

**HB**

**319**

# STATE OF ALASKA

## DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES OFFICE OF THE COMMISSIONER

TONY KNOWLES, GOVERNOR

3132 CHANNEL DRIVE  
JUNEAU, ALASKA 99801-7888

TEXT: (907) 465-3682  
FAX: (907) 588-8385  
PHONE: (907) 469-3000

February 22, 2000

Mr. Stephen Moreno  
Alaska Division Administrator  
Federal Highway Administration  
P.O. Box 21648  
Juneau, Alaska 99802

Dear Mr. Moreno:

I'm enclosing a report on the preferred alternative for the Juneau Access Project. The Department prepared the report to present our recommendation to Governor Knowles. In the report we recommend that Alternative 2: East Lynn Canal Highway of the Environmental Impact Statement (EIS) be selected as the preferred alternative. The report provides a well-reasoned and impartial analysis that is simple and clear. The Governor has accepted our recommendation. Alternative 2: East Lynn Canal Highway is the State's preferred alternative for the Juneau Access Project.

However, the Governor and I have determined that due to other critical funding needs in the State, we cannot afford the preferred alternative at this time. Therefore, we are suspending further work on the EIS.

If you wish to discuss any further details of the project, I can be reached at 465-3901, or you may contact Mike Downing of my staff directly at 465-2960.

Sincerely,



Joseph L. Perkins, P.E.  
Commissioner

Enclosure

cc: Robert Doll, Southeast Region Director  
Michael L. Downing, P.E., Statewide Design & Engineering Services Director

# FISCAL NOTE

Bill Version: HB 319

(H) Publish Date: 1/26/00

**STATE OF ALASKA  
2000 LEGISLATIVE SESSION**

Revision Date/Time (Note if correction) \_\_\_\_\_ Dept. Affected DOT&PF  
 Title Transportation Bonds BRU Commissioner's Office  
 Component \_\_\_\_\_  
 Sponsor Rules Committee  
 Requester Governor Component No. \_\_\_\_\_

**Expenditures/Revenues (Thousands of Dollars)**

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006
Personal Services	0.0	0.0	0.0	0.0	0.0	0.0
Travel	0.0	0.0	0.0	0.0	0.0	0.0
Contractual	0.0	0.0	0.0	0.0	0.0	0.0
Supplies	0.0	0.0	0.0	0.0	0.0	0.0
Equipment	0.0	0.0	0.0	0.0	0.0	0.0
Land & Structures	0.0	0.0	0.0	0.0	0.0	0.0
Grants & Claims	0.0	0.0	0.0	0.0	0.0	0.0
Miscellaneous	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL OPERATING</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

<b>CAPITAL EXPENDITURES</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
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<b>CHANGE IN REVENUES ( )</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
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**FUND SOURCE (Thousands of Dollars)**

1002 Federal Receipts	0.0	0.0	0.0	0.0	0.0	0.0
1003 GF Match	0.0	0.0	0.0	0.0	0.0	0.0
1004 GF	0.0	0.0	0.0	0.0	0.0	0.0
1005 GF/Program Receipts	0.0	0.0	0.0	0.0	0.0	0.0
1037 GF/Mental Health	0.0	0.0	0.0	0.0	0.0	0.0
Other (Specify Type)	0.0	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

Estimate of any current year (FY2000) cost: 0.0

**POSITIONS**

Full-time	0	0	0	0	0	0
Part-time	0	0	0	0	0	0
Temporary	0	0	0	0	0	0

**ANALYSIS:** (Attach a separate page if necessary)

The Department will submit a capital budget amendment to add projects funded by the bonds.

Prepared by: Dennis Poshard, Special Assistant to the Commissioner Phone 465-3904  
 Division Commissioner's Office Date/Time 1/24/00 4:16 PM  
 Approved by Commissioner [Signature] Date \_\_\_\_\_  
 Agency For Joseph L. Rerkins, DOT&PF

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**STATE OF ALASKA  
 2000 LEGISLATIVE SESSION**

Revision Date/Time (Note if correction) \_\_\_\_\_ Dept. Affected \_\_\_\_\_ Revenue \_\_\_\_\_  
 Title Transportation Bonds BRU \_\_\_\_\_ Revenue Operations \_\_\_\_\_  
 Component \_\_\_\_\_ Treasury Division \_\_\_\_\_  
 Sponsor Rules Committee  
 Requester Governor Component Serial No. 121

**Expenditures/Revenues (Thousands of Dollars)**

Note: Amounts do not include inflation unless otherwise noted below.

OPERATING EXPENDITURES	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006
Personal Services						
Travel (Marketing & Selling Bonds)	15.0	15.0	15.0	0.0		
Contractual (Paying Agent)		5.0	10.0	15.0	15.0	15.0
Supplies	1.0	1.0	1.0	0.0		
Equipment						
Land & Structures						
Grants & Claims						
Debt Service	0.0	36,660.0	36,662.0	36,661.0	36,659.0	36,661.0
<b>TOTAL OPERATING</b>	<b>16.0</b>	<b>36,681.0</b>	<b>36,688.0</b>	<b>36,676.0</b>	<b>36,674.0</b>	<b>36,676.0</b>

<b>CAPITAL EXPENDITURES</b>						
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<b>CHANGE IN REVENUES ( )</b>						
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**FUND SOURCE (Thousands of Dollars)**

FUND SOURCE	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006
1002 Federal Receipts		32,994.0	32,996.0	32,995.0	32,993.0	32,995.0
1003 GF Match		3,666.0	3,666.0	3,666.0	3,666.0	3,666.0
1004 GF	16.0	21.0	26.0	15.0	15.0	15.0
1005 GF/Program Receipts						
1037 GF/Mental Health						
Other (Specify Type)						
<b>TOTAL</b>	<b>16.0</b>	<b>36,681.0</b>	<b>36,688.0</b>	<b>36,676.0</b>	<b>36,674.0</b>	<b>36,676.0</b>

Estimate of current year (FY00) cost: 0.0

**POSITIONS**

Full-time						
Part-time						
Temporary						

**ANALYSIS:** (Attach a separate page if necessary)  
 Authorizes \$350 million in general obligation bonds to fund transportation projects. It is anticipated that approximately 90% of the debt service on these bonds will be paid with federal funds.  
 Assuming an interest cost of 6.22% (approximately 0.75% above current rates), and a 15-year term, annual debt service is approximate \$36.7 million beginning in fiscal year 2002. The state's match for annual debt service will be \$3.7 million.  
 The state is currently working with the Federal Highway Administration to obtain a ruling allowing investment earnings on the funds obtained through the bond sale to be used for the state's 10% match to federal funds. If this ruling is granted, the general fund exposure will be eliminated in the earlier years and reduced in the later years.

Prepared by Deven Mitchell, Debt Manager  
 Division Treasury Division  
 Approved by Wilson L. Condon  
 Agency Department of Revenue

Phone 465-3750  
 Date/Time January 21, 2000  
 Date January 21, 2000

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AMENDMENT #1

TO: HB 319

sponsored by Rep. Allen Kemplen

page 2, line 29  
delete "Gambel Street"

page 2, line 30  
delete "to McCarrey Street"  
insert "Interchanges at Bragaw & Airport Heights"

page 2, line 31  
change "65,000,000" to "25,000,000"

FAILS 4-2

## Department of Transportation and Public Facilities

### Responses to House Transportation Committee Questions

February 24, 2000

1. **The ferry called for in the "all marine" alternative for Juneau Access carried 105 vehicles. Why did the Governor select a ferry that only carries 30 vehicles that has never been part of your study?**

The Governor did not "select" a high speed ferry as an "alternative" within the context of an Environmental Impact Study (EIS). What he did was to increase the current service in Lynn Canal by committing a Fast Vehicle Ferry (FVF) to the route in addition to the Malaspina. Neither the Governor nor the DOT&PF has represented the FVF now under design by the AMHS as being an "alternative" which had been considered by the Juneau Access EIS. It is consistent with the Southeast Alaska Transportation Plan and could, like all AMHS ships, be employed anywhere in Alaska.

2. **When the Governor announced his plan to build ferries for Juneau Access he said that he was going to continue the Road project by sending it on to the Feds. Are you going to complete the Environmental Impact Statement and send it to the Federal Highway Administration (FHWA) with the Road as the preferred alternative? And if so, do you need additional funding?**

We are going to submit the EIS as it exists today to the Federal Highway Administration. Based upon the technical studies and documentation contained in the EIS, the submission will recognize the "Road Alternative" as the preferred alternative. The department does not intend to conduct any further studies at this time. The time required to accomplish the remaining technical work on the preferred alternative would be approximately two years at a cost of \$1,937,000. This funding is not currently available to DOT&PF and would have to be appropriated by the legislature if the EIS were to be completely finalized our FY01 budget does not include a request for this funding. Attached is the scope of the work for finalizing the EIS.

3. **I assume that the Federal Government has established some rules as to how you should spend the \$5.3 million that you have spent on Juneau Access. Is there a risk that the State of Alaska will have to pay it back?**

There are established federal guidelines governing the conduct of Environmental Impact Statements (EIS). The procedure is contained in the National Environmental Policy Act (NEPA) with implementing instructions in the Code of Federal Regulations, Title 23, Section 771. Throughout the conduct of our EIS we have followed those guidelines. We are confident that the federal government will not require us to repay the federal funds.

4. **It is my understanding that this boat is to be a day boat. Bob Doll recently said that this boat would leave Auke Bay at 8 am and return about 5 pm. That's one round trip per day, 30 vehicles north and 30 vehicles south. Is that your intention?**

Yes, it is AMHS intention to operate the Fast Vehicle Ferry in the Lynn Canal, year round, on a one round trip per day schedule, probably 5 days per week. That will provide a capacity for some 300 cars

and 30 cargo vans per week above what currently exists. That should be ample to accommodate our winter demand. In the summer, all mainliners will go to Haines and Skagway and add to our Lynn Canal traffic capacity. This is in addition to utilizing the Malaspina during the summer as a day boat.

**5. Your department says that this ship will burn 3.5 to 4 times the fuel as existing ships. What will be the cost per vehicle carried for the fast ferry?**

Our best estimate of fuel consumption by the Fast Vehicle Ferry is 870 GPH at 32 knots. This can be compared with nominal consumption rates by the Columbia of 450 GPH and the Matanuska of 240 GPH. However, since the FVF can accomplish its mission in a shorter period, its fuel consumption per mission will be lower than might be expected from simply comparing consumption rates. For example, the cost of fuel for a round trip by the FVF in the Lynn Canal is estimated at \$2515., and for the Malaspina at \$2011. Since other costs for the FVF are considerably less, a round trip by the FVF will cost about one third of the cost for a round trip by the Malaspina.

The cost per vehicle per day carried by the FVF will be approximately \$128. For the Malaspina it is \$149.

**6. Will the "fast ferries" be able to use the existing docks or will modifications be necessary?**

To reduce loading and unloading time, we will provide stern loading capabilities at one end of each FVF route. At present, we are planning stern loading facilities at Juneau and Ketchikan. The FVF will be able to use side loading facilities in most other locations.

**7. Do you intend to eliminate some existing ships when these come into service?**

The implementation of the Southeast Transportation Plan, in which FVF's play an important part, will result in the ultimate retirement of some of the current vessels.

**8. Environmental groups have said that they would take legal action to stop the Road project. If you complete the Environmental Impact Statement will it withstand a legal challenge?**

A properly prepared EIS should be able to withstand a legal challenge. However, it is impossible to predict a court's decision on a potential challenge to a final Juneau Access EIS. The EIS for the Whittier Tunnel was challenged all the way to the U.S. Supreme Court. It was ultimately upheld, but during the process one court issued an order which stopped work on the project and cost the state several million dollars when the construction contractor was demobilized.

**9. What happens if the legislature or the voters reject your bond package?**

If the bond package is rejected we will fund the projects utilizing the regular federal program (STIP). Adding these projects to the STIP would displace other projects. Moreover, the state would need to satisfy the match requirement with approximately \$35 million in state general funds rather than investment earnings on bond proceeds.

# Department of Transportation and Public Facilities

## Juneau Access EIS Information

- Expended on the project to date — \$5,130,000
- Additional funding required to complete the EIS \* — \$1,937,000  
(Scope of work attached)
- Completion of the EIS is estimated to take 25 months with the following major milestones:

Complete technical studies and publish SDEIS: 12months

Conduct public hearings and procure permits: 10 months

Publish FEIS and receive the record of decision: 3 months

\*Does not include legal costs if EIS is challenged

# JUNEAU ACCESS FEIS BUDGET

## Explanation of Estimated Cost

### I. APPENDIX A

#### 1. User Benefit Analysis: \$25,000 – Consultant

An update of the User Benefit Analysis will be prepared. This update will verify the Benefit Cost Ratio's and Net Present Values for all alternatives. These values are affected by the traffic forecast, the construction, operating and maintenance costs of each alternative and the user costs. Since we are up-dating our traffic forecast and reviewing the Marine Alternative vessel types, this Technical Appendix has the potential for major revisions. Traffic Forecasts should be completed prior to this task.

#### 2. Traffic Forecast Analysis: \$50,000 – Consultant & Staff

Traffic forecasting is one of the most critical elements of the EIS. We received many comments from the public and agencies that our traffic forecasting was either too liberal or too conservative for the highway alternative. We feel that it is important to substantiate the DEIS forecast and will use a different approach to verify our ADT's. Work will be performed by our Traffic Section and a traffic consultant. This task should be completed early in the process to allow other appendices to be updated.

#### 3. Financing Strategies: \$0 – Staff

We are not anticipating having to update the Financing Strategies Technical Appendices. The existing financing strategies are adequately covered in the appendix. The effort required will be to identify our preferred financing strategy in

the FEIS. The cost of this effort is included in the managers time and the Writing SDEIS estimates that appear later. This task will be completed in the FEIS.

## II. APPENDIX B

### 1. Technical Alignment Report: \$600,000 – Consultant & Staff

The original Technical Alignment Report was based on an uncontrolled aerial mapping survey. This information was accurate enough for the DEIS but does not provide us with the confidence level needed for the FEIS. The East Lynn Canal route was re flown in the fall of 1997 using controlled aerial mapping techniques. The new contours have not been calculated or reduced. For approximately \$175,000 we can complete the controlled mapping for the full 65 miles from Berners Bay to Skagway. This will allow us to more accurately identify the alignment and calculate quantities, and slope limits for the entire alignment. This data is needed most critically for the Berners Bay Alignment and Bridges, the Gran Point and Met Point Critical Habitat Areas, the Katzehin River Crossing and the Skagway Tie-In. The contour mapping would be completed under an existing contract with Aeromap and the design calculations would be performed by in-house staff. It is critical to complete the contour mapping ASAP. This work is necessary for many other appendices.

### 2. Marine Segments Report: \$10,000 – Consultant & Staff

An update of the Marine Segments Report will need to be prepared. This update will re-evaluate the vessel for the East Lynn Canal Highway Alternative Shuttle Ferry. Public comment has shown that weather delays for the shuttle ferry are unacceptable and that the shuttle ferry must be able to operate in all but the most adverse weather conditions.

3. Railroad Analysis: \$0 – Staff

No action required except for minor update of wording in the FEIS.

4. Snow Avalanche Report: \$160,000 – Consultant & Staff

A minor update of the Snow Avalanche Report and a new Snow Avalanche Mitigation Report will be prepared. Avalanches were a major concern of the East Lynn Canal Highway during the public hearings. These concerns will need to be addressed. For three winters DOT&PF had a consultant monitor the East Lynn Canal avalanche paths. This information will be incorporated into a minor update of the report. A new Snow Avalanche Mitigation Report will need to be prepared to address the proposed mitigation for each of the 58 avalanche paths and what the mitigated hazard will be. Terry Onslow from Central Region M&O will help with the mitigation report. The possibility of incorporating the Katzehin Shuttle Ferry into our avalanche mitigation/avoidance program needs to be evaluated (shuttle service from Haines to Kensington during high incidence). This work will have some effect on the User Benefit Analysis if costs for mitigation change the construction and maintenance and operation costs. Otherwise it can be conducted independent of other activities.

### III. APPENDIX C

1. Socio-economic Effects: \$50,000 – Consultant

A minor update of the Socio-economic Effects Appendix will need to be prepared. This update will need to further identify the effects of the increased traffic on the Haines, Skagway, and Juneau communities. More details on the types of impacts to businesses and numbers and types of vehicles will be developed. An update of the tourism

industry and number of tourists between 1994 and the present will be added to the existing report. This will be a consultant effort that can proceed independently of other updates.

2. Household Survey: \$0 – Staff

No new survey is required.

3. Land Use and Coastal Zone Technical Report: \$0 – Staff

Any issues will be addressed by staff in the writing of the FEIS.

IV. APPENDIX D

1. Steller Sea Lion Technical Report: \$75,000 – Consultant

Work to be performed includes updating the technical report based on using our controlled survey to better define highway impacts. This task needs to be started early but can proceed independently of other tasks.

2. Bald Eagle Technical Report: \$50,000 – Consultant

Work to be performed includes updating the recent years observations including the poor nesting rate for 1997 and to review alignment in vicinity of nesting trees based on the controlled survey. This work can be performed independently.

3. Wetlands Technical Report: \$250,000 – Consultant & Staff

Work to be performed includes field evaluating and mapping the wetlands. The preferred alignment through Berners Bay has not been field mapped. We will use the controlled survey and staff surveyors to flag the alignment. A consultant will field map and categorize the wetlands. Field survey should be done prior to spring vegetation in order to minimize

brushing requirements. Getting a late start will either delay the project or cost more to perform. This work can be performed independent of other studies except for needing the controlled survey.

4. Anadromous Fish Habitat Technical Report: \$25,000 - Consultant

Work to be performed includes identifying the length and type of structure to be used at all fish streams.

5. Wildlife Technical Report: \$30,000 - Consultant

Work to be performed will be a minor update of the Wildlife Technical Report plus a sensitive species analysis for the USFS. The sensitive species analysis is the result of DEIS comments. This work can be performed independent of other studies.

6. Visual Impact Assessment Technical Report: \$50,000 - Consultant

Work to be performed will be a minor update of the Technical Report in response to DEIS comments. The main effort will be to identify the height of cut slopes using the controlled survey and to generate drawings to show the visual impacts all along the highway route. This work can be performed independent of other studies.

#### V. APPENDIX E (NEW ITEMS)

1. Secondary/Cumulative Impacts: \$100,000 Consultant & Staff

This work is EPA driven. This work will have two components. The Secondary/Cumulative Environmental Issues and the Secondary/Cumulative Social Issues. It will be necessary to identify the cumulative impacts from the

proposed Goldbelt, Kensington and Jualin projects as well as the Juneau Access Project. This work will draw on work from the other appendices. It will be one of the last efforts to be completed, however its impacts will have to be considered during the scoping phases of the other work.

2. Highway Cost Estimate: \$10,000 – Staff & Consultant

Based on the controlled survey we will generate new project quantities and update the project cost estimate. We will also use a contractor as a consultant to verify our cost estimate. Based on recent bids for off road type work we feel that our cost estimate may be lowered. This work is dependent on the Technical alignment report and completion of the GPS mapping.

3. Project Mitigation Report: \$50,000 – Consultant & Staff

We will need to summarize all project impacts, (deep water disposal, wetlands fill, etc), identify all on project mitigation, (bridges, steepened slopes, revegetation, etc) and propose offsite mitigation to compensate for project impacts (improvements to Mendenhall River, Chilkat River, etc.). This work will be completed after most of the other appendices are completed.

4. Historical/Archaeological Update: \$10,000 – Consultant & Staff

In response to public comments we will need to further address some of the historical/archaeological issues. We will also need to evaluate the new proposed Skagway Tie-In for possible historical/archaeological impacts. This work can be performed independent of other studies, however some of the field work should be conducted in the spring prior to vegetative cover being established.

5. Hydrology: \$30,000 – Staff

A hydraulic study of all major streams and rivers will need to be performed. This work will be performed by the Regional Hydrologist and can be performed independent of other studies.

6. Permit Drawings & Applications: \$25,000 – Staff

All necessary permit drawings and applications will need to be prepared and submitted with the FEIS. This will cover staff time to design, draft and prepare all permit applications for deep water disposal, bridges, culverts and wetlands. This work will summarize all of the impacts from other studies and will be one of the last activities performed.

VI. DOCUMENT PREPARATION/SDEIS/FEIS/COMMENTS & ADMINISTRATION

1. Writing SDEIS: \$25,000 – Consultant

It is anticipated that a consultant will help to write the SDEIS. This is the estimated amount to cover the consultants involvement.

2. Printing SDEIS & FEIS: \$25,000 – Staff

Estimated cost for duplication and mailing out of the SDEIS and FEIS.

3. Managers Time: \$100,000 – Staff

All management of the SDEIS and FEIS will be taken over by the Department. In addition the manager will be responsible for reading and addressing all agency and public comments and attending all meetings. The manager will also administer all consultant contracts. It is estimated that this will be equivalent to one man year of effort.

4. Project Environmental Coordinators Time: \$150,000 – Staff

The project environmental coordinator will help draft all environmental consultant scope of services and review all work items. Will also draft responses to environmental concerns raised during the public comment period. It is estimated that this will take 9 man months of effort.

5. Contracts Coordinator's Time: \$15,000 – Staff

Contracts Coordinator will help prepare and track all consultant contracts and amendments.

6. Editing for FEIS: \$5,000 – Consultant

Cost for consultant to help with editing of the FEIS.

7. Public Hearings Travel/Graphics: \$30,000 – Staff

It is estimated that public hearings will be held in Juneau, Haines and Skagway. This is the estimated cost for travel, per diem, wages, graphics and hall rentals.

8. Drafting Support: \$20,000 – Consultant & Staff

Estimated Drafting Support for visual presentations, graphics and models in support of all appendices.

9. Contingency: \$100,000

It is estimated that a project of this magnitude should have a contingency of at least this amount.

TOTAL ESTIMATED COST	\$2,070,000
Current Balance	<u>\$ 133,000</u>
Required Funding	\$1,937,000

# Alaska Marine Highway System's New Fast Vehicle Ferry

Background: The AMHS is working to acquire a successful fast ferry that is especially well suited for Southeast waters in response to public demand for more regular schedules and convenient daylight departures.

## **Q: So what exactly is a Fast Vehicle Ferry (FVF) anyway?**

**A:** It functions like a high speed shuttle between ports. It operates at up to 38 mph as opposed to the 19 mph top speed of most of the other vessels in our fleet. The AMHS Fast Vehicle Ferry will carry about 250 passengers, about 30 vehicles, and three 15 ton, 28 foot commercial vans. The vehicle height clearance limit will be equal to or greater than any of the vessels currently in the AMHS fleet: 14 feet. Similar fast ferries in other parts of the world look something like this:



A rendering of the AMHS Fast Ferry will be available in Fall 2000 when the design/build team has been selected.

**Q: How will the Fast Vehicle Ferry benefit Southeast?**

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**A:** The high speeds at which the FVFs can safely travel will allow the AMHS to better meet the public's goals for regular, convenient service by achieving three important goals: 1) the FVF can make the round-trip between ports within one day, which translates into more convenience for the traveling public; 2) regular, predictable schedules can also be achieved with these faster ferries; and 3) the FVF design and carrying capacity will allow us to scale the system's capacity to better match demand, thus increasing efficiencies and eventually cutting costs.

**Q: Will the quality of foodservice decline?**

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**A:** No. It will be different, but it will be good. On a dayboat like the FVF, with a maximum on-board time of 5 to 6 hours, self-serve hot and cold entrees, snacks, healthy munchies, cold and hot drinks will be available. The food service will likely be open during most of the passage.

**Q: Will the FVF be affected by weather? More or less than the current fleet?**

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**A:** Even though we are designing for wintertime operability of greater than 95%, the FVF will be more affected by weather than the current AMHS ferries. This means that 5% of the time during the off-season the voyage may be cancelled for the safety and comfort of the passengers.

**Q: Will there be significant environmental impacts?**

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**A:** No. The FVF will have zero overboard effluents by design; all waste will be taken off board at night. The FVFs will meet much stricter air quality requirements than the older ferries. When operating at top speed in unpopulated areas, the FVF will be marginally louder than existing ferries – about 70 decibels at 300 yards from the vessel – or much less than a large float plane. When operating at low speeds near ports, the FVF noise levels will be similar to existing AMHS ferries. The impact on fish and wildlife is considered to be minimal with proper operation; it is considered to be on par with existing AMHS vessels in this respect.

**Q: How big will the wake be? Will it damage shorelines or docks?**

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**A:** At times the wake may be as high as 4 to 5 feet; however, by reducing the speed, the wake can be reduced to that of a large pleasure boat or a commercial fishing boat. Wake management is critical to successful FVF operation; it will be a top priority. The captain will reduce the speed of the vessel wherever and whenever wake could have an adverse impact. Areas of soft beach along the routes will be identified in the Route Operating Manual in advance to remind operators of the need for significantly reduced speeds. The FVF will not damage docks: operation in or near ports will be very slow and deliberate.

**Q: Will a Fast Vehicle Ferry be able to transit all Southeast waters at any stage of the tide or current?**

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**A:** It's really too early in the study/design process to answer this question definitively for each specific area in the region. We do know that the FVF will result in significant reductions in travel times and greater scheduling convenience for travelers region-wide. However, in some of the more challenging Southeast passages the FVFs will have to slow down or vary their scheduled departure times in order to maintain our safety and environmental standards.

For example, results of a test run through Sergius Narrows by the AMHS General Manager, Operations Manager, Port Captain and our fast ferry consultant suggest that departure and arrival times may need to vary in order to accommodate each day's tide. Even with this variance taken into consideration, the FVFs will allow arrivals and departures to be scheduled at more convenient times than current scheduling practices allow.

**Q: On which routes will the Fast Vehicle Ferry be used?**

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**A:** The Southeast Alaska Transportation Plan (SATP) calls for use of the FVF on routes from Ketchikan to Wrangell, and from Sitka to the proposed new terminal in Chatham. But this vessel will be capable of serving routes such as

Sitka/Petersburg, Sitka/Juneau, Juneau/Petersburg, Ketchikan/Prince Rupert, and Juneau to Haines/Skagway.

**Q: Will the FVF require a new terminal? Where will it be located?**

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**A:** The FVF will be capable of docking at existing terminals. New overnight support facilities will be required at what are currently planned to be the "home base" terminals: Ketchikan, Juneau and possibly Sitka.

**Q: When will the FVFs be used? Will we still have mainline service?**

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**A:** Market demand will drive decisions as to when short-haul and long-haul service will be provided. FVF short-haul service will be provided year-round; mainliner service will be heavily concentrated in the summer. In the summer months we will operate both the FVFs (for local, short-haul service) and the mainliners (for through service). As the summer demand tapers off each year, the FVFs will continue to operate but may adjust their frequency according to demand for short-haul service. Similarly, mainline service in the winter will be adjusted to the demand for long-haul travel. As spring approaches, mainline ferry service will be increased until it matches frequencies that we currently run in the summer.

**Q: How will the FVFs save the State money?**

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**A:** The FVFs will save the State money by allowing us to better tailor the ferries we operate to the market demand in different seasons. We will be able to maximize revenue in the summer that will help to support the operations of the AMHS year-round. The major source of savings comes from dayboat operations, in which only one crew shift is required per day, whereas the existing AMHS vessels are manned for 24 hours per day service with two crew ships per day.

**Q: Will there be more or fewer jobs when the Fast Vehicle Ferry comes on line?**

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**A:** The total number of jobs in the AMHS will probably not be reduced, but employment will be concentrated in the summer when revenues and demand are at the peak. The FVF itself will increase the number of jobs by 8 to 10 new, year-round crew positions. In addition, there will be several new ferry service positions created ashore in each home port. While employment numbers on the mainline ferries will remain much as they are now, work aboard those ships will be concentrated in the summer months.

**Q: Will the FVFs be built in Alaska?**

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**A:** Local boat builders will be invited to respond to the AMHS qualification process. They will be required to have an experienced fast ferry design partner and be capable of meeting all of the safety and quality requirements imposed by the US Coast Guard. These qualifications are needed to assure that Alaska gets the best and the safest FVF possible.

**Q: The SATP calls for a Vessel Suitability Study - what is that? Will the results of this study affect the FVF?**

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**A:** We are conducting the Vessel Suitability Study (VSS) to determine the optimum vessel for each route and for the system as a whole. The initial results (of the weather/route study and the vehicle/passenger capacity study that are being conducted as a part of the VSS) are being incorporated into the design requirements for the FVF as they become available. We would have preferred to have the VSS completed prior to designing our fast ferry, but the federal funding is available now. Fortunately, it is already clear that introducing a fast vehicle ferry to the AMHS fleet is critical to improving the overall transportation system in Southeast.

**Q: What is the purpose of the Sitka Access Corridor Study?**

**A:** ADOT&PF will retain a consultant to assess the comparative socio-economic, environmental and capital costs of land transportation alternatives to marine service alternatives in order to further evaluate which alternative is in the best overall public interest.

**Q: How does the Fast Vehicle Ferry fit into the implementation of other elements of the Southeast Alaska Transportation Plan?**

**A:** The Southeast Alaska Transportation Plan (SATP) is complex. It has to be. A variety of transportation types, operated in a variety of ways, are required in order to move people and goods around this region in a safe and efficient way – that is, to meet the public's goals as stated in the adopted plan. Planning for this kind of inter-related transportation system is fairly straightforward. But implementing the plan is always much more complex. When the plan's words hit the designer's drawing board, there are a lot of details that must be adjusted on each project so that the system can work as a whole. So, the short answer is that the FVF is an important first step in implementation of the plan. And even though each step must be carefully coordinated with the rest of the elements in the plan, the FVF is in many ways a stand-alone project that will have many uses independent of other SATP projects.



Jack Meyers  
SE Plan Implementation Manager  
Department of Transportation &  
Public Facilities  
6860 Glacier Highway  
Juneau, AK 99801

ANDREW HALCRO  
HOUSE TRANSPORTATION COMMITTEE  
ALASKA LEGISLATURE  
STATE CAPITOL, ROOM 418  
JUNEAU, AK 99801

## ALASKA MARINE HIGHWAY SYSTEM'S

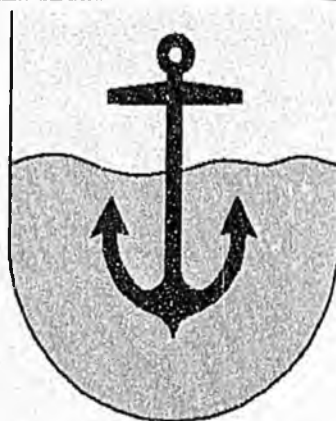
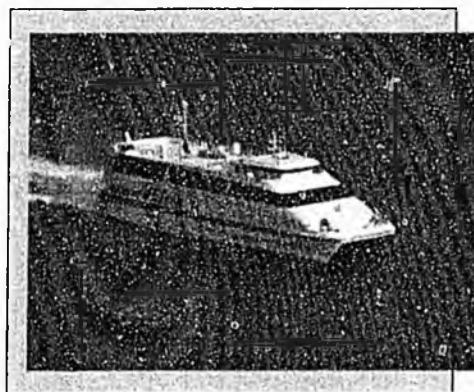
# New Fast Vehicle Ferry

### BACKGROUND

*The Department of Transportation & Public Facilities' Alaska Marine Highway System (AMHS) is working to acquire a successful fast ferry that is especially well suited for Southeast waters in response to public demand for more regular schedules and convenient daylight departures.*

### Q: So what exactly is a Fast Vehicle Ferry, anyway?

**A:** It functions like a high speed shuttle between ports. It operates at up to 38 mph as opposed to the 19 mph top speed of most of the other vessels in our fleet. The AMHS Fast Vehicle Ferry will carry about 250 passengers, about 30 vehicles, and three 15 ton, 28 foot commercial vans. The vehicle height clearance limit will be equal to or greater than any of the vessels currently in the AMHS fleet: 14 feet. Similar fast ferries in other parts of the world look something like the one in the photo at right.



### Q: How will the Fast Vehicle Ferry benefit Southeast?

**A:** The high speeds at which the FVFs can safely travel will allow the AMHS to better meet the public's goals for regular, convenient service by achieving three important goals: 1) the FVF can make the round-trip between ports within one day, which translates into more convenience for the traveling public; 2) regular, predictable schedules can also be achieved with these faster ferries; and 3) the FVF design and carrying capacity will allow us to scale the system's capacity to better match demand, thus increasing efficiencies and eventually cutting costs.

# THE FVF AND THE SOUTHEAST ALASKA TRANSPORTA- TION PLAN

*The Southeast Alaska Transportation Plan (SATP) is complex. It has to be. A variety of transportation types, operated in a variety of ways, are required in order to move people, vehicles and goods around this region in a safe and efficient way – that is, to meet the public's goals as stated in the adopted plan. Planning for this kind of inter-related transportation system is fairly straightforward. But implementing the plan is always much more complex. When the plan's words hit the designer's drawing board, there are a lot of details that must be adjusted on each project so that the system can work as a whole. So, the FVF is an important first step in implementation of the plan. And even though each step must be carefully coordinated with the rest of the elements in the plan, the FVF is in many ways a stand-alone project that will have many uses independent of other SATP projects.*



*Another example of a Fast Vehicle Ferry*

## Q: Will the quality of the food service decline?

**A:** No. It will be different, but it will be good. With a maximum on-board time of 5 to 6 hours, self-serve hot and cold entrees, snacks, healthy munchies, cold and hot drinks will be available. The food service will likely be open during most of the passage.



## Q: On which routes will the FVF be used?

**A:** The Southeast Alaska Transportation Plan (SATP) calls for use of the FVF on routes from Ketchikan to Wrangell, and from Sitka to the proposed new terminal in Chatham. But this vessel will be capable of serving a variety of other routes as well.

## Q: When will the FVFs be used? Will we still have mainline service?

**A:** Market demand will drive decisions as to when short-haul and long-haul service will be provided. FVF short-haul service will be provided year-round; mainliner service will be heavily concentrated in the summer. In the summer months we will operate both the FVFs (for local, short-haul service) and the mainliners (for through service). As the summer demand tapers off, the FVFs will continue to operate and adjust their frequency according to demand for short-haul service. Similarly, mainline service in the winter will be adjusted to the demand for long-haul travel. As spring approaches, mainline ferry service will be increased until it matches frequencies that we currently run in the summer.

## Q: Will the FVF require a new terminal? Where will it be located?

**A:** The FVF will be capable of docking at existing terminals. New overnight support facilities will be required at what are currently planned to be the "home base" terminals: Ketchikan, Juneau and possibly Sitka.



**Q: How will the FVFs save the State money?**

**A:** The FVFs will save the State money by allowing us to better tailor the ferries we operate to the market demand in different seasons. We will be able to maximize revenue in the summer that will help to support the operations of the AMHS year-round. The major source of savings comes from dayboat operations, in which only one crew shift is required per day, whereas the existing AMHS vessels are manned for 24 hours per day service with two crew shifts per day.

**Q: Will there be more or fewer jobs when the Fast Vehicle Ferry comes on line?**

**A:** The total number of jobs in the AMHS will probably not be reduced, but employment will be concentrated in the summer when revenues and demand are at the peak. The FVF itself will increase the number of jobs by 8 to 10 new, year-round crew positions. In addition, there will be several new ferry service positions created ashore in each home port. While

employment numbers on the mainline ferries will remain much as they are now, work aboard those ships will be concentrated in the summer months.

*More FVF Questions?  
FVF Project Manager  
Gary Smith, Naval Architect  
465-8867/Gary\_Smith@dot.state.ak.us*

*More SATP Questions?  
Special Projects Manager  
Jack Meyers  
465-2033/Jack\_Meyers@dot.state.ak.us*



**KELLEY HEGARTY & ASSOCIATES • Community & Regional Planning Consultants • [khiegarty@poiarnet.com](mailto:khiegarty@poiarnet.com)**

**RETURN ADDRESS**

Gary Smith, FVF Project Manager  
DOT&PF / Southeast Region  
Alaska Marine Highway System  
3132 Channel Drive  
Juneau, AK 99801-7898



ANDREW HALCRO  
HOUSE TRANSPORTATION COMMITTEE  
ALASKA LEGISLATURE  
STATE CAPITOL, ROOM 418  
JUNEAU, AK 99801



## ENVIRONMENTAL EFFECTS

No significant environmental impacts will be created by the introduction of the Fast Vehicle Ferry to the waters of Southeast. The FVF will have zero overboard effluents by design; all waste will be taken off board at night. The FVFs will meet much stricter air quality requirements than the existing ferries. When operating at top speed in unpopulated areas, the FVF will be marginally louder than existing ferries – about 70 decibels at 300 yards from the vessel – or much less than a large float plane. When operating at low speeds near ports, the FVF noise levels will be similar to existing AMHS ferries. The impact on fish and wildlife is considered to be minimal with proper operation; it is considered to be on par with existing AMHS vessels in this respect.

**Q: How big will the wake be? Will it damage shorelines or docks?**

**A:** At times the wake may be as high as 4 to 5 feet; however, by reducing the speed, the wake can be reduced to that of a large pleasure boat or a commercial fishing boat. Wake management is critical to successful FVF operation; it will be a top priority. The captain will reduce the speed of the vessel wherever and whenever wake could have an adverse impact. Areas of soft beach along the routes that require reduced speeds will be identified in the Route Operating Manual in advance. The FVFs will not damage docks; operation in or near ports will be very slow and deliberate.

**Q: Will a Fast Vehicle Ferry be able to transit all Southeast waters at any tide or current?**

**A:** It's really too early in the study/design process to answer this question definitively for each specific area in the region. We do know that the FVF will result in significant reductions in travel times and greater scheduling convenience for travelers region-wide. However, in some of the more challenging Southeast passages the FVFs will have to slow down or vary their scheduled departure times in order to maintain our safety and environmental standards.



**Q: Will the FVF be affected by weather? More or less than the current fleet?**

**A:** Even though we are designing for wintertime operability of 95+%, the FVF will be more affected by weather than the current AMHS ferries. This means that during the winter there is a 5% possibility of cancellation for the safety and comfort of passengers.



## New ferry on the horizon

by Gary Smith, Naval Architect

The Alaska Marine Highway System is bringing speed to its fleet and may set a record in the process.

Planning is under way to design, build, and operate a fast vehicle ferry. Its mission is to provide safe and reliable daily round trip service for 250 passengers and 30-40 vehicles on routes of up to 320 nautical miles. Compare its 32 knots at normal operating speed to the Columbia's 17.3 knots, and it's not hard to imagine the FVF meeting its goal of 12 hours round-trip.

The AMHS ferries are limited by some of Southeast Alaska's challenging weather and navigational conditions. The FVF will be designed to operate safely year-round with minimum delays or cancellations due to weather.

What makes the FVF so fast? Light weight, powerful engines, and a sleek hull.

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*What makes the FVF so fast? Light weight, powerful engines, and a sleek hull.*

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Although the design process is only in the earliest stages, the FVF will almost certainly have an aluminum hull, which is lighter than conventional steel hulls. The hull type will be selected for speed as well. AMHS is currently researching hull types that will work best for speed in Southeast waters. Equipped with four large, conventional diesel engines, the FVF will have more horsepower for its size than existing vessels. A water jet propulsion system will replace the traditional propeller and rudder, which would be impractical at high speeds and would

provide too much resistance on a fast ferry. With an overall length of 200-300 feet (200 feet if a catamaran hull), it will be smaller than most existing ferries, and it will draw much less water when under way than other vessels of its size.

Speed between ports means there will be no need for overnight accommodations for either crew or passengers.

The FVF will be a dayboat. Eliminating cabins will increase the public spaces available for passengers and vehicles. A vehicle deck designed for quick and efficient loading and unloading (45 minutes is the goal) will further shorten the trip. The ship will be serviced each evening at new homeport facilities. This means taking on potable water, fuel, and supplies every night rather than carrying enough for several days. That adds up to weight savings and shorter turnaround times.

There will be trade-offs in operating costs. The FVF will see reduced costs for personnel. Only eight people will likely be required to operate the vessel for 12 hours. Currently, it takes 24 people to operate the LeConte for 24 hours. However, the FVF will consume three and a half to four times the amount of fuel of a conventional vessel.

Speed and the ability to operate in bad weather could have one undesirable result: seasickness. This isn't a problem for most crew and passengers during ordinary operating conditions on the slower conventional ferries. AMHS is currently researching wave heights and frequencies along the proposed FVF routes and studying the possible impact of various speeds and sea states on the FVF's passengers and crew. There will be rare times when the vessel does not sail due to weather. The vessel may be able to handle the conditions, but ride comfort would be unacceptable.

Glosten Associates, a marine consulting firm in Seattle, is performing sea state analysis and design studies to allow AMHS to make basic design decisions. Glosten is expected to complete this preliminary work in late December 1999. After this, AMHS will finalize its owner requirements in March 2000 and go out to bid for design and construction. A designer/builder team will be selected in September 2000. If all goes as scheduled, the FVF will be delivered and put into service in August 2002.

Federal funding will be used for the design and construction of the FVF.

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*Federal funding will be used for the design and construction of the fast vehicle ferry.*

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All of the fast ferries currently operating in the U.S. carry passengers only. AMHS's fast ferry will likely become the first one registered in the U.S. to carry both passengers and vehicles.

Like the other vessels in the AMHS fleet, the FVF will also be named for an Alaska glacier. Get out your atlas and stand by for an opportunity to name the new vessel.



# Tides & Currents

January 2000

The Alaska Marine Highway System

## In This Issue

*Tracking the trends for 2000*

*Operations news*

*Terminal turns*

*New MQs for Storekeepers*

*Important STCW information*

*Master's meeting*

*Fast vehicle ferry*

*Cold weather safety*

*Great web sites*

*Santa, Smokey and pumpkins*

*Employee awards and kudos*



**ALASKA MARINE HIGHWAY**  
— A Proud Tradition —

## From the Captain's Cabin Tracking the trends for 2000

by Captain Bob Doll, General Manager

In an effort to keep track of what's going on in the System, I have a number of indicators that I watch. Here's what some of my indicators are showing:

**Revenue**—For the first five months of this fiscal year (July through November) revenue received is at the highest level in the last eight years. Who knows if it will last, but since we opened bookings for the summer of 2000 on December 1, this month should be a good one too. That translates into good customer support.

**On-line booking**—Our customers now have the capability to request a reservation on the Internet and get an electronic response within one working day. This should be especially useful to Alaskans, who usually do not book ferry reservations through travel agents, and will free up the phone system for those who need advice.

**Columbla** Her federal project totals some \$4.4 million dollars, and includes hull paint from the sponson upward, superstructure paint, renovation of the theater and forward observation lounge, creation of some ADA cabins, and lots of lifesaving improvements. Next year, there will be a complete stateroom replacement.

**Taku**—Most of the work in this federal project is centered on SOLAS requirements, including car deck ventilation, fire safety, and rescue equipment, but also including exterior blasting and painting and replacement of reefers and compressors.

**Expenses**—Operating expenses are at the highest levels on record, some \$74 million. A great deal of that is the result of the same inflationary trends we see in our household budgets, and part is the result of operating nine ships, the world's largest deep-water RO-RO/passenger fleet. We need to seek cost reductions wherever they can be found and take every opportunity to capture additional revenue.

In just a few years we will observe the 40<sup>th</sup> Anniversary of the Malaspina's arrival in Ketchikan. I expect that celebration to mark the beginning of a System that is capitalizing on its assets and looking forward to the next forty years!



Captain Bob Doll