



# **Juneau Access Improvements Project Draft Supplemental Environmental Impact Statement**

## **Appendix Z Technical Report Updates**

**Prepared for:**

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& Public Facilities  
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## List of Technical Report Updates in Appendix Z

*2014 Update to Appendix D – Technical Alignment Report*  
*2014 Update to Appendix G – Visual Resources Technical Report*  
*2013 Update to Appendix J – Snow Avalanche Report*  
*2014 Update to Appendix K – Hydrology and Water Quality Technical Report*  
*2014 Update to Appendix L – Noise Technical Report*  
*2014 Update to Appendix M – Initial Site Assessment Technical Report*  
*2014 Update to Appendix N – Essential Fish Habitat Assessment*  
*2014 Update to Appendix O – Wetlands Technical Report*  
*2014 Update to Appendix P – Anadromous and Resident Fish Streams Technical Report*  
*2014 Update to Appendix Q – Wildlife Technical Report*  
*2014 Update to Appendix R – Bald Eagle Technical Report*  
*2014 Update to Appendix S – Steller Sea Lion Technical Report*  
*2014 Update to Appendix T – Air Quality Modeling Memorandum*  
*2014 Update to Appendix X – Draft Section 404/10 Permit Application, Draft Section 404(b)(1) Analysis, and Wetlands Findings*

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## 1. Introduction

In January 2005, the Federal Highway Administration (FHWA) and Alaska Department of Transportation and Public Facilities (DOT&PF) published the Juneau Access Improvements (JAI) Project Supplemental Draft Environmental Impact Statement (EIS), with supporting technical reports as appendices. During development of the JAI Final EIS in 2006, DOT&PF updated several of those reports to (a) respond to comments on the 2005 Supplemental Draft EIS; (b) incorporate new data and further analysis; (c) reflect changes to Alternative 2B and the removal of Alternatives 2, 2A, and 2C from the range of reasonable alternatives; and (d) incorporate additional mitigation measures that would reduce impacts to wildlife, anadromous streams, essential fish habitat (EFH), and Steller sea lions. The updated reports were presented as technical report addenda in Appendix W of the 2006 Final EIS.

A U.S. District Court ruling in 2009 vacated the 2006 Record of Decision (ROD), and in 2011 the Ninth Circuit of Appeals ruled the 2006 Final EIS invalid because it did not include an alternative that would improve transportation using existing assets (649 F.3d 1050 [9<sup>th</sup> Cir. 2011]). As a result, the FHWA and DOT&PF initiated preparation of a Supplemental EIS (SEIS) in 2012.

Because more than 7 years had passed since the 2006 Final EIS and ROD were published, the FHWA and DOT&PF recognized the need to update many of the technical reports as part of the JAI Project SEIS. Updates were needed to reflect changes in regulations, new information related to the potentially affected environment or conditions, updated analysis, evaluation of the newly added Alternative 1B, and changes in the design or alignment for Alternatives 2B and 3. Three key components that affected changes to the design and alignment of Alternative 2B since the 2006 ROD included U.S. Army Corps of Engineers (USACE) permitting under Section 404 and Section 10 (further wetland avoidance and minimization), advanced geotechnical investigations, and 2012 eagle nest surveys (new nest avoidance and minimization). The alignment for Alternative 3 was slightly modified since the 2006 ROD to avoid and minimize newly surveyed (2012) eagle nests.

This Appendix Z replaces the addenda in Appendix W of the 2006 Final EIS with the following updated technical reports (2005 Supplemental Draft EIS appendix designations are noted in parentheses):

- *Technical Alignment Report* (Appendix D)
- *Visual Resources Technical Report* (Appendix G)
- *Snow Avalanche Report* (Appendix J)
- *Hydrology and Water Quality Technical Report* (Appendix K)
- *Noise Technical Report* (Appendix L)
- *Initial Site Assessment Technical Report* (Appendix M)
- *Essential Fish Habitat Assessment* (Appendix N)
- *Wetlands Technical Report* (Appendix O)
- *Anadromous and Resident Fish Streams Technical Report* (Appendix P)

- *Wildlife Technical Report* (Appendix Q)
- *Bald Eagle Technical Report* (Appendix R)
- *Steller Sea Lion Technical Report* (Appendix S)
- *Air Quality Modeling Memorandum* (Appendix T)

These technical report updates summarize the previous studies, describe the changes associated with the update (e.g., new regulations, new affected environment data, alignment shift, etc.), analyze the potential impacts associated with those changes, and propose new or updated mitigation measures, where applicable. Information in the original technical reports appended to the 2005 Supplemental Draft EIS remains valid unless otherwise noted in the 2014 updated reports.

This Appendix Z also presents an update to the Draft Section 404/10 Permit Application and Draft Section 404(b)(1) Analysis, which were provided in Appendix X of the 2006 Final EIS. The 2014 update of Appendix X provides the requisite information for the USACE to authorize the construction of Alternative 2B or another selected alternative under a new permit.

The technical reports that were not updated and the reasons why are as follows:

- ***Alternative Screening Report (Appendix A)***: This document explains the process through which the reasonable alternatives were identified for detailed analysis in the 2005 Supplemental Draft SEIS. It is an historical document in the context of the development of alternatives but has been superseded by the 2006 Final EIS and this SEIS.
- ***Household Survey Report (Appendix I)***: This document summarizes the results of telephone surveys conducted with households in Juneau, Haines, Skagway, and Whitehorse in July and August 2003 to understand the importance of access improvement, preferences for how access could be improved, and the frequency with which travelers would use the improved system. No new surveys were performed, so no updated to this appendix is needed.
- ***Indirect and Cumulative Effects Analysis Report (Appendix U)***: During preparation of the 2006 Final EIS, changes to the analyses of indirect and cumulative effects were incorporated directly into the 2006 Final EIS without developing an addendum to this report. The *Indirect and Cumulative Effects Analysis Report* is support documentation for the Supplemental Draft EIS only. Updated analyses of indirect and cumulative impacts from the JAI Project alternatives are presented in Chapter 4 of this SEIS.
- ***Responses to Comments (scoping and 1997 Draft EIS) (Appendix V)***: The information in this appendix is specific to previous scoping activities. New scoping information associated with this SEIS is presented in Appendix HH.
- ***Responses to 2005 Draft Supplemental EIS Comments (Appendix Y)***: This appendix provides responses to all of the comments on the Supplemental Draft EIS. It is a singular report, specific to the 2006 Final EIS. No update to this appendix is needed.
- ***Karst Technical Report***: This report was not distributed to the public to protect sensitive resources. There has been no update to the report.

- **Cultural Resources Technical Report:** This report was not distributed to the public to protect sensitive resources. There has been no update to the report.

The following technical reports were replaced in their entirety due to the extensiveness of updated information and are presented as new appendices in this SEIS:

- **Marine Segments Technical Report** (formerly Appendix B, now Appendix GG)
- **Traffic Forecast Report** (formerly Appendix C, now Appendix AA)
- **User Benefit Analysis** (formerly Appendix E, now Appendix FF, renamed as **User Benefit, Life-cycle Cost, and Total Project Cost Analyses**)
- **Land Use and Coastal Management Technical Report** (formerly Appendix F, now Appendix DD, renamed as **Land Use Technical Report**)
- **Socioeconomic Effects Technical Report** (formerly Appendix H, now Appendix EE)

## 2. Project Changes

This SEIS includes full evaluation of the court-mandated Alternative 1B that improves marine ferry service in Lynn Canal using existing Alaska Marine Highway System (AMHS) assets. The SEIS also updates the reasonable alternatives presented in the Final EIS. The updates are described in the following sections.

### 2.1 *Alternative 1 – No Action*

The No Action Alternative (Alternative 1) includes a continuation of mainline ferry service in Lynn Canal and incorporates two Day Boat Alaska Class Ferries (ACFs). The Alaska Marine Highway System (AMHS) would continue to be the National Highway System (NHS) route between Juneau and Haines/Skagway, and no new roads or ferry terminals would be built. In addition to the Day Boat ACFs, programmed improvements include improved vehicle and passenger staging areas at the Auke Bay and Haines ferry terminals to optimize traffic flow on and off the Day Boat ACFs as well as expansion of the Haines Ferry Terminal to include a new double end berth to accommodate the Day Boat ACFs. This alternative is based on the most likely AMHS operations in the absence of any capital improvements specific to the JAI Project.

Mainline service would include two round trips per week in the summer and one per week in the winter with Auke Bay-Haines-Skagway-Haines-Auke Bay routing. During the summer, one Day Boat ACF would make one round trip between Auke Bay and Haines six days per week, and one would make two round trips per day between Haines and Skagway six days per week. The Day Boat ACFs would not sail on the seventh day because the mainliner is on a similar schedule. In the winter, ferry service in Lynn Canal would be provided primarily by the Day Boat ACFs three times per week. The *M/V Malaspina* would no longer operate as a summer day boat in Lynn Canal.

### 2.2 *Alternative 1B – Enhanced Service with Existing AMHS Assets*

Alternative 1B includes all of the components of Alternative 1, No Action, but focuses on enhancing service using existing AMHS assets without major initial capital expenditures. Similar to Alternative 1, Alternative 1B includes a continuation of mainline ferry service in Lynn Canal; the AMHS would continue to be the NHS route between Juneau and Haines/Skagway; no new roads or ferry terminals would be built; and in addition to the Day Boat ACFs, programmed improvements include improved vehicle and passenger staging areas at the Auke Bay and Haines ferry terminals to optimize traffic flow on and off the Day Boat ACFs as well as expansion of the Haines Ferry Terminal to include a new double end berth to accommodate the Day Boat ACFs. Service to other communities would remain the same as with the No Action Alternative. Alternative 1B keeps the *M/V Malaspina* in service after the second Day Boat ACF is brought online to provide additional capacity in Lynn Canal. Enhanced services included as part of Alternative 1B are a 20 percent reduction in fares for trips in Lynn Canal and extended hours of operations for the reservation call center.

Mainline service would include two round trips per week in the summer and one per week in the winter with Auke Bay-Haines-Skagway-Haines-Auke Bay routing. During the summer, the *M/V*

*Malaspina* would make one round trip per day seven days per week on a Skagway-Auke Bay-Skagway route, while one Day Boat ACF would make one round trip between Auke Bay and Haines six days per week, and one would make two round trips per day between Haines and Skagway six days per week. The Day Boat ACFs would not sail on the seventh day because the mainliner would be on a similar schedule. In the winter, ferry service in Lynn Canal would be provided primarily by the Day Boat ACFs three times per week.

### **2.3 Alternative 2B – East Lynn Canal Highway to Katzeihin, Shuttles to Haines and Skagway**

Alternative 2B would construct the East Lynn Canal Highway (50.8 miles, including 47.9 miles of new highway and widening of 2.9 miles of the existing Glacier Highway) from Echo Cove around Berners Bay to a new ferry terminal 2 miles north of the Katzeihin River. Ferry service would connect Katzeihin to Haines and Skagway. In addition, this alternative includes modifications to the Skagway Ferry Terminal to include a new end berth and construction of a new conventional monohull ferry to operate between Haines and Skagway. Mainline ferry service would end at Auke Bay. This alternative assumes the following improvements will have been made independent of the JAI Project before Alternative 2B would come on-line: two Day Boat ACFs, improved vehicle and passenger staging areas at the Haines Ferry Terminal to optimize traffic flow on and off the Day Boat ACFs, and expansion of the Haines Ferry Terminal to include two new double end berths.

During the summer months, one Day Boat ACF would make eight round trips per day between Haines and Katzeihin, a second Day Boat ACF would make six round trips per day between Skagway and Katzeihin, and the Haines-Skagway shuttle ferry would make two trips per day. During the winter, one Day Boat ACF would make six round trips per day between Haines and Katzeihin, and a second Day Boat ACF would make four round trips per day between Skagway and Katzeihin. The Haines-Skagway shuttle would not operate; travelers going between Haines and Skagway would travel to Katzeihin and transfer ferries.

### **2.4 Alternative 3 – West Lynn Canal Highway**

Alternative 3 would upgrade/extend the Glacier Highway (5.2 miles, including 2.3 miles of new highway and widening of 2.9 miles of the existing Glacier Highway) from Echo Cove to Sawmill Cove in Berners Bay. New ferry terminals would be constructed at Sawmill Cove in Berners Bay and at William Henry Bay on the west shore of Lynn Canal, and the Skagway Ferry Terminal would be modified to include a new end berth. A new 38.9-mile highway would be constructed from the William Henry Bay Ferry Terminal to Haines with a bridge across the Chilkat River/Inlet connecting into Mud Bay Road. A new conventional monohull ferry would be constructed and would operate between Haines and Skagway. Mainline ferry service would end at Auke Bay. This alternative assumes the following improvements will have been made independent of the JAI Project before Alternative 3 would come on-line: two Day Boat ACFs, improved vehicle and passenger staging areas at the Haines Ferry Terminal to optimize traffic flow on and off the Day Boat ACFs, and expansion of the Haines Ferry Terminal to include two new double end berths.

During the summer, two Day Boat ACFs would make six round-trips per day between Sawmill Cove and William Henry Bay (total of 12 trips each direction), and the Haines-Skagway shuttle ferry would make six round-trips per day. During the winter, one Day Boat ACF would make four round-trips per day between Sawmill Cove and William Henry Bay, and the Haines-Skagway shuttle ferry would make four round-trips per day.

## **2.5 Alternatives 4A through 4D**

Alternatives 4A through 4D would include continued mainline ferry service in Lynn Canal with a minimum of two trips per week in the summer and one per week in the winter with Auke Bay-Haines-Skagway-Haines-Auke Bay routing. Each of these alternatives includes a new conventional monohull shuttle that would make two round trips per day between Haines and Skagway six days a week in the summer and a minimum of three round trips per week between Haines and Skagway in the winter. The AMHS would continue to be the NHS route between Juneau and Haines/Skagway. These alternatives assume the following improvements will have been made independent of the JAI Project before the alternative comes on-line: improved vehicle and passenger staging areas at the Auke Bay and Haines ferry terminals to optimize traffic flow on and off the Day Boat ACFs, and expansion of the Haines Ferry Terminal to include new double end berths.

### **2.5.1 Alternative 4A – Fast Vehicle Ferry Service from Auke Bay**

Alternative 4A would construct two new fast vehicle ferries (FVFs). No new roads would be built for this alternative, and the Auke Bay Ferry Terminal would be expanded to include a new double end berth. A new conventional monohull ferry would be constructed and would operate between Haines and Skagway. The *M/V Malaspina* would no longer operate as a summer day boat in Lynn Canal, and the Day Boat ACFs would no longer operate in Lynn Canal. The FVFs would make two round trips between Auke Bay and Haines and two round trips between Auke Bay and Skagway per day in the summer. During the winter, one FVF would make one round trip between Auke Bay and Haines and one round trip between Auke Bay and Skagway each day.

### **2.5.2 Alternative 4B – Fast Vehicle Ferry Service from Berners Bay**

Similar to Alternative 4A, Alternative 4B would construct two new FVFs. This alternative would upgrade/extend Glacier Highway (5.2 miles, including 2.3 miles of new highway and widening of 2.9 miles of the existing Glacier Highway) from Echo Cove to Sawmill Cove in Berners Bay, where a new ferry terminal would be constructed. The Auke Bay Ferry Terminal would be expanded to include a new double end berth. A new conventional monohull ferry would be constructed and would operate between Haines and Skagway. The *M/V Malaspina* would no longer operate as a summer day boat in Lynn Canal, and the Day Boat ACFs would no longer operate in Lynn Canal. In the summer, the FVFs would make two round trips between Sawmill Cove and Haines and two round trips between Sawmill Cove and Skagway per day. During the winter, one FVF would make one round trip between Auke Bay and Haines and one round trip between Auke Bay and Skagway each day.

### **2.5.3 Alternative 4C – Conventional Monohull Service from Auke Bay**

Alternative 4C would use Day Boat ACFs to provide additional ferry service in Lynn Canal. No new roads would be built for this alternative. The Auke Bay Ferry Terminal would be expanded to include a new double end berth, and the Skagway Ferry Terminal would be expanded to include a new end berth. A new conventional monohull ferry would be constructed and would operate between Haines and Skagway. In the summer, one Day Boat ACF would make one round trip per day between Auke Bay and Haines, and one Day Boat ACF would make one round trip per day between Auke Bay and Skagway. During the winter, one Day Boat ACF would alternate between a round trip to Haines one day and a round trip to Skagway the next day.

### **2.5.4 Alternative 4D – Conventional Monohull Service from Berners Bay**

Alternative 4D would use Day Boat ACFs to provide additional ferry service in Lynn Canal. This alternative would upgrade/extend Glacier Highway (5.2 miles, including 2.3 miles of new highway and widening of 2.9 miles of the existing Glacier Highway) from Echo Cove to Sawmill Cove in Berners Bay, where a new ferry terminal would be constructed. The Auke Bay Ferry Terminal would be expanded to include a new double end berth, and the Skagway Ferry Terminal would be expanded to include a new end berth. This alternative includes construction of a new conventional monohull ferry that would operate between Haines and Skagway. In the summer, the Day Boat ACFs would make two trips per day between Sawmill Cove and Haines and two trips per day between Sawmill Cove and Skagway. During the winter, a Day Boat ACF would operate from Auke Bay, alternating between a round trip to Haines one day and to Skagway the next day.

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