

EXECUTIVE SUMMARY

ES-1 Introduction

The Juneau Access Improvements (JAI) Project is a proposed action by the Federal Highway Administration (FHWA) and Alaska Department of Transportation and Public Facilities (DOT&PF) to improve surface transportation to and from Juneau, Alaska, within the Lynn Canal corridor. To meet requirements of the National Environmental Policy Act (NEPA)¹, FHWA and DOT&PF prepared a Draft Supplemental Environmental Impact Statement (Draft SEIS), notice of which was published in the *Federal Register* on September 19, 2014, and which was available for public review and comment through November 25, 2014. FHWA and DOT&PF have prepared this Final Supplemental Environmental Impact Statement (Final SEIS) to update the 2006 Final Environmental Impact Statement (EIS), including any updates or changes to regulations, project conditions, analyses, or alternatives that were necessary to address new environmental and engineering information made available since the 2006 Record of Decision (ROD). This Final SEIS also documents and responds to all comments made on the 2014 Draft SEIS.

NEPA requires preparation of an EIS for any proposed action that:

- Is not categorically excluded or otherwise exempt from NEPA
- Is a major federal action (i.e., requires a permit, regulatory decision, or funding from a federal agency)
- May have a significant adverse effect on the quality of the human environment

In 2006, the FHWA and DOT&PF issued a Final EIS for the JAI Project, and FHWA selected Alternative 2B, the East Lynn Canal Highway, for construction in its 2006 ROD. A 2009 District Court decision ruled that the Final EIS was not valid because it did not consider an alternative that would improve surface transportation in Lynn Canal with existing Alaska Marine Highway System (AMHS) assets. This ruling was upheld by a 2 to 1 decision of a panel of the U.S. Court of Appeals for the Ninth Circuit Court in 2011.

Council on Environmental Quality (CEQ) Regulations for Implementing NEPA (40 Code of Federal Regulations [CFR] 1502.9) state that agencies shall prepare supplements to either a draft or a final EIS if:

- (i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or
- (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

In direct response to the court ruling, FHWA determined that an SEIS should be prepared for the JAI Project and, on January 12, 2012, FHWA issued a Notice of Intent to prepare an SEIS. The 2014 Draft SEIS assessed a new alternative that would improve marine ferry service in Lynn

¹ National Environmental Policy Act of 1969 (Public Law 91-190, U.S. Code 4321-4347, January 1, 1970, as amended).

Canal using existing AMHS assets, identified as Alternative 1B. As noted above, it also updated the 2006 Final EIS by reassessing the reasonable alternatives presented in that Final EIS, including any changes to regulations, updated project conditions, updated analyses, or alternative revisions that were necessary to address new environmental and engineering information made available since the 2006 ROD. The basis of the 2014 Draft SEIS was the 2006 Final EIS text in its entirety, with changes made as appropriate throughout the document and highlighted in gray for easy identification by the reader. Similarly, the basis of this Final SEIS is the 2014 Draft SEIS text in its entirety, with substantial changes highlighted in gray.

The 2014 Draft SEIS was an important element of the NEPA process because it provided an opportunity for the general public and interested parties (including governmental entities, regulatory agencies, Tribes, and Native organizations) to comment on the project. The 2014 Draft SEIS identified Alternative 2B, the East Lynn Canal Highway with ferry service between Katzehin and Haines and Skagway, as FHWA's and DOT&PF's preferred alternative. Comments on the 2014 Draft SEIS ranged from simple statements of support or opposition, to complex technical discussions of such issues as project alternatives, study methods, determination and characterization of impacts, and mitigation recommendations. This Final SEIS presents changes to the 2014 Draft SEIS based on updated information and comments made by the general public and interested parties on the Draft SEIS. This Final SEIS identifies Alternative 1 – No Action, as the preferred alternative. FHWA intends to issue a new ROD for the project no sooner than 30 days following release of this Final SEIS.

ES-2 Proposed Action

DOT&PF proposed to improve surface transportation to and from Juneau within Lynn Canal. Juneau is the largest community on the North American continent not connected to the continental highway system. Because of its location and lack of highway access, all freight, vehicle, and passenger movement to and from Juneau is by air or sea. The only public surface transportation available to and from Juneau is the AMHS, a State-owned ferry system that provides transportation to many of Southeast Alaska's coastal communities. AMHS service from Juneau connects to the continental highway system in Prince Rupert, British Columbia (B.C.), and Bellingham, Washington, to the south, and in Haines and Skagway to the north. The AMHS is the National Highway System link to Juneau, Haines, and Skagway.

DOT&PF uses transportation planning and programming documents to guide its development of surface transportation projects. The Statewide Transportation Improvement Program (STIP) is a federally required document that programs federally funded projects. DOT&PF's 2016–2019 STIP (Amendment 3) was approved by FHWA and the Federal Transit Administration on June 28, 2017. Alternative 1 – No Action is consistent with the currently adopted STIP. The STIP includes modifications to the Haines Ferry Terminal that are scheduled to be constructed in 2018. Using State funding, DOT&PF is also constructing two Alaska Class Ferries, one of which is slated to function as a shuttle between Haines and Skagway. The other is planned to run between Auke Bay and Haines (see Chapter 2 for further detail).

DOT&PF has been in the process of updating its Southeast Alaska Transportation Plan (SATP) for several years and released a Draft SATP in June 2014 (DOT&PF, 2014). The 2014 Draft SATP recommended a highway from Juneau to Katzehin with ferry service between Katzehin

and Haines and Skagway (i.e., Alternative 2B in this SEIS). The SATP is now being updated to reflect the identification of Alternative 1 – No Action as the JAI Project preferred alternative.

ES-3 Project Purpose and Need

The purpose of and need for the JAI Project is to provide improved surface transportation to and from Juneau within the Lynn Canal corridor that will:

- Provide the capacity to meet transportation demand in the corridor
- Provide flexibility and improve opportunity for travel
- Reduce travel times between Lynn Canal communities
- Reduce State costs for transportation in the corridor
- Reduce user costs for transportation in the corridor

Chapter 1 contains detailed information on the purpose and need for the proposed JAI Project.

ES-4 Alternatives Evaluated in the Final Supplemental Environmental Impact Statement

Following are brief descriptions of the reasonable alternatives evaluated in this Final SEIS. Chapter 2 includes more detailed descriptions of each alternative. Maps of the reasonable alternatives follow Chapter 2 in Figures 2-5 through 2-7a and 2-8 through 2-11.

ES-4.1 Alternative 1 (Preferred) – No Action

Alternative 1 – No Action reflects the most likely AMHS operations without any of the capital improvements proposed in the JAI Project. Alternative 1 – No Action includes a continuation of mainline AMHS service in Lynn Canal and incorporates the two Day Boat Alaska Class Ferries (Day Boat ACFs) under construction by the AMHS (separately authorized). Other programmed improvements under Alternative 1 – No Action include changes to the 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 accommodate loading and unloading for the Day Boat ACFs. There would be no new roads or ferry terminals constructed under Alternative 1.

ES-4.2 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 AMHS service in Lynn Canal, the two Day Boat ACFs, the programmed improvements to vehicle and passenger staging areas at the Auke Bay and Haines ferry terminals, and expansion of the Haines Ferry Terminal. Unlike Alternative 1, Alternative 1B keeps the *M/V Malaspina* in service as a summer shuttle, after the second Day Boat ACF is brought online, to provide additional capacity in Lynn Canal. Service to other communities would remain the same as Alternative 1 – No Action. Enhanced service included as part of Alternative 1B is a 20 percent reduction in fares for trips in Lynn Canal. There would be no new roads or ferry terminals constructed under Alternative 1B.

ES-4.3 Alternative 2B: East Lynn Canal Highway to Katzehin, Shuttles to Haines and Skagway

Alternative 2B would widen Glacier Highway from Echo Cove to Cascade Point (2.9 miles) and construct a new highway from Cascade Point to a point just north of the Katzehin River delta (47.9 miles). Shuttle ferry service to Skagway and Haines would be provided from a new terminal at Katzehin using the Day Boat ACFs. The Haines to Skagway shuttle service would continue to operate in the summer using a new conventional monohull ferry. Mainline AMHS service would end at Auke Bay. The Skagway Ferry Terminal would be modified to include a new end berth.

ES-4.4 Alternative 3: West Lynn Canal Highway

Alternative 3 would widen the Glacier Highway from Echo Cove to Cascade Point (2.9 miles) and construct a new highway from Cascade Point to Sawmill Cove in Berners Bay (2.3 miles). New ferry terminals would be constructed at Sawmill Cove and William Henry Bay, and the Day Boat ACFs would operate as shuttle ferries across Lynn Canal between the two terminals. A new 38.9-mile West Lynn Canal Highway would be constructed from William Henry Bay to Haines with a bridge across the Chilkat River/Inlet connecting to Mud Bay Road. A new conventional monohull ferry would be constructed to provide shuttle service between Haines and Skagway. The Skagway Ferry Terminal would be modified to include a new end berth for the new vessel. Mainline ferry service would end at Auke Bay.

ES-4.5 Alternatives 4A through 4D

These four build alternatives include continued mainline ferry service in Lynn Canal. The Haines-Skagway shuttle service would be provided by a new conventional monohull ferry. All of these alternatives would require construction of a new double stern berth at Auke Bay.

- **Alternative 4A: FVF Service from Auke Bay** – Alternative 4A would construct two new Fast Vehicle Ferries (FVFs) to provide daily service between Auke Bay, Haines, and Skagway. The Auke Bay Ferry Terminal would be expanded to include a new double end berth. No new roads would be built. The Day Boat ACFs would not operate in Lynn Canal.
- **Alternative 4B: FVF Service from Berners Bay** – Alternative 4B would widen Glacier Highway from Echo Cove to Cascade Point and construct a new highway to Sawmill Cove (5.2 miles total) where a new ferry terminal would be constructed. The Auke Bay Ferry Terminal would be expanded to include a new double end berth. The alternative includes two new FVFs, which would be constructed to provide daily service between Sawmill Cove, Haines, and Skagway in the summer and between Auke Bay, Haines, and Skagway in the winter. The Day Boat ACFs would not operate in Lynn Canal.
- **Alternative 4C: Conventional Monohull Service from Auke Bay** – Alternative 4C would use the two Day Boat ACFs to provide daily summer service between Auke Bay, Haines, and Skagway. No new roads would be built. The Skagway Ferry Terminal would be expanded to include a new end berth. The Auke Bay Ferry Terminal would be expanded to include a new double end berth, to accommodate both Day Boat ACFs at once.

- **Alternative 4D: Conventional Monohull Service from Berners Bay** – Alternative 4D would widen Glacier Highway from Echo Cove to Cascade Point and construct a new highway to Sawmill Cove (5.2 miles total), where a new ferry terminal would be constructed. The alternative would use the two Day Boat ACFs to provide daily service between Sawmill Cove, Haines, and Skagway in the summer and between Auke Bay, Haines, and Skagway in the winter. The Skagway Ferry Terminal would be expanded to include a new end berth. The Auke Bay Ferry Terminal would be expanded to include a new double end berth, to accommodate both Day Boat ACFs at once.

ES-4.6 Alternatives Eliminated from Further Consideration

A variety of potential alternatives for the JAI Project have been identified by the DOT&PF project team, resource agencies, and the public over the course of preliminary engineering studies and environmental review of the project. Many JAI Project alternatives were eliminated from further consideration in previous NEPA documents because they are not technically or financially feasible, are not practical, are similar to other alternatives carried through the environmental analysis, and/or do not meet the purpose of and need for the proposed project.

Other alternatives were removed from detailed consideration because they would adversely affect resources protected under Section 4(f) of the Department of Transportation Act of 1966. FHWA determined that alternatives connecting a road to Skagway and requiring use of land in the Skagway and White Pass District National Historic Landmark, a protected resource under Section 4(f), could not be considered reasonable alternatives.

Additional discussion regarding the elimination of alternatives from further consideration, including some suggestions made in comments on the 2014 Draft SEIS, is provided in Chapter 2, Project Alternatives.

ES-5 Affected Environment

Chapter 3 of this Final SEIS describes the existing conditions of the environmental resources that could be affected by the JAI Project alternatives. The descriptions of the natural and human environment in Chapter 3 provide a baseline from which FHWA and DOT&PF characterized the potential impacts of the project alternatives.

ES-6 Environmental Consequences

Chapter 4 of this Final SEIS presents the environmental consequences associated with the reasonable alternatives for the JAI Project. Table ES-1, provided at the end of the Executive Summary, summarizes many of the beneficial and adverse impacts associated with these alternatives. The following paragraphs summarize key elements of those impacts.

Transportation – In order to evaluate the impacts to transportation, FHWA and DOT&PF analyzed each alternative based on its consistency with the currently approved SATP and STIP, the traffic demand it would realize and accommodate, its capacity, the opportunities for travel/traveler flexibility, its travel times, and total costs, as well as cost to the State of Alaska and to the user.

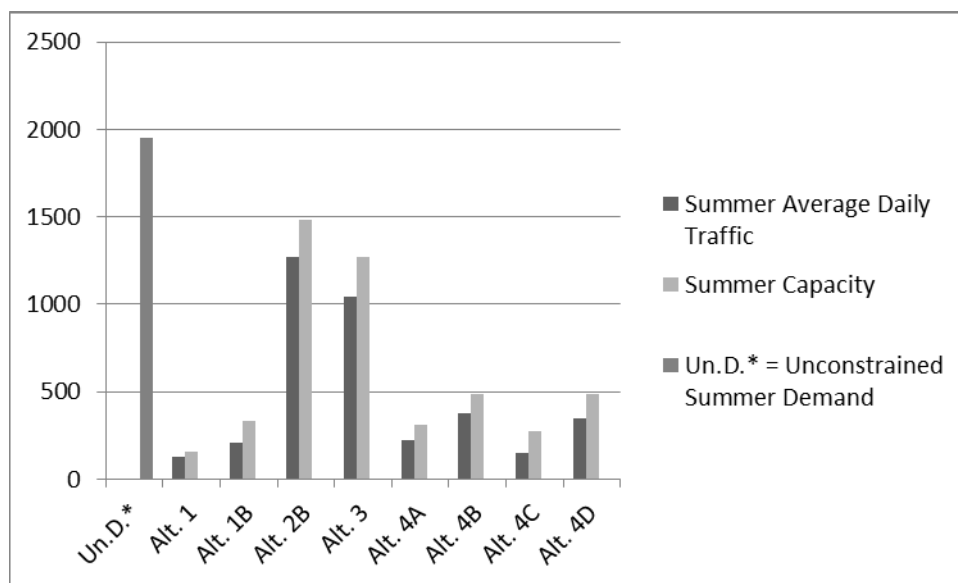
Consistency with the SATP and STIP. The 2004 SATP identified a highway from Juneau to Skagway with a ferry from Katzehein to Haines as its proposed improvement. The DOT&PF has

been in the process of updating its SATP for several years and it will include Alternative 1 – No Action as the revised proposed improvement. The 2016–2019 STIP does not include any capital improvements for the JAI Project and is consistent with Alternative 1 – No Action.

Travel Demand and Capacity. DOT&PF conducted a new traffic forecast analysis for the 2014 Draft SEIS and updated it for this Final SEIS. The analysis predicts potential traffic volumes for each project alternative. The analysis was done in two steps. The first step was to estimate the total unconstrained traffic demand in the Lynn Canal corridor; that is, the number of vehicles that would travel between Juneau and Haines or Skagway if there were no impediments to travel other than availability of a vehicle and the cost of fuel for that vehicle. To calculate the total demand, two methods were used that were most representative of conditions along Lynn Canal. Each methodology was developed independently. The two methods resulted in similar estimates, which provided confidence in the prediction. The analysis indicates that unconstrained summer demand in Lynn Canal is estimated to be about 1,950 vehicles per day (also known as summer average daily traffic [ADT]).

The second step used a travel demand “choice” model to estimate the percentage of the unconstrained demand that would be realized and accommodated by each JAI Project alternative. None of the reasonable alternatives would realize the level of unconstrained demand because they all include ferry links, which place constraints on travel in terms of increased cost and travel time. These increased constraints limit demand. None of the alternatives have been designed to have a capacity that would support the unconstrained demand; rather, the alternatives have been designed to have the capacity to accommodate at least the demand they would realize based on auto travel time and cost, ferry travel time and fares, and delay at ferry terminals. Figure ES-1 is a graph that shows the total 2055 forecast summer demand and capacity for each alternative in relation to the projected unconstrained summer ADT. The forecast summer demand and capacity for each alternative are listed in Table ES-1 for Juneau-Haines and Juneau-Skagway.

**Figure ES-1:
2055 Forecast Summer Demand and Capacity in Lynn Canal
for JAI Project Alternatives**



Travel Flexibility and Opportunity. All the build alternatives, through their provision of a road or additional ferry trips, would increase the opportunity for travel in Lynn Canal and would provide more flexibility for travelers. Travel frequency for each of the alternatives is measured by average number of ferry round trips per week. Comparing summer travel opportunities, Alternatives 1B and 4C would add the fewest number of ferry trips relative to Alternative 1 – No Action, and Alternatives 2B and 3 would add the greatest number of ferry trips (more than five times Alternative 1 – No Action) (see Table ES-1). Alternatives 4A, 4B, and 4D would double the number of ferry trips between Juneau and Haines or Skagway in summer relative to Alternative 1 – No Action.

Travel Time. Travel times between Auke Bay and Haines, and Auke Bay and Skagway were determined for each alternative. Travel time was based on an average speed on the highway segments (45 miles per hour); ferry travel times; and delay at ferry terminals associated with wait time or check-in time². All alternatives would have shorter travel times in summer between Auke Bay and Skagway than Alternative 1 – No Action (see Table ES-1). Travel time between Auke Bay and Haines would be the same as Alternative 1 – No Action under Alternatives 1B and 4C, but shorter for all other alternatives. Alternatives 2B, 3, 4A, 4B, and 4D would reduce summer travel times between Auke Bay and Haines by up to 3 hours.

Total Cost. The total project life cost less residual value is the summation of all capital and annual operating costs, regardless of who pays, over the lifetime of the project minus any residual value left at the end of 36 years (approximately 6 years of construction and 30 years of operation). All action alternatives would have greater total project life cost less residual value than Alternative 1 – No Action (see Table ES-1, Cost Factors). Of the build alternatives, Alternatives 4C, 4D, and 2B would have the lowest total project life costs less residual value, and Alternatives 4B, 4A and 3 would have the highest, attributable primarily to the maintenance and operations costs of FVFs.

Maintenance Cost. With regard to annual maintenance and operating costs, Alternative 1 – No Action would have the lowest cost of all alternatives (see Table ES-1). Alternatives 4A and 4B, with the FVF shuttles, would have the highest maintenance and operating costs, approximately \$15.5 to \$15.1 million higher, respectively, than Alternative 1 – No Action. Alternatives 1B, 2B, 3, 4C, and 4D would have maintenance and operations costs approximately \$2.7 to \$8.3 million higher than Alternative 1 – No Action.

State Cost. This cost represents the State of Alaska's share of the total project life costs minus the revenue the State collects (see Table ES-1, Purpose and Need Factors). Compared to Alternative 1 – No Action, none of the alternatives except Alternatives 3 and 4D would reduce net State cost over a 36-year period, when taking into consideration construction and refurbishment costs, operating costs, and revenues. Alternatives 3 and 4D would reduce net State cost by approximately 5 to 19 percent, whereas the other alternatives would increase net State cost by approximately 8 to 82 percent. Alternative 4A would be the most costly alternative for the State.

² Due to the frequency of ferry trips with Alternatives 2B and 3, their ferry delay includes wait time based on a quarter of the ferry headway (time between arrivals) rather than check-in time. The wait time assumes half the ferry travelers would arrive randomly and half would schedule their arrival to match the ferry schedule.

Cost Per Vehicle. All of the build alternatives would carry more vehicles than Alternative 1 – No Action (see summer demand numbers in Table ES-1). Because Alternatives 2B, 3, 4B, and 4D realize higher traffic volumes than Alternative 1 – No Action, these alternatives would cost the State less than Alternative 1 – No Action on a per vehicle basis, with Alternative 2B having the lowest net State cost per vehicle at approximately \$43.

User Cost. The out-of-pocket costs for travelers with vehicles in Lynn Canal would be reduced for most alternatives relative to Alternative 1 – No Action. Alternatives 2B and 3 would have the lowest out-of-pocket costs for travelers with vehicles, of all project alternatives (see Table ES-1).

Socioeconomics – Improved access in Lynn Canal would allow for better movement of goods and people to and within the northern reaches of Southeast Alaska, resulting in better connections among the economies of Juneau, Haines, Skagway, and Whitehorse.

In the short term, improved access to Juneau is not expected to result in new major economic development in Alaska. Instead, improved access to Juneau would redistribute within the state some of the economic benefits received from one of Alaska’s primary industries, the visitor industry. As access is improved, independent visitors (i.e., non-cruise ship visitors) could shift their travel patterns, perhaps spending more time and money in Southeast Alaska. In addition, improved access would have beneficial effects on other segments of the region’s economy by reducing travel costs for residents and shipping costs for some items.

The population and the overall demographics of Juneau, Haines, and Skagway would not be substantially affected by improved access. Of the three major communities in the Lynn Canal corridor, Juneau would experience the most population growth due to improved access, but the growth would not be considerable.

Alternative 2B is projected to cause the greatest influx of independent visitors to Lynn Canal of all the build alternatives; therefore, it would create the largest economic benefits to the region. All the other build alternatives would result in less independent visitor travel than Alternative 2B and therefore would result in less visitor spending. Alternative 3 would provide the largest economic benefit to Haines of all the build alternatives, but essentially no economic benefit to Skagway. Alternatives 4A, 4B, and 4D would provide a small benefit to the region’s economy. Alternatives 1B and 4C would be similar to Alternative 1 – No Action in regard to travel opportunity and flexibility; therefore, they would provide no discernible added economic benefits to Lynn Canal communities.

Visual Resources – No impacts to visual resources would result from Alternative 1 – No Action or Alternative 1B. Alternative 2B would be visible at many points in Berners Bay and Lynn Canal, primarily at locations where transportation infrastructure is constructed close to the shore. From the highway, there would be many panoramic views of Lynn Canal with the Chilkat Range in the background.

Most views of the Alternative 3 road from Lynn Canal would be masked by vegetation, except where the highway crosses the Endicott River, the Sullivan River, the Davidson Glacier outwash plain, and the Chilkat River/Inlet. At those locations, Alternative 3 would introduce man-made forms into the natural landscape. The ferry terminals for this alternative would also be visible from views in Berners Bay and William Henry Bay.

Alternatives 4A through 4D would primarily involve improved ferry transportation in Lynn Canal. They would have fewer visual impacts within Lynn Canal than the highway alternatives considered for the project.

Subsistence – Alternatives 1 – No Action, 1B, 4A, and 4C are not expected to impact subsistence resources. Alternatives 2B and 3 would provide access to areas used for subsistence harvest activities that previously were accessible only by boat or aircraft. Improved access to these areas could increase competition for subsistence resources from recreational hunting and fishing. Alternatives 4B and 4D would not improve access in Lynn Canal enough to impact subsistence activities.

Cultural Resources – The FHWA has met with Lynn Canal Tribal entities since publication of the 2014 Draft SEIS and has reconfirmed its determination that none of the build alternatives would have an adverse effect on properties eligible for inclusion on the National Register of Historic Places.

Geology – Alternative 2B, East Lynn Canal Highway, would cross 41 avalanche paths, and Alternative 3, West Lynn Canal Highway, would cross 19 avalanche paths. Alternative 2B incorporates hazard reduction methods that include adjusting the alignment of the highway, constructing barriers and snow sheds, avalanche forecasting and warnings, temporary highway closures, and release of unstable snow with explosives during highway closures. Alternative 3 also would incorporate measures to reduce avalanche impacts, such as avalanche forecasting and warnings, temporary highway closures, and release of unstable snow with explosives during highway closures. The risk of avalanche-associated accidents along any of the highway alternatives would be reduced to the generally accepted standard in North America for safe operation of a highway in avalanche-prone areas. None of the other alternatives would be in avalanche zones.

The potential risks associated with other geologic hazards, such as rockfall and debris flow (potentially affecting Alternatives 2B and 3), karst (potentially affecting Alternative 3), geochemical properties of waste rock (potentially affecting Alternatives 2B and 3), and outburst floods, would be further evaluated in geotechnical and hydrologic studies conducted in support of final design and construction should Alternative 2B or 3 be selected. The risk of rockfall and debris flow hazards would be reduced by mitigation strategies such as avoidance or removal of the rockfall initiation zone; stabilization of the rockfall area with hand scaling, blasting, and rock bolting; or protection from debris flow with catchment ditches.

Wetlands – Alternatives 1 – No Action, 1B, 4A, and 4C would not result in the construction of any new highways or ferry terminals; therefore, they would have no direct or indirect effects on wetlands.

Alternative 2B would result in the loss of approximately 61 acres of wetlands and approximately 32 acres of unvegetated intertidal and subtidal areas. This represents a reduction of approximately 9 acres of wetland impacts from what was presented in the 2006 Final EIS, because DOT&PF made design changes to Alternative 2B during the 2008 U.S. Army Corps of Engineers (USACE) permitting process, and during more recent design refinements that minimized impacts to wetlands and reduced the extent of rock side cast areas. All but approximately 1 acre of the wetlands impacted by the Alternative 2B highway alignment would be forested wetlands, which store flood waters, keep sediment from entering nearby waterbodies,

and provide wildlife habitat. The largest area of wetland loss, approximately 53 acres of palustrine forested wetlands, would occur between Slate Creek and Sherman Point north of Berners Bay.

Alternative 3 would result in the loss of approximately 26 acres of wetlands, and approximately 12 acres of other aquatic habitat would be filled or excavated. Approximately 82 percent of the wetlands impacted by the highway alignment would be forested wetlands.

Alternatives 4B and 4D would result in the loss of approximately 2 acres of wetlands and approximately 3 acres of other waters of the U.S. between Echo Cove and Sawmill Cove.

Marine and Freshwater Habitats (including Essential Fish Habitat) – Alternatives 1 – No Action, 1B, 4A, and 4C would have no adverse effect on marine and freshwater habitat or fish and other marine species from construction. Increases in operations under Alternatives 1B, 4A, and 4C would not produce a measurable difference in effects to fish or fish species relative to Alternative 1 – No Action, although the pattern of ferry traffic and noise within the habitat would change.

Under Alternative 2B, a total of approximately 32 acres of unvegetated intertidal and subtidal marine habitat would be filled or dredged for construction of the highway and the Katzechin Ferry Terminal. All anadromous fish streams would be crossed with bridges. Piers for the bridges over the Lace, Antler, and Katzechin rivers would be placed at least 130 feet apart and would not impede fish movement in these rivers.

Alternative 3 would result in impacts to approximately 12 acres of unvegetated intertidal and subtidal habitat, primarily from construction of ferry terminals at Sawmill Cove and William Henry Bay. All anadromous fish streams would be crossed with bridges under Alternative 3, and bridges across the Sullivan, Endicott, and Chilkat rivers would be of similar design to the large bridges of Alternative 2B.

Alternatives 4A through 4D would cause disturbance to less than 1 acre of unvegetated subtidal habitat at the existing Auke Bay Ferry Terminal. Alternatives 4B and 4D would also result in impacts to approximately 3 acres of unvegetated marine habitat from construction of a ferry terminal at Sawmill Cove.

None of these impacts would be large enough to measurably affect fish and invertebrate populations in Lynn Canal. Conservation measures identified by DOT&PF and the National Marine Fisheries Service (NMFS) would be included in the design and construction if a build alternative were selected to further minimize impacts to intertidal and subtidal habitat (Essential Fish Habitat).

Terrestrial Habitat – No impacts to terrestrial habitat would occur under Alternative 1 – No Action, 1B, 4A, or 4C. Most of the terrestrial habitat that would be affected by Alternatives 2B and 3 is in the Tongass National Forest. Alternative 2B would remove approximately 400 acres of the approximately 103,500 acres of old-growth forest mapped along the east side of Lynn Canal. Alternative 3 would remove approximately 265 acres of old-growth forest mapped along the east and west sides of Lynn Canal (predominantly the west side, which has approximately 51,960 acres). Alternatives 4B and 4D would reduce the size of the old-growth forest stands in the area by less than 0.04 percent. As part of its management of old-growth habitat, the U.S.

Forest Service (USFS) would adjust the boundaries of small old-growth habitat reserves affected by Alternative 2B, if it were selected.

Wildlife – Alternatives 1 – No Action, 1B, 4A, and 4C would have no impacts on terrestrial wildlife. The direct loss of wetland and terrestrial habitat from the build alternatives that include a highway (Alternatives 2B, 3, 4B, and 4D) would have a minor effect on wildlife because that loss would be a small (less than 1 percent) part of the habitat available in the project study area. However, habitat fragmentation caused by the presence of a highway, mortality from vehicle collisions, and the indirect impact of improved access by hunters and trappers resulting from Alternatives 2B and 3 would have a larger impact on wildlife, particularly terrestrial mammals.

Alternative 2B would create a potential barrier between upland habitats and important marine fringe along the east side of Lynn Canal that would fragment animal habitat. It would reduce available habitat for moose and brown bears and increase the potential for mortality from vehicle collisions. To reduce habitat fragmentation impacts, bridges constructed at anadromous fish streams would be designed for wildlife passage beneath the bridge. Large mammal underpasses would be constructed in two other locations at known high-use bear corridors in Berners Bay and near the Katzechin River.

Alternative 3 would have similar but smaller impacts to wildlife than Alternative 2B. Alternative 3 bridges at anadromous fish streams also would be designed for wildlife passage. Alternatives 4B and 4D would involve minor road construction through terrestrial habitats; therefore, their effect on wildlife would be small.

Bald Eagle – The U.S. Fish and Wildlife Service (USFWS) and DOT&PF conducted aerial surveys in April 2012 to obtain updated bald eagle nest information for the analysis of alternatives for the JAI Project SEIS. The April 2012 surveys were flown on both sides of Lynn Canal and documented 60 new nests along East Lynn Canal and 21 new nests along West Lynn Canal.

Alternatives 1 – No Action, 1B, 4A, and 4C would have no impacts on bald eagle nests. The alignments of Alternatives 2B, 3, 4B, and 4D have been shifted, where possible, to avoid nests that would be less than 30 feet from project construction work limits. The highway under Alternative 2B would be located within 0.5 mile of 137 bald eagle nests and within 660 feet of 101 of these nests. Alternative 3 would be within 0.5 mile of 79 bald eagle nests, and within 660 feet of 56 of these nests. A total of 16 bald eagle nests are documented within 0.5 mile of the ferry terminal and highway portions under Alternatives 4B and 4D. No communal roosting locations are known to occur along the highway alignments.

A highway on the east or west side of Lynn Canal would involve a persistent source of highway traffic noise that might result in eagle pairs relocating to alternate nest trees within their nesting territory. Individual eagle pairs may abandon their nesting territory and associated hunting perches altogether, especially during summer, when traffic volumes are predicted to peak. Food availability has been identified as a key factor that influences breeding success; therefore, eagle pairs less sensitive to noise disturbance would likely habituate to highway operation near prime feeding areas. This is likely to occur, given that new nests have been constructed along existing highway segments in Southeast Alaska with higher traffic volumes than are predicted under the JAI Project alternatives. In addition, opportunistic bald eagle pairs from other territories may use previously abandoned nest sites along the shoreline of Lynn Canal for breeding. As a result, a

highway on either side of Lynn Canal would not affect the overall population of bald eagles in the Lynn Canal area. DOT&PF would coordinate with USFWS to determine if a Disturbance Permit were necessary for annual winter blasting in avalanche areas.

On-the-ground nest surveys would be conducted before clearing would take place to confirm the location of trees with eagle nests. Construction activities in the vicinity of bald eagle nests would be coordinated with the USFWS to determine the need for alignment changes, blasting plan changes, or other measures to avoid impacts to any new nests identified. DOT&PF would apply for permits to disturb bald eagles at nests within 660 feet of the work limits of the alignment and for nests within 0.5 mile of blasting activities. Under alternatives that require widening of 2.9 miles of the existing Glacier Highway (Alternatives 2B, 3, 4A, and 4D), DOT&PF would obtain permits to disturb bald eagles at nests within 660 feet unless no permit is needed due to existing activity that is already tolerated. None of the alternatives are anticipated to require removal of nest trees.

Threatened and Endangered Species – There are two species in the project study area that are protected under the Endangered Species Act (ESA): the western population of Steller sea lions (classified as endangered) and the Mexico population of humpback whales (classified as threatened). The eastern population of Steller sea lions, which is most prevalent in the project area, was removed from the threatened and endangered species list in December 2013. Although the eastern population is no longer protected under the ESA, it remains protected under the Marine Mammal Protection Act (MMPA). Individual animals from the endangered western population of Steller sea lions are known to occur in the project area. There are two principal haulouts that are used on an annual basis by Steller sea lions in the project study area: Gran Point and Met Point. These haulout sites are on the east side of Lynn Canal. Gran Point is designated a Critical Habitat Area under the Endangered Species Act. Although Met Point is not used as extensively by Steller sea lions as Gran Point, it also is an important haulout for this species.

On September 8, 2016, NMFS published a final decision that changed the status of humpback whales under the ESA (81 *Federal Register* [FR] 62259), effective October, 11 2016. The decision recognized the existence of 14 humpback whale Distinct Population Segments (DPSs) based on distinct breeding areas in tropical and temperate waters: 5 DPSs were classified under the ESA (4 endangered and 1 threatened), and the other 9 DPSs were delisted. Humpback whales found in southeast Alaska are predominantly members of the Hawaii DPS, which is not listed under the ESA. However, based on a comprehensive photo-identification study, members of the Mexico DPS (ESA-listed as threatened) are known to occur in southeast Alaska. Members of different DPSs are known to intermix on feeding grounds; therefore, all waters off the coast of Alaska should be considered to have ESA-listed humpback whales.³ According to Wade et al. (2016)⁴, the probability of encountering a humpback whale from the Mexico DPS is 6.1 percent. The remaining 93.9 percent of individuals in southeast Alaska are likely members of the Hawaii

³ NMFS (National Marine Fisheries Service). 2016. Occurrence of Endangered Species Act (ESA) Listed Humpback Whales off Alaska. National Marine Fisheries Service, Alaska Region. Revised 12 December 2016.

⁴ Wade, P.R., T.J. Quinn II, J. Barlow, C.S. Baker, A.M. Burdin, J. Calambokidis, P.J. Clapham, E. Faclone, J.K.B. Ford, C.M. Gabriele, R. Leduc, D.K. Mattila, L. Rojas-Bracho, J. Straley, B.L. Taylor, J. Urban R., D. Weller, B.H. Witteveen, and M. Yamaguchi. 2016. Estimates of abundance and migratory destination for North Pacific humpback whales in both summer feeding areas and winter mating and calving areas. Paper SC/66b/IA21 submitted to the Scientific Committee of the International Whaling Commission, June 2016, Bled, Slovenia.

DPS⁵. All 14 DPSs of humpback whale remain listed as “depleted” under the MMPA and are on the Alaska State Endangered Species List.⁶ There is no designated critical habitat for humpback whales.

Pile driving for construction of ferry terminals under Alternatives 2B, 3, 4B, and 4D and multi-span bridges under Alternatives 2B and 3 could disturb Steller sea lions and/or humpback whales. Vibratory hammers would be used during pile driving to the extent possible to minimize underwater noise. Monitors would also be used during pile driving to ensure that this activity would not occur when Steller sea lions were within 660 feet of pile-driving activities unless a different distance were set in an MMPA authorization.

Under Alternative 2B, noise associated with typical highway construction activities within 1,000 feet of the Gran Point and Met Point haulouts could be heard by Steller sea lions at the haulouts, but only blasting would potentially exceed the NMFS’s in-air disturbance threshold. Blasting would be required for two tunnels near the Gran Point haulout, as well as for slope cuts in the vicinity of Gran Point and Met Point. For blasting within 600 feet of a haulout, DOT&PF would record noise levels at the haulout for 10 days of blasting. If noise levels are higher than NMFS’s in-air disturbance threshold at the haulouts, DOT&PF would require the use of noise attenuation/mitigation methods to reduce noise levels.

Helicopter use, for construction of Alternative 2B, within 3,000 feet of Gran Point or Met Point would occur at a minimum altitude of 1,500 feet (when weather conditions permit) and a minimum distance of 1,000 feet from each haulout. No flights over the haulouts would be conducted.

Other than Alternative 2B, none of the build alternatives are in proximity to the Gran and Met Point haulouts; however, if another build alternative were selected, the FHWA would consult with the NMFS, as appropriate, on potential impacts to Steller sea lions. All of the build alternatives would increase ferry traffic in one or more areas of Lynn Canal; however, collisions between Steller sea lions and ferries are expected to be minimal, as Steller sea lions would likely avoid such encounters.

The increase in ferry traffic would not be high enough to substantially increase the risk of collisions with humpback whales. The NMFS has raised concerns that Alternatives 3, 4B, and 4D would adversely affect humpback whales due to the ferry traffic in Berners Bay during spring herring and eulachon spawning periods. The FHWA has committed to avoid operating in Berners Bay until May 15 under Alternatives 4B and 4D, after eulachon and herring spawning in April and early May.

ES-7 Identification of the Preferred Alternative

In its 2006 ROD for the JAI Project, FHWA selected Alternative 2B, East Lynn Canal Highway, for advancement to design and construction. During development of the 2014 Draft SEIS, FHWA and DOT&PF reassessed the reasonable alternatives considered in the 2006 Final EIS, as well as an additional alternative identified as a result of a District Court ruling. This additional

⁵ NMFS 2016. Occurrence of Endangered Species Act (ESA) Listed Humpback Whales off Alaska. National Marine Fisheries Service, Alaska Region. Revised 12 December 2016.

⁶ Alaska Department of Fish and Game. < <http://www.adfg.alaska.gov/index.cfm?adfg=specialstatus.akendangered>> Accessed December 29, 2016.

alternative was designed to improve access to Juneau using existing AMHS assets and is identified as Alternative 1B. After careful review and consideration of the updated information and analyses conducted in support of the 2014 Draft SEIS, FHWA and DOT&PF continued to prefer Alternative 2B, and the published 2014 Draft SEIS reflected that preference.

Since the 2014 Draft SEIS was released, however, declining oil prices have caused unprecedented cuts to DOT&PF's capital and operating budgets. The net result is that the current budget deficit has affected the State's ability to advance a build transportation solution in Lynn Canal at this time. As a result, DOT&PF and FHWA have identified Alternative 1 – No Action as the preferred alternative in this Final SEIS. The fiscal conditions underpinning the change in preferred alternative are described in detail in Sections 2.5.1 and 2.5.2.

DOT&PF and FHWA continue to stand by the transportation purpose and need for the JAI Project that was identified and refined over many years with input from the public and agencies, as described in detail in Chapter 1. Both agencies recognize that Alternative 1 – No Action would not solve the existing and future transportation problems in Lynn Canal. Travel costs for users would continue to be high, opportunities for improvement in flexibility or frequency of travel would be limited, travel times would remain long, limited capacity improvement would be made toward satisfying corridor demand, and costs to the State would remain high considering the low number of vehicles served.

The continued public controversy on the JAI Project contributed to the decision to identify Alternative 1 – No Action as the preferred alternative. This project has had a history of division, with disagreement among elected officials and the public on how to proceed. While the need to improve transportation in Lynn Canal is recognized by most, how best to accomplish that remains a question for many. Feelings are strong on both sides, and sentiment has wavered over the years on whether the solution lies in building a road or improving ferry service. More information on the controversy is provided in Sections ES-8 and 2.5.3.

In summary, DOT&PF and FHWA find the following:

- Declining oil prices have caused the need for cuts to State budgets.
- Declining revenues, particularly General Fund revenues, have resulted in substantive cuts to DOT&PF's capital and operating budgets.
- The net result is that the current budget deficit has affected the State's ability to advance a build transportation solution in Lynn Canal at this time.
- Controversy on the JAI Project is high.

Given the State's budgetary reality, coupled with a high level of controversy, DOT&PF and FHWA have identified the No Action Alternative as the Preferred Alternative. All reasonable alternatives evaluated in this Final SEIS have been evaluated to a comparable level of detail⁷ and formally remain under consideration.

Alternative 1 – No Action has been identified as the preferred alternative in this Final SEIS. It was noticed in the *Federal Register*, on the JAI Project website, in local newspapers, and to the

⁷ Additional information is known about Alternative 2B (more than the other alternatives) because Alternative 2B was selected as the preferred alternative in the 2006 ROD. Subsequent to that ROD, DOT&PF continued work to acquire permits and approvals necessary for the implementation of Alternative 2B.

Project mail list via postcard mailers. It also was distributed to federal, State, and local governments; Native organizations; and public libraries.

ES-8 Areas of Controversy

Providing highway access to Juneau is a contentious issue in northern Southeast Alaska.

Much of the controversy surrounding this project, which has persisted for many years, is related to the potential impacts to the natural and social environment associated with alternatives that include substantial road components. Some of the controversy has been related to the basic modal choice reflected in the build alternatives (i.e., ferries versus roads). This has been expressed in numerous resolutions from the local governments of Haines, Skagway, and Juneau and is reflected in their adopted comprehensive plans. The level of controversy is further reflected in the intense interest from the public as expressed in the comments generated for and against the various alternatives through past scoping processes, received at public hearings, submitted on draft versions of the EIS and SEIS, and reflected in surveys. Many residents and environmental advocacy groups (local and national) have expressed environmental concerns (captured in the impacts disclosed in this Final SEIS and in the comments summarized in Appendix JJ, *Responses to Draft Supplemental Environmental Impact Comments*), and lawsuits have been filed based on some of those concerns. The history of the lack of consensus and controversy is summarized in Section 2.5.3 of this Final SEIS.

The 2006 Final EIS addressed issues and concerns raised in comments on the 2005 Supplemental Draft EIS by revising the document where appropriate and by directly responding to individual comments.

The 2014 Draft SEIS addressed issues raised by the public and agencies during scoping for the SEIS in 2012. These issues are outlined in Chapter 7. The FHWA and DOT&PF reviewed all comments on the 2014 Draft SEIS and present responses to those comments in this Final SEIS.

ES-9 Related Actions and Projects

There are currently no related actions or projects that would affect the JAI Project.

ES-10 Federal Actions Necessary

If a build alternative were selected for the JAI Project, the following federal permits, consultations, and approvals may be required.

- USFS transportation and utility easement issued under SAFETEA-LU Section 4407 for use of Tongass National Forest lands, and USFS special use permit for any project activities or facilities located outside the Section 4407 easement on Tongass National Forest.
- USACE Section 404 (Clean Water Act) permit for fill in wetlands and other waters of the U.S.
- USACE Section 10 permit (Rivers and Harbors Act) for dredge, fill, and structures placed below mean high water
- USFWS Bald Eagle Disturbance Permit

- U.S. Coast Guard, Section 9 permits (Rivers and Harbors Act) for bridges over navigable waters not exempted under 23 CFR 650.805 or subject to FHWA advance approval under 33 CFR 115.70, as amended.
- NMFS ESA Section 7 consultation for threatened and endangered species
- NMFS MMPA Incidental Harassment Authorization for marine mammals

ES-11 Unresolved Issues

In 2008, the DOT&PF received a USACE permit for the alternative selected in the 2006 ROD: Alternative 2B. That permit expired in 2013. As part of the Section 404/10 permitting process, if a build alternative were selected, DOT&PF would submit a new permit application and coordinate with the USACE to develop a compensatory mitigation plan to offset impacts to waters of the U.S.

During development of the 2006 Final EIS, NMFS, ADF&G, and EPA did not concur with FHWA's assessment of the impacts in Berners Bay associated with Alternatives 3, 4B, and 4D. This disagreement involved projected direct impacts to Pacific herring spawning habitat and indirect impacts to Steller sea lions and humpback whales. If one of these three alternatives were selected for the proposed project, further consultation would be necessary.

ES-12 EIS Availability

This Final SEIS, including appendices, is available free of charge on DVD for viewing electronically. A printed copy of this Final SEIS is available upon request for free. Printed copies of appendices are available for a printing charge. The document is also available for viewing on the project website at www.juneauaccess.alaska.gov. Printed copies of the document and all appendices are available for public review at the following locations:

Juneau Public Library 292 Marine Way Juneau, Alaska	Mendenhall Valley Public Library 3025 Dimond Park Loop Juneau, Alaska	Douglas Public Library 1016 3 rd Street Douglas, Alaska	Alaska State Library 395 Whittier Street Juneau, Alaska
Haines Public Library 111 3 rd Avenue Haines, Alaska	Skagway Public Library 769 State Street Skagway, Alaska	DOT&PF Southcoast Region 6860 Glacier Highway Juneau, Alaska	

For information on obtaining a CD or bound version of this Final SEIS, contact the DOT&PF project office at (907) 465-1828, or visit the project website at www.juneauaccess.alaska.gov.

**Table ES-1:
Summary of Estimated Beneficial and Adverse Impacts of Proposed Project Alternatives**

Factors	Alternative								
	1 – No Action	1B	2B	3	4A	4B	4C	4D	
Cost Factors¹									
Initial Construction Costs (\$million)	\$0	\$0	\$680	\$596	\$250	\$318	\$78	\$110	
Total Project Life Costs, Less Residual Value (\$millions)	\$787	\$1,212	\$1,156	\$1,167	\$1,621	\$1,718	\$981	\$1,048	
Annual Maintenance and Operations Costs (\$millions)	\$18.2	\$26.5	\$20.9	\$22.1	\$33.7	\$33.3	\$22.7	\$24.2	
Net Present Value (\$millions) Relative to Alternative 1 – No Action	-	-\$135	-\$351	-\$331	-\$202	-\$211	-\$75	-\$26	
Purpose and Need Factors									
2055 Forecasted Summer Demand to/from Skagway (vehicles per day)	45	100	565	385	100	170	65	155	
2055 Forecasted Summer Demand to/from Haines (vehicles per day)	80	110	705	655	125	205	85	190	
Summer Capacity to/from Skagway (vehicles per day)	61	171	636	456	149	237	131	237	
Summer Capacity to/from Haines (vehicles per day)	93	160	848	816	162	250	144	250	
Summer Travel Time – Auke Bay to Skagway ³ (hours)	8.1	6.8	4.0	5.5NB/ 5.1SB	4.1	3.9	6.6	5.4	
Summer Travel Time – Auke Bay to Haines ³ (hours)	6.2	6.2	3.3	3.2	3.9	3.7	6.2	5.0	
Number of Ferry Round trips/Week – to Skagway (summer)	8	16 ⁴	42	42	16	16	9	16	
Number of Ferry Round trips/Week – to Haines (summer)	8	10	56	84	16	16	9	16	
State's Net Project Life Cost, Less Residual Value – (\$millions) ⁵	\$378	\$577	\$407	\$361	\$688	\$554	\$482	\$308	
State's Net Cost Per Vehicle (dollars)	\$279	\$283	\$43	\$46	\$335	\$179	\$313	\$105	
Total/Out-of-Pocket User Costs (one way) – Juneau-Haines ⁶	Family of 4 in a 19-foot vehicle	\$229/ \$227	\$183/ \$181	\$82/\$47	\$91/\$60	\$229/ \$227	\$166/ \$151	\$229/ \$227	\$166/\$151
	Driver only in a 19-foot vehicle	\$132/ \$130	\$106/ \$104	\$69/\$35	\$72/\$41	\$132/ \$130	\$103/ \$88	\$132/ \$130	\$103/ \$88
	Walk-on passenger (excluding ground transportation) ⁷	\$39/\$39	\$31/\$31	\$5/\$5	\$8/\$8	\$39/\$39	\$25/\$25	\$39/\$39	\$25/\$25

Factors		Alternative							
		1 – No Action	1B	2B	3	4A	4B	4C	4D
Total/Out-of-Pocket User Costs (one way) – Juneau-Skagway ⁶	Family of 4 in a 19-foot vehicle	\$302/\$302	\$242/\$242	\$101/\$68	\$144/\$111	\$302/\$302	\$220/\$207	\$302/\$302	\$220/\$207
	Driver only in a 19-foot vehicle	\$169/\$169	\$136/\$136	\$79/\$47	\$105/\$73	\$169/\$169	\$131/\$118	\$169/\$169	\$131/\$118
	Walk-on passenger (excluding ground transportation) ⁷	\$53/\$53	\$43/\$43	\$9/\$9	\$16/\$16	\$53/\$53	\$36/\$36	\$53/\$53	\$36/\$36

Traffic-related Employment and Population Impacts									
Juneau									
New Local Employment (2055)	0	15	130	105	15	40	5	35	
Population Increase (2055)	0	23	195	158	23	60	8	53	
Skagway									
New Local Employment (2055)	0	10	80	50	15	25	5	25	
Population Increase (2055)	0	15	120	75	23	38	8	38	
Haines									
New Local Employment (2055)	0	5	60	15	5	20	0	20	
Population Increase (2055)	0	8	90	23	8	30	0	30	
Natural Resources Impacts									
Number of Anadromous Streams Crossed	0	0	10	11	0	1	0	1	
Old-growth Forest Habitat Losses (acres)	0	0	412	308	0	38	0	38	
Wetland Habitat Losses (acres)	0	0	61	26	0	2	0	2	
Intertidal/Subtidal Area Losses (acres)	0	0	32	12	<1	3	<1	3	
Essential Fish Habitat Impacted (acres)	0	0	32	12	<1	3	<1	3	
Eagle Nests Within 660 Feet	0	0	101	56	0	8	0	8	
Total Eagle Nests within 0.5 mile	0	0	137	79	0	16	0	16	

¹ Costs and benefit analysis are presented in Revised Appendix FF, *User Benefit, Life-Cycle Cost, and Total Project Cost Analyses*.

² The total project life cost less residual value is the summation of all capital and annual operating costs over the lifetime of the project minus any residual value left at the end of 36 years.

³ Travel time for Day Boat ACF or FVF or *M/V Malaspina* as a shuttle. In all alternatives except 2B and 3, the mainline ferry would have a travel time of 9.1 hours between Auke Bay and Skagway and 7.2 hours between Auke Bay and Haines.

⁴ Six trips per week are made by taking the Day Boat ACF between Auke Bay and Haines and transferring ferries.

⁵ This represents the total project life cost less the federal contribution and State revenue.

⁶ First number is total user cost and second number is out-of-pocket cost. Total cost is based on fares plus \$0.64 per mile for vehicular travel (AAA, 2012). Out-of-pocket cost based on fares and gasoline consumption.

⁷ For costs of walk-on passengers including ground transportation, please see Chapter 4.