson plans should number about 25. These would be clustered into the following units:

- Weather in Alaska
- Adverse Weather Flying Techniques
- Takeoff and Landing Techniques for Special Surfaces
- Navigation and Piloting Techniques
- Mountain and Pass Flying
- Area Specific Flying Techniques
- Fuel Management and Handling Techniques
- Cold Weather Operating Techniques
- Hazardous Materials in Alaska
- Survival Training
- Management Training Plans

In addition, a lesson will be developed which will prepare experienced Alaskan pilots and operators to use the plans developed in this project to teach others.

CHAPTER IV

FUTURE PHASES

At the conclusion of the effort described in this proposal, the citizens of the State of Alaska will have a usable product which can have a significant effect on aviation safety in the State. However, although the production of a set of lesson plans is useful and desirable, they do not represent a Total Training System. The lesson plans are a second, but necessary, step in the continuing process of providing safer aviation activities in Alaska through improved training.

The next step is to professionally prepare all of the lessons in an audio-visual, computer assisted and satellite transmittable aviation training program. Even though some Alaskan opinion leaders would prefer that the automated audio-visual programs be produced this year, we believe it is better to prepare the lesson plans and let experienced Alaskan aviators validate their effectiveness before committing the resources to automate them. Then, the Alaska Aviation Safety Foundation can define and build the training media required to produce the best trained arctic pilots possible. Therefore, the Foundation is proposing that each step be taken sequentially and proven before committing to a total training system. This approach will result in the ultimate goal of maximum safety through a "Total Training System" that effectively meets the Alaskan aviation training requirements.

National Transportation Safety Board

Washington, D.C. 20594

January 4, 1983

Office of the Chairman

DUE BY:
IN 1/20/83

Mr. Lance Wells
Executive Director
Alaska Air Carriers Association
Box 6469
Anchorage, Alaska 99502

Dear Mr. Wells:

As a result of its special study 1/ of air taxi safety in Alaska, the National Transportation Safety Board recommended on September 25, 1980, that the Alaska Air Carriers Association, "Extend its safety program to reiterate the hazards of air taxi operations in Alaska and to overcome, in particular, the 'bush pilot syndrome'" (A-80-105). The Safety Board later classified the recommendation "Closed-Acceptable Action" as a result of your organization's efforts in launching the Alaska Aviation Safety Foundation to promote a safer air transportation environment in Alaska.

The concerns which prompted the Safety Board to conduct the special study of Alaska air taxi operators in 1980 reappeared during a recent investigation. On May 16, 1982, a Gifford Aviation, Inc., deHavilland DHC-6, operated as Wein Air Alaska Flight 517 under the provisions of 14 CFR Part 135, crashed at Hooper Bay, Alaska. 2/ The investigation revealed a casual attitude on the part of the pilots regarding adherence to weight and balance regulations and operating procedures which led to the airplane operating with a center of gravity considerably aft of the published limit. Additionally, the investigation revealed poor maintenance practices regarding the condition of seatbelts in the accident airplane as well as two other DHC-6's operated by Gifford Aviation, Inc. These unsafe practices were precisely the same type noted during the Safety Board's special study and which generated the Safety Board's earlier recommendation to your organization.

Our staff has recently reviewed the "Final Report on Definition of Alaskan Aviation Training Requirements" prepared by American Airlines Training Corporation under the auspices of the Alaska Aviation Safety Foundation. The Safety Board is pleased with the program's content, objectives, and goals and urges its early implementation as soon as funds become available.

Respectfully yours,

Patricia A. Goldman for

Jim Burnett
Chairman

1/ Special Study--"Air Taxi Safety in Alaska" (NTSB-AAS-80-3).
2/ For more detailed information, read Aircraft Accident Report--"Gifford Aviation, Inc., deHavilland DHC-6, N103AQ, Hooper Bay, Alaska, May 16, 1982" (NTSB-AAR-82-14).

EXHIBIT A

Introduced: 2/4/83
Referred: Health, Education &
Social Services and Finance

Funding Information
General Fund $753,000
Other Funds -0-
$753,000

BY HURLBERT, BETTISWORTH, MCBRIDE, MALONE AND HERRMANN

IN THE HOUSE

HOUSE BILL NO. 160

IN THE LEGISLATURE OF THE STATE OF ALASKA

THIRTEENTH LEGISLATURE - FIRST SESSION

A BILL

For an Act entitled: "An Act making a special appropriation to the Department of Education for development of a training program for Alaska aviation; and providing for an effective date."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. The sum of $753,000 is appropriated from the general fund to the Department of Education for development of a training program for Alaska aviation.

* Sec. 2. The unexpended and unobligated portion of the appropriation made by this Act lapses into the general fund June 30, 1984.

* Sec. 3. This Act takes effect July 1, 1983.