

Gravina Access Project
Draft Supplemental Environmental
Impact Statement

Summary

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SUMMARY

Introduction

The Alaska Department of Transportation and Public Facilities (DOT&PF), in cooperation with the Federal Highway Administration (FHWA), has developed the Gravina Access Project to improve public access between Revillagigedo Island and Gravina Island. In July 2004, FHWA and DOT&PF issued a Final Environmental Impact Statement (FEIS) for the Gravina Access Project, identifying Alternative F1 as the preferred alternative. Alternative F1 would cross Tongass Narrows at Pennock Island, requiring two bridges (one across East Channel and one across West Channel) and roadway link to the airport on Gravina Island. Alternative F1 was the selected alternative in FHWA's Record of Decision, which was issued on September 15, 2004.

With Alternative F1 selected in FHWA's Record of Decision and identified and permitted as the Least Environmentally Damaging Practicable Alternative (LEDPA) by the U.S. Army Corps of Engineers (USACE), the DOT&PF moved forward with the first phase of implementing Alternative F1: construction of the Gravina Island Highway. Construction of the Gravina Island Highway was completed in 2008.

On September 21, 2007, due to rapidly escalating costs, Alaska Governor Sarah Palin directed the Department to look for the most fiscally responsible alternative for the Gravina Access Project instead of proceeding further with Alternative F1.

Purpose of the SEIS

Council on Environmental Quality (CEQ) Regulations for Implementing the National Environmental Policy Act (40 CFR 1500-1508) state that agencies shall prepare supplements to either draft or final EISs 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.

FHWA and DOT&PF determined that a Supplemental Environmental Impact Statement (SEIS) should be prepared for the Gravina Access Project and, on July 2, 2008, FHWA issued a notice of intent to re-examine alternatives in an SEIS and identify and select a new preferred alternative.

Similar to an EIS, the SEIS shall determine, characterize, analyze, and document the project's environmental impacts, as well as specify possible mitigation of adverse impacts. This Draft SEIS is made available to the general public and interested parties (including government entities, regulatory agencies, and Native organizations) who are given an opportunity to comment on its content during a 45-day comment period. These comments may range from simple statements of support or opposition to complex technical discussions of project alternatives, study methods, determination and characterization of impacts, and mitigation recommendations.

The Final SEIS will identify a preferred alternative and document and respond to all substantive comments on the Draft SEIS. If comments received on the Draft SEIS are minor, FHWA and DOT&PF, in accordance with Section 1319 of the Moving Ahead for Progress in the 21st Century Act (MAP-21), may elect to issue the Final SEIS as errata sheets. The errata sheets

would explain factual corrections to the Draft SEIS and explain why Draft SEIS comments do not warrant further response in the form of a full Final SEIS. In either approach (a full Final SEIS or errata sheets), the Final SEIS will identify a preferred alternative and explain why it was selected; describe findings, including any on wetlands, floodplains, and section 106 effects, as applicable; provide a list of commitments for mitigation measures for the preferred alternative; and identify any other findings to be made in compliance with all environmental laws, regulations, Executive Orders, and other related requirements with associated agency consultation documentation. An additional 30-day review would follow publication of the Final SEIS. The Record of Decision will include responses to comments on the Final SEIS.

Organization of the SEIS

The SEIS is organized as follows:

- Summary
- Contents (including listings of all tables, figures, and appendices)
- Acronyms and Abbreviations
- Chapter 1.0: Purpose of and Need for Action
- Chapter 2.0: Alternatives
- Chapter 3.0: Affected Environment
- Chapter 4.0: Environmental Consequences
- Chapter 5.0: List of Preparers
- Chapter 6.0: SEIS Distribution List
- Chapter 7.0: Comments and Coordination
- Chapter 8.0: Index
- Appendices:
 - A – DOT&PF Commissioner Letters
 - B – Conceptual Stage Relocation Study and Assessment of Right-of-Way Acquisition Costs and Addendum
 - C – FAA Determination of No Hazard to Air Navigation
 - D – ADEC letter to FHWA on Air Quality Conformity Analysis
 - E – Essential Fish Habitat and Threatened and Endangered Species Consultation

Proposed Action

The proposed action is to improve surface transportation between Revillagigedo Island and Gravina Island in the Ketchikan Gateway Borough (Borough) of Alaska. The purpose of and need for the Gravina Access Project, which have not changed since the 2004 FEIS was issued, are as follows:

Purpose: The purpose of the Gravina Access Project is to improve surface transportation between Revillagigedo Island and Gravina Island.

Need: The need for improving access is threefold:

- To provide the Borough and its residents more reliable, efficient, convenient, and cost-effective access for vehicles, bicycles, and pedestrians to Borough lands and other developable or recreation lands on Gravina Island in support of the Borough's adopted land use plans
- To improve the convenience and reliability of access to Ketchikan International Airport for passengers, airport tenants, emergency personnel and equipment, and shipment of freight
- To promote environmentally sound, planned long-term economic development on Gravina Island

Currently, there is no "hard link" (surface) transportation between Gravina Island and Revillagigedo Island. Public access between the islands is available via a ferry that transports vehicles, bicyclists, and pedestrians from Ketchikan across Tongass Narrows to the Ketchikan International Airport terminal on Gravina Island. The proposed action addresses the need for improved access to developable land, improved access to the airport, and long-term economic development on Gravina Island. Chapter 1 provides a detailed description of the purpose of and need for the project.

The FHWA and DOT&PF have examined a range of alternatives for the Gravina Access Project in this SEIS: one bridge alternative that crosses Tongass Narrows near the airport, one bridge alternative that crosses Pennock Island, three ferry alternatives that would supplement the existing airport ferry service with new ferries and terminals, and one ferry alternative that makes improvements to the existing airport ferry facilities. All of the action alternatives include roadway improvements on Gravina Island to enhance the transportation links to developable land.

Summary of Gravina Access Project Alternatives Considered

The Gravina Access Project SEIS presents and analyzes the following alternatives:

No Action Alternative - Continued operation of existing airport ferry

Under the No Action Alternative, no bridge would be constructed and no additional ferry service would be provided between Revillagigedo Island and Gravina Island. The only public access between the two islands would continue to be provided by the existing airport ferry service across Tongass Narrows, private boats, and floatplanes. On Revillagigedo Island, the existing ferry terminal is located 2.8 miles north of downtown Ketchikan; on Gravina Island, the terminal is on the waterfront, just east of the airport terminal. The Borough operates the airport ferry service. The ferry service would continue to operate 16 hours per day and the frequency of service would remain the same, with departures every 30 minutes in winter and every 15 minutes in summer.

Alternative C3-4 – Airport Bridge with 200 feet of vertical navigational clearance

Alternative C3-4 would include construction of a road along a topographic bench on Revillagigedo Island connecting to Rex Allen Drive/Misty Marie Lane/Signal Road near Wal-Mart and a bridge across Tongass Narrows touching down on Gravina Island near the airport terminal. The Alternative C3-4 bridge would be approximately 4,190 feet long and total length of the alternative would be 1.9 miles. It would include an 8-foot-wide walkway on the bridge structure, which can be used by pedestrians and bicycles. The maximum height of the bridge over the navigational channel would be approximately 280 feet above mean higher high water (MHHW), which would penetrate FAA Part 77 airspace. The vertical navigational clearance would be 200 feet above MHHW. The horizontal navigational clearance would be 550 feet. These navigational clearances would accommodate one-way passage of cruise ships and two-way passage of most other ships, including Alaska Marine Highway System (AMHS) ferries.

Alternative F3 – Pennock Island bridges with 60 feet of vertical navigational clearance over the East Channel and 200 feet of vertical navigational clearance over the West Channel

Alternative F3 is approximately 5.9 miles long and would cross Tongass Narrows with two bridges via Pennock Island. The access would begin at South Tongass Highway south of the U.S. Coast Guard Station and cross the East Channel to Pennock Island and the West Channel to Gravina Island. The East Channel bridge would be approximately 1,985 feet long and have a maximum height of approximately 115 feet above MHHW. The bridge would have a vertical navigational clearance of 60 feet above MHHW and a horizontal clearance of approximately 350 feet. These clearances would not accommodate cruise ships, AMHS ferries, or tall freight barges that currently use the East Channel as their primary navigational route. The primary users of the East Channel are anticipated to be smaller tugs and barges, and commercial and recreational vessels with air drafts less than 60 feet. The West Channel bridge would be approximately 2,470 feet long and have a maximum height of approximately 270 feet above MHHW. The bridge would have a vertical navigational clearance of 200 feet above MHHW and a horizontal navigational clearance of approximately 550 feet, which would accommodate one-way passage of cruise ships and two-way passage of most other ships, including AMHS ferries. Both bridge structures would include an 8-foot-wide walkway, which can be used by pedestrians and bicycles. Neither bridge would penetrate FAA Part 77 airspace. This alternative requires dredging the West Channel to

improve its navigational characteristics. The dredged quantity is approximately 213,000 cubic yards over approximately 15 acres.

Alternative G2 - New ferry between Peninsula Point and Lewis Point; continued operation of existing ferry

Alternative G2 would be a new ferry service that would complement the existing airport ferry for vehicles and passengers between Peninsula Point on Revillagigedo Island and Lewis Point on Gravina Island. This alternative would cross Tongass Narrows approximately 2.0 miles north of the airport passenger terminal and would have a sailing distance of approximately 0.8 miles. Two new ferry vessels and construction of a new ferry terminal on each side of Tongass Narrows would be required for this alternative. A 0.8-mile-long road would be constructed on Gravina Island to connect the ferry terminal at Lewis Point with Seley Road.

Alternative G3 - New ferry between Downtown and south of airport; continued operation of existing ferry

Alternative G3 would be new ferry service that would complement the existing airport ferry for vehicles and passengers between downtown Ketchikan at Jefferson Street (near the Plaza Mall at Bar Point) on Revillagigedo Island and a location approximately 1.3 miles south of the airport passenger terminal on Gravina Island near Clump Cove. The crossing distance would be approximately 1.3 miles. This alternative would require construction of a new ferry terminal on each side of Tongass Narrows and two new ferry vessels. Dredging may be required to provide adequate navigational depth for the ferry terminal on Revillagigedo Island. The existing breakwater could also be widened and extended for use as the ferry terminal pier. A paved road would be constructed on Gravina Island from the ferry terminal past the new Runway 11/29 extension approximately 0.2 miles to the Gravina Island Highway.

Alternative G4 - New ferry adjacent to existing ferry; continued operation of existing ferry

Alternative G4 would be new ferry service for vehicles and passengers adjacent to the existing airport ferry route between Charcoal Point on Revillagigedo Island and the existing ferry lay-up berth on Gravina Island on a quarter-mile crossing of Tongass Narrows, approximately 2.6 miles north of downtown. This alternative would require two new ferry vessels and construction of a new ferry terminal on each side of Tongass Narrows adjacent to the existing airport ferry terminals.

Alternative G4v - Continued operation of existing ferry with improved shoreside amenities

Alternative G4v was added as a lower cost alternative to Alternative G4 because it provides shoreside facilities to improve the convenience of airport travelers and heavy freight movement, but does not add new ferries or ferry terminals until ferry demand increases enough to warrant the additional capacity. Such demand is not anticipated in the 75-year design life of this alternative.

Per a request by DOT&PF, bridge alternatives were evaluated with and without tolls to offset, in part, the cost of bridge construction and operation.

All ferry alternatives include:

- A 60-passenger waiting facility and other improvements to the terminal site on Revillagigedo Island.
- Two shuttle vans to carry both pedestrians and their luggage from Revillagigedo Island to the airport terminal on Gravina Island.
- A new heavy freight dock on Gravina Island for highway loads that cannot be accommodated by the shuttle ferry.
- Reconstruction of the existing airport ferry transfer bridges and ramps.
- Upgrades and improvements for all sidewalks and wheelchair ramps associated with the airport ferry facilities to meet applicable standards.
- Toll facilities.
- Replacement of the existing ferry layup dock and transfer bridge to support layup and maintenance of the airport shuttle ferry system.

Each action alternative includes the maintenance and operation of:

- The recently constructed Gravina Island Highway;
- Lewis Reef and Seley roads to the northern airport reserve boundary; and
- Airport Access Road, which extends from the airport terminal to its intersection with the Gravina Island Highway and Lewis Reef Road.

Each action alternative also includes replacement of the existing 24-foot wide bridge over Airport Creek (west fork) at the end of Lewis Reef Road with a new 36-foot wide bridge. The existing Airport Creek bridge is a temporary structure constructed by a private entity for access to land in the Lewis Reef development area. While the creek crossing was authorized by FHWA as part of Alternative F1, it was not included in the first phase of construction by DOT&PF. Although Alternative F1 had been selected by FHWA in the 2004 Record of Decision and identified and permitted as the LEDPA by USACE, it was not carried forward as a reasonable alternative in the SEIS because its construction costs were estimated to exceed available funding. Under the USACE permit for Alternative F1, a total of 82.2 acres of permanent fill were permitted and DOT&PF provided \$405,000 of compensatory mitigation as a fee in lieu type of mitigation. With completion of Phase 1 (i.e., construction of the Gravina Island Highway), 54.3 acres of wetlands had been filled and DOT&PF had paid the compensatory mitigation to the Southeast Alaska Land Trust. The USACE permit expired June 30, 2011.

Summary of Beneficial and Adverse Impacts

The following table, "Summary of Impacts by Alternative," presents the major environmental impacts, both beneficial and adverse, associated with each alternative. Alternative F1, the preferred alternative in the 2004 FEIS and selected alternative in the Record of Decision, is included in the table: although it is no longer a reasonable alternative under consideration in this Draft SEIS, its potential adverse impacts are provided here as a point of comparison.

Summary of Impacts by Alternative

Impact Categories	No Action	Bridge Alternatives		Ferry Alternatives				2004 FEIS Preferred and Record of Decision Selected Alternative F1 ¹⁰
		C3-4 Airport Bridge	F3 Pennock Island Bridges	G2 Peninsula Pt to Lewis Pt	G3 Downtown to South of Airport	G4 New Ferry Adjacent to Existing	G4v Low Cost Variant of G4v	
<i>Cost Factors</i>								
Construction and Project Development (\$ million)	0	223	276	81	70	62	23	375
Average Annual O&M (\$ million)	2.1	0.24	0.19	5.9	5.9	5.9	3.6	ND
75-year Lifecycle (\$ million) ¹	35	222	286	331	314	301	182	ND
Total life cost (\$ million)	929	391	576	1,330	1,262	1,207	1,050	ND
Total life cost assuming toll revenue (\$ million)	590	335	531	879	811	756	712	ND
<i>Purpose and Need Factors</i>								
<u>Reliability of Access</u>								
Hours of operation per day ²	16	24	24	16	16	16	16	24
Round Trips (RT) per hour (summer/winter)	4 RT/2 RT	NA	NA	4 RT/2 RT	4 RT/2 RT	4 RT/2 RT	4 RT/2 RT	NA
Hours of downtime per day ²	8	0	0	8	8	8	8	0
Restrictions to hazmat transport and oversized/overweight ³ vehicles? (Yes/No)	Yes	No	No	Yes	Yes	Yes	Yes	No

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		C3-4 Airport Bridge	F3 Pennock Island Bridges	G2 Peninsula Pt to Lewis Pt	G3 Downtown to South of Airport	G4 New Ferry Adjacent to Existing	G4v Low Cost Variant of G4v	
<u>Efficiency & Convenience of Access</u>								
Vehicular travel time ⁴ (in minutes) to airport from:								
Downtown Ketchikan	28	14	13	43	35	25	28	13
Carlanna Creek	19	6	22	34	33	16	19	21
Ward Cove	25	8	28	34	39	22	25	27
Vehicular travel time (in minutes) to developable land from:								
Downtown Ketchikan	32	17	11	35	29	29	32	7
Carlanna Creek	24	8	19	26	28	21	24	15
Ward Cove	30	11	25	26	34	27	30	21
<u>Economic Development</u>								
Projected development on Gravina Island (in acres):								
Residential	13	308	308	40	40	40	13	383
Industrial/commercial	3	23	23	3	3	3	3	22
Projected development on Pennock Island (in acres):								
Residential	0	0	12	0	0	0	0	75
Industrial/commercial	0	0	0	0	0	0	0	1
<u>Social and Economic Impacts</u>								
Private Property impacts (# of parcels; total acres)	0	19 parcels; 42 acres	7 parcels; 4 acres	0	6 parcels; <1 acre	0	0	ND
Residential Relocations	0	2	0	0	0	0	0	0
Business Relocations	0	6	0	2	0	0	0	0

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		C3-4 Airport Bridge	F3 Pennock Island Bridges	G2 Peninsula Pt to Lewis Pt	G3 Downtown to South of Airport	G4 New Ferry Adjacent to Existing	G4v Low Cost Variant of G4v	
Estimated number of affected parcels	0	24	14	7	11	5	5	30
Total construction jobs ⁵	0	1,560	1,780	470	510	470	120	470
Annual O&M jobs (without toll for bridge alternatives) ⁶	13	2	3	28	28	28	13	1
User economic benefits (\$ million) ⁷	0	63	51.4	(24.8)	(24.5)	(22.0)	(1.3)	ND
<i>Transportation Impacts</i>								
Intrusion into Part 77 airspace? (Yes/No)	No	Yes	No	No	No	No	No	No
Obstruction for seaplanes? (Yes/No)	No	Yes	Yes	No	No	No	No	Yes
<i>Natural Resources Impacts</i>								
Permanent upland habitat losses (acres)	0	10	2	4	3	1	1	10.7
Permanent wetland habitat losses – marine (acres)	0	0	0	1.2	2.9	0	0	96.5 (incl. fresh water)
below the high tide line (HTL)	0	0	0	0.6	1.1	0	0	ND
below the Mean High Water (MHW) mark	0	0	0	0.6	1.8	0	0	ND
below the ordinary high water mark (OHWM)	0	0	0	0	0	0	0	ND
Permanent wetland habitat losses – fresh water (acres)	0	13	33	23	16	13	13	ND
Temporary upland habitat disturbance (acres)	0	3	2	1	1	1	1	ND
Temporary wetland habitat disturbance – marine (acres)	0	0	0	0	0	0	0	0
Temporary upland habitat disturbance – fresh water (acres)	0	5	16	13	9	4	4	11.3
Essential Fish Habitat losses (acres)								
Marine	0	1.9	15.3	1.2	4	0.7	0.1	0.2
Fresh water	0	0	0	0	0	0	0	0

Impact Categories	No Action	Bridge Alternatives		Ferry Alternatives				2004 FEIS Preferred and Record of Decision Selected Alternative F1 ¹⁰
		C3-4 Airport Bridge	F3 Pennock Island Bridges	G2 Peninsula Pt to Lewis Pt	G3 Downtown to South of Airport	G4 New Ferry Adjacent to Existing	G4v Low Cost Variant of G4v	
Number of anadromous stream crossings ⁸	0	2	7	2	3	2	2	5
Number of piers in Tongass Narrows ⁹	0	12	6	0	0	0	0	6
Discharge of fill in marine waters of Tongass Narrows								
Quantity (cubic yards)	0	0	0	21,000	18,000	0	0	0
Area (acres)	0	0	0	1.2	2.9	0	0	0
Dredging/removal of sediment from marine waters								
Quantity (cubic yards)	0	0	213,000	1,400	18,600	15,200	0	ND
Area (acres)	0	0	15	0.25	2.2	0.4	0.4	ND
<i>Cultural Resources Impacts</i>								
Eligible historic/archaeological properties in direct area of potential effect	NA	1	7	1	1	0	0	0

¹ Lifecycle costs reported are for the no toll option.

² Hours of operation and downtimes would be the same for all ferries.

³ Ferry service is typically limited to vehicles less than 20 feet in length. The weight limit is 30,000 pounds.

⁴ Numbers in **bold** type indicate travel times shorter than existing conditions. Values provided represent travel times using new ferry facility only. Travel time for the existing airport ferry would be the same as for the No Action alternative.

⁵ Assumes a three-year construction period. Jobs can be full-time, part-time, or seasonal.

⁶ Number of jobs represents one full-time employee.

⁷ Benefits are shown in 2012 dollars (with no toll option) and are a compilation of savings over 75 years (2012-2086). See Section 4.26.3.6 in the SEIS for more information.

⁸ Number of anadromous fish streams shaded by bridge or covered with culvert. No permanent loss of EFH is anticipated at these locations.

⁹ Bridge alternatives include piers 30 feet square. Ferry alternatives include small-diameter pilings which are not included in this total.

¹⁰ All table entries for Alternative F1 are derived from the 2004 FEIS with the exception of Construction and Project Development Costs, which were developed during the alternatives screening process for the SEIS.

NA = Not applicable

ND = Not determined

Federal Actions Necessary

The following federal laws and executive orders are the primary federal laws that apply to the one or more project alternatives:

- Clean Air Act
- Clean Water Act, Section 401
- Clean Water Act, Section 404
- Coastal Zone Management Act
- Endangered Species Act
- Fish & Wildlife Coordination Act
- Magnuson-Stevens Fishery Conservation & Management Act (Essential Fish Habitat)
- Marine Mammal Protection Act
- Marine Protection, Research, and Sanctuaries Act, Section 102/103
- Migratory Bird Treaty Act
- Bald and Golden Eagle Protection Act
- National Historic Preservation Act, Section 106
- Rivers and Harbors Act, Section 9
- Rivers and Harbors Act, Section 10
- Executive Order 11988 Floodplain Management
- Executive Order 11990 Protection of Wetlands
- Executive Order 12898 Environmental Justice
- Executive Order 13175 Consultation and Coordination with Tribes

Sections 3.13 and 4.13 provide additional information about the federal laws and regulations applicable to the Gravina Access Project.

SEIS Availability

The Draft SEIS is available free of charge on compact disk (CD) for viewing electronically. The document is also available for viewing on the project web site at http://dot.alaska.gov/sereg/projects/gravina_access/. Bound versions of the document are available for public review at the following locations:

Ketchikan Public Library

629 Dock Street, Ketchikan, Alaska

Ketchikan Gateway Borough Department of Planning and Community Development

344 Front Street, Ketchikan, Alaska

DOT&PF Southeast Region

6860 Glacier Highway, Juneau, Alaska

City of Ketchikan Clerk's Office

334 Front Street, Ketchikan, Alaska

City of Saxman Clerk's office

2841 South Tongass Highway, Ketchikan, Alaska

Ketchikan Indian Community

2960 Tongass Avenue, Ketchikan, Alaska

Organized Village of Saxman

Route 2, Box 2, Ketchikan

Metlakatla Library

4th and Milton Street, Metlakatla, Alaska

For information on obtaining a CD or bound version of the EIS, contact Mark Dalton at HDR Alaska at (907) 644-2000, or visit the project web site at:

http://dot.alaska.gov/sereg/projects/gravina_access/. Requests for alternative formats should be directed to Kris Riesenber, FHWA's NEPA Project Manager at (907) 586-7413.

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