

Gravina Access Project Supplemental EIS



Alternatives Screening Report



**Alaska Department of Transportation & Public Facilities
Federal Highway Administration**

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Table of Contents

1. Introduction.....1
 Gravina Access Project Overview1
 Document Purpose1
2. Alternatives Screened2
 2004 Final EIS Reasonable Alternatives2
 2008 SEIS Scoping Comments on Alternatives4
 Alternatives Created or Modified after SEIS Scoping.....6
 Alternatives Identified for Screening.....8
 Alternative Construction Costs9
3. Screening Methods and Criteria.....11
4. Screening Results.....14
 Phase 114
 Phase 217
5. Gravina Access Project SEIS Reasonable Alternatives.....21
APPENDICES22
 A Screening Comments Receive
 B Letter from FHWA to Ketchikan Gateway Borough, July 29, 2009
 C Letter from DOT&PF Commissioner, September 17, 2009
 D FAA Determinations of No Hazard to Air Navigation for Alternative C3-4

1. INTRODUCTION

Gravina Access Project Overview

The Federal Highway Administration (FHWA) in cooperation with the Alaska Department of Transportation and Public Facilities (DOT&PF) is preparing a Supplemental Environmental Impact Statement (SEIS) for the Gravina Access Project. The project is in the Ketchikan Gateway Borough in Southeast Alaska and is proposed to improve access between Revillagigedo Island (a.k.a. Revilla Island), home of the Cities of Ketchikan and Saxman, and Gravina Island, home of Ketchikan International Airport and large tracts of developable land (see Figure 1 at the end of this report).

The SEIS will update the *Gravina Access Project Final Environmental Impact Statement* (Final EIS), which was issued in 2004 by FHWA in cooperation with DOT&PF, and provide information based on recent activities related to project planning and engineering. The 2004 Final EIS evaluated nine alternatives for improved access and a No Action Alternative. It identified Alternative F1, a two-bridge crossing at Pennock Island, as FHWA's and DOT&PF's Preferred Alternative. FHWA issued a Record of Decision (ROD) in September 2004 identifying Alternative F1 as the Selected Alternative.

In September 2007, Alaska Governor Sarah Palin made a determination that Alternative F1 was not financially feasible and directed DOT&PF to look for the most fiscally responsible alternative for access to Gravina Island. FHWA determined that an SEIS would need to be prepared because the federal government had made a commitment toward Alternative F1 in funding the construction of a component of that alternative; i.e., the Gravina Island Highway. In addition, several years had passed since FHWA issued its ROD and new information about the project area and potential alternatives needed to be studied. Through the SEIS process, FHWA and DOT&PF will reassess all reasonable alternatives, including new alternatives or variations that have been discussed since the Final EIS was published. The Gravina Island Highway will be integrated into each alternative, although the construction of the highway is not included in cost estimates.

Document Purpose

This report presents the process used to screen alternatives proposed to meet the purpose and need of the Gravina Access Project, and eliminates alternatives that are not reasonable when considering financial, environmental, and engineering factors. The reasonable alternatives identified as a result of this screening process will be evaluated in detail in the SEIS. The purpose of this document is to explain how DOT&PF and FHWA identified the alternatives to be screened, the process through which they were screened, and the range of reasonable alternatives that result from this screening process.

2. ALTERNATIVES SCREENED

2004 Final EIS Reasonable Alternatives

DOT&PF identified 18 build concepts for crossing Tongass Narrows during the initial alternatives development phase for the 2004 Final EIS. These concepts were based on previous studies, input from agencies and the public, engineering, and the purpose and need for the project. In 2000, DOT&PF applied a screening process to the 18 build concepts that considered several factors, including the ability of the alternative to meet the project purpose and need, cost, environmental impacts, impacts to Section 4(f) properties¹, and transportation impacts. Eleven options (A, B, C1, C2, D2, E, E2, F1, F1 cable-stayed, F2, and F3) were not considered practical or feasible from a technical and economic standpoint and were eliminated in the 2000 screening process. A twelfth option (G1) was screened out because of its potential impacts to Refuge Cove State Park, a Section 4(f) property. The DOT&PF identified the remaining options (C3, C4, D1, G2, G3, and G4) as reasonable alternatives that would be evaluated in the EIS.

In late 2000, input from the Ketchikan Gateway Borough Assembly led the DOT&PF to raise the cost ceiling used in its initial screening so that Option F3 could be considered a reasonable alternative. Additional technical studies identified another reasonable alternative as a variation of Alternative C3. DOT&PF identified the original Alternative C3 as Alternative C3a and the variant as Alternative C3b. Two years later, in response to strong local support and federal funding assurances from the Alaska Congressional delegation, DOT&PF raised the cost ceiling again, allowing Option F1 to be included in the range of reasonable alternatives. At the conclusion of the alternative screening process, FHWA and DOT&PF ultimately identified nine reasonable build alternatives and the No Action Alternative to evaluate in the Draft and Final EISs for the Gravina Access Project.

The nine reasonable build alternatives from the 2004 Final EIS are described as follows:

Alternative C3a: a bridge across Tongass Narrows approximately 2,500 feet north of the airport passenger terminal that connects to Signal Road on Revilla Island. The alignment would be 2.2 miles long, including the 6,800-foot long bridge and a 0.3-mile Airport Return Loop. The main bridge span would have a vertical navigational clearance of 200 feet above Mean Higher High Water (MHHW) and a horizontal navigational clearance of at least 550 feet. These navigational clearances would accommodate one-way passage of cruise ships and two-way passage of most other ships including the largest Alaska Marine Highway System (AMHS) ferries. The maximum height of the bridge would be approximately 265 feet above MHHW. The bridge would penetrate into the Federal Aviation Administration (FAA) Part 77 airspace.²

Alternative C3b includes a bridge across Tongass Narrows approximately 3,600 feet north of the airport passenger terminal that connects to Signal Road on Revilla Island. The alignment would be about 2.2 miles long, with a bridge that would be approximately 4,250 feet long and a 0.3-mile Airport Return Loop. The main span of this bridge would have a vertical navigational

¹ Section 4(f) of the Department of Transportation Act (49 USC Section 303) forbids U.S. Department of Transportation agencies from using parks, recreation areas, waterfowl and wildlife refuges, and historic sites unless there is no “prudent and feasible alternative.”

² Part 77 airspace refers to the protected airspace for aeronautical navigation. Objects that affect navigable airspace are identified by FAA in accordance with Part 77.

clearance of 120 feet above MHHW and a horizontal navigational clearance of approximately 500 feet. These navigational clearances would accommodate passage of ships as large as AMHS ferries. The maximum height of the bridge would be approximately 175 feet above MHHW, which would not penetrate FAA Part 77 airspace.

Alternative C4 includes a bridge across Tongass Narrows approximately 2,500 feet north of the airport passenger terminal. The bridge is generally on the same alignment as Alternative C3a, but the Revilla Island approach connects near Cambria Drive. This alignment would be 2.1 miles long, with a bridge that would be approximately 5,000 feet long and a 0.4-mile Airport Return Loop. The main span of this bridge would have a vertical navigational clearance of 200 feet above MHHW and a horizontal navigational clearance of over 550 feet. These navigational clearances would accommodate one-way passage of cruise ships and two-way passage of most other ships, including AMHS ferries. The maximum height of the bridge would be approximately 260 feet above MHHW. The bridge would penetrate into the FAA Part 77 airspace.

Alternative D1 includes a bridge that would cross Tongass Narrows directly east of the airport passenger terminal. The alignment would be about 1.6 miles long, and the bridge would be approximately 3,600 feet long with a 0.4-mile Airport Return Loop. The main span of this bridge would have a vertical navigational clearance of 120 feet above MHHW and a horizontal navigational clearance of approximately 500 feet. These navigational clearances would accommodate passage of ships as large as the AMHS ferries. The maximum height of the bridge would be approximately 165 feet above MHHW, which would not penetrate FAA Part 77 airspace.

Alternative F1 is approximately 7.0 miles long and would cross Tongass Narrows with two bridges via Pennock Island. The access would begin along Stedman Street just to the south of Deermount Street and cross the East Channel to Pennock Island and the West Channel to Gravina Island. The East Channel bridge would be approximately 3,400 feet long, and have a maximum height of approximately 285 feet above MHHW. It 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. The West Channel bridge would be approximately 2,465 feet long and have a maximum height of approximately 160 feet above MHHW. The bridge would have a vertical navigational clearance of 120 feet above MHHW and a horizontal navigational clearance of approximately 500 feet, which would accommodate passage of ships as large as the AMHS ferries, but not the largest cruise ships.

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 US 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 ship, 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. This alternative requires dredging the West Channel to improve its navigational characteristics.

Alternative G2 would be a new ferry service that would complement the existing airport ferry for vehicles and passengers between Peninsula Point on Revilla 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 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 Revilla 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 Revilla 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 would be new ferry service for vehicles and passengers adjacent to the existing airport ferry route between Charcoal Point on Revilla 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.

Note that Alternatives G2, G3, and G4, subsequent to release of the Final EIS, have been modified to include a heavy freight dock on Gravina Island to provide for the movement of freight and equipment that is too large or heavy to be transported on the shuttle ferries. See page 8 for more detail.

2008 SEIS Scoping Comments on Alternatives

During the scoping process for the SEIS,³ several commenters suggested additional alternatives or features for the DOT&PF and FHWA to consider in the Gravina Access Project. Additional comments regarding alternatives were received during the review of alternatives proposed for

³ The FHWA and DOT&PF initiated agency scoping on July 1, 2008. Public scoping was initiated with the Notice of Intent published in the Federal Register on July 2, 2008. Public scoping meetings were held in Ketchikan on July 22, 2008.

screening⁴ (see Appendix A for comments received). These ideas were either incorporated into one or more of the alternatives to be screened in this screening process or dismissed if clearly outside the scope of the project. The alternatives and features that were dismissed from further consideration and the reason for their dismissal are characterized as follows:

Provide a baggage and/or passenger check-in terminal at the existing ferry terminal on Revilla Island. Arrangements for baggage and passenger check-in are coordinated by the airlines under FAA regulations, and are not a surface transportation issue (see Appendix B for letter from FHWA to the Ketchikan Gateway Borough dated July 29, 2009). The difficulty for pedestrians with baggage using the ferry would be addressed with shuttle vans, as described below.

Use aerial cable trams for access between Revilla Island and Gravina Island. A tram would not provide vehicular access between the islands and would not promote long-term economic development on Gravina Island.

Relocate AMHS operations to Ward Cove or Gravina Island. This option would add substantial cost to the alternatives and would not improve the linkage between Revilla and Gravina Islands.

Construct additional roads on Pennock Island (6.5 miles) and Gravina Island (7.75.miles). This option would add substantial cost to the alternatives and would not improve the linkage between Revilla and Gravina Islands.

Build four small boat harbors on Pennock and Gravina Islands. This option would add substantial cost to the alternatives and would not improve the linkage between Revilla and Gravina Islands.

Build out the electrical system along the new road system. Utilities could be expanded along the existing and proposed road network; however, improved access between Revilla and Gravina Islands is not dependent on this feature.

Develop a heavy freight terminal on Revilla Island adjacent to the existing airport ferry terminal. Heavy freight facilities exist on Revilla Island. There is no need for new heavy freight handling facilities.

Pay outstanding debt for the MV Oral Freeman and other Ketchikan International Airport improvements. This does not meet the purpose and need for the project because it is not an element that would improve surface transportation between Revilla and Gravina Islands (see Appendix B for letter from FHWA to the Ketchikan Gateway Borough dated July 29, 2009).

Establish a “Gravina Access Permanent Fund” with monies provided by the State of Alaska to pay for operating costs of the airport ferry system. A fund to defray ferry operating costs is outside the scope of this project as it does not pertain to the purpose of and need for the project (see Appendix B for letter from FHWA to the Ketchikan Gateway Borough dated July 29, 2009).

Remove I-90 Floating Bridge Dock and construct a new boat dock on Gravina Island to handle vessels up to 100 feet long. Replacement of the deficient existing ferry layup dock and transfer bridge (consisting of a section of the old I-90 floating bridge) to support future layup and

⁴ Gravina Access Project Pre-screening Alternatives Memorandum, dated February 6, 2009; distributed to cooperating, participating, and interested agencies on February 10, 2009, with a request for comments by March 9, 2009; distributed to the public on March 5, 2009, with a request for comments by April 6, 2009.

maintenance of the airport ferry system is a reasonable component of the ferry alternatives. Each of the ferry alternatives will include a layup dock so that maintenance layup can occur without blocking use of a ferry terminal. Constructing an additional length of dock for public use would not address the purpose of improving surface transportation between Revilla and Gravina islands for vehicles, bicycles and pedestrians. In the past, joint use (ferry and public tie-up) docks have been built in other communities with the municipality providing funds for the public portion of the dock. The SEIS will discuss the possibility of constructing a longer dock with a public use section if the Borough acquires the required funds.

Relocate the existing seaplane pullout approximately 100 yards to the west. This is not an element that would improve surface transportation between Revilla and Gravina islands for vehicles, bicycles, and pedestrians. Relocating the seaplane pullout to improve seaplane operations is an FAA airport layout issue. Seaplane pullout relocation would only be included in a Gravina Access Project alternative if the physical layout of the alternative required it.

Alternatives Created or Modified after SEIS Scoping

DOT&PF has explored potential cost savings by changing some of the design parameters of previously considered alternatives and incorporating alternatives and features identified in the SEIS scoping process (i.e., those that were not dismissed) to develop variations for consideration in this screening process. Design parameters that were changed to reduce costs include: design speed, encroachment of causeway fill into the water to shorten structure length, greater encroachment into FAA's Part 77 airspace, adjustment of marine vessel track lines, use of different component or structure types, and delay in implementation of some features. During this process, DOT&PF identified the following six new or revised alternatives:

Alternative C3-4 is a variant of C3a and C4 that removes a curve from the bridge main span, and would include construction of a portion of the Borough's proposed Bench Road to Rex Allen Drive/Misty Marie Lane/Signal Road near Wal-Mart, rather than a large cut to Signal Road and Tongass Avenue. Alternative C3-4 is 1.9 miles long with a bridge that would be approximately 4,190 feet long. The maximum height of the bridge over the navigational channel would be approximately 280 feet above 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 AMHS ferries.

Alternative F3v is a variant of Alternative F3 that reduces the length of the bridge structures by creating embankments with fill for the bridge approaches and uses a cable-stayed structure over East Channel. The intent was to achieve overall cost saving compared to Alternative F3; however, the cost of the fill out-weighed the saving from a shorter bridge structure and construction costs for Alternative F3v are estimated to be higher than those for Alternative F3. The East Channel cable-stayed span would be 1,700 feet long. The West Channel box girder would be 700 feet long. The East Channel bridge would have a vertical navigational clearance of 60 feet above MHHW and a horizontal navigational clearance of approximately 350 feet. The West Channel bridge would have a vertical navigational clearance of 200 feet above MHHW and a horizontal navigational clearance of approximately 550 feet. As with Alternative F3, in order to accommodate the change in cruise ship passage, this alternative will include dredging the

West Channel to improve its navigational characteristics and provide a 750-foot-wide channel 30 feet deep at MLLW with the center 550-foot portion having a minimum depth of 40 feet.

Alternative G4v is a variant of Alternative G4 that would provide the same passenger waiting area, shuttle vans for pedestrians and their luggage, and heavy freight dock with staging area on Gravina. The variant, however, would provide a new ferry and new ferry terminals only when ferry demand increases enough to warrant the additional capacity.⁵ Although a fourth ferry is not anticipated in the 75-year design life of this alternative, this alternative does not preclude addition of another ferry if needed. Alternative G4v was added as a lower cost alternative to Alternative G4 to address immediate needs for improved facilities for airport travelers and heavy freight movement.

Alternative M1 is a moveable bridge over Tongass Narrows near the quarry on Tongass Avenue and the existing ferry terminal on Gravina Island. The alignment would be about 0.31-miles long and relatively flat. The bridge would be approximately 1,400-feet long, forming a T-intersection with Tongass Avenue on Revilla Island and connecting near the airport terminal on Gravina Island. The bridge would be a vertical lift steel through-truss span with 300-foot high lift towers, providing navigational clearances of 550 feet horizontally and 200 feet vertically above MHHW in the raised position. In the lowered position, the vertical clearance would be 20 feet above MHHW. The lift towers would penetrate FAA Part 77 airspace. In raised position, the lift span would accommodate one-way passage of cruise ships and two-way passage of most other ships, including AMHS ferries. In the lowered position, the bridge would allow passage of very small commercial vessels and recreation craft.

Alternative M2 is a moveable bridge over Tongass Narrows near the two existing ferry terminals on Revilla and Gravina islands. The alignment would be about 0.5 miles long, and the bridge would be approximately 1,700 feet long. The bridge would be a vertical lift steel through-truss span with 300-foot high lift towers, providing navigation clearances of 550 feet horizontally and 200 feet vertically above MHHW in the raised position. The lift towers would penetrate into the Part 77 airspace. In the raised positions, the lift span would accommodate one-way passage of cruise ships and two-way passage of most other ships, including AMHS ferries. In the lowered position, the vertical clearance would be approximately 60 feet above MHHW, which would allow passage of most barges, commercial vessels, and many recreational craft. The bridge alignment would curve to its connection with Tongass Avenue on Revilla Island, providing adequate room for 25 vehicles queuing when the bridge is raised. On Gravina Island, the connection would be in the vicinity of the airport terminal building.

Alternative T1 is a modification of one of the tunnel alternatives presented in the 2004 Final EIS. Alternative T1 would be a 3,200-foot submersed tunnel crossing between Peninsula Point on Revilla Island and Lewis Point on Gravina Island at the location of Alternative G2. The crossing distance would be approximately 0.5 miles long. A 0.8-mile long new road would be constructed on Gravina Island to connect the tunnel with Seley Road.

⁵ The threshold of demand that would trigger development of a new ferry and new ferry terminals will be determined in the SEIS.

Alternatives Identified for Screening

The 15 build alternatives described above are the alternatives DOT&PF, in consultation with FHWA, identified for this SEIS screening process. These alternatives were developed with input from the public and the participating and cooperating agencies for the project.⁶

Each build alternative includes the maintenance and operation of:

- The recently constructed Gravina Island Highway for a total length of approximately 3.2 miles;
- Lewis Reef and Seley roads to the northern airport reserve boundary, for a total length of approximately 2.2 miles; and
- Airport Access Road, which extends from the airport terminal, passes beneath the runway safety area in a tunnel, and then climbs the hill to its intersection with the Gravina Island Highway and Lewis Reef Road, a distance of approximately 1.2 miles.

Each build alternative also includes replacement of the existing 24-foot wide bridge over Airport Creek at the end of Lewis Reef Road with a new 36-foot wide bridge.

All alternatives include accommodations for pedestrians and bicycles. Bridge alternatives include an 8-foot wide walkway on the bridge structure, which can be used by pedestrians and bicycles.

All ferry alternatives include:

- A 60-passenger waiting facility with restrooms at the existing ferry terminal on Revilla Island and other improvements to the terminal site, including expansion of paved parking areas, lighting, security, water, sewer, covered walkways, security cameras, fencing, landscaping, parking meter system, sidewalks, and Tongass Highway access improvements. These improvements may require acquisition of adjoining land.
- Two shuttle vans to carry both pedestrians and their luggage from Charcoal Point on Revilla Island to the airport terminal on Gravina Island.
- A new heavy freight dock on a 2.5-acre site near the airport, just to the south of the existing ferry berth to provide heavy freight access to Gravina Island for highway loads that cannot be accommodated by the shuttle ferry. This facility would be capable of landing vessels and barges carrying large loads, such as construction equipment and materials, transit mixers, fuel tankers, and fire trucks. The dock would also be capable of accommodating AMHS-class vessels. Dock facilities that can accommodate the large loads are currently available on Revilla Island.
- Reconstruction of the existing airport ferry transfer bridges and ramps, if needed to meet current design standards.

⁶ On February 10, 2009, FHWA and DOT&PF requested input from cooperating and participating agencies on the pre-screening alternatives, and on February 20, 2009, asked the agencies for input on the proposed screening method. FHWA and DOT&PF requested comments from the agencies on the proposed pre-screening alternatives and screening methods by March 9 and 23, 2009, respectively. FHWA and DOT&PF held an open house in Ketchikan on March 5, 2009, to provide information on the pre-screening alternatives and the screening process. Public comments on the pre-screening alternatives and screening process were due April 6, 2009.

- Upgrades and improvements for all sidewalks and wheelchair ramps associated with the airport ferry facilities to meet applicable standards.
- Toll facilities. Revenue from toll collection would be used to offset the costs of operation and maintenance of the ferry system.
- Replacement of the deficient existing ferry layup dock and transfer bridge (consisting of a section of the old I-90 floating bridge) to support layup and maintenance of the airport shuttle ferry system.

In the FEIS, all alternatives (bridges and ferries) included a parking structure adjacent to the airport terminal to accommodate anticipated future needs for airport travelers. This feature has been removed from the alternatives to be evaluated in the SEIS. FHWA and DOT&PF have determined that future development of parking facilities would occur when warranted and when funding is available. The type and extent of parking facilities at the airport would be determined based on future demand, which is unknown at this time. The funding source is anticipated to be FAA rather than FHWA because parking is an airport function. The SEIS will consider the potential for future expansion of parking facilities on Gravina Island at the airport and, if it is determined to be a reasonably foreseeable future action, the expansion of parking facilities on Gravina Island will be included in the cumulative impact assessment.

DOT&PF Commissioner Leo von Scheben requested that any bridge alternative be evaluated with tolls to offset, in part, the cost of constructing and operating the bridge.⁷ Tolling is considered a potential element of the bridge alternatives in this screening process. Should tolling be considered reasonable, bridge alternatives that pass the screening process would include the option of tolling. DOT&PF projects that any bridge alternative with tolling would include a single toll collection facility on Gravina Island near the approach to the bridge and that tolls would be collected only from vehicles in route to Revilla Island. The DOT&PF will conduct a sensitivity analysis to determine the optimum toll amount and develop more detailed information about the design and type of toll facility that could be built. If tolling is considered reasonable, the SEIS will discuss toll rates, operational costs, life cycle costs, revenue estimates, and how a toll might affect traffic demand and development on Gravina Island.

Federal agencies are required to assess the effects of a No Action Alternative in an EIS (40 CFR Section 1502.14(d)). For this reason, the No Action Alternative is not included in the screening process other than to provide a baseline for evaluating potential build alternatives.

Alternative Construction Costs

The DOT&PF calculated construction costs for each of the alternatives using preliminary design information (see *Construction Cost Estimate Report of the Alternatives to be Considered in the SDEIS Screening Process* July 2009). Construction costs include costs for mobilization, design engineering, construction materials and labor, construction management, and right-of-way acquisitions. Proposed screening criteria included 75-year life-cycle costs; however, FHWA and DOT&PF decided construction costs are a more appropriate measure because they relate more directly to the needed and available funds for development. The construction costs associated

⁷ Memorandum from Leo von Scheben, Commissioner, DOT&PF, to Gary L. Davis, Southeast Regional Director, DOT&PF, September 17, 2009. A copy of the memorandum is provided at Appendix C.

with the 15 build alternatives examined in this screening process and the No Action Alternative are as follows:

Construction Costs Associated with Alternatives		
Alternative	Construction Costs	Construction Costs with Toll Facility
C3a	\$462.7 million	\$463.0 million
C3b	\$352.3 million	\$352.6 million
C4	\$441.1 million	\$441.4 million
C3-4	\$240.4 million	\$240.7 million
D1	\$290.6 million	\$290.9 million
F1	\$375.2 million	\$375.5 million
F3	\$303.7 million	\$304.0 million
F3v	\$348.8 million	\$349.1 million
G2	\$90.6 million	Not applicable
G3	\$83.0 million	Not applicable
G4	\$69.8 million	Not applicable
G4v	\$22.7 million	Not applicable
M1	\$374.7 million	\$375.0 million
M2	\$412.7 million	\$413.0 million
T1	\$417.0 million	\$417.3 million
No Action	\$0	Not applicable

Note: The construction costs presented in this table have been revised since issuance of the *Construction Cost Estimate Report of the Alternatives to be Considered in the SDEIS Screening Process* (July 2009). Construction costs of ferry alternatives have been revised to include replacement cost of the layup facility. Costs of a tolling facility were added to the bridge alternatives.

3. SCREENING METHODS AND CRITERIA

The screening method used by FHWA and DOT&PF was developed with input from the public and the participating and cooperating agencies for the project. Proposed screening factors were made available to agencies and the public during the review period for pre-screening alternatives.⁸ The screening factors for alternatives include cost, purpose and need, Section 4(f) impacts, and environmental or social impacts that would be unacceptable or unpermissible as defined by agencies having regulatory authority over those resources. The screening criteria are described below.

Screening Criteria for Gravina Access Project SEIS Alternatives
<p>Criterion 1 - Costs: Each alternative will be screened on the basis of construction costs. The FHWA and DOT&PF have determined that an alternative with estimated construction costs in excess of \$305 million is not reasonable, based on potentially available funds.⁹</p>
<p>Criterion 2 - Purpose and Need: The purpose of the Gravina Access Project is to improve surface transportation between Revilla Island and Gravina Island. Three specific needs are identified:</p> <p>To provide the Ketchikan Gateway Borough and its residents more reliable, efficient, convenient, and cost-effective access for vehicles, bicycles, and pedestrians to Borough lands and other developable or recreational lands on Gravina Island in support of the Borough's adopted land use plans.</p> <p>To improve the convenience and reliability of access to Ketchikan International Airport for passengers, airport tenants, emergency personnel and equipment, and shipment of freight.</p> <p>To promote environmentally sound, planned long-term economic development on Gravina Island.</p> <p>Alternatives screened under Criterion 2 will be examined in the following context:</p> <ul style="list-style-type: none"> • Convenience and efficiency to users in the form of travel time to the airport and land that is or could be developed for residential, recreational, or commercial uses. • Reliability of transit across Tongass Narrows; e.g., frequency of access closures for any reason. • Ability to support Ketchikan Gateway Borough planned economic development on Gravina Island, expressed in terms of areas or road extensions likely to be developed, as conceived in the Borough's Gravina Island Plan.

⁸ Gravina Access Project Draft Alternatives Screening Methodology, February 2009; distributed to cooperating, participating, and interested agencies on February 20, 2009, with a request for comments by March 23, 2009; distributed to the public on March 5, 2009, with a request for comments by April 6, 2009.

⁹ See Appendix C for letter from DOT&PF Commissioner dated September 17, 2009, and related talking points of September 26, 2009.

Criterion 3 - Environmental or Socioeconomic Impacts Large Enough to Preclude

Consideration: This criterion focuses on the environmental or social impacts that would be unacceptable or unpermissible as defined by agencies having regulatory authority over those resources. Three primary impact categories were considered: impacts to wildlife and/or habitat, impacts to marine navigation, and impacts to aviation.

Tongass Narrows is a sheltered marine channel known for its fish and wildlife, including species protected by the Endangered Species Act, and high value habitat with protection under the Magnuson-Stevens Fisheries Conservation and Management Act and the Clean Water Act. If an alternative would create unacceptable and unavoidable adverse impacts to sensitive habitats or protected species or an agency with jurisdiction by law has indicated an alternative could not be permitted, that alternative will be determined not reasonable.

Tongass Narrows accommodates a large volume of commercial marine traffic. Large cruise ships navigate through Tongass Narrows during the summer tourist season. If an alternative would not meet the reasonable needs of navigation for existing vessel traffic in Tongass Narrows and therefore would not be permitted by the U. S. Coast Guard (USCG) under Section 9 of the Rivers and Harbors Act of 1899, it will be determined not reasonable.

Airspace associated with Ketchikan International Airport is overseen by the Federal Aviation Administration (FAA). Federal Aviation Regulations Part 77 authorizes the FAA to identify potential aeronautical hazards to prevent or minimize adverse impacts to the safe and efficient use of navigable airspace. In accordance with Part 77, the FAA reviews proposed projects in the vicinity of an airport to determine whether project construction would affect airspace. The FAA may find “no objection” to an alternative; make a “conditional determination,” in which an alternative would be acceptable contingent upon implementation of mitigation measures (e.g., lighting); or find an alternative “objectionable,” indicating the project would create a hazard.

All aircraft departing from or arriving at Ketchikan International Airport and the Ketchikan area floatplane facilities operate under instrument flight rules (IFR) or visual flight rules (VFR). In addition, special visual flight rules (SVFR) are in effect when visibility and ceiling conditions drop below VFR minimums. Exemption 4760 allows aircraft to fly as low as 200 feet MSL. If an alternative would affect instrument procedures or create an aeronautical hazard that could not be mitigated, that alternative will be considered not reasonable.

Criterion 4 - Section 4(f) Impacts: Section 4(f) of the Department of Transportation (DOT) Act of 1966 is codified in Title 49 U.S.C. Section 303 and Title 23 U.S.C. Section 138. Commonly called “Section 4(f),” the law stipulates FHWA and other federal DOT agencies cannot approve the use of land from publicly owned parks, recreation areas, or wildlife or waterfowl refuges, or from historic sites unless:

- There is no feasible and prudent alternative to the use of land.
- The action includes all possible planning to minimize harm to the property resulting from use.

If at least one otherwise reasonable alternative avoids all Section 4(f) properties, or can be modified to avoid such properties, an alternative that does use Section 4(f) property will be eliminated as not reasonable.

A two-phased approach was used for the alternative screening analysis. Alternatives were broadly screened for all criteria in the first phase. Alternatives that were clearly not reasonable based on the first phase of the analysis were removed from further screening analysis. Alternatives that satisfied the first phase of screening were carried forward for consideration under a more detailed screening analysis. If an alternative did not satisfy one or more screening criteria in the second phase of the analysis, it was removed from further consideration. In this process, the alternatives that satisfy all four screening criteria are considered reasonable alternatives that will be evaluated in the SEIS.

4. SCREENING RESULTS

This section presents the results of the two-phased screening process.

Phase 1

In the first phase of the screening process, we examined the 15 build alternatives relative to the overall cost threshold, ability to meet the purpose and need for the project, environmental or socioeconomic impacts that would be unreasonable, and Section 4(f) impacts. The following table characterizes the 15 build alternatives relative to these broad screening criteria. Shaded cells in the table indicate areas where an alternative does not pass the screen. The paragraphs following the table provide further explanation of the first phase screening results.

<u>Alternative</u>	<u>Criterion 1</u> Costs <i>Cost relative to \$305 million threshold</i>	<u>Criterion 2</u> Purpose and Need <i>Improved convenience, efficiency, and reliability of access to Gravina Island</i>	<u>Criterion 3</u> Unreasonable Environmental or Socioeconomic Impacts	<u>Criterion 4</u> Section 4(f) impacts
C3a	\$158M over	Achieved through unrestricted access	None identified	None identified
C3b	\$47M over	Achieved through unrestricted access	Impacts to marine navigation	None identified
C4	\$136M over	Achieved through unrestricted access	None identified	None identified
C3-4	\$65M under	Achieved through unrestricted access	None identified	None identified
D1	\$14M under	Achieved through unrestricted access	Impacts to marine navigation	None identified
F1	\$70M over	Achieved through unrestricted access	None identified	None identified
F3	\$1M under	Achieved through unrestricted access	None identified	None identified
F3v	\$44M over	Achieved through unrestricted access	None identified	None identified
G2	\$221M under	Achieved through more frequent ferry service and alternative locations of access	None identified	None identified
G3	\$228M under	Achieved through more frequent ferry service and alternative locations of access	None identified	None identified
G4	\$242M under	Achieved through more frequent ferry service and new roads to developable lands	None identified	None identified
G4v	\$289M under	Partially achieved through new roads to developable lands	None identified	None identified

<u>Alternative</u>	<u>Criterion 1</u> Costs <i>Cost relative to \$305 million threshold</i>	<u>Criterion 2</u> Purpose and Need <i>Improved convenience, efficiency, and reliability of access to Gravina Island</i>	<u>Criterion 3</u> Unreasonable Environmental or Socioeconomic Impacts	<u>Criterion 4</u> Section 4(f) impacts
M1	\$70M over	Partially achieved – bridge raisings for marine traffic would cause unacceptable delays	None identified	None identified
M2	\$108M over	Partially achieved – bridge raisings for marine traffic would cause unacceptable delays	None identified	None identified
T1	\$112M over	Achieved through unrestricted access	None identified	None identified

Criterion 1 –Costs. The estimated construction costs of Alternatives C3a, C3b, C4, F1, F3v, M1, M2, and T1 far exceed the cost threshold of \$305 million established by DOT&PF. These alternatives are not financially feasible. Alternatives C3-4, D1, F3, G2, G3, G4, and G4v are financially feasible based on construction cost estimates. At approximately \$300,000, the construction costs of a toll collection facility would not add substantially to the overall cost of Alternatives C3-4, D1, or F3. Tolling, therefore, would be a reasonable optional element of the bridge alternatives under the cost criterion.

Criterion 2 - Purpose and Need. Each of the 15 build alternatives supports the Ketchikan Gateway Borough’s plan for economic development on Gravina Island by maintaining and operating roads that extend beyond the airport property to developable lands (i.e., the Gravina Island Highway and Lewis Reef and Seley roads). Convenience and reliability would be improved with alternatives that provide unrestricted access or additional access opportunities compared with existing conditions. Long or frequent interruption in access or closures due to mechanical problems with a single ferry system or, in the case of moveable bridges, bridge raisings for marine traffic would cause unacceptable delays. In particular with the moveable bridges, Alternatives M1 and M2, scheduled bridge raises would be frequent in the summer and would severely inhibit traffic movement between Revilla and Gravina islands. The time to raise the span, allow a vessel to pass, and then lower the span would be up to 30 minutes, much longer than the delays in the No Action Alternative. Although the moveable bridge alternatives would provide convenient and reliable access when open to highway traffic, the frequency and duration of bridge raisings would be such that these alternatives do not sufficiently meet the criterion for improved convenience and reliability of access. Short travel time delays (likely a few minutes or less) may be associated with a toll facility for the bridge alternatives; however, the delay would not create an unreasonable inconvenience or appreciably affect the reliability of access.

Criterion 3 – Unreasonable Environmental or Socioeconomic Impacts. The DOT&PF consulted with U.S. Fish and Wildlife Service, National Marine Fisheries Service, U.S. Army Corps of Engineers, and Alaska Department of Fish and Game to determine whether any unacceptable or unpermissible wildlife or habitat impacts could result from any of the alternatives identified for screening. None of the agencies identified an unacceptable or unpermissible alternative.

The USCG has expressed concern over any alternative that would substantially impede marine navigation in Tongass Narrows.¹⁰ Alternatives C3b and D1 would preclude the passage of large cruise ships through Tongass Narrows, which would alter the direction of their approach and departure to and from the cruise ship dock in Ketchikan. Access to the Port of Ketchikan would become effectively one-way in and out for vessels with air drafts (the distance from the surface of the water to the highest point on a vessel) of over 120 feet. The consequences of this impact would be increased sailing time and fuel expenditures, and possibly changed arrival and departure schedules that could reduce port time in Ketchikan. Some cruise ship operators might choose to bypass Ketchikan altogether. Alternatives C3b and D1 would not be acceptable or permissible according to the USCG because of their impacts on marine navigation.

Criterion 4 - Section 4(f) Impacts. Based on analyses presented in the FEIS and an architectural field reconnaissance conducted in August 2008,¹¹ there are no publicly-owned, parks, recreation areas, wildlife or waterfowl refuges or historic sites within the proposed right-of-way of any of the build alternatives. The architectural field reconnaissance identified one structure potentially eligible for the National Register of Historic Places in the vicinity of an alternative. The structure is identified as the Temsco Helicopter Quonset hut at Peninsula Point, near the proposed location of the Alternative G2 ferry terminal on Revilla Island. While the property would not be directly affected by alternative, proximity impacts that could potentially impair the property's attributes were considered. There is no indication that the contributing elements to the Quonset hut's potential eligibility for National Register listing would be affected by the presence of a ferry terminal. Views from the Quonset hut would not be a contributing element for eligibility and, therefore, a bridge alternative visible from the property would not be considered an adverse impact.

No alternative is eliminated by screening for Criterion 4. The addition of a tolling facility for bridge alternatives would not require additional right-of-way or other interest in a Section 4(f) property.

The results of the first phase of the screening process clearly indicate that Alternatives C3a, C3b, C4, F1, F3v, M1, M2, and T1 have costs that are well beyond anticipated funding. Alternatives M1 and M2 also fail to meet the need for improved reliability of access. Alternative C3b does not meet the reasonable needs of navigation in Tongass Narrows. Neither does Alternative D1, although its costs are below the cost threshold of \$305 million. With these results, Alternatives C3a, C3b, C4, D1, F1, F3v, M1, M2, and T1 are eliminated from further consideration in the

¹⁰ Letter from J.N. Helfinstine, USCG Bridge Section Chief, to David Miller, FHWA Division Administrator, October 9, 2008.

¹¹ Memorandum to Mark Dalton, HDR, from Michael Yarborough, Cultural Resources Consultants, LLC, Re: Architectural Field Reconnaissance for the Gravina Access Project. October 22, 2008.

Gravina Access Project SEIS. The remaining alternatives, Alternatives C3-4, F3, G2, G3, G4, and G4v were carried forward and examined in greater detail in the second phase of the screening analysis.

Phase 2

With the cost threshold and Section 4(f) criteria strictly applied in the first phase, no further analysis of these factors was needed in the second phase of screening. Rather, the second phase of the screening process looked more closely at the alternatives relative to the criteria for purpose and need and environmental and socioeconomic impacts.

Criterion 2 - Purpose and Need. Alternatives C3-4, F3, G2, G3, G4, and G4v were evaluated for their convenience, efficiency, and reliability based on travel time for users and potential closures due to weather or other conditions that would temporarily interrupt access via the alternatives.

Travel time estimates from Revilla Island to Gravina Island using Alternatives C3-4, F3, G2, G3, G4, and G4v are presented in the table below. Travel time for the No Action Alternative is included as a point of reference. While the existing ferry would be operational under Alternatives G2 and G3, note that travel time estimates for these alternatives represent the new ferry facility only. The travel times from the existing ferry facility are represented in Alternative G4v. The travel time reported for Alternative G4 is shorter than the travel time for Alternative G4v because Alternative G4 includes additional ferry service, which increases the frequency of ferry trips, thereby reducing the wait for a ferry.

Efficiency of Access Based on Travel Time							
Travel Route	Alternative						
	No Action¹	C3-4²	F3¹	G2³	G3³	G4⁴	G4v⁵
Average Vehicular Travel Time (in minutes)							
To airport from:							
Downtown Ketchikan	27	15	13	42	35	25	27
Carlanna Creek	19	7	21	34	34	17	19
Ward Cove	25	9	27	34	40	23	25
To developable land from:							
Downtown Ketchikan	31	18	7	34	29	29	31
Carlanna Creek	23	10	15	26	28	21	23
Ward Cove	29	12	21	26	34	27	29

¹ From 2004 Final EIS.
² Values derived from travel time calculations made for Alternative C3a in the 2004 Final EIS, assuming additional distance with the C3-4 alignment on Revilla Island would add approximately 1 minute to travel time for each travel route.
³ From 2004 Final EIS. Values represent travel time from the new ferry facility only. Travel time for the existing airport ferry would be the same as for No Action.
⁴ From 2004 Final EIS. Additional ferries at the same location reduce the wait time, resulting in reduced travel time.
⁵ Same as No Action Alternative.

Concerning convenience and reliability of access to Borough lands and other developable or recreation lands on Gravina Island, as well as Ketchikan International Airport:

- Alternatives C3-4 and F3 would provide unrestricted bridge access. Bridge closures would occur only under severe weather conditions, which would likely close the airport also.
- Alternatives G2, G3, G4, and G4v would not provide unrestricted access because the ferries associated with these alternatives would operate under a similar schedule as the existing ferry service: one vessel would operate between the new ferry terminals during the winter (16 hours per day, crossing every 30 minutes), and both vessels would operate during the summer (16 hours per day, crossing every 15 minutes). There would be no access for vehicles in the late night/early morning, except in an emergency. Severe weather conditions could interrupt ferry service; although such conditions would likely close the airport as well. Alternative G2, G3, and G4 would provide an additional access opportunity to Gravina Island if one of the crossing locations were to experience service interruption or delays from mechanical problems, limited ferry capacity, incompatible ferry arrival or departure schedule, or other issues. Alternative G4v would not provide additional access opportunities in the near term: no new ferry service would be provided until demand increases enough to warrant it. All of the ferry alternatives would improve convenience for airport users by providing increased parking and a protected waiting area with restrooms on the Revilla Island side, as well as a shuttle van system to transport pedestrians and their baggage. These alternatives would also improve access for freight shipment and large emergency response vehicles and equipment with the addition of the heavy freight dock on Gravina Island.

Criterion 2 also calls for examination of the alternatives relative to their ability to support Ketchikan Gateway Borough planned economic development on Gravina Island. With recent development of roads on Gravina Island (i.e., since publication of the 2004 Final EIS and Record of Decision), the ability of the alternatives to support further development can be tied to the linkages created by the alternative. All alternatives considered in this screening phase would provide improved access to developable land, as conceived in the Borough's Gravina Island Plan. They all include an improved bridge over Airport Creek, and they all maintain access to developable land via the Gravina Island Highway and Lewis Reef Road. Furthermore, Alternatives G2 and G3 require additional roadway, which would provide additional access to commercial and industrial land.

In reviewing Alternatives C3-4, F3, G2, G3, G4, and G4v relative to Criterion 2, it is clear that Alternatives C3-4 and F3 fully meet the project's purpose and need because they provide 24/7, free-flowing access across Tongass Narrows. Bridge alternatives near the airport would maximize convenience, reliability, travel time reduction, and development support. Requiring travelers to pay a toll when crossing the bridge from Gravina Island to Revilla Island could cause delays, depending on traffic volumes at any given time and the method of payment delivery; however, the overall effect on travel time would be negligible. Tolling is not eliminated as a potential element of a bridge alternative under this criterion. Alternatives G2, G3, and G4 provide some improvement to the reliability of access, but little or no improvement to efficiency in terms of reduced travel times. Alternative G4v would not initially provide more sailings to improve the reliability of access, but it addresses the need for improved convenience of access for airport users with the facilities on Revilla Island and the need for improved freight

transportation with the heavy freight dock, as do the other ferry alternatives. Alternatives C3-4, F3, G2, G3, G4, and G4v all support Ketchikan Gateway Borough planned economic development on Gravina Island with improved access provided to developable lands by the Gravina Island Highway and the Lewis Reef Road. Alternatives C3-4, F3, G2, G3, G4, and G4v sufficiently address one or more parts of the project purpose and need and none are eliminated in this screening phase under Criterion 3.

Criterion 3 - Environmental or Socioeconomic Impacts Large Enough to Preclude

Consideration. As stated in the first phase of the screening process, none of the alternatives were identified as being unacceptable or unpermissible based on impacts to fish, wildlife, and water resources. In this phase, we evaluated Alternatives C3-4, F3, G2, G3, G4, and G4v relative to aviation and marine navigation impacts. The FAA conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and Title 14 of the Code of Federal Regulations, part 77, where applicable, to determine whether Alternative C3-4 would affect safe and efficient utilization of navigable airspace. The FAA recently determined that Alternative C3-4 would not be a hazard to air navigation if the bridge and road structures are marked and/or lighted in accordance with FAA Advisory circular 70/7460-1 K Change 2 (see Appendix D). As reported in the 2004 Final EIS, the bridges associated with Alternative F3 would not penetrate any airspace surfaces and would have no effect on approaches or departures from Ketchikan International Airport.

In the scoping process for the 2004 Final EIS, the FAA commented on bridge alternatives and potential interference with SVFR operations. Specifically, the FAA commented that bridges near the airport (i.e., Alternatives C3(a), C3(b), C4, and D1) would hinder aircraft flying inbound from the West to Ketchikan Harbor and, if any of these bridges were built, the boundaries of Exemption 4760 would have to be modified to exclude any airspace west of the airport. The FAA also stated that such modification of the boundaries would greatly reduce the effectiveness of Exemption 4760, allowing less than 10 percent of current operations conducted under the exemption to occur.¹² Alternative C3-4 would have similar effects on SVFR operations. These impacts do not preclude Alternative C3-4 from further consideration because operations under Exemption 4760 represent less than 2 percent of total floatplane operations in the Ketchikan area. DOT&PF will investigate changes to floatplane operations in Tongass Narrows since completion of the 2004 Final EIS to reconfirm these findings in the SEIS, but such changes are not expected to affect the reasonableness of Alternative C3-4 under this criterion.

Neither of the bridges proposed for Alternative F3 would be within the boundaries of the Exemption 4760 airspace; however, the FAA commented that the bridge locations are sufficiently close to the Exemption 4760 airspace to potentially reduce the number of SVFR operations and require adjustment of the exemption.¹³ Alternative F3 could reduce SFVR operations by 5 percent, or 100 flights per year. This impact does not preclude Alternative F3 from further consideration because 100 flights per year represent less than 0.1 percent of total annual floatplane operations in the Ketchikan area. While the magnitude of the impact may have changed since these numbers were reported in the 2004 Final EIS due to changes in floatplane

¹² Letter from Mick J. Green, Principal Operations Inspector, FAA, to John Schommer, FAA Obstruction Evaluation Specialist, July 15, 2002.

¹³ Ibid.

operations in Tongass Narrows, it is not expected to affect the reasonableness of Alternative F3 under this criterion.

Marine traffic volume through Tongass Narrows is considerably high, especially during the summer. Large cruise ships, AMHS ferries, floatplanes, barges, fishing vessels, charter boats, recreational passenger boats, and smaller craft create a high volume of marine traffic in a relatively small area. Alternative C3-4 is designed with navigational clearances that would support passage of all vessels currently transiting Tongass Narrows.

During development of the Draft EIS for the Gravina Access Project, the USCG commented that Alternative F3, as proposed in 2002, would not provide for the reasonable needs of navigation because it would require large cruise ships to use the West Channel.¹⁴ This alternative would alter the direction of their approach and departure to and from the cruise ship dock in Ketchikan. The USCG expressed concern over increased congestion in the turning basin at Ketchikan Harbor and potentially hazardous navigation conditions during inclement weather by routing cruise ships through the West Channel. In the 2004 Final EIS, the DOT&PF presented a revised Alternative F3 that included modification (widening) of the West Channel to improve its navigability (also described in Section 2 of this screening report). Further modifications to the design of Alternative F3 were made to improve safety by aligning the West Channel bridge to a position perpendicular to the main navigation channel. With these modifications, DOT&PF considers Alternative F3 a reasonable alternative with respect to marine navigation through West Channel.

Alternatives G2, G3, G4, and G4v, the ferry alternatives, would have no effect on marine navigation other than adding a minor amount of cross-channel traffic in Tongass Narrows. Given the regular gaps in the ferry schedules, ferry maneuverability, and the past compatibility of the ferry service with other marine traffic in Tongass Narrows, these alternatives would not have unacceptable adverse effects on marine navigation.

Alternatives C3-4, F3, G2, G3, G4, and G4v satisfy Criterion 3 and pass the second phase of screening under Criterion 4. There are no environmental or socioeconomic impacts associated with tolling that are large enough to preclude consideration of tolling as an element of a reasonable bridge alternative.

¹⁴ Letter from J.N. Helfinstine, USCG Bridge Section Chief, to Mark Dalton, HDR Project Manager, March 4, 2002.

5. GRAVINA ACCESS PROJECT SEIS REASONABLE ALTERNATIVES

Based on the results of this screening process, Alternatives C3-4, F3, G2, G3, G4, and G4v are reasonable alternatives and will be evaluated in detail in the Gravina Access Project SEIS along with the No Action Alternative. In accordance with the DOT&PF Commissioner's request, the SEIS will also evaluate variants of Alternatives C3-4 and F3 that include tolls.

APPENDICES

- A Screening Comments Received**
- B Letter from FHWA to Ketchikan Gateway Borough, July 29, 2009**
- C Letter from DOT&PF Commissioner, September 17, 2009**
- D FAA Determinations of No Hazard to Air Navigation for Alternative C3-4**

Appendix A

Screening Comments Received

MEMORANDUM

State of Alaska DEPARTMENT OF FISH & GAME

TO: Reuben Yost
Southeast Environmental Coordinator
DOT&PF Southeast Region
Juneau

DATE: March 9, 2009

PHONE: (907) 826-2560

FROM: Mark Minnillo
Habitat Biologist
Division of Habitat
Craig

SUBJECT: Gravina Access SEIS and
Pre-Screening Comments

The Alaska Department of Fish & Game (ADF&G) has reviewed the *Gravina Access Pre-Screening Alternatives Memorandum* and the *Draft Screening Methodology* for the Gravina Access Project located in Ketchikan. The following represents our concerns as they pertain to the proposed alternatives and the screening methodology used.

The purpose of the Gravina Access project is to improve surface transportation between Revillagiedo Island, the primary population center for the Ketchikan Gateway Borough, the City of Ketchikan, and the City of Saxman; and Gravina Island, the location of the Ketchikan International Airport. Subsequent to the approval of the Gravina Access Project Final Environmental Impact Statement (FEIS) and issuance of the Record of Decision (ROD) in 2004, it was determined that the cost of the selected alternative (F1) was beyond the realistic amount of funding available to the state and not financially feasible. In initiating the Supplemental Environmental Impact Statement (SEIS); the *Gravina Access Pre-Screening Alternatives Memorandum* lists 15 action and 1 no action alternatives which ADOT&PF are now considering in place of the F1 alternative.

As detailed in our 2004 comments on the original environmental document for the Gravina Access project, ADF&G's concerns pertained to the road portion of the project on Gravina Island due to the crossing of several fish-bearing streams. This portion of the project has been completed and all associated Fish Habitat permits have been issued. None of the 15 alternatives proposed for screening include any additional stream crossings or work that would require any Fish Habitat permits.

With regards to the *Draft Screening Methodology*; ADF&G has the following comment to offer:

1. Section 4(f) impacts criteria should not be used as there are no lands associated with the project that fall under Section 4(f) of the Department of Transportation Act of 1966 codified in Section 303 of Title 49 U.S.C. and Section 138 of Title 23 U.S.C..

Reuben Yost
March 9, 2009

Gravina Access
Pre-Screening Alternatives

Thank you for the opportunity to comment on this project. If you have any questions or need further information, please contact me.

Cc: Al Ott, ADF&G, Fairbanks*
Boyd Porter, ADF&G, Ketchikan*
Scott Walker, ADF&G, Ketchikan*
Nicole Hayes, USACE, Anchorage*
Paul Slenkamp, ADNR, Juneau*
Steve Brockman, USFWS, Juneau*
Jim Rypkema, ADEC, Juneau*

* Email

From: Yost, Reuben M (DOT)
Sent: Friday, April 10, 2009 9:31 AM
To: Holman, Deborah L (DOT)
Subject: FW: Gravina Access - Screening Comments for SEIS
Attachments: R2138.pdf; Dan Bockhorst.vcf

For the record and HDR

From: Dan Bockhorst [mailto:danb@borough.ketchikan.ak.us]
Sent: Wednesday, March 25, 2009 4:57 PM
To: Yost, Reuben M (DOT); Lowell, James A (DOT)
Cc: 'Harriet Edwards'
Subject: Gravina Access - Screening Comments for SEIS

Reuben and Jim:

Attached is a copy of Resolution No. 2138 of the Assembly of the Ketchikan Gateway Borough addressing the 16 Gravina Access alternatives (including the "no build" option). In brief, the Assembly offered the following comments for consideration in the screening process:

1. Given that the State of Alaska has previously rejected as too expensive the F1 alternative, and given that five other alternatives are currently estimated to cost as much as or more than the F1 alternative, the Assembly found no reason to encourage DOT&PF to pursue further consideration of the following options unless the State modifies its fiscal policy regarding Gravina Access:

F1 (two bridges across Pennock Island);
C3a (high bridge near airport);
C4 (high bridge near airport);
T1 (tunnel - Peninsula Pt. to Lewis Pt.);
M2 (movable bridge near airport); and
M1 (movable bridge at airport).

2. Two of the options, the C3b (low bridge near airport) and D1 (low bridge at airport) alternatives, are too low to accommodate most cruise ships that are a foundation of the Ketchikan economy. Therefore, the Assembly took the position that those alternatives do not warrant further consideration.
3. The three remaining bridge options should be evaluated further. These consist of the following:
F3 – two bridges across Pennock Island (estimated cost: \$304 million);
F3v – variation of F3 (estimated cost: \$349 million); and
C3-4 – high bridge near the airport (estimated cost: \$240 million).

The Assembly recognized, however, that the C3-4 option penetrates into FAA Part 77 airspace and that DOT&PF has not yet determined whether FAA would allow construction of that option. If practical, FAA's position concerning the C3-4 option should be determined before DOT&PF spends significant resources evaluating that option.

4. Rather than choose any of the prescribed ferry options, the Borough Assembly expressed its support for a new ferry option to include the following elements:
 - 1) Purchase of the estimated 3-acre parcel adjoining the western end of the Revillagigedo Island parking lot for expansion of airport parking and freight terminal (note: after the Assembly adopted its resolution, it became known that the property at the eastern end of the parking lot is also available. That other property should also be considered in the context of the SEIS);

- 2) Development of a ¾-acre (or larger) heavy freight terminal on the 3-acre parcel;
- 3) Further development of the 3-acre parcel to include paving, lighting, water, sewer, covered walkways, security cameras, fencing, landscaping, parking meter system, sidewalks, and Tongass Highway access improvements;
- 4) Improved marine facilities for freight barges and fuel barges on Gravina Island;
- 5) Expansion and development of parking on Gravina Island (paving, lighting, security cameras, fencing, landscaping, parking meter system, and sidewalks) without encroaching on space currently used or reserved for General Aviation parking for airplanes;
- 6) Payment of all outstanding debt incurred by the Ketchikan Gateway Borough for the *MV Oral Freeman* and other improvements at the Ketchikan International Airport;
- 7) Reconstruction of the present ferry ramps on Revillagigedo Island and Gravina Island (e.g., hydraulic systems are exposed to salt water);
- 8) Remove "I-90 Floating Bridge Dock" and construct new boat dock on Gravina Island to handle vessels up to 100 feet long (with ramp to the dock for access by vehicles);
- 9) Relocate the existing seaplane pull-out approximately 100 yards to the west;
- 10) Upgrade and improve all existing sidewalks and wheelchair ramps on the Revillagigedo Island and Gravina Island ferry and airport sites;
- 11) Establishment of a "Gravina Access Permanent Fund" with monies provided by the State of Alaska, the proceeds of which can be used to fund in part or in full the cost of operating the airport ferry service so residents of Ketchikan enjoy the same level of access to their airport that other Alaskans enjoy to airports serving their communities; and
- 12) Establishment of terminal facilities for passengers and baggage handling on Revillagigedo Island (as well as maintaining the facilities on Gravina Island.).

Please read the resolution in its entirety. The Borough made a good faith effort to provide reasonable, meaningful, and constructive comments are requested by DOT&PF. Copies of the resolution have been provided to the officials listed in Section 6 of the Resolution. Beyond you two, if there is anyone else to whom these comments and the resolution should be provided, please let me know.

Cordially,

Dan Bockhorst

<p>Dan Bockhorst Borough Manager Ketchikan Gateway Borough (907) 228-6625 Work (907) 254-8123 Mobile dan.bockhorst@borough.ketchikan.ak.us 1900 First Avenue, Suite 210 Ketchikan, Alaska 99901 http://www.borough.ketchikan.ak.us/</p>	
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KETCHIKAN GATEWAY BOROUGH

RESOLUTION NO. 2138

A RESOLUTION OF THE ASSEMBLY OF THE KETCHIKAN GATEWAY BOROUGH ADDRESSING GRAVINA ACCESS ALTERNATIVES IN THE CONTEXT OF THE GRAVINA ACCESS PROJECT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

RECITALS

WHEREAS, as is the case with nearly every community in Alaska, airplanes are the primary mode of transportation to and from the greater Ketchikan area; and

WHEREAS, the Ketchikan International Airport is located on Gravina Island; and

WHEREAS, almost all of the nearly 13,000 residents of the Ketchikan Gateway Borough live on nearby Revillagigedo Island; and

WHEREAS, there is no surface-transportation link between Revillagigedo Island and Gravina Island; and

WHEREAS, reliable, expedient, and economical access to Gravina Island is crucial to the life, health, and safety interests of residents of Ketchikan and surrounding regions; is vital to the economic development of the greater Ketchikan area; and is important to the everyday social and cultural activities of southern Southeast Alaska; and

WHEREAS, residents of the Ketchikan Gateway Borough and surrounding regions have worked since the construction of the Ketchikan International Airport during the early 1970s for the establishment of a surface-transportation link between Revillagigedo Island and Gravina Island; and

WHEREAS, in 2004, after numerous earlier studies and decades of efforts to link Gravina Island to Revillagigedo Island, FHWA, in partnership with DOT&PF, completed an extensive review of nine "reasonable alternative" links between Revillagigedo Island and Gravina Island; and

WHEREAS, on September 15, 2004, after consideration of all social, economic, and environmental factors and input from the public, tribal entities, and agencies, the FHWA selected "Gravina Access Alternative F1," linking Revillagigedo, Pennock, and Gravina Islands via a 200-foot-high bridge over the east channel of Tongass Narrows and a 120-foot-high bridge crossing the west channel; and

WHEREAS, in 2005, Congress appropriated \$223 million earmarked for the Gravina Bridge; and

WHEREAS, in November 2005, Congress stripped the earmarks from the federal funds for the Gravina Bridge, but allowed the State of Alaska to keep the \$223 million; and

WHEREAS, on September 21, 2007, the State of Alaska announced that it would not fund the F1 alternative, and DOT&PF was directed "to look for the most fiscally responsible alternative

for access" (*Gravina Access Project SEIS "Fact Sheet"* published by DOT&PF in February 2009); and

WHEREAS, much of the federal funding originally designated for the Gravina Bridge was diverted to other State projects; and

WHEREAS, on October 9, 2007, the Administrator of FHWA wrote to DOT&PF that "should the State decide to not advance the project as selected, all or part of the monies expended on the construction phase of the project may be declared ineligible for federal participation;" and

WHEREAS, in a letter to DOT&PF dated January 17, 2008, FHWA expressed the understanding that "DOT&PF intends to identify and select a new preferred alternative for the Gravina Access Project;" FHWA emphasized that the State had initiated construction on 3.45 miles of road related to the preferred alternative selected in the September 15, 2004 Record of Decision and that the portion of the road then under construction was compatible with only 2 of 9 alternatives that had been included in the original Draft and Final Environmental Impact Statements; and

WHEREAS, on January 25, 2008, DOT&PF conducted a public meeting in Ketchikan, during which it acknowledged that the State would be required to repay as much as \$55 million in federal funds if the September 15, 2004, Record of Decision were not amended to reconcile that Record of Decision with the expenditure of funds to date; DOT&PF noted that before the Record of Decision can be modified, it must prepare a Supplemental Environmental Impact Statement (SEIS) regarding the alternatives; and DOT&PF stated at the time that the SEIS may take as much as one year and \$1 million to complete; and

WHEREAS, DOT&PF and FHWA maintain today that there exists "a need to improve access between Revillagigedo Island and Gravina Island" (emphasis added; *ibid.*); and

WHEREAS, the DOT&PF in conjunction with FHWA is preparing the Gravina Access Project SEIS to comply with the National Environmental Policy Act (NEPA); and

WHEREAS, NEPA requires the FHWA "to evaluate 'reasonable alternatives' that would satisfy the project purpose and need and, if there are many possible alternatives, to evaluate a full range of the alternatives" (*ibid.*); and

WHEREAS, DOT&PF and FHWA have identified the 16 alternatives listed below – the original nine alternatives, six new alternatives, and a no-build option – to “begin the process of defining the alternatives that will be fully evaluated in the Gravina Access Project SEIS:”

Alignment	Construction Cost (descending order)	Life-Cycle Cost	Life-Cycle Cost (Revenue Adjusted)
C3a – high bridge near airport	\$463M	\$435M	
C4 – high bridge near airport	\$441M	\$411M	
T1 – tunnel - Peninsula Pt. to Lewis Pt.	\$417M	\$442M	
M2 – movable bridge near airport	\$413M	\$445M	
F1 – two bridges across Pennock	\$375M	\$369M	
M1 – movable bridge at airport	\$375M	\$388M	
C3b – low bridge near airport	\$352M	\$332M	
F3v – variant of F3	\$349M	\$342M	
F3 – two bridges across Pennock	\$304M	\$301M	
D1 – low bridge at airport	\$291M	\$275M	
C3-4 – variant of C3a and C4	\$240M	\$231M	
G2 – new ferry - Peninsula Pt. to Lewis Pt.	\$84M	\$211M	\$168M
G3 – new ferry – downtown to Clump Cove	\$77M	\$198M	\$155M
G4 – new ferry adjacent to existing ferry	63M	\$181M	\$138M
G4v – variant of G4	\$16M	\$148M	\$105M
No Build	\$0M	\$76M	\$30M

WHEREAS, the F1 alternative (two bridges across Pennock), which, because of its high cost, was rejected by the State of Alaska on September 21, 2007, is currently estimated to cost \$375 million to complete (which does not include that portion of the more than \$55 million spent to date on the Gravina Access Project); and

WHEREAS, the C3a (high bridge near airport), C4 (high bridge near airport), T1 (tunnel - Peninsula Pt. to Lewis Pt.), M2 (movable bridge near airport), and M1 (movable bridge at airport) alternatives are currently estimated to cost at least as much as the F1 (two bridges across Pennock) alternative; and

WHEREAS, the C3b (low bridge near airport) and D1 (low bridge at airport) alternatives are too low to accommodate vessels larger than the AMHS ferries, including most cruise ships that are a mainstay of the Ketchikan economy; and

WHEREAS, the 2004 Record of Decision regarding Gravina Access shows that FHWA rejected improved ferry service alternatives because those alternatives would have provided “substantially less reliable, less efficient, less convenient and less cost effective access to Gravina Island;” and

WHEREAS, the State of Alaska operates airports throughout most of Alaska; however, the Ketchikan International Airport is a rare exception in that it is operated by the Ketchikan Gateway Borough at an annual cost of more than \$4 million; and

WHEREAS, by operating the Ketchikan International Airport, the Ketchikan Gateway Borough saves the State of Alaska millions of dollars in costs annually; and

WHEREAS, the Ketchikan Gateway Borough, the first borough formed under the 1963 Mandatory Borough Act, bears a huge and discriminatory fiscal burden – nearly \$11 million in the current fiscal year – in the form of unfunded State mandates relating to education, planning, platting, land use regulation, and assessment and collection of taxes.

NOW, THEREFORE, IN CONSIDERATION OF THE ABOVE FACTS, IT IS RESOLVED BY THE ASSEMBLY OF THE KETCHIKAN GATEWAY BOROUGH AS FOLLOWS:

Section 1. On August 20, 2007, the Assembly expressed support for the F1, F3, C3a, C4, and C3-4 options. The Assembly reaffirmed its support for those five options on February 19, 2008. Still today, the Assembly considers these options reasonable in the context of achieving the purpose and need of the Gravina Access Project. Additionally, the Assembly considers the newly identified options designated as T1 (tunnel - Peninsula Pt. to Lewis Pt.), M2 (movable bridge near airport), and M1 (movable bridge at airport) proposals worthy of further consideration in terms of accomplishing the purpose and need of the Gravina Access Project.

However, notwithstanding the fact that DOT&PF has expended \$55,339,832 to date for the Gravina Access project (principally the F1 alternative involving right-of-way acquisition, Gravina Highway, Phase 1, Lewis Reef Road, Lewis Reef Road Underpass, and the main Gravina Access project), the Assembly recognizes that the F1 alternative has been declared by the State to be too expensive.

Given that the State of Alaska had previously rejected as too expensive the F1 alternative, and given that five other alternatives are currently estimated to cost as much as or more than the F1 alternative, it is axiomatic that the State of Alaska will conclude that the six alternatives listed below are not financially viable unless the State adopts a different fiscal policy position regarding those projects. Therefore, under current State policy, the Assembly finds no reason to encourage DOT&PF to pursue further consideration of the following options unless the State modifies its fiscal policy:

- F1 (two bridges across Pennock Island);
- C3a (high bridge near airport);
- C4 (high bridge near airport);
- T1 (tunnel - Peninsula Pt. to Lewis Pt.);
- M2 (movable bridge near airport); and
- M1 (movable bridge at airport).

Section 2. Two of the options, the C3b (low bridge near airport) and D1 (low bridge at airport) alternatives, are too low to accommodate most cruise ships that are a foundation of the Ketchikan economy. Therefore, the Assembly takes the position that those alternatives do not warrant further consideration.

Section 3. Three bridge options remain among the sixteen alternatives identified. These consist of the following:

- F3 – two bridges across Pennock Island (estimated cost: \$304 million);
- F3v – variation of F3 (estimated cost: \$349 million); and
- C3-4 – high bridge near the airport (estimated cost: \$240 million).

The Assembly endorses further study of these options. The Assembly recognizes, however, that the C3-4 option penetrates into FAA Part 77 airspace and that DOT&PF has not yet determined whether FAA would allow construction of that option. If practical, FAA's position concerning the C3-4 option should be determined before DOT&PF spends significant resources evaluating that option.

Section 4. Four ferry options are included among the sixteen alternatives identified. These consist of the following:

- G2 – new ferry - Peninsula Point to Lewis Point;
- G3 – new ferry – downtown to Clump Cove;
- G4 – new ferry adjacent to existing ferry; and
- G4v – variant of G4

All of the ferry options include a 60-passenger waiting facility, restrooms, two shuttle vans, and a heavy freight terminal with a three-quarter-acre staging area. While these options have the least initial capital cost (exclusive of the no-build option), they have the highest average annual operation and maintenance (O&M) cost. According to the *Gravina Action Project EIS* (p. 2-3), the O&M cost of the ferry alternatives was projected to be 31 to 45 times greater than the O&M cost of the bridge alternatives. The O&M cost of the ferry alternatives were also nearly 2.5 times the cost of the existing ferry service.

The G2 and G3 options would provide for unwarranted duplicate infrastructure that would increase travel time. Additionally, the cost estimate provided by DOT&PF for the G2 option does not include cost of upgrading Seley Road. Further, the G3 option would increase traffic congestion.

Moreover, as noted above, FHWA's 2004 Record of Decision rejected improved ferry service alternatives because those alternatives would have provided "substantially less reliable, less efficient, less convenient and less cost effective access to Gravina Island."

Further, as also noted above, the Ketchikan Gateway Borough – more accurately, the citizens of the Ketchikan Gateway Borough – bear a huge fiscal burden (currently, nearly \$11 million) in the form of unfunded State mandates. Those unfunded State mandates do not include the more than \$4 million annual cost to the Borough for operation of the airport (which allows the State of Alaska to avoid that cost).

The critical deficiencies identified by FHWA regarding improved ferry service can be substantially overcome if the State of Alaska establishes a fund to financially support the operational, maintenance, and capital costs of the ferry so that citizens of the greater Ketchikan area are treated in the same fashion as other Alaskans in terms of the cost of accessing the principle mode of transportation to and from the community.

Rather than choose any of the prescribed ferry options identified by DOT&PF at this point, the Borough Assembly expresses its support for a new ferry option to include the following

elements:

1. Purchase of the estimated 3-acre parcel adjoining the western end of the Revillagigedo Island parking lot for expansion of airport parking and freight terminal;
2. Development of a ¾-acre (or larger) heavy freight terminal on the 3-acre parcel;
3. Further development of the 3-acre parcel to include paving, lighting, water, sewer, covered walkways, security cameras, fencing, landscaping, parking meter system, sidewalks, and Tongass Highway access improvements;
4. Improved marine facilities for freight barges and fuel barges on Gravina Island;
5. Expansion and development of parking on Gravina Island (paving, lighting, security cameras, fencing, landscaping, parking meter system, and sidewalks) without encroaching on space currently used or reserved for General Aviation parking for airplanes;
6. Payment of all outstanding debt incurred by the Ketchikan Gateway Borough for the *MV Oral Freeman* and other improvements at the Ketchikan International Airport;
7. Reconstruction of the present ferry ramps on Revillagigedo Island and Gravina Island (e.g., hydraulic systems are exposed to salt water);
8. Remove "I-90 Floating Bridge Dock" and construct new boat dock on Gravina Island to handle vessels up to 100 feet long (with ramp to the dock for access by vehicles);
9. Relocate the existing seaplane pull-out approximately 100 yards to the west;
10. Upgrade and improve all existing sidewalks and wheelchair ramps on the Revillagigedo Island and Gravina Island ferry and airport sites;
11. Establishment of a "Gravina Access Permanent Fund" with monies provided by the State of Alaska, the proceeds of which can be used to fund in part or in full the cost of operating the airport ferry service so residents of Ketchikan enjoy the same level of access to their airport that other Alaskans enjoy to airports serving their communities; and
12. Establishment of terminal facilities for passengers and baggage handling on Revillagigedo Island.

Section 5.

The "no build" option is unacceptable to the Assembly. If the State of Alaska does not construct a hard link between Gravina Island and Revillagigedo Island, the Assembly takes the position that it must provide a ferry option with the 12 elements noted above.

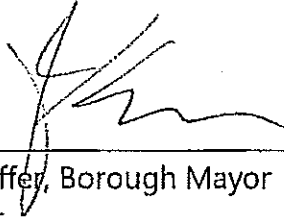
Section 6.

A copy of this resolution shall be provided to the following:

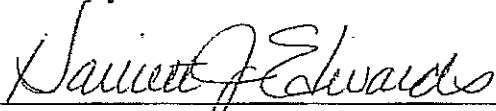
- A. The Honorable Lisa Murkowski, United States Senator for Alaska;
- B. The Honorable Mark Begich, United States Senator for Alaska;
- C. The Honorable Don Young, Congressman for Alaska;
- D. The Honorable Kyle Johansen, Majority Leader for the Alaska State House of Representatives and Representative for State House District 1;
- E. The Honorable Bert Stedman, Co-Chair of the Finance Committee of the Alaska State Senate and Senator for State Senate District A.
- F. Administrator of the FHWA; and
- G. Leo von Scheben, Commissioner of DOT&PF.

This resolution is effective immediately.

ADOPTED this 16th day of March 2009.



Dave Kiffer, Borough Mayor



Harriett Edwards, Borough Clerk

APPROVED AS TO FORM:



Scott A. Brandt-Erichsen, Borough Attorney

EFFECTIVE DATE:		MARCH 16, 2009		
ROLL CALL	YES	NO	ABSENT	
Gibbons	✓			
Harrington	✓			
Painter	✓			
Phillips	✓			
Salazar				✓
Shoemaker	✓			
Thompson	✓			
Mayor (tie votes only)				
4 AFFIRMATIVE VOTES REQUIRED FOR PASSAGE				

KETCHIKAN GATEWAY BOROUGH

RESOLUTION NO. 2073

**A RESOLUTION OF THE ASSEMBLY OF THE KETCHIKAN GATEWAY BOROUGH
AMENDING THE ASSEMBLY'S POLICY REGARDING GRAVINA ACCESS IN LIGHT
OF RECENT DEVELOPMENTS**

RECITALS

WHEREAS, in 2004, after numerous earlier studies and decades of efforts to link Gravina Island to Revillagigedo Island, the U.S. Department of Transportation Federal Highway Administration (FHWA), in partnership with the Alaska Department of Transportation and Public Facilities (DOT&PF), completed an extensive review of nine "reasonable alternative" links.

WHEREAS, on September 15, 2004, after consideration of all social, economic, and environmental factors and input from the public, tribal entities, and agencies, the FHWA selected "Gravina Access Alternative F1," linking Revillagigedo, Pennock, and Gravina Islands via a 200-foot-high bridge over the east channel of Tongass Narrows and a 120-foot-high bridge crossing the west channel.

WHEREAS, in 2005, Congress appropriated \$223 million earmarked for the Gravina Bridge. Of that, \$100 million was for "planning, design, and construction of a bridge joining the Island of Gravina to the Community of Ketchikan," \$18.75 million was provided in each of four fiscal years for the "construction of a bridge joining the Island of Gravina to the community of Ketchikan," and \$48 million was for "Earthwork and roadway construction Gravina Access Project."

WHEREAS, in November 2005, Congress released the earmark that the money must be spent for the Gravina Bridge.

WHEREAS, between 2004, when the Federal Environmental Impact Statement was completed and the Record of Decision was issued, and the summer of 2007, DOT&PF increased its estimates of the cost of the preferred alternative to the point where it was apparent that the federal funds identified would be insufficient to construct the preferred alternative without substantial additional funding.

WHEREAS, DOT&PF took the position that additional funding from the federal government was unlikely and that DOT&PF was unlikely to seek additional State funding. On July 2, 2007, DOT&PF declared in that regard:

All project stakeholders should recognize and accept the reality that the (previously) preferred alternative F1 will likely never be fully funded given the current project cost. Reconsideration needs to be given to other less costly EIS alternatives such as, Alternative F3 or near airport crossing alternatives, C3A, C4, D1, or a hybrid thereof such as C3-4. The Department would like to conduct a comprehensive value engineering effort in the re-evaluation of these alternatives to insure that costs saving measures are maximized in the least cost reasonable alternative meeting the purpose and need of this mission.

WHEREAS, the Assembly considered alternatives for Gravina access at its meeting of July 16, 2007. The minutes of that meeting reflect that DOT&PF had advised the Assembly that "the F-3 alternative could be built."

WHEREAS, the minutes of Assembly meeting of July 16, 2007, also reflect that DOT&PF had given the impression at a recent meeting that "the remaining funds in the bridge project would go to other projects in the state if the Assembly did not act quickly." This created a false sense of urgency for the Assembly to comply with the DOT&PF desires.

WHEREAS, on July 16, 2007, the Ketchikan Gateway Borough Assembly adopted a motion requesting

DOT&PF to proceed with construction of Alternative F3, which would link Revillagigedo, Pennock, and Gravina Islands via a 60-foot-high bridge over the east channel of Tongass Narrows and a 200-foot-high bridge crossing the west channel.

WHEREAS, in a letter dated July 19, 2007, DOT&PF requested that the Borough "not limit [its] hard link preference for the Gravina Island access project to Alternative F3." DOT&PF specifically encouraged the Borough Assembly to include the option of improved ferry service. At that point, DOT&PF had not disclosed that failure to proceed with a Gravina access project consistent with the Record of Decision would require DOT&PF to repay funds spent on the project.

WHEREAS, on August 20, 2007, the Ketchikan Gateway Borough Assembly considered a motion requesting DOT&PF to "evaluate for construction, maintenance and operational costs several limited alternatives, focusing on Alternate F-3, Alternates D-1, C3a or C3-4, or improved ferry service which includes a ferry to handle heavy equipment, additional port facilities, and baggage handling on the city side." Understanding that the \$223 million appropriated by Congress for the Gravina Access project would be used for the selected alternative, the Assembly adopted the motion.

WHEREAS, on September 21, 2007, Governor Sarah Palin issued a press release stating that she had directed DOT&PF "to look for the most fiscally responsible alternative for access to the Ketchikan airport and Gravina Island" instead of proceeding further with the most expensive bridge option.

WHEREAS, the Ketchikan Gateway Borough Assembly learned through the media on September 21, 2007, that "Governor Palin [had] directed [DOT&PF] Commissioner Leo von Scheben to review transportation projects statewide to prepare a list of possible uses for the [unspent Gravina access] funds."

WHEREAS, on October 9, 2007, the Administrator of FHWA wrote to DOT&PF he too had learned through news media reports that "the State would no longer continue to advance the preferred alternative on the Ketchikan Gravina Island Access project."

WHEREAS, in its letter of October 9, 2007, FHWA advised DOT&PF that "should the State decide to not advance the project as selected, all or part of the monies expended on the construction phase of the project may be declared ineligible for federal participation."

WHEREAS, in a letter to DOT&PF dated January 17, 2008, FHWA expressed the understanding that "DOT&PF intends to identify and select a new preferred alternative for the Gravina Access Project." FHWA emphasized that the State had initiated road construction on 3.45 miles of the preferred alternative selected in the September 15, 2004 Record of Decision and that the portion of the road currently under construction was compatible with only 2 of 9 alternatives that had been included in the original Draft and Final Environmental Impact Statements.

WHEREAS, on January 25, 2008, DOT&PF conducted a public meeting in Ketchikan, during which it acknowledged that the State would be required to repay as much as \$55 million in federal funds if the September 15, 2004, Record of Decision were not amended to reconcile that Record of Decision with the expenditure of funds to date. DOT&PF noted that before the Record of Decision can be modified, it must prepare a Supplemental Environmental Impact Statement (SEIS) regarding the alternatives. DOT&PF indicated that the SEIS may take as much as one year and \$1 million to complete.

WHEREAS, DOT&PF announced plans at the meeting of January 25, 2008, to poll residents of Ketchikan and nearby communities regarding preferred alternatives. The polling began hours after the meeting. The questions asked by the pollster appeared to be designed to elicit favorable responses concerning the ferry option.

NOW, THEREFORE, IN CONSIDERATION OF THE ABOVE FACTS, IT IS RESOLVED BY THE

ASSEMBLY OF THE KETCHIKAN GATEWAY BOROUGH AS FOLLOWS:

Section 1. The Assembly of the Ketchikan Gateway Borough has every reason to believe that the SEIS, which will be completed at a cost of up to \$1 million over the next 12 months, will be a results-oriented product favoring a ferry link to the existing 3.45 miles of road currently under construction. That may allow DOT&PF to avoid a requirement to repay up to \$55 million in federal funds. It would also allow DOT&PF to incur the least additional initial capital expenditure on the project, thereby maximizing the remaining balance of the \$223 million in federal funds that can be used for projects in other parts of Alaska. However, while a ferry link has the least initial capital cost, it has the highest average annual operation and maintenance (O&M) cost. According to the *Gravina Action Project EIS* (p. 2-3), the O&M cost of the ferry alternatives was projected to be 31 to 45 times greater than the O&M cost of the bridge alternatives. The O&M cost of the ferry alternatives were also nearly 2.5 times the cost of the existing ferry service. Unless the State of Alaska assumes responsibility for operation of the airport ferry service and provides that service toll-free, the Ketchikan Gateway Borough and its citizens will be saddled with significantly higher costs of operating the ferry service. Ketchikan will remain the only community in Alaska whose residents must pay a toll to access to their airport.

Section 2. The Assembly of the Ketchikan Gateway Borough is also gravely concerned that a ferry link to the existing 3.45 miles of road currently under construction will not meet requirements governing expenditure of federal funds for the Gravina access project. In that regard, the Assembly stresses that the 2004 Record of Decision shows that FHWA rejected improved ferry service alternatives because those alternatives would have provided "substantially less reliable, less efficient, less convenient and less cost effective access to Gravina Island." If DOT&PF now pursues a ferry alternative, the Assembly fears that project expenditures will ultimately be determined to be ineligible for federal funding. Such a determination will result in a substantial loss to the treasury of the State of Alaska. The Ketchikan Gateway Borough Assembly does not wish to be perceived as condoning that risky course of action.

Section 3. Because of the grave concerns reflected in Sections 1 and 2 of this Resolution, the Assembly of the Ketchikan Gateway Borough hereby rescinds that portion of its motion of August 20, 2007, endorsing among other alternatives, "improved ferry service which includes a ferry to handle heavy equipment, additional port facilities, and baggage handling on the city side."

Section 4. The Assembly remains supportive of the other alternatives included in that motion adopted on August 20, 2007. Those consist of Alternative F3 or near-airport-crossing alternatives C3A, C4, D1, or a hybrid such as C3-4.

Section 5. A copy of this resolution shall be provided to the following:

- A. The Honorable Ted Stevens, United States Senator for Alaska;
- B. The Honorable Lisa Murkowski, United States Senator for Alaska;
- C. The Honorable Don Young, Congressman for Alaska;
- D. The Honorable Kyle Johansen, Chair of the Transportation Committee of the Alaska State House of Representatives and Representative for State House District 1;
- E. The Honorable Bert Stedman, Co-Chair of the Finance Committee of the Alaska State Senate and Senator for State Senate District A.
- F. David C. Miller, Division Administrator of the FHWA; and
- G. Leo von Scheben, Commissioner of DOT&PF.

This resolution is effective immediately.

ADOPTED this 19th day of February 2008.

Appendix B

Letter from FHWA to Ketchikan Gateway Borough, July 29, 2009



U.S. Department
of Transportation

**Federal Highway
Administration**

Alaska Division

July 23, 2009

709 West 9th Street, Rm. 851
P.O. Box 21648
Juneau, AK 99802
(907) 586-7418
(907) 586-7420 Fax
www.fhwa.dot.gov/akdiv

Mr. Dan Bockhorst, Borough Manager
Ketchikan Gateway Borough
1900 First Avenue, Suite 210
Ketchikan, Alaska 99901

In Reply Refer To:
HP-NCPD-0922(5)/67698

Dear Mr. Bockhorst:

Thank you for your letter transmitting Resolution No. 2138 adopted by the Ketchikan Gateway Borough Assembly (Borough) on March 16, 2009. We are writing to inform you that all of the Borough's comments regarding alternatives will be considered during the alternatives screening process. At this point in the process, we are not identifying a preferred alternative or selecting an action for construction; rather, we are determining which alternatives are reasonable for detailed evaluation in the Supplemental Environmental Impact Statement (SEIS).

We have conferred with the Alaska Department of Transportation and Public Facilities (DOT&PF) and understand that they have contacted you to clarify several items in your resolution. Based on their conversations with you, it appears that some of the new ferry option elements you have suggested address the purpose and need for this surface transportation project and can be incorporated into a reasonable alternative. However, other elements will not be appropriate to include in an alternative. Specifically, the Borough's interest in the repayment of outstanding debt for the MV Oral Freeman and other Ketchikan International Airport improvements, establishing a "Gravina Access Permanent Fund" with funding provided by the State of Alaska to pay for the operating costs for the airport ferry system, and relocating terminal facilities to Revellagigedo Island are not elements that would be eligible for federal assistance or do not pertain directly to the current project purpose and need and will not be included in an alternative.

The Federal Highway Administration and the DOT&PF will address these and other elements in your resolution in the SEIS. I can also assure you that federal regulations require that any surface transportation improvements funded by federal aid must be maintained by the State of Alaska, unless the State has executed a maintenance agreement with a third party. We recognize that the Borough, as the current operator of the only public surface transportation access to Gravina Island, has a strong interest in the outcome of this project and we will consult closely with the Borough and the DOT&PF before identifying a preferred alternative or selecting a construction action.

We would be happy to meet with you to discuss your resolution or this response in greater detail. Please contact me if you have further questions or concerns.

Sincerely,

David C. Miller
Division Administrator

cc: Gary Davis, DOT&PF, Southeast Regional Transportation Director



Appendix C

Letter from DOT&PF Commissioner, September 17, 2009

MEMORANDUM

State of Alaska

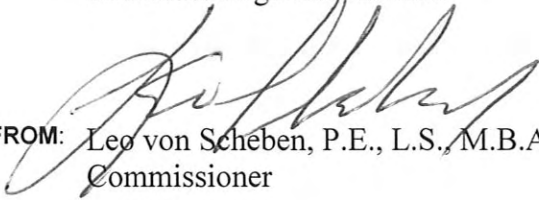
Department of Transportation & Public Facilities
Office of the Commissioner

TO: Gary L. Davis
Southeast Regional Director

DATE: September 17, 2009

TELEPHONE NO: 465-3901

FAX NUMBER: 586-8365

FROM:  Leo von Scheben, P.E., L.S., M.B.A.
Commissioner

SUBJECT: Cost Ceiling for
Gravina Access
Supplemental EIS
Alternatives

I understand that preparation of the Gravina Access Project Supplemental EIS is at the point where FHWA and DOT&PF need to screen suggested alternatives to determine those that are reasonable. One of the screening criteria is cost. This is particularly important in light of the 2007 directive by Governor Palin to discontinue work on the selected alternative, F1, because of its high cost. The Supplemental EIS must evaluate alternatives that the State can afford to construct and operate.

I have determined the construction and lifecycle cost ceiling for the Gravina Access Project alternative screening is \$305 million. Based on the funding sources we can anticipate in the time frame of the project, alternatives with construction and/or lifecycle costs above this amount have no likelihood of being funded.

Please note that this is not a guarantee that a particular level of funding can be obtained. Funding at this level would be difficult to secure. Due to the level of current and anticipated future federal aid, it is almost certain that a considerable portion of the required construction funds (beyond the \$70 million currently held) would need to be appropriated by the Legislature from the General Fund. Therefore I am requesting that any bridge alternatives be evaluated with tolls such that some of the construction and operation costs are borne by users. I believe a plan to collect tolls may be necessary in order to gain funding approval.

I look forward to completion of the project Screening Report in the near future and subsequent release of the Draft Supplemental EIS as soon as possible.

cc: Frank T. Richards, P.E., Deputy Commissioner, Highway & Public Facilities



- ON SEPTEMBER 21, 2007, GOVERNOR PALIN DIRECTED DOT&PF NOT TO PROCEED WITH THE F1 ALTERNATIVE, AS IT APPEARED TOO EXPENSIVE. RATHER, DOT&PF WAS DIRECTED TO LOOK FOR THE MOST FISCALLY RESPONSIBLE ALTERNATIVE FOR IMPROVED ACCESS TO THE KETCHIKAN AIRPORT AND GRAVINA ISLAND.
- THE FEDERAL HIGHWAY ADMINISTRATION SUBSEQUENTLY NOTIFIED DOT&PF THAT IT WOULD NEED TO PREPARE A SUPPLEMENTAL ENVIRONMENTAL IMPACT STUDY (EIS) IF IT WANTED TO CONSIDER ALTERNATIVES FROM THE 2004 EIS OTHER THAN F1 OR F3, AS OTHER ALTERNATIVES HAD NOT INCLUDED THE GRAVINA ISLAND HIGHWAY WHICH HAS ALREADY BEEN CONSTRUCTED. THE SUPPLEMENTAL EIS WOULD UPDATE ALTERNATIVES AND EVALUATE HOW THEY WOULD FUNCTION WITH THE CONSTRUCTED HIGHWAY.
- DOT&PF CONDUCTED PUBLIC AND AGENCY SCOPING TO ACQUIRE NEW INPUT ON THE PROJECT, INCLUDING POSSIBLE ALTERNATIVES.
- AFTER SCOPING SUGGESTED ALTERNATIVES ARE SCREENED TO DETERMINE THOSE THAT ARE REASONABLE; REASONABLE ALTERNATIVES WILL BE EVALUATED IN DETAIL IN THE SUPPLEMENTAL EIS. COST IS USUALLY A SCREENING FACTOR. IN THIS CASE IT IS ESSENTIAL AS WE ARE PREPARING A SUPPLEMENTAL EIS SPECIFICALLY BECAUSE THE STATE CANNOT AFFORD THE ALTERNATIVE SELECTED PREVIOUSLY.
- AS PART OF THE SCREENING PROCESS, DOT&PF PREPARED COST ESTIMATES FOR PROPOSED ALTERNATIVES, INCLUDING VARIATIONS OF PREVIOUSLY STUDIED ALTERNATIVES THAT MIGHT REDUCE THE COST.

- I (COMMISSIONER VON SCHEBEN) CONSIDERED THE FACT THAT THERE IS APPROXIMATELY \$70 MILLION OF FEDERAL AID SET ASIDE FOR THIS PROJECT. FUTURE FEDERAL AID EARMARKS ARE UNLIKELY. USING MORE THAN \$15 TO 20 MILLION DOLLARS YEARLY FROM THE STATEWIDE TRANSPORTATION IMPROVEMENT PROGRAM OVER THE LIFE OF A BRIDGE CONSTRUCTION PROJECT WOULD NOT BE POSSIBLE WITHOUT HURTING THE REGION. LEGISLATIVE FUNDING EXCEEDING \$100 MILLION IS UNLIKELY ALSO. COLLECTIVELY, THIS MEANS THAT FUNDING SUBSTANTIALLY EXCEEDING \$300 MILLION CANNOT BE CONSIDERED.
- BECAUSE PRELIMINARY ESTIMATES CAN CHANGE, IT IS IMPORTANT THAT A COST CEILING BE SET AT A POINT WHERE THERE IS A LARGE BREAK BETWEEN ALTERNATIVES SO THERE IS NO QUESTION THAT A REJECTED ALTERNATIVE SHOULD HAVE BEEN EVALUATED IN DETAIL. ALTERNATIVE F3 IS ESTIMATED TO COST \$304 MILLION, WHILE THE NEXT MOST COSTLY ALTERNATIVE HAS AN ESTIMATED COST OF \$349 MILLION. CONSIDERING THIS, I (COMMISSIONER VON SCHEBEN) SET THE CEILING AT \$305 MILLION AS IT WOULD ALLOW STUDY OF AT LEAST TWO BRIDGES HIGH ENOUGH TO ACCOMMODATE ALL VESSEL TRAFFIC WHILE ELIMINATING THOSE THAT WOULD COST AN ADDITIONAL \$45 MILLION OR MORE.
- GENERAL FUND APPROPRIATIONS MAY BE VERY DIFFICULT TO OBTAIN. THEREFORE I (COMMISSIONER VON SCHEBEN) ASKED THAT BRIDGE ALTERNATIVES BE EVALUATED WITH A TOLL SO THAT WE WILL KNOW HOW MUCH REVENUE COULD BE GENERATED IF AND WHEN WE ASK THE LEGISLATURE TO CONSIDER FUNDS FOR A BRIDGE ALTERNATIVE.
- BASED ON THIS DECISION, THE SUPPLEMENTAL EIS PROCESS CAN CONTINUE. WE EXPECT THAT A DRAFT SUPPLEMENTAL EIS CAN BE RELEASED TO THE PUBLIC IN MID 2010. A FINAL SUPPLEMENTAL EIS WOULD BE EXPECTED IN EARLY 2011, WITH A NEW RECORD OF DECISION IN MID 2011.

Appendix D

FAA Determinations of No Hazard to Air Navigation for Alternative C3-4



Federal Aviation Administration
 Air Traffic Airspace Branch, ASW-520
 2601 Meacham Blvd.
 Fort Worth, TX 76137-0520

Aeronautical Study No.
 2009-AAL-147-OE

Issued Date: 07/10/2009

Jim Lowell, PE
 Alaska Dept of Transportation and Public Facilities
 6860 Glacier Highway
 Juneau, AK 99801

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Bridge Nearest Point - Alignment C 3-4
 Location: Ketchikan, AK
 Latitude: 55-21-36.89N NAD 83
 Longitude: 131-43-03.21W
 Heights: 142 feet above ground level (AGL)
 159 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure would have no substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities. Therefore, pursuant to the authority delegated to me, it is hereby determined that the structure would not be a hazard to air navigation provided the following condition(s) is(are) met:

As a condition to this Determination, the structure is marked and/or lighted in accordance with FAA Advisory circular 70/7460-1 K Change 2, Obstruction Marking and Lighting, red lights - Chapters 4,5(Red),&12.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be completed and returned to this office any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part I)
- Within 5 days after the construction reaches its greatest height (7460-2, Part II)

See attachment for additional condition(s) or information.

This determination expires on 01/10/2011 unless:

- (a) extended, revised or terminated by the issuing office.
- (b) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE POSTMARKED OR DELIVERED TO THIS OFFICE AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE.

This determination is subject to review if an interested party files a petition that is received by the FAA on or before August 09, 2009. In the event a petition for review is filed, it must contain a full statement of the basis upon which it is made and be submitted in triplicate to the Manager, Airspace and Rules Division - Room 423, Federal Aviation Administration, 800 Independence Ave., Washington, D.C. 20591.

This determination becomes final on August 19, 2009 unless a petition is timely filed. In which case, this determination will not become final pending disposition of the petition. Interested parties will be notified of the grant of any review. For any questions regarding your petition, please contact Office of Airspace and Rules via telephone -- 202-267-8783 - or facsimile 202-267-9328.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

This aeronautical study considered and analyzed the impact on existing and proposed arrival, departure, and en route procedures for aircraft operating under both visual flight rules and instrument flight rules; the impact on all existing and planned public-use airports, military airports and aeronautical facilities; and the cumulative impact resulting from the studied structure when combined with the impact of other existing or proposed structures. The study disclosed that the described structure would have no substantial adverse effect on air navigation.

An account of the study findings, aeronautical objections received by the FAA during the study (if any), and the basis for the FAA's decision in this matter can be found on the following page(s).

A copy of this determination will be forwarded to the Federal Communications Commission if the structure is subject to their licensing authority.

If we can be of further assistance, please contact Robert van Haastert, at (907)271-5863. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2009-AAL-147-OE.

Signature Control No: 631414-116063639

(DNH)

Kevin P. Haggerty
Manager, Obstruction Evaluation Service

Attachment(s)
Additional Information
Map(s)

Additional information for ASN 2009-AAL-147-OE

NARRATIVE AERONAUTICAL STUDY NO. 2009-AAL-147-148-149-OE

Abbreviations

AGL - above ground level

MSL - mean sea level

RWY - runway

IFR - instrument flight rules

VFR - visual flight rules

nm - nautical mile

Part 77 - Title 14 Code of Federal Regulations (CFR) Part 77, Objects Affecting Navigable Airspace

1. LOCATION OF PROPOSED CONSTRUCTION

This proposal identifies three points of the proposed Ketchikan International Airport (KTN) access road and bridge. 2009-AAL-147-OE is on Gravina Island near KTN, 2009-AAL-148-OE is near the midpoint of the bridge in the Tongass Narrows, and 2009-AAL-149-OE is on the mainland, located northwest of Ketchikan, AK. KTN elevation: 89 feet MSL.

2009-AAL-147-OE, 142 feet AGL, 159 feet MSL, 1,372 feet from KTN RWY 11 threshold.

2009-AAL-148-OE, 265 feet AGL, 265 feet MSL, 2,196 feet from KTN RWY 11 threshold.

2009-AAL-149-OE, 0 feet AGL, 283 feet MSL, 3,516 feet from KTN RWY 11 threshold.

2. OBSTRUCTION STANDARDS EXCEEDED

The proposed bridge and access road points are identified as obstructions under these two Part 77 standards:

1) Section 77.25(a) -- The surface of a takeoff and landing area of an airport or any imaginary surface established under 77.23, 77.25, or 77.29. Two points would exceed the VFR maneuvering areas for Category A and Category B aircraft (horizontal surface) at KTN:

2009-AAL-148-OE, would exceed the KTN horizontal surface by 26 feet, and

2009-AAL-149-OE, would exceed the KTN horizontal surface by 44 feet.

2) Section 77.25(e) -- The transitional surface area designated to prevent tall structures from being located at the edge of the primary and approach surfaces of an airport established under 77.23, 77.25, or 77.29.

2009-AAL-147-OE, would exceed the KTN RWY 11 transitional surfaces by 59 feet.

3. EFFECT ON AERONAUTICAL OPERATIONS

a. The impact on arrival, departure, and en route procedures for aircraft operating under VFR follows:

Adverse Impact - The proposed bridge and access road would exceed the Part 77 horizontal surface by 44 feet and exceed the KTN RWY 11 transitional surface by 59 feet. Proposed bridge and access road would be located approximately 12,645 feet northwest of the Ketchikan Harbor (5KE) Seaplane Base. The Revilla Corridor Operation and Letter of Agreement will be adversely impacted.

b. The impact on arrival, departure, and en route procedures for aircraft operating under IFR follows: None.

c. The impact on all planned public-use airports and aeronautical facilities follow: None.

d. The cumulative impact resulting from the proposed construction or alteration of a structure when combined with the impact of other existing or proposed structures follows: None.

4. CIRCULATION AND COMMENTS RECEIVED

The proposal was circulated for public comment on 29 May 2009 and no comments were received by 10 July 2009.

5. DETERMINATION - NO HAZARD TO AIR NAVIGATION

It is determined that the structure would not have a substantial adverse effect on the safe and efficient use of navigable airspace by aircraft.

6. BASIS FOR DECISION

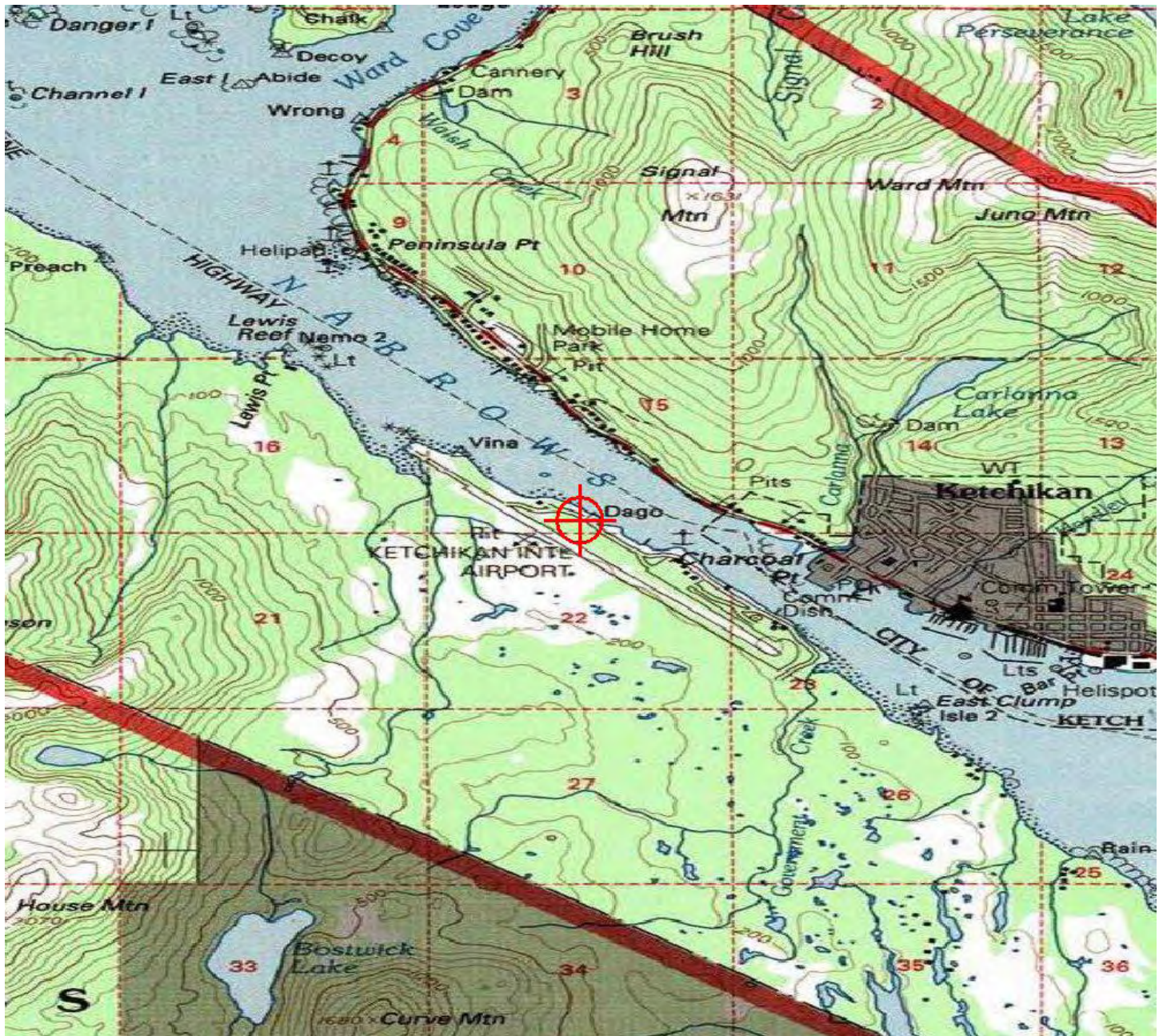
The proposed antenna would exceed the KTN Part 77 horizontal surfaces by 44 feet, exceed the transitional surface by 59 feet, and the Revilla Corridor Operation and Letter of Agreement will be adversely impacted, however, there are no IFR effects and no objections to the identified Special VFR effects were raised. The incorporation of obstruction marking and lighting will mitigate the Part 77 penetrations and provide the necessary pilot conspicuity.

7. CONDITIONS

The structure shall be marked and lighted as outlined in chapters 4, 5, and 12, of Advisory Circular AC 70/7460-1K. The advisory circular is available online at https://oeaaa.faa.gov/oeaaa/external/content/AC70_7460_1K.pdf. It is also free of charge, from the Department of Transportation, Subsequent Distribution Section, M-494.3, 400 7th Street, SW, Washington, DC 20590.

Within five days after the structure reaches its greatest height, proponent is required to file a FAA form 7460-2, Actual Construction notification, at the OE/AAA website (<http://oeaaa.faa.gov>). This Actual Construction notification will be the source document detailing the site location, site elevation, structure height, and date structure was built for the National Aeronautical Charting Group (NACG) to map the structure on aeronautical charts and update the national obstruction database.

-x-







Federal Aviation Administration
 Air Traffic Airspace Branch, ASW-520
 2601 Meacham Blvd.
 Fort Worth, TX 76137-0520

Aeronautical Study No.
 2009-AAL-148-OE

Issued Date: 07/10/2009

Jim Lowell, PE
 Alaska Dept of Transportation and Public Facilities
 6860 Glacier Highway
 Juneau, AK 99801

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Bridge Mid-Point Alignment C3-4
 Location: Ketchikan, AK
 Latitude: 55-21-48.76N NAD 83
 Longitude: 131-42-50.26W
 Heights: 265 feet above ground level (AGL)
 265 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure would have no substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities. Therefore, pursuant to the authority delegated to me, it is hereby determined that the structure would not be a hazard to air navigation provided the following condition(s) is(are) met:

As a condition to this Determination, the structure is marked and/or lighted in accordance with FAA Advisory circular 70/7460-1 K Change 2, Obstruction Marking and Lighting, red lights - Chapters 4,5(Red),&12.

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be completed and returned to this office any time the project is abandoned or:

- At least 10 days prior to start of construction (7460-2, Part I)
- Within 5 days after the construction reaches its greatest height (7460-2, Part II)

See attachment for additional condition(s) or information.

This determination expires on 01/10/2011 unless:

- (a) extended, revised or terminated by the issuing office.
- (b) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE POSTMARKED OR DELIVERED TO THIS OFFICE AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE.

This determination is subject to review if an interested party files a petition that is received by the FAA on or before August 09, 2009. In the event a petition for review is filed, it must contain a full statement of the basis upon which it is made and be submitted in triplicate to the Manager, Airspace and Rules Division - Room 423, Federal Aviation Administration, 800 Independence Ave., Washington, D.C. 20591.

This determination becomes final on August 19, 2009 unless a petition is timely filed. In which case, this determination will not become final pending disposition of the petition. Interested parties will be notified of the grant of any review. For any questions regarding your petition, please contact Office of Airspace and Rules via telephone -- 202-267-8783 - or facsimile 202-267-9328.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

This aeronautical study considered and analyzed the impact on existing and proposed arrival, departure, and en route procedures for aircraft operating under both visual flight rules and instrument flight rules; the impact on all existing and planned public-use airports, military airports and aeronautical facilities; and the cumulative impact resulting from the studied structure when combined with the impact of other existing or proposed structures. The study disclosed that the described structure would have no substantial adverse effect on air navigation.

An account of the study findings, aeronautical objections received by the FAA during the study (if any), and the basis for the FAA's decision in this matter can be found on the following page(s).

A copy of this determination will be forwarded to the Federal Communications Commission if the structure is subject to their licensing authority.

If we can be of further assistance, please contact Robert van Haastert, at (907)271-5863. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2009-AAL-148-OE.

Signature Control No: 631415-116063638

(DNH)

Kevin P. Haggerty
Manager, Obstruction Evaluation Service

Attachment(s)
Additional Information
Map(s)

Additional information for ASN 2009-AAL-148-OE

NARRATIVE AERONAUTICAL STUDY NO. 2009-AAL-147-148-149-OE

Abbreviations

AGL - above ground level

MSL - mean sea level

RWY - runway

IFR - instrument flight rules

VFR - visual flight rules

nm - nautical mile

Part 77 - Title 14 Code of Federal Regulations (CFR) Part 77, Objects Affecting Navigable Airspace

1. LOCATION OF PROPOSED CONSTRUCTION

This proposal identifies three points of the proposed Ketchikan International Airport (KTN) access road and bridge. 2009-AAL-147-OE is on Gravina Island near KTN, 2009-AAL-148-OE is near the midpoint of the bridge in the Tongass Narrows, and 2009-AAL-149-OE is on the mainland, located northwest of Ketchikan, AK. KTN elevation: 89 feet MSL.

2009-AAL-147-OE, 142 feet AGL, 159 feet MSL, 1,372 feet from KTN RWY 11 threshold.

2009-AAL-148-OE, 265 feet AGL, 265 feet MSL, 2,196 feet from KTN RWY 11 threshold.

2009-AAL-149-OE, 0 feet AGL, 283 feet MSL, 3,516 feet from KTN RWY 11 threshold.

2. OBSTRUCTION STANDARDS EXCEEDED

The proposed bridge and access road points are identified as obstructions under these two Part 77 standards:

1) Section 77.25(a) -- The surface of a takeoff and landing area of an airport or any imaginary surface established under 77.23, 77.25, or 77.29. Two points would exceed the VFR maneuvering areas for Category A and Category B aircraft (horizontal surface) at KTN:

2009-AAL-148-OE, would exceed the KTN horizontal surface by 26 feet, and

2009-AAL-149-OE, would exceed the KTN horizontal surface by 44 feet.

2) Section 77.25(e) -- The transitional surface area designated to prevent tall structures from being located at the edge of the primary and approach surfaces of an airport established under 77.23, 77.25, or 77.29.

2009-AAL-147-OE, would exceed the KTN RWY 11 transitional surfaces by 59 feet.

3. EFFECT ON AERONAUTICAL OPERATIONS

a. The impact on arrival, departure, and en route procedures for aircraft operating under VFR follows:

Adverse Impact - The proposed bridge and access road would exceed the Part 77 horizontal surface by 44 feet and exceed the KTN RWY 11 transitional surface by 59 feet. Proposed bridge and access road would be located approximately 12,645 feet northwest of the Ketchikan Harbor (5KE) Seaplane Base. The Revilla Corridor Operation and Letter of Agreement will be adversely impacted.

b. The impact on arrival, departure, and en route procedures for aircraft operating under IFR follows: None.

c. The impact on all planned public-use airports and aeronautical facilities follow: None.

d. The cumulative impact resulting from the proposed construction or alteration of a structure when combined with the impact of other existing or proposed structures follows: None.

4. CIRCULATION AND COMMENTS RECEIVED

The proposal was circulated for public comment on 29 May 2009 and no comments were received by 10 July 2009.

5. DETERMINATION - NO HAZARD TO AIR NAVIGATION

It is determined that the structure would not have a substantial adverse effect on the safe and efficient use of navigable airspace by aircraft.

6. BASIS FOR DECISION

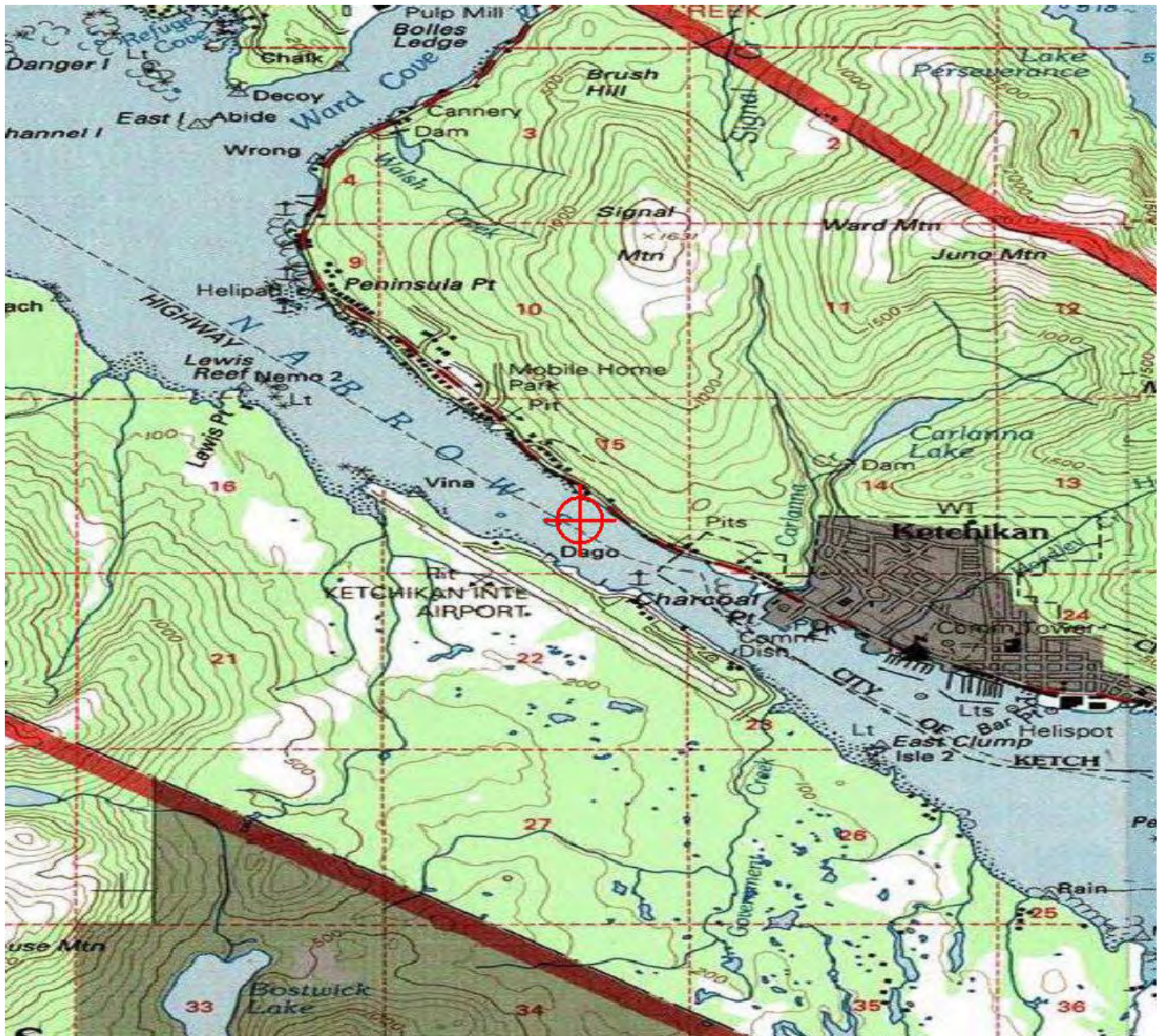
The proposed antenna would exceed the KTN Part 77 horizontal surfaces by 44 feet, exceed the transitional surface by 59 feet, and the Revilla Corridor Operation and Letter of Agreement will be adversely impacted, however, there are no IFR effects and no objections to the identified Special VFR effects were raised. The incorporation of obstruction marking and lighting will mitigate the Part 77 penetrations and provide the necessary pilot conspicuity.

7. CONDITIONS

The structure shall be marked and lighted as outlined in chapters 4, 5, and 12, of Advisory Circular AC 70/7460-1K. The advisory circular is available online at https://oeaaa.faa.gov/oeaaa/external/content/AC70_7460_1K.pdf. It is also free of charge, from the Department of Transportation, Subsequent Distribution Section, M-494.3, 400 7th Street, SW, Washington, DC 20590.

Within five days after the structure reaches its greatest height, proponent is required to file a FAA form 7460-2, Actual Construction notification, at the OE/AAA website (<http://oeaaa.faa.gov>). This Actual Construction notification will be the source document detailing the site location, site elevation, structure height, and date structure was built for the National Aeronautical Charting Group (NACG) to map the structure on aeronautical charts and update the national obstruction database.

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Federal Aviation Administration
Air Traffic Airspace Branch, ASW-520
2601 Meacham Blvd.
Fort Worth, TX 76137-0520

Aeronautical Study No.
2009-AAL-149-OE

Issued Date: 07/10/2009

Jim Lowell, PE
Alaska Dept of Transportation and Public Facilities
6860 Glacier Highway
Juneau, AK 99801

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Bridge Access Road Alignment C 3-4
Location:	Ketchikan, AK
Latitude:	55-21-57.86N NAD 83
Longitude:	131-42-32.55W
Heights:	0 feet above ground level (AGL) 283 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure would have no substantial adverse effect on the safe and efficient utilization of the navigable airspace by aircraft or on the operation of air navigation facilities. Therefore, pursuant to the authority delegated to me, it is hereby determined that the structure would not be a hazard to air navigation provided the following condition(s) is(are) met:

As a condition to this Determination, the structure is marked and/or lighted in accordance with FAA Advisory circular 70/7460-1 K Change 2, Obstruction Marking and Lighting, red lights - Chapters 4,5(Red),&12.

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 Within 5 days after the construction reaches its greatest height (7460-2, Part II)

See attachment for additional condition(s) or information.

This determination expires on 01/10/2011 unless:

- (a) extended, revised or terminated by the issuing office.
- (b) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE POSTMARKED OR DELIVERED TO THIS OFFICE AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE.

This determination is subject to review if an interested party files a petition that is received by the FAA on or before August 09, 2009. In the event a petition for review is filed, it must contain a full statement of the basis upon which it is made and be submitted in triplicate to the Manager, Airspace and Rules Division - Room 423, Federal Aviation Administration, 800 Independence Ave., Washington, D.C. 20591.

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An account of the study findings, aeronautical objections received by the FAA during the study (if any), and the basis for the FAA's decision in this matter can be found on the following page(s).

A copy of this determination will be forwarded to the Federal Communications Commission if the structure is subject to their licensing authority.

If we can be of further assistance, please contact Robert van Haastert, at (907)271-5863. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2009-AAL-149-OE.

Signature Control No: 631416-116063640

(DNH)

Kevin P. Haggerty
Manager, Obstruction Evaluation Service

Attachment(s)
Additional Information
Map(s)

Additional information for ASN 2009-AAL-149-OE

NARRATIVE AERONAUTICAL STUDY NO. 2009-AAL-147-148-149-OE

Abbreviations

AGL - above ground level

MSL - mean sea level

RWY - runway

IFR - instrument flight rules

VFR - visual flight rules

nm - nautical mile

Part 77 - Title 14 Code of Federal Regulations (CFR) Part 77, Objects Affecting Navigable Airspace

1. LOCATION OF PROPOSED CONSTRUCTION

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2009-AAL-147-OE, 142 feet AGL, 159 feet MSL, 1,372 feet from KTN RWY 11 threshold.

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2. OBSTRUCTION STANDARDS EXCEEDED

The proposed bridge and access road points are identified as obstructions under these two Part 77 standards:

1) Section 77.25(a) -- The surface of a takeoff and landing area of an airport or any imaginary surface established under 77.23, 77.25, or 77.29. Two points would exceed the VFR maneuvering areas for Category A and Category B aircraft (horizontal surface) at KTN:

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2009-AAL-149-OE, would exceed the KTN horizontal surface by 44 feet.

2) Section 77.25(e) -- The transitional surface area designated to prevent tall structures from being located at the edge of the primary and approach surfaces of an airport established under 77.23, 77.25, or 77.29.

2009-AAL-147-OE, would exceed the KTN RWY 11 transitional surfaces by 59 feet.

3. EFFECT ON AERONAUTICAL OPERATIONS

a. The impact on arrival, departure, and en route procedures for aircraft operating under VFR follows:

Adverse Impact - The proposed bridge and access road would exceed the Part 77 horizontal surface by 44 feet and exceed the KTN RWY 11 transitional surface by 59 feet. Proposed bridge and access road would be located approximately 12,645 feet northwest of the Ketchikan Harbor (5KE) Seaplane Base. The Revilla Corridor Operation and Letter of Agreement will be adversely impacted.

b. The impact on arrival, departure, and en route procedures for aircraft operating under IFR follows: None.

c. The impact on all planned public-use airports and aeronautical facilities follow: None.

d. The cumulative impact resulting from the proposed construction or alteration of a structure when combined with the impact of other existing or proposed structures follows: None.

4. CIRCULATION AND COMMENTS RECEIVED

The proposal was circulated for public comment on 29 May 2009 and no comments were received by 10 July 2009.

5. DETERMINATION - NO HAZARD TO AIR NAVIGATION

It is determined that the structure would not have a substantial adverse effect on the safe and efficient use of navigable airspace by aircraft.

6. BASIS FOR DECISION

The proposed antenna would exceed the KTN Part 77 horizontal surfaces by 44 feet, exceed the transitional surface by 59 feet, and the Revilla Corridor Operation and Letter of Agreement will be adversely impacted, however, there are no IFR effects and no objections to the identified Special VFR effects were raised. The incorporation of obstruction marking and lighting will mitigate the Part 77 penetrations and provide the necessary pilot conspicuity.

7. CONDITIONS

The structure shall be marked and lighted as outlined in chapters 4, 5, and 12, of Advisory Circular AC 70/7460-1K. The advisory circular is available online at https://oeaaa.faa.gov/oeaaa/external/content/AC70_7460_1K.pdf. It is also free of charge, from the Department of Transportation, Subsequent Distribution Section, M-494.3, 400 7th Street, SW, Washington, DC 20590.

Within five days after the structure reaches its greatest height, proponent is required to file a FAA form 7460-2, Actual Construction notification, at the OE/AAA website (<http://oeaaa.faa.gov>). This Actual Construction notification will be the source document detailing the site location, site elevation, structure height, and date structure was built for the National Aeronautical Charting Group (NACG) to map the structure on aeronautical charts and update the national obstruction database.

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